



Tech Info Library

ARA Personal Server Log Stops Adding Entries (1/95)

Revised: 1/25/95
Security: Everyone

ARA Personal Server Log Stops Adding Entries (1/95)

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Article Created: 25 January 1995

TOPIC -----

My Apple Remote Access (ARA) Personal Server is able to dial out and users can dial in, but the log has stopped logging any activity.

DISCUSSION -----

Drag both the Apple Remote Access Preferences and the Apple Remote Access Log, in the Preferences Folder within the System Folder on the Server, to the trash, then restart the Server. Apple Remote Access should start logging activity.

WARNING: Be certain you throw away both files mentioned above. Dragging only one file to the trash will cause the server to crash when using ARA.

Support Information Services

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Tech Info Library Article Number:17065



Tech Info Library

Apple Remote Access, PowerBook Duo 230, and Error -23 (1/95)

Revised: 1/25/95
Security: Everyone

Apple Remote Access, PowerBook Duo 230, and Error -23 (1/95)

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Article Created: 25 January 1995

TOPIC -----

When I use Apple Remote Access (ARA) on my PowerBook 230 with an Express Modem, and I attempt to open a connection; I get the following error message:

"The connection attempt has failed. An unknown error of type -23 has occurred.", or "The connection attempt has failed. An unknown error of type -20 has occurred."

What is causing this?

DISCUSSION -----

System 7.5 has the Extensions Manager control panel, which lets a user turn extensions and/or control panels on or off. The Express Modem control panel has been disabled through the Extensions Manager. Enabling the Express Modem control panel and restarting will correct the error.

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Tech Info Library Article Number:17066



Tech Info Library

System 7.5: The Print Shop ATM Errors and ATM GX (1/95)

Revised: 1/26/95
Security: Everyone

System 7.5: The Print Shop ATM Errors and ATM GX (1/95)

Article Created: 26 January 1995

TOPIC -----

Customers may call experiencing an Adobe Type Manager (ATM) error when using Broderbund's The Print Shop with System 7.5.

DISCUSSION -----

According to Broderbund tech support, customers using The Print Shop 1.0 and 1.1 may get an ATM error indicating that a certain font cannot be found, at which point the Macintosh may crash. This occurs when ATM is not installed.

Recently Broderbund tech support has erroneously been recommending that customers run a Custom Install of QuickDraw GX and install only ATM GX, without the other QuickDraw GX software.

However, QuickDraw GX enables fonts upon installation. Font enabling still occurs with the custom install of ATM GX making Type 1 fonts unusable if the customer does not have QuickDraw GX installed, thus creating other problems for the customer.

Broderbund tech support has been made aware of the issues involved with a QuickDraw GX installation and should be modifying their tech database and no longer instructing customers to perform a QuickDraw GX custom install.

The recently released Print Shop Deluxe CD Ensemble includes The Print Shop 1.1.1 and does not appear to exhibit this problem. The Print Shop Companion 1.0 (included on floppies with the CD Ensemble) also does not seem to exhibit this problem. The Print Shop 1.1.1 is not currently available on floppies for customers already owning 1.0 or 1.1. They do, however, have an upgrade path available to the CD Ensemble.

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Tech Info Library Article Number:17067



Tech Info Library

System 7: Network Control Panel Pre-Installed or Not? (1/95)

Revised: 1/26/95
Security: Everyone

System 7: Network Control Panel Pre-Installed or Not? (1/95)

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Article Created: 25 January 1995

TOPIC -----

Is the "Network Control Panel" pre-installed on all System 7 or later Macintosh computers? Please include Macintosh Performa models in this discussion.

DISCUSSION -----

The Network Control Panel is not normally pre-installed on a Macintosh system that only has LocalTalk capability.

On a machine, such as a Quadra or Power Macintosh that comes with built-in Ethernet, it will be pre-installed since there are two network interfaces to choose between: LocalTalk or EtherTalk.

In the Macintosh Performa line of computers, Ethernet is usually an optional capability. The exception to this rule is the Performa 61xx series which all have built-in Ethernet. However, unlike most Macintosh models, the Performa models usually will have the Network control panel pre-installed whether they have built-in Ethernet or not.

How to install the Network Control Panel:

- It can be installed from a Network Software Installer disk.
- It can be installed by selecting a Custom Install from the System Software disks.
 - If installing from System 7.0, 7.1, or System 6.0.x disks, choose EtherTalk from the custom install selections.
 - If installing from System 7.5, choose Network from the Control Panel options in the custom install selections
- It can also be installed by running the installer for any one of several Apple Remote Access products.

Support Information Services

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Tech Info Library Article Number:17068



Tech Info Library

DOS Compatibility Card: LaserWriter Select Print Problem (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: LaserWriter Select Print Problem (1/95)

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Article Created: 26 January 1995

TOPIC -----

I have the DOS Compatibility Card for the Power Macintosh and when I try to print to the LaserWriter Select 300 from Windows, the Macintosh side freezes. I have to restart my Macintosh.

DISCUSSION -----

This is a known problem with the LaserWriter Select printer driver and Background printing. In order to print properly, turn off Background printing and do not use the QuickDraw GX printer driver.

Support Information Services

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Tech Info Library Article Number:17069



Tech Info Library

DOS Compatibility Card: DOSClip Causes DOS Crash (5/96)

Revised: 5/22/96
Security: Everyone

DOS Compatibility Card: DOSClip Causes DOS Crash (5/96)

Article Created: 26 January 1995
Article Reviewed/Updated: 22 May 1996

TOPIC -----

I am using Harvard Graphics v3.0 on the DOS Compatibility Card and when I try to copy from the MS-DOS environment to the Macintosh OS, and then go back to the MS-DOS environment, the system crashes. The message I get is:

"Memory allocation error
Cannot load COMMAND, system halted"

DISCUSSION -----

This problem is caused by not loading the SmartDrive into high memory. To correct this you need to change your CONFIG.SYS and AUTOEXEC.BAT files.

In the CONFIG.SYS File
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Add the following line:

If you are using PC Setup 1.0.7 lines are:

DEVICE=C:\DOS\EMM386.EXE NOEMS X=C800-CFFF RAM=D000-EFFF

or

DEVICE=C:\DOS\EMM386.EXE X=C800-CFFF RAM=D000-EFFF

For PC Setup 1.5, the lines are:

DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF

or

```
DEVICE=C:\DOS\EMM386.EXE I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
```

Also change the following line:

From - DOS=HIGH to DOS=HIGH,UMB

In the AUTOEXEC.BAT File

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Placed LH before C:\DOS\SMARTDRV.EXE /X in the autoexec.bat.

Article Change History:

22 May 1996 - Added new config.sys memory lines for PC Setup 1.0.7

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Tech Info Library Article Number:17070



Tech Info Library

DOS Compatibility Card: IRQ settings Hard Coded (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: IRQ settings Hard Coded (1/95)

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Article Created: 26 January 1995

TOPIC -----

I have the option in a MS-DOS application program to change the Sound Blaster IRQ setting through the software. However when I do, I still hear music. Why?

DISCUSSION -----

IRQ settings on the DOS Compatibility Card for the Power Macintosh are hard coded. However, the Synthesis portion of the card still functions with the invalid IRQ settings. If you Select digital sound with the invalid IRQ settings, you will not hear anything. You need to select the proper IRQ settings for the card in order to use both part of the Sound Blaster card.

Support Information Services

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Tech Info Library Article Number:17071



Tech Info Library

DOS Compatibility Card: Macintosh Must Have Some RAM (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Macintosh Must Have Some RAM (1/95)

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Article Created: 26 January 1995

TOPIC -----

I have a Power Macintosh 6100 with the DOS Compatibility Card and when I set the Shared Memory to 8 MB I get an error when I restart. The message explains that there is not enough memory to load all of the extensions.

DISCUSSION -----

The Macintosh OS needs enough memory to operate normally. If you assign a large portion of memory as shared memory, you need to make sure that you still have enough memory left for the Macintosh operating system (OS) to operate normally. The PC Setup control panel does not do any verification of how much memory you have assigned as shared memory. You must make sure that you are not assigning more memory than you have available as shared memory. For example, if you have 8MB of RAM installed in your Macintosh and set the PC Setup control panel to 4 MB of shared memory you could run into problems if the Macintosh OS takes up more than 4 MB of RAM. If you run into this problem, the best solution is to purchase additional RAM. You can also try to reduce the number of extensions and control panels. This reduces the amount of RAM the Macintosh OS requires.

Support Information Services

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Tech Info Library Article Number:17072



Tech Info Library

DOS Compatibility Card: Older SYSINFO Causes Crash (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Older SYSINFO Causes Crash (1/95)

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Article Created: 26 January 1995

TOPIC -----

I am using Norton Utilities SYSINFO on the DOS Compatibility Card for the Power Macintosh and it causes the system to crash.

DISCUSSION -----

You need to use v8.0 or higher of SYSINFO. Earlier version can cause the DOS Compatibility Card to freeze or crash.

Support Information Services

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Tech Info Library Article Number:17073



Tech Info Library

DOS Compatibility Card: Cannot Convert Custom Clipboards (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Cannot Convert Custom Clipboards (1/95)

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Article Created: 26 January 1995

TOPIC -----

I have a DOS Compatibility Card for the Power Macintosh and I am trying to copy Adobe PhotoShop clipboard contents to the Macintosh. But, when I copy the contents from Windows and switch over to the Macintosh there is nothing in the clipboard.

DISCUSSION -----

Adobe PhotoShop and a few other high-end Window paint application programs use their own clipboard instead of the Windows clipboard. Some applications have ways of setting the preferences so that they convert things into the Windows clipboard format. In applications like Adobe PhotoShop that do not allow you to change the clipboard settings, there are a couple of options.

- 1) Open the Window application Clipboard Viewer before you switch between the Windows and Macintosh platforms. This forces Adobe PhotoShop to convert the clipboard into a standard Windows format.
- 2) Minimize Adobe PhotoShop. This also forces Adobe PhotoShop to convert the clipboard into a standard Windows format.

Support Information Services

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Tech Info Library Article Number:17074



Tech Info Library

DOS Compatibility Card: PowerCD Not Compatible with DOS (1/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: PowerCD Not Compatible with DOS (1/95)

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Article Created: 26 January 1995

TOPIC -----

Can I use the Apple PowerCD with the DOS Compatibility Card?

DISCUSSION -----

You can use the Apple PowerCD when you are using the Macintosh OS, but you cannot use the Apple PowerCD when you are running MS-DOS or Windows. The PowerCD requires special drivers that are not available for MS-DOS or Windows.

Support Information Services

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Tech Info Library Article Number:17075



Tech Info Library

AppleShare & GraceLAN: Network Trash Prevents Disconnect (2/95)

Revised: 2/1/95
Security: Everyone

AppleShare & GraceLAN: Network Trash Prevents Disconnect (2/95)

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Article Created: 26 January 1995
Article Reviewed/Updated: 1 February 1995

TOPIC -----

As the administrator of our AppleShare server, I'm using GraceLAN to limit the time clients can access the server. The users have discovered that if they put something in the trash from the server but not empty it, GraceLAN will not disconnect them. Is there a workaround to this problem?

DISCUSSION -----

Yes, do not give the client users write access to the root level. This will prevent the Network Trash from creating a folder. AppleShare needs write access to the whole volume to create the Network Trash Folder (which is invisible). When the client puts anything in the trash they will get the message: "Filename cannot be left in the trash. Do you want to delete it immediately?"

Article Change History:
01 Feb 1995 - Revised article.

Support Information Services

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Tech Info Library Article Number:17076



Tech Info Library

Security Lock Ports on Desktop Macintosh Computers (7/95)

Revised: 7/7/95
Security: Everyone

Security Lock Ports on Desktop Macintosh Computers (7/95)

Article Created: 27 January 1995
Article Reviewed/Updated: 07 July 1995

TOPIC -----

What type of security lock ports do the desktop Macintosh computers have and where are they located?

DISCUSSION -----

Security lock ports are used to physically lock desktop Macintosh computers to a desk or other stationary object using some kind of cable locking system.

Apple uses four different types of security lock ports on Macintosh computers. They are as follows:

PORT TYPE	DESCRIPTION
Large rectangular port	This is the original security port used on the first Macintosh computers. It is a rectangular port that measures approximately 6mm x 35mm at the opening.
Small rectangular port	This is a slightly smaller rectangular port that is used on the majority of Macintosh computers. It measures approximately 6mm x 22mm at the opening.
1/4" Mini-slot port	This is the most recent security lock port. This port is a small, 3mm x 7mm, opening without latches of any kind. It uses a different type of security device than the previous security lock ports.
Cable Slotted port	This is a plastic loop on the bottom of the unit that is intended to have a security

cable fed through it.

Use the following chart to determine which type of security device you need for your Macintosh computer.

NOTE Generally, security lock ports are located on the back panels of most Macintosh computers or, in the case of the cable slotted port, on bottom panels.

PRODUCT DESCRIPTION	PORT TYPE	LOCATION
-----	-----	-----
Compact Macintosh Systems		

Macintosh 128K	Large rectangular port	Right center
Macintosh 512K, 512Ke	Large rectangular port	Right center
Macintosh Plus	Large rectangular port	Right center
Macintosh SE	Small rectangular port	Center
Macintosh SE/30	Small rectangular port	Center
Macintosh Classic	Small rectangular port	Left center
Macintosh Classic II	Small rectangular port	Left center
Macintosh Color Classic	Small rectangular port	Center
Macintosh II Systems		

Macintosh II	Small rectangular port	Lower right corner
Macintosh IIX	Small rectangular port	Lower right corner
Macintosh IICx	Small rectangular port	Next to Nubus slots
Macintosh IICi	Small rectangular port	Next to Nubus slots
Macintosh IIfx	Small rectangular port	Lower right corner
Macintosh IISI	Small rectangular port	Lower left corner
Macintosh IIVx	Small rectangular port	Next to Nubus slots
Macintosh IIVI	Small rectangular port	Next to Nubus slots
Macintosh LC Series		

Macintosh LC	Cable Slotted port	Bottom right corner
Macintosh LC II	Cable Slotted port	Bottom right corner
Macintosh LC III	Cable Slotted port	Bottom right corner
Macintosh LC 475	Cable Slotted port	Bottom right corner
Macintosh LC 520	Small rectangular port	Center
Macintosh LC 550	Small rectangular port	Center
Macintosh LC 575	Small rectangular port	Center
Macintosh TV	Small rectangular port	Center
Macintosh LC 580	Small rectangular port	Center
Macintosh LC 5200	Cable slotted port	Center
Performa Series		

Performa 200		
Performa 400,405,430,450	Cable Slotted port	Bottom right corner
Performa 475 & 476	Cable Slotted port	Bottom right corner

Performa 550	Small rectangular port	Center
Performa 575	Small rectangular port	Center
Performa 577	Small rectangular port	Center
Performa 578	Small rectangular port	Center
Performa 600	Small rectangular port	Next to Nubus slots

Quadra and Centris Series

Quadra 605	Cable Slotted port	Bottom right corner
Quadra/Centris 610	1/4" Mini-Slot	Next to AC receptacle
Macintosh 630 family	1/4" Mini-Slot	Next to AC receptacle
Quadra/Centris 650	Small rectangular port	Next to Nubus slots
Quadra/Centris 660AV	1/4" Mini-Slot	Next to AC receptacle
Quadra 700	Small rectangular port	Next to NuBus slots
Quadra 800	Small rectangular port	Lower right corner
	1/4" Mini-Slot	Lower right corner
Quadra 840AV	Small rectangular port	Lower right corner
	1/4" Mini-Slot	Lower right corner
Quadra 900	Small rectangular port	Lower left corner
Quadra 950	Small rectangular port	Lower left corner

Power Macintosh Series (all clock speeds)

Power Macintosh 6100	1/4" Mini-Slot	Next to AC receptacle
Power Macintosh 7100	1/4" Mini-Slot	Next to Nubus slots
Power Macintosh 8100	Small rectangular port	Lower right rear
	1/4" Mini-Slot	Lower right rear
Power Macintosh 9500	Small rectangular port	Lower right rear
	1/4" Mini-Slot	Lower right rear

Apple Workgroup Servers

Workgroup Server 60	1/4" Mini-Slot	Next to AC receptacle
Workgroup Server 80	Small rectangular port	Lower right corner
Workgroup Server 95	Small rectangular port	Lower left corner
Workgroup Server 6150	1/4" Mini-Slot	Next to AC receptacle
Workgroup Server 8150	Small rectangular port	Lower right corner
	1/4" Mini-Slot	Lower right corner
Workgroup Server 9150	Small rectangular port	Lower left corner

Article Change History:

07 Jul 1995 - Added new computers and correct Macintosh 630 family information

Support Information Services

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Tech Info Library Article Number:17079



Tech Info Library

Apple MessagePad 120: Specifications (4/97)

Revised: 4/28/97
Security: Everyone

Apple MessagePad 120: Specifications (4/97)

Article Created: 27 January 1995
Article Reviewed/updated: 9 April 1997

TOPIC -----

This article discusses the technical specifications of the Apple MessagePad 120.

DISCUSSION -----

Newton Intelligence

- Newton Recognition Architecture
 - Recognizes handwriting-printed, cursive, or a mixture of the two--with the assistance of a 13,000-word, built-in word list
 - Lets you add up to 1,000 words
 - Recognizes writing letter by letter or word by word
 - Allows deferred recognition: can store notes in handwritten form for later recognition
 - Includes three pop-up keyboards: typewriter, numeric, and phonepad
 - Recognizes graphics and symmetrical objects
- Newton Communications Architecture
 - Provides single interface for all communication services
 - Supports easy communications with minimum setup requirements
 - Supports new communications capabilities through its modular design
- Intelligent Assistance Architecture
 - Helps users complete repetitive tasks in multiple categories, including communications, scheduling, finding, and reminding functions.
 - Contains smart defaults to reduce complexity
 - Works in and between applications
 - Supports extensions by third-party developers

- Newton Hardware Architecture
 - ARM 610 RISC processor at 20 MHz
 - Apple custom system ASIC
 - Low-power, reflective LCD display (320 by 240 pixels)
3.8-in. by 2.8-in. (9.6 cm by 7.2 cm)
 - Telescoping pen and crisp, transparent tablet
 - 4MB of ROM, upgradable
 - 2MB of RAM version: 687K of system RAM; 1,361k of non-volatile user RAM
 - 1MB of RAM version: 639K of system RAM; 385k of non-volatile user RAM
 - One PCMCIA Type II card slot with 325 mA capacity
 - LocalTalk and RS-232-compatible serial port
 - Low-power, half-duplex, infrared transceiver works at up to 38.4 kbps within 3.28 feet (1 meter)
 - Protective removable lid

Communications Capabilities

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- Capable of communication with a variety of serial, parallel, and network printers
- Receive and store wireless messages using optional messaging card*
- Communicate by e-mail or tap into on-line information services with optional modem card
- Send notes, name card, and appointments at up to 38.4 kbps within 3.28 feet (1 meter) using high-speed "beaming" using infrared technology
- Handle telephone needs with assistance for intelligent auto dialing (DTMF or modem dialing)*
- Fax with optional fax/modem (automatic cover-page generation, post-formatting)
- Using built-in NewtonMail with optional modem, exchange electronic mail with other NewtonMail subscribers of on-line services

* Note: This service may not be available in all countries.

Size and Weight

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- Length: 8.0-in. (20.32 cm)
- Width: 4.0-in. (10.16 cm)
- Height: 1.2-in. (2.9 cm)
- Weight: 1.0-lb. (0.48kg) without batteries

Operating Environment

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- Temperature: 32 to 104 degrees F (0 to 40 degrees C)
- Storage temperature: -4 to 117 degrees F (-20 to 47 degrees C)
- Transit temperature: -4 to 149 degrees F (-20 to 65 degrees C) for up to 72 hours
- Relative humidity: 20% to 90% noncondensing

Power Requirements

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- Power adapter
 - Universal, 100 to 240 volts AC, 50/60 Hz
 - Four plug configurations: U.S., U.K., Europe, and Australia
- Battery Type: alkaline or NiCad Battery Pack
- Lithium cell: DL2032
 - Operating range: 3 volts (nominal)
- Built-in fast charger for optional NiCad Battery Pack
- Power sources: four AA batteries (included), optional Power Adapter, and optional Rechargeable NiCad Battery Pack

Computer Connectivity Requirements

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- Works with PC-compatible computers with 80386DX or better processors running Windows version 3.0 or later, using the Newton Connection Kit for Windows.
- Works with Macintosh computers with 68030 or better processors and system software version 7.1 or later, using the Newton Connection Kit for Macintosh

Printer Support

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- Built-in printer support for the Apple LaserWriter Plus (and other PostScript-equipped LaserWriter printers), the Personal LaserWriter LS, as well as the StyleWriter II printers
- Works with most popular PC printers including the Hewlett-Packard LaserJet II, DeskJet 500, Canon BubbleJet 10e, and Epson LQ and FX using the optional Newton Print Pack

Fax Machine Support

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- Supports Group 3 fax machines

Ordering Information

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- Apple MessagePad 120 2MB version
Order number: H0142LL/A
 - Apple MessagePad 120 personal digital assistant
 - Telescoping Pen
 - Batteries
 - Complete setup, learning, and reference documentation
 - Limited warranty

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- Newton External Fax Modem
- Notion 1.1 software
- Apple MessagePad 120 1MB version
Order number: H0126LL/A
 - Apple MessagePad 120 personal digital assistant
 - Telescoping Pen
 - Batteries
 - Complete setup, learning, and reference documentation
 - Limited warranty
 - Notion 1.1 software

Accessories

- The Apple MessagePad 120 is compatible with all accessories and software applications available for the Apple MessagePad 110.

Article Change History:

09 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:17080



Tech Info Library

Apple MessagePad 120: Description (1/95)

Revised: 5/9/96
Security: Everyone

Apple MessagePad 120: Description (1/95)

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Article Created: 27 January 1995

TOPIC -----

The article provides a description of the Apple MessagePad 120.

DISCUSSION -----

Description
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The Apple MessagePad 120 puts easy-to-use communications, productivity, and desktop connectivity solutions in the palm of your hand so you can work away from your office.

Yet you'll find it far more useful than paper or electronic organizers because while it has a built-in notepad, to-do list, datebook, and address file for organizing personal and business affairs, with a modem it can also send faxes and gives you access to e-mail and on-line services.

The Apple MessagePad 120 can receive pages as well as electronic mail. And its built-in infrared communications allow you to instantly exchange information with other Newton devices.

The Apple MessagePad 120 lets you share and exchange information with either Windows-based or Macintosh computers.

Pen-based navigation and data entry make finding information easy and fast. And it allows you to capture and organize information in many forms: notes, sketches, schedules, lists, and letters. It also lets you enter information in many ways: digital ink, printed text, graphics, on-screen keyboard, or a combination.

The Apple MessagePad 120 has printing capabilities that make it simple to print your information the way it appears on its crisp, easy-to-read screen, or as full-page formatted letters.

Its built-in recognition software can even transform your written handwriting into typed text letter by letter or word by word.

But best of all-unlike paper and electronic organizers-your Apple MessagePad 120 can be expanded with software titles as well as accessories and on-line services that can keep you organized, efficient, and very well informed.

Features

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- Built-in functions
 - Calendar helps you plan monthly, weekly, and daily activities
 - To-do list helps you manage and prioritize your tasks
 - Includes name and address files for colleagues and friends using a familiar business-card format
 - Actively assists you in making phone calls, faxing, finding information, sending electronic mail, printing, scheduling meetings, and completing to-do lists
 - Offers an assortment of information and productivity tools such as time-zone maps, a calculator, currency exchange formulas, and measurement conversions
 - Allows free-form note taking
 - Can turn printed or cursive handwriting into typed text
 - Lets you beam notes, messages, schedules, or business cards using a built-in infrared communication capability
 - Can use a wired or wireless modem to send faxes or use built-in NewtonMail software to tap into electronic mail and on-line services
 - Using the optional Newton Connection Kit, lets you share information and back up and synchronize files with Windows-based or Macintosh computers
 - Prints formatted letters and notes directly using Apple printers or serial or parallel printers using the optional print pack
 - Maintains your business and personal information safely and securely even when your batteries are fully discharged
- Expandable functions
 - Offers a large selection of productivity, finance, time, billing, management, reference, and entertainment software
 - Lets you receive wireless paging messages with an optional messaging card
 - Works with a large selection of PCMCIA cards and external serial peripherals-modems, pagers, and wireless communications and storage products

Ordering Information

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- Apple MessagePad 120 2MB version
 - Order number: H0142LL/A
 - Apple MessagePad 120 personal digital assistant

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- Telescoping Pen
 - Batteries
 - Complete setup, learning, and reference documentation
 - Limited warranty
 - Newton External Fax Modem
 - Notion 1.1 software
- Apple MessagePad 120 1MB version
Order number: H0126LL/A
 - Apple MessagePad 120 personal digital assistant
 - Telescoping Pen
 - Batteries
 - Complete setup, learning, and reference documentation
 - Limited warranty
 - Notion 1.1 software

Accessories

- The Apple MessagePad 120 is compatible with all accessories and software applications available for the Apple MessagePad 110.

Support Information Services

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Tech Info Library Article Number:17081



Tech Info Library

PowerBooks: Scrolling Speed - Color vs Black & White (1/95)

Revised: 1/27/95
Security: Everyone

PowerBooks: Scrolling Speed - Color vs Black & White (1/95)

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Article Created: 27 January 1995

TOPIC -----

I have a PowerBook 170 which I want to replace with a PowerBook 280c. However, I cannot understand why the text scrolling in Microsoft Word 5.1 on the PowerBook 280c seems slower than on my PowerBook 170. On the other hand, I found that the performance of Microsoft Excel is faster on the PowerBook 280c than on my PowerBook 170.

I understand that the PowerBook 170 and the PowerBook 280c are each running at different processor speeds and operating on different system software, but could you provide a technical answer describing why the scrolling on PowerBook 280c seems slower?

DISCUSSION -----

The reason why scrolling may appear faster on a PowerBook 170 is due to the color, or lack thereof. A PowerBook 170 can only display black and white, so a pixel on the screen of a 170 is represented by 1 bit. A PowerBook 280c can display 256 colors, so a pixel on the screen of a PowerBook 280c is represented by 8 bits (16 bits in thousands of colors). This means that QuickDraw has to keep track of that much more information when scrolling which makes it slower.

A better comparison in performance would be to set the PowerBook 280c (or any PowerBook whose screen is set to display grays or colors) to black and white using the Monitors control panel, and then compare application performance. This will give you a truer comparison of the actual processing speed of each machine.

Support Information Services

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Tech Info Library Article Number:17082



Tech Info Library

PowerBook: Wake on Ring Explanation (2/96)

Revised: 2/14/97
Security: Everyone

PowerBook: Wake on Ring Explanation (2/96)

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Article Created: 30 January 1995
Article Reviewed/Updated: 14 February 1996

TOPIC -----

What exactly is the Wake on Ring feature of my PowerBook and how do I use it?

DISCUSSION -----

The Wake on Ring feature is designed to wake the computer from sleep when a phone call is received by the internal modem. After the computer wakes up via this feature, it will not go to sleep again automatically. When a modem is set to receive a fax, the computer will not sleep because the serial port is busy monitoring for an incoming phone call.

All of the PowerBook 100 series computers (except the 150 and 190) support the Wake on Ring feature. This includes the PowerBook 100, 140, 145, 145B, 160, 165, 165c, 170, 180, and 180c.

All other PowerBook computer models (including the 150 and 190) do not have this same "Wake on Ring" feature. Instead they have a "Wake-up At" feature which wakes the computer from sleep at a specified time rather than when the phone rings.

Article Change History:
14 Feb 1997 - Reworded for clarity.
10 Feb 1997 - Added PowerBook 1400 series.
02 Jan 1996 - Added PowerBook 150, 190, and 5300 series information.

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Tech Info Library Article Number:17083



Tech Info Library

PowerBook: Hard Drive Spins Up After Spin Down Command (4/95)

Revised: 4/3/95
Security: Everyone

PowerBook: Hard Drive Spins Up After Spin Down Command (4/95)

Article Created: 30 January 1995
Article Reviewed/Updated: 03 April 1995

TOPIC -----

When I use the Control Strip on my PowerBook to "Spin Down Internal Hard Disk," my hard drive will spin up after a minute or so. Why does it spin up when I'm not actually saving or accessing the hard drive at the time?

DISCUSSION -----

There are two types of files that may cause this to happen.

1. If you are running any applications that automatically update a file or monitor activity, the hard drive may spin up to either read or save. Such programs include anti-virus, backup, spell checkers, and compression software.

The application may also need to load in resources which were not loaded when it launched. The same could hold true for system software resources that become needed after the drive spins down.

2. Some Extensions and Control Panels may cause the hard drive to spin up. When running on battery power, use the Extensions Manager to turn off as many Extensions and Control Panels as possible. This may help to eliminate spurious background activity.

Article Change History:
03 Apr 1995 - Additional reasons for spin up documented.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17084



Tech Info Library

Apple MessagePad: System Update 1.3 Versions and Changes (1/97)

Revised: 1/17/97
Security: Everyone

Apple MessagePad: System Update 1.3 Versions and Changes (1/97)

=====

Article Created: 30 January 1995
Article Reviewed/Updated: 17 January 1997

TOPIC -----

There are a couple of different versions of the Newton System Update 1.3 available. Which version should I use?

DISCUSSION -----

Apple MessagePad 100
=====

If you have an Apple MessagePad 100, install System Update 1.3 (414313). This version installs over the earlier MessagePad 100 System Update version 1.3 (414059).

Apple MessagePad 110
=====

If you have an Apple MessagePad 110, install System Update 1.3 (345025). This version installs over the following earlier MessagePad 110 System Updates:

- Version 1.3 (344311)
- Version 1.3 (344052)
- Version 1.3 (344138)
- Version 1.2.0

System Update 1.3 Changes
=====

The Newton software no longer closes Notification Windows (such as alarms) when it goes to sleep, preventing you from missing notifications you receive when the Newton is left unattended.

You can now use the * (asterisk) and # (pound) characters when dialing phone numbers from the call slip. For example, you can set the dialing prefix to *70 to turn off call waiting if your phone system permits it.

A recognition problem, which could cause the accuracy of the MessagePad's handwriting recognition to gradually degrade for some users, was corrected. If you switch to guest mode then switch back to owner's mode, the MessagePad now restores the preferred Letter Styles settings when the writing style is set to Printed Only.

If the location is set to a city in Japan and you attempt to dial while using a modem, the Newton sends the correct modem initialization string: AT%J&P1. A problem that could require you to perform a soft reset before your Apple MessagePad would recognize PCMCIA cards was corrected.

The contents of flash PCMCIA memory cards are erased more reliably.

Availability =====

System Update 1.3 is available through the following methods:

- Newton System Update 1.3 available online
- Newton Bulletin Board Service
- U.S. Mail service

Online -----

America Online - keyword: applecomputer

CompuServe - GO APLSUP

Internet -
Worldwide Web: <<http://www.info.apple.com/swupdates>>
ftp: <<ftp://ftp.info.apple.com>>

Newton Bulletin Board Service -----

You can receive the Newton System 1.3 Update by calling the special Newton Bulletin Board Service and following these steps:

Step 1:
Connect your Newton to your Newton Modem.

Step 2:
Connect your modem to a standard phone line.

Step 3:
Tap Extras.

Step 4:
Tap In Box.

Step 5:

Tap Receive

Step 6:

Tap Enhancement

Step 7:

Enter 9, if needed, to reach an outside phone line, then enter:
1-800-NEWTON9 (639-8669).

Step 8:

Tap Call. Your Newton automatically receives the system update.

Step 9:

Tap the Restart button on the screen to complete the installation.

You can verify the new version number by tapping on Extras, then tapping on Prefs. At the bottom of the window the Apple MessagePad 100 should display 1.3 (414313); the Apple MessagePad 110 should display 1.3 (344311).

U.S. Mail Service

You can receive the Newton System 1.3 Update by calling the Apple Order Center at (800) 315-2246 and requesting the update.

IMPORTANT: There is a shipping and handling charge for the update if it is sent by mail.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:

17 Jan 1997 - Updated online references.
25 Sep 1995 - Added additional system version to MessagePad 110.
06 Mar 1995 - Added keyword; minor technical updates and clarifications.
06 Feb 1995 - Corrected MessagePad 110 System Update version number.

Support Information Services

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Tech Info Library Article Number:17085



Tech Info Library

LaserWriter 16/600 PS: Disable NetWare If Not Needed (1/95)

Revised: 1/30/95
Security: Everyone

LaserWriter 16/600 PS: Disable NetWare If Not Needed (1/95)

=====

Article Created: 30 January 1995

TOPIC -----

If you are connected to a Novell network, and do not properly configure the LaserWriter 16/600 PS for Netware an IPX bindery request is broadcast every 30 seconds.

DISCUSSION -----

In order to prevent the bindery request, configure the printer for Netware or disable IPX using the Apple Printer Utility.

Disabling Netware

- 1) Place the Configuration switch in the UP position
- 2) Launch the Apple Printer Utility
- 3) Use Custom Switch option
- 3) Select Ethernet Port, NetWare, Mode, Off.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17086



Tech Info Library

PlainTalk: Additional Files Installed Description (2/95)

Revised: 2/16/95
Security: Everyone

PlainTalk: Additional Files Installed Description (2/95)

=====

Article Created: 30 January 1995
Article Reviewed/Updated: 16 February 1995

TOPIC -----

After installing System 7.5 from my Upgrade CD, I noticed the following files were also installed in my Extensions folder; InlineFilter, CEToolbox, and QuicKeys.

What are these files?

DISCUSSION -----

These four files are installed when PlainTalk is installed. A description of each follows:

InlineFilter - Provides in line text editing for non arabic languages such as Kanji or Chinese. It is related to AppleScript.

CEToolbox - Is used by CE Software's QuicKeys.

QuicKeys - A keyboard macro utility.

Article Change History:
16 Feb 1995 - Changed keyword and reviewed technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17087



Tech Info Library

VideoSync: Not Supported on Power Macintosh (3/95)

Revised: 3/28/95
Security: Everyone

VideoSync: Not Supported on Power Macintosh (3/95)

=====

Article Created: 30 January 1995
Article Reviewed/Updated: 28 March 1995

TOPIC -----

I have a Power Macintosh 6100AV and I want to tape the output of the screen. VideoSync is available for this purpose, but I cannot get it to work on the Power Macintosh 6100AV. Is there a newer version of this utility that works on the Power Macintosh AV computers?

DISCUSSION -----

There is no officially supported solution available for using VideoSync with a Power Macintosh AV system. But, there is a workaround that you may want to use.

You could use a third-party sense code adapter, such as the MacLiberty Adapter from Enhance Cable Technology. This adapter has an adjustable dial allowing it to send the Macintosh video card the correct sense codes for a variety of different screen configurations.

By selecting the appropriate setting for VGA or SVGA, a Power Macintosh AV system makes two video modes available, which will display at a 60 Hz scan rate. These video modes are the VGA resolution of 640x480, and the SVGA (also sometimes called VESA) resolution of 1024x768. These modes can be selected by clicking on the "Options" button in the Monitors control panel.

Because these video modes use a 60 Hz scan rate, these resolutions are suitable for filming and video taping. This enables you to use a sense code adapter as an alternative to the VideoSync software. Be aware that 60 Hz is definitely not suited for filming and that 60 Hz will create a visible, though slight, roll to the picture.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

28 Mar 1995 - Changed information on 60 Hz filming and taping.

03 Mar 1995 - Added information on using VGA and SVGA modes.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17090



Tech Info Library

Using A Macintosh While Placed On Its Side (9/95)

Revised: 9/29/95
Security: Everyone

Using A Macintosh While Placed On Its Side (9/95)

=====

Article Created: 30 January 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

I would like to position my Macintosh on its side. Will this cause a problem if I do this? I think as long as the air vents are not blocked and there is plenty of air flow, this would be OK. Also would there be some kind of mechanical problem, like the hard drive needing to be upright in order to spin properly?

DISCUSSION -----

Using a Macintosh on its side is not supported by Apple Computer. Thermal testing and safety testing were done with the unit in its intended position. Any variation on the intended use of the product is not supported.

If a customer decides to operate the unit on its side they would have to allow spacing for air flow from the fan(s) located inside of the case.

If the unit has an internal CD-ROM drive, it probably would not work because of the tray loading of CD discs. There would be no way of holding the CD in position when the tray moves back into the CD-ROM drive.

The operation of the hard drive assembly should not be affected by the change in orientation of the Macintosh.

Article Change History:
29 Sep 1995 - Made article more Macintosh generic.

Support Information Services

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Tech Info Library Article Number:17091



Tech Info Library

Newton OS: No Audible Beep Moving Sound Slider (1/95)

Revised: 1/30/95
Security: Everyone

Newton OS: No Audible Beep Moving Sound Slider (1/95)

=====

Article Created: 30 January 1995

TOPIC -----

If I have the volume level of the Newton OS at the lowest level, then I move the volume level slider, in the Extras drawer, to another level it does not make the corresponding audible beep.

DISCUSSION -----

If you use the use the Sound section of the Prefs instead of the Volume level in the Extras drawer, you get the audible beep.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17092



Tech Info Library

System 7.5, Adjustable Keyboard, and Key Caps (1/95)

Revised: 1/31/95
Security: Everyone

System 7.5, Adjustable Keyboard, and Key Caps (1/95)

=====

Article Created: 31 January 1995

TOPIC -----

Using Key Caps in System 7.5 with an Adjustable Keyboard, I only see the keypad, not the keyboard. Does the original software for this keyboard need to be installed?

DISCUSSION -----

No, the software for the Adjustable Keyboard was included in the System Update 3.0, which in turn is in System 7.5. The Installer for the Adjustable Keyboard software will put up a warning dialog box indicating that newer software already exists. The solution is to press a key on the keyboard and Key Caps will switch its display to it. In other words, if Key Caps brings up the keypad, press a key on the keyboard and it will then display it, and vice versa.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17093



Tech Info Library

Global Village Fax: Using Shortcuts Make Faxing Easier (1/95)

Revised: 1/31/95
Security: Everyone

Global Village Fax: Using Shortcuts Make Faxing Easier (1/95)

=====

Article Created: 31 January 1995

TOPIC -----

Each time I want to send a fax with my PowerBook 540c and Global Village Mercury modem, I have to open the Chooser and select Global Fax. Then when I want to print, I have to again open the Chooser and select my printer. Is there an easier way to do this?

DISCUSSION -----

When you make a selection between either Global Fax, or printer in the Chooser then close it, you save that setting as your default printer. By using this method you are changing the Default Printer every time.

An easier way would be to select your printer in the Chooser as the default printer. When you want to send a fax, first press and hold the Option key, then from the File menu select Print or Fax (Fax will appear if the application you are using supports this feature). After you have finished sending your fax, system software will automatically switch back to your default printer.

The Option key can also be changed to the Command key in the Chooser by selecting Global Fax and hitting the radio button Shortcut.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17094



Tech Info Library

Global Village: GlobalFax 2.5 Software Upgrade (3/95)

Revised: 3/23/95
Security: Everyone

Global Village: GlobalFax 2.5 Software Upgrade (3/95)

Article Created: 31 January 1995
Article Reviewed/Updated: 23 March 1995

TOPIC -----

Global Village has upgraded their GlobalFax software to version 2.5. This upgrade includes many bug fixes, and also provides better support for System 7.5 and QuickDraw GX.

DISCUSSION -----

GlobalFax 2.5 began shipping with Global Village TelePort and PowerPort modems, and OneWorld Fax and OneWorld Combo servers in January 1995. GlobalFax 2.5 software was rolled into bundles that contain Global Village modems in February, 1995 for PowerBook, and is scheduled for March, 1995 for Performa computers. For current GlobalFax users, special low-cost upgrades are available directly through Global Village at 800-736-4821 (select menu option #2). GlobalFax 2.5 Upgrades are priced at \$24.95. GlobalFax Cover Sheets are available separately for \$24.95.

NOTE: The GlobalFax 2.5 software update is NOT available from Apple Computer; it is available only from Global Village.

The GlobalFax 2.5 upgrade for TelePort serial modems replaces the Performa Receive upgrade previously offered by Global Village. With the new software, owners of Global Village TelePort Bronze for Performa fax modems can now add the original receiving, group address lists, and scheduling capabilities of Performa Receive along with all the new features of GlobalFax 2.5 for one-half the price of the original.

Article Change History:
23 Mar 1995 - Made minor technical updates.
01 Feb 1995 - Changed a small piece of information for clarity.

Support Information Services

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Tech Info Library Article Number:17095



Tech Info Library

DOS Compatibility Card: Printing is Slow in MS-DOS (3/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Printing is Slow in MS-DOS (3/95)

=====

Article Created: 1 February 1995
Article Reviewed/Updated: 1 March 1995

TOPIC -----

I have the DOS Compatibility Card for the Power Macintosh 6100 connected using Ethernet to a LaserWriter Pro 630. When I am printing from within any Windows applications, it prints without any problems. However, when I use MS-DOS applications, specifically FoxPro, it is extremely slow printing. It can take up to 10 minutes for something I send to the printer to start printing. I have changed settings in the Macintosh PC Spooler application from PCL to Epson emulation, but that has not increased the printing speed.

I am also concerned about the typeface used when printing from MS-DOS applications. The font looks like Geneva, and I need the font to be in a mono-spaced font like courier. How can I change this?

DISCUSSION -----

There are two possible solutions to increase the speed; connect the LaserWriter Pro 630 directly to the DOS Compatibility Card using a custom serial cable, or print from MS-DOS using a utility from LaserTools. Printing from MS-DOS to the LaserWriter Pro 630 over a network can be extremely slow.

Hardware Configuration
=====

In order to print to a LaserWriter 630 connected to the DOS Compatibility Card, a serial cable like the one below needs to be built.

Cable Pinouts No Handshaking

.	DB9	Din-8
(LaserWriter Pro 630)		(Macintosh)

```
-----
.   DCD 1----|
.   DTR 4----|-----1 HSKo (DTR)
.   RTS 7----|-----2 HSKi (CTS)
.   CTS 8----|
.   TxD 3-----5 RxD-
.   RxD 2-----3 TxD-
.   SIG GND 5-----|----4 SIG GND
.                   |----7 GPi
.   DSR 6 - No Connection
.   RI  9 - No Connection
```

This cable is a straight through connection without handshaking. Pins 1,4,7, and 8 on the DB9 are connected to pins 1 and 2 on the Din-8. Pin 5 on the DB9 is connected to both pins 4 and 7 on the Din-8. On this cable everything is grounded except for transmit and receive. The HSKo and HSKi on the Macintosh are not used, so a more straight forward cable like the one below can be used instead.

Alternate Cable Pinouts

```
-----
.           DB9                      Din-8
.           ---                      -----
DCD         1 No Connection           1 HSKo (DTR) No Connection
DTR         4 No Connection           2 HSKi (CTS) No Connection
RTS         7 No Connection
CTS         8 No Connection
TxD         3-----5 RxD-
RxD         2-----3 TxD-
SIG GND     5 No Connection           4 SIG GND No Connection
DSR         6 No Connection           7 GPi No Connection
RI          9 No Connection
```

Both of these cables work in Windows and MS-DOS. You can use these cables in Windows at either 19,200 or 9600 baud. However, you can only use 9600 baud when you are using MS-DOS.

Software Configuration

=====

Once the LaserWriter Pro 630 is connected to the Macintosh, you need to configure the printer port in the Macintosh OS as: COM1 for MS-DOS and Windows. Here is how to configure the printer port.

Mac Control Panel PC Setup

- 1) Open the PC Setup control panel
- 2) Change the Mapping for COM1 to Printer Port.

Note:

If you prefer you can use COM2 instead of COM1.

- 3) Click the Restart PC button
- 4) A dialog appears. Click OK to confirm you want to continue.
- 5) Close the PC Setup control panel

Printing From Windows

- 1) In Windows, double-click the Main Group icon
- 2) Double-click the Control Panels icon
- 3) Double-click the Printers icon
- 4) Install the appropriate driver for the LaserWriter Pro 630 printer. The printer drivers for Windows are provided with the LaserWriter Pro 630.

Note:

Consult the Windows or LaserWriter Pro 630 manual for driver installation.

- 5) After driver installation, click the "Connect" button in the Printers Control Panel.
- 6) Select the appropriate COM port, click the check box marked "Fast Printing Direct to Port"
- 7) Click the "Settings" button
- 8) Set the COM port parameters to:

- . Baud Rate: 19200
- . Data Bits: 8
- . Parity: None
- . Stop Bits: 1
- . Flow Control: Xon/Xoff

- 9) Click either "Set As Default Printer" or "Close" and Windows is setup to print to a DOS serial printer without having to go through emulation.

Printing in MS-DOS Using Printer Control Panel

=====

The best option printing in MS-DOS is to use a printer mode switching utility from LaserTools. The Printer Control Panel software was licensed and originally included in specific LaserWriters for Windows products. In LaserWriter printers not specifically marketed as Windows printers, this software was not included. If your LaserWriter Pro 630 did not come with the Printer Control Panel

software, you need to purchase a copy of it.

The product is a TSR (terminate and stay resident) called Printer Control Panel and works for both DOS and Windows environments. It supports the LaserWriter Pro 600 and 630, Personal LaserWriter NTR, and the LaserWriter Select 310.

The product checks all print jobs from the PC and downloads the appropriate emulation switching PostScript commands to the printer. Thus, the "automatic" emulation switching takes place at the PC-level and not at the LaserWriter, since the LaserWriter cannot automatically sense the type of jobs coming in.

Article Change History:

01 Mar 1995 - Corrected some of the pinout lables.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17096



Tech Info Library

LaserWriter 16/600 PS: Setting the IP Address from Bootp (2/95)

Revised: 2/1/95
Security: Everyone

LaserWriter 16/600 PS: Setting the IP Address from Bootp (2/95)

Article Created: 1 February 1995

TOPIC -----

On the LaserWriter 16/600 PS printer an incorrect IP address (0.0.0.0) is printed on the start-up page. The printer can be printed too, and pinged but the IP address cannot be extracted with bootp (in one situation, the Ethernet hardware address from another device was being associated with the IP address of the LaserWriter). The only way to set the IP address was manually.

DISCUSSION -----

The following is a list of the configuration files that used to set up the IP addressing through BootP to the Laserwriter 16/600.

#Make sure the IP address is the same in the "/etc/hosts" file and the the #BootP server configuration file

```
grep printtest /etc/hosts
130.43.4.210    printtest
```

#Set up the BootP server configuration file

```
%more /etc/bootptab
```

```
test:\
    bf=bp.conf:\
    hd=/etc:\
    hn:\
    ht=ether:\
    vm=rfc1048:\
    ha=1000E02B4531:\
    lp=130.43.4.210:\
    gw=130.43.4.0:\
```

```
#Set up a configuration file with the printer's Ethernet MAC address
# and the intended Ip address:
```

```
%more /etc/bp.conf
# printer_name      ethernet_address      IP_address
  testprint         10:00:e0:2b:45:31      130.43.4.210
```

```
#To see whether BootP server takes its configuration file or not
%tail /usr/adm/syslog
```

```
Jan 25 15:42:31 hp715 bootpd[1341]: reading "/etc/bootptab"
Jan 25 15:42:31 hp715 bootpd[1341]: read 1 entries from "/etc/bootptab"
Jan 25 15:53:24 hp715 bootpd[1374]: bootpd 2.1 #1.16.193.3: Wed Jul 7
```

```
#IP configuration for the BootP server
%ifconfig lan0
lan0: flags=63<UP,BROADCAST,NOTRAILERS,RUNNING>
      inet 130.43.4.220 netmask ffffffff broadcast 130.43.4.255
```

```
#Please make sure that BootP services are entered and running:
```

```
%netstat -a | grep bootp
udp          0          0 *.bootps          *.*
```

```
#/etc/services
bootps      67/udp      # Bootstrap Protocol Server
bootpc      68/udp      # Bootstrap Protocol Client
```

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17097



Tech Info Library

Apple MessagePad: System Update 1.3 Read Me File (2/95)

Revised: 2/6/95
Security: Everyone

Apple MessagePad: System Update 1.3 Read Me File (2/95)

=====

Article Created: 1 February 1995
Article Reviewed/Updated: 6 February 1995

TOPIC -----

This article contains the Read Me file for the Apple MessagePad System Update 1.3.

DISCUSSION -----

Newton System Update 1.3 for MessagePad 100 and MessagePad 110

=====

This document describes the feature enhancements of System Update 1.3 for the MessagePad 100 and the MessagePad 110, along with installation instructions. This System Update 1.3 is for all MessagePad 100 and MessagePad 110 owners in the United States and Australia.

Changes in This System Update:

=====

- Alarm windows are no longer closed when the Newton goes to sleep. This will prevent you from missing notifications that occur when your Newton is unattended.
- A recognition problem was corrected that may have caused accuracy of handwriting recognition to gradually degrade for some users.
- PCMCIA cards can now be recognized without a soft reset.
- You can use the '*' and '#' characters when dialing phone numbers while in the call slip. (For example, you can set the dialing prefix to '*70' to turn off call waiting if your phone system allows it.)
- If your handwriting style is set to "Printed Only" in Prefs, when you

switch to guest mode, then back again, your letter styles settings are restored.

- The PackageMover application is included to install the system update.

CHANGES TO THE MESSAGEPAD 100 SYSTEM SOFTWARE ONLY:

- When you have more than 30 items visible in the Extras Drawer, icons are displayed properly.
- The current date is at the top of all Calendar and To Do printouts and faxes.

CHANGES TO THE MESSAGEPAD 110 SYSTEM SOFTWARE ONLY:

- You can now dial a number using a modem if your location is set to a city in Japan.
- The reliability of erasing flash PCMCIA card memory has been improved.

Installing the System UPDATE 1.3

=====

- If you have a Newton MessagePad 100, install System Update 1.3 (414313). This version will install over the earlier MessagePad 100 System Update version 1.3 (414059).
- If you have a Newton MessagePad 110, install System Update 1.3 (345025). This version will install over the following earlier MessagePad 110 System Updates:
 - version 1.3 (344052)
 - version 1.3 (344138)
 - version 1.2.0

If you need to determine the system software version your MessagePad has:

- 1) Tap Extras to open the Extras Drawer.
- 2) Tap Prefs.

The system software version number is at the bottom of the screen.

Notes:

- Installing this system update will not affect your handwriting recognition and will not erase any information currently stored on your MessagePad.
- The Newton System Update 1.3 will not damage your MessagePad 110 if you have already installed it, and install it again, or if you install it on an original MessagePad or MessagePad 100.

If you have any questions about installing the System Update 1.3, contact the Apple Assistance Center at (800) SOS-APPL (767-2775).

If you have the Newton Connection Kit 2.0 for Macintosh or the Newton Connection Kit 2.0 for Windows, follow the instructions in "Using the Newton Connection Kit

2.0". If you have a Macintosh or a PC and a serial cable, follow the instructions in "Using a Serial Cable".

Using the Newton Connection Kit 2.0

=====

To install this update, you need the following:

- The System Update 1.3 for the MP100 and MP110 for Macintosh or the System Update 1.3 for the MP 100 and MP110 for Windows disk
- The Newton Connection Kit 2.0 for Macintosh or the Newton Connection Kit 2.0 for Windows
- One of the following:
 - a Macintosh computer with a 68030 processor or better, running system software version 7.1 or later
 - a PC-compatible computer with a 80386DX processor or better, running Windows 3.0 or later

If you have a Macintosh computer, see "Macintosh Users." If you have a PC running Windows, see "Windows Users."

Macintosh users

IMPORTANT: You should synchronize your MessagePad with the Newton Connection Kit or back up to a storage card (PCMCIA card) before you install this system update.

Follow these steps to transfer information:

1) Connect your MessagePad to your Macintosh.

Use the cable that came with your Newton Connection Kit. (It has mini DIN-8 connectors on both ends.) For more information, see the Newton Connection Kit 2.0 for Macintosh User's Guide.

2) Turn your MessagePad and your Macintosh on.

3) Insert the System Update 1.3 for MP 100 and MP110 for Macintosh disk into your Macintosh.

4) On your computer, double-click the disk icon to open it.

5) Click the PackageMover.pkg and drag it to the Newton Package Installer. The Newton Package Installer opens.

6) In the window that appears, select the type of connection you made, and click OK.

7) On your MessagePad, tap Extras to open the Extras Drawer, then tap Connection.

- 8) Select the kind of connection you made in the list of options.
The Newton Package Installer then installs the PackageMover.pkg.
- 9) On your computer:
 - If you have a Messagepad 100, drag the MP100 1.3(414313).pkg file to the Newton Package Installer.
 - If you have a MessagePad 110, drag the MP110 1.3(345025).pkg file to the Newton Package Installer.
- 10) In the window that appears, select the type of connection you made, and click OK.
- 11) On your MessagePad tap Extras to open the Extras Drawer, then tap Connection.
- 12) Select the kind of connection you made in the list of options.
The selected System Update 1.3 file is installed on your MessagePad.
A message appears saying "New system software has been installed.
Please tap Restart".
- 13) Tap Restart.
- 14) On your MessagePad, tap Extras to open the Extras Drawer.
- 15) Tap Prefs.
The version number at the bottom of the screen should be 1.3 (414313) if you installed the software successfully on a MessagePad 100, or 1.3 (345025) if you installed the software successfully on a MessagePad 110.

Windows users
=====

IMPORTANT: You should synchronize your MessagePad with the Newton Connection Kit or back up to a storage card (PCMCIA card) before you install this system update.

Follow these steps to transfer information:

- 1) Connect your MessagePad to your PC.
Use the cable that came with your Newton Connection Kit. (a 9-pin serial connector at one end and a mini DIN-8 connector at the other.)
If you have a 25-pin serial port, use the adapter that came with your Newton Connection Kit. For more information, see the Newton Connection Kit 2.0 for Windows User's Guide.
- 2) Turn your PC and MessagePad on.
- 3) Insert the System Update 1.3 for MP 100 and MP110 for Windows disk into your PC.

- 4) On your PC, double-click the File Manager icon to open it, and select the A or B drive, depending on which drive the disk is in.
- 5) Double-click the NEWTINST.EXE icon. The Newton Package Installer opens.

Note: Follow steps 6-9 exactly as stated. You must always select Install Package on your PC first, before tapping Connection on your MessagePad.

- 6) From the File menu, choose Install Package.
- 7) Select PCKGEMVR.PKG to install, and click OK.
- 8) On your MessagePad, tap Extras to open the Extras Drawer, then tap Connection.
- 9) Tap DOS or Windows PC in the list of options, then tap Connect. PCKGEMVR.PKG is installed on your MessagePad.
- 10) From the File menu, choose Install Package.
- 11) Select a System Update 1.3 file to install, and click OK.
 - If you have a MessagePad 100, select the MP100.pkg file.
 - If you have a MessagePad 110, select the MP110.pkg file.
- 12) On your MessagePad, tap Extras to open the Extras Drawer, then tap Connection.
- 13) Tap DOS or Windows PC in the list of options, then tap Connect. The selected System Update 1.3 file is installed on your MessagePad. A message appears saying "New system software has been installed. Please tap Restart".
- 14) Tap Restart.
- 15) On your MessagePad, tap Extras to open the Extras Drawer.
- 16) Tap Prefs. The version number at the bottom of the screen should be 1.3 (414313) if you installed the software successfully on a MessagePad 100, or 1.3 (345025) if you installed the software successfully on a MessagePad 110.

USING A SERIAL CABLE =====

To install this update, you need the following:

- the System Update 1.3 for MP 100 and MP110 for Macintosh or for Windows disk
- One of the following:

- a Macintosh computer with a 68030 processor or better, running system software version 7.1 or later, and a serial cable (mini DIN-8 connectors on both ends.)
- a PC-compatible computer with a 80386DX processor or better, running Windows 3.0 or later, and serial cable (a 9-pin serial connector at one end and a mini DIN-8 connector at the other, if you have a 25-pin serial port, use an adapter).

If you have a Macintosh computer, see "Macintosh Users." If you have a PC running Windows, see "Windows Users."

Macintosh users

IMPORTANT: You should synchronize your MessagePad with the Newton Connection Kit or back up to a storage card (PCMCIA card) before you install this system update.

Follow these steps to transfer information:

- 1) Connect your MessagePad to your Macintosh.
Plug one end of a serial cable (mini DIN-8 to mini DIN-8) into the communication port on your MessagePad and plug the other end into the printer or modem port on your Macintosh.
- 2) Turn your Macintosh and MessagePad on.
- 3) Insert the System Update 1.3 for MP 100 and MP110 for Macintosh disk into your Macintosh.
- 4) On your computer:
 - If you have a MessagePad 100, double-click the System Update 1.3 for MP 100 for Macintosh disk icon to open it.
 - If you have a MessagePad 110, double-click the System Update 1.3 for MP110 for Macintosh disk icon to open it.
- 5) Drag the Apple Modem Tool icon to your System Folder.
A message appears telling you that the file will be placed in the Extensions folder.
- 6) Click OK.
Apple Modem Tool is placed in the Extensions Folder within your System Folder.
- 7) Click on PackageMover.pkg and drag it to Newton Package Installer.
The Newton Package Installer opens.
- 8) In the window that appears, select the serial connection you made, and click OK.
- 9) On your MessagePad, tap Extras to open the Extras Drawer, then tap Connection.

- 10) Select the kind of connection you made in the list of options.
The Newton Package Installer then installs the PackageMover.pkg from the disk.
- 11) On your computer, select a System Update 1.3 file to install, and drag it to Newton Package Installer.
 - If you have a MessagePad 100, select the MP100 1.3(414313).pkg file.
 - If you have a MessagePad 110, select the MP110 1.3(345025).pkg file.
- 12) In the window that appears, select the type of connection you made, and click OK.
- 11) On your MessagePad, tap Extras to open the Extras Drawer, then tap Connection.
- 12) Select the kind of connection you made in the list of options.
The selected System Update 1.3 file is installed on your MessagePad. A message appears saying "New system software has been installed. Please tap Restart".
- 14 Tap Restart.
- 15 On your MessagePad, tap Extras to open the Extras Drawer.
- 16 Tap Prefs. The version number at the bottom of the screen should be 1.3 (414313) if you installed the software successfully on a MessagePad 100, or 1.3 (345025) if you installed the software successfully on a MessagePad 110.

Windows users

IMPORTANT: You should synchronize your MessagePad with the Newton Connection Kit or back up to a storage card (PCMCIA card) before you install this system update.

Follow these steps to transfer information:

- 1) Connect your MessagePad to your PC.
Use a cable that has a 9-pin serial connector at one end and a mini DIN-8 connector at the other. (If you have a 25-pin serial port, use a 9-pin to 25-pin adapter, along with the above cable.) Choose an available serial port on your PC and connect the end of the cable with 9 holes to the appropriate port. Plug the other end of the cable into the MessagePad's communication port.
- 2) Turn your PC and your MessagePad on.
- 3) Insert the System Update 1.3 for MP 100 and MP110 for Windows disk into your PC.
- 4) On your PC, double-click the File Manager icon to open it, and select

the A or B drive, depending on which drive the disk is in.

- 5) Double-click the NEWTINST.EXE icon.
The Newton Package Installer opens.

Note: Follow steps 6-9 exactly as stated. You must always select
Install Package on your PC first, before tapping Connection on
your MessagePad.

- 6) From the File menu, choose Install Package.
- 7) Select PCKGEMVR.PKG to install, and click OK.
- 8) On your MessagePad, tap Extras to open the Extras Drawer, then tap
Connection.
- 9) Tap DOS or Windows PC in the list of options, then tap Connect.
PCKGEMVR.PKG is installed on your MessagePad.
- 10) From the File menu, choose Install Package.
- 11) Select a System Update 1.3 file to install, and click OK.
 - If you have a MessagePad 100, select the MP100.pkg file.
 - If you have a MessagePad 110, select the MP110.pkg file.
- 12) On your MessagePad, tap Extras to open the Extras Drawer, then tap
Connection.
- 13) Tap DOS or Windows PC in the list of options, then tap Connect.
The selected System Update 1.3 file is installed on your MessagePad.
A message appears saying "New system software has been installed.
Please tap Restart".
- 14) Tap Restart.
- 15) On your MessagePad, tap Extras to open the Extras Drawer.
- 16) Tap Prefs. The version number at the bottom of the screen should
be 1.3 (414313) if you installed the software successfully on a
MessagePad 100, or 1.3 (345025) if you installed the software
successfully on a MessagePad 110.

Article Change History:

06 Feb 1995 - Corrected version number for the MessagePad 110.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17100



Tech Info Library

AGE Logic Incorporated (12/95)

Revised: 12/13/95
Security: Everyone

AGE Logic Incorporated (12/95)

=====

Article Created: 1 February 1995
Article Reviewed/Updated: 13 December 1995

AGE Logic Incorporated

12651 High Bluff Drive
San Diego, CA 92130

Telephone: 619-755-1000

Fax: 619-755-3998

WWW: <http://www.age.com>

Company Profile:

Develops and markets XWindows server software for Windows and Macintosh computers. (Developing Xwindows server for Macintosh for Apple.)

Support Information Services

Copyright 1995 Apple Computer, Inc.

Tech Info Library Article Number:17102



Tech Info Library

Security Lock Ports on Apple Displays (2/95)

Revised: 2/1/95
Security: Everyone

Security Lock Ports on Apple Displays (2/95)

Article Created: 1 February 1995

TOPIC -----

What type of security lock ports do the Apple displays have and where are they located?

DISCUSSION -----

Security lock ports are used to physically lock Apple displays to a desk or other stationary object using some kind of cable locking system.

Apple generally uses four different types of security lock ports on their hardware products. They are as follows:

PORT TYPE	DESCRIPTION
Large rectangular port	This security port is a rectangular port that measures approximately 6mm x 35mm at the opening.
Small rectangular port	This is a slightly smaller rectangular port. It measures approximately 6mm x 22mm at the opening.
1/4" Mini-slot port	This is the most recent security lock port. This port is a small, 3mm x 7mm, opening without latches of any kind. It uses a different type of security device than the previous security lock ports.
Cable Slotted port	This is a plastic loop on the bottom of the unit that is intended to have a security cable fed through it.

Use the following chart to determine which type of security device you need for your Apple display.

NOTE Generally, security lock ports are located on the back panels of most Apple displays or, in the case of the cable slotted port, on the bottom panels.

PRODUCT DESCRIPTION -----	PORT TYPE -----	LOCATION (View From Rear) -----
12-Inch Monochrome	Small rectangular port	Lower Left Corner
12-Inch RGB	Small rectangular port	Lower Left Corner
Performa Display	No Security	No Security
Performa Plus Display	No Security	No Security
Hi-Resolution Monochrome	Small rectangular port	Between power & video
Hi-Resolution RGB	Small rectangular port	Between power & video
Macintosh Color Display	Cable slotted port	Security On Base
Portrait Display	Small rectangular port	Lower Right Corner
16-Inch Color	Small rectangular port	Lower Left Corner
Two-Page Monochrome	Small rectangular port	Lower Left Corner
21-Inch Color	Small rectangular port	Lower Left Corner
Apple Basic Color	No Security	No Security
AudioVision 14-Inch	Cable slotted port	Security On Base
Apple Color Plus	No Security	No Security
Multiple Scan 15-Inch	Cable slotted port	Right Side-Middle
Multiple Scan 17-Inch	Small rectangular port	Lower Left Corner
Multiple Scan 20-Inch	Cable slotted port	Security On Base

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17103



Tech Info Library

Apple Mobile Messaging System: Description (7/95)

Revised: 7/6/95
Security: Everyone

Apple Mobile Messaging System: Description (7/95)

=====

Article Created: 1 February 1995
Article Reviewed/Updated: 06 Jul 1995

TOPIC -----

This article provides an overview of the Apple Mobile Message System.

DISCUSSION -----

Overview

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The Apple Mobile Message System is an easy-to-use wireless messaging system that lets users of Apple PowerBook computers, Apple MessagePad units, and DOS Windows-compatible notebook computers manage, while mobile, the following types of communications:

- Telephone
- Voicemail
- Fax
- Paging
- e-mail

This all-in-one-box solution helps mobile computing professionals stay in touch and informed by providing all of the necessary hardware, software and service components in one package.

The contents of the Apple Mobile Message System include:

- The Apple Notification Service, a "one-stop" activation, billing, and support program
- A PageCard wireless message Type II PCMCIA card receiver with LCD screen from Socket Communications
- Update! receive software and Notify! send software from Ex Machina

- DateBook and TouchBase Pro Bundle software from Adobe Systems
- Message transmission via the PageNet nationwide wireless network
- Wireless gateway services by the National Dispatch Center (NDC)

How It Works

=====

Users of the Mobile Message System receive a PageCard dual-mode display pager from Socket Communications that lets them:

Multiple Sources

Receive and view wireless messages from multiple sources including the Internet

Use when Inserted in PowerBook

Receive, view, store, and transfer messages when the PageCard is inserted in their 500-series PowerBook, where they can:

- View and respond to messages on larger display
- Have their mail automatically uploaded to their PowerTalk universal mailbox
- Receive automatic calendar updates to Aldus DateBook via AppleScript
- Send pages via PowerTalk AppleMail and a modem

Use Integrated Send/Receive Application

Receive, view, and send messages with their Apple MessagePad (with a modem) using integrated send/receive application from Ex Machina

Use IBM PC or Compatible

Receive, view, and send messages on an IBM PC or compatible notebook computer (with a PCMCIA slot and a modem) running Windows using integrated send/receive application from Ex Machina

Notification Services

=====

To take advantage of the capabilities of the Apple Mobile Message System, users must sign up with a vendor that routes transmissions to them. Apple is offering its own low-cost service (as part of the Mobile Message System), the Apple Notification Service. The service is available for a basic monthly fee of \$19.95.

Information about how to subscribe to the Apple Notification Service can be found in two places: in the Apple Notifications Service guide and in the Activation flyer, both of which are included in the package.

As part of the basic Apple Notification service, customers receive a personal

800 number through which they can receive:

- Numeric messages
- Alphanumeric (full text) messages
- Voice mail messages
- Fax documents

The Notification Service routes the numeric and alphanumeric messages directly to customers' PageCards and notifies them that they have received voice mail messages and fax documents.

As part of the basic Apple Notification Service, customers receive the following:

Message Notification

- Nationwide roaming coverage
- Personal 800 number message center
- No separate PIN number needed
- Toll-free fax and voice mailboxes, 30 minutes of use
- 60 messages with 80 alphanumeric characters
- Internet, page send s/w or phone keypad access
- Appoint/calendar updates for DateBook
- Optional operator or on-line access

Internet Notification

- Address is your personal 800 number—e.g. 18008772961@NOTIFICATION.COM
- Message includes sender, subject and text up to 500 characters

QuickMail Notification

- Optional gateway software from Ex Machina: QM-Notify!
- Allows other QuickMail users to send wireless messages to your pager, PageCard
- Receive mail headers and/or body text of message

Users who purchase the Apple Notification Service also have the opportunity to subscribe to the following optional notification services for an additional fee:

Call Notification

All the features of Message Notification, plus

- Live call routing to any desk or cell phone
- Page notification of live call
- Optional outbound calling

Securities Notification (available April 1995)

- Personally selected securities (stocks, bonds, and options) quotes
- Current quotes based on chosen parameters (e.g., price delta, time, volume, high, low, close)

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- Breaking news on selected companies
- Updates to portfolio applications are possible

News Notification (available April 1995)

- Five news categories: headline, business, weather, sports, entertainment
- Optional routing, via AppleScript to news folders on the PowerBook

Bundled Items

=====

Included in the Mobile Message System are the following items:

Physical Device

- Socket PCMCIA T2 Display PageCard
- Small carrying case for card

System Software

- System 7.5 with PowerTalk
- Send/Receive gateways for PowerTalk from Ex Machina
- Send/Receive software for Newton and Windows from Ex Machina
- Other gateways (CompuServe, FaxSTF, QuickMail, Internet)

Application Software

- PowerBook: Aldus/Adobe DateBook/TouchBase

Services

- Apple Notification Service
- Personal 800 number
- Toll free fax mail box
- Receive short messages from the Internet
- Optional nationwide roaming
- Calendar updates to DateBook

Other items in the bundle

- One Apple integrated manual to cover PageCard, software for three platforms
- System 7.5 Upgrade Guide, Apple Guide Help
- Apple Notification activation flyer, Services manual, Quick Reference Card
- Apple Notification Service manual

System Requirements

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To use the Apple Mobile Message System, users will need one or more of the following:

- An Apple PowerBook 500 series computer with at least 8MB of RAM and an Apple

PowerBook PCMCIA Expansion Module

- An Apple Newton MessagePad 100 or 110 personal digital assistant
- An IBM or IBM-compatible computer with Microsoft Windows version 3.1 or later, at least 4MB of RAM, a Type II PCMCIA expansion slot, and Card Services software version 2.0 or later
- A Hayes-compatible modem (if you want to send messages)

Availability & Pricing

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The Apple Mobile Message System may be purchased only at authorized Apple Value Added Resellers and select Apple authorized resellers.

The ApplePrice for the Apple Mobile Message System (M3516LL/A) is \$549. The basic monthly fee for the Apple Notification Service is \$19.95.

For more information and/or a list of authorized resellers, customers should call the Apple Mobile Message System fax-back number 1-800-510-4955.

Part Number	Description	ApplePrice
M3516LL/A	Apple Mobile Message System	\$549.00
.	Apple Notification Service	\$ 19.95/month

Article Change History:

06 Jul 1995 - Corrected typos.

07 Apr 1995 - Made minor technical updates; reformatted.

Support Information Services

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Tech Info Library Article Number:17104



Tech Info Library

SCSI Manager 4.3: Purpose of Extension File (9/96)

Revised: 9/4/96
Security: Everyone

SCSI Manager 4.3: Purpose of Extension File (9/96)

Article Created: 1 February 1995
Article Reviewed/Updated: 4 September 1996

TOPIC -----

I understand that the SCSI Manager 4.3 is part of the ROM in my Power Macintosh computer. After I upgraded to System 7.5, I noticed an extension called SCSI Manager 4.3 in the Extensions folder. What is this for?

DISCUSSION -----

SCSI Manager 4.3 is part of the ROM in all versions of the Power Macintosh computer. System 7.5, when installed from the upgrade CD-ROM disc, places the extension in your Extensions folder, but it is not required.

The absence or presence of the SCSI Manager 4.3 extension has no bearing on the performance of your Power Macintosh computer.

The extension normally provides the benefits of the new SCSI Manager to computers that do not have it in their ROM.

The SCSI Manager 4.3.1 extension from System 7.5 Update 1.0 contains software fixes needed only on 68040-based Macintosh computers and the PowerPC Upgrade Card. The 68040-based PowerBook computers do NOT need SCSI Manager 4.3.1 extension because PowerBook computers do not support SCSI Manager 4.3.

Mac OS 7.5.3 and later have the SCSI Manager 4.3 functionality included in the system software, so the extension is not needed.

Article Change History:

04 Sep 1996 - Updated article to include System 7.5.3.
30 Mar 1995 - Added information on System 7.5 Update 1.0.
22 Feb 1995 - Added keyword; made minor technical updates.

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Tech Info Library Article Number:17107



Tech Info Library

Intelligent Battery Recondition Software Troubleshooting (2/95)

Revised: 2/1/95
Security: Everyone

Intelligent Battery Recondition Software Troubleshooting (2/95)

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Article Created: 1 February 1995

TOPIC -----

When I run the Intelligent Battery Recondition application on my PowerBook 540c I get the message "Status: Please attach AC adapter." I already plugged in the AC power adapter, but the installer still will not go past this message. What could be the problem?

DISCUSSION -----

The Intelligent Battery Recondition application will not run if it cannot detect any AC power. The problem you describe indicates that your PowerBook 500 Series AC power adapter may be the reason you cannot charge your battery.

At this point, you may want to have the AC power adapter voltage checked by an authorized Apple Service Provider.

If you have another AC adapter, try to run the Intelligent Battery Recondition application again using this AC power adapter. If the Intelligent Battery Recondition application runs without getting the same error message, you will know that the problem is with your other AC power adapter, not with your battery.

Support Information Services

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Tech Info Library Article Number:17108



Tech Info Library

Adobe PhotoShop: Determining Scratch Disk Size (2/95)

Revised: 2/2/95
Security: Everyone

Adobe PhotoShop: Determining Scratch Disk Size (2/95)

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Article Created: 2 February 1995

TOPIC -----

I am using Adobe PhotoShop 3.0 and when I open a file I get an error message that reads "The scratch disk is full". What is the problem?

DISCUSSION -----

When opening a file, PhotoShop creates a scratch disk three to four times the size of the actual file. For example, if you try and open a 10MB file, the scratch disk it attempts create ranges from 30MB to 40MB. There may not be enough acutual room on the hard disk to open large files. If you have an external hard drive, with enough storage space, you can set the prefrences in PhotoShop to create the scratch disk using a different drive with more storge space. If the problem persists you need to talk to Adobe Technical Support.

Support Information Services

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Tech Info Library Article Number:17110



Tech Info Library

StyleWriter: Using Manual Feed With StyleWriter II Driver (2/95)

Revised: 2/2/95
Security: Everyone

StyleWriter: Using Manual Feed With StyleWriter II Driver (2/95)

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Article Created: 2 February 1995

TOPIC -----

I am using a StyleWriter with the StyleWriter II printer driver. When I try to print an envelope, the manual feed option is dimmed. How do I use the manual feed option?

DISCUSSION -----

The StyleWriter II printer driver is backward compatible to support the original StyleWriter. Starting with System 7.1.2, the StyleWriter II printer driver is the only driver installed in the Macintosh OS. In order for the printer driver to activate the manual feed option, you must first print to the StyleWriter using the sheet feeder option. After this procedure, the printer driver recognizes that an original StyleWriter is attached to your Macintosh, and the next time you print the manual feed option is available.

Support Information Services

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Tech Info Library Article Number:17111



Tech Info Library

DOS Compatibility Card: Bit-Depth Causes Slow AVI Movies (2/95)

Revised: 2/2/95
Security: Everyone

DOS Compatibility Card: Bit-Depth Causes Slow AVI Movies (2/95)

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Article Created: 2 February 1995

TOPIC -----

I have a DOS Compatibility Card for the Power Macintosh 6100, and I am trying to use AVI files on it. However, when I try playing these files, they drop both frames and lose sound. The same files work fine on a IBM 486 DX2-50 computer. How can I improve performance? Would performance increase using QuickTime for Windows 2.0?

DISCUSSION -----

The probable cause of the problem is that the AVI movie was compressed as a 16-bit (32,000 colors) or 24-bit (16 million colors) movie and you are trying to play it back on an unaccelerated 8-bit display (256 colors), and the on-the-fly conversion taking place is slowing down the movie.

You can try converting the movie to 8-bit Video for Windows or converting it to QuickTime for Windows 2.0 with the AVI converter, for better frame rate and audio performance. One application that works well for this type of conversion is Adobe Premiere for Windows.

QuickTime for Windows 2.0 is a for-sale product available from APDA, Apple Software Licensing, and online through ZiffNet/Mac and ZiffNet. ZiffNet/Mac and ZiffNet are the online information services all about computing, from Ziff-Davis Interactive, hosted on the CompuServe Information Service. Ziffnet/Mac members can type GO MACSTORE and ZiffNet members can type GO STORE to download the new version of QuickTime for Windows.

Support Information Services

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Tech Info Library Article Number:17112



Tech Info Library

Color StyleWriter Pro: Changes in Printer Driver v1.5.2 (2/95)

Revised: 2/2/95
Security: Everyone

Color StyleWriter Pro: Changes in Printer Driver v1.5.2 (2/95)

=====

Article Created: 2 February 1995

TOPIC -----

This article describes the changes made in Color StyleWriter Pro v 1.5.2 printer driver.

DISCUSSION -----

Version 1.5.2 of the Color StyleWriter Pro printer driver fixes two problems found in version 1.5.

- Fixes a problem where Power Macintosh computers would freeze when trying to print to the Color StyleWriter Pro the very first time. The freeze would typically occur while printing the calibration page.
- Fixes a problem involving certain Macintosh computers with 32MB or more of RAM installed would generate an error type -39 when trying to print to a Color StyleWriter Pro.

The Color StyleWriter Pro v1.5.2 update can be found on the online services Apple publishes software updates on.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Support Information Services

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Tech Info Library Article Number:17113



Tech Info Library

MacX 1.2: Features, Benefits, and Product Details (8/95)

Revised: 8/7/95
Security: Everyone

MacX 1.2: Features, Benefits, and Product Details (8/95)

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Article Created: 2 February 1995
Article Reviewed/Updated: 7 August 1995

TOPIC -----

This article describes the MacX 1.2 product's features, benefits, system requirements, product details, and ordering and licensing information.

DISCUSSION -----

MacX is an X window System display server for the Apple Macintosh and A/UX operating systems. The server lets users in multivendor environments run network-based X client applications on the same Macintosh desktop.

Macintosh users can access X applications by choosing commands from a pull-down menu that displays the X applications in easy-to-use Macintosh windows, and the menu is easily customized. With MacX, users can cut and paste text and color graphics between Macintosh and X client applications.

The X Window System was developed by researchers from the Massachusetts Institute of Technology (MIT) and others from the computer industry.

MacX demonstrates Apple Computer's commitment to industry standards. It complies with Version 11, Release 4 standards and conventions set by the MIT X Consortium. This means that MacX is compatible with all X client applications that follow the X Window System standards.

MacX provides complete X Window system functionality combined with Macintosh ease-of-use for both new and experienced X Window System users. It allows MIS managers to integrate Macintosh computers into an organization that operates in a standardized multivendor setting.

Features and Benefits
=====

- An X Window System display server for Macintosh computers that complies with X Window System standards.
- Access to all Macintosh applications.
- Text and color graphics copy-and-paste capability.
- Ease-of-use including Macintosh windows.
- Support for Macintosh system software version 7 and later.
- Support for color and grayscale applications.
- Support for multiple monitors.
- Support for multiple networking protocols.
- Industry standard Backing Store/Save Under capabilities.
- Provides industry-standard X applications in a multivendor, networked environment.
- Allows users to choose from many easy-to-use Macintosh applications that run alongside X client applications.
- Allows users to move text and image data between Macintosh and X client applications, using familiar copy-and-paste commands and the Macintosh clipboard.
- Allows users to customize frequently accessed X client applications by using pull-down menus. Displays X applications in familiar Macintosh windows for easy moving and resizing.
- Allows MacX users to take advantage of System 7 features and its intuitive interface.
- Displays 256 colors or shades of gray from a palette of 16 million colors.
- Allows client applications to display on multiple screens.
- Permits full use of all major networking protocols including TCP/IP, DECnet, and AppleTalk.
- Allow users to regulate the frequency of window updates for improved performance.

System Requirements and Product Details

=====

Required Equipment

To use MacX you need:

- Any Macintosh computer
- At least 2 MB of memory (5 MB or more recommended)
- System software version 6.0.5 or later
- At least two floppy disk drives, one of which should be an Apple FDHD (for version 6.0.5 or later software)
- A hard disk (for version 7.0 or later software)
- A network connection, using the LocalTalk port or an Ethernet connection

Optional Equipment

You may also want to add:

- An Apple Ethernet NB Card or the equivalent
- A Macintosh 8•24 Graphics card
- An AppleColor High-Resolution RGB Monitor or the equivalent (multiscreen configurations are supported)
- An Apple 16 inch or 21 inch Color Monitor

- A three-button mouse (available from third-party companies)

Standard Conformance

MacX complies with the following standards:

- X Window System, Version 11, Release 4 (includes support for Version 11, Release 4 shape extension)
- X11 protocols
- X logical font description (XLFD) protocol
- ICCCM window management

Network Configurations

MacX takes advantage of the Macintosh Communications Toolbox, allowing many simultaneous connections over different transport protocols. MacX includes:

- MacTCP (Apple's implementation of the TCP/IP protocols)
- AppleTalk ADSP
- DECnet (offered by third-party companies)

MacX Window Manager

MacX includes a built-in window manager that complies with the ICCCM standard. Users can control client applications in windows on their desktops using Macintosh user interface capabilities. The window manager provides:

- Title bars
- Close boxes
- Other Macintosh window controls

Font Manager

MacX includes a font compiler that converts font files from bitmap distribution format (BDF) to the MacX server's internal format. In addition, MacX can access Macintosh TrueType and screen bitmap fonts resident in the Macintosh system. MacX includes the following font families:

- Charter
- Clean
- Courier
- Helvetica
- Lucida (Lucida Bright and Lucida Tupewriter)
- New Century Schoolbook
- Symbol
- Times

Foreign Window Manager Support

MacX includes the capability for use of foreign window managers such as mwm (by OSF/Motif) and twm. A special Macintosh window is dedicated to displaying client applications controlled by a foreign window manager. This window can share the desktop with other client applications controlled by the built-in MacX Window Manager.

Three-button Mouse Support

MacX emulates second and third mouse buttons through the keyboard. Three-button mouse devices are available from third-party companies.

DECWindows Support

MacX is fully compatible with DECWindows conventions for remote startup of applications and for copying and pasting between Macintosh and DECWindows applications. (See a Digital Equipment Corporation representative for more information on PATHWORKS, Digital's network communications package for Macintosh computers, which includes MacX.)

Color Support

MacX supports 8-bit color and grayscale video cards. Users have access to 256 distinct colors or shades of gray from a palette of 16 million colors. MacX supports the following Apple video cards:

- 8•24 Card
- The built-in video card on Macintosh computers (like the Macintosh IIfx)

Ordering and Licensing Information

MacX 1.2

Order Number M0108LL/D, you will receive:

- MacX software and fonts
- MacX Communications software
- MacX Installation Guide
- MacX User's Guide
- MacTCP Connection Tool Module
- MacTCP Administrator's Guide
- MacX Release Notes

MacX Right-to-Copy License

Order Number M8102LL/A

This license grants the right to copy MacX to one additional system.

MacX 1.2 Update Product

Order Number M01197LL/B

With your order you receive software and manuals to update any version of MacX to version 1.2

MacX Manual Set

Order Number M0602LL/C

With your order you receive additional manuals for licensed systems.

- MacX Installation Guide
- MacX User's Guide

- MacTCP Administrator's Guide

MacX Right-to-Update License

Order Number M8103LL/A

This license grants the right to update any version of MacX to one additional system.

For information about licensing, contact:

ABS Licensing Department

Apple Computer, Inc.

1 Infinite Loop, M/S: 35-AE

Cupertino, CA 95014

408-974-2320

Article Change History:

07 Aug 1995 - Made minor corrections; reformatted.

Support Information Services

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Tech Info Library Article Number:17117



Tech Info Library

Power Macintosh: Bus Speeds (4/97)

Revised: 4/29/97
Security: Everyone

Power Macintosh: Bus Speeds (4/97)

Article Created: 3 February 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

What are the bus speeds of the Power Macintosh computers?

DISCUSSION -----

Below are the processor and bus speeds for the Power Macintosh computers:

Begin_Table

Computer	Processor Speed	Bus Speed
Power Macintosh 4400/200	200 MHz	40 MHz
Power Macintosh 5200/75	75 MHz	37.5 MHz
Macintosh Performa 5200 Series		
Power Macintosh 5260/100 & 5300/100	100 MHz	40 MHz
& Performa 5300 Series		
Macintosh Performa 6200 Series	75 MHz	37.5 MHz
Macintosh Performa 6290CD, Macintosh Performa 6300CD Series, Macintosh Performa 6320CD	100 MHz	40 MHz
Power Macintosh 5400/120	120 MHz	40 MHz
Power Macintosh 5400/180	180 MHz	40 MHz
Power Macintosh 5400/200	200 MHz	40 MHz
Power Macintosh 6400/200	200 MHz	40 MHz

Macintosh Performa 6400/180	180 MHz	40 MHz
Macintosh Performa 6400/200	200 MHz	40 MHz
Macintosh Performa 6360/100	160 MHz	40 MHz
Power Macintosh 5500/225	225 MHz	50 MHz
Power Macintosh 6500/225		
Power Macintosh 6500/250	250 MHz	50 MHz
Power Macintosh 6100/60	60 MHz	30 MHz
Power Macintosh 6100/66	66 MHz	33 MHz
Power Macintosh 7100/66	66 MHz	33 MHz
Power Macintosh 7100/80	80 MHz	40 MHz
Power Macintosh 7200/75	75 MHz	37.5 MHz
Power Macintosh 7200/90	90 MHz	45 MHz
Power Macintosh 7200/120	120 MHz	40 MHz
Power Macintosh 7300/166	168 MHz	48 MHz
Power Macintosh 7300/180	180 MHz	45 MHz
Power Macintosh 7300/200	200 MHz	50 MHz
Power Macintosh 7500/100	100 MHz	50 MHz
Power Macintosh 7600/120	120 MHz	40 MHz
Power Macintosh 7600/132	132 MHz	44 MHz
Power Macintosh 8100/80	80 MHz	40 MHz
Power Macintosh 8100/100	100 MHz	33 MHz
Power Macintosh 8100/110	110 MHz	36.67 MHz
Power Macintosh 8500/120	120 MHz	40 MHz
Power Macintosh 8500/132	132 MHz	44 MHz
Power Macintosh 8500/150	150 MHz	50 MHz
Power Macintosh 8500/180	180 MHz	45 MHz
Power Macintosh 8600/200	200 MHz	50 MHz

Power Macintosh 9500/120	120 MHz	40 MHz
Power Macintosh 9500/132	132 MHz	44 MHz
Power Macintosh 9500/150	150 MHz	50 MHz
Power Macintosh 9500/180MP	180 MHz	45 MHz
Power Macintosh 9500/200	200 MHz	50 MHz
Power Macintosh 9600/200	200 MHz	50 MHz
Power Macintosh 9600/200MP	200 MHz	50 MHz
Power Macintosh 9600/233	233 MHz	46.6 MHz
PowerBook 1400cs	117 MHz	25 MHz
PowerBook 1400c	117 MHz	25 MHz
PowerBook 1400c	133 MHz	25 MHz
PowerBook 2300c	100 MHz	33 MHz
PowerBook 5300	100 MHz	33 MHz
PowerBook 5300cs	100 MHz	33 MHz
PowerBook 5300c	100 MHz	33 MHz
PowerBook 5300ce	117 MHz	33 MHz
=====	=====	=====

End_Table

This article was published in the Information Alley on 24 June 1996.

Article Change History:

29 Apr 1997 - Reviewed for technical accuracy; added 7300/166.

24 Feb 1997 - Added new computers.

06 Dec 1996 - Added PowerBook 1400 series.

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Tech Info Library Article Number:17121



Tech Info Library

ImageWriter II: Single Sheets of Paper Require Manual Feed 2/95

Revised: 2/3/95
Security: Everyone

ImageWriter II: Single Sheets of Paper Require Manual Feed 2/95

=====

Article Created: 3 February 1995

TOPIC -----

Whenever I try printing to my ImageWriter II using single sheets of paper, the top margin is not what I specified in my application. How can I get the proper margin in my document?

DISCUSSION -----

This occurs when you select Automatic in the Print dialog. Instead, select Hand Feed or Manual Feed depending on the printer configuration. You should Automatic only when you are using tractor feed paper.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17122



Tech Info Library

PictureWorks Technology, Inc.

Revised: 2/3/95
Security: Everyone

PictureWorks Technology, Inc.

=====

PictureWorks Technology, Inc.

125A Town and Country Drive
Danville, CA 94526

Phone: (800) 303-5400

Company Profile: Provides imaging tools and products running Microsoft Windows.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17123



Tech Info Library

Color StyleWriter 2400: Printing Problems with Print Shop (1/97)

Revised: 1/9/97
Security: Everyone

Color StyleWriter 2400: Printing Problems with Print Shop (1/97)

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Article Created: 3 February 1995
Article Reviewed/Updated: 9 January 1997

TOPIC -----

I am having problems trying to print to my Color StyleWriter 2400 from Print Shop Deluxe.

DISCUSSION -----

If you having problems printing to the Color StyleWriter 2400, you need to upgrade your version of PrintShop Deluxe. Both Print Shop Deluxe 1.1.1 and Print Shop Deluxe CD Ensemble v1.0, by Broderbund, provide support for printing to the Color StyleWriter 2400 printer.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
09 Jan 1997 - Corrected the product name of Print Shop Deluxe.
21 Mar 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:17124



Tech Info Library

StyleWriter II: No Background Printing With WordPerfect (2/95)

Revised: 2/3/95
Security: Everyone

StyleWriter II: No Background Printing With WordPerfect (2/95)

=====

Article Created: 3 February 1995

TOPIC -----

When I print from WordPerfect v3.0 to my StyleWriter II, it continues to spools my document until I run out of disk space. How can I correct this?

DISCUSSION -----

This problem occurs with Word Perfect v3.0 and any serial printer such as the StyleWriter II, Personal LaserWriter 300, and LaserWriter Select 300. To correct this problem permanently, contact WordPerfect for an upgrade.

Deleting Spooled Documents

=====

- 1) Open the System Folder
- 2) Throw the Print Monitor Documents folder into the Trash
- 3) Restart

Temporary Workaround

=====

- 1) Open the Chooser
- 2) Turn off Background Printing

Do not try printing the same document. If you do, the same thing will happen again. Sometimes you can copy the document and paste the information into a new document, then print the new document.

To locate a vendor's address and phone numbers, use the vendor name as the search string.

Support Information Services

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Tech Info Library Article Number:17125



Tech Info Library

Macintosh Software Updates: Order for Installation (5/95)

Revised: 5/1/95
Security: Everyone

Macintosh Software Updates: Order for Installation (5/95)

=====

Article Created: 06 February 1995
Article Reviewed/Updated: 1 May 1995

TOPIC -----

I have System 7.1, System Update 3.0, Network Software Installer, and Express Modem Software to install on my Macintosh. What order should these products be installed.

DISCUSSION -----

Installation of Macintosh system software is pretty flexible. After installing the Mac OS System Software, examine the Read Me file for any additional packages that you intend to install. Check to see if any order dependencies are mentioned (usually there are none). If there are no dependencies, you can usually install packages in any order.

The Apple Installer program will check to see if the system has later versions of software installed already. Generally, it will not let you downgrade, or go backwards, with respect to versions of software already installed as this could cause problems and is not what users would want to happen. Take, for example, a file like the Apple Shared Library Manager (ASLM), which comes with GeoPort, QuickTake, AppleShare 4.x, ARA MultiPort Server, Apple Internet Router, Apple IP Gateway, Open DB Connectivity, and MacSNMP. Not that you would want to install all of these products, but the order you install any set of them is unimportant. In this case, after installing some set of packages, the Installer will have placed the latest version of ASLM in the Extensions folder from whatever package contained the latest version.

Occasionally, the installer script will recognize that software could be downgraded by the installation and you will be presented with a warning stating that you are trying to install software that is older than what's already installed. That warning will allow you to cancel the whole installation or choose the Older or Newer component. We would recommend selecting Newer unless you are trying something out of the ordinary.

NOTE: Any version of ASLM greater than 1.1 is compatible with all software that utilizes the manager. There are no compatibility problems other than those for software written to the 1.0 ASLM API, of which all (that we are aware of) have been revised to the current API.

If you desire more of a roadmap, you should install packages in the order that they were released, as each package will have probably been tested with all packages before its release. To install packages in the order that they were released chronologically, note the modification date on the Installer script file, (not the installer application), by doing a Get Info of the Installer script document. These dates should correspond closely to the release date of the package. Installing in the order of release date should be a safe installation technique.

Article Change History:

01 May 1995 - Added note to article on ASLM 1.1 compatibility.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17126



Tech Info Library

DOS Compatibility Card: Ethernet Drvr Does Not Use IRQ's (2/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Ethernet Drvr Does Not Use IRQ's (2/95)

=====

Article Created: 6 February 1995

TOPIC -----

I need to know the Ethernet IRQ settings for the DOS Compatibility Card. I have a DOS application that needs to know the IRQ settings.

DISCUSSION -----

The ethernet driver (MACODI.COM) used for the built-in Ethernet on the DOS Compatibility Card does not use IRQs. It conforms to the ODI specification for a Multiple Link Interface Driver (MLID), which do not use IRQs. You are probably trying to use a NDIS application, whose drivers DO use IRQs. If this is the case, you need to use Novell's ODI to NDIS translator (odinsup.com) to configure the software to function in an ODI environment. For more information on odinsup.com, contact Novell Inc.

To locate a vendor's address and phone numbers, use the vendor name as the search string.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17127



Tech Info Library

Apple WorkGroup Server: Meaning of DAT drive LEDs (2/95)

Revised: 2/6/95
Security: Everyone

Apple WorkGroup Server: Meaning of DAT drive LEDs (2/95)

=====

Article Created: 6 February 1995

TOPIC -----

The Apple WorkGroup Server 8150 and 9150 have a DAT (Digital Audio Tape) Drive which has some drive status lights on the front panel. When I pull a tape out of the drive, the status lights flash the media wear lights (left: steady green, right: pulsing amber). What is going on?

DISCUSSION -----

After every 25 hours of use, the head cleaning light sequence flashes even without a tape until the cleaning cartridge is inserted. The cleaning tape resets the lights.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17128



Tech Info Library

Newton OS: General Performance Hints (2/95)

Revised: 2/6/95
Security: Everyone

Newton OS: General Performance Hints (2/95)

=====

Article Created: 6 February 1995

TOPIC -----

I have an Apple MessagePad and it seems slow particularly when moving between folders. Is there anything I can do to improve performance?

DISCUSSION -----

To help increase performance, the first thing you should do is clean up your folders and notes. You should also limit the number of folders you have to seven (7). Doing these two things helps improve the overall performance of the Newton OS.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17129



Tech Info Library

Color OneScanner: Difference Between Rev A and Rev B (2/95)

Revised: 2/6/95
Security: Everyone

Color OneScanner: Difference Between Rev A and Rev B (2/95)

=====

Article Created: 6 February 1995

TOPIC -----

Is there any way to tell the difference between the Apple Color OneScanner rev. A and rev. B from the outside?

DISCUSSION -----

Yes, the Apple Color OneScanner Rev.A has a lamp replacement access door on the right side of the scanner. This door is absent on the Apple Color OneScanner Rev.B.

The removal of the access door is the only difference (both internal and external) between the Rev. A and Rev. B Apple Color OneScanner .

Support Information Services

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Tech Info Library Article Number:17131



Tech Info Library

LaserWriter 16/600 PS: Envelope Feeder Capacity (2/95)

Revised: 2/7/95
Security: Everyone

LaserWriter 16/600 PS: Envelope Feeder Capacity (2/95)

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Article Created: 7 February 1995

TOPIC -----

This article describes the LaserWriter 16/600 PS envelope feeder capacity and envelope sizes.

DISCUSSION -----

Here are the envelope sizes supported:

Envelope	Weight	Size
-----	-----	-----
COM 10	24 pound	4 1/8 in. X 9 1/2 in. (104.7 mm x 241.3 mm)
Monarch	24 pound	3 7/8 in. x 7 1/2 in. (98.4 mm x 190.5 mm)
DL	80 g/square meter	110 mm x 220 mm
C5	90 g/square meter	162 mm x 229 mm

The envelope feeder will hold up to 75 standard business envelopes.

Both the new envelope feeder and the optional second sheet feeder are backwards compatible with the LaserWriter 630 printer. The accessories for the LaserWriter 630 are NOT forward compatible to the LaserWriter 16/600 PS printer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17135



Tech Info Library

System 7.5: Clean Installation from the Hard Drive (9/95)

Revised: 9/6/95
Security: Everyone

System 7.5: Clean Installation from the Hard Drive (9/95)

Article Created: 7 February 1995
Article Reviewed/Updated: 6 September 1995

TOPIC -----

This article presents the steps necessary to perform a clean installation of system software version 7.5 when the installer software has been pre-loaded on the hard drive. Follow these instructions in the order presented.

DISCUSSION -----

Purpose of a Clean Installation

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving most files in place, and forcing the Installer to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Follow these instructions in the order presented.

Restart with Disk Tools

Shut down your Macintosh computer, insert Disk Tools in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of your screen with your hard disk's icon below it.

If the computer ejects the Disk Tools disk, make sure you have the Disk Tools specified for your model Macintosh.

Run Disk First Aid

Disk First Aid can detect and repair problems with a hard disk.

- 1) Open the Disk Tools disk, and double-click on the Disk First Aid icon.
In the window that appears, select the main hard drive.
- 2) Click once on Verify. Disk First Aid will check your hard disk for any potential problems. If it finds problems, you should let the software repair them.
- 3) Repeat this procedure for each hard disk attached to the system.
- 4) When you're finished verifying the hard disks, choose Quit from the File menu to return to the desktop.

If Disk First Aid cannot repair a hard disk, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For Apple SCSI drives, use Apple HD SC Setup. If you have an Apple IDE drive, use Intrnal HD Formatter or Drive Setup 1.0.2.

Update Hard Disk Drivers

If you do not have an Apple hard drive, or you use third-party software to format your hard disk, do not use the Apple HD SC Setup utility. However, you should contact your hard drive vendor to verify that your formatting software is compatible with system software version 7.5.

If you have an Apple SCSI hard drive, you should update the drivers with the version of Apple HD SC Setup that is in the System 7.5 folder, following these steps:

- 1) Double-click the Apple HD SC Setup icon on the Hard Drive to open it.
- 2) Click on the Update button.
- 3) When you're finished, click Quit to return to the desktop.

Sometimes HD SC Setup can not update the hard disk driver (indicated by a "dimmed" Update button). Here are some possible causes and solutions:

- If a third-party utility formatted your hard disk, you should obtain the latest version of the utility to update your hard drive.
- If a version of Apple HD SC Setup more recent than the version on the Disk Tools disk formatted your hard drive, do not update the hard disk drivers.
- If an earlier System 6 version of Apple HD SC Setup formatted the drive, it may not have left enough room for the updated driver. You do not have to update the hard disk drivers. However, if you intend to use file sharing or have a Macintosh that can use virtual memory, then you need to back up the disk and reinitialize it with HD SC Setup. This erases the disk, so be certain you back up the hard disk

first.

- If the driver is corrupt, the Macintosh does not recognize the drive (that is, the drive doesn't show on the desktop when you start from a floppy disk). You may wish to reinitialize it with HD SC Setup. This erases the disk, so be certain you back up the hard disk first.
- If the driver was modified with disk compression or security software you may not be able to update the SCSI drive with Apple HD SC Setup. Contact the vendor for any special instructions.
- If your internal hard drive is not a SCSI hard drive, but an IDE drive, you should use Internal HD Formatter or Drive Setup 1.0.2. These utilities are available from online services and are able to test and update the drivers on IDE drives.

Check Available Hard Disk Space

Be sure you have at least 21MB available on the hard disk where you plan to install the system software. Open the hard disk's window. Open the Views control panel and select "Show disk info in header." The amount of available disk space appears in the upper-right corner of any open window.

If there's less than 21MB available, you'll need to delete some unnecessary files by moving them to the Trash. Choose Empty Trash from the Special menu, and you will have more disk space available. Also you can copy files onto floppy disks or other media before moving them to the Trash.

Performing a Clean Install

-
1. Start up the computer while holding down the Shift key until you see the message "Welcome to Macintosh, Extensions Off."
 2. Double-click the Installer located on the Hard Drive. Pass through the Welcome to System 7.5 dialog box.
 3. Check the destination drive and make sure the Hard Drive is selected.
 4. Press the Command-Shift-K keys simultaneously.

You are presented with a small dialog box with two selections:

- Update existing system folder
- Install new system folder

For a clean install, select Install new system folder. This installs a new system folder and renames your current folder to "Previous System Folder".

After performing a System 7.5 Clean Install, when About This Macintosh is selected under the Apple menu, it no longer displays the specific Macintosh name. Instead, it displays only "Macintosh", "Macintosh Powerbook", or "Power Macintosh" depending on which system it is running on.

If System 7.5 is installed over an existing system (pre 7.5), it retains the specific Macintosh name for the About This Macintosh window. This holds true for future Macintosh computers also.

Restart Your Computer

Choose Restart from the Special menu. The system automatically ejects the Disk Tools disk, and it should boot on the Hard Drive normally.

Verify Problem Resolution

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of this procedure.

Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Previous System Folder") such as fonts, screen savers, device drivers, and so on. If possible, you should reinstall these items from their original disks.

If the original disks are not available, you may move the non-standard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Only move items that are not already in the new System Folder.

- 1) Open each corresponding folder within the System Folder and the Previous System Folder then compare the contents.
- 2) Move anything that is not already in the new System Folder and its subfolders from the Previous System Folder and its subfolders.
- 3) Restart your Macintosh.

Troubleshooting Extension Conflicts

If you have installed any system extensions or control panels, you will probably see their icons line up across the bottom of the screen when you restart. They load into memory at startup time and modify the standard behavior of the operating system.

Verify INIT Conflict

If the Macintosh fails to restart or behaves erratically, you probably have an incompatible or conflicting INIT (also known as a system extension or control panel). To verify this problem, follow these steps:

- 1) Be sure the Caps Lock key is off.
- 2) Restart, and after you see the picture of a computer with a smile, hold down the Space Bar key.
- 3) Release the Space Bar key when the "Extensions Manager" window appears.
- 4) Select "All Off" in the Sets pull down menu then close Extensions

Manager.

5) When the Macintosh is ready, try to recreate the erratic behavior.

If the problem no longer occurs, then you have a conflicting extension or control panel. Continue with the steps in the next section.

Turn On and Turn Off INITs in System Folder

1) Using the Extensions Manager turn on your Extensions and Controls Panels one at a time.

2) Close the Extensions Manager, and restart the Macintosh.

3) Attempt to recreate the original problem.

Repeat steps 1 through 3 for each item in the Extensions Manager until the problem reoccurs. The last item activated in the Extensions Manager is probably the cause of the problem.

Final Steps

Verify that your applications are performing normally. If not, refer to the application manual or contact the vendor.

When the Macintosh behaves as expected, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.

Article Change History:

06 Sep 1995 - Reviewed for technical accuracy, corrected minor typo.

Support Information Services

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Tech Info Library Article Number:17137



Tech Info Library

LaserWriter Pro 630: Windows Driver Available Online (8/95)

Revised: 8/23/95
Security: Everyone

LaserWriter Pro 630: Windows Driver Available Online (8/95)

Article Created: 7 February 1995
Article Review/Updated: 23 August 1995

TOPIC -----

I have a LaserWriter Pro 630 connected to my MS-Windows computer, but I cannot find the proper printer driver for it. There are four Apple LaserWriter drivers that ship with Windows, which driver should I use?

DISCUSSION -----

For the LaserWriter Pro 600 and LaserWriter Pro 630, you can either use the LaserWriter IINTX driver that ships with Windows, or you can download the LaserWriter Pro printer drivers from online services. If you use the LaserWriter IINTX driver, you will not be able to specify paper and tray options. The LaserWriter Pro 600/630 printer drivers are available from Online services which Apple publishes software updates on.

If you are printing from MS-DOS applications, usually you will use the generic PostScript printer driver. Apple does not provide drivers for specific MS-DOS applications.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:
23 Aug 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:17140



Tech Info Library

Microsoft Office: Command-Option-Tab Switches Apps (2/95)

Revised: 2/7/95
Security: Everyone

Microsoft Office: Command-Option-Tab Switches Apps (2/95)

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Article Created: 07 February 1995

TOPIC -----

I just installed System 7.5 and Microsoft Office and I notice that hitting the Command-Option-Tab key combination switches between applications.

Where did this feature come from?

DISCUSSION -----

Microsoft Office installs a Control Panel with an option called QUICKSWITCH that allows you to do this-it can be toggled on or off.

Support Information Services

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Tech Info Library Article Number:17141



Tech Info Library

Newton Power Organizer Pack Instruction Addendum (2/95)

Revised: 2/7/95
Security: Everyone

Newton Power Organizer Pack Instruction Addendum (2/95)

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Article Created: 7 February 1995

TOPIC -----

This article contains the Newton Power Organizer Pack Instruction Addendum.

DISCUSSION -----

Newton Power Organizer Pack Instruction Addendum

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For Macintosh users:

These instructions replace the section "Installing Newton Package Installer" in the pamphlet "Installing Newton Packages Using Your Computer."

- 1) Unlock the Notion and NPI floppy disk by sliding the black tab in the upper-right corner of the disk so that it covers the square hole.
- 2) Insert the floppy disk into your disk drive.
- 3) Choose Empty Trash from the Special menu. Emptying the Trash will remove an outdated version of the software. You will not lose anything that you need on the disk.
- 4) Open the floppy disk icon.
- 5) Open the Newton Package Installer folder.
- 6) Select the Apple Modem Tool and the AppleTalk ADSP Tool and drag them to the icon of the System Folder on your startup disk.
- 7) You'll see a message asking whether you want to install these items in the Extensions folder. Click OK.
- 8) You may see a message asking whether you want to replace items with

the same name click OK.

- 9) If you wish to use NPI to install other Newton packages, drag the NPI icon from the Newton Package Installer folder to your hard disk.

Note: NPI is automatically placed on your hard disk when you install the ExpensePlus software (contained in the other envelope you received). If you plan to install ExpensePlus, you don't need to copy NPI to your hard disk.

- 10) Restart your computer by choosing Restart from the Special menu. The floppy disk is ejected.
- 11) After the Welcome to Macintosh screen appears, push the floppy disk back into the disk drive.
- 12) Newton Package Installer is now ready to use. Turn now to the section "Installing the Notion Software on Your Newton" in the pamphlet "Installing Newton Packages Using Your Computer."

For Windows Users:

You can ignore or delete the "!desktop.fol" folder on the Notion disk. It contains an outdated version of the software. Proceed as instructed in the pamphlet "Installing Newton Packages Using Your Computer."

Support Information Services

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Tech Info Library Article Number:17142



Tech Info Library

At Ease 2.x: Cannot Lock Startup Volume on IDE drives (2/95)

Revised: 2/7/95
Security: Everyone

At Ease 2.x: Cannot "Lock Startup Volume" on IDE drives (2/95)

=====

Article Created: 7 February 1995

TOPIC -----

I installed At Ease 2.x for Workgroups on my Macintosh 630 computer, and I cannot select the "Lock Startup Volume" option. I have tried upgrading from At Ease for Workgroups version 2.0 to 2.0.1 and 2.0.3, but the option is dimmed regardless of the version.

DISCUSSION -----

Apple uses Integrated Drive Electronics (IDE) hard disks on the Macintosh 630 family and PowerBook 150 computers. As indicated in the At Ease ReadMe file, the dimmed security option is the correct behavior for At Ease when it detects a hard disk with an incompatible driver or when the hard disk has been partitioned with A/UX.

The hard disk drivers used on Apple computers with IDE drives are not currently compatible with this feature of At Ease. There is no workarounds for this problem. A new hard disk driver needs to be installed on the drive. Apple's formatting utility for IDE drives currently does not install a compatible driver.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17143



Tech Info Library

Who Built America CD and Type 15 Error (2/97)

Revised: 2/24/97
Security: Everyone

"Who Built America" CD and Type 15 Error (2/97)

Article Created: 7 February 1995
Article Reviewed/Updated: 24 February 1997

TOPIC -----

When I try to launch the application on my "Who Built America?" CD I get a Type 15 error. I got this CD with the Apple Education Series Elementary Reference Bundle. I installed a new version of QuickTime (2.0), but that didn't fix the problem. What's wrong?

DISCUSSION -----

The CD (compact disc) you have, "Who Built America? From the Centennial to the Great War, 1876-1914 by The American Social History Project," is produced by the Voyager Company.

The Type 15 error will occur regardless of which version (1.6.1 or 2.0) of QuickTime is installed in your system.

The reason you are getting a Type 15 error message is that the "Who Built America?" HyperCard stack needs a higher memory allocation. The Voyager Company has stated that the HyperCard Player application needs to have 5MB of RAM allocated to it in order to open their HyperCard stack.

HyperCard Player is available on the "Who Built America?" CD and in the Extras folder of the System 7.5 CD. Copy it from one of these CDs to your Macintosh Hard Drive.

To Allocate More Memory to HyperCard Player

-
- 1) Quit out of the HyperCard Player application if it is running.
 - 2) Locate and click on the HyperCard Player application icon on your Macintosh hard drive (not the HyperCard Player application on the CD).
 - 3) Choose "Get Info" from the File menu and increase the amount of

memory allocated to the HyperCard Player application in the "Preferred size" box to 5000.

- 4) Close the "Get Info" window and double-click the HyperCard stack "Who Built America?" on the CD.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled, Locating Vendor Information, can help you search for a particular vendor's address and phone number.

Article Change History:

24 Feb 1997 - Reviewed for technical accuracy.

09 Mar 1995 - Changed title to clarify problem.

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Tech Info Library Article Number:17144



Tech Info Library

Apple MessagePad 110: System 1.3 Update Read Me (2/95)

Revised: 2/7/95
Security: Everyone

Apple MessagePad 110: System 1.3 Update Read Me (2/95)

=====

Article Created: 7 February 1995

TOPIC -----

This article contains the Read Me file that comes with the Newton System Update 1.3.

DISCUSSION -----

Information about a modem-related problem with the MessagePad 110 and System Update 1.3 (345025):

When you have used a modem to initiate a telephone call to someone and you click the close box on the MessagePad 110 to tell the modem that it can hang up (because you have lifted the telephone receiver to begin talking with the person), the modem does not hang up and the buttons on the bottom of your MessagePad screen don't respond to taps.

To be able to use the buttons on your MessagePad screen again, press the Reset button inside the battery compartment on the MessagePad. (Pressing Reset does not erase the information in your MessagePad.)

If you used an Apple external modem to initiate the call, you also need to remove and then reinsert one of the batteries in the modem to hang up the modem (to stop the modem from depleting its battery power).

Note: This problem does not occur when you use the modem for other purposes, such as faxing or NewtonMail.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17145



Tech Info Library

Global Village TelePort Fax Software: QuickDraw GX Aware (10/95)

Revised: 10/4/95
Security: Everyone

Global Village TelePort Fax Software: QuickDraw GX Aware (10/95)

Article Created: 8 February 1995
Article Reviewed/Updated: 4 October 1995

TOPIC -----

The Global Village TelePort Fax/Modem software, GlobalFax, for versions earlier than 2.5 are not accessible when QuickDraw GX is active. How do I get my Fax software to work with QuickDraw GX?

DISCUSSION -----

GlobalFax versions earlier than 2.5 are not recognized by QuickDraw GX. It is not an incompatibility, but rather non-GX aware software that is not available when QuickDraw GX is active. One solution is to turn QuickDraw GX off in the Extensions Manager control panel and then restart when wanting to send a Fax. To turn QuickDraw GX back on, select it in the Extensions Manager control panel and restart.

Another solution is to upgrade to GlobalFax 2.5.2P or later, which is available on online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
04 Oct 1995 - Added the GlobalFax 2.5.2P Update is online.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17149



Tech Info Library

StyleWriter II Driver: Print Head Cleaning Feature (2/95)

Revised: 2/8/95
Security: Everyone

StyleWriter II Driver: Print Head Cleaning Feature (2/95)

=====

Article Created: 8 February 1995

TOPIC -----

Is the StyleWriter II driver feature that allows the user to specify a print head cleaning prior to a print job, available when printing to the original StyleWriter?

DISCUSSION -----

The print head cleaning feature of the StyleWriter II driver is NOT available when printing to the original StyleWriter printer. The first print job sent to the printer will list it as an option. During the first print job, the driver determines which type of StyleWriter is being used. If the driver detects an original StyleWriter then all subsequent print jobs will show the options button grayed out. If a StyleWriter II printer is later connected, the options button will remain grayed out until one print job has been sent to the printer, thereby giving the driver the opportunity to determine what type of printer is connected.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17150



Tech Info Library

HyperCard: Changing and Printing Card Headers (2/95)

Revised: 2/8/95
Security: Everyone

HyperCard: Changing and Printing Card Headers (2/95)

=====

Article Created: 8 February 1995

TOPIC -----

How can I add, change, or remove a header when I print a single card from my HyperCard stack?

DISCUSSION -----

The Print Card command in HyperCard gets its header information from the header text box in the Print Stack dialog box.

To Add, Change, or Remove a Header from a Card
=====

Step 1

Pull down the File Menu and choose Print Stack. The Print Stack dialog box will open.

Step 2

Type the desired header text in the text window at the bottom of the dialog box.

Step 3

Click the Print button. The Print dialog box will open.

Step 4

Since you do not actually want to print the whole stack, you only want to print a single card, click the Cancel button. The changes you made to the header text will be saved.

Step 5

Pull down the File Menu and choose Print Card. You will now see the header text that you entered in the Print Stack dialog box at the top of the card.

NOTE: If you click the Cancel button in the Print Stack dialog box instead of the Print button (Step 3), your changes to the header text will not be saved.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17153



Tech Info Library

LaserWriter: LaserWriter Fax Tune-Up ReadMe (2/95)

Revised: 2/9/95
Security: Everyone

LaserWriter: LaserWriter Fax Tune-Up ReadMe (2/95)

=====

Article Created: 9 February 1995

TOPIC -----

This article contains the LaserWriter Fax Tune-Up ReadMe file.

DISCUSSION -----

Using LaserWriter Fax Tune-Up

WHY

The fax tune-up program prevents certain problems when you print out oversize faxes on your LaserWriter printer.

- If you receive banner-size or legal-size faxes, your printer will reduce the fax to fit the paper size that's in the largest-size paper tray you have installed (letter, A4, or legal).
- If you receive letter-size faxes with no margins, your printer will reduce the fax to fit letter-size paper with margins.

HOW

1. Open the Chooser and make sure that the printer you use for your faxes is selected.
2. Open the fax tune-up program.

IMPORTANT

If you have restarted your printer, or turned it off and then on again, you have to open the fax tune-up program AGAIN before using your printer to print out oversize faxes. The printer keeps the instructions it receives from the fax tune-up program in its memory, and it loses those instructions when it is turned off or restarted.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17154



Tech Info Library

PCMCIA Expansion Module: Can Read DOS Formatted Volumes (5/96)

Revised: 5/27/96
Security: Everyone

PCMCIA Expansion Module: Can Read DOS Formatted Volumes (5/96)

Article Created: 09 February 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

I have noticed that many storage PCMCIA cards (PC Cards) are formatted for use with DOS systems. Is it possible to use these PC Cards with my PowerBook 500 series computer and Apple PCMCIA Expansion Module?

DISCUSSION -----

Most storage PCMCIA cards (PC Cards™) are pre-formatted as DOS volumes. PowerBook 500 series computers have the ability to mount these volumes thanks to the Macintosh PC Exchange software that ships with every PowerBook.

For correct results, it is necessary to use PC Exchange version 2.0.2 or greater (this version is included with System 7.5 or can be acquired by contacting the Apple Order Center. To install a newer version of Macintosh PC Exchange, drag the PC Exchange icon into the Control Panels folder of your System Folder and click "OK" to overwrite the older version of PC Exchange. Restart your Macintosh.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Note that while you can use PC Exchange to read and write data from/to DOS volumes and erase data from PC cards, it cannot be used to alter the format of a PC Card (from DOS to Macintosh or vice versa). If you wish to change a DOS-format card to a Macintosh format, simply turn PC Exchange off (open the PC Exchange control panel and select the Off option) and then reinsert the PC card. You will then be prompted to reformat the PC card as a Macintosh volume. Once the PC card is reformatted, you can turn PC Exchange back on from the control panel.

Macintosh PC Exchange will not allow you to reformat a Macintosh-format PC card as a DOS-format PC card. To do so you should use a DOS/Windows computer.

A note on Ministor PC Cards:

Some PC Cards from Ministor contain factory-installed compression software that is specific to DOS/Windows computers. This compression software consumes usable disk space and should be deleted for use with PowerBook computers. Select the "Erase Disk..." command from the Finder's Special menu in order to delete this software.

Article Change History:

27 May 1996 - Updated for technical accuracy.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17155



Tech Info Library

ABC Direct (2/95)

Revised: 2/9/95
Security: Everyone

ABC Direct (2/95)

=====

Article Created: 9 February 1995

ABC Direct

*** FOR SCHOOLS OR BUSINESSES ONLY. NO INDIVIDUALS PLEASE ***

18777 North Midway
Suite 309
Dallas, Texas 75287

214-306-5494 Technical Support

800-481-6782 Customer Relations

800-481-6782 Sales

214-307-0375 FAX

Internet: abcdirect@aol.com

Company Profile:

Manufactures and supports hard to find hardware and software items for Apple II series products for schools and businesses.

Provides support for the Applied Engineering products for the Apple II series (including the DOS compatibility card). Also has a repair service available for any Applied Engineering product based on an hourly fee.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17157



Tech Info Library

Brainstorm Products (2/95)

Revised: 2/9/95
Security: Everyone

Brainstorm Products (2/95)

=====

Article Created: 9 February 1995

Brainstorm Products

958 San Leandro Blvd.
Suite 300
Mountain View, CA 94043

415-988-2900

415-988-2906 FAX

AppleLink: D6800

Internet: braintech@aol.com

Company Profile:

Hardware and software, specializing in Macintosh accelerator cards and Internet connectivity products.

Note:

Provides support for Applied Engineering accelerators and related software only.

Support Information Services

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Tech Info Library Article Number:17158

[Home](#) - [CD Index](#) - [Feedback](#)

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[CompTIA Codes](#) - [Ordering Parts FAQ](#) - [Product Service](#)
[Matrix](#) - [REAs](#) - [Service Excellence](#)

TITLE

Locating Vendor Information

Article ID: 17159
Created: 2/9/95
Modified: 1/4/00

TOPIC

How can I search for just a particular vendor's name, address, and phone number?

DISCUSSION

To locate a vendor's name, address, and phone number proceed to Apple's Macintosh Products Guide website located at:
<http://guide.apple.com>

The Apple's Macintosh Products Guide website catalogs over 15,000 products for the Macintosh. This website contains a search features that allow you to search by a vendor company's name or other criteria.

If, however, you prefer to use the TIL to search for a vendor, use the vendor name as a search string in addition to the keyword 3pty. 3pty refers to a third party (non-Apple) company.

Sample Search Strings:

XYZ Company and 3pty
ABC Corporation and 3pty
123 and 3pty

TIL Article 22104: "[**Tech Info Library: Basic Search Techniques**](#)", contains a list of useful keywords and instructions describing how to improve your searching techniques.

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: Third Party Directory
Category:
Sub Category:



Tech Info Library

Locating Vendor Information (3/95)

Revised: 3/1/95
Security: Everyone

Locating Vendor Information (3/95)

=====

Article Created: 9 February 1995
Article Reviewed/Updated: 1 March 1995

TOPIC -----

How can I search for just a particular vendor's name, address, and phone number?
I have been trying to enter just the vendor name as my search string, but I get
too many articles and cannot find the phone number.

DISCUSSION -----

This article, "Locating Vendor Information," suggests the best way to locate a
particular vendor's address and phone number without getting too many articles
which refer in some way to a company's products, but do not contain the company
address or phone number.

To locate a particular vendor's address and phone number only, use the vendor
name as a search string in addition to the keyword 3pty. 3pty refers to a third
party (non-Apple) company.

Sample Search Strings:

XYZ Company and 3pty
ABC Corporation and 3pty
123 and 3pty

The TIL article, "Tech Info Library: How to Search for Articles," contains a
list of useful keywords and instructions describing how to improve your
searching techniques.

Article Change History:

01 Mar 1995 - Added the title of the article, "Locating Vendor Information,"
to the text to increase its relevancy ranking.
10 Feb 1995 - Added reference to "How to Search" article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17159



Tech Info Library

PowerTalk and System 7.5: -15064 Error (2/95)

Revised: 2/9/95
Security: Everyone

PowerTalk and System 7.5: -15064 Error (2/95)

Article Created: 9 February 1995

TOPIC -----

We have two computers set up with System 7.5 and PowerTalk. One is new with clean system software, the other is an existing computer. Everything works fine except for PowerTalk. The situation is as follows:

- We use several mail services like CompuServe, MS Mail, and Eudora.
- On the clean computer, when we select "I'm at..." and then click on any of the options, there is no problem.
- On the existing computer, when we select either MS Mail, or Direct Dial from "I'm at...", an error, -15064, appears.

We tried to resolve the problem by start the existing computer with only system 7.5 extensions loaded. We added one extension at a time, then tried selecting MS Mail or Direct Dial until the error appeared. The error still appeared and we couldn't track it down to any one extension. What is does the -15064 error signify?

The version of MS Mail used is 3.1d client and 3.1a server. We thought at first it was a Microsoft problem, but with the error appearing on Direct Dial also, it looks more like a system error.

Any help you could give, would be gratefully received.

DISCUSSION -----

In the course of testing with Direct Dialup, we also got the -15064 error when trying to enable Direct Dialup in the I'm at... menu. The only way we got around this error was to open the setup for Direct Dialup in the Key Chain and enter the phone number for the Modem Telephone. We suspect there may be a similar problem with the MS Mail setup. Error -15064 is: kMailSetFailed.

Support Information Services

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Tech Info Library Article Number:17160



Tech Info Library

Sound Control Panel: Volume Level Anomaly (5/95)

Revised: 5/9/95
Security: Everyone

Sound Control Panel: Volume Level Anomaly (5/95)

=====

Article Created: 06 March 1995
Article Reviewed/Updated: 09 May 1995

TOPIC -----

I have the Built-in Headphones slider set all the way up and the Built-In slider set in the middle. When I restart, the sound is lower, but the Headphones slider still shows that it set to the maximum setting. Why does the sound volume change after I restart my computer?

After the restart, all I need to do is move the Built-In Headphones slider slightly and the volume is reset to the level indicated by the Built-in slider. The startup chime will also use this setting.

DISCUSSION -----

What Is Happening

There is inconsistent visual feedback between the Built-in Headphones slider setting in the Sound control panel and the actual level heard through the external speakers to the Power Macintosh.

The purpose of the two separate sliders is to provide the ability to control the sound output for the internal speaker versus the headphones. That is, you may wish to have the sound play very softly (or no sound at all) out of the internal speaker, but you may also want to have the the sound play loudly out of the headphones.

Workaround

The workaround is to set both the Built-in and Built-in Headphones sliders to the same position.

Article Change History:
09 May 1995 - Reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17162



Tech Info Library

AppleScript: Script Editor Error Source Not Available (2/95)

Revised: 2/10/95
Security: Everyone

AppleScript: Script Editor Error "Source Not Available" (2/95)

=====

Article Created: 10 February 1995

TOPIC -----

The script below, gives the error "Source not available" on repeated runs when the events log window is open and "Show Event Results" is checked. The script worked fine for a period of time, until suddenly this error started occurring.

```
set FinderLib to load script (alias ((path to ~  
    extensions folder as string) & "Scripting Additions:finderLib"))
```

DISCUSSION -----

This script is actually getting a -1756 error. This can be determined by surrounding the given statement with an AppleScript try / on error processing statement. This error code is returned from a call to OSASGetSource function to decompile the script data, and obtain the equivalent source data. The problem is that finderLib is compiled and saved with Save As Run-Only which does not save the AppleScript text with the object for later editing and display.

FinderLib was intended to be used with the "barely-scriptable" Finder of System 7.1 or the Finder 7.0 after ResEditing an aete resource into the Finder. AppleScript 1.0 came with Script Editor 1.0.1 and the finderLib facility. This version of the Script Editor did not have the event window logging capability that came with AppleScript 1.1 and Script Editor 1.1 and later.

The Script Editor's event logging facility depends on being able to access the source AppleScript, to do event logging, AND show event results against a compiled AppleScript. As you found, if Show Event Results are not selected, the Script Editor can run the script just fine against a saved as Run-Only compiled script, since not as much logging detail is being requested.

What probably happened is, you have upgraded to AppleScript 1.1 where the error will be noticed with finderLib, or you saved other loaded and compiled scripts as Run-Only. To use the full debugging facilities of the Script Editor against loaded compiled scripts, the scripts must be saved with the AppleScript source,

for example not as Run-Only. In a compiled AppleScript, you can tell with a resource editor, whether it's saved as Run-Only or not by the presence of an "scpt" resource, which is where the compiled text is saved.

The following event logs demonstrate what's happening. If you want to reproduce this, compile the miniFinderLib AppleScript, place it in the Scripting Additions folder and run the driving AppleScript from the Script Editor with full event logging. You will see the results similar to the first log. Note how the saved AppleScript text is displayed in the event logging window. Recompile miniFinderLib, save it as Run-Only and rerun the driving AppleScript. This will give the -1756 error or sources not available.

The driving AppleScript:

```
try
    set FinderLib to load script (alias ((path to ~
        extensions folder as string) & "Scripting Additions:miniFinderLib"))
    tell FinderLib to emptyTrash()
on error ErrMsg number ErrNmbr
    log ("Error " & ErrNmbr & ": " & ErrMsg)
    display dialog "Error " & ErrNmbr & ": " & ErrMsg
end try
```

The miniFinderLib script:

```
on emptyTrash()
    --
    -- Asks the Finder to empty the trash
    --
    tell application "Finder" to empty trash
end emptyTrash
```

Script Editor log with Show Event Results against a compiled library with the source saved:

```
tell current application
    path to extensions folder as string
    --> "Macintosh HD:System Folder:Extensions:"
    load script ~
alias "Macintosh HD:System Folder:Extensions:Scripting Additions:miniFinderLib"
    --> on emptyTrash()
    --
    -- Asks the Finder to empty the trash
    --
    tell application "Finder" to empty trash
end emptyTrash
end tell
tell application "Finder"
    empty trash
end tell
```

Script Editor log without Show Event Results against a compiled library saved as Run-Only:

```
tell current application
  path to extensions folder as string
  load script ~
alias "Macintosh HD:System Folder:Extensions:Scripting Additions:miniFinderLib"
end tell
tell application "Finder"
  empty trash
end tell
```

Script Editor log with Show Event Results against a compiled library saved as Run-Only:

```
tell current application
  path to extensions folder as string
  --> "empty trash:Extensions:"
  load script ~
alias "Macintosh HD:System Folder:Extensions:Scripting Additions:miniFinderLib"
  (*Error -1756: Source not available.*)
  display dialog "Error -1756: Source not available."
  --> {button returned:"OK"}
end tell
```

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17171



Tech Info Library

System 7.5: Folder Protection Option Not Available (1/97)

Revised: 1/25/97
Security: Everyone

System 7.5: Folder Protection Option Not Available (1/97)

=====

Article Created: 10 February 1995
Article Reviewed/Updated: 25 January 1997

TOPIC -----

Why is the System Folder "locking feature" not available on all of my Macintosh computers that are running System 7.5? It works on some of my Macintosh computers, but not all of them.

Can I enable System Folder "locking feature" on one of my computers and then copy the General Controls control panel from that computer onto all of my other computers instead of resetting each of their General Controls control panels?

DISCUSSION -----

System 7.5

This folder "locking feature" you describe is called Folder Protection. It gives you the ability to protect the System Folder or Applications Folder from change or accidental deletion. It is a function of System 7.5, not of the hardware. In other words, this function will work on any Macintosh computer running System 7.5 if the system software is set up correctly and operating properly.

Most likely, what is "wrong" on some of your Macintosh computers is that File Sharing is turned on. Folder Protection will not work if File Sharing is on. When File Sharing is on the Folder Protection options in the General Controls control panel will be unavailable or "grayed out."

Check your Sharing Setup control panel to see whether File Sharing is on or off. If it is on, you will have to turn it off if you want to enable the Folder Protection features. File Sharing and Folder Protection cannot be on at the same time, you can only have one or the other. File Sharing will automatically turn off the Folder Protection features when it is turned on.

Your idea of copying the General Controls control panel to lock all of your computers System Folders will not work because the system settings will be reset

as soon as File Sharing is turned on.

System 7.5.3

With System 7.5 Version 7.5.3, if folder protection is turned on for both the System and Applications folder, these folders cannot be renamed because of the protection feature as expected. If File Sharing is now turned on, the folder protection options in the General Controls control panel become grayed out. However, the System and Applications folders cannot be renamed as if folder protection had not been turned off.

By opening the General Controls control panel, which shows folder protection boxes grayed and indicate folder protection is off, and closing the control panel, you can now rename the protected folders indicating folder protection is now off.

It appears that turning on File Sharing does not actually turn off folder protection, if it had previously been turned on. However, because File Sharing is on, opening and closing the General Controls control panel turns it off because the buttons are disabled.

Article Change History:

25 Jan 1997 - Added System 7.5.3 information.

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Tech Info Library Article Number:17172



Tech Info Library

Power Macintosh:Norton Utilities & Wrong Processing Speed (2/95)

Revised: 3/23/95
Security: Everyone

Power Macintosh:Norton Utilities & Wrong Processing Speed (2/95)

Article Created: 10 February 1995

TOPIC -----

I have a Power Macintosh 8100/100 and the latest version of Norton Utilities. When I run the SYSINFO utility that comes with the Norton Utilities bundle, it tells me that my Power Macintosh 8100/100 is running at 61 MHz and it performs all tests in emulation mode.

Is there something wrong with my computer?

DISCUSSION -----

In an attempt to reproduce your problem, I installed the "System Info" portion of Symantec Corporation's Norton Utilities bundle version 3.1.1, onto a Power Macintosh 8100/100. When I ran the tests, the report said that the CPU is a "PowerPC 601 @ 100 MHz", and that "all the tests were run in native PowerPC code."

You didn't specify the actual version number of the Norton Utilities software that you have. One way to tell if you have the latest version of the software is to check your original Norton Utilities disks. There should be a document named "Norton 3.1.1 ReadMe" on one of these disks.

If you have version 3.1 rather than 3.1.1, I would recommend that you upgrade to version 3.1.1 and run the SYSINFO utility again. You should then receive the correct and expected results.

Note:

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Symantec Corporation, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17173



Tech Info Library

Macintosh AV: S-Video Connector Pinouts (2/95)

Revised: 2/14/95
Security: Everyone

Macintosh AV: S-Video Connector Pinouts (2/95)

Article Created: 14 February 1995

TOPIC -----

I am trying to purchase an S-Video cable to attach a VCR to my Quadra 840AV. I noticed that the S-Video input connector on the back of my VCR has four pins and the S-Video input connector on the back of my Quadra 840AV has seven pins.

Do I need a special cable with seven pins to hook up my VCR to my Quadra 840AV?

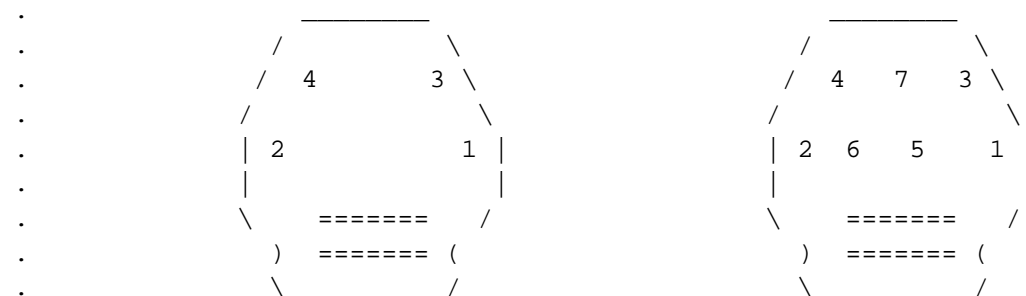
DISCUSSION -----

The standard 4-pin S-Video connector used on most video and television equipment is functionally identical and fully compatible with the 7-pin S-Video input connector used on the Quadra 660AV, 840AV and Power Macintosh 6100, 7100, 8100 AV card.

The only difference between the two connectors is that Apple provides three additional inputs, I²C clock, I²C data, +12V, that were intended for future products and expansion.

A standard 4-pin S-Video cable available at most electronics stores will fit into the Apple 7-pin S-Video input connector without a problem. No adapter cable is necessary because pins 5, 6, and 7 are unused.

Below is a chart showing the pinouts of both the 4-pin and 7-pin connectors:



.	4-pin S-Video		Apple 7-Pin S-Video	
.	Connector		Input Connector	
.				
.				
.	PIN #	DESCRIPTION	PIN #	DESCRIPTION
.	-----		-----	
.	1	AGND (signal)	1	AGND (signal)
.	2	AGND (power)	2	AGND (power)
.	3	Video Y	3	Video Y
.	4	Video C	4	Video C
.			5	I ² C clock
.			6	+12 V
.			7	I ² C data

Support Information Services

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Tech Info Library Article Number:17174



Tech Info Library

DOS Compatibility Card: No Support for Non-Apple CD-ROMs (2/94)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: No Support for Non-Apple CD-ROMs (2/94)

=====

Article Created: 13 February 1995

TOPIC -----

I have a DOS Compatibility Card in my Macintosh and I want to use my non-Apple brand CD-ROM player. I talked to the vendor of the CD-ROM drive about getting MS-DOS drivers for it, and they told me that their drivers were designed for a specific SCSI controller card. What SCSI controller card is the DOS Compatibility Card emulating?

DISCUSSION -----

The Macintosh is not emulating a SCSI controller. The CDROM.SYS CD-ROM driver is not really a SCSI driver, it simply reroutes certain CDROM calls from the DOS side to the Macintosh cdrom drive. Apple wrote CDROM.SYS specifically to reroute the calls. A standard MS-DOS CD-ROM driver will not work, because it is not written to reroute the calls to the Apple CD-ROM extension.

You may be able to use parts of a CD-ROM disc by using the folder sharing feature on the CD-ROM. This is the only way to use non-Apple CD-ROM drives unless the vendor creates a specific DOS driver to transfer CD-ROM calls from the DOS side to the third-party CD-ROM driver on the Macintosh side.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17176



Tech Info Library

PrintMonitor: Randomly Changes Order of Print Jobs (2/95)

Revised: 2/13/95
Security: Everyone

PrintMonitor: Randomly Changes Order of Print Jobs (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

We are printing single and multi-copy pages of scanned images containing single and multiple instances of a 12 page document. The PrintMonitor should display the documents waiting to print in the numerical order of receipt, but sometimes, for some unknown reason, it displays documents randomly.

DISCUSSION -----

PrintMonitor lists and prints jobs in a different order than they were "received" when the total number of print jobs queued exceed approximately 39 jobs. For example, if you queue 50 print jobs, jobs 39 to 50 may not be listed and processed in the same order that they were "sent to PrintMonitor." All of the jobs will eventually print without problems; they just will not print in the order they were sent. Apple is aware of this problem and intends to fix it in a future version of software.

Problem Verified with:

PrintMonitor 7.1.2
System 7.5 (QuickDraw GX turned off)
LaserWriter 8.2f

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17181



Tech Info Library

Desktop Positioning of an External Volume (2/95)

Revised: 2/13/95
Security: Everyone

Desktop Positioning of an External Volume (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

I have an external SyQuest volume that always mounts on the desktop and then displays in the middle of the screen behind open windows. This always happens even though I previously moved it to the desired place on the desktop the last time it was mounted.

There are a lot of other icons on my desktop. I have already rebuilt the desktop file. Is there some way I can control the desktop positioning of my external volume icons when they are mounted?

DISCUSSION -----

While the Finder's Desktop database file, does keep information about icon placement within windows and on the desktop, rebuilding the desktop file will not cause any change of positioning.

The grid choice of the Views control panel has affect on the method used by the Finder in displaying a mounted volume. The Finder will always position a mounted volume Icon as if snap to grid option is chosen even if it is not. If you do have the snap to grid option selected, the Finder will position icons within the confines of the Straight or Staggered grid selection you have chosen.

We suspect the problem you are experiencing is related to other Finder Desktop Icons, of which you say there are a many. The Finder will try to show a mounted disk (volume) somewhere on its invisible grid in the column of Icons at the right-most side of the display screen working down from the top. The Finder tries to locate the mounted volume icon so that there is no overlap of names on the desktop. If the name of the disk is very long, that may cause the Finder to search further to the left to avoid overlapping existing Icons.

If there are other icons in the right most column, whether they be RAM disk, Catalog, Mailbox, server volumes, floppy disks, or any file Icons, this may force the Finder to move its search for an empty display area one column to the

left and start searching from the top again, and so on further and further to the left.

One would expect the same positioning result to happen on your system, if you inserted a floppy diskette with the same name as the SyQuest cartridge or if you saved a file by that same name from an application onto the Desktop. The Finder's Icon positioning algorithm for the Desktop includes avoiding overlap with existing neighbor Icons.

Suggestions:

Step 1

Clean out the right most column of icons to make room for mounted volumes.

Step 2

Examine the next column to the left for files with long names. Shorten their names or move them further to the left, so their names do not extend into the right most column.

Step 3

Shorten the name of the SyQuest volume name.

Some combination of the above steps should clear up this situation.

Support Information Services

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Tech Info Library Article Number:17182



Tech Info Library

Direct Dialup 1.1.1 Extension (2/95)

Revised: 2/13/95
Security: Everyone

Direct Dialup 1.1.1 Extension (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

This article describes the Direct Dialup 1.1.1 extension and where to get it.

DISCUSSION -----

The Direct Dialup extension, version 1.1.1 is intended only for users who already have PowerTalk Direct Dialup 1.1 installed. Version 1.1 is a System 7.5 version only, it is not supported on System 7 Pro (7.1.1).

If you send large messages or enclosures via PowerTalk Direct Dialup Mail 1.1, you may encounter a known problem. Direct Dialup 1.1 will begin sending the letter, but it will disconnect before completing the letter. The letter will not appear in the recipients In Tray. Direct Dialup 1.1 will retry sending the letter according to the parameters set in the Direct Dialup 1.1 key in the Key Chain, without success. The letter will then be marked as "Done" in the Out Tray and you will receive a Non-Delivery Report in the In Tray. This problem has been corrected in version 1.1.1 of the Direct Dialup extension.

To use, download, double-click the downloaded file (this decompresses it). Drag the Direct Dialup extension on top of your System Folder and it will be automatically placed in your extensions folder.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17183



Tech Info Library

DOS Compatibility Card: Connection On Banyan VINES (4/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Connection On Banyan VINES (4/95)

=====

Article Created: 13 February 1995
Article Reviewed/Updated: 24 April 1995

TOPIC -----

I want to connect my Power Macintosh 6100 with a DOS Compatibility Card to a Banyan VINES network. Is this supported on the DOS Compatibility Card? If so, what do I need to do to the CONFIG.SYS and AUTOEXEC.BAT files?

DISCUSSION -----

We have not tested the Power Macintosh DOS Compatibility Card with a Banyan Vines server because we do not have a Banyan Vines server. However, it should work if Banyan can use ODI drivers. It is important to note that this is not a DOS Compatibility Card specific issue. This is a third party software configuration problem normally handled by Banyan.

Here is a configuration that a customer has successfully used to configure the Power Macintosh 6100/DOS compatible as a Banyan client:

Step 1

The Banyan Macintosh client runs on top of NDIS and uses Ethernet II frames with a magic number of 0xBAD. So to run it with the DOS Compatibility Card, you must first set up the NET.CFG file to reflect this. The following is a sample Banyan NET.CFG file for DOS Compatibility Card.

Link Driver MACODI

```
Frame ETHERNET_802.3
Frame ETHERNET_802.2
Frame ETHERNET_II
Frame ETHERNET_SNAP
Protocol BANYAN BAD ETHERNET_II
int 6
port 300
```


Protocol ODINSUP

Bind MACODI

buffered <--- Very important, ODINSUP will not work without it.

Step 2

Run the following to set up the DOS Compatible for Banyan. This has been tested with lsl v2.05 and ODINSUP v1.22. These files are not included with the DOS Compatibility Card and must be obtained from a Novell client installation.

LSL

MACODI

ODINSUP

Step 3

Configure VINES. Include following the line in the CONFIG.SYS file.

```
DEVICE=C:\BAN\PROTMAN.DOS /I:C:\BAN
```

If you've installed the software somewhere instead of C:\BAN, substitute your directory here. The configuration file for PROTMAN.DOS is called PROTOCOL.INI. It should be in the C:\BAN directory and should contain the following:

```
[protocol manager]
```

```
drivename = PROTMAN$
```

```
[VINES_XIF]
```

```
DRIVERNAME = NDISBAN.DOS$
```

```
BINDINGS = MACODI
```

Step 4

- Run PCCONFIG, the Banyan configuration program.
- Choose the first option, "Network Card Settings".
- Choose "NDIS Ethernet."
- In the configuration screen, configure IRQ 10, driver name MACODI.
- Press F10 to save the changes.
- Choose the second option, "Login Environment Settings".
- Configure NDIS Ethernet.
- Press F10 to save the changes.

Step 5

Restart your computer, then type the following to get VINES running (from the Banyan directory, or wherever you have put it).

```
BAN /NC NDISBAN NETBIND ARSWAIT REDIR4 Z: LOGIN
```

NOTE:

Ignore the "network driver not enabled" message. This message means it is working.

Troubleshooting Hint

If you can run everything, but cannot access files on the Z: drive, make sure the protocol line is in the NET.CFG file.

Article Change History:

24 Apr 1995 - Added MACODI to list of items needed.

19 Apr 1995 - Corrected INT setting.

15 Feb 1995 - Minor typography correction.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17184



Tech Info Library

Portable StyleWriter: Insert Sheet of Paper Message (2/95)

Revised: 2/13/95
Security: Everyone

Portable StyleWriter: Insert Sheet of Paper Message (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

When I print anything on my Portable StyleWriter, I get a message telling me to insert a sheet of paper and click OK to continue. I have to do this every time I print.

DISCUSSION -----

This message is normal. One workaround to avoid this message is to select "Automatic" as the paper source in the print dialog. Normally this option is used when there is an Automatic Sheet Feeder attached, but you can select it even if you do not have one. This prevents the message from appearing.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17185



Tech Info Library

Portable StyleWriter: Background Printing Not Available (2/95)

Revised: 2/13/95
Security: Everyone

Portable StyleWriter: Background Printing Not Available (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

When I go to the Chooser, the background printing option is not available for the Portable StyleWriter. Background printing is available for all other printers. Can I print in the background?

DISCUSSION -----

Background printing on the Portable StyleWriter works differently than on other Apple printer. The Portable StyleWriter uses an application called SpoolMaster instead of the PrintMonitor for background printing. In order to use SpoolMaster, the SpoolLauncher extension must load at startup. If this extension is missing or not loaded at starutp, the background printing option is not available for the Portable StyleWriter.

Note:

Restarting with extensions off disables SpoolMaster but not the PrintMonitor.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17186



Tech Info Library

AppleCD 300e Plus and 300i Plus: Technical Specifications (5/96)

Revised: 2/17/97
Security: Everyone

AppleCD 300e Plus and 300i Plus: Technical Specifications (5/96)

Article Created: 13 February 1995
Article Reviewed/Updated: 17 Feb 1997

TOPIC -----

This article provides the technical specifications of the AppleCD 300e Plus and AppleCD 300i drive.

DISCUSSION -----

Technical Specifications
=====

Playback media

8- or 12-cm optical disc (any standard CD-ROM or audio compact disc is compatible)

Capacity

Mode 1: 656MB
Mode 2: 748MB

CD-audio playback

Maximum playing time: 74 minutes, 42 seconds
Frequency response: 20 to 20,000 Hz
Stereo at 44-kHz sample rate

CD-ROM playback characteristics

Average access time (1/3 stroke)
. -Normal speed (1X): 360 ms
. -Double speed (2X*): 290 ms
Data streaming rate, normal speed (1X)
. -Mode 1: 150 kilobytes per second

. -Mode 2: 171 kilobytes per second
Data streaming rate, double speed (2X)
. -Mode 1: 300 kilobytes per second
. -Mode 2: 342 kilobytes per second
SCSI bus transfer burst rate (over one CD-ROM block): 2.5 megabytes per second
Buffer size: 256K

*Note:

The symbol for increased performance—double the spin speed.

Formats supported

Multisession Kodak Photo CD
ISO 9660/High Sierra
Macintosh HFS
CD-ROM XA
CD+G
CD+MIDI
Standard audio CDs
CD digital audio data export via SCSI bus

Interfaces

- Two SCSI-2 peripheral 50-pin connectors for connection to the Macintosh and other SCSI devices (rear panel)
- Stereo audio output ports (RCA jacks) for external amplifier or amplified speakers (rear panel)
- Stereo headphone output port and front-panel volume control (external player only)

Electrical requirements

Power requirements:

—External: 100 to 240 volts AC, 50/60 Hz, 0.28 A maximum
—Internal: 5 volts DC, 350 mA maximum, 12 volts DC, 1.5 A maximum

Operating environment

Temperature:

. -External: 41° to 104° F (5° to 40° C)
. -Internal: 41° to 122° F (5° to 50° C)
Relative humidity: 5% to 90% noncondensing

Nonoperating environment

Storage temperature (6 mo.):

. -External: -22° to 122° F (-30° to 50° C)
. -Internal: 41° to 122° F (5° to 50° C)
Relative humidity: 5% to 90% noncondensing

System requirements

- A Mac Plus computer or later model
- System software version 6.0.7 or later
- A separate SCSI system or peripheral cable (not included)

Size and weight

External:

- . -Height: 2.32 in. (5.9 cm)
- . -Width: 6.22 in. (15.8 cm)
- . -Depth: 13.1 in. (32.3 cm)
- . -Weight: 5.73 lb. (2.60 kg)

Internal:

- . -Height: 1.67 in. (4.25 cm)
- . -Width: 5.83 in. (14.8 cm)
- . -Depth: 8.25 in. (21.0 cm)
- . -Weight: 2.10 lb. (0.95 kg)

Ordering Information

=====

AppleCD 300e Plus (external)

Order No. M2918LL/A

- . -AppleCD 300e Plus external CD-ROM player
- . -Installation software
- . -Multimedia Starter CD
- . -Software Dispatch CD with software samples, demonstrations, and guided tours
- . -Your choice of three free CDs from a list of best-selling titles
- . -Power cord
- . -Complete setup, learning, and reference documentation
- . -Limited warranty

AppleCD 300i Plus (internal)

Order No. M3152LL/A

- . -For use with Macintosh models with a half-height, 5.25-inch removable-drive bay. Requires an additional adapter kit and installation by an authorized Apple service provider.
- . -AppleCD 300i Plus internal CD-ROM player
- . -Complete learning and reference documentation
- . -Limited warranty

AppleCD 300i Plus Adapter Kits

=====

Note:

An adapter kit may be required to install the AppleCD 300i Plus internal player inside your Macintosh. Your authorized Apple service provider has the compatibility and adapter information necessary for the installation.

Apple SCSI System Cable

Order No. M0206LL/A

Apple SCSI Cable Terminator
Order No. M0332LL/A

Apple SCSI Peripheral Interface Cable
Order No. M0207LL/A

Apple SCSI Cable Extender
Order No. M0208LL/A

Article Change History:

17 Feb 1997- revised system requirements to include Mac Plus.
16 May 1996 - corrected spelling of SCSI-2.

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Tech Info Library Article Number:17187



Tech Info Library

Macintosh Easy Open: Show Only Recommended Sources (2/95)

Revised: 2/13/95
Security: Everyone

Macintosh Easy Open: Show Only Recommended Sources (2/95)

=====

Article Created: 13 February 1995

TOPIC -----

Why is Macintosh Easy Open not giving me the option to select "Show only recommended sources" on my first attempt to open a document? I want this option active so that Macintosh Easy Open will filter out all the unnecessary choices.

I can sometimes select this option after opening and closing the Macintosh Easy Open control panel several times. I use it for PC files. I have DataViz translators that open the files and translate them.

DISCUSSION -----

The Macintosh Easy Open "Show only recommended sources" option is greyed out (not selectable) because the list always contains all the recommended choices when it is first opened.

The "Show only recommended sources" option is only there to try to reduce the list when it may be filled with unusual choices.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17188



Tech Info Library

Power Macintosh: DART 1.5.3, -64 Error (2/95)

Revised: 2/14/95
Security: Everyone

Power Macintosh: DART 1.5.3, -64 Error (2/95)

=====

Article Created: 14 February 1995

TOPIC -----

Why do I get a -64 error when launching DART 1.5.3 on my Power Macintosh?

DISCUSSION -----

This is a known issue with DART 1.5.3 on any Power Macintosh. DART version 1.5.3 does run a Power Macintosh. The error message is displayed when DART is launched, but if you click OK, DART will continue and everything works as expected. We have not experienced any problems with DART 1.5.3 on a Power Macintosh.

As an alternative to DART, we recommend using Disk Copy, with or without a third party compression utility.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17191



Tech Info Library

LaserWriter 16/600 PS: Envelope Feeder Grayed Out (2/95)

Revised: 2/14/95
Security: Everyone

LaserWriter 16/600 PS: Envelope Feeder Grayed Out (2/95)

=====

Article Created: 14 February 1995

TOPIC -----

I just installed the envelope feeder on to my LaserWriter 16/600 PS (the same applies to a LaserWriter Pro 630 with its envelope feeder). I tried to print from the envelope feeder, but the option was grayed out in the print dialog box. How do I print to envelopes in the feeder?

DISCUSSION -----

Follow these steps to print an envelope from your LaserWriters envelope feeder:

Step 1

Make sure the printer is restarted after physically installing the Envelope Feeder. The feeder will not be recognized unless it is connected to the printer at startup.

Step 2

You must either use the LaserWriter 7.2, or LaserWriter 8.x driver. From the Chooser select one of these print drivers, select a printer, and click the Setup... button. A dialog box appears with several button options, click the Configure button. Another dialog box appears, look for the text Envelope Feeder and a pop-up menu with the options of "Not Installed" or "Installed". You will need to choose "Installed".

Step 3

For the Envelope Feeder to be available in the Paper Source pop-up menu of the Print dialog box, you must have an envelope selected in Page Setup. Many programs let you provide templates or options to print envelopes without having to select an envelope in the print dialog box.

Support Information Services

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Tech Info Library Article Number:17192



Tech Info Library

DOS Compatibility Card: Mouse Driver for MS-DOS (1/97)

Revised: 1/6/97
Security: Everyone

DOS Compatibility Card: Mouse Driver for MS-DOS (1/97)

=====

Article Created: 15 February 1995
Article Reviewed/Updated: 6 January 1997

TOPIC -----

This article describes how to use the Macintosh mouse in the MS-DOS environment on the DOS Compatibility Card for the Power Macintosh 6100, Macintosh LC 630 DOS Compatible, Performa 640 DOS Compatible, and the PC Compatibility Cards for Power Macintosh Computers (running Windows 3.1).

DISCUSSION -----

The solution provided below is not supported by Apple Computer, and it is recommend that you contact Microsoft Corporation for the appropriate mouse driver. This solution may provide functionality until the proper mouse driver is obtained.

The MS-DOS 6.2 software, which comes with the DOS Compatibility Card, does not have drivers for any mouse pointing devices. Window 3.1, also included with the DOS Compatibility Card, does provide a driver that you can use. The driver is located on Windows Disk 4.

The driver is called MOUSEHP.CO_, and you need to copy it from the disk to your hard disk. This file is compressed, so you also need to expand the file. To expand the file, insert the "Microsoft Windows 3.1 Disket 4 of 6" and type the following command:

```
expand a:\mousehp.co_ c:\windows\mousehp.com
```

This creates the MOUSEHP.COM file on the hard disk. You can use this file from the MS-DOS Command line, or from a batch file such as the AUTOEXEC.BAT file. If you place the MOUSEHP.COM line in your AUTOEXEC.BAT file, it loads the mouse driver every time you start MS-DOS.

To test the installation of the driver, switch to the Windows directory and type "mousehp.com" at the c prompt. This will load the mouse driver into DOS.

If you would like the mouse driver to load at startup, edit the autoexec.bat file and add the line "LH C:\WINDOWS\MOUSEHP.COM"

NOTE:

MS-DOS applications must support a mouse in order to use the mouse. In some MS-DOS applications, the mouse does not look like an arrow. Instead, the mouse may appear as a square block.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

06 Jan 1997 - More details about testing mouse driver added.

10 Oct 1995 - Added supportability statement.

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Tech Info Library Article Number:17194



Tech Info Library

Power Macintosh: SCSI Problems Related to Cable Quality (5/95)

Revised: 5/30/95
Security: Everyone

Power Macintosh: SCSI Problems Related to Cable Quality (5/95)

Article Created: 3 March 1995
Article Reviewed/Updated: 30 May 1995

TOPIC -----

I am using a Power Macintosh without an internal hard disk. Instead, I am using external hard disks. When I connect up to two hard disks, everything works without any problems. However, when I connect three or more SCSI devices, all of the devices will not mount. Changing the SCSI ID or position in the SCSI chain does not solve the problem. I am using well made third-party SCSI cables, so I don't think cabling is the problem.

DISCUSSION -----

The Power Macintosh computers have a higher performance SCSI bus which is more susceptible to noise and signal integrity than other Macintosh computers.

We have found that, in most cases, after installing all Apple brand SCSI cables and an Apple brand terminator, the abnormal behavior of the external SCSI devices is reduced or eliminated.

It is strongly recommended that Apple cables or third party cables which match Apple's double shielding (wire braid and copper sheath) be used to assure maximum performance and trouble free operation.

Article Change History:
30 May 1995 - Minor typographical correction.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17195



Tech Info Library

Power Macintosh 8100/110: No Official AV Card Support (7/95)

Revised: 7/11/95
Security: Everyone

Power Macintosh 8100/110: No Official AV Card Support (7/95)

=====

Article Created: 15 February 1995
Article Reviewed/Updated: 11 July 1995

TOPIC -----

I notice that the Power Macintosh 8100/110 does not ship with an AV video card.
Will the Power Macintosh AV video card work in a Power Macintosh 8100/110?

DISCUSSION -----

While designed to function in any Processor Direct Slot (PDS) equipped Power Macintosh computer, the Power Macintosh AV Card was never thoroughly tested in the Power Macintosh 8100/110. Therefore, Apple does not support the use of the AV card in the Power Macintosh 8100/110.

Due to the similarity of the design of the Power Macintosh 8100/80, 8100/100, and 8100/110, it is unlikely you will experience a problem when installing the AV card into a Power Macintosh 8100/110.

However, because this configuration was not thoroughly tested by Apple, we cannot officially support this configuration if a problem arises.

Article Change History:
11 Jul 1995 - Reviewed for technical accuracy.
17 Mar 1995 - Revised compatibility statement of AV card in a Power Macintosh.

Support Information Services

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Tech Info Library Article Number:17197



Tech Info Library

Power Macintosh Upgrade Card: Memory Concerns (2/95)

Revised: 2/15/95
Security: Everyone

Power Macintosh Upgrade Card: Memory Concerns (2/95)

=====

Article Created: 15 February 1995

TOPIC -----

If I install a Power Macintosh Upgrade Card in a Quadra 650 that is populated with a single 8MB SIMM, will this present a problem? I understand that the Power Macintosh requires SIMMs to be installed in pairs.

I assume the single SIMM won't be a problem because memory is addressed through the controller on the Quadra 650 logic board. Is this correct?

Also, will SIMMs that are double-sided be a problem, assuming they already worked in the Quadra 650 before the upgrade?

DISCUSSION -----

You are absolutely correct that the memory is addressed through the existing controller on the Quadra 650, or on any logic board that the upgrade card is used with.

The single 8 MB SIMM won't be a problem if it is working in the unit before the upgrade.

As long as the double sided SIMMs are non-composite, they will be fine.

Support Information Services

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Tech Info Library Article Number:17198



Tech Info Library

Power Macintosh: Fractal Dabblers & Modern Memory Manager (2/95)

Revised: 2/15/95
Security: Everyone

Power Macintosh: Fractal Dabblers & Modern Memory Manager (2/95)

=====

Article Created: 15 February 1995

TOPIC -----

I just got a copy of Fractal's Dabblers 1.0 and installed it on my Power Macintosh running System 7.5. I installed the PowerPC code during the installation (other options were 68K and universal or fat binary).

When I attempted to launch Dabblers I got the bomb with a message saying, "Sorry, a system error occurred "Finder" floating point coprocessor not installed." The only option was Restart.

DISCUSSION -----

We spoke with Fractal Design Corporation's Technical Support about this problem. They are aware of it and state that the problem only occurs when Fractal is installed with the Modern Memory Manager turned on.

If Modern Memory Manager is turned on after installation of Dabblers, it should work correctly. In addition, Fractal's Technical Support was unsure if the problem could be bypassed by simply installing Dabblers with extensions off. When customers call with this problem, Fractal Technical Support recommends to turn off the Modern Memory Manager option in the Memory control panel AND all other extensions.

This issue is currently under investigation by Fractal, but it is believed that the problem lies in Fractal's Installer application. Fractal is using a third party installer application to install Dabblers, not the Apple Installer.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17199



Tech Info Library

Personal LaserWriter 320: Universal Cassette Paper Sizes (2/95)

Revised: 2/15/95
Security: Everyone

Personal LaserWriter 320: Universal Cassette Paper Sizes (2/95)

=====

Article Created: 15 February 1995

TOPIC -----

What paper sizes does the Personal LaserWriter 320 100 Sheet Universal Paper Cassette support?

DISCUSSION -----

Here are the specifications for the Personal LaserWriter 320 100 Sheet Universal Paper Cassette.

Paper Capacity: Maximum stacking height of 10mm (100 sheets of Xerox 4024 DP 20#)

Paper Sizes	Width	Length
-----	-----	-----
A4	210.0 mm (8.27 in.)	297.0 mm (11.69 in.)
US Letter	215.9 mm (8.5 in.)	279.4 mm (11 in.)
B5 (JIS)	182.0 mm (7.17 in.)	257.0 mm (10.12 in.)
Executive	184.2 mm (7.25 in.)	266.7 mm (10.5 in.)
US Legal	215.9 mm (8.5 in.)	355.6 mm (14 in.)

Paper Weights

=====

Minimum 64 gr/sq m (16.0#)
Maximum 90 gr/sq m (24.0#)

Illustrated instructions are located inside the Personal LaserWriter 100 Sheet Universal Paper Cassette demonstrating the correct procedure for adjusting the cassette.

Support Information Services

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Tech Info Library Article Number:17200



Tech Info Library

Color StyleWriter 2400: Test Page Not Generated (2/95)

Revised: 2/15/95
Security: Everyone

Color StyleWriter 2400: Test Page Not Generated (2/95)

=====

Article Created: 15 February 1995

TOPIC -----

I have a Color StyleWriter 2400 printer and I cannot get it to print a test page.

DISCUSSION -----

There are two conditions where the Color StyleWriter 2400 does not generate a test page

LocalTalk Cable

=====

If you are using LocalTalk cable instead of a standard System/Peripheral 8 cable (Apple Part # M0197), the printer sends a blank page through the printer when power is applied to the printer. This is due to a sensor located in the port on the printer.

Solution:

Disconnect LocalTalk cables and use the System/Peripheral 8 cable that came with the printer

New Ink Cartridge

=====

Unlike previous versions of the StyleWriter ink cartridges, you cannot shake the Color StyleWriter 2400 ink cartridges to get the ink started.

Solution:

Listen for clicking sounds while printing the test page. Sometimes the printout looks like an imprint, or very light text. This is corrected by using the clean option available in the Utilities section of the print dialog.

Creating a Test Page

=====

1) Holding down the power button on startup until the yellow orange light comes on and then goes off.

2) Release the power button.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17201



Tech Info Library

DOS Compatibility Card: 2 MB of RAM Corrupts BIOS (2/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: 2 MB of RAM Corrupts BIOS (2/95)

=====

Article Created: 15 February 1995

TOPIC -----

After installing the DOS Compatibility Card for the Power Macintosh 6100, I received a memory error when I tried to start MS-DOS. I am sharing 2 MB of RAM from my Power Macintosh 6100. I tried using the F5 and F8 keys to bypass the AUTOEXEC.BAT and CONFIG.SYS, but they did not work. Are these keys supported?

I found a reference in the DOS Compatibility Card User's Guide that the BIOS can get corrupted using only 2 MB of memory. Can the BIOS really get corrupted?

DISCUSSION -----

Yes, the corruption of ROM BIOS is a real possibility as documented on page 58 of the DOS Compatibility Card User's Guide. If the DOS Compatibility Card only has 2 MB of RAM and the TESTMEM switch is not off, the card is unusable because the ROM BIOS becomes corrupted during the memory test.

The minimum memory requirements for the 6100 DOS Compatibility Card are at least 8 MB RAM with 2 MB shared for the PC. This is documented on page 90 of DOS Compatibility Card User's Guide. The requirements listed on the box for the DOS Compatibility Card are 4 MB for the card plus the memory required for the Macintosh OS. Since System 7.5 requires 8 MB on the Power Macintosh computers, there should be a minimum of 12 MB of RAM in a Power Macintosh using System 7.5. The memory requirements are lower when System 7.1.2 is used because 7.1.2 only require 4 MB RAM.

The F5 and F8 keys do work on the DOS Compatibility Card. You have to wait for the "Starting MS-DOS..." message to appear before you press the function keys. If the keys are pressed before this message is displayed, they are ignored by MS-DOS. Other MS-DOS computers also have this same behavior.

Support Information Services

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Tech Info Library Article Number:17202



Tech Info Library

LaserWriter Pro 810: 802.2 Novell Ethernet Frame Types (2/95)

Revised: 2/16/95
Security: Everyone

LaserWriter Pro 810: 802.2 Novell Ethernet Frame Types (2/95)

=====

Article Created: 16 February 1995

TOPIC -----

Does the LaserWriter Pro 810 support 802.2 Novell Ethernet frame types?

DISCUSSION -----

The LaserWriter Pro 810 does not support 802.2 frame types, only 802.3 and Ethernet_II. For this printer to function in a Novell NetWare environment (and 802.2 is the default with Netware 3.12 and 4.x), the NetWare autoexec.ncf file must have an entry for one of these other protocols to support a LaserWriter Pro 810 printer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17204



Tech Info Library

Power Macintosh: Upgrades from Other Macintosh Models (4/97)

Revised: 4/8/97
Security: Everyone

Power Macintosh: Upgrades from Other Macintosh Models (4/97)

=====

Article Created: 16 February 1995
Article Reviewed/Updated: 8 April 1997

TOPIC -----

The following compares the Power Macintosh Upgrade Card and the Macintosh Processor Upgrade (discontinued).

DISCUSSION -----

Begin_Table

Current Macintosh model	Current clock speed	Speed with Power Macintosh Upgrade Card	Speed with: Macintosh Processor Upgrade
Quadra 950	33 MHz	66 MHz !	N/A
Quadra 900	25 MHz	50 MHz !	N/A
Quadra 840av	40 MHz	N/A	N/A
Quadra 800	33 MHz	66 MHz !	N/A
Quadra 700	25 MHz	50 MHz !	N/A
Quadra 660av	25 MHz	N/A	N/A
Quadra 650	33 MHz	66 MHz !	N/A
Quadra 630	33 MHz	66 MHz !	66 MHz
Quadra 610	25 MHz	50 MHz	N/A
Quadra 605	25 MHz	N/A	50 MHz

Centris 660av	25 MHz	N/A	N/A
Centris 650	25 MHz	50 MHz	N/A
Centris 610	20 MHz	40 MHz	N/A
Macintosh IIfx	16 MHz	N/A !	N/A
Macintosh IIfx	32 MHz	N/A !	N/A
Macintosh IIfx	25 MHz	N/A !	N/A
Macintosh IIfx	20 MHz	N/A !	N/A
LC 630	33 MHz	N/A !	66 MHz
LC 575	33 MHz	N/A !	66 MHz
LC 475	25 MHz	N/A !	50 MHz
Performa 630 series	33 MHz	N/A !	66 MHz
Performa 600	32 MHz	N/A	N/A
Performa 575, 577 & 578	33 MHz	N/A !	66 MHz
Performa 475 & 476	25 MHz	N/A !	50 MHz

End_Table

KEY:

! - Separate Upgrade Card offered by DayStar Digital.

NOTES:

- Power Macintosh Upgrade Cards are customer installable.
- Macintosh Processor Upgrade
 - Has been discontinued.
 - Comes with PowerPC 601 Processor with floating-point processor and 256K level-2 cache that is expandable to 1MB.
 - Must be installed by an Apple authorized service provider.

Article Change History:

08 Apr 1997 - Updated with availability information.
 16 Aug 1995 - Modified format for ease of viewing.
 27 Jul 1995 - Reviewed for grammatical errors.

Copyright 1995-1997, Apple Computer, Inc.

Tech Info Library Article Number:17205



Tech Info Library

Sound In Options: Dimmed on Some Macintosh Models (7/95)

Revised: 7/24/95
Security: Everyone

Sound In Options: Dimmed on Some Macintosh Models (7/95)

=====

Article Created: 16 February 1995
Article Reviewed/Updated: 24 July 1995

TOPIC -----

I've got a problem with a Quadra 800 and Sound Manager 3.0. When I open the Sound control panel (v. 8.0.1) and I choose Sound In, the Options button is disabled (it appears dimmed or "grayed out"). Do you know what could be causing this?

DISCUSSION -----

The Options button was added to the Sound control panel to provide a place for users to control access to sound channels and the Playthrough option. The affected models released before these options were put into use.

The systems that exhibit this behavior are:

- Performa 475/476
- Quadra 605
- Centris 610
- Centris 650
- Quadra 610
- Quadra 650
- Quadra 800

When these computers were released, the CD-ROM drive was set up to always play audio CDs through the built-in speaker (or the sound out port). The CD player was chosen as the sound source whenever the microphone was not plugged into the Sound In port. In other words, the features that you control by clicking on the Options button are controlled automatically on these systems.

There is no way to let these systems control their sound channels and playthrough options using software, like other Macintosh systems do. That is why the Options button has been disabled.

Article Change History:

24 Jul 1995 - Added additional computers

06 Mar 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17206



Tech Info Library

LaserWriter Pro 630: Macintosh Serial Connection (2/95)

Revised: 2/16/95
Security: Everyone

LaserWriter Pro 630: Macintosh Serial Connection (2/95)

=====

Article Created: 16 February 1995

TOPIC -----

I want to use a serial cable to connect a Macintosh to a LaserWriter Pro 630 printer. I want to use the RS-232 port (DB-9) on the LaserWriter Pro 630, does Apple have a pre-built cable for this purpose? If not can you provide me with the pinouts?

DISCUSSION -----

Depending on why you want to use a serial connection, a System/Peripheral 8 cable (Apple Part # M0197) may be a better solution. If you use the RS-232 port (DB-9) on the LaserWriter Pro 630, you cannot use the standard LaserWriter printer driver. APDA at one time provided an asynchronous printer driver, but this driver is no longer available.

If you use the LocalTalk port (Din-8) on the LaserWriter Pro 630, you can use the standard LaserWriter printer driver. This doesn't provide you with asynchronous communications to the printer, but using the standard LaserWriter printer driver is the method Apple recommends.

If you want to use the RS-232 port to use PostScript in the interactive mode, here are the pinouts:

Macintosh (Din-8)		LaserWriter Pro (DB-9)	
-----		-----	
Signal	Pin#	Pin#	Signal
GND	4	5	GND
TxD-	3	2	RxD
TxD+	6	1	DCD
HSKo	1	4	DTR
RxD+	8	NC	
RxD-	5	3	TxD

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17207



Tech Info Library

Power Macintosh: Macintosh Print Pack Not Compatible (2/95)

Revised: 3/23/95
Security: Everyone

Power Macintosh: Macintosh Print Pack Not Compatible (2/95)

=====

Article Created: 16 February 1995

TOPIC -----

Is the Macintosh Print Pack compatible with Power Macintosh computers or QuickDraw GX?

DISCUSSION -----

The current version of the Macintosh Print Pack is not compatible with QuickDraw GX or Power Macintosh computers. Macintosh Print Pack "may" work with System 7.5, but has not been tested.

GDT Softworks makes PowerPrint which provides the same functionality as the Macintosh Print Pack. You can contact GDT Softworks for additional information on PowerPrint. The current version of PowerPrint was tested with Power Macintosh computers.

Apple currently has no plans to update or upgrade the Macintosh Print Pack.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17208



Tech Info Library

Color StyleWriter 2400: Extending Ink Cartridge Life (2/95)

Revised: 2/16/95
Security: Everyone

Color StyleWriter 2400: Extending Ink Cartridge Life (2/95)

=====

Article Created: 16 February 1995

TOPIC -----

Why can I only get approximately 25 pages of printing from my Color StyleWriter 2400 black ink cartridge when I print? I am trying to print some simple black and white PICT documents.

DISCUSSION -----

The number of pages that can be printed from an ink tank varies significantly depending on the type of document being printed, the mode of printing (Best, Normal, or Draft), and the type of material being printed on.

Select Best when printing requires significantly more ink than the Normal mode. Using the Best mode can cut the ink cartridge life almost in half depending on the documents being printed. When printing black and white documents it is more cost-effective and faster to print using the black-only ink cartridge (M3240G/A) because it contains a much larger supply of black ink.

Suggestions for Extending Ink Cartridges

=====

The Color StyleWriter 2400 User's Guide (page 66) contains several suggestions for extending the printing life of ink cartridges. The section reads as follows:

Ink tanks and cartridges run out of ink too quickly

To Extend the life of your ink cartridges, try the following:

- Select Draft print quality in the Print dialog box whenever you can.
- Do not clean the print head unless necessary.
- Do not print solid background colors unless necessary.
- Do not open the printer's cover unnecessarily. (After you shut the cover, the

printer cleans the print head, which uses up ink.)

- Do not unplug the printer or otherwise discontinue power frequently.
- Do not print the test page unless necessary.

Support Information Services

Copyright 1995, Apple Computer, Inc

Tech Info Library Article Number:17209



Tech Info Library

PB 500 Series: Global Village Mercury 2.5 Software Change (2/95)

Revised: 2/16/95
Security: Everyone

PB 500 Series: Global Village Mercury 2.5 Software Change (2/95)

=====

Article Created: 16 February 1995

TOPIC -----

I just installed the new Global Village Modem software 2.5 into my Powerbook 500 series and the Compatible/Normal settings in the Powerbook Setup control panel are gone. Is this no longer an option?

DISCUSSION -----

Global Village has moved these settings into the Powerport 500 control panel. It now has the same feel as the Apple Express Modem 1.5.5 software in this respect.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17210



Tech Info Library

Macintosh Networks: No Way to Calculate Real World Speed (2/95)

Revised: 2/17/95
Security: Everyone

Macintosh Networks: No Way to Calculate Real World Speed (2/95)

=====

Article Created: 17 February 1995

TOPIC -----

Is there a method as to how I can determine the correlation between a networking file transfer speed specification in mbits/sec and as to what I should see in a real world setting in regards to file transfer speed in mbytes/min across a given network. If this is not enough info to go on I'll be glad to supply any needed.

DISCUSSION -----

The short answer to this question is "no".

Let's take Ethernet as an example. The 10Mbps is the actual bandwidth of the cable. 40% average utilization of an Ethernet network would be considered high. At times a single node may use up to 60% of the available bandwidth but this is uncommon.

Then there are hardware and software issues. How efficient are the hardware and software? Is the data being read from disk or RAM?

There is no way to say how fast a given computer will be at doing network transfers unless you actually test it. There is no test data for Apple's Macintosh systems.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17212



Tech Info Library

LaserWriter Pro 16/600 PS: Printer Reduces Size of Faxes (2/95)

Revised: 2/17/95
Security: Everyone

LaserWriter Pro 16/600 PS: Printer Reduces Size of Faxes (2/95)

=====

Article Created: 17 February 1995

TOPIC -----

I am faxing a full length page to my LaserWriter 16/600 PS Fax printer and the printer is reducing the document by about 5-7%, is this normal?

DISCUSSION -----

Yes, a small amount of resizing is normal. The document must be resized so that the header on fax can be placed on the document properly. The width gets resized proportionally, so the document does not appear distorted. The overall reduction is approximately 5%.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17214



Tech Info Library

Pwr Mac DOS Compatability Card: VTCPIP Error w/ Windows (2/95)

Revised: 5/24/95
Security: Everyone

Pwr Mac DOS Compatability Card: VTCPIP Error w/ Windows (2/95)

Article Created: 17 February 1995

TOPIC -----

I have installed LAN WorkPlace for DOS on my DOS Compatibility Card for the Power Macintosh 6100. Now when I restart the MS-DOS environment and try loading Windows I get the following error message:

VTCPIP: Device load failed.
TCPIP is not installed or not the right version.
hit any key to continue.

Despite this error, Windows seems to load properly.

DISCUSSION -----

This error occurs if you have installed the Windows portion of LAN Workplace. If Windows runs before TCPIP.EXE is loaded, you get this error. This error doesn't prevent Windows from loading and working properly, however your TCP/IP software will not work.

The most common cause of this error is running Windows before loading network software. You may encounter this error because the CALL C:\LANWP.BAT is added as the last line of the AUTOEXEC.BAT file. Apple ships the DOS Compatibility Card with WIN as the last line in AUTOEXEC.BAT. To correct this error, move WIN after CALL C:\LANWP.BAT, or comment it out altogether.

If you have further questions about Microsoft Windows, please contact Microsoft's technical support. If you have further questions about LAN Workplace for DOS, please contact Novell.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17215



Tech Info Library

DOS Compatibility Card: How to Access Upper Memory (5/96)

Revised: 5/22/96
Security: Everyone

DOS Compatibility Card: How to Access Upper Memory (5/96)

Article Created: 17 February 1995
Article Reviewed/Updated: 22 May 1996

TOPIC -----

I have a Power Macintosh 6100 with a DOS Compatibility Card installed. I am unable to get EMM386 working. The user's manual discourages the use of memory management tools, so I'm wondering if the DOS Compatibility Card supports EMM386? If so, how do I get it working?

DISCUSSION -----

The DOS Compatibility card supports upper memory. To access upper memory make the following change to your config.sys file:

If you are using PC Setup 1.0.7, the lines are:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS X=C800-CFFF RAM=D000-EFFF
```

or

```
DEVICE=C:\DOS\EMM386.EXE X=C800-CFFF RAM=D000-EFFF
```

For PC Setup 1.5, the command lines are:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
```

or

```
DEVICE=C:\DOS\EMM386.EXE I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
```

Depending on how you have configured the file, config.sys should look similar this:

```
DEVICE=C:\DOS\SETVER.EXE  
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
```

```
DEVICE=C:\DOS\EMM386.EXE X=C800-CFFF RAM=D000-EFFF  
DOS=HIGH,UMB  
FILES=30  
LASTDRIVE=M
```

This information is also provided in the DOS Compatibility Card Read Me File.

Article Change History:

22 May 1996 - Added new config.sys line for PC Setup 1.0.7
28 Feb 1995 - Reformatted article.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17216



Tech Info Library

Apple SCSI Terminator: Description of Active Terminator (2/95)

Revised: 2/23/95
Security: Everyone

Apple SCSI Terminator: Description of Active Terminator (2/95)

=====

Article Created: 23 February 1995

TOPIC -----

This article provides a description and some Q and A information for the new Apple Active SCSI Terminator part number M3503LL/A.

DISCUSSION -----

The Apple SCSI Active Terminator is the new style of SCSI terminator. It replaces service part number 658-8032, the new service part number is 922-1185.

Question: What does it do?

Answer: The Apple SCSI Active Terminator includes a voltage regulator and capacitors to filter the term power. Active termination is one of the alternatives specified in the new SCSI specifications. The active termination is much less sensitive to variations in the termination power supplied by various SCSI devices.

The active terminator functions as follows:

The terminator voltage supplied by the device, typically between 4.25 Vdc and 5.25 Vdc is applied to a low drop voltage regulator and the output is regulated to 2.85 Vdc which is then applied to 110 ohm series termination resistors.

Question: Does it turn off or turn on?

Answer: No, the regulator is on when ever termination power is supplied to it.

Question: Why isn't there a LED on it indicating activity?

Answer: A complete redesign of the tooling for the terminator housing would be required to fit an LED to the terminator. Since the terminator is at the back of the peripheral, out of sight of the user, the benefit of an LED would be minimal.

Question: Does it adjust for resistance or impedance problems?

Answer: No, its designed for regulating the termination power supplied by SCSI devices.

Question: Why would someone want this one over the old one?

Answer: Improved reliability of the term power signal level.

Question: Did the finished goods part number change to a /B?

Answer: No, this is the first revision of this part, not a revision of the old part. The new part number is M3503LL/A

Question: How can I differentiate it from the old terminator from the outside?

Answer: The previous non active SCSI terminator has part number 590-0304-A embossed in the plastics. The new active SCSI terminator has part number 590-0772-A embossed in the plastics.

Question: Is it required by any current or future computers?

Answer: This new active SCSI terminator is not required for any specific computer or peripheral from Apple. It is a replacement for the current terminator. The IIIfx and some LaserWriter printers still require the black terminator.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17218



Tech Info Library

Macintosh Portable: How to Identify Backlit Model (4/95)

Revised: 4/26/95
Security: Everyone

Macintosh Portable: How to Identify Backlit Model (4/95)

=====

Article Created: 20 February 1995
Article Reviewed/Updated: 26 April 1995

TOPIC -----

Is there a outward way to differentiate between the backlit and original Macintosh Portable? I know I can open the rear cover and look at the memory configuration since the Backlit Portable has fewer memory chips on the left side of the logic board, but can I identify them from the outside?

DISCUSSION -----

The easiest way to tell the difference between a backlit and non-backlit Portable is, of course, to see if there is a light emanating from the display.

Another way to tell is to check the model number, located on the bottom of the unit. The Backlit Portable was model number M5126 and the non-backlit was M5120.

Note: If the non-backlit model had an upgrade to the backlit, it would retain the old model number, M5120 and have the backlight upgrade card installed in the J10 ROM slot and have inprinted on it "PORTABLE BACKLIGHT UPGRADE".

Article Change History:
26 Apr 1995 - Added more info on how to differentiate between models.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17219



Tech Info Library

Drive7: Compatibility with Power Macintosh and System 7.5 (2/95)

Revised: 2/20/95
Security: Everyone

Drive7: Compatibility with Power Macintosh and System 7.5 (2/95)

=====

Article Created: 20 February 1995

TOPIC -----

What version of Drive7 should I use on my Power Macintosh? Is it System 7.5 compatible?

DISCUSSION -----

Casa Blanca Works, makers of Drive7, strongly recommend that customers use at least version 3.0 of Drive7 for full Power Macintosh compatibility.

They stated that there are known Power Macintosh compatibility issues with Drive7 versions previous to 3.0. The current version of Drive7 is 3.0.9. Version 3.0 and later is also System 7.5 compatible.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17220



Tech Info Library

System 7.5: Recovering Deleted Text from Stickies (2/95)

Revised: 2/20/95
Security: Everyone

System 7.5: Recovering Deleted Text from Stickies (2/95)

=====

Article Created: 20 February 1995

TOPIC -----

I saved some important info using the Stickies DA and then I accidentally deleted it. Is there any way to get it back?

DISCUSSION -----

Stickies supports the Undo command from the Edit menu. If you accidentally delete text, this is the only reliable way to retrieve it. Note that the Undo command will only undo the last text editing task.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17223



Tech Info Library

Apple Personal Diagnostic: False Directory Problem Report (2/95)

Revised: 2/20/95
Security: Everyone

Apple Personal Diagnostic: False Directory Problem Report (2/95)

=====

Article Created: 20 February 1995

TOPIC -----

Apple Personal Diagnostics reports a disk or directory problem with my hard disk, but when I run Disk First Aid, no problems are found.

What is causing this contradiction?

DISCUSSION -----

Under some circumstances, Apple Personal Diagnostics may incorrectly report disk or directory problems, but drive diagnostics such as Disk First Aid may not find these problems. This situation is usually caused by extension conflicts with the diagnostics.

For best results, when running Apple Personal Diagnostics, disable Extensions by holding down the Shift key at start up, then run the diagnostics.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17224



Tech Info Library

Tech Info Library: How to Search for Articles (2/97)

Revised: 2/12/97
Security: Everyone

Tech Info Library: How to Search for Articles (2/97)

=====

Article Created: 22 February 1995
Article Reviewed/Updated: 12 Feb 1997

TOPIC -----

The following discussion gives an overview of the use of the Technical Information Library, keywords, constructing searches, and relevance ranking.

For a description of how to submit an article for publication, refer to the article titled "Tech Info Library: Submitting Articles for Publication".

DISCUSSION -----

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THE TECHNICAL INFORMATION LIBRARY

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What Is The Technical Information Library?

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The Apple Technical Information Library (TIL) is Apple's official technical support database. The TIL is a textual database of several thousand articles about Apple and third-party product technical issues. The TIL is accessible by thousands of users world-wide on online services such as CompuServe, and the Internet (both World Wide Web and WAIS). The TIL is updated daily with new information and is the same database that Apple employees use to answer customer questions.

Where You Can Find the TIL

=====

A subset of the TIL is available to anyone through these online services:

America Online

..TIL17225-Tech_Info_Library-How_to_Search_for_Articles_2-97.pdf

Use your AOL Web Browser to visit: <http://til.info.apple.com>.

CompuServe

Located in the Apple Tech Info area (go aplttil).

The Internet

Maintained in two locations:

info.hed.apple.com (Home Gopher Server)

Path: Home Gopher Server -> Computer Information -> Apple Tech Info Library

info.apple.com

World Wide Web

Located at this URL: <http://til.info.apple.com> OR <http://www.info.apple.com>

SEARCHING THE TIL

=====

There are four ways to search the TIL:

- By keyword
- By full text search
- By publication date (CompuServe -- See NOTE*)
- By browser

*NOTE: This search varies slightly between platforms. See the specific platform section below for information on searching by date.

Searching with Keywords

=====

Use keywords to quickly and easily find the information you are looking for in the TIL. For best results, use a keyword and a product name. Here is an example of using a keyword and product name in a search string:

"SPECSHT and Quadra 840AV"

This search string finds the "Quadra 840AV: Specifications" article.

Using a keyword in a search string may not find all relevant articles; some articles were in the TIL prior to the implementation of keywords. In addition, some related articles do not include the keyword for the article to which it relates.

The keywords in the following list can help you easily narrow a search. This list is current as of 12 February 1997:

Begin_Table

Description -----	Keyword -----
Apple MessagePad (Newton)	knmp
Apple Network Administrator Toolkit	kanat
At Ease Information	katease
Available in rich text via FAX	kfax
Cable Information	cabinfo
Document Manual Errors	kmanerr
Emerging Issues	kissue
Engineering Feedback Pilot Program	kfeed
Frequently Asked Questions (FAQ)	kfaq
Information Alley	kalley
Internet Related Information	kinter
Matrix/ Table	ktable
Online Information	kol
PCI Bus Related Articles	kpci
PowerBook	kpbook
PowerPC, Power Macintosh	kppc
Searching Libraries/Posting Articles	khelp
Software or Hardware Configuration	cnfg
Specification Sheets	specsht
Support Issues	supt
System 7.0 Articles	sys7
System 7.5 Articles	sys75
System 7.6 Articles	sys76
Third Party Compatibility Lists	pcompat
Third Party Info	3pty
Top 20 Most Accessed Articles/Month	ktop20
Top TIL articles read in Internet TIL	ktoptil
Troubleshooting: Hardware	hts
Troubleshooting: Network	knts
Troubleshooting: Software	ksts
Windows/MS-DOS	kwindows

End_Table

Entering Text Queries
=====

You can search the TIL by simply typing in a word or phrase and then clicking the Search button. A list of all articles that contain the word or phrase you entered displays in a scrolling field. You can then double-click on an individual title to view the article.

Spell Correctly

To ensure a complete search, it is important to spell correctly. Products are indexed into the TIL by their full name. Capitalization and trademark symbols are not necessary.

Use Full Product Names

When making searches, it is important to use the full product name. For a complete listing of all Apple product names, see the Apple Computer, Inc. Trademark List. This can be located by searching the TIL using "trademark list" as the search information.

Use Full Search Phrases When Appropriate

It is possible to use a full search phrase when searching the TIL. For example: searching for "color stylewriter pro" finds all articles that contain the exact phrase "Color StyleWriter Pro". (Note: for all example search strings shown, do not type the quote marks [","]- they used in this article only to identify the specific search string.)

Searching Tips

When you do not know an exact phrase, use operators such as AND, OR, or NOT* (except in the Internet WAIS-based TIL) between words to expand or limit your search. For example, typing in "PowerBook and Printer" gives you a listing of all articles that contain the words PowerBook and Printer anywhere in the document. If you are looking for information on toner cartridges for a LaserWriter, typing the search string "laserwriter and (toner or cartridge)" finds every document that includes the words LaserWriter and toner or the words LaserWriter and cartridge.

*Search Tip for WAIS-based Tech Info Library

An important tip to remember when searching the WAIS-based Tech Info Library (<http://til.info.apple.com>) is that the database does not understand AND, OR or NOT. Thus, if you search for either "MessagePad and 120," or "MessagePad OR 120," the result is all articles that contain either Messagepad or 120. Thus, try using keywords or very specific terms (example: 5200) as well as limiting the number of article titles found (40 is the default, up to 100) when searching.

Relevance Ranking of Articles

=====

The theory of relevance ranking is that it matches your search words against the textual content of selected information sources to find articles that match the search request. A statistical algorithm then ranks the articles according to relevancy and displays the most relevant article(s) at the top of the hit list. As a result, you can see at a glance which articles are most relevant. Relevance ranking helps you find more pertinent information with less effort.

=====

THE TIL ON COMPUSERVE

=====

This section describes the differences in searching the TIL on CompuServe. You can search the TIL on CompuServe in three ways:

- By product category
- By Publication date
- By full text search

You can perform a search using one or a combination of these methods.

We recommend using "Full Text Search" in your search (alone or in combination with one or both of the other methods). Although searching requires more time, in many cases you get more matches based on your search criteria.

Searching on CompuServe =====

The following instructions assume that you are using CIM (CompuServe Information manager) software. (If you are using the text mode, please type the number next to the appropriate line item.)

Step 1: Type "Go APLTIL" to access the main search screen for the TIL.

Step 2: Select "Search the Apple Technical Information Library"

Step 3: Complete Step 3 as described below for the type of search you want.

Step 4: Complete Step 4 as described below for the type of search you want.

The remaining search steps follow the separate Step 3 and Step 4 procedures. To perform a combination search, complete Step 3 and Step 4 for each desired type of search before continuing with Step 5.

Searching by Product Category -----

Step 3: Select "Product Category."

Step 4: Select the product category you want to search:

- Any Product Category
- AppleTalk
- A/UX
- HyperCard
- LaserWriter
- Newton
- Performa
- PowerBook
- Power Macintosh
- Quadra
- System 7

Searching by Publication Date -----

Step 3: Select "Publication Date."

Step 4: Select the date specification and enter the search date in MM/DD/YY format. The date specifications are:

- Any Date
- On or After a Specific Date
- On or Before a Specific Date

Searching with Full Text

Step 3: Select "Full Text Search"

Step 4: Enter the word or words you want to search for. You can enter all words in the first of the three available rows, which results in a search for the exact string. You can enter words in different rows, which results in a search for the specified words in any order (in other words, the multiple rows provide an "and" function). For example: Entering "Power Macintosh printing" on the first row searches for this exact string; entering "Power Macintosh" on the first row and "printing" on the second row searches for an article that includes the two strings "Power Macintosh" and "printing" somewhere in the article. (CompuServe does not support boolean "or" or "not" type searches.)

Step 5: The Apple Tech Info Library performs the search and reports the results labeled "Records selected: nnn".

Step 6: Select "Display Selected Records" to view all article titles of articles found in the search.

Step 7: Select individual article title(s) to view the article(s).

Article Change History:

12 Feb 1997 - Added keyword sys76
11 Jul 1996 - Added new keyword kanat.
10 Jul 1996 - Added keyword.

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Tech Info Library Article Number:17225



Tech Info Library

GPi and Super-Fast Modems: Overview (2/95)

Revised: 2/21/95
Security: Everyone

GPi and Super-Fast Modems: Overview (2/95)

Article Created: 21 February 1995

TOPIC -----

This article describes the GPi (General Purpose input) line of the serial port on a Macintosh computer and how it works with super-fast modems.

DISCUSSION -----

What is GPi?

=====

GPi is a signal pin that is used on the serial connector of a DIN-8 (DIN-9 on Geoport enabled Macintosh computers). It was intended to provide a way for the Macintosh to support communication devices that needed to pass along pacing information (an external clocking signal).

This signal was typically needed several years ago by modems that were synchronous serial modems. This "class" of modems is typically used for specialized purposes, as into tying into certain computer data networks or directly into a remote communications controller.

Today, the vast majority (98% or better) of personal computer remote communications are done via asynchronous modems. The need for GPi to be used as a synchronous external clock input is rare. Asynchronous serial modems today go as fast as 28,800 bps over the communication link, and if the data going over that link is highly compressible, it is theoretically possible that the actual data rate (because of the gain in compression) can approach 115,000 bps.

However, there is a more practical use for the GPi control line - hardware handshaking. Hardware handshaking is a method of signaling used between hardware devices (computer and modem) to pace the "conversations" over the serial line to help ensure that characters and other information do not get "dropped". Typically speaking, most Macintosh computers that are communicating serially to a modem only require a special cable called a "high speed hardware handshaking cable" to speak at serial port speeds of 9600 bps or higher.

In Macintosh computers that support the GPi connection, the GPi line goes to the "Data Carrier Detect" or DCD signal line of the serial control chip. It is located at pin 7 on the DIN-8 serial connectors, and connects to the DCD input of the Z8530 Serial Communications Controller (SCC). Some machines that do not support GPi include the Macintosh Plus, Macintosh Classic, and Macintosh LC. On these machines, pins 7 of the DIN-8 serial connectors are not connected.

There is no one correct way to institute a hardware handshaking protocol as it relies heavily on a combination of events: the software requiring serial communications, the cable used to connect the computer and the external serial communications device (typically a modem of sorts), and the communications device itself (again, typically a modem).

In Macintosh software, the choice of using GPi is up to the programmer of the software. The software producer should tell you in the documentation whether their software relies on GPi and other configuration information. In most Macintosh serial communications software, the use of GPi is minimal or non-existent.

A few Macintosh computers (such as the Macintosh IIfx and Macintosh Quadra 950) are exceptions to certain hardware trends and require the use of special compatibility software to allow the use of communications software that require GPi control.

GPi signal use can be instituted to allow for one form of Hardware handshaking control. However, the use of the GPi line is not required for the use of other hardware handshaking control schemes on the Macintosh. In fact, many "Super High Speed" modems do not use GPi to hardware handshake.

Can you use a "high Speed" modem with your Macintosh?

=====

Yes, you can use a "Super High Speed" modem for your Macintosh. The general technical classification for these modems are:

- V.32 for 9600baud
- V.32bis for 14,400
- V.32ter for 19,200
- V.34 for 28,800

The data rate specified is typically the best data for that class of modem (for example, V.32 will never go faster than 9600, but it can communicate at 4800, 2400, and 1200 baud speeds) taking into account certain factors like quality of telecommunications line, how much "attention" your Macintosh can pay to the serial line, and other tasks that it needs to be doing at the same time.

In fact, for most Macintosh computers that are not equipped with the Geoport capability, the fastest ideal speed that you can expect the computer can speak at the serial connector is 57,600 bps. Geoport-equipped Macintosh computers can potentially go up to 230Kbps at the serial port.

Further Reference

=====

For additional information about GPi technology, refer to the following publications:

- "Inside Macintosh, Volume III - The Macintosh Hardware"
- "Inside Macintosh, Volume VI - Compatibility Guidelines"
- "Guide to the Macintosh Family Hardware - Serial I/O Ports"
- "Technical Note M.OV. GestaltSysenvirons - Gestalt and Sysenvirons: A Never Ending Story"
- "Technical Note M.HW.MacIIfx - Macintosh IIfx: The Inside Story"
- "Technical Manual: Z8530 SCC Serial Communications Controller (contact Zilog or AMD)"

Support Information Services

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Tech Info Library Article Number:17226



Tech Info Library

PowerBook: Jumpy or Erratic Trackpad Operation (2/97)

Revised: 2/21/97
Security: Everyone

PowerBook: Jumpy or Erratic Trackpad Operation (2/97)

Article Created: 21 February 1995
Article Reviewed/Updated: 21 February 1997

TOPIC -----

The cursor on my PowerBook keeps jumping or moving where I do not want it to without my touching it. It also acts strangely when I do touch it. I have tried cleaning both the Trackpad itself and my finger, using a tissue between my finger and the Trackpad.

I am not wearing any jewelry, using any hand lotion, or sweating a lot from my hands. Also, the Trackpad reacts the same way with any one of the many different people who use this computer. What else could be wrong?

Is there something wrong with the Trackpad or am I doing something wrong?

DISCUSSION -----

The trackpad on the PowerBook 190, 500, 2300, 1400, 3400*, and 5300 series computers works on a principal called coupling capacitance. As your finger moves over the surface, the trackpad evaluates the change in capacitance between two layers of measurement electrodes built into the surface of the trackpad.

Make sure only one part of your finger is touching the pad. You will not be able to use a pen or other object, it is designed to work with your finger. Also make sure that you are not resting your wrist on or very close to the pad. The trackpad may interpret this as your wrist touching it and make the cursor move in that direction. If you suspect either of these is causing the cursor's behavior, try raising your wrist in the air and only touch the pad with the tip of your finger. If the symptom goes away then you know that one of the above is the cause and you should adjust the position of your wrist and or finger.

If you have sweaty hands or if moisture collects on the pad, this may also confuse the trackpad. Wiping off the trackpad with a cloth or tissue will usually fix this problem. If the problem goes away when a piece of paper is put in between the finger and trackpad you may want to consider purchasing a Teflon

applique to fit over the pad to prevent the moisture from having direct contact with the trackpad. Before installing the Teflon applique, make sure the trackpad is clean and dry. You can use a mild glass cleaner sprayed onto the cloth, not onto the trackpad itself to clean the trackpad. If the problem is still happening with a piece of paper in between the finger and trackpad try removing the trackpad preferences from the Preferences folder in the System folder.

Oil or lotion can also cause the same problem. Either do not use hand lotion, or consider purchasing a Teflon pad to protect the trackpad. Before installing the Teflon pad, make sure the trackpad is clean and dry.

Jewelry may also cause interference. Try removing rings or bracelets and see if the jumping or erratic behavior disappears.

Apple has had some reports of the strange behavior you describe about power supplies made by a company called Battery Technology, Inc. (BTI)**. If you are using one of these power supplies, unplug it and try running from just the Apple NiMH battery to see how the Trackpad behaves. Also try using the Apple AC Adapter instead of the third-party AC Adapter. If the Trackpad behaves normally running from just the Apple battery or with the Apple AC Adapter, there is most likely a problem with your third-party power supply.

* Note: The trackpad used in the PowerBook 3400 series computers was designed to be much more tolerant than previous models of moisture and other environmental factors. The issues mentioned in this article should have little or no impact on this redesigned and improved trackpad.

** This article provides some information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the third-party vendor for more information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

21 Feb 1997 - Added PowerBook 3400 info.
21 Jan 1997 - Added PowerBook 1400.
20 Sep 1996 - Added keyword.

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Tech Info Library Article Number:17228



Tech Info Library

Chinese Language Kit v1.1 Full Custom Install (2/95)

Revised: 2/21/95
Security: Everyone

Chinese Language Kit v1.1 Full Custom Install (2/95)

Article Created: 21 February 1995

TOPIC -----

What is the difference between a Simplified Custom install and a Traditional Custom Install of the Chinese Language Kit v1.1?

DISCUSSION -----

Listed below are the software components and the hard disk space they require that are installed onto a hard disk from Chinese Language Kit v1.1 using the Customize button in the Installer and selecting all the options. Both the Simplified Installation and Traditional Installation are shown here.

NOTE:

The items installed for the Chinese Language Kit v1.0 are the same as v1.1 listed below, but the version numbers of the items may vary.

CHINESE LANGUAGE KIT V1.1 SIMPLIFIED INPUT FULL CUSTOM INSTALL:

Hard Disk:

=====

Read Me 5k

TeachText 36k v7.1

Apple Extras:

=====

Simp. Chinese Language Register 39k v7.1.1

System Folder:

=====

Beijing 16L1 128k

Beijing 16L2 96k

Simplified Chinese Fonts 2k

Song 16 236k

Song 24 527k

Extensions:

FarEast Addition 33k v1.0.1
InputBackSupport 107k v7.2.1
Language Kit Extension 72k v7.1.2
Roman Support 5k v7.1
Simplified Chinese Input Method 209k vCH1-1.0.2
Simplified Chinese Support 5k vCH1-7.1
WorldScript II 78k v7.2
WorldScript Power Adapter 29k v7.2.1
Chubun 81k vCH1-1.0

Fonts:

Beijing 18k
Song 5,858k

Preferences:

Languauge Kit Preferences
SCIM

CHINESE LANGUAGE KIT V1.1 TRADITIONAL INPUT FULL CUSTOM INSTALL:

=====

Hard Disk:

=====

Read Me 5k
TeachText 36k v7.1

Apple Extras:

=====

Trad. Chinese Language Register 39k v7.1.1

System Folder:

=====

Apple LiSung Light 16L1 189k
Apple LiSung Light 16L2 243k
Apple LiSung Light 24L1 422k
Apple LiSung Light 24L2 543k
Taipei L1 188k
Taipei L2 242k
Traditional Chinese Fonts 2k

Extensions:

Cangjie 170k v2.0.9
Da yi 176k v2.0.9
FarEast Addition 33k v1.0.1

InputBackSupport 107k v7.2.1
Language Kit Extension 72k v7.1.2
Parrot 14k vTA1-2.0
Pin Yin 81k vTA1-2.0.9
Roman Support 5k v7.1
Traditional Chinese Support 5k vTA1-7.1
WorldScript II 78k v7.2
WorldScript Power Adapter 29k v7.2.1
Zhuyin 81k vTA1-2.0.9
Chubun 81k vCH1-1.0

Fonts:

Apple LiSung Light 6,749k
Taipei 18k

Preferences:

Language Kit Preferences
SWM Preferences
SCIM

Support Information Services

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Tech Info Library Article Number:17229



Tech Info Library

Power Macintosh Upgrade Card: Blank Desktop at Start Up (2/95)

Revised: 2/21/95
Security: Everyone

Power Macintosh Upgrade Card: Blank Desktop at Start Up (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

After installing Power Macintosh Upgrade Card in my Centris 650, my extensions load properly on startup but the desktop comes up blank.

Restarting in 68040 mode works fine. What is the problem?

DISCUSSION -----

If you have a Radius Lemans GT card installed, you will need to reconfigure the card properly to match the Power Macintosh hardware (after switching to PowerPC mode) by holding down the letter "u" on startup.

You may wish to contact Radius should the problems persist.

To locate a vendor's address and phone number, use the vendor's name as a search string in the Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17230



Tech Info Library

Japanese Language Kit v1.1: Full Custom Install (2/95)

Revised: 2/21/95
Security: Everyone

Japanese Language Kit v1.1: Full Custom Install (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

What does the Japanese Language Kit 1.1 install when you use the Customize button in the Installer and select all the options?

DISCUSSION -----

Below is a list of the items that the Japanese Language Kit 1.1 installs onto a hard drive when you choose the Customize button in the Installer you select all the options:

NOTE:

The items installed for the Japanese Language Kit v1.0 are the same as v1.1 listed below, but the version numbers of the items may vary.

JAPANESE LANGUAGE KIT V1.1 FULL CUSTOM INSTALL:

=====

Hard Disk:

=====

Read Me 5K

TeachText Japanese 39k vJ1-7.1

Apple Extras:

=====

Japanese Language Register 39k v7.1.1

System Folder:

=====

ChuGothic L1 399k

ChuGothic L2 380k

HonMincho GX 20k

Kanji Fonts 5k

MaruGothic GX 14k
Osaka L1 221k
Osaka L2 141k
SaiMincho L1 515k
SaiMincho L2 488k

Control Panels:

Text 15k v7.1

Extensions:

Koteri 566k vJ1-1.1.1
Kotoeri (Main Dictionary) 453k vJ1-1.1
Kotoeri (Name Dictionary) 254k vJ1-1.1
Kotoeri (Users Dictionary) 42k vJ1-1.0
Kotoeri (Help) 153k vJ1-1.1.1
Kotoeri (Seals) 119k J1-1.1.1
Kotoeri (...Dictionary) 263k vJ1-1.1
Font Extension 23k v1.0
InputBackSupport 107k v7.2.1
Japanese Support 6k v7.1
Language Kit Extension 72k v7.1.2
Roman Support 5k v7.1
WorldScript II 78k v7.2
WorldScript Power Adapter 29k v7.2.1

Fonts:

ChuGothic 27k
HonMincho 8,114k
MaruGothic 6,734k
Osaka 14k
SaiMincho 29k
Tohaba Gothic 17k
Tohaba Mincho 17k
Tohaba Osaka 9k

Preferences:

Language Kit Preferences 2k

Support Information Services

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Tech Info Library Article Number:17231



Tech Info Library

Express Modem and PBX System Compatibility (2/95)

Revised: 2/21/95
Security: Everyone

Express Modem and PBX System Compatibility (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

Can I plug a PowerBook 14.4 Express Modem or Duo 14.4 Express Modem into a PBX phone system?

DISCUSSION -----

From the "Macintosh Express Modem User's Guide":

- Preface, page ix - The PowerBook Duo 14.4 Modem and PowerBook 14.4 Modem will not work with party lines, cannot be connected to a coin-operated telephone, and may not work with a digital private exchange (PBX) system.
- Chapter 1, page 4 - To use your Express Modem, you need an ANALOG telephone line. Most hotels and other buildings use an exchange system (PBX) with digital extensions. If the office or hotel room has a digital extension, consult the office telephone manager or telephone service provider to determine if an analog line can be installed.

CAUTION: Be sure to request an analog telephone line, because higher voltage than recommended may cause damage to your Express Modem, and the repair will not be covered under warranty.

Support Information Services

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Tech Info Library Article Number:17232



Tech Info Library

LaserWriter 16/600 PS: HP/UX PCL Printing Over TCP/IP (2/95)

Revised: 2/21/95
Security: Everyone

LaserWriter 16/600 PS: HP/UX PCL Printing Over TCP/IP (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

I have a LaserWriter 16/600 PS connected over the network to an HP/UX 9.0.x computer. I followed the instructions in the LaserWriter manual to configure the printer under HP/UX and everything prints fine, except I need to print reports from an application in landscape format.

What's the best way to configure the printer so it can take full advantage of landscape mode? Should I set it up as a HP LaserJet using PCL?

DISCUSSION -----

To print to a LaserWriter 16/600 from HP/UX, you configure the printer to either auto-select, or use PCL emulation over TCP/IP.

You seem to have set up the printer queue correctly via "sam" on the HP workstation. However, to print a PCL print job from your workstation in landscape mode, you need the correct escape sequence to specifically tell the printer how to set the print job output. Use of the "lp" or "rlp" command will not make a difference.

To set the correct escape sequence to print in landscape mode, you have to know how to embed an escape sequence in a PCL job. For example, /etc/hosts tends to be an ASCII file, and you can create ASCII files like /etc/hosts, then embed the escape code in the beginning of the text. Below is the escape sequence:

^[&l10

- The symbol "^", a carrot, in "vi" requires holding down the CONTROL-key and letter "v" at the same time.

- The symbol "[", an open bracket, can be obtained by holding down the CONTROL-key and the "{/[" key at the same time.

- The symbol "&" is SHIFT-7.
- The "l" is the lower-case letter "L".
- The "1" is a numeric one
- The "O" is upper-case letter "O"

Support Information Services

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Tech Info Library Article Number:17233



Tech Info Library

Personal LW NT: LaserJet Emulation Page Layout Codes (2/95)

Revised: 2/21/95
Security: Everyone

Personal LW NT: LaserJet Emulation Page Layout Codes (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

I'm trying to use a Personal LaserWriter NT to print reports from our DEC VAX via a serial port.

The printer responds to our requests. However, it prints in a font that is too large to have all the text appear on the page. I'm not sure if it is related to the communication software, VAX print que, or the NT settings. I've tried using the printer's HP LaserJet and Diablo settings, same result. I have tried modifying printer settings in the software, same result.

I've been told that I need to set the printer to 66 lines of output. I don't really know what this means. Any words of wisdom?

DISCUSSION -----

There are at least two parameters that need to be changed (Lines per page and character size) to achieve the page layout that you want. Optionally you may need to set top and bottom margins. To do this in LaserJet emulation you need to pass certain escape sequences to the printer to change these parameters.

If you do not have access to a text/binary editor such as EDT, request your MIS department to send the following information to the printer.

Commands

Page length:

ESC&1#P # = NUMBER OF LINES PER PAGE
ESC&1#E # = NUMBER OF LINES AT TOP MARGIN
ESC&1#F # = NUMBER OF LINES AT BOTTOM MARGIN

Font Selection:

ESC(s7C 7 point character size
ESC(s8C 8 point character size
ESC(s8.5C 8.5 point character size
ESC(s10C 10 point character size
ESC(s12C 12 point character size
ESC(s14.4C 14.4 point character size

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Tech Info Library Article Number:17234



Tech Info Library

LaserWriter Pro 630: Virtual Memory Error (2/95)

Revised: 2/21/95
Security: Everyone

LaserWriter Pro 630: Virtual Memory Error (2/95)

Article Created: 21 February 1995

TOPIC -----

I have a LaserWriter Pro 630 with 8MB of RAM being used in a school lab on an Ethernet network. Occasionally the printer displays a virtual memory error when documents are printed that use TrueType fonts not present on the printer. If I reset the printer, every works fine. Later in the day however, the error may reappear. Why?

DISCUSSION -----

You are getting the virtual memory error because the printer is running out of memory. Even with 8MB of RAM, the majority of it is taken up by the page buffer (especially with PhotoGrade or 600dpi). Power-cycling the printer clears out all temporary items in memory such as fonts, so it is not surprising that the print jobs work for a while, and then fail again once the fonts fill up memory.

Since it seems that you are downloading quite a few fonts to the printer, we would suggest enabling "Unlimited Downloadable Fonts" in the Page Setup Options dialog. This option purges each font from the printer's memory after it is used. As a result, print jobs will probably take longer to process, however, this should get rid of the PostScript errors.

If you will be constantly downloading fonts to the printer, you might want to purchase additional RAM, or even a hard drive for the printer to store the TrueType fonts.

Support Information Services

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Tech Info Library Article Number:17236



Tech Info Library

Pwr Mac DOS Compatibility Card: LSL.COM Not Included (2/95)

Revised: 5/24/95
Security: Everyone

Pwr Mac DOS Compatibility Card: LSL.COM Not Included (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

I have a DOS Compatibility Card for the Power Macintosh, I am trying to use it on a network. Our support personnel keeps asking me for a link support layer LSL.COM. Where can I get this?

DISCUSSION -----

LSL.COM is part of Novell Netware client software. If you are running a Novell Netware network, the distribution disks will have LSL.COM. If not, you can get LSL.COM from Novell's ftp site (ftp.novell.com) or by calling Novell and ordering a site-license.

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Tech Info Library Article Number:17237



Tech Info Library

Color StyleWriter Pro: Margin Limitations and Solutions (2/95)

Revised: 2/21/95
Security: Everyone

Color StyleWriter Pro: Margin Limitations and Solutions (2/95)

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Article Created: 21 February 1995

TOPIC -----

I have a Color StyleWriter Pro and when I print to it from various applications, it seems that all of the margins are offset from what I specify in the application. As an example, the top margin seems to be offset anywhere from 1/8-in. to 3/16-in. so the entire page is moved up towards the top by that amount.

DISCUSSION -----

There are some known problems with the margins on the Color StyleWriter Pro printer. We have outlined some workarounds below.

With the right and left margins, the printable area of the page is offset from the center. The driver does its best to inform applications of this offset, however, applications that do not use the information provided by the driver and assume the page is centered produce incorrect margins.

Top and bottom margins will typically be from 1/8-in. to 3/16-in. off (moved toward the top of the page). This problem is due to the hardware limitations of the printer, specifically, with the paper roller mechanism. The best workaround for this issue is to add 1/8-in. or 3/16-in. to the margin when specifying this value in the application's margin settings.

Support Information Services

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Tech Info Library Article Number:17239



Tech Info Library

Apple EtherNet AUI Adapter: Not FCC Certifiable (2/95)

Revised: 2/21/95
Security: Everyone

Apple EtherNet AUI Adapter: Not FCC Certifiable (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

I noticed that the Apple Ethernet AUI Adapter does not carry any FCC labeling to indicate that it has been tested and certified by the FCC. Is the AUI adapter certified by the FCC?

DISCUSSION -----

The Apple Ethernet AUI Adapter is considered a power supply by the FCC and is NOT certifiable. The device is within the FCC Class A limits for emissions but it does not require certification nor the FCC label. The FCC will not certify this type of device.

The Apple Thin Coax transceiver is a Class B compliant device and carries both the FCC ID and the FCC 'interference' statement.

The Apple Ethernet Twisted-Pair Transceiver is a Class A compliant device and is required only to carry the FCC 'interference' statement and does not require its own FCC ID.

Also see the related TIL Article: "Apple Hardware: FCC Compliance"

Support Information Services

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Tech Info Library Article Number:17240



Tech Info Library

Retrospect: How To Interpret Performance Shown in Log (2/95)

Revised: 2/21/95
Security: Everyone

Retrospect: How To Interpret Performance Shown in Log (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

Please clarify the way Dantz Development Corporation's Retrospect software computes its throughput in this example:

8:56:53 AM: Copying
8:57:00 AM: Comparing
8:57:04 AM: Execution completed successfully

Total Completed: 31 files, 861 KB
Performance: 4.5 MB/minutes (7.2 copy, 12.6 compare)

DISCUSSION -----

The log gives the impression that the copy took 7.2 seconds and the compare took 12.6 seconds. This is not correct. These times are instead accumulative. In other words, after 7.2 seconds the copy was completed and after 5.4 more seconds the compare was completed.

Here are the calculations used to get the number above:

Duration: 00:00:11
Throughput = kbytes backed up / duration
4.5 MB/minute = 861 KB/11 sec * 60 sec / 1 minute * 1 MB/1000 KB
7.2 MB/minute = 861 KB/7.2 sec * 60 sec / 1 minute * 1 MB/1000 KB
9.9MB/minute = 861 KB/5.2 sec * 60 sec / 1 minute * 1 MB/1000 KB

Note:

The total performance is based on the total time of the backup and compare procedures. If you compute just backup or compare time, you seem to have a higher throughput.

This article provides information about a non-Apple product. Apple Computer,

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17241



Tech Info Library

Macintosh Easy Open and Generic System File Icons (2/95)

Revised: 2/21/95
Security: Everyone

Macintosh Easy Open and Generic System File Icons (2/95)

=====

Article Created: 21 February 1995

TOPIC -----

Since I installed System 7.5, both the Finder icon on the System Folder and the System icon in the About this Macintosh window are showing up as a generic document icons (a little piece of paper with the upper left corner folded over).

Everything seems to function normally. I have already rebuilt my desktop with extensions off, but that did not change it. How can I fix this?

DISCUSSION -----

Make sure that Macintosh Easy Open is the first control panel to load before all other extensions and control panels. You can do this by adding a space before the control panel's name so, instead of "Macintosh Easy Open" the name will be " Macintosh Easy Open".

If this does not correct your problem, you may need perform a clean installation of the System software.

Support Information Services

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Tech Info Library Article Number:17242



Tech Info Library

Display Card 24AC: Power Macintosh Can Use Acceleration (2/95)

Revised: 2/22/95
Security: Everyone

Display Card 24AC: Power Macintosh Can Use Acceleration (2/95)

=====

Article Created: 22 February 1995

TOPIC -----

I installed v1.2 of the Display Card 24AC software, which is compatible with Power Macintosh systems, but I cannot find the acceleration options in the Monitors control panel. Is acceleration available on Power Macintosh computers?

DISCUSSION -----

There should be no problems using the Display Card 24AC with any Power Macintosh computer that has an available NuBus slot.

The icons which allow Power Macintosh users to activate video acceleration on the Display Card 24AC should appear in the Options section of the Monitors control panel under the following conditions:

- A Display Card 24AC is installed in the Power Macintosh, and a monitor is attached to the card.
- The "Apple Macintosh 24AC" file is in the Control Panels folder of the current System Folder. The installer for the Display Card 24AC places this file in the Control Panels folder automatically.
- The monitor that is attached to the Display Card 24AC is selected in the Monitors control panel, before the "Options" button is selected. The top left corner of the Options window should read "Apple Macintosh 24AC".

Any time the icons which allow you to activate video acceleration are not visible, video acceleration has not been activated for that monitor.

If the acceleration option is not available, verify all the conditions listed above. If you meet these conditions, then there may be a conflict with other software and you should remove perform basic system software troubleshooting procedures.

Support Information Services

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Tech Info Library Article Number:17245



Tech Info Library

System 7.5: Failure After Partial Installation (4/95)

Revised: 4/7/95
Security: Everyone

System 7.5: Failure After Partial Installation (4/95)

Article Created: 22 February 1995
Article Reviewed/Updated: 7 April 1995

TOPIC -----

While installing System 7.5 from CD or floppy disks, I get part way through the install, usually to Disk 2, then an error message asks me to insert Disk 1. Next an error message says the installation could not be completed.

What can be causing this problem?

DISCUSSION -----

The Installer always asks for Disk 1 to be inserted if it finds a problem during the installation process, this behavior is normal. The error message is actually contained in the Installer code on Disk 1.

Possible Causes

There are two possible causes of the problem:

- A bad diskette, or a dirty or damaged CD
- A corruption in the internal PRAM of the computer

If the CD is dirty, clean it with a soft cloth and water. Be careful to wipe directly from the center out towards the edge; never in a circular path around the CD.

To determine if the problem is related to the diskette itself, first make sure all network, printer, third party Apple Desktop Bus (ADB), and external SCSI devices are disconnected. Clear PRAM by holding down the Command-Option-P-R keys at startup. You will hear the computer chime normally when it restarts. Continue holding the keys down until you hear three more chimes, then release the keys.

Retry the installation process, if it fails again at the same point, the floppy disk or CD you are using is probably damaged and should be replaced. Call

1-800-SOS-APPL or your local dealer for help.

Article Change History:

07 Apr 1995 - Made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17246



Tech Info Library

Pwr Mac DOS Compatibility Card: NetBeui Not Supported (8/95)

Revised: 8/10/95
Security: Everyone

Pwr Mac DOS Compatibility Card: NetBeui Not Supported (8/95)

=====

Article Created: 22 February 1995
Article Reviewed/Updated: 10 August 1995

TOPIC -----

I have a DOS Compatibility Card for the Power Macintosh 6100 connected to a network. When I have NetBeui only selected in Windows for Workgroups 3.11 as the communications protocol, the DOS Compatibility Card cannot communicate with other NetBeui only based Windows for Workgroups 3.11 workstations.

DISCUSSION -----

The MACODI MLID does not support NetBeui. As stated in the User's Manual, The Power Macintosh DOS Compatibility Card only supports IPX and IP protocols.

Article Change History:
10 Aug 1995 - Revised article by author.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17247



Tech Info Library

DOS Compatibility Card: Macintosh Conflicts Affect MS-DOS (2/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Macintosh Conflicts Affect MS-DOS (2/95)

Article Created: 22 February 1995

TOPIC -----

I have a DOS Compatibility Card in my Macintosh, and I am having a problem with the MS-DOS side. This problem seems related to a Macintosh extension. Is it possible for a Macintosh extension to cause problems on the MS-DOS side? I am thinking that the extension in question is mapping the modem port, which is causing problems under MS-DOS.

If this is the case, would adding dedicated memory to the DOS Compatibility Card provide any help to me?

DISCUSSION -----

It is possible to have an init conflict on the Macintosh that affects the DOS Compatibility Card. Since the DOS Compatibility Card relies on the slot manager to function, any Macintosh system problem that 'locks up' the slot manager will also hang the DOS Compatibility Card.

Your hypothesis regarding your problem is correct. The problem is the result of both PC Setup and the modem extension trying to capture the modem port. The modem init replaces the normal serial driver with a network modem driver. The problem occurs at startup when PC Setup attempts to take control of the serial port. Since the modem port is busy (the modem init has 'captured' the port) the configuration process fails and the DOS card hangs. However, since the Macintosh startup process continues, both systems are operating at the same time, the Macintosh system continues to startup.

Adding more memory to the DOS card will not resolve this problem.

Workaround
=====

The work around is to set 'configure comm ports at startup' to none in the PC Setup control panel. If you want to use a network modem, you can configure the

appropriate comm port as needed. You can configure the comm ports with PC Setup running.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17248



Tech Info Library

PrinterShare: Not Enough Memory Error (International) (2/95)

Revised: 2/22/95
Security: Everyone

PrinterShare: Not Enough Memory Error (International) (2/95)

=====

Article Created: 22 February 1995

TOPIC -----

I am having problems using PrintShare with my StyleWriter II printer. Whenever I try to print, an error message appears on the screen stating that there is not enough memory to share the printer. I am using PrintShare v1.1.1 that ships with the French-Canadian version of System 7.5

DISCUSSION -----

This is a know issue with the French-Canadian version of PrintShare v1.1.1. However, there is a simple workaround. You can install PrintShare v1.1.1 that ships with the French-Canadian version of the Color StyleWriter 2400 software. Once you install this version of PrintShare, you can share your printer.

Support Information Services

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Tech Info Library Article Number:17249



Tech Info Library

Pwr Macintosh 6100 DOS Compatible: Video Modes Supported (2/95)

Revised: 5/24/95
Security: Everyone

Pwr Macintosh 6100 DOS Compatible: Video Modes Supported (2/95)

Article Created: 22 February 1995

TOPIC -----

What is the maximum bit-depth (number of colors) I can obtain from a Power Macintosh 6100 DOS Compatible with a Color Plus, Multiple Scan 15, or Multiple Scan 17 Display?

DISCUSSION -----

Power Macintosh 6100 Video Support (Macintosh OS)

	13/14-in. Displays	16-in. Color Display	MS 17,20 Display
Video Port	MS Display @ 640x480	MS Display @ 832x624	@ 1024x768
-----	-----	-----	-----
HDI-45	32,768 Colors	256 Colors	N/A

Power Macintosh 6100 Video Support (MS-DOS/Windows)

	13/14-in. Displays	16-in. Color Display	MS 17,20 Display
Video Port	MS Display @ 640x480	Multiple Scan Display	@ 1024x768
-----	-----	-----	-----
DOS Card	VGA, SVGA @ 640x480 **	VGA, SVGA @ 640x480 & 800x600 **	N/A

** Note: If you intend to run Windows with 256 Colors at a resolution of 640x480 pixels or use an Apple Multiple Scan Display, Apple 16-Inch RGB or VGA display with 16 colors at a resolution of 800 x 600 you must install a display driver for the program you are using. See "Installing Video Drivers" page 39 of the User's Guide for more information.

From page 39 of the User's Guide: "Installing video drivers", select "Windows

3.1" as the application during the installation process.

If you are working with two monitors, make sure that both monitors are connected before starting the Macintosh and DOS Compatibility Card. The monitor dedicated to the Macintosh environment should be connected to the video port on the back of your Macintosh. The monitor dedicated to MS-DOS should be connected to your DOS Compatibility Card.

Troubleshooting

=====

Symptom

Interference and no video on 13/14-in. display.

Solution

When you have a monitor dedicated to the DOS Compatibility Card, it must be connected to the DOS Compatibility Card prior to turning on your Macintosh. If the monitor is not connected first, you will only see the interference. In the PC Setup control panel, the monitor selection displays 16-in. The 14-in. is not available. To correct this problem, shut down your Macintosh. You must shut down your computer, restarting it will not correct the problem. Once the computer is turned off, turn it back on. You can now open the PC Setup control panel and set the Display to 14-in. and start the DOS Compatibility Card.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17250



Tech Info Library

PaperType Editor: Description, Installation, and Usage (2/95)

Revised: 2/22/95
Security: Everyone

PaperType Editor: Description, Installation, and Usage (2/95)

=====

Article Created: 22 February 1995

TOPIC -----

I see in the QuickDraw GX custom install, that you can install a utility called PaperType Editor. What is it and how do I use it?

DISCUSSION -----

Description

The PaperType Editor is a utility which allows you to define your own custom paper types and sizes. With the PaperType Editor you can create a custom menu item for any non-standard paper size that you use; such as, a strange stationary size or unusual envelope size. Once you have created your own custom paper definition, you will be able to print a document using your own custom-defined paper dimensions.*

Note:

This program will only run with QuickDraw GX installed.

Install the PaperType Utility

Step 1

Launch the QuickDraw GX Installer from your system 7.5 disk or CD by double-clicking its icon.

Step 2

Select Custom Install from the pop-up menu in the upper left corner.

Step 3

Click the arrow to the left of the QuickDraw GX Utilities box which is pointing to the right. It should now point down and reveal a list of utilities from which you can choose.

Step 4

Click an X in the box next to PaperType Utility.

Step 5

Click the Install button. This will place a copy of the utility on your hard drive.

Create a Custom Paper Definition

Step 1

Launch the PaperType Editor utility by double-clicking its icon.

Step 2

Enter the parameters for the paper: paper size, print area, and margins.

Step 3

Click on Save As. A navigation box will open.

Step 4

Type in a name for your custom paper definition in the text box beneath the words, "Save Paper Type as:". The default name will be "untitled 1," but you might want to give it a descriptive name, such as: note card, invitation, or small envelope.

Step 5

Click on Extensions. Then click Save. This will save the information into the Extensions Folder inside the System Folder.

Step 6

Quit PaperType Editor by pulling down the File menu and selecting Quit from the list.

Print a Document Using Your Custom Paper Definition

Step 1

Open the application from which you want to print (such as, SimpleText).

Step 2

Pull down the File menu and select Page Setup from the list. This will open the Page Setup dialog box.

Step 3

Pull down the Paper Type pop up menu in the Page Setup dialog box and select your newly defined custom paper name from the list.

The selection of this custom menu item tells the application from which you are printing the correct parameters for your custom paper.

* Note:

Not all applications support the PaperType custom-defined paper feature. The

application must be QuickDraw GX aware to use this feature.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17251



Tech Info Library

Multimedia Starter CD Asks For Install Disk 2 (2/95)

Revised: 2/22/95
Security: Everyone

Multimedia Starter CD Asks For Install Disk 2 (2/95)

=====

Article Created: 22 February 1995

TOPIC -----

This article describes how the Multimedia Starter CD asks for "Install Disk 2" while installing the Hardware System Update (HSU) 2.0 included on the CD.

DISCUSSION -----

The Multimedia Starter CD comes with every Multimedia Kit, and it contains a folder called Macintosh System Updates. A user is instructed to Install HSU 2.0 on their system as part of the process. There is an Installer in the Macintosh System Updates folder which users are supposed to run. When a user runs this installer, he or she may be instructed to insert Install Disk 2, but there is no Disk 2.

If a user has already installed System 7.5, HSU 2.0 DOES NOT need to be installed.

A workaround is to view the Macintosh System Update folder by name under the View menu, and look for a folder called, Extensions and Control Panels. The contents of this folder can be moved by selecting the folder contents and dragging them to the active System folder.

Support Information Services

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Tech Info Library Article Number:17252



Tech Info Library

A/UX adduser: passwd file busy, try later. Message (2/95)

Revised: 2/22/95
Security: Everyone

A/UX "adduser: passwd file busy, try later." Message (2/95)

=====

Article Created: 22 February 1995

TOPIC -----

I'm getting, "adduser: passwd file busy, try later.", when I try to add a user to my AWS (Workgroup Server) 95 with A/UX 3.0.1. Do you know what this is? Have I exceeded my license count? Below is the message along with the active processes, and my /etc/passwd file.

```
AWS95.root # adduser
adduser: passwd file busy, try later.
AWS95.root # ps -ef
```

UID	PID	PPID	C	STIME	TTY	TIME	COMMAND
root	0	0	0	12:29:46	?	0:00	swapper
root	1	0	0	12:29:46	?	0:00	/etc/init
root	2	0	0	12:29:46	?	0:00	vhand
root	3	0	0	12:29:46	?	0:00	kmemd
root	4	0	0	12:29:46	?	0:00	asiod
root	5	0	0	12:29:46	?	0:00	asiod
root	6	0	0	12:29:46	?	0:00	asiod
root	7	0	0	12:29:46	?	0:00	asiod
root	8	0	0	12:29:46	?	0:00	syncd
root	156	1	0	12:30:13	console	0:01	-sh -c /mac/bin/mac32
root	11	1	0	12:29:47	?	0:00	/etc/fidd
root	154	1	0	12:30:12	?	0:00	/usr/lib/sendmail -bd -q30m
root	127	1	0	12:30:09	?	0:00	/usr/lib/errdemon
root	153	1	0	12:30:11	?	0:28	/etc/catsearchd
root	132	1	0	12:30:09	?	0:00	/etc/portmap
root	135	1	0	12:30:10	?	0:00	/etc/cron
root	138	1	0	12:30:10	?	0:00	/etc/in.routed
root	142	1	0	12:30:10	?	0:00	/etc/inetd
root	157	1	0	12:30:13	iw2	0:00	/etc/getty tty1 at_9600
root	145	1	0	12:30:10	?	0:00	/etc/syslogd
root	171	156	0	12:30:17	console	0:00	sh /mac/bin/mac32
root	173	171	2	12:30:17	console	2:16	/mac/bin/startmac
root	174	171	22	12:30:17	console	0:20	/mac/bin/CommandShell -u

```
root    175    142    0 12:31:09 ?          0:00 rpc.mountd
root    187    174    0 12:34:29 C1         0:00 /bin/sh
root    196    174    0 12:39:49 C2         0:00 /bin/sh
root    225    196    2 13:09:03 C2         0:00 ps -ef
AWS95.root # cat /etc/passwd
root:EZGqjZTuZJ8Ns:0:0:::/bin/sh
daemon:*:1:1:::/:
bin:*:2:2::/bin:
sys:*:3:3::/bin:
adm:*:4:4::/usr/adm:
uucp:*:5:5:UUCP Administrator:/usr/lib/uucp:
nuucp:*:10:10:UUCP User:/usr/spool/uucppublic:/usr/lib/uucp/uucico
lp:*:7:7:lp:/usr/spool/lp:
nobody:*:60001:60001:NFS generic user:/tmp:/bin/noshell
dan:elw5oOC7lpMU2:1000:1000:Dan S,,,:/users/dan:/bin/csh
eddie:jnb7McFx5xnaI:1001:1001:Eddie L,,,:/users/eddie:/bin/csh
elut:woXd0MzMJTW76:1002:1002:Eddie L,,,:/users/elut:/bin/csh
manuel:EYOOGuBmQxPnU:1003:1003:Manuel S,,,:/users/manuel:/bin/csh
eric:flwBFKi07P.tI:1005:1005:Eric D,,,:/users/eric:/bin/csh
rick:MIaUtdPAJ6/F6:1006:0:Rick H,,,:/users/rick:/bin/csh
pat::1007:1006:Pat S,,,:/users/pat:/bin/csh
charles:iEsGPQynYEm8c:1008:1007:Charles B,,,:/users/charles:/bin/csh
dave::1009:1008:David S,,,:/users/dave:/bin/csh
andres:pwENfvAx3Wago:1010:1009:Andres,,,:/users/andres:/bin/csh
sofia:Fkzh0A8Rt50JA:1012:1011:Sof,,,:/users/sofia:/bin/csh
rich:wmnERRhZmwaFA:1013:1012:Richard H,,,:/users/rich:/bin/csh
brinkley::1014:1013:Brinkley,,,:users/brinkley:/bin/csh
steve:wHfLlYSHyAl/k:1015:1014:Steve B,,,:/users/steve:/bin/csh
mark:sho7IYFHj.Lr6:1016:1015:,,,:/users/mark:/bin/csh
hackett:FAlsZeEsY.3FU:1017:1016:Elaine W,,,:/users/hackett:/bin/csh
chuck:.DTH.csvi4oQY:1018:1017:Chuck P,,,:/users/chuck:/bin/csh
mart:tESvwlB14R4/A:1019:1018:Mart S,,,:/users/mart:/bin/csh
AWS95.root #
```

DISCUSSION -----

We believe you unsuccessfully added a user with "adduser" involving "vipw" while setting the user password, or there was other user or process activity modifying the password file at the same time. This in turn, created a "ptmp" or "gtmp" locked file in the /etc directory.

We suggest stopping other users or processes from modifying the password file, and removing the /etc/ptmp or /etc/gtmp locked file, if there are any. This should take care of your problem.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17253



Tech Info Library

Apple IP Gateway: -344 Error (6/96)

Revised: 6/4/96
Security: Everyone

Apple IP Gateway: -344 Error (6/96)

Article Created: 22 February 1995
Article Reviewed/Updated: 4 June 1996

TOPIC -----

I am having problems starting the Apple IP Gateway. I am using an SE/30, System 7.1, Asante SCSI-to-Ethernet adapter box, MacTCP 2.0.4, and ARA 2.0.1. I have a working TCP/IP connection on the SE/30, and I want to use this computer as an ARA dial in connection to the IP network.

I have attempted both Custom and Easy installs of IP Gateway software. Whenever I start the IP Gateway, I get the error, "Gateway cannot start because of a system error -344". This corresponds to a Start Manager error -- No more sResources.

In Chapter 1 of the IP Gateway manual, it states that the software will work with SCSI, NuBus, or PDS Ethernet interfaces. Why does this error occur?

DISCUSSION -----

The Apple IP Gateway 1.0 was not tested with any third-party SCSI Ethernet adapters. In the original design specifications, supporting third-party SCSI Ethernet adapters was anticipated. The manual should not state, the Apple IP Gateway supports third-party SCSI Ethernet adapters. The Apple IP Gateway team is aware of this and will either change the documentation, or revise the software to work with third-party SCSI Ethernet adapters.

If you are seeing this error, obtain the Apple IP Gateway 1.0.1 Patch, which can be found on Apple Computer's software update locations. The Apple IP Gateway 1.0.1 Patch Read Me states, "The IP Gateway now works with external SCSI Ethernet devices." However, the Apple IP Gateway may not work with ALL third-party SCSI Ethernet adapters.

These articles can help you locate the software update mentioned here:

..TIL17254-Apple_IP_Gateway-344_Error_6-96_(TA33351).pdf

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

04 Jun 1996 - Updated for accuracy and changed distribution status.

22 May 1996 - Added reference to Apple IP Gateway Patch 1.0.1.

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Tech Info Library Article Number:17254



Tech Info Library

Biap Systems, Inc. (2/95)

Revised: 2/22/95
Security: Everyone

Biap Systems, Inc. (2/95)

=====

Article Created: 22 February 1995

BIAP Systems, Inc.

16323 Hazy Pines Ct.
Houston, TX 77059

email: (general information) info@biap.com or cshotton@biap.com
email: (order status) orders@biap.com

Internet URL: <http://www.biap.com/>

Company Profile:

Develops and markets MacHTTP, a Worldwide Web server which runs on the Macintosh platform; AppleWebSearch, a utility to make AppleSearch servers and indexes accessible to Worldwide Web users; and FV Bridge, a software bridge which links MacHTTP servers to the First Virtual Internet Payment System.

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Tech Info Library Article Number:17255



Tech Info Library

Kagi Shareware (2/95)

Revised: 2/22/95
Security: Everyone

Kagi Shareware (2/95)

=====

Article Created: 22 February 1995

Kagi Shareware

1442-A Walnut Street #392-PL
Berkeley, California, 94709-1405
USA

email (comments to the author): peter@kagi.com

Internet URL: <http://ftp.amug.org/pub/peterlewis/home-page.html>

Company Profile: Collects shareware fees for the following Macintosh Internet server and surfing applications developed by Peter Lewis from Perth, Austrailia: Anarchie, FTPd, Talk, and TFTPd

Copyright 1995 Apple Computer, Inc.

Tech Info Library Article Number:17256



Tech Info Library

Power Macintosh AV: Displaying PAL Video at 768 x 576 (2/95)

Revised: 2/23/95
Security: Everyone

Power Macintosh AV: Displaying PAL Video at 768 x 576 (2/95)

=====

Article Created: 23 February 1995

TOPIC -----

When using a Power Macintosh AV with PAL video output, I can't select the PAL standard resolution of 768 x 576. I can only select the 640 x 480 resolution. With this resolution selected, a black border is visible around the screen image.

We have many customers with this problem. Do you have any suggestions?

DISCUSSION -----

When outputting a Power Macintosh AV's screen as a PAL video signal, the 768 x 576 screen resolution may not be visible in the Monitors control panel.

To set the Power Macintosh AV card to this resolution, try these steps:

- Open the Monitors control panel
- Click on the Options button
- Check the Display Video on Television button
- Select PAL video
- Select Upon Restart Display Video on Television
- Restart the Power Macintosh

The Power Macintosh AV system should display the 768 x 576 resolution on the PAL monitor after restarting the computer. After restarting, you may want to reopen the Monitors control panel to adjust your video settings.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17257



Tech Info Library

DOS Compatibility Card: PC Dongles May Not Work (10/96)

Revised: 10/4/96
Security: Everyone

DOS Compatibility Card: PC Dongles May Not Work (10/96)

=====

Article Created: 23 February 1995
Article Reviewed/Updated: 3 October 1996

TOPIC -----

I have a DOS Compatibility Card and want to know if a PC hardware dongle works with this card. Also will hardware keys, like the kind used with 3D Studio which connects to the parallel port, work with the DOS Compatibility Card?

DISCUSSION -----

Many PC dongles or hardware keys are parallel devices and connect to LPT1. These will not work with the DOS Compatibility Card because the card does not have a parallel port. Dongles or hardware keys that use the serial port may work depending on how they receive power.

The Macintosh serial ports are RS-422 ports and do not support all RS-232 signals. In particular, the Carrier Detect (CD), Data Set Ready (DSR), Request To Send (RTS), and Ring Indicator (RI) signals are not available. On page 71 of the DOS Compatibility Card user's manual (or page 105 of the PC Compatibility Card user's guide), there is additional information about using PC peripherals. Included is a chart listing the Macintosh serial port signals and Mini DIN-8 pinouts along with corresponding DB-9 and DB-25 pinouts.

If you have tried using the dongle and it did not work, you will need to contact the vendor to obtain specific information about how the dongle receives power. If it gets power from any of the four unsupported signals, it will not work. However, if it is powered by a signal, other than the four unsupported signals, then you may be able to get it working by using the information on page 71 along with pinout information supplied by the vendor.

We are not aware of any dongles that will work with the game port.

Article Change History:
03 Oct 1996 - Modified manual page reference information.

10 Oct 1995 - Combined articles.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17259



Tech Info Library

ARA 1.0 & 2.x: Connection Document Compatibility (2/95)

Revised: 2/23/95
Security: Everyone

ARA 1.0 & 2.x: Connection Document Compatibility (2/95)

=====

Article Created: 23 February 1995

TOPIC -----

I have upgraded from Apple Remote Access (ARA) 1.0 to 2.x. I want to know if I can continue to use the connection documents saved under ARA 1.0, or do I have to create new connection documents for ARA 2.x?

DISCUSSION -----

ARA 2.x connection documents contain additional resources not found in 1.0 connection documents. These resources are used to provide the additional functionality offered by ARA 2.x such as using Dial Assist, dialing an alternate number, and compatibility with 1.0 servers. Despite these differences the documents are interchangeable, ARA 1.0 simply ignores the additional resources. When a user upgrades from 1.0 to 2.x the old connection documents can be used. It is not necessary to create new connection documents. The first time an old document is saved under 2.x it will be updated to contain the new resources.

CCLs written for ARA 1.0 can be used with ARA 2.x but will not support the added features in 2.x such as blind dialing. For example, the Express Modem software provides two CCL files, one for use with 1.0 and one for 2.x. Check with the modem manufacturer for the proper CCL to use.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17260



Tech Info Library

AppleSearch Quick Start (7/96)

Revised: 9/26/96
Security: Everyone

AppleSearch Quick Start (7/96)

=====

Article Created: 23 February 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This article will help you install your AppleSearch software. While this information will get you started quickly and easily, the documentation that came with AppleSearch contains important additional information.

DISCUSSION -----

In order to set up your server for AppleSearch you need to name your server, specify its owner, and enable program linking using the Sharing Setup control panel, if you haven't already done so.

Installing the AppleSearch Server Software
=====

Follow the steps in this section to perform an Easy Install (all components) of the AppleSearch Server software.

Step 1

Insert the disk AppleSearch Server 1 into your disk drive and open the Installer program.

Step 2

Select the disk where you want to install AppleSearch, then click Install.

Step 3

Remove the AppleSearch Server 1 disk and insert the AppleSearch Server 2 disk when prompted by the Installer software.

Step 4

Remove the AppleSearch Server 2 disk and re-insert the AppleSearch Server 1 disk.

Step 5

Click the Restart button when the installation is finished.

NOTE: If you're using a version of AppleShare earlier than 3.0.2, run the AppleShare 3.0.2 patch located on the AppleSearch Server 3 disk. Only AppleShare 3.0.2 or later is supported with AppleSearch.

Starting Up AppleSearch

=====

Follow these steps to start up the AppleSearch Server program.

Step 1

Open the AppleSearch Server folder.

Step 2

Double-click the AppleSearch Server icon.

Adding Shared Volumes or Folders as Information Sources

=====

To designate a shared volume or folder of documents as an AppleSearch information source, simply add the shared item (volume or folder) to the list of information sources, as described in this section.

IMPORTANT: Before proceeding, make sure that you have sufficient disk space, equal to the size of the information source, for storing temporary files. If you don't have enough room on your startup disk, the default location for storing temporary files, choose Preferences from the Server menu and select another locally connected disk for the temporary files.

The AppleSearch Server application allocates 3500 KB of RAM to support 10 information sources. You need to allocate an additional 100 KB to the AppleSearch Server application for each information source beyond 10 that you add. Follow these steps to designate shared items as information sources:

Step 1

Choose Information Sources from the Server menu.

Step 2

Click the shared volume or folder that you want to designate as an information source. Use the pull-down menu, if necessary, to find the correct item.

Step 3

Click the Add button to designate the volume or folder as an information source.

Step 4

Select where you want to store the index files associated with the specified information source using the "Store index on" pop-up menu. The pop-up menu contains a list of all locally connected volumes on your server.

Step 5

Click the OK button.

Indexing Information Sources

=====

When you index an information source, AppleSearch makes a list (an index) of every distinctive word contained in the source. A separate index must be created for each information source. Follow these steps to perform immediate indexing of an information source:

Step 1

Select the information source on the right side of the Information Sources window.

Step 2

Click the Index button.

NOTE: The information sources are indexed at an average rate of 10 to 20 MB per hour when the information source is on a hard disk.

Moving an Index

=====

You can move the index of an information source from one hard disk volume to another as your needs determine. If you're using a pre-indexed CD-ROM as an information source, you may want to copy its index to a hard disk to improve the speed of information searching. You may also want to move the index from one volume to another if storage space on the current volume is becoming limited.

Moving an Index from CD-ROM to Hard Disk

Step 1

Mount the pre-indexed CD-ROM on your server desktop.

Step 2

Create a new folder called "AppleSearch Indexes" (if one doesn't already exist) at the root level of the volume where you want to move the index.

NOTE: Do not change the name of the AppleSearch Indexes folder. The AppleSearch Server software looks for a folder that is specifically named AppleSearch Indexes.

Step 3

Open the CD-ROM and its AppleSearch Indexes folder.

Step 4

Locate the information source index that you want to move.

NOTE: The index consists of three files. Each file has the same name as its

information source plus the suffix .def, .pls, or .sif.

Step 5

Copy the three index files from the CD-ROM to the AppleSearch Indexes folder that you created in Step 2.

Step 6

Open the Information Sources window.

Step 7

In the left side of the window, locate the information source on the CD-ROM and select its name.

Step 8

Click the Add button.

Step 9

Click the pop-up triangle by the volume name and use the directory list to select the hard disk that contains the newly copied index.

Step 10

Click OK.

Moving an Index from One Hard Disk to Another

Step 1

Quit the AppleSearch Server application.

Step 2

Create a new folder called "AppleSearch Indexes" (if one does not already exist) at the root level of the volume where you want to move the index.

NOTE: Do not change the name of the AppleSearch Indexes folder. AppleSearch Server software looks for a folder that is specifically named AppleSearch Indexes.

Step 3

Open the original AppleSearch Indexes folder at the location you specified when you first added the information source.

Step 4

Locate the index of the information source that you want to move.

NOTE: The index consists of three files. Each file has the same name as its information source plus the suffix .def, .pls, or .sif.

Step 5

Copy the three index files from the source volume to the destination volume.

Step 6

Delete the older set of index files from the source volume by dragging their icons to the trash.

Step 7

Restart the server.

Step 8

Use the directory list in the pop-up menu to find the new AppleSearch Indexes folder and open it.

Step 9

Select the name of the index file, then click the Open button.

Setting Preferences

=====

By setting preferences you can schedule automatic indexing, designate a location for the storage of temporary files associated with indexing, and set an optional password required for server administration. To set server preferences, follow these steps:

Step 1

Choose Preferences from the Server menu.

Step 2

Specify the days of the week and times of the day when you want indexing to occur.

Step 3

Specify the folder or volume where you want the temporary files to be stored by using the "Store temporary files on" pop-up menu.

IMPORTANT: To avoid running out of storage space, be sure that you select a location that has available disk space equal to approximately 1.5 times the size of the information source.

NOTE: If you specify a different volume on which to store temporary files, the change will not take effect until the server is restarted.

Step 4

If you want to restrict access to server administration windows, click Always Require Password.

Step 5

To set a password, click the Set Password button.

- Type a password in the "New password" box.
- Type the password again (for confirmation) in the "Confirm new" box.
- Click the OK button.

NOTE: The password goes into effect only after you click the Always Require Password button. In other words, you may set a password and confirm it, but it will not become active until you click Always Require Password.

Working with the AppleSearch Stopwords List

=====

While creating an index for the information source, AppleSearch filters out certain non-distinctive words, called stopwords, such as articles (for example: "the", "an", "a"), and prepositions (for example: "with", "of", "on"). You can modify the contents of the stopwords list to add or delete specific stopwords, as your needs determine.

NOTE: Unless you have very special needs, you should not modify the AppleSearch Stopwords file. The file conforms to established conventions for standard information search-and-retrieval systems.

Follow these steps to modify the stopwords file:

Step 1

Shut down the AppleSearch Server program by choosing Quit from the File menu.

Step 2

Open the AppleSearch folder within the Preferences folder of your System Folder.

Step 3

Open the AppleSearch Stopwords file.

IMPORTANT: Keep the words in alphabetical order. The stopwords file is sorted alphabetically and must be kept in alphabetical order.

Step 4

Add words to the list or remove them as needed. You can also modify existing stopwords.

NOTE: If you modify the stopwords list, you should delete the indexes that used the old stopwords list; then, re-index all the corresponding information sources.

Step 5

Save the stopwords list as a text-only file but do not change its name.

Step 6

Restart the server.

Installing the AppleSearch Client Software

=====

Follow the steps in this section to install the AppleSearch client software on your computer.

Step 1

Insert the AppleSearch Client Installer disk into your floppy disk drive, open

the disk, and double-click the Installer icon.

Step 2

Select the disk where you want to install AppleSearch, then click install.

Step 3

Click the Restart button to restart your computer.

Connecting to an AppleSearch Server

=====

Step 1

Open your AppleSearch Client folder and then open the AppleSearch Client application.

Step 2

If your network contains zones, they are listed in the lower-left corner of the Select an AppleSearch Server window. Select the name of the zone in which your AppleSearch server resides.

Step 3

Select the name of the Apple Workgroup Server that you want to use in the top-left corner of the window, then select the AppleSearch Server program on the right side of the window.

Step 4

Click the OK button.

Step 5

Connect as a registered user or guest.

Creating an AppleSearch Reporter

=====

An AppleSearch Reporter is an electronic search agent that actively finds the information you want on the AppleSearch server and makes it available to you. To create a Reporter you need to tell it where to look, what to look for, and when to look for the information. You can do this by doing the following:

Step 1

From the AppleSearch window, click the New Reporter button to open a new Reporter window.

Step 2

Click the Info Sources button or choose Info Sources from the Search menu.

Step 3

Review the available information sources in the left side of the Information Sources window and click the ones that are most relevant to your search.

Step 4

Click the Add button to specify that the selected sources should be searched by the AppleSearch Reporter.

NOTE: If you decide that a source you selected is not appropriate, select its name in the right side of the window, then click Remove.

Step 5

Click Done when you have finished adding or removing information sources.

Step 6

Type a search request in the "Search for" box.

IMPORTANT: If you copy and paste words into the "Search for" box, use only alphanumeric characters (letters and numbers) and avoid using the words and, or, and not. Your Reporter translates the search request from your own words into Boolean operations; and, or, and not, and certain non-alphanumeric characters have specialized meanings in AppleSearch. For more information see chapter 3 of your "AppleSearch User's Guide."

Step 7

Specify the Minimum Rank (for relevance ranking) in the Search Options box. See Chapter 3 of the "AppleSearch User's Guide" for detailed information on relevance ranking.

Step 8

Specify the Maximum Returns in the Search Options box.

Step 9

Specify the After Date in the Search Options box to limit how far back in time you want your reporter to search.

Obtaining Immediate Search Results

To obtain immediate search results perform the following steps:

Step 1

Click the Start Search button in the top of the Reporter window.

Step 2

Double click the information source icon or name in the lower part of the window, or click the adjacent triangle.

Step 3

Double click any article title to view its content.

Step 4

To close the Article Viewer click the close box.

Additional Options

Once you have a reporter that you want to save, all you have to do is click the Save Reporter button on the right side of the Reporter window or choose Save

Reporter from the Search menu, type a name for your Reporter in the "Save as" box, and then click Save.

See chapter 2, Scheduled0receiving an update, in your "AppleSearch User's Guide" to learn how to schedule a Reporter to retrieve information on a regular basis.

Your "AppleSearch User's Guide" also contains additional valuable information that will increase the usefulness of your AppleSearch software.

Where to Get More Information =====

For additional information about AppleSearch, you have two other sources of information: The "AppleSearch Administrator's Guide" and the "AppleSearch User's Guide."

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Support Information Services

Article Change History:
02 Jul 1996 - Added Fax Doc word

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Tech Info Library Article Number:17262



Tech Info Library

AppleShare Quick Start (7/96)

Revised: 7/3/96
Security: Everyone

AppleShare Quick Start (7/96)

=====
Article Created: 23 February 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This article will help you set up your AppleShare server.

DISCUSSION -----

Introduction

This Quick Start article will help you set up your AppleShare server. While this article will get you started quickly with your AppleShare server, the documentation supplied with your software -- both printed and electronic -- contains important additional information. The instructions in this section assume you have already performed these tasks:

- You have set up the server computer and connected the server computer to the network.
- You have activated AppleTalk in the Chooser window and selected the appropriate network type in the Network control panel.
- AppleShare 4.0.x (Apple Workgroup Server 60, 80, 6150, or 8150), or AppleShare Pro (Apple Workgroup Server 95) is installed on your Apple Workgroup Server.

If you have not yet performed these tasks, see the documentation that came with either your server computer, or the manual that came with your network cabling system.

NOTE: Make sure you have all of the components assembled before starting.

Setting Up File Service

----- Step 1

..TIL17263-AppleShare_Quick_Start_7-96.pdf

Choose the AppleShare Admin program alias from the Apple menu.

Step 2

Apple Workgroup Server 60, 80, 6150, or 8150: Enter a contact name and telephone number, and the name of your organization, then enter your serial number and click OK.

Step 3

Name the file server.

Step 4

Enter an Admin Key and then click OK.

IMPORTANT: Remember your Admin Key! This is the last time you'll see the Admin Key on the screen. Record it somewhere. Replacing a forgotten Admin Key is difficult and time consuming. See the "Troubleshooting" chapter in your setup manual for instructions on replacing the Admin Key.

Step 5

Confirm the Admin Key and then click OK.

Step 6

Enter your administrator name and password and then click OK.

After a few moments, you see three windows -- the User List, Group List, and User Information windows. For now, you will work only with the User Information window. Each user account you create will have its own User Information window. This one is for you as the administrator.

Step 7

Enter an administrator name in the Name box.

Step 8

Enter a password.

IMPORTANT: Don't use a password that is the same as the Admin Key. Keeping the two distinct provides an added level of server security.

Step 9

Verify your AppleShare options. These options are explained in the section "Registering Users" in Chapter 2 of the AppleShare administrator's guide.

Step 10

Click Save.

Step 11

Close the User information window.

Allowing or Denying Guest Access

If you allow guest access, anyone connected to the network can log on to the file server. If you deny guest access, only registered users can log on. The

program is preset to deny guest access.

IMPORTANT: If you are not sure whether to allow guest access, do nothing for now. You can always change the setting later.

Step 1

Open the User List window, if it isn't already open.

Step 2

Double-click the <Any User> entry in the User List window.

Step 3

Click the Login Enabled checkbox to place an X in it.

Step 4

Click Save.

Step 5

Close the User Information window.

Registering Users

Registering users means assigning each user a personal file server account. Each user you register is listed in the Users and Groups Data File kept in the server's Preferences folder.

Step 1

Choose Create User from the Users menu.

Step 2

Enter the user's name.

Step 3

Enter a password.

Step 4

Select this user's AppleShare options.

Here's a brief summary of how these options function:

Login Enabled lets the user log on to the file server. You must select this option to let the user gain access to the file server.

Change Password Enabled lets the user change his or her own password.

All Privileges Enabled gives the user access to all volumes and folders on the server computer, regardless of whether you've shared them.

Require New Password on Next Login makes the user change the password the first time they log on to the file server.

Program Linking Enabled allows a user to create a link between a program on the

server and a program on the user's computer. If other networking services are installed on the server computer, the list of options may be longer.

Step 5

Click Save to confirm the entries.

Step 6

Close the User Information window.

Step 7

Repeat steps 1 through 6 for each user you want to register.

Setting Up and Adding Members to Groups

Creating groups allows you to consolidate access privileges for volumes and folders available on the file server. For more information, see Chapter 2, "Setting Up File Service," in the AppleShare administrator's guide.

Step 1

Choose Create Group from the Groups menu.

Step 2

Enter a name for the group.

Step 3

Click Save.

Step 4

Choose User List from the Users menu, then select the users you want to assign to this group.

Step 5

Drag the icons representing the users you selected to the Members box in the group window.

Step 6

Close the group window.

Sharing Volumes and Folders and Setting Access Privileges

Now that you've registered users and created groups, you need to share volumes on the file server. This means you will indicate which hard disks and folders you want to make available to users on the file server. If you need more than the following information, refer to the documentation for a complete description of sharing volumes and setting access privileges.

Step 1

Choose Access Information from the Privileges menu.

Step 2

Select a volume -- or a folder from within a volume -- from the Volumes list.

IMPORTANT: When you share an entire hard disk, all of the folders contained on it are available to users. Also, AppleShare Pro does not allow you to share the "/" volume. You must share specific folders within the / volume to share the contents of the / volume. Also, if you choose a mount point for a shared disk within a volume or folder, you cannot share the enclosing volume or folder. Disks that are mounted within a folder must be shared through explicit privileges. See the "AppleShare Pro Administrator's Guide" for additional information.

Step 3

Click Share to share the selected volume or folder.

NOTE: The Share button changes to an Unshare button each time you share a selected volume or folder.

Step 4

For folders, click the Same as Enclosing Folder option to remove the X.

Step 5

If necessary, assign an owner to the volume or folder. You can change ownership if you want, using the following procedure:

Step 5-a

Select the volume or folder in the Shared Items box.

Step 5-b

Select the user or group you're assigning ownership to.

Step 5-c

Select the icon of that user or group and drag it to the Owner box in the Access Information window.

Step 6

Assign a user or group to the volume or folder.

You need to indicate which user or group will have access privileges for each shared item:

Step 6-a

Choose User List from the Users menu or Group List from the Groups menu.

Step 6-b

Select the user or group you're assigning privileges to. You can choose one user or one group.

Step 6-c

Select the icon of that user or group and drag it to the User/Group box in the Access Information window.

Step 7

Select the access privileges for the volume or folder.

Step 8

Select the access privileges for guests by clicking the appropriate boxes for Everyone.

Step 9

If you want to apply the same access privileges to all the folders within the volume or folder you've shared, click the Change All Enclosed Folders checkbox to place an X in it.

Step 10

Click Save.

Step 11

Click the button representing the choice you want and click OK.

Step 12

Repeat steps 2 through 11 for each item you want to share.

Step 13

Close the Access Information window.

Step 14

Quit the AppleShare Admin program.

Starting the AppleShare File Server Program

Choose the AppleShare File Server program alias from the Apple menu.

Setting Up Print Services

This section explains how to capture a printer for spooling documents over the network, set printer options, and begin using print service.

Step 1

Choose the AppleShare Print Server alias from the Apple menu.

Step 2

Select the icon for the type of printer you want to capture in the Printer Types box.

Step 3

If necessary, select the zone the printer is in.

Step 4

Select the printer you wish to capture from the Available list.

Step 5

Click Capture.

Step 6

Select the options you want for this printer.

Step 7

Click OK. The program captures the printer you selected. In a moment, two windows appear -- the Queue and Log windows for the captured printer.

Step 8

Close the Queue and Log windows. You won't need to use these windows until after users begin using the print server.

Step 9

Choose Setup from the File menu. The Setup window appears again.

Step 10

Repeat steps 2 through 8 for each additional printer you want to capture.

Step 11

Verify that all users have the same printer drivers installed on their computers.

NOTE: You will not experience significant Print Server performance differences between AppleShare 3.0.x, AppleShare 4.0.x, and AppleShare Pro because the bottleneck in print server performance is the printer, not the server.

Where to Get More Information

For additional information about AppleShare, you have two other sources of information:

The AppleShare 4.0.x or AppleShare Pro Administrator's Guide -- either the electronic or printed version-and Balloon Help, which is built into the AppleShare software.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Support Information Services

Article Change History:

02 Jul 1996 - Added Fax Doc word

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Tech Info Library

Extra Pages When Printing a Window From the Finder (2/95)

Revised: 2/23/95
Security: Everyone

Extra Pages When Printing a Window From the Finder (2/95)

=====

Article Created: 23 February 1995

TOPIC -----

When I print a list (View by Name) of a window from the Finder I get pages of text alternating with "blank" sheets that only have a header on each page. Why is it printing these pages with nothing but headers on them? Is there something wrong with my printer?

DISCUSSION -----

This situation occurs because the window being printed is wider than a single sheet of letter size (8 1/2 x 11) paper. The "blank" pages that only have headers on them are actually the right sides of a left and right sided two page width window. In other words, if you were to line up all of the pages side by side in two columns each, you would see that, in at least one instance, some text from the left page would "run-over" onto the right page.

To prevent this from occurring:

- Pull down the File Menu and select Page Setup. Change the orientation from Portrait to Landscape. Then print.

or

- Use the Views control panel to turn off various window elements, such as: Show size, Show kind, Show label, Show date, Show version, and Show comments. If you remove enough of these elements, you will decrease the width of the window, so that it will no longer be more than one page across.

Support Information Services

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Tech Info Library Article Number:17264



Tech Info Library

System 7.5: Daystar Turbo Card Compatibility (2/95)

Revised: 2/24/95
Security: Everyone

System 7.5: Daystar Turbo Card Compatibility (2/95)

Article Created: 24 February 1995

TOPIC -----

I'm having problems installing System 7.5 on my Macintosh IIci. I discovered that this was due to an incompatibility with my Daystar Turbo 040 card. Do you know what's wrong?

DISCUSSION -----

In Daystar's forum on CompuServe, there is information that a ROM upgrade is needed for their 68040-base card. There is a small charge for the replacement, you need to contact Daystar. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Daystar's 68030-based cards do not need to be upgraded.

The ROM upgrade comes as a field upgrade, meaning the end user is responsible for the installation. For those who don't mind opening their Macintosh, removing cards, and then replacing a chip it's pretty easy. Daystar provides you with a chip removing tool and a grounding strap. On the Turbo 040 card, the ROM chip is the only one that is socketed, the rest of the chips are soldered. In addition to the instructions and the pictures, it would be extremely difficult to get the wrong chip.

Support Information Services

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Tech Info Library Article Number:17265



Tech Info Library

MacTCP: DNS (Domain Name Server) Configuration Problems (7/96)

Revised: 7/3/96
Security: Everyone

MacTCP: DNS (Domain Name Server) Configuration Problems (7/96)

Article Created: 24 February 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

I'm having a problem with the MacTCP Domain Name Server (DNS). Below is the problem and some attempts to resolve it.

Begin_Table

If I set up the MacTCP DNS information like this:

Domain	IP Address	Default
colby.edu	137.146.210.37	X
.	137.146.210.33	

End_Table

If the server 137.146.210.33 goes down, and I query the name "colby.edu"; the name doesn't resolve but all other names do. This is a problem because everyone queries the name "colby.edu" to receive email.

However if I add another host to the end of the DNS info like this:

Begin_Table

Domain	IP Address
.	137.146.210.39

End_Table

I can access "colby.edu", at least as long as that server is up.

I have two questions:

Question 1

Is the use of a period in the domain still valid for the MacTCP DNS information? The documentation we have for MacTCP 1.x says that using a period will substitute the Domain Name above. The documentation for 2.x doesn't mention using the period. If I replace the period in the above example that didn't work, the "colby.edu" address does resolve.

Question 2

How exactly does MacTCP determine which server to query first and the order for querying?

I've tried this with MacTCP 2.0.4 and 2.0.6. Here is the situation:

If I set up MacTCP with domain name servers like this:

Begin_Table

Domain	IP Address	Default
colby.edu	137.146.210.37	X
.	137.146.210.33	

End_Table

Everything resolves properly when both machines are up. However, when 137.146.210.33 goes down names like "server.colby.edu" are resolved properly but the name "colby.edu" is not resolved.

Later last week we had another situation. MacTCP was set up like:

Begin_Table

Domain	IP Address	Default
colby.edu	137.146.1.5	X
.	137.146.210.37	
.	137.146.210.33	

End_Table

The name server 137.146.1.5 crashed, and the other two servers weren't being used to look up the address "colby.edu". This can be frustrating for users, one setup of MacTCP DNS will work because it doesn't have an entry for the server that is "down" while another user won't work because they do have an entry for the server that is down.

In the first case above, if I replaced the period with "colby.edu" the address "colby.edu" would resolve properly. However that isn't true for the second example.

Basically, if a name server in the Domain Name Server list goes down and you

query on a name that appears in the domain name list that name may not get resolved to its IP address. I say may because in example #1 if I add the entry:

Begin_Table

Domain	IP Address
.	137.146.210.37

End_Table

to the DNS information then "colby.edu" does resolve to its proper IP address.

DISCUSSION -----

There are several ways to setup MacTCP to handle domain name servers:

Begin_Table

Method 1

Domain	IP Address	Default
colby.edu	137.146.210.37	X
.	137.146.210.33	

End_Table

With this configuration, all DNS lookups within the domain of "colby.edu" (for example, ftp.colby.edu) will be made to 137.146.210.37. Lookups with any other domain (for example, ftp.support.apple.com) will go to 137.146.210.33. The "." ends up being a wild card that matches anything that "colby.edu" does not.

The draw back to this method is that 137.146.210.37 is not used for all lookups. This can be a real problem if the second name server is slow or unreliable.

Also, if you have a machine with the same name as the domain, MacTCP will look for it in the parent domain. In your situation, the host "colby.edu" has the same name as the domain. So MacTCP thinks the host is in the "edu" domain and uses 137.146.210.33 for the lookup. This is okay as long as 137.146.210.33 is up. If it is down, the name lookup will fail even though 137.146.210.37 is up.

This is the most likely the problem you are experiencing.

Begin_Table

Method 2

Domain	IP Address	Default
.	137.146.210.37	X
.	137.146.210.33	

End_Table

This method works well in most respects. 137.146.210.37 would be used for all DNS lookups unless it was down. If 137.146.210.37 were down, then 137.146.210.33 would be used instead.

The only problem with this method is that you must use fully qualified domain names even when addressing hosts in your domain. For example, if you were using the host "test.colby.edu" and wanted to telnet to ftp.colby.edu, you would have to type "telnet ftp.colby.edu". If MacTCP were setup as in example 1 above, all you would have to type is "telnet ftp".

Begin_Table

Method 3

Domain	IP Address	Default
colby.edu	137.146.210.37	X

End_Table

This method is a good way to go if your primary domain server never goes down.

Begin_Table

Method 4

Domain	IP Address	Default
colby.edu	137.146.210.37	X
.	137.146.210.37	
.	137.146.210.33	

End_Table

This method is the best way to go and the one we recommend using. It will use 137.146.210.37 for all lookups unless it is down and still allows you to use partially qualified domain names.

This method should solve your problem.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

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07 Dec 1995 - Updated for technical accuracy.

27 Nov 1995 - Added keyword.

09 Aug 1995 - Reformatted to make more readable.

Support Information Services

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Tech Info Library Article Number:17266



Tech Info Library

PowerBook 145B &150: Backup and Restore Instructions (1/96)

Revised: 1/8/96
Security: Everyone

PowerBook 145B &150: Backup and Restore Instructions (1/96)

Article Created: 27 February 1995
Article Reviewed/Updated: 8 January 1996

TOPIC -----

Does Apple provide any software for backing up the hard drive of the Macintosh PowerBook 145B or PowerBook 150?

DISCUSSION -----

There is a program on the hard disk of both of these computers. On the PowerBook 145b it is called PowerBook 145B Backup. The PowerBook 150 also contains a similar Backup program. The instructions for use are almost identical for both applications on both computers.

This program will back up all the files on your hard drive to be used if some or all of your data become damaged. It is important to perform the backup on a regular basis to insure you against the unlikely event of any data loss. Be sure to have a supply of high density diskettes to back up onto.

Backup Process
=====

Step 1

Launch the PowerBook Backup program by double-clicking its icon. The program is located on the hard disk.

Step 2

Click the Continue button.

A message appears, telling you how many high-density diskettes you need to make the backup and approximately how long it will take. Make sure you have enough time and disks to complete the backup. If you stop the process before it's finished, you'll have to start over again from the beginning.

Step 3

Click the appropriate button. The first time through, select Copy System Folder. The second time through, select Copy All Files.

Step 4

Insert a high-density floppy disk into the disk drive.

Step 5

Follow the instructions on the screen until a message tells you that you're finished. As you remove each disk from the computer, label each disk in an ascending order so they can be inserted in the proper order for the restore operation.

Step 6

Repeat steps 1-5 and select Copy All Files to make a backup of all files on your hard disk.

When you're finished, be sure the floppy disks are properly labeled and locked, then store them in a safe, cool place.

Restore Process

=====

Step 1

Get the floppy disk labeled Disk Tools (or Utilities disk if you are using the PowerBook 150) that came with your computer and the floppy disks that you used to backup up your hard disk.

Step 2

Make sure your PowerBook is powered off.

Step 3

Insert the Disk Tools diskette (or Utilities disk) into the PowerBook and turn on your computer.

Step 4

After the computer starts up, locate the PowerBook Restore icon on the Disk tools disk (or Utilities disk).

Step 5

Launch the PowerBook Restore application.

Step 6

Read the information on the screen and click the Continue button.

Step 7

Insert the first backup disk. The restoration proceeds automatically from there.

Step 8

Respond to any messages you see on the screen. If PowerBook Restore finds an item on your hard disk that is newer than an item with the same name on the

floppy disk, you are asked whether you want the older version of the item to replace the newer version. Select the choice you want.

Step 9

Repeat steps 7 and 8 for the next disk in your stack of backup disks. Make sure you insert disks in the correct order.

Step 10

The PowerBook Restore program lets you know when you are finished. Store your backup disks in a safe, cool place.

Step 11

Restart your PowerBook and make sure that everything is back on your hard drive.

Article Change History:

08 Jan 1996 - Added information about PowerBook 150 Utilities disk.

10 May 1995 - Clarified several steps and changed title.

Support Information Services

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Tech Info Library Article Number:17269



Tech Info Library

QuickTime: Directing Playback to a MIDI Device (2/95)

Revised: 2/27/95
Security: Everyone

QuickTime: Directing Playback to a MIDI Device (2/95)

=====

Article Created: 27 February 1995

TOPIC -----

How do I direct QuickTime movie information to my MIDI device? Does it require additional software, and if so, where can I obtain it?

DISCUSSION -----

There are two sources of the Music Device Configuration software required to switch from the Macintosh Built In Software Synthesizers and Modem output to other MIDI hardware equipment.

The first source is a CD-ROM bundled with the book - "QuickTime - The Official Guide for Macintosh Users" - by Judith Stern and Robert Lettieri from Hayden books. \$45.00

The second source is the QuickTime 2.0 Software Developer Kit available from APDA. \$195.00.

Support Information Services

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Tech Info Library Article Number:17270



Tech Info Library

Power Macintosh: Internal Speaker Volume (4/95)

Revised: 4/26/95
Security: Everyone

Power Macintosh: Internal Speaker Volume (4/95)

Article Created: 27 February 1995
Article Reviewed/Updated: 26 April 1995

TOPIC -----

After upgrading one of our Power Macintosh 8100 computers to an AV version with a CD-ROM, the sound volume from the internal speaker seems lower.

Is this a design to accommodate external amplification, or is it common to all Power Macintosh computers?

DISCUSSION -----

The audio amplification level used by the current Power Macintosh computers is slightly lower than the amplification level of previous Macintosh models. This is due to changes in the chip used to amplify the audio signals.

The use of external amplified speakers is unaffected by the lower volume level since you would use the volume control on the external speakers to control the volume.

Article Change History:
26 Apr 1995 - Minor typographical corrections.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17271



Tech Info Library

Retrospect Remote: Throughput Varies During Backup (2/95)

Revised: 2/27/95
Security: Everyone

Retrospect Remote: Throughput Varies During Backup (2/95)

=====

Article Created: 27 February 1995

TOPIC -----

I'm seeing highly variable rates of throughput when doing a backup over the network with Retrospect Remote. It's taking 3 to 12 hours to run a daily incremental backup of all my workstations. What is taking this so long?

DISCUSSION -----

One thing to check is that your workstations are not logged onto file servers during the backup process. When a user chooses shutdown and goes into Retrospect's wait mode, the computer does not dismount file servers which causes a slowdown of file transfer. We have been told that a backup throughput can increase from 0.5 MB/second to 5+ MB/second when file servers are mounted on a workstation.

Support Information Services

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Tech Info Library Article Number:17272



Tech Info Library

Macintosh AV: Video Depth Set In Applications (2/95)

Revised: 2/27/95
Security: Everyone

Macintosh AV: Video Depth Set In Applications (2/95)

=====

Article Created: 27 February 1995

TOPIC -----

When recording video on both a Power Macintosh AV or Quadra AV, with the monitor set to 256 gray levels, the recording is actually in 16 gray levels. Why?

This problem does not appear to be software related since I have tried this with two different applications and had both with the same results.

DISCUSSION -----

The color settings for the main monitor do not necessarily influence the way video recording applications, such as Fusion Recorder, capture QuickTime movies.

The color depth used for recording movies can be adjusted separately, using the video settings window.

To adjust the color level video applications use to record QuickTime movies, open the video settings dialog box. In Fusion Recorder, this is accessed by choosing "Video Settings..." from the "Record" menu.

Choose "Compression" from the pop-up menu in the upper-left corner of this window. Then choose a compression option from the "Compressor" pop-up menu. If no compression is desired, choose "None".

Depending on which compressor was chosen, the available color depth options appear in the "Depth" pop-up menu. The video compressors "Component Video", "Component Video -- YUV", and "Video" only work in color.

After adjusting these settings, the video application should record movies at the chosen color depth. If the compressor's color depth was set to "256 grays", the video application will record an 8-bit grayscale movie, regardless of the settings in the monitor control panel. Even if the monitor was set to "Black & White", the video application can record in 8-bit grayscale as long as the options in the video settings window were set correctly.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17275



Tech Info Library

Multiple Scan Displays: Power Consumption Ratings (2/95)

Revised: 2/27/95
Security: Everyone

Multiple Scan Displays: Power Consumption Ratings (2/95)

=====

Article Created: 27 February 1995

TOPIC -----

What are the power consumption ratings for the Multiple Scan 15, 17, and 20 Displays?

DISCUSSION -----

Multiple Scan Model	Power Consumption	
	Maximum	Energy Saver Mode
-----	-----	-----
MS 20 Display	180 Watts	10 Watts
MS 17 Display	150 Watts	10 Watts
MS 15 Display	90 Watts	<5 Watts

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17276



Tech Info Library

Pwr Mac DOS Compatibility Card: PC/TCP Does Not Function (7/95)

Revised: 7/5/95
Security: Everyone

Pwr Mac DOS Compatibility Card: PC/TCP Does Not Function (7/95)

=====

Article Created: 27 February 1995
Article Reviewed/Updated: 5 July 1995

TOPIC -----

I cannot get the PC/TCP software to function properly on my Power Macintosh DOS Compatibility Card. When I try to ping a good location, I get an ARP failure. How can I solve this problem? Also are there other PC products that would let me mount NFS partitions?

DISCUSSION -----

This a problem with FTP's software, there are two known workarounds. Use the workaround that corresponds to the version of PC/TCP you are using.

PC/TCP v2.3
=====

Step 1

Start the MS-DOS/Windows environment. This loads all the IP software. If you try to PING at this point you get an ARP failure. At this point you must add the following lines to the NET.CFG file:

```
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II
```

Step 2

Perform warm-restart (ctl-alt-del)

Step 3

Remove the lines added in step 1 from the net.cfg and warm-boot again.

After step 3, FTP's PC/TCP software functions correctly. If you restart your Macintosh, you must perform all three steps again.

PC/TCP v3.1
=====

Step 1

Start the MS-DOS/Windows environment. This loads all the IP software. If you try to PING at this point you get an ARP failure. At this point you must unload network drivers down to LSL.COM.

Step 2

Add following lines to NET.CFG:

```
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II
```

Step 3

Load network drivers again.

Step 4

Unload network drivers.

Step 5

Remove lines added in step 2 from the NET.CFG file

Step 6

Reload network drivers.

After step 6, FTP's PC/TCP software functions correctly. If you restart your Macintosh, you must perform all six steps again.

The easiest solution is to follow the directions for v.2.3. Unloading and loading the network drivers has the same affect as doing a warm boot of the DOS Card. In version 3.1 of PC/TCP, the drivers should be able to be unloaded from memory, then reloaded. If that is not the case, then a warm boot will suffice.

If for some reason you cannot unload the network drivers, this may be because "idrive" has no "unload" function. If you can possiblily load this function before the networking software, you should be able to unload all of the networking software, and not have to reboot. It is our understanding that version 3.x of ethdrv.exe does in fact support unloading network drivers from memory.

NetManage's Chameleon software has NFS volume support, and has shown to be stable in the testing we have done. Also, we have successfully used the InterCon Systems' products.

Article Change History:

05 Jul 1995 - Updated for clarity and added more information.

27 Mar 1995 - Added problem is with FTP software.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17277



Tech Info Library

AppleShare 4.0.2: Compatibility with Empower Software (2/95)

Revised: 2/28/95
Security: Everyone

AppleShare 4.0.2: Compatibility with Empower Software (2/95)

=====

Article Created: 28 February 1995

TOPIC -----

This article describes two compatibility issues between AppleShare 4.0.2 and Empower security software.

DISCUSSION -----

There are known issues with AppleShare 4.0.2 running on Power Macintosh computers and Empower security software.

First, the computer will lockup when the Empower screen saver mode comes on. This is a known and reproducible issue with Empower.

Second, Empower can restrict access to individual folders much like file sharing does. If a user tries to access one of these restricted folders while AppleShare is running, unusual problems of an unknown nature, may occur.

For security, Apple recommends that file servers be kept behind closed and/or locked doors. This should reduce the need for security software.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17280



Tech Info Library

MAE Compatibility 1.0 Extension Available By ftp (2/95)

Revised: 2/27/95
Security: Everyone

MAE Compatibility 1.0 Extension Available By ftp (2/95)

=====

Article Created: 27 February 1995

TOPIC -----

This article is an announcement of MAE Compatibility 1.0 Extension available by way of ftp.

DISCUSSION -----

The MAE Compatibility 1.0 extension has been designed to fix a compatibility problem between MAE 1.0a and Microsoft PowerPoint 4.0. This extension is available via anonymous ftp from the following server:

ftp.support.apple.com (130.43.6.3)

Please read the README.MAE_Compatibility file before downloading. The Extension and README are located in the following directory:

pub/mae/patches/mae_1.0a_updates

From this directory, download file MAE_Compatibility.tar by anonymous ftp (binary transfer) and un'tar it using the following UNIX command:

```
tar -xvf MAE_Compatibility.tar
```

To install, copy the "MAE Compatibility" extension to your Extensions folder (inside your System Folder) and restart MAE.

This extension should fix the problem which inhibits PowerPoint 4.0 from loading successfully under MAE.

Support Information Services

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Tech Info Library Article Number:17281



Tech Info Library

ARA, Performa 611x, and Global Village Gold II Modem (5/95)

Revised: 5/18/95
Security: Everyone

ARA, Performa 611x, and Global Village Gold II Modem (5/95)

=====

Article Created: 27 February 1995
Article Reviewed/Updated: 18 May 1995

TOPIC -----

This article describes a problem with users of the Performa 611x computer typically choosing the wrong Apple Remote Access (ARA) connection script, GV TP Gold/Silver. This modem script does not work with the Gold II modem that ships with the Performa 611x. However, the correct connection script is on the computers hard disk.

DISCUSSION -----

The Performa 611x like most Performa computers, comes with a modem. This modem is a TelePort Gold II for Performa from Global Village. It has both 14,400 bps send and receive fax plus 14,400 bps data. This modem also requires a special connection script or CCL for ARA. Here is the hard drive path to the CCL:

Hard Disk:Applications:GV TelePort Gold II:Scripts:ARA 2.0 Script:GV TelePort Gold II for ARA 2.0

The CCL, GV TelePort Gold II for ARA 2.0, must be placed in the extensions folder within the System Folder, and chosen in the Remote Access Setup control panel for the modem to work properly with ARA.

Article Change History:
18 May 1995 - Corrected path to the CCL.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17282



Tech Info Library

Radius Pivot Displays: Compatibility Information (2/95)

Revised: 2/28/95
Security: Everyone

Radius Pivot Displays: Compatibility Information (2/95)

Article Created: 28 February 1995

TOPIC -----

Which Radius Pivot monitors work on the Power Macintosh? Where can I get the latest software? Is it System 7.5 compatible?

DISCUSSION -----

Radius Technical Support states that the Power Macintosh supports the following:

- Radius Precision Color Pivot displays
- Late model Radius Grayscale and Color Pivot displays

The Radius Pivot displays that are not compatible with Macintosh built-in video will not work on Power Macintosh computers, such as:

- Original Black & White SoftPivot (Model 0194)
- ColorPivot LE

For System 7.5 compatibility, customers should use version 3.2 or later of the SoftPivot control panel. The RadiusWare control panel is not System 7.5 compatible. For System 7.5 compatibility, use version 3.2 or later of Dynamic Desktop control panel.

This software is available on the Radius BBS, (408) 541-6190, and on the internet at [ftp.radius.com](ftp://ftp.radius.com).

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17283



Tech Info Library

Pwr Mac DOS Compatibility Card: Not For 68040 Computers (2/95)

Revised: 5/24/95
Security: Everyone

Pwr Mac DOS Compatibility Card: Not For 68040 Computers (2/95)

=====

Article Created: 28 February 1995

TOPIC -----

When using the DOS Compatibility Card for Macintosh (M3581LL/A) in a Quadra series computer with System 7.5 and PowerTalk, the machine freezes at startup.

DISCUSSION -----

The DOS Compatibility Card for Power Macintosh 6100/60, 6100/66, or Performa 6100 series (M3581LL/A), was not tested on 68040-based Macintosh computers. Therefore, putting this card in a Macintosh Quadra is not a supported configuration. You should not use this card for non-Power Macintosh computers.

Your configuration may work as expected if "Auto-start PC" is not selected in the PC Setup control panel. However, Apple cannot guarantee that you will not experience problems with this unsupported configuration.

Support Information Services

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Tech Info Library Article Number:17286



Tech Info Library

ED 3.5 Diskette Labelled As 4 MB, Formats As 800K (4/95)

Revised: 4/7/95
Security: Everyone

ED 3.5 Diskette Labelled As 4 MB, Formats As 800K (4/95)

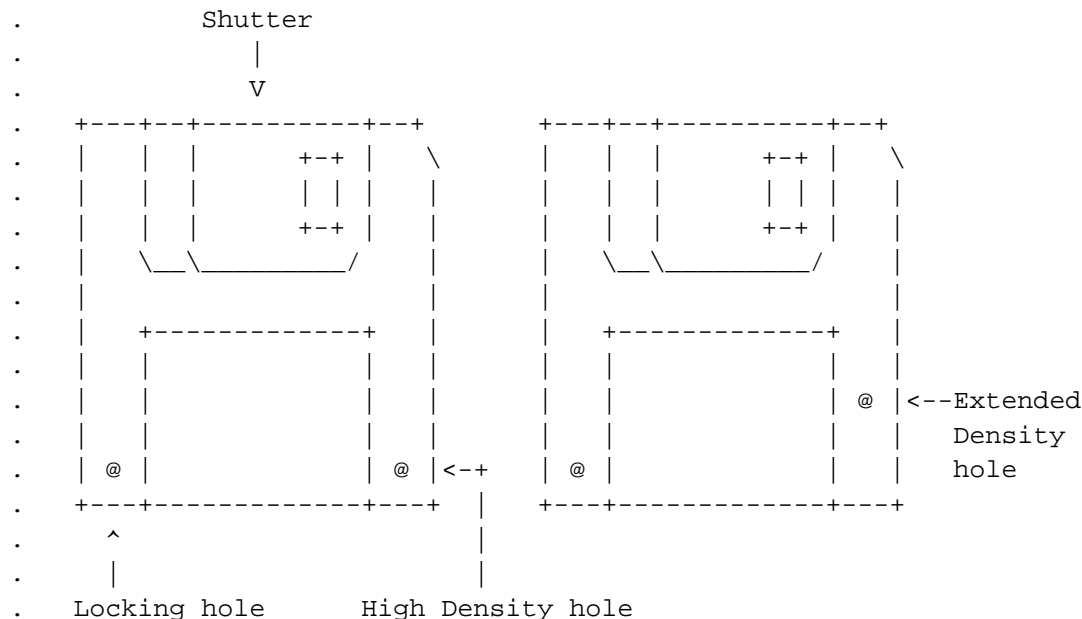
Article Created: 28 February 1995
Article Reviewed/Updated: 7 April 1995

TOPIC -----

The Extended Density (ED) 3.5 inch floppy disk (which is labelled as 4 MB, but formats at 2.88 MB), is NOT supported on any Apple Macintosh computer as of February 1995. The floppy drive mechanism that supports this disk is primarily found in MS-DOS/Windows and UNIX workstation computers.

DISCUSSION -----

While holding the diskette with the shutter in the up position, you will notice two square holes on the disk. The one on the lower left is for locking, and the other on the lower right indicates the density.



HD (High Density) disks also have an ID hole. The HD disk ID hole is parallel to

the locking hole. The ED ID hole is offset about a 1/4 inch closer to the shutter. Since the ID hole is in a different location, the Apple SuperDrive treats the ED disk like an 800K disk, which does not have a density hole.

Article Change History:

07 Apr 1995 - Made minor technical updates; added graphics.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17288



Tech Info Library

Power Macintosh: SoftWindows to DOS Compatibility Card (2/95)

Revised: 9/29/95
Security: Everyone

Power Macintosh: SoftWindows to DOS Compatibility Card (2/95)

=====

Article Created: 28 February 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

I have a Power Macintosh 6100/60 running SoftWindows, and I have now purchased a DOS card. I want to maintain my applications and data files on the SoftWindows partition. PC Setup will recognize the SoftWindows partition, but when I switch to the DOS Compatibility screen I get a message saying, "Missing Operating System". How do I access the SoftWindows partition?

DISCUSSION -----

A SoftWindows/Soft PC drive file cannot be used as the C: drive for the DOS Compatibility Card. However, the SoftWindows/Soft PC drive file can be used as the D: drive. The following steps show how to access the SoftWindows/Soft PC drive file with the DOS Compatibility Card.

Step 1

Install the DOS Compatible Card software including DOS.

Step 2

Use the PC Setup control panel and choose the SoftWindows drive file for the D: drive.

Step 3

Switch to the PC and the SoftWindows/Soft PC drive file is now accessible as drive D:

Support Information Services

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Tech Info Library Article Number:17289



Tech Info Library

Quadra 630: SAM 4.0 Compatibility (3/95)

Revised: 3/1/95
Security: Everyone

Quadra 630: SAM 4.0 Compatibility (3/95)

Article Created: 01 March 1995

TOPIC -----

Are you aware of any problems with SAM 4.0 on a Quadra 630 running System 7.5?

DISCUSSION -----

Norton Technical Support states that they are not aware of any specific problems with that configuration but that there are some inherent problems with SAM 4.0. Version 4.0.1 is the update, and the current version is 4.0.2 which adds a new virus definition.

Support Information Services

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Tech Info Library Article Number:17291



Tech Info Library

KanjiTalk: Frequently Asked Questions (11/95)

Revised: 2/13/96
Security: Everyone

KanjiTalk: Frequently Asked Questions (11/95)

Article Created: 1 March 1995
Article Reviewed/Updated: 10 November 1995

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) on KanjiTalk.

Questions in this FAQ:
=====

- 1) What is KanjiTalk?
- 2) What is the Japanese Language Kit?
- 3) How much does it cost?
- 4) Who provides technical support?

DISCUSSION -----

1) Question: What is KanjiTalk?

Answer: KanjiTalk is the fully translated, Japanese version of the Macintosh operating system. All of its menus, dialog boxes and system messages are in Japanese. KanjiTalk is designed for those users who need to work in a full Japanese environment. KanjiTalk is sold and supported in Japan predominantly, but there are a few resellers in the United States who can order it for you. For more information on resellers in the United States see the Tech Info Library article titled "KanjiTalk: Authorized U.S. Dealers and VARs (3/95)".

To use your current English applications under KanjiTalk, you would need to purchase their equivalent Japanese version to ensure compatibility and smooth operation. Contact the vendor of your favorite applications to see if they offer a Japanese version.

2) Question: What is the Japanese Language Kit?

Answer: In contrast to KanjiTalk, the Apple Japanese Language Kit (JLK) is for customers who wish to exchange, edit and read Japanese documents, but work in the language of their original operating system. For example, say someone lives in Spain and once in a while exchanges Japanese files with someone in Japan. They would only need to install the JLK to read the files, but be able to operate in Spanish at all other times.

3) Question: How much does it cost?

Answer: There are several Apple dealers and Value Added Resellers (VARs) in the United States who sell KanjiTalk. They set their price for KanjiTalk, and they should be contacted for their current price. For more information on resellers in the United States see the Tech Info Library article titled "KanjiTalk: Authorized U.S. Dealers and VARs".

4) Question: Who provides technical support?

Answer: KanjiTalk is supported in Japan, and for a fee, by some third party companies such as AsiaSoft at 407-234-5366. Apple does not provide toll free KanjiTalk technical support in the United States. In contrast, Apple does provide toll free technical support for the Japanese Language Kit through 1-800-SOS-APPL.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

10 Nov 1995 - Updated title.

28 Jun 1995 - Added KanjiTalk support number

21 Jun 1995 - Changed article type to FAQ format.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17293



Tech Info Library

Macintosh: Pioneer CD Requires Lower SCSI ID (3/95)

Revised: 3/1/95
Security: Everyone

Macintosh: Pioneer CD Requires Lower SCSI ID (3/95)

=====

Article Created: 1 March 1995

TOPIC -----

I installed a Pioneer DRM-600 CD changer with driver v3.0 on my Macintosh. After installing the Pioneer driver the internal CD drive can no longer be seen by the system.

DISCUSSION -----

According to Pioneer you need the 3.0 version of the driver for System 7.5 compatibility and replaces the Apple CD-ROM driver.

Pioneer has also discovered that their DRM-600 drive needs to have a lower SCSI ID than the SCSI ID of the internal CD-ROM from Apple. Apparently, this contradicts the recommendations in their read me.

If your internal CD-ROM drive is set to SCSI ID 3 (the ID set by Apple at the factory), set the Pioneer DRM-600 drive to SCSI ID 1 or 2.

For additional information on this problem, contact Pioneer.

Support Information Services

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Tech Info Library Article Number:17294



Tech Info Library

Macintosh: RMS, Peak-to-Peak, Line Level Definitions (4/95)

Revised: 5/19/95
Security: Everyone

Macintosh: RMS, Peak-to-Peak, Line Level Definitions (4/95)

Article Created: 2 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

This article contains questions and answers concerning microphones and definitions related to them.

DISCUSSION -----

Question: I am looking for information about audio input and output voltages to different Macintosh computers. Some specifications show the value in "Peak-to-Peak" while others are in "RMS" and I have also heard of a term "Line Level". What do these terms mean?

Answer: Peak-to-Peak and RMS are ways of measuring the voltage of an audio or AC signal. Line Level is an industry standard used in audio equipment.

Question: Are Peak-to-Peak and RMS the same thing? Can the terms be used interchangeably?

Answer: No. Peak-to-Peak is the measurement of any signal from the positive most peak to its negative most peak, in other words, its extremes. RMS stands for Root Means Square and it is the value of a signal's "Effective Value" or the work it can do.

Question: How do I convert from one to the other?

Answer: There are two simple equations that you can use based on the assumption that the signal is a "sine wave". They are:

To Find	Equation
-----	-----
Peak-to-Peak	$\text{RMS} * 2.828$

RMS Peak-to-peak * 0.3535

RMS is defined first by the "means" of the "square" (2) of every angle through a given wave. With sine waves the mean is 0.707 which is 1 divided by the square root of 2. Therefore, the $(1/\text{SQRT } 2)$ is the root means of the squares of all the angles.

The RMS of one half of a sine wave is 70.7% of the peak value or $[\text{Peak} * 0.707 = \text{RMS}]$.

The Peak value of a sine wave is $1/2$ of the peak-to-peak value.

Question: What is the voltage rating of "Line Level" in, RMS or Peak-to-peak?

Answer: Line Level has no voltage standard. It is actually an impedance or "Signal Resistance" value set at 47,000 Ohms. There is no way of converting this information alone into any voltage specification.

Line Level provides an industry standard so that all audio and other electronic equipment can operate properly together. Most VCRs, including both home and professional audio equipment use Line Level as a standard. They are commonly used where you find an "RCA" connector. The RCA plug looks similar to a four leafed flower with a center single conductor pole. The RCA jack usually sticks out about $1/4$ -inch from the chassis and is about $1/4$ -inch around with a $1/8$ -inch center hole.

Question: How do I convert my microphone signal to a Line Level signal?

Answer: The easiest way is to use any home audio equipment that accepts microphone inputs. Tape recorders, audio tuners, audio mixers, and video cameras are all common equipment that usually provide a microphone input.

This article was published in the "Information Alley":
Volume I, Issue 25, Page 7

Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17296



Tech Info Library

LaserWriter 16/600 PS: PostScript For Changing Paper Tray (1/96)

Revised: 1/10/97
Security: Everyone

LaserWriter 16/600 PS: PostScript For Changing Paper Tray (1/96)

Article Created: 2 March 1995
Article Reviewed/Updated: 10 January 1997

TOPIC -----

How can I obtain the PostScript code for changing the default paper tray on the LaserWriter 16/600 PS printer?

DISCUSSION -----

The following PostScript code can be used to make changes to the default paper tray. The example below changes sets the optional 500 sheet cassette as the default.

Caution:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

Use this PostScript code at your own risk. You are responsible for the support of any problems associated with changing the default tray. You should also inform others using the printer that you have changed the default tray. Changing the default tray on the printer may cause the paper out LED to light if there is no paper present in the default tray, or if the wrong size paper is used in the tray. When this happens, there is nothing wrong with the printer's hardware.

PostScript code is case-sensitive so the information should be entered exactly as seen below.

```
%=====
% Begin PostScript code -- This is PostScript Level 2
%
serverdict begin 0 exitserver
1 dict dup /InputAttributes 1 dict dup /Priority [0 1 2] put put setpagedevice
%
```

```
% End PostScript code
%=====
```

The above code makes the 250 sheet cassette (0) the default tray to use when:

- 1) Auto Select is chosen as the Paper Source in the Print dialog AND
- 2) the 250 sheet cassette has the same paper size as set in Page Setup.

To set the 500 sheet cassette (2) as default, you would change the matrix above to [2 0 1]. To make the MultiPurpose tray (1) default, the matrix should be [1 0 2].

After downloading the code verify that the change was made by printing the configuration page. The lower left corner of the configuration page lists all of the trays, their tray numbers, and an indicator showing which one is the current default tray. The LaserWriter 8.2 driver and later provides additional paper handling features which are better suited for the Macintosh environment. Consult your LaserWriter 16/600 PS user's manual for more detailed information on the 'installed and preferred' and automatic paper tray switching capabilities.

It is important to note that the paper out LED only indicates the paper out condition in the default paper tray. If the default tray is changed, it will cause the paper out LED to stay on even though paper is in the 250 sheet cassette. Setting the default tray back to the 250 sheet cassette will restore the printer back to its default setting.

Article Change History:

- 10 Jan 1997 - Updated the PostScript code to Level 2 PostScript.
- 21 Apr 1995 - Added additional information to caution message.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17297



Tech Info Library

Pwr Mac DOS Compatibility Card: Only Uses MS-DOS 6.x (3/95)

Revised: 5/24/95
Security: Everyone

Pwr Mac DOS Compatibility Card: Only Uses MS-DOS 6.x (3/95)

=====

Article Created: 3 March 1995

TOPIC -----

I recently tried using some older software, which required an older version of MS-DOS, with our 6100 DOS Compatible computer. I kept getting "Incompatible Version of DOS" when I tried running the application. If I tried using a disk that had the older version of MS-DOS on it, I got a "Wrong DOS Version, Cannot Load COMMAND.COM" error message. Can the DOS Compatibility Card use older versions of MS-DOS?

Also can the DOS Compatibility Card display CGA graphics on Apple Displays? When I tried the screen lost sync and the image was unusable.

DISCUSSION -----

Only DOS 6.0 and higher are supported on the DOS Compatibility Card. These versions are the only ones tested and supported. There are no plans to test older versions of MS-DOS, or try to get them running on the DOS Compatibility Card.

The problems with CGA applications is that Apple monitors do not support this display mode. The documentation for the DOS Compatibility Card explains that the VGA controller is backward compatible with EGA, CGA and MDA. But in order to use it in other modes, you need a third party monitor capable of displaying CGA graphics.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17299



Tech Info Library

LaserWriter 8.x: Update Guide No Longer Available (3/95)

Revised: 3/3/95
Security: Everyone

LaserWriter 8.x: Update Guide No Longer Available (3/95)

=====

Article Created: 3 March 1995

TOPIC -----

I am looking for a document called the LaserWriter 8.0 update guide. How can I get a copy of this?

DISCUSSION -----

Apple no longer produces the LaserWriter 8.0 update guide, and so it is no longer available.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17300



Tech Info Library

Format vs. Initialize: Difference Between Them (4/95)

Revised: 5/19/95
Security: Everyone

Format vs. Initialize: Difference Between Them (4/95)

=====

Article Created: 3 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

The terms format and initialization are often used interchangeably. With regards to Apple HD SC Setup, what is the difference between format and initialization?

DISCUSSION -----

Formatting is a process that prepares a disk for storing information. Formatting can be low-level which prepares a disk by dividing it into tracks and sectors where information can be stored or high-level where only a directory is created.

Low-Level Formatting

Low-level formatting is also commonly referred to as simply formatting. During formatting, sector addresses, byte gaps, sync gaps, drivers, and partitions are created on the disk.

High-Level Formatting

High-level formatting, commonly referred to as initialization, creates a directory but does not write any sector information on to the hard drive.

This can get confusing because drive utilities vary greatly in the way they handle initialization and formatting. Apple HD SC Setup, for example, performs both initialization and formatting in the same operation while other utilities, such as SiliverLining, Norton Utilities, and FWB Hard Disk Toolkit separate initialization and formatting into two distinct operations.

The Erase Disk command from the Mac OS Finder can perform both a low-level format and a high-level format if the disk is a floppy disk. On hard drives, Erase Disk can only do a high-level format.

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Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17304



Tech Info Library

PowerBook: Single Serial Port and GV Teleport II Conflict (3/95)

Revised: 3/3/95
Security: Everyone

PowerBook: Single Serial Port and GV Teleport II Conflict (3/95)

=====

Article Created: 3 March 1995

TOPIC -----

Since I installed the software for my new Global Village Teleport II modem on my PowerBook 520, I can no longer print to my StyleWriter II. What's wrong? How can I fix it?

DISCUSSION -----

The Teleport II software that ships with the new Global Village Teleport II series of modems will not allow a PowerBook with a single serial port [such as: a PowerBook 200 series (Duo), PowerBook 100, PowerBook 150 or PowerBook 500 series] to print to a serial printer while the modem driver is present in the Extensions folder within the System Folder.

The Teleport II software, if present, will constantly occupy the shared port. You will get various error messages indicating that the port is busy when you attempt to print.

The only workaround we are aware of at this time is to disable the modem software every time you want to print. You can do this by either using the an extensions or startup manager control panel device to disable the modem software or by actually removing the modem extension from the Extensions folder.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Global Village, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17305



Tech Info Library

QuickTime Installation Failed Message at Startup (9/95)

Revised: 9/1/95
Security: Everyone

QuickTime Installation Failed Message at Startup (9/95)

Article Created: 3 March 1995
Article Reviewed/Updated: 1 September 1995

TOPIC -----

My computer gives me this message each time it starts up: "QuickTime installation has failed because QuickTime was already installed." I do not understand this message because I am not trying to install anything. What is going on?

DISCUSSION -----

If your computer gives you this message each time it starts up, you have two copies of the QuickTime extension somewhere in your System Folder. You may have one in the Extensions folder and one loose in the System Folder. You may have two different versions of the QuickTime extension or two copies of the QuickTime extension that are the same version, but are named differently residing in your Extensions folder of your System Folder.

Try these two procedures to make sure you have only one copy of QuickTime in your System Folder:

Procedure 1

=====

Step 1

Open your System Folder.

Step 2

Click on the Views menu and choose By Name.

Step 3

If you see an item called QuickTime or QuickTime 2.0 loose in the System Folder, drag it to the Trash. Make sure you have disabled the "Protect System Folder"

feature in the General Controls control panel first. If you do not see an item called QuickTime, go to Procedure 2.

Step 4

Restart your computer to make sure the error message does not appear.

Procedure 2

=====

If you do not see QuickTime loose in the System Folder, open your Extensions folder. You may see one extension labeled QuickTime and one extension labeled Quicktime 2.0 or other version.

Step 1

Highlight one of the files by clicking it ONE time.

Step 2

Select "Get Info" from the File menu and check the version displayed in the Info window. Keep the later version, (for example, 2.0 is later than 1.6) and move the older one to the Trash. If they are both the same version, it does not matter which one you remove.

Step 3

Restart your computer to make sure the error message does not appear.

Many third-party CD-ROM disc games will add QuickTime when they are first installed on your computer. Some games may contain an older version of QuickTime which may replace your newer version. Any computer which comes with System 7.5 also comes with QuickTime 2.0. If your copy of QuickTime 2.0 has been replaced with an earlier version, you will need to either reinstall it from your original floppy disks or CD, or restore your system software if you have a Macintosh Performa computer.

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Article Change History:

01 Sep 1995 - Clarified procedures section.

03 May 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17306



Tech Info Library

AudioVision 14 Display: Built-In Microphone Audio Level (4/95)

Revised: 4/3/95
Security: Everyone

AudioVision 14 Display: Built-In Microphone Audio Level (4/95)

=====

Article Created: 03 March 1995
Article Reviewed/Updated: 3 April 1995

TOPIC -----

How come when I record a sound using the microphone built into the AudioVision 14 Display connected to my Quadra 630, the sound is low and full of static?

The ~AudioVision extension loads normally and all the AV options appear in the Sound control panel.

DISCUSSION -----

We recommended that customers use a PlainTalk microphone connected directly to the Macintosh 630 family computer instead of the built-in microphone on the AudioVision 14 Display. As an alternative, disabling the ~AudioVision control panel may improve the recording quality of the AudioVision 14 microphone.

The following computers are in the Macintosh 630 family: LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, and Performa 638.

Article Change History:
03 Apr 1995 - Rewrite of discussion.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17307



Tech Info Library

PowerBook 150: Does Not Start Up (3/96)

Revised: 3/29/96
Security: Everyone

PowerBook 150: Does Not Start Up (3/96)

Article Created: 03 March 1995
Article Reviewed/Updated: 7 August 1995

TOPIC -----

When I press the power button, my PowerBook 150 either does not start up, or flashes the display momentarily and goes blank. What is wrong?

DISCUSSION -----

Possible Causes

=====

This situation can occur when a battery is fully depleted and then left in the PowerBook without having the AC adapter connected. The battery will continue to discharge until there is not enough power left to boot the unit.

This situation can also occur when the power adapter is left attached to the computer, but no power is applied to the power adapter.

Examples

- A power strip is powered off at the end of the day.
- The power adapter is unplugged from the wall outlet, but not disconnected from the computer first.
- A wall light switch is turned off shutting off power to the wall power outlet (hence the computer's power is cut off).

Startup Procedures

=====

Users should be able to startup their PowerBook 150 by following these procedures:

Plug in the AC Adapter

If the unit starts with the AC Adapter connected, but not with the battery inserted, you need to charge the battery. If, after charging the battery, the same symptom appears, you may need to reset the power manager or replace the battery.

Reset the Power Management Circuitry

To do this, follow these steps:

Step 1

Remove the power adapter and battery from unit.

Step 2

Push the Reset button in the back of the unit with a paper clip and hold for 5 to 10 seconds.

Step 3

Attach the power adapter and push the Reset button in back again, but just briefly. You should hear a small pop from the speaker; do not be concerned.

Step 4

Push the main power button in back (large exposed button). The unit should power up.

Step 5

Charge the battery for at least 8 hours before attempting to run on battery power.

If the PowerBook powers on, the battery may be reinserted. If it fails to start, the PowerBook probably needs service.

If the machine does not start with a recharged or new battery, or does not start with the AC Adapter alone (with the battery removed), your PowerBook may need servicing. For help in obtaining service, please call 1-800-SOS-APPL or see your local Apple Authorized Service Provider.

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Article Change History:

29 Mar 1996 - Added more reasons why this may occur.

07 Aug 1995 - Added reasons why this may occur.

31 May 1995 - Added Info Alley information; made minor updates.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17308



Tech Info Library

Energy Saver Won't Work w/All Power Macintosh Models (3/95)

Revised: 3/6/95
Security: Everyone

Energy Saver Won't Work w/All Power Macintosh Models (3/95)

=====

Article Created: 6 March 1995

TOPIC -----

When I install the Apple Multiple Scan Display software on a PowerBook 200 Series computer (Duo) running System 7.1.1, everything installs fine. However, when I install the same software on a Power Macintosh 6100/66 or 7100/80/AV running System Software 7.5, the Energy Saver control panel does not install. Why not?

DISCUSSION -----

The Power Macintosh 7100/80, 8100/100 and 8100/110 computers were tested with the energy saver utility software from the Connectix Desktop Utilities which shipped with these models in the Apple Extras folder. That is the only energy saver software that should be installed onto these Power Macintosh computers.

The Apple Multiple Scan Display software will not install on any Power Macintosh computer which is running System Software 7.5. This is because the Multiple Scan Display software functionality (but not the Energy Saver Control Panel) is already included in System Software 7.5.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17310



Tech Info Library

QuickDraw GX: PostScript Font Handling Tips (4/95)

Revised: 5/19/95
Security: Everyone

QuickDraw GX: PostScript Font Handling Tips (4/95)

=====

Article Created: 6 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

This article contains some pointers about using QuickDraw GX with PostScript fonts and PostScript savvy applications.

DISCUSSION -----

Using QuickDraw GX with PostScript fonts and applications that manipulate PostScript font data can sometimes lead into some compatibility issues. First, QuickDraw GX is a new, emerging technology that not all applications can take advantage of. This article describes some procedures that let you keep QuickDraw GX installed and still use applications that do not support QuickDraw GX.

Background
=====

The following is a simplified explanation of fonts. See Font Facts in Information Alley Volume I, Issue 3 for further information on how fonts are handled on the Macintosh.

To understand how QuickDraw GX handles PostScript fonts, it is first necessary to understand how System 7, without QuickDraw GX, handles PostScript fonts. Under System 7.5, fonts are stored in the fonts folder. There are three types of fonts supported by the Mac OS:

- Bitmap
- TrueType
- PostScript

Bitmap and TrueType fonts are stored in the Fonts folder inside the System Folder. A bitmap file has a single letter A on the icon, a TrueType file has three successively smaller letter As on the icon. PostScript fonts consist of

two or more files per font -- a suitcase file that contains bitmaps and a printer outline font file.

To determine what type of font you are looking at, when in the Fonts folder, select View by Kind from the View menu. Use the same procedure to determine the type of font contained within a font suitcase. Open the suitcase and select View by Name from the View menu.

Installing QuickDraw GX and Enabling PostScript Fonts

=====

QuickDraw GX brings to PostScript fonts the same benefit TrueType has had for years - the ability to store the printer font data in the font suitcase along with the bitmap data for a PostScript font.

The benefits are:

- Less confusion about what files go with what font since the PostScript Font files (printer fonts) are no longer needed
- Consistent way of handling all fonts whether they are TrueType or PostScript

Using QuickDraw GX, you can open a suitcase and see the (printer) outline portion of the font (either TrueType or PostScript) and the bitmap portion of the font. To have this ability, QuickDraw GX must first enable the PostScript font. Enabling involves combining the bitmap and printer font files into a font suitcase.

The QuickDraw GX installer enables all PostScript fonts installed in the Fonts folder. Copies of the unmodified fonts (both suitcases and printer font files) are placed in a folder called •Archived Type 1 Fonts• inside the System Folder. The installer does not delete any fonts.

Tip #1

If you use a lot of PostScript fonts, use the QuickDraw GX customize option and install the QuickDraw GX utilities. This provides you with the latest version of the LaserWriter Utility, QuickDraw GX helper, and the Type 1 Enabler application. The Type 1 Enabler application should be used to convert any PostScript fonts you add to the system after installing QuickDraw GX. It performs the same operation as the QuickDraw GX installer, combining bitmap and PostScript font files into a font suitcase.

Using Your PostScript Fonts and the GX Helper

=====

Most of the QuickDraw-compatible applications work fine with QuickDraw GX and PostScript fonts. QuickDraw GX comes with printer drivers for most Apple printers. QuickDraw GX printer drivers check if applications support QuickDraw GX, and revert back to older QuickDraw printer features (usually referred to as compatibility mode), if applications do not support QuickDraw GX.

The programs that could take advantage of QuickDraw GX fonts, such as PageMaker, Quark XPress, Illustrator, Freehand, and FrameMaker, are not QuickDraw GX compatible yet, and often do not work in the compatibility mode. You should check with the application's vendor for QuickDraw GX compatibility information.

When using these applications with QuickDraw GX on, you get messages like "You will be unable to print since no outline fonts are present" and "Font Mismatch Helveobl..." and "No PostScript fonts are present" along with other miscellaneous messages. Usually these are applications that manipulate PostScript data (especially font data). The applications are not QuickDraw GX compatible and usually either come with their own printer drivers or make assumptions about where font data is stored (believing that PostScript fonts are still kept in separate files).

Tip #2

Use the QuickDraw GX Helper extension, installed by the Customize option in the QuickDraw GX installer, to print from non-GX compatible applications. QuickDraw GX Helper is a system extension that lets you disable QuickDraw GX desktop printing. It gives you the option to select what type of printing to use from the Apple menu. The setting is preserved by applications and is stored in the QuickDraw GX Helper preferences file in the Preferences folder.

When desktop printers are inactive, the Mac OS does not use the QuickDraw GX print driver. All printing calls are routed to the non-QuickDraw GX print driver. The non-QuickDraw GX print driver acts as if QuickDraw GX is not installed, and looks for PostScript printer outline fonts files in their previous location. The printer driver is not aware of QuickDraw GX enabled font suitcases.

Tip #3

QuickDraw GX Helper uses a non-GX printer driver, so you must re-install the PostScript font files into the Fonts folder. These are listed in the Finder as PostScript Font when you view the files by kind. This is necessary because the older printer drivers have not been updated to support the QuickDraw GX font suitcase format (created by the GX installer) that places PostScript fonts in a suitcase.

Both the PostScript font file and the new QuickDraw GX compatible suitcases can be present in the Fonts folder at the same time, and there are no performance problems, however extra disk space is required for the duplicate fonts.

You can find the original PostScript font files in either the •Archived Type 1 Fonts• folder in the System Folder, or on the original fonts disk. Do NOT copy suitcase files from the archived folder, or from fonts disks to the fonts folder -- this removes the enabled fonts required when QuickDraw GX helper is not being used. Use the Type 1 enabler application to enable and install fonts.

Tip #4

If you are using a non-Apple printer, do not use Apple print drivers. You need

to contact the manufacturer to obtain a QuickDraw GX compatible driver. There are no workarounds to use the older QuickDraw print driver unless you turn off QuickDraw GX.

Turning QuickDraw GX Off and using PostScript Fonts =====

If you have an application that does not work even with GX Helper, or have decided to wait until your applications are QuickDraw GX compatible and you turn off QuickDraw GX, you have problems using your PostScript fonts. Without QuickDraw GX, the non-QuickDraw GX Printer drivers cannot find the PostScript font data inside the enabled suitcases.

Tip #5

If you are sure you will not be using QuickDraw GX again, use the remove option in the QuickDraw GX installer to remove QuickDraw GX. The removal process cannot un-enable PostScript fonts. Copy the PostScript fonts and the other fonts files from the •Archived Type 1 Fonts• folder in the System folder or from the original fonts disk. Reinstall the fonts in their prior format -- a font suitcase of the bitmaps and a separate PostScript font (outline) file.

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Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17312



Tech Info Library

Apple Menu Options: Slow Initial Server Mounting (7/95)

Revised: 7/31/95
Security: Everyone

Apple Menu Options: Slow Initial Server Mounting (7/95)

=====

Article Created: 06 March 1995
Article Reviewed/Updated: 31 July 1995

TOPIC -----

I notice that when mounting a server volume with Apple Menu Options (AMO) active, it takes a particularly long time to draw the icons from that remote volume. Why is this?

DISCUSSION -----

When the option of remembering recent servers is checked in the Apple Menu Options control panel, an alias to a recently accessed server is placed in the recent servers folder. Since this server alias could potentially be navigated with hierarchical menus starting at Recent Servers:<server alias>, Apple Menu Options enumerates and caches all files and folders on the server. Up to four levels of menus could be extended (five is the maximum menu hierarchy, and the first level is used to navigate to the Recent Servers folder), so AMO acquires HFS structure information for the top four levels of folders and files. Depending on the access of the given user to this server, this can result in slow connect time.

Since each server user can have different folder access privileges to the volume, the time it takes for AMO to acquire and cache the information for one user might be vastly different from another. The Administrator with access to all folders, might experience longer waits than a user with only access to a single drop folder. Apple Menu Options will only access folder information that the user has privileges to. The interior of a drop folder cannot be seen, so nothing beyond the first level is acquired. This represents the two most extreme cases.

Another simple example between two users might be when each has access to just a single folder to store their files. One user may create a wide and deep folder structure inside their user folder. The second user may not use any folder hierarchy, but just store files at the top level. User one will have a longer connect time to the server than user two.

The width and depth of the folder structure that the user has access to on a server affects how much information AMO needs to acquire from that server.

If you wish to avoid these slowdowns, rather than disabling and removing Apple Menu Options completely, disable the Recent Servers option in the Apple Menu Options Control Panel. This enables the user to still use hierarchical menus to access Control Panels, Recent Files and Recent Applications. Aliases to servers can still be created by the user and stored somewhere other than the Apple Menu Items or a subfolder. This will keep Apple Menu Options from "exploring" the server file system.

Article Change History:

31 Jul 1995 - Added information on server access.

Support Information Services

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Tech Info Library Article Number:17314



Tech Info Library

Workgroup Server 95: Cache Optimization, Basic Formula (6/96)

Revised: 6/3/96
Security: Everyone

Workgroup Server 95: Cache Optimization, Basic Formula (6/96)

Article Created: 6 March 1995
Article Reviewed/Updated: 3 June 1996

TOPIC -----

This article provides a basic formula for optimizing the cache memory on an Apple Workgroup Server (AWS) 95, which runs the A/UX operating system.

DISCUSSION -----

Formula
=====

Buffer cache = Z - VM

Begin_Table

Element	Description
Z	Total Ram - X

Where X = (Kernel=5 MB) +
(CatsearchD=1 MB for every 10,000 files).

VM Retrospect + System Software +
AppleShare Caches + Print Server +
any other Macintosh software

End_Table

IMPORTANT: These calculations assume no other UNIX processes are being started besides the ones started in the system by default. If this is not the case, add the memory requirements for those processes to the calculation of X.

NOTE: Make sure Z is greater than or equal to Buffer Cache + VM.

- The System Software value can be obtained by selecting the "About this Macintosh" option under the Apple Menu before launching AppleShare.
- The AppleShare Caches value can be obtained from the Dialog "File Server Cache Preferences" in the AppleShare Pro Admin application.

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Article Change History:

03 Jun 1996 - Added A/UX for searchability.
21 Apr 1995 - Added keyword; made minor technical and format corrections.

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Tech Info Library Article Number:17315



Tech Info Library

AppleShare File Sharing: Permission To See Grayed Volume (3/95)

Revised: 3/6/95
Security: Everyone

AppleShare File Sharing: Permission To See Grayed Volume (3/95)

=====

Article Created: 6 March 1995

TOPIC -----

With AppleShare file sharing a user enters the correct name and password, but can't get the volume they want. They get to the "Select the items you want to use:" window, but the volume they want is grayed out.

What permissions need to be set to let the user mount this volume?

DISCUSSION -----

Users need either See Folders or See Files permissions at the top level of the shared volume. Make Changes is not relevant in this situation.

AppleShare administrators may want to consider several strategies for the top level permissions.

- Create a group that includes all users who can access a volume, and give that group See Files and/or See Folders in the User/Group level.
- Set everyone to See Files and/or See Folders at the top level, and then provide security to each folder in the top level.

For more information on determining access levels, see Tech Info Library article "Macintosh: Determining File Sharing Access Levels."

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17316



Tech Info Library

Apple IP Gateway: Cannot See Other Clients on Same Server (5/96)

Revised: 5/28/96
Security: Everyone

Apple IP Gateway: Cannot See Other Clients on Same Server (5/96)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 28 May 1996

TOPIC -----

I have set up two Macintosh systems on Appletalk that use the Apple IP Gateway to get IP connections to the Internet. Both machines can connect to Internet services and visa-versa, but the machines cannot talk to each other. For example, a machine on the Internet can ping these two machines. These two machines can ping any machine on the Internet. However, neither of these two machines can ping each other. Why?

DISCUSSION -----

This issue was resolved with the IP Gateway 1.0.1 patch. This patch can be obtained from the following sources.

- Web: [www.info.apple.com/Apple Support Area
Apple.Software.Upadates/US/Macintosh/Networking_and_Communications/Other_N-C](http://www.info.apple.com/Apple_Support_Area_Apple.Software.Upadates/US/Macintosh/Networking_and_Communications/Other_N-C)
- FTP: [ftp.info.apple.com/Apple Support Area
Apple.Software.Upadates/US/Macintosh/Networking_and_Communications/Other_N-C](http://ftp.info.apple.com/Apple_Support_Area_Apple.Software.Upadates/US/Macintosh/Networking_and_Communications/Other_N-C)
- Applelink: through the path, Support/Developer Support/Developer Services/Technical Documentation/ABS Technical Notes
- Developer CD: Technical Documentation/ABS Technical Notes (on the reference library disk)

Article Change History:

07 Apr 1995 - Made minor technical updates.
28 May 1996 - Issue resolved with patch, provided sources.

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Tech Info Library Article Number:17318



Tech Info Library

DOS Compatibility Card: Using TCP/Connect II for Windows (8/95)

Revised: 8/10/95
Security: Everyone

DOS Compatibility Card: Using TCP/Connect II for Windows (8/95)

Article Created: 7 March 1995
Article Reviewed/Updated: 10 August 1995

TOPIC -----

This article provides information on using TCP/Connect II for Windows with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction
=====

This document assumes a working knowledge of DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for and should be used in conjunction with product documentation!

Simultaneous Macintosh and DOS networking
=====

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; They all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS networking and Memory
=====

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

Windows for Workgroups: Installation considerations

=====

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS translation issues

=====

Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

INT 6

in the Link Driver section of the NET.CFG file. Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 6.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

InterCon TCP/Connect II for Windows
=====

You must have successfully installed the NetWare client software and Windows before performing this step. "Successfully" means you are able to connect to a NetWare server and you are able to run Windows. Windows comes preinstalled on

the Power Macintosh 6100 DOS Compatible. If you are not able to connect to a NetWare server, check your files against those listed above. Make sure all of the programs needed (called) are in the proper location. Also, make sure you don't have networking software loaded on the Macintosh that would cause a conflict, such as MacIPX. Once you have successfully connected to a server, follow these steps to load InterCon's TCP/Connect II for Windows. Again, only the steps that deviate from standard installations will be thoroughly outlined. Please note that for this installation, Windows for Workgroups 3.11 was installed.

Step 1

Before beginning the installation, you will need to have the following information:

IP ADDRESS:

SUB-NET MASK:

DEFAULT ROUTER IP ADDRESS:

DOMAIN NAME:

DOMAIN NAME SERVER IP ADDRESS:
(If DNS services will be used)

Step 2

Follow the directions in InterCon's documentation for installing the software. The installer is self-explanatory, as is the settings it asks you for. There is nothing Power Macintosh 6100 DOS Compatible specific in the installation of this software. The Power Macintosh 6100 DOS Compatible uses ODI drivers, so that is the choice when prompted for the type of driver.

Step 3

Listed below is the NET.CFG file for TCP/Connect support. Notice that IPX is also loaded, set for 802.2 frame type. Only networking specific entries are listed in the AUTOEXEC.BAT. Note the Windows for Workgroups 3.11 entries in the AUTOEXEC.BAT are not listed, as they aren't modified by the InterCon installer.

NET.CFG

Link Driver MACODI

```
Frame Ethernet_802.2
Frame Ethernet_802.3
Frame Ethernet_SNAP
Frame Ethernet_II
PROTOCOL IPX E0 ETHERNET_802.2
PROTOCOL IP 800 ETHERNET_II
PROTOCOL ARP 806 ETHERNET_II
```

PROTOCOL RARP 8035 ETHERNET_II

LINK SUPPORT
Buffers 8 1600
MemPool 4095

AUTOEXEC.BAT

C:\NWCLIENT\LSL.COM
C:\NWCLIENT\MACODI.COM
C:\NWCLIENT\IPXODI.COM
C:\TCPCONN\ODIPKT.COM 3 107

For further help with installing InterCon TCP/Connect II for Windows,
please call InterCon.

Description of Files
=====

C:\NWCLIENT\LSL.COM

Link support layer driver. Supplied by Novell client software

C:\NWCLIENT\MACODI.COM

Network interface card driver. Supplied by Apple.

C:\NWCLIENT\IPXODI.COM

IPX Protocol stack layer. Supplied by Novell client software

C:\TCPCONN\ODIPKT.COM 3 107

ODI Packet driver. The first number selects the frame type from the entries in the net.cfg file. The first frame listed in the net.cfg is considered 0. Since we are using Ethernet_II, and it is the last of 4 frame types specified in the net.cfg file, this number is 3 in this example. The second number is the "line number" and should always be set to 107 for Ethernet. Supplied by InterCon software.

Article Change History:

10 Aug 1995 - Made correction for technical accuracy.
29 Jun 1995 - Corrected spelling.
19 Apr 1995 - Corrected INT setting.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17319



Tech Info Library

DOS Compatibility Card: Using LAN WorkPlace for DOS (6/95)

Revised: 6/29/95
Security: Everyone

DOS Compatibility Card: Using LAN WorkPlace for DOS (6/95)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 29 June 1995

TOPIC -----

This article provides information on using LAN WorkPlace for DOS with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

This article focuses on aspects of network software installation that deviates from normal DOS/Windows installations and assumes a working knowledge of DOS and Windows. This article is not a substitute for and should be used in conjunction with product documentation!

Introduction

=====

Simultaneous Macintosh and DOS Networking

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; they all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS Networking and Memory

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing

unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for its Browser to function properly.

Windows for Workgroups: Installation Considerations

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS Translation Issues

Novell provides an ODI to NDIS translator called ODINSUP.COM, which is copied to the same directory as the client software. This lets ODI drivers be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement in the Link Driver section of the NET.CFG file:

```
INT 6
```

Failure to do this results in the following error message:

```
"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID
specification. Call adapter manufacturer and request a newer MLID that preserves
the PIC mask bit."
```

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking does not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment. It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that

bind IP, ARP, and RARP are ALWAYS the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

```
.  Link Driver MACODI
.  Frame Ethernet_II
.  Protocol IP 800 Ethernet_II
.  Protocol ARP 806 Ethernet_II
.  Protocol RARP 8035 Ethernet_II
```

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

LAN WorkPlace for DOS Setup

=====

You must have successfully installed the NetWare client software before performing this step. "Successfully" means LSL.COM and MACODI.COM are loading without errors. Make sure you do not have networking software loaded on the Macintosh that would cause a conflict, such as MacTCP. If you are going to install Windows for Workgroups 3.11, do so before performing this step. Follow these steps to load LAN WorkPlace for DOS. Again, only the steps that deviate from standard installations will be thoroughly outlined.

Step 1

Before beginning the installation, you need to have the following information:

- IP ADDRESS:
- SUB-NET MASK:
- DEFAULT ROUTER IP ADDRESS:
- DOMAIN NAME:
- DOMAIN NAME SERVER IP ADDRESS (If DNS servicess will be used):

Step 2

Run the Lan WorkPlace for DOS installer, and follow the prompts. Enter the information as it is asked. Let it modify the files for you, although you will have to modify them again.

Step 3

Edit the NET.CFG file. The version of LAN WorkPlace for DOS used in this example did not enter the proper values into the Link Driver MACODI heading of the net.cfg file, meaning you must enter them in manually. This is what it should read after editing it manually. Note that the addresses listed are for illustrative purposes ONLY. LAN WorkPlace for DOS enters the proper information under the Protocol TCPIP heading. The main concern is the Link Driver MACODI heading:

```
.  * NET.CFG (without Windows for Workgroups 3.11 installed)
.
.  Link Driver MACODI
.
.      FRAME ETHERNET 802.2
.      FRAME ETHERNET II
.      PROTOCOL IPX E0 ETHERNET 802.2
.      PROTOCOL IP 800 ETHERNET II
.      PROTOCOL ARP 806 ETHERNET II
.
.  Link Support
.
.      Buffers 8 1500
.      MemPool 4096
.
.  Protocol TCPIP
.
.      PATH SCRIPT      C:\NET\SCRIPT
.      PATH PROFILE     C:\NET\PROFILE
.      PATH LWP_CFG     C:\NET\HSTACC
.      PATH TCP_CFG     C:\NET\TCP
.      ip_router        130.43.4.1
.      ip_netmask        255.255.255.0
.      ip_address        130.43.4.45
.
.  * NET.CFG (with Windows for Workgroups 3.11 installed)
.
.  Link Driver MACODI
.
.      FRAME ETHERNET_II
.      FRAME ETHERNET_802.2
.      FRAME ETHERNET_802.3
.      FRAME ETHERNET_SNAP
.
.      PROTOCOL IPX E0 ETHERNET_802.2
.      PROTOCOL IP 800 ETHERNET_II
.      PROTOCOL ARP 806 ETHERNET_II
.
.  Link Support
.
.      Buffers 8 1500
.      MemPool 4096
.
```

```
.      Protocol  TCPIP
.
.      PATH  SCRIPT      C:\NET\SCRIPT
.      PATH  PROFILE     C:\NET\PROFILE
.      PATH  LWP_CFG      C:\NET\HSTACC
.      PATH  TCP_CFG      C:\NET\TCP
.      ip_router  130.43.4.1
.      ip_netmask 255.255.255.0
.      ip_address  130.43.4.45
```

Step 4

Save the NET.CFG file, restart the computer, and answer yes when it asks you if you want to load the TCP/IP software. Ping a known good address by typing:

ping address (where address is a known good IP address)

LAN WorkPlace for DOS modifies the autoexec.bat file by adding the following line:

```
CALL C:\LANWP.BAT
```

LANWP.BAT simply asks you if you want to load the TCP/IP transport, then loads it if you answer yes. The transport file is called TCPIP.EXE and is located in:

```
C:\NET\BIN
```

For further help with installing LAN WorkPlace for DOS, please call Novell. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the "Information Alley":
Volume II, Issue 4, Page 16

Article Change History:

29 Jun 1995 - Corrected spelling.
14 Jun 1995 - Added Info Alley information; made several technical updates.
19 Apr 1995 - Corrected INT setting.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17320



Tech Info Library

DOS Compatibility Card: Using Microsoft's TCP/IP-32 IP (4/95)

Revised: 6/29/95
Security: Everyone

DOS Compatibility Card: Using Microsoft's TCP/IP-32 IP (4/95)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 29 June 1995

TOPIC -----

This article provides information on using Microsoft's TCP/IP-32 IP with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction
=====

This document assumes a working knowledge of DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for and should be used in conjunction with product documentation!

Simultaneous Macintosh and DOS networking
=====

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; They all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS networking and Memory
=====

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

Windows for Workgroups: Installation considerations

=====

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS translation issues

=====

Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

INT 6

in the Link Driver section of the NET.CFG file. Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

Microsoft's TCP/IP-32 IP Protocol stack
=====

You must have successfully installed the ODI drivers and Windows for Workgroups 3.11 before performing this step. "Successfully" means you are able to connect to a server and you are able to run Windows for Workgroups 3.11. If you are not

able to connect to a server, check your files against those listed above. Make sure all of the programs needed (called) are in the proper location. Also, make sure you don't have networking software loaded on the Macintosh that would cause a conflict, such as MacIPX. Once you have successfully connected to a server, follow these steps to load Microsoft's TCP/IP-32 IP protocol stack into Windows for Workgroups 3.11. Again, only the steps that deviate from standard installations will be thoroughly outlined. It is advisable that you be thoroughly familiar with the entries in the protocol.ini before editing it. See the Windows for Workgroups 3.1 Resource Kit for a complete discussion of the protocol.ini file and its entries.

Step 1

Before beginning the installation, you will need to have the following information:

IP ADDRESS:

SUB-NET MASK:

DEFAULT ROUTER IP ADDRESS:

DOMAIN NAME:

DOMAIN NAME SERVER IP ADDRESS:
(If DNS services will be used)

Step 2

Follow the directions in Microsoft's documentation for installing the IP networking protocol. Once you have installed TCP/IP-32, Windows for Workgroups 3.11 will prompt you to restart. Don't, because you will need to edit the NET.CFG and PROTOCOL.INI files.

Step 3

Listed below are the NET.CFG and PROTOCOL.INI files for TCP/IP-32 support. Notice that IPX is also loaded. Edit your files to look similar to these, depending on your configuration. Note that the TCP/IP-32 installer cannot detect what ODI driver is being used, so it inserts "XXXX" for the driver name. Remove any redundant entries, and change "XXXX" to "MACODI".

NET.CFG

Link Driver MACODI

Frame Ethernet_802.2

Frame Ethernet_802.3

Frame Ethernet_II

Frame Ethernet_SNAP

PROTOCOL IPX E0 ETHERNET_802.2

PROTOCOL IP 800 ETHERNET_II

PROTOCOL ARP 806 ETHERNET_II

PROTOCOL RARP 8035 ETHERNET_II

LINK SUPPORT

Max Boards 4

Buffers 4 1500

MemPool 4095

PROTOCOL.INI

[network.setup]
version=0x3110
netcard=ms\$odimac,1,MS\$ODIMAC,4
transport=ms\$nwlinknb,NWLINK
transport=tcpip-32n,MSTCP32
lana0=ms\$odimac,1,ms\$nwlinknb
lana1=ms\$odimac,1,tcpip-32n

[net.cfg]
PATH=C:\NWCLIENT\NET.CFG

[MS\$ODIMAC]

[Link Driver MACODI]
data=Frame Ethernet_SNAP
data=Frame Ethernet_802.2
data=Frame Ethernet_II
data=Frame Ethernet_802.3
data=Link Driver MACODI

[NWLINK]

BINDINGS=MACODI
FRAME=ETHERNET_802.2

[MSTCP32]
BINDINGS=MACODI
LANABASE=1

For further help with installing Microsoft's TCP/IP-32, please call Microsoft.

Article Change History:

29 Jun 1995 - Corrected spelling.

19 Apr 1995 - Corrected INT setting.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17321



Tech Info Library

Pwr Mac DOS Compatibility Card: Using Chameleon/NFS (6/95)

Revised: 6/29/95
Security: Everyone

Pwr Mac DOS Compatibility Card: Using Chameleon/NFS (6/95)

Article Created: 7 March 1995
Article Reviewed/Updated: 29 June 1995

TOPIC -----

This article provides information on using NetManage's Chameleon/NFS with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction

=====

This document assumes a working knowledge of DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for and should be used in conjunction with product documentation!

Simultaneous Macintosh and DOS networking

=====

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; They all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS networking and Memory

=====

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

Windows for Workgroups: Installation considerations

=====

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS translation issues

=====

Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

INT 6

in the Link Driver section of the NET.CFG file. Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

NetManage's Chameleon/NFS installation
=====

You must have successfully installed the NetWare client software and Windows before performing this step. "Successfully" means LSL.COM and MACODI.COM are loading without errors. Make sure you don't have networking software loaded on

the Macintosh that would cause a conflict, such as MacTCP. Windows comes preinstalled on the Power Macintosh 6100 DOS Compatible. Follow these steps to load Chameleon/NFS. Again, only the steps that deviate from standard installations will be thoroughly outlined. Windows for Workgroups 3.11 was installed for this configuration.

Step 1

Before beginning the installation, you will need to have the following information:

IP ADDRESS:

SUB-NET MASK:

DEFAULT ROUTER IP ADDRESS:

DOMAIN NAME:

DOMAIN NAME SERVER IP ADDRESS:
(If DNS services will be used)

Step 2

Follow the directions in the NetManage manual for running the Chameleon/NFS installer, and follow the prompts. Enter the information as it is asked.

Step 3

After adding the information requested, you should go under the "Services" menu and add any other information required for your environment such as router address, DNS address, etc. When done, save the configuration, quit, and restart.

NetManage adds the following to the AUTOEXEC.BAT file:

C:\NETMANAG\NMODI

The directory listed will match whatever you told NetManage to install into.

NetManage changes the NET.CFG file, which looks like this after the Chameleon/NFS install:

NET.CFG

Link Driver MACODI

FRAME Ethernet_802.2
FRAME ETHERNET_II

PROTOCOL IP 800 ETHERNET_II
PROTOCOL ARP 806 ETHERNET_II
PROTOCOL RARP 8035 ETHERNET_II

For further help with installing NetManage's Chameleon/NFS, please call
NetManage.

Article Change History:

29 Jun 1995 - Corrected spelling.

19 Apr 1995 - Corrected INT setting.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17322



Tech Info Library

DOS Compatibility Card: Using With Novell Netware (11/96)

Revised: 11/14/96
Security: Everyone

DOS Compatibility Card: Using With Novell Netware (11/96)

Article Created: 7 March 1995
Article Reviewed/Updated: 14 November 1996

TOPIC -----

This article provides information on using Novell Netware with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction
=====

This document assumes a working knowledge of DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for and should be used in conjunction with product documentation!

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DOS networking and Memory
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If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

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=====

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Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

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Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the protocol.ini or net.cfg file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the net.cfg file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the net.cfg file for IP support:

```
Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II
```

As a general rule, do not add PORT or INT statements to the net.cfg file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

Novell Netware client software installation

When installing the NetWare client software, the main install screen lists 6 options. Option 5 is specific to the Power Macintosh 6100 DOS Compatible and is the only one that deviates from standard installations.

Step 1

Scroll down to option 5. and press enter to see the list of network interface card (NIC) drivers from which to choose.

Step 2

Scroll down (or click "ot") to "OTHER DRIVERS" and press enter.

Step 3

If you are installing the NetWare client software from CD-ROM, insert the disk labelled "DOS Compatibility Card Installer Disk for DOS Environment" and hit enter. If you are installing the NetWare client software from floppy, hit command-e to eject the disk that's in the drive, insert the above mentioned disk, and hit enter.

Step 4

Hit enter on "Power Macintosh 6100 Ethernet Adapter"

Step 5

It will ask you what frame type you want, follow the prompts to select the proper frame type.

At this point, everything else is standard - follow the prompts on the screen to finish the installation. The following lists the config.sys, autoexec.bat, startnet.bat, and net.cfg files after installing the NetWare client on a stock Power Macintosh 6100 DOS Compatible. These files were modified by the NetWare client installer. In addition, "yes" was entered to "install Windows support" and "let the installer modify files" on the NetWare client installer screen. This install was performed from the Novell Netware 3.12 CD-ROM. For further help with installing Novell Netware client software, please call Novell.

CONFIG.SYS

```
DEVICE=C:\DOS\SETVER.EXE
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
REM No EMS memory configuration
REM For PC Setup 1.0.7 the lines are:
REM DEVICE=C:\DOS\EMM386.EXE NOEMS X=C800-CFFF RAM=D000-EFFF
REM or
REM DEVICE=C:\DOS\EMM386.EXE X=C800-CFFF RAM=D000-EFFF
REM
REM For PC Setup 1.5, the command lines are:
REM DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
REM or
REM DEVICE=C:\DOS\EMM386.EXE I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
REM
DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
REM EMS memory configuration
REM DEVICE=C:\DOS\EMM386.EXE RAM=D000-EFFF FRAME=D000
DOS=HIGH,UMB
```

```
FILES=40
STACKS=9,256
LASTDRIVE=Z
DEVICE=C:\Apple\CDROM.SYS /D:CDDVR
```

AUTOEXEC.BAT

```
-----
@CALL C:\NWCLIENT\STARTNET
@ECHO OFF
LH C:\DOS\SMARTDRV.EXE /X
PROMPT $p$g
PATH C:\WINDOWS;C:\DOS
PATH=C:\NWCLIENT\;%PATH%
SET TEMP=C:\DOS
SET SOUND=C:\SB16
SET BLASTER=A220 I5 D1 H1 T6
LH C:\SB16\MIXERSET /P /Q
LH C:\Apple\ApplePC
LH C:\Apple\MacShare
LH C:\DOS\MSCDEX /D:CDDVR /L:E
LH C:\Apple\DOSClip
set tmp=C:\Temp
```

STARTNET.BAT

```
-----
@ECHO OFF
C:
CD \NWCLIENT
SET NWLANGUAGE=ENGLISH
LSL
MACODI.COM
IPXODI
VLM
CD \
```

NET.CFG

```
-----
Link Driver MACODI
```

FRAME Ethernet_802.2

Article Change History:

14 Nov 1996 - Reworded for clarity.
23 May 1996 - Added new PC Setup CONFIG.SYS information.
29 Jun 1995 - Corrected spelling.

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Tech Info Library Article Number:17323



Tech Info Library

Pwr Mac DOS Compatibility Card: Using Trumpet Winsock (9/95)

Revised: 9/14/95
Security: Everyone

Pwr Mac DOS Compatibility Card: Using Trumpet Winsock (9/95)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 14 September 1995

TOPIC -----

This article provides information on using Trumpet Winsock with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction
=====

This document assumes a working knowledge of MS-DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for the documentation provided with the DOS Compatibility Card and Trumpet Winsock. These instructions should be used in conjunction with other product documentation.

Simultaneous Macintosh and DOS networking
=====

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; They all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS networking and Memory

=====

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

Windows for Workgroups: Installation considerations

=====

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS translation issues

=====

Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

INT 6

in the Link Driver section of the NET.CFG file. Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the PROTOCOL.INI or NET.CFG file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the NET.CFG file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the NET.CFG file for IP support:

```
Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II
```

As a general rule, do not add PORT or INT statements to the NET.CFG file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 6.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

Trumpet WinSock
=====

You must have successfully installed the NetWare client software and Windows before performing this step. "Successfully" means you are able to connect to a

NetWare server and you are able to run Windows. Windows comes pre-installed on the Power Macintosh 6100 DOS Compatible. If you are not able to connect to a NetWare server, check your files against those listed above. Make sure all of the programs needed (called) are in the proper location. Also, make sure you do not have networking software loaded on the Macintosh that would cause a conflict, such as MacIPX. Once you have successfully connected to a server, follow these steps to load Trumpet WinSock. Again, only the steps that deviate from standard installations will be thoroughly outlined. Please note that for this installation, Windows for Workgroups 3.11 was installed. Note the Windows for Workgroups 3.11 entries in the AUTOEXEC.BAT are not listed, as they are not modified by the Trumpet WinSock.

Step 1

Before beginning the installation, you will need to have the following information:

IP ADDRESS:

SUB-NET MASK:

DEFAULT ROUTER IP ADDRESS:

DOMAIN NAME:

DOMAIN NAME SERVER IP ADDRESS:
(If DNS services will be used)

Step 2

This document assumes you have gathered all the pieces necessary for Trumpet WinSock install.

Step 3

For the sake of brevity, it is assumed that all Trumpet WinSock files are in the same directory. In this example, the files are located in C:\TRUMPET. Since there is no installer for Trumpet Winsock, edit the NET.CFG and whatever batch file you use to call the networking software to match the files listed below.

NET.CFG

Link Driver MACODI

```
Frame Ethernet_802.2
Frame Ethernet_802.3
Frame Ethernet_SNAP
Frame Ethernet_II
PROTOCOL IPX E0 ETHERNET_802.2
PROTOCOL IP 800 ETHERNET_II
PROTOCOL ARP 806 ETHERNET_II
PROTOCOL RARP 8035 ETHERNET_II
```

LINK SUPPORT
Max Stacks 8
Buffers 8 1600
MemPool 4095

AUTOEXEC.BAT

C:\NWCLIENT\LSL.COM
C:\NWCLIENT\MACODI.COM
C:\NWCLIENT\IPXODI.COM
C:\TRUMPET\ODIPKT.COM 3 107
C:\TRUMPET\WINPKT.COM 107

Description of Files
=====

LSL.COM

Link support layer driver. Supplied by Novell client software.

MACODI.COM

Network interface card driver. Supplied by Apple.

IPXODI.COM

IPX Protocol stack layer. Supplied by Novell client software.

ODIPKT.COM 3 107

ODI Packet driver. The first number selects the frame type from the entries in the net.cfg file. The first frame listed in the net.cfg is considered 0. Since we are using Ethernet_II, and it is the last of 4 frame types specified in the net.cfg file, this number is 3 in this example. The second number is the "line number" and should always be set to 107 for Ethernet.

C:\TRUMPET\WINPKT.COM 107

Windows Virtual Packet Driver. Takes the line number as an argument. Must be the same as the line number for the packet driver.

Article Change History:

14 Sep 1995 - Corrected for accuracy.
18 Aug 1995 - Made corrections for technical accuracy.
10 Aug 1995 - Made correction for technical accuracy.

Support Information Services

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Tech Info Library

DOS Compatibility Card: Using Windows for Workgroups 3.11 (6/95)

Revised: 6/29/95
Security: Everyone

DOS Compatibility Card: Using Windows for Workgroups 3.11 (6/95)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 29 June 1995

TOPIC -----

This article provides information on using Microsoft's Windows for Workgroups 3.11 with the DOS Compatibility Card for the Power Macintosh.

DISCUSSION -----

Introduction
=====

This document assumes a working knowledge of DOS and Windows. This document will focus on aspects of network software installation that deviates from normal DOS/Windows installations. This document is not a substitute for and should be used in conjunction with product documentation!

Simultaneous Macintosh and DOS networking
=====

Your Power Macintosh 6100 DOS Compatible can have simultaneously active connections in both environments, provided different networking protocols are used. You cannot have two identical protocols running in both environments. If identical protocol support in both environments is needed, the only solution at this time is to encapsulate one protocol inside a different protocol, referred to as "tunneling". For example, there are various options to have TCP/IP active on both the Macintosh and the DOS side; They all require some form of gateway to either route IP encapsulated in AppleTalk, or IP encapsulated in IPX. One solution is to set MacTCP for EtherTalk and put an Apple IP Gateway on the network.

DOS networking and Memory
=====

If you will be using the Power Macintosh 6100 DOS Compatible networking functions, it is recommended that you maximize conventional memory by removing unnecessary device drivers and TSRs. Also, load the remaining device drivers and TSRs high if possible. Windows for Workgroups 3.11 requires greater than 540K of conventional memory for it's Browser to function properly.

Windows for Workgroups: Installation considerations

=====

If you will be installing Windows for Workgroups 3.11, the Novell Netware client, AND TCP/IP support, install the NetWare client first, Windows for Workgroups 3.11 second, and the IP stack third.

ODI to NDIS translation issues

=====

Novell provides an ODI to NDIS translator called "ODINSUP.COM", which is copied to the same directory as the client software. This allows ODI drivers to be used in an NDIS environment. When using ODINSUP.COM, you must specify an interrupt in the NET.CFG file. Use the statement:

INT 6

in the Link Driver section of the NET.CFG file. Failure to do this results in the following error message:

"ERROR: "First Mac ODI MLID does not conform to the latest ODI MLID specification. Call adapter manufacturer and request a newer MLID that preserves the PIC mask bit."

For a complete discussion of ODINSUP.COM and configuration information for it, please contact Novell.

Windows for Workgroups 3.11

=====

If Windows for Workgroups 3.11 is to be installed, it is recommended that you become familiar with the protocol.ini file, which Windows for Workgroups 3.11 uses for setting up the networking environment. Without the proper entries in this file, Windows for Workgroups 3.11 networking will not function properly. The installer for Windows for Workgroups 3.11 does NOT modify the protocol.ini or net.cfg file correctly, which means they must be manually edited. A suggested resource is the Windows for Workgroups 3.1 Resource Kit, available from Microsoft.

MACODI

=====

MACODI.COM is located on the DOS Compatibility Card Installer Disk for DOS Environment.

It is important to note that the Power Macintosh 6100 DOS Compatible does not require any special settings where networking is concerned. The DOS side functions as would any DOS machine using ODI drivers. The only special consideration is to be sure the same protocols are not running in both environments unless tunneling is used.

Binding TCP/IP protocols in NET.CFG
=====

For any TCP/IP setup, you MUST bind IP and ARP in the net.cfg file. The only notable exception to this that we know of is FTP Software's PC/TCP. If the IP protocol stack you use requires RARP, you MUST bind this also. The entries that bind IP, ARP, and RARP will ALWAYS be the same, unless you are binding to a frame type other than Ethernet_II, which is unlikely. This is the standard IP, ARP, and RARP listing that MUST be in the net.cfg file for IP support:

Link Driver MACODI
Frame Ethernet_II
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II

As a general rule, do not add PORT or INT statements to the net.cfg file. ODI drivers do not necessarily require them, and MACODI does not use interrupts. If using odinsup.com for NDIS compatibility, set the INT value to 10.

Example Installation and Settings Files
=====

The following are some examples of networking configurations on the Power Macintosh 6100 DOS Compatible. Note that for all of these installations, Novell Netware was loaded. Also note that defaults were selected in all of these scenarios, which may not be valid for your environment. These are included as examples only. In some situations, the installer may not respond as outlined due to differences in files loaded into memory at the time of the installation. If that occurs, proceed per the software's documentation for using the software with ODI drivers. For the sake of brevity, only portions of files specific to the discussion will be listed. For further help in setting up the various networking environments, please contact the vendor of your network operating system.

Windows for Workgroups 3.11 installation
=====

This assumes you are starting with a standard configuration; ie. Windows 3.1 is already on the machine. If you have not installed the NetWare client, do so before this step. Detail are listed only for the steps that deviate from the

standard Windows for Workgroups 3.11 install.

Step 1

Run the Windows for Workgroups 3.11 installer and select the express setup.

Step 2

When you get to the Network Setup, click "Advanced", then click "Drivers", then click "Add Adapter", then scroll down the list that's displayed and highlight "IPXODI Support Driver (Ethernet)" and click "OK".

Step 3

Click on the "IPX/SPX Compatible Transport With NetBIOS" and click "Setup". Click "Frame Type", select the proper frame type for your application, and click OK.

Step 4

Set the default protocol and click "Close" to continue with the installation.

Step 5

After entering the information on the next screen, it will ask you if you want to replace the Novell Netware drivers. Answer NO.

That's it - the installer will take care of the rest.

Windows for Workgroups 3.11 adds two commands to the AUTOEXEC.BAT file. One is "net start" which initializes Windows for Workgroups 3.11's network functions. The second is "odihlp.exe" which is Microsoft's ODI to NDIS mapper. Since Microsoft's networking functions work with NDIS drivers only, ODI drivers must be translated to NDIS. Microsoft's translator is supported by Microsoft, not Apple.

For further help with installing Windows for Workgroups 3.11, please call Microsoft. For further reading on Windows for Workgroups 3.11, a suggested resource is the Microsoft Windows for Workgroups 3.11 Resource Kit available from Microsoft or your local book seller.

Here's a listing of the net.cfg, autoexec.bat, and protocol.ini file after the above Windows for Workgroups 3.11 install, with a Frame type of ETHERNET_802.2 selected. Note that NetBeui was NOT installed in this listing:

NET.CFG

Link Driver MACODI

FRAME ETHERNET_802.2
FRAME ETHERNET_802.3
FRAME ETHERNET_SNAP
FRAME ETHERNET_II

AUTOEXEC.BAT

```
-----
C:\WINDOWS\NET START
@CALL C:\NWCLIENT\STARTNET
C:\WINDOWS\ODIHL.P.EXE
@ECHO OFF
LH C:\DOS\SMARTDRV.EXE /X
PROMPT $p$g
PATH C:\WINDOWS;C:\DOS
PATH=C:\NWCLIENT\;%PATH%
SET TEMP=C:\DOS
SET SOUND=C:\SB16
SET BLASTER=A220 I5 D1 H1 T6
LH C:\SB16\MIXERSET /P /Q
LH C:\Apple\ApplePC
LH C:\Apple\MacShare
LH C:\DOS\MSCDEX /D:CDDRVR /L:E
LH C:\Apple\DOSClip
set tmp=C:\Temp
```

protocol.ini

```
-----
[network.setup]
version=0x3110
netcard=ms$odimac,1,MS$ODIMAC,4
transport=ms$nwlinknb,NWLINK
lana0=ms$odimac,1,ms$nwlinknb
```

```
[net.cfg]
PATH=C:\NWCLIENT\NET.CFG
```

[MS\$ODIMAC]

```
[Link Driver MACODI]
data=Frame Ethernet_SNAP
data=Frame Ethernet_802.2
data=Frame Ethernet_II
data=Frame Ethernet_802.3
data=Link Driver MACODI
```

[NWLINK]

```
BINDINGS=MACODI
FRAME=ETHERNET_802.2
```

Article Change History:

29 Jun 1995 - Corrected spelling.
19 Apr 1995 - Corrected INT setting.

Support Information Services

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Tech Info Library Article Number:17325



Tech Info Library

Apple Media Tool: How To Create a Slide Show (4/95)

Revised: 6/5/96
Security: Everyone

Apple Media Tool: How To Create a Slide Show (4/95)

=====

Article Created: 7 March 1995
Article Reviewed/Updated: 7 April 1995

TOPIC -----

This article describes how to create a slide show presentation using the Apple Media Tool.

DISCUSSION -----

Step 1 - The Basics

Launch the Apple Media Tool application program and create one screen. Import the media, place the media inside the screen (creating objects), and align the coordinates for each object.

Note:

This article assumes you already know how to import media, create a screen, align coordinates, change actions, create commands, change commands, and other basic media tool procedures. If you do not know how to do this, please refer to the user's manual.

Step 2 - Setting duration times

You need to set the length of time you want each object to appear on the screen. This is done using the duration command in the object menu. Highlight the object for which you want to set the duration, then go to the object menu and select Duration. A window opens showing you the name of the object you have selected as well as On and Off buttons. Click the On button and enter a duration time in ticks (60 ticks = 1 second). Once you set the duration, click OK. Do this for each object you want in your sequence.

Step 3 - Assigning commands for the objects

Here is a chart of the action/commands for each object:

	Before Display	Finished
	-----	-----
Object 1	Disable itself	Hide itself
.	Show itself	Show obj. 2
.	Start itself	Start obj. 2
Object 2	Disable itself	Hide itself
.	Hide itself	Show obj. 3
.		Start obj. 3
Object 3	Disable itself	Hide itself
.	Hide itself	Show obj. 4
.		Start obj. 4
Object 4	Disable itself	Hide itself
.	Hide itself	Show obj. 5
.		Start obj. 5
Object 5	Disable itself	-----
.	Hide itself	

Note:

The reason the finished action and the start command is used (usually for movies), is because once you assign a duration to an object, the media tool treats it similarly to the way it treats a movie.

Once you have assigned the commands for the objects, you are finished. Close the screen window, and run the presentation.

This article only provides the groundwork for creating a simple slide show project. Once you are comfortable with the procedure, you can add effects and change the duration to suit your needs.

Article Change History:

07 Apr 1995 - Made minor update to Step 3 table. Added keyword.

Support Information Services

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Tech Info Library Article Number:17326



Tech Info Library

Macintosh Performa: Where is CloseView? (4/95)

Revised: 5/19/95
Security: Everyone

Macintosh Performa: Where is CloseView? (4/95)

Article Created: 7 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

Is the CloseView control panel software preinstalled in the Control Panels folder on all Macintosh Performa computers?

If it is not, how can I install it? Is it inside another folder somewhere on a disk or on the hard drive?

Is there any difference between installing CloseView on a computer running System 7.5 and installing it on any other version of the Macintosh Performa system software?

DISCUSSION -----

CloseView is not installed in the Control Panels of the active System Folder on Macintosh Performa computers. It is included in the Apple Extras folder on the hard drive.

Installation of CloseView is easy from within the Finder. There is no installer, so you can just drag the CloseView icon on top of your System Folder.

If you are using At Ease, you need to launch the Finder before you can install CloseView.

Installing CloseView:

Step 1
Open the hard drive.

Step 2
Open the folder called Apple Extras.

Step 3

Click on the CloseView icon and hold the mouse button down.

Step 4

Drag the CloseView icon on top of the System Folder and release the mouse button.

Step 5

An alert box appears telling you that CloseView will be placed in Control Panels. Click the OK button.

Step 6

Pull down the Apple Menu and open Control Panels.

Step 7

Open the CloseView control panel and make the necessary changes to turn on and configure CloseView the way you want it.

Step 8

Close the CloseView control panel.

Installation is the same for System 7.5 and other Performa computers assuming that the user is working within the Finder.

This article was published in the "Information Alley":
Volume I, Issue 25, Page 15

Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17327



Tech Info Library

Can a Diskette Have a Capacity of 2 MB (3/95)

Revised: 3/7/95
Security: Everyone

Can a Diskette Have a Capacity of 2 MB (3/95)

=====

Article Created: 7 March 1995

TOPIC -----

Does a Macintosh format HD (High Density) floppy disks from 3 MB or hold 2 MB of data?

DISCUSSION -----

A 2 MB Floppy can be perceived in one of two ways:

- 2 MB is the unformatted rated capacity of an HD diskettes. Once a 2 MB unformatted diskette is formatted, its capacity is 1.44 MB. These diskettes may have the "HD" logo impressed on the diskette somewhere, and there are two holes at the rear, or on the side opposite the diskette shutter, that are read by the drive mechanism to identify a diskette as an HD diskette.
- There is another format that has recently been release called ED (Extended Density). This diskette has an unformatted rated capacity of 4 MB, and a formatted capacity of 2.88 MB. As of March, 1995 Apple does NOT manufacture computers that read or write to this format. These drives are found in the PC marketplace primarily.

Support Information Services

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Tech Info Library Article Number:17328



Tech Info Library

Global Village Mercury Problem Receiving Faxes (3/95)

Revised: 3/7/95
Security: Everyone

Global Village Mercury Problem Receiving Faxes (3/95)

=====

Article Created: 7 March 1995

TOPIC -----

I cannot receive Faxes with my Global Village Mercury modem. What can I do to fix this?

DISCUSSION -----

If you cannot receive Faxes with a Global Village Mercury, please check the following:

- Make sure the modem is set to answer Faxes.
- Make sure the modem status box reads Ready to answer Fax calls. If it does not, turn the modem off and turn it back on from the control panel.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17330



Tech Info Library

Macintosh: Lose AppleTalk When Printing To StyleWriter (3/95)

Revised: 3/7/95
Security: Everyone

Macintosh: Lose AppleTalk When Printing To StyleWriter (3/95)

=====

Article Created: 7 March 1995

TOPIC -----

When I try to configure my Color StyleWriter 2400 using the chooser I get a message that reads, "Access to current network services will have to be reestablished. Are you sure you want to make it inactive?"

The problem only occurs when I try to use the printer port, but everything works fine when using the modem port. I am using the Ethernet port for networking so the printer port should be available for other uses. What is the problem and how do I correct it?

DISCUSSION -----

In many cases a software control panel extension creates this conflict. The LaserWriter Bridge software by Sonic Systems is a control panel which is provided with the LaserWriter Select 360 printer and is probably preventing the printer port configuration from being changed unless AppleTalk is turned off first. The LaserWriter Bridge software resides in the control panels folder and allows a networked LocalTalk device such as the LaserWriter Select 360 to be visible on an Ethernet network. Apple ships the LaserWriter Bridge software with all LaserWriter Select 360 printers so it is possible that the LaserWriter Bridge was installed on one or more of these systems. The software can be turned off from within the control panel itself, but the system must be restarted for the changes to take effect. If the LaserWriter Bridge software features are not required then simply turning it off from within the control panel will allow the printer port to be used with the Color StyleWriter 2400, Color StyleWriter Pro, StyleWriter II, and other serial based printers.

Support Information Services

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Tech Info Library Article Number:17331



Tech Info Library

Broderbund Software, Inc. (1/96)

Revised: 1/12/96
Security: Everyone

Broderbund Software, Inc. (1/96)

=====

Article Created: 6 March 1995
Article Reviewed/Updated: 11 January 1996

Brøderbund Software, Inc.

500 Redwood Blvd.
Novato, CA 94948-6121

800-521-6263 (Sales and Software Updates)

415-382-4400 (Main Phone Number)

415-382-4700 (Technical Support)

415-883-5889 (Electronic Bulletin Board Service)

Company Profile:

Brøderbund Software, Inc., developer of the Print Shop Deluxe, is a diversified consumer software company that offers a broad selection of fun, award-winning products, such as Lode Runner, for use in homes, schools and small businesses.

Support Information Services

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17332



Tech Info Library

Portable StyleWriter: Configurable DIP Switch Settings (3/95)

Revised: 3/8/95
Security: Everyone

Portable StyleWriter: Configurable DIP Switch Settings (3/95)

Article Created: 8 March 1995

TOPIC -----

I need to get the dip switch settings for the Portable StyleWriter.

DISCUSSION -----

The are 11 configurable DIP switches. Depending on the position of DIP switches 10 and 11, the meaning of switches 6 to 10 change, so the following list includes the values of these switches first. The rest of this article describes the remaining options.

DIP Switches 10 and 11
=====

. SW 10 and 11 Sets Printer Modes	SW 10	SW 11
. -----	-----	-----
. BJ-10e (IBM Proprinter X24E (default))	OFF	OFF
. BJ-10e (Canon BJ-130e)	ON	OFF
. LQ Epson LQ-510	—	ON

BJ10e Emulation Mode
=====

If the printer is in BJ-10e emulation mode then the following switch settings are used.

. Dip	Function	ON	OFF	NOTES
. ---	-----	-----	-----	-----
. 1	AutoSheetFeeder	Enable	Disable	A
. 2	TextScale	Enable	Disable	B
. 3	Automaticlinefeed	CR=CR+LF	CR=CR	C
. 4	Page length	305 mm	279 mm	D

.		(12")	(11")	
.	5	Character set	Set 2	Set 1
.	6	Automatic carriage return	LF = LF+CR	LF=LF E
.	7	Alternate Graphics Mode (AGM)	Enable	Disable F
.	8	Receivebuffer/download buffer	3K/34K	37K/OK G
.	9	Code page	Multilingual	USA437 H
.		850		
.	10	Printer emulation	BJ-130e	X24E s

NOTES:

A) Set this switch to ON if the optional Auto Sheet Feeder is used.

B) When this switch is ON, the printer will reduce the line spacing by a factor of 29/30 (from 63 lines/page to 66 lines/page if line spacing is set to 1/6). If you want to print on letter-size paper with 6 lines/inch line spacing and 66 lines/page, set this switch to ON. This _ function is available only when line spacing is 1/6 or 1/8.

C) When this switch is ON, the printer automatically adds a linefeed (LF) code when it receives a carriage return (CR) code.

D) When this switch is OFF, the page length is 11 inches -- the appropriate length for using letter-size paper. When this switch is ON, the page length is 12 inches -- the appropriate length for using A4-size paper.

E) When this switch is ON, the printer automatically adds a carriage return (CR) code when it receives a linefeed (LF) code.

F) When AGM (Alternate Graphics Mode) is enabled, the printer accepts high resolution 2; dot all-point-addressable graphics commands similar to those used with conventional 24-pin printers.

G) When this switch is ON, the printer allocates 34K bytes of buffer for downloaded fonts. Change this setting to ON when using downloaded fonts.

H) Select multilingual code page 850 for European character set.

LQ (Laser Quality) Mode

=====

If the printer is in LQ emulation mode then the following switch settings are used.

.	Dip	Function	ON	OFF	NOTES
.	---	-----	-----	-----	-----
.	1	AutoSheetFeeder	Enable	Disable	I
.	2	TextScale	Enable	Disable	J
.	3	Automaticlinefeed	CR=CR+LF	CR=CR	K
.	4	Page length	305 mm	279 mm	L
.			(12")	(11")	

. 5 Character set Set 2 Set 1
. 6 \
. 7 >International character set (see the table following the notes)
. 8 /
. 9 \ Font selection (see the Font Selection Table below)
. 10 /

NOTES:

I) Set this switch to ON if the optional Auto Sheet Feeder is used.

J) When this switch is ON, the printer reduces the line spacing by a factor of 29/30 (from 63 lines/page to 66 lines/page if line spacing is set to 1/6). If you want to print on letter-size paper with 6 lines/inch line spacing and 66 lines/page, set this switch to ON. This function is available only when line spacing is 1/6 or 1/8.

K) When this switch is ON, the printer automatically adds a linefeed (LF) code when it receives a carriage return (CR) code.

L) When this switch is OFF, the page length is 11 inches -- the appropriate length for using letter-size paper. When this switch is ON, the page length is 12 inches -- the appropriate length for using A4-size paper.

Switches 6-7-8 International Character Set Table

. Character Set	SW6	SW7	SW8
. -----	---	---	---
. USA	OFF	OFF	OFF
. UK	OFF	OFF	ON
. Germany	OFF	ON	OFF
. France	OFF	ON	ON
. Denmark	ON	OFF	OFF
. Sweden	ON	OFF	ON
. Italy	ON	ON	OFF
. Spain	ON	ON	ON

Font Selection Table

If the application specifies use of a different font, then that font is used for printing, and the font table settings are ignored.

. Font	SW9	SW10
. -----	---	----
. Roman	OFF	OFF
. Sans Serif	OFF	ON
. Draft	ON	N/A (See Note)

NOTE: When switch 9 is ON, the painter is always in economy mode, regardless of the status of the DIP switch 10.

Support Information Services

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Tech Info Library Article Number:17334



Tech Info Library

Apple Wireless Messaging Service: No Area Code In PIN (3/95)

Revised: 3/8/95
Security: Everyone

Apple Wireless Messaging Service: No Area Code In PIN (3/95)

=====

Article Created: 8 March 1995

TOPIC -----

I am using the Apple Wireless Messaging Service to send and receive pages. However, when the Notify software dials the paging service number and connects, an error message appears. The error states that the PIN (Personal Identification Number) or Service is not correct in the Pager Address. When opening the returned message an error appears that states "This letter could not be delivered to the marked addresses." I know I entered my PIN correctly.

DISCUSSION -----

The User's Manual has an error. You are not required to use your area code as part of your PIN. Your PIN is your beeper number (7-digit number).

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17335



Tech Info Library

LaserWriter Fax: Customizing The Fax Cover Sheet (10/95)

Revised: 10/6/95
Security: Everyone

LaserWriter Fax: Customizing The Fax Cover Sheet (10/95)

Article Created: 8 March 1995
Article Reviewed/Updated: 6 October 1995

TOPIC -----

I have a LaserWriter 16/600 PS with an optional PostScript fax card and want to easily customize the cover pages - adding company logo, changing English text to French and so forth. We also need to modify the date format so it makes sense to French Canadians, which, is in month day year format with commas instead of slashes.

- 1) Can you help with the format of the date on the cover page.
- 2) How can I change the English text to French.
- 3) Is there any outlook for a software solution to the problem of cover pages with LaserWriter 8f software?

DISCUSSION -----

Using the "Alternate Cover Page.PS" file that is installed with the LaserWriter Fax software, here is how to change the date to month-day-year format with commas instead of slashes. This change is very easy and can be performed by the following:

- 1) Open the "Alternate Cover Page.PS" file from SimpleText.
- 2) Look for the following two lines of PostScript:

```
TimeSent 1 G str cvs S ( ) S  
TimeSent 2 G str cvs S ( ) S
```

- 3) Change the "/" character inside the parenthesis to a comma. (,)

The lines should look like:

```
TimeSent 1 G str cvs S (,) S
TimeSent 2 G str cvs S (,) S
```

4) Save the file.

5) Select the file as your cover page in the Fax Cover Page dialog that comes up when faxing a document. In the Fax Cover Page dialog, click on the "Cover Page To Use" popup field and select the file you saved.

Changing English Text Into Another Language

=====

You can change the English text to French, by doing the following:

1) Open the "Alternate Cover Page.PS" file from SimpleText

.

2) Around the middle of the 5th page, look for the line:

% Program:

3) Beyond this point, you will see the text that actually appears on fax cover sheet. The text will be enclosed in parenthesis, and can be modified to anything you want - in your case this can be French. The parenthesis must remain, but the text inside can be modified. Here are the strings that can be changed:

```
(Facsimile Transmission)
(To:)
(Organization:)
(Fax Number:)
(From:)
(Organization:)
(Fax Number:)
(Phone Number:)
(Date:)
(Pages:)
(, excluding cover sheet.)
```

Caution:

You need to be very careful about the length of the replacement text. Make sure that it is not too much longer than the original english text or it will overwrite the data in the fields.

4) Save the file.

5) Select this file as your cover page in the Fax Cover Page dialog that comes up when faxing a document. In the Fax Cover Page dialog, click on the "Cover Page To Use" popup field and select the file you saved.

Adding a logo to the Cover Sheet

=====

You can add a logo to the cover page by following the process described in the TIL article "LaserWriter Fax: Adding a Logo to The Fax Cover Sheet".

Article Reviewed/Updated:

06 Oct 1995 - Updated reference to adding logo article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17336



Tech Info Library

Apple MessagePad: What Items Get Erased (6/95)

Revised: 6/13/95
Security: Everyone

Apple MessagePad: What Items Get Erased (6/95)

Article Created: 9 March 1995
Article Reviewed/Updated: 13 June 1995

TOPIC -----

I am confused on how to properly erase information and what gets erased from my Apple MessagePad. I performed erase procedure outlined on page 110 of the MessagePad 120 Handbook, and now I cannot find the Notion package that came on my Apple MessagePad. The Handbook states "This does not remove Newton's programs or operating system software (including system updates)." Is this correct?

DISCUSSION -----

The handbook is a bit confusing on this topic.

After Erasing Your Messagepad

These Files Remain:

- The Calendar
- To Do List
- Notes
- Names programs
- Newton operating system
- system updates

These Files are Erased:

- Notions
- Notions templates
- Newton Mail modules
- PackageMover
- other installed programs
- all data in the internal memory

NOTE: Information on any storage card is unaffected when you erase.

How To Erase Your Apple MessagePad

Step 1

Press and hold down the Power switch.

Step 2

Press and release the Reset button while holding down the Power switch.

Step 3

Continue to hold down the Power switch until the message appears asking if you want to erase data completely.

Step 4

Release the Power switch.

Step 5

Tap on the YES button and then tap on the OK button.

This article was published in the "Information Alley":
Volume II, Issue 4, Page 8

Article Change History:

13 Jun 1995 - Updated from Information Alley.

Support Information Services

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Tech Info Library Article Number:17339



Tech Info Library

LaserWriter 16/600 PS: Setting the Paper Tray (4/97)

Revised: 4/14/97
Security: Everyone

LaserWriter 16/600 PS: Setting the Paper Tray (4/97)

=====

Article Created: 9 March 1995
Article Reviewed/Updated: 14 April 1997

TOPIC -----

I am having multiple problems with LaserWriter 16/600 with 500 sheet optional trays. They do not pull from the 500 sheet tray all the time. For example, in Microsoft Word printing using the keys Command-P pulls paper from 500 sheet tray. Using the print option in the tool bar, pulls paper from multi-purpose tray. Using the File menu and choosing Print, pulls paper from the 500 sheet feeder. I have had similar problems in both Microsoft Works and Microsoft Excel. The 500 sheet feeder is installed and preferred in the Chooser.

DISCUSSION -----

This is an application problem where the vendor is using different print records when doing a "Print One" as opposed to using the pull-down Print menu.

To correct this problem, follow these steps:

Step 1

Create a SimpleText file and enter the following lines of PostScript code.

Note:

PostScript is case sensitive. The PostScript code must be entered exactly as it shown.

This is PostScript Level 1 code:

%=====

% Begin PostScript Code

%

serverdict begin 0 exitserver

```
statusdict begin 2 setdefaultpapertray end
%
% end PostScript Code
%=====
```

The following values for the number before "setdefaultpapertray" above:

0	250 Sheet Cassette
1	Multi-purpose tray
2	500 Sheet Cassette
3	Envelope tray

This is the equivalent PostScript Level 2 code:

```
%=====
% Begin PostScript Code
%
serverdict begin 0 exitserver
1 dict dup /InputAttributes 1 dict dup /Priority [2 1 0] put put setpagedevice
%
% End PostScript Code
%=====
```

This sets the paper tray priority to:

1st Priority - Cassette (500 Sheets) - designated by the "2" in the array above.
2nd Priority - Multipurpose Tray - designated by the "1" in the array above.
3rd Priority - Cassette (250 Sheets) - designated by the "0" in the array above.

You can change the paper tray priority order by changing the values in "/Priority [2 1 0]".
For example, /Priority [0 1 2] makes the 250 sheet cassette first priority, then the Multipurpose tray next, then the 500 sheet cassette.

Step 2

Save the file and quit SimpleText.

Step 3

Launch Apple LaserWriter Utility, under the Utilities menu, choose Download PostScript File.

Article Change History:
14 Apr 1997 - Added PostScript Level 2 code.

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Tech Info Library Article Number:17340



Tech Info Library

LW Select 360: Low Memory Causes 'In Use' light to Blink (3/95)

Revised: 3/9/95
Security: Everyone

LW Select 360: Low Memory Causes 'In Use' light to Blink (3/95)

Article Created: 9 March 1995

TOPIC -----

I am trying to print my Desktop using QuickDraw GX with System 7.5. The document is getting spooled to the hard disk and the LaserWriter's 'Ready/In Use' light blinks, but it never prints. If I use the LaserWriter 8.1.1 printer driver, the Desktop prints within a minute.

DISCUSSION -----

In low memory situations when using QuickDraw GX this problem may appear. In order to correct this, send the following PostScript code to the printer.

Caution:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

```
%=====
% Begin PostScript Code
%
0 serverdict begin exitserver
<< /FactoryDefaults true >> setsystemparams
systemdict begin
realtime 10000 add
{ dup realtime le { pop exit } if } loop
quit
%
% end PostScript Code
%=====
```

Support Information Services

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Tech Info Library Article Number:17341



Tech Info Library

Micro World (3/95)

Revised: 3/9/95
Security: Everyone

Micro World (3/95)

=====

Article Created: 9 March 1995

Micro World

=====

1905 Vestal Pkwy. East
Vestal, NY 13850

Phone: (607) 757-0500
Fax: (607) 757-0505

Company Profile:

Manufactures add-on lens attachments for the Apple QuickTake camera.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17346



Tech Info Library

VisionTek (3/95)

Revised: 3/9/95
Security: Everyone

VisionTek (3/95)

=====

Article Created: 9 March 1995

VisionTek

=====

1175 Lakeside Dr.
Berne, IL 60031

Sales Phone: (800) 726-9695
Sales Fax: (708) 360-7144

Company Profile:
Sells computer and printer RAM modules.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17347



Tech Info Library

PowerBook File Assistant: Data Can't Be Opened (7/95)

Revised: 7/20/95
Security: Everyone

PowerBook File Assistant: Data Can't Be Opened (7/95)

=====

Article Created: 10 March 1995
Article Reviewed/Updated: 20 July 1995

TOPIC -----

When I try and run PowerBook File Assistant, I get a message that says "The file assistant data can't be opened." I used PowerBook File Assistant yesterday. What's wrong?

DISCUSSION-----

The file assistant data has become corrupted. You can either restore it if you have made backups or simply throw it away and recreate it. "File Assistant Data" can be found in the preferences folder, in the system folder.

Article Change History:
20 Jul 1995 - Corrected minor typo.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17349



Tech Info Library

Macintosh System 7.5 Update 1.0 ReadMe (10/95)

Revised: 3/20/96
Security: Everyone

Macintosh System 7.5 Update 1.0 ReadMe (10/95)

=====

Article Created: 13 March 1995
Article Reviewed/Updated: 16 October 1995

TOPIC -----

The following article is the ReadMe document for Macintosh System 7.5 Update 1.0.

DISCUSSION -----

What is the Macintosh System 7.5 Update 1.0?

=====

System 7.5 Update 1.0 is a set of software enhancements that improves the performance and reliability of Macintosh computers running System Software 7.5.

When installed after Macintosh System Software version 7.5, this update provides enhancements to the system software (Launcher, system extensions, and control panels), applications, and it also provides solutions for problems encountered by some Macintosh computer users.

Before you install System 7.5 Update 1.0, review the section called "What the Update Provides" later in this Read Me. It explains the problem fixes and new features for your system, the Launcher, system extensions, control panels, and applications. For information about problems that System 7.5 Update 1.0 does not fix, see the "Tips" section.

Installing System 7.5 Update 1.0 from Disks

=====

During the update, the Installer automatically determines what software your model of Macintosh needs. However, if you want to install specific items you can choose Custom Install (see step 5 below).

Step 1

..TIL17350-Macintosh_System_7-5_Update_1-0_ReadMe_10-95_(TA33428).pdf

Before you install System 7.5 Update 1.0, make sure that Macintosh System Software Version 7.5 is installed on your computer.

Step 2

Insert the "System 7.5 Update 1.0 - 1" disk.

Step 3

Double-click the Installer icon to open it.

Step 4

Read the first screen, then click OK.

Step 5

At the next screen, do one of the following:

- To allow the Installer to automatically determine what software your computer needs, check the pop-up menu to make sure that Easy Install is displayed.
- To select specific items to install, open the pop-up menu and choose Custom Install.

Step 6

Click the Install button. Follow the messages presented, inserting disks as requested.

Step 7

When you see a message that the installation was successful, click the Restart button.

Step 8

Installing the LaserWriter 8 version 8.2 printer driver removes the LaserWriter 8 Prefs file from your system. If you use the LaserWriter 8 printer driver, you need to restore your printer settings by following the instructions below:

- Open the Chooser.
- Click the LaserWriter 8 icon.
- Click the printer name.
- Click the Setup button.

Installing System 7.5 Update 1.0 Over a Network

=====

To update Macintosh computers that are connected on a network, you can create a net install folder and install over the network. Using a net install makes updating networked computers faster and simpler.

Creating a Net Install Folder

Step 1

Create a folder on the server called "System 7.5 Update Net Install".

Step 2

Insert the first disk titled "System 7.5 Update 1.0 - 1" into the floppy disk drive.

Step 3

Open the disk and drag the following items into the "System 7.5 Update Net Install" folder:

- the Installer
- the Install System Update file
- the "System 7.5 Update 1.0 - 1" disk icon

Step 4

Do the following for each of the 3 remaining installation disks:

- Insert the disk in the floppy disk drive.
- Drag the disk icon into the "System 7.5 Update Net Install" folder.

Step 5

Verify that the "System 7.5 Update Net Install" folder contains the following icons:

- Installer
- Install System Update
- System 7.5 Update 1.0 - 1 (folder)
- System 7.5 Update 1.0 - 2 (folder)
- System 7.5 Update 1.0 - 3 (folder)
- System 7.5 Update 1.0 - 4 (folder)

Step 6

Close the "System 7.5 Update Net Install" folder.

Running the Installer Over a Network

During the update, the Installer will automatically determine what software your model of Macintosh needs. However, if you want to install specific items you can choose Custom Install (see step 6 below).

To install System 7.5 Update 1.0 over a network, follow the instructions below:

Step 1

Before you install System 7.5 Update 1.0, make sure that Macintosh System Software Version 7.5 is installed on your computer.

Step 2

From the computer onto which you want to install the System 7.5 Update 1.0, log onto the server that contains the "System 7.5 Update Net Install" folder.

Step 3

Open the "System 7.5 Update Net Install" folder.

Step 4

Double-click the Installer icon to start the Installer.

Step 5

Read the first screen, then click OK.

Step 6

At the next screen, do one of the following:

- To allow the Installer to automatically determine what software your computer needs, check the pop-up menu to make sure that Easy Install is displayed.
- To select specific items to install, open the pop-up menu and choose Custom Install.

Step 7

Click the Install button.

Step 8

When you see a message that the installation was successful, click the Restart button.

Step 9

Installing the LaserWriter 8 version 8.2 printer driver removes the LaserWriter 8 Prefs file from your system. If you use the LaserWriter 8 printer driver, you need to restore your printer settings by following the instructions below:

- Open the Chooser.
- Click the LaserWriter 8 icon.
- Click the printer name.
- Click the Setup button.

WHAT THE UPDATE PROVIDES

=====

The System 7.5 Update File

=====

The update installs a file called System 7.5 Update in your System Folder. The new file provides the following enhancements to System 7.5:

Low Memory Situations

Improves system stability when memory is very low

Japanese Systems w/QuickTime 2.0

Fixes a potential crash problem when shutting down or restarting Japanese systems with QuickTime 2.0 installed

Pasting Large Data Blocks

Fixes a potential crash problem when pasting large blocks of data

Alias Opens Correct Original

No longer opens the wrong original when you select an alias on the desktop of a disk other than the startup disk.

Custom Colors In Applications

No longer interferes with custom colors that some applications use in the Open and Save dialog boxes

Keyboard Power Key

The keyboard Power key can now be used to turn the computer off. To shut down the computer, press the Power key. When the dialog box appears, you can shut down your computer, restart your computer, put it to sleep (if it supports sleep) or cancel the shutdown.

PowerBook 100 Series

These computers do not have a Power key on their built-in keyboard. However, if you attach an external keyboard, the keyboard Power key can now be used to turn the computer off. To shut down the computer, press the Power key. When the dialog box appears, you can shut down your computer, restart your computer, put it to sleep, or cancel the shutdown.

PowerBook Duo Docks

Pressing the eject button automatically launches items in the Shutdown Items folder and shuts down the computer. No dialog box appears.

PowerBook 500 Models

Improves trackpad performance

PowerBook 150

The update extends battery life by reducing power requirements during sleep mode. It also fixes a potential system freeze problem that occurs when you use the internal modem several times without restarting the computer. The PowerBook 150 Update system extension is no longer needed and is automatically removed from the Extensions folder (inside the System Folder) during installation.

Power Macintosh

Native QuickDraw speeds up operations such as scrolling, image filtering, and pattern and text drawing. The updated Serial Driver fixes a potential crash problem.

Power Macintosh

(including Macintosh computers w/the Power Macintosh upgrade card and the

Centris 660AV, Quadra 660AV, and Quadra 840AV)

Updated video software prevents scrambled video when the computer starts up.

Macintosh: Performa 630 series, PowerBook 150, Quadra 630, and LC 630

(models with internal IDE hard disks):

The update fixes a problem that prevents the internal IDE disk from appearing on the desktop. The problem occurs when the internal IDE disk is the selected startup disk, but the computer is started up from an external hard disk by holding down the Command-Shift-Option-Delete keys during startup. The MountIDE system extension is no longer needed and is automatically removed from the Extensions folder (inside the System Folder) during installation.

Macintosh Quadra 700

An Apple Desktop Bus (ADB) patch fixes a potential problem that can slow down the mouse or trackball.

Macintosh Quadra 840AV

The updated Display Manager ensures that a multi-sync monitor is set to the correct resolution when you restart the computer.

Launcher Enhancements

=====

Launcher version 2.7 supports Macintosh Drag and Drop so that it is easier to add or remove items:

To Add An Item

Open the Launcher and drag the item into the Launcher window or onto a category button. The system creates a new Launcher button for the item by placing an alias in the Launcher Items folder. The original item remains on your hard disk.

To Remove An Item

Open the Launcher, hold down the Option key and drag the button out of the Launcher.

To Move A Launcher Button Into A New Category

Hold down the Option key and drag the button to a category (grouping) button along the top of the Launcher window.

To Open A File

Drag the file's icon onto a Launcher button that represents an application program. For example, you can open a SimpleText file by dragging its icon onto the SimpleText button. If the program the button represents can open the file, the button is highlighted when you drag the file to it.

To Put A File Into A Folder

Drag the file's icon onto a Launcher button that represents a folder.

To Re-size The Currently Visible Launcher Buttons

Hold down the Command key and click inside the Launcher window. Then choose a new size from the pop-up menu.

To Open A Category Button's Folder

(located in the Launcher Items folder)
Hold down the Option key and click the grouping button.

System Extension Enhancements

File Sharing

File Sharing version 7.6.1 improves overall performance and provides new functionality. When file sharing is turned on, removable disks and CD-ROMs will automatically be shared-except for audio CDs, which will no longer be shared. You no longer have to turn off file sharing in order to eject a removable disk or CD-ROM.

Apple Guide

Apple Guide version 1.2.5 improves performance, runs native on Power Macintosh models, and is compatible with At Ease.

SCSI Manager

SCSI Manager version 4.3.1

- works with Performa 630 series, PowerBook 150, Quadra 630, and LC 630.
- fixes a potential data corruption problem on Quadra 840AV and Quadra 660AV models.
- Fixes a potential crash problem when using some external hard disks.

Speech Manager

Speech Manager version 1.3 is provided. (It was not provided on the System 7.5 upgrade disks.)

Power Macintosh Models With PowerTalk And At Ease Installed

PowerTalk Mailbox version 1.1.1 fixes a potential crash problem that occurs when you select Go To At Ease from the File menu. PowerTalk and At Ease now work together cleanly.

Update File Replaces Some Extensions

The System 7.5 Update file contains the functionality of and removes the following extensions: EM Sound Update, PowerBook 150 Update, and Mount IDE Drive.

Threads Library

The updated Threads Library (ThreadsLib) provides additional information for developers on Power Macintoshes.

Math Functions Library

The updated Math Functions Library (MathLib) boosts performance of math operations on Power Macintoshes.

Control Panel Enhancements

=====

General Controls

General Controls version 7.5.3 improves Application folder and System Folder locking and provides more specific error messages for folder locking.

Apple Menu Options

Apple Menu Options version 1.0.1 improves performance and shows non-AppleShare servers in the Recent Servers submenu.

Keyboard

Keyboard version 7.5.1, by default, does not allow a keyboard shortcut for changing keyboard layouts. To turn on the shortcut, open the Keyboard control panel and click the Command-Option-space bar checkbox to put a check in it.

WindowShade

WindowShade version 1.3.1 fixes a potential crash problem that occurs when memory is very low.

MacTCP

MacTCP version 2.0.6 provides the following enhancements:

- shortens re-transmission delays
- prevents potential out-of-memory errors
- makes configuring communications easier
- gives you more control over the choice of which server(s) to contact and the order in which they are contacted

PC Setup

Centris 610 and Quadra 610 with the 610 PC Card installed: PC Setup version 1.0.2 is provided. (It was not provided on the System 7.5 upgrade disks.)

TV Setup

Macintosh Easy Open version 1.1.1 works better with drag and drop on document converters and fixes problems with cut and paste between Macintosh and PC applications on Macintosh computers with a PC Card installed.

Application Enhancements

=====

SimpleText

SimpleText version 1.2 provides the following enhancements:

- Large documents, PICT files, and page ranges (such as, pages 2 and 3 of a 5-page document) print correctly.
- Page Up, Page Down, and scrolling work better with Portable Digital Documents (PDDs) and other documents.
- Editing features (such as Cut, Copy, the forward delete key on extended keyboards, underlining, and selected text highlighting) work correctly.
- SimpleText documents that use a system font now retain their fonts when opened on a Macintosh with a different system font.
- In the Don't Save/Save/Cancel dialog box, you can type "D" or Command-D for Don't Save.
- If you Quit with an unsaved document, choose Save in the Don't Save/Save/Cancel dialog box, then choose Cancel in the Save dialog box, SimpleText now cancels the Quit rather than quitting.
- Remote program linking (controlling SimpleText with AppleScript from another Macintosh) is enabled by default.

Find File

Find File version 1.1.1 handles restricted-access disks better.

Synchronize Folder AppleScript

The Synchronize Folders AppleScript automated task handles nested folders properly.

Share a Folder AppleScript

A new AppleScript automated task-Share a Folder (No Guest)-lets you automatically share a folder with the Guest access disabled.

Stickies

Stickies version 1.0.1 fixes a potential crash problem that occurs when Stickies launches with a "collapsed" note window.

Jigsaw Puzzle

Jigsaw Puzzle version 1.0.1 fixes sound problems caused by a third-party extension.

PowerTalk Catalogs

PowerTalk Catalogs Extension version 1.1.1 no longer displays an out-of-memory error when you open the Catalog.

PowerTalk AppleMail

PowerTalk AppleMail version 1.1.2 works better on systems with many fonts installed and defaults to "sender only" for mail replies.

PowerTalk DigiSign Utility

PowerTalk DigiSign Utility version 1.1.1 improves printing on Hewlett Packard (HP) DeskWriter C and 550-style printers.

Direct Dialup

Direct Dialup version 1.1.1 works better when dialing using a long string and won't time out while sending a large letter or a letter with a large enclosure.

LaserWriter version 8.2 Printer Driver

Enhancements

The LaserWriter version 8.2 printer driver provides the following enhancements:

- The new Setup button in the Chooser automatically looks for the selected printer, selects the appropriate PostScript Printer Definition (PPD) file, and configures the paper trays. If you wish, you can manually configure the PPDs and papers trays manually by clicking the Setup button a second time.
- The destination in the Print dialog box resets to "Printer" instead of retaining the previous print job destination. For example, if the previous destination was "Fax," the destination automatically resets to "Printer" for the next job.
- You can tab backwards through the fields in all print dialogs by pressing Shift-Tab.

Printer Set Up

Installing the LaserWriter 8 version 8.2 printer driver removes the LaserWriter 8 Prefs file from your system. After you install, you need to set up your printer. Follow the steps below:

Step 1

Open the Chooser.

Step 2

Click the LaserWriter 8 icon.

Step 3

Click the printer you want to use.

Step 4

Click the Setup button.

Tips

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Problem with PC Setup 1.0.2

(on the Macintosh SE, Plus, Classic, Portable, and PowerBook 100 Series)
If you use the Custom Install option, do not install PC Setup on a Macintosh SE, Plus, Classic, Portable, or PowerBook 100 (models with the 68000 processor).
When installed on these models, PC Setup causes the system to crash. Easy Install will not install PC Setup on any of these models.

Apple Menu Options "Recent Documents" and Application Launch Time

"Recent Documents" tracking in Apple Menu Options monitors all files that are opened, even those opened by an application as part of its launch sequence (for example, drop-in filters used by desktop publishing packages). This can significantly slow down the launching of such applications. At present, the solutions are to disable "Recent Documents" tracking in the Apple Menu Options control panel or turn off Apple Menu Options in the Extensions Manager.

Reset Apple Menu Options

The update returns all settings in the Apple Menu Options control panel to their default values. If you have made any changes to Apple Menu Options, you will need to select them again.

Macintosh Centris/Quadra 660AV, Quadra 840AV, and Alert Sounds

If you have a Macintosh Centris/Quadra 660AV or Quadra 840AV, some system alert sounds may not play correctly with the Alert Volume turned down. To avoid the problem, keep the Alert Volume turned all the way up and adjust the Built-in system volume. (To adjust Built-In volume, open the Sound control panel and choose Volumes from the pop-up menu.)

Problem with Guides on Some Power Macintosh Models

If you have a Power Macintosh and have trouble opening the Tutorial, Macintosh Guide, Shortcuts, or other Apple Guide databases, you may have extra files that don't belong on your computer. To solve the problem, follow the steps below:

Step 1

Open the Extensions folder (inside the System Folder) and drag the PowerBook Guide Additions file to the Trash.

Step 2

Unless your computer is an AV model, drag the following items to the Trash:

- Video Guide Additions
- Video Player Guide Additions
- Speech Guide Additions

Step 3

Choose Empty Trash from the Special menu.

Step 4

Restart your computer.

MathLib Installed on Non-Power Macintosh Systems

The update installs the Math Functions Library, which is intended for Power Macintosh systems, on some non-Power Macintosh systems (in the Extensions folder). Unless you have a Power Macintosh or plan to install a Power Macintosh upgrade card, you may remove the file by dragging it to the Trash.

Setting AppleTalk to Inactive while FileSharing is on

If you set AppleTalk to Inactive, either through the Chooser or the Control Strip, while File Sharing is on, the Sharing Setup control panel will show File Sharing is on. File Sharing is actually off.

Removing PowerTalk

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If you wish to remove PowerTalk software from your computer, follow the steps below:

Step 1

Do the following to clean out your mailboxes:

- Save any important messages as text to your hard disk.
- Check your out box to make sure that all mail has been sent.

Step 2

Restart your computer with all extensions off by holding down the Shift key during startup.

Step 3

When the computer is ready, open the System Folder and drag the PowerTalk Data folder to the Trash.

Step 4

Open the Apple Menu Items folder (inside the System Folder) and drag the Mail and Catalogs folder to the Trash.

Step 5

Open the Control Panels folder (inside the System Folder) and drag PowerTalk Setup to the Trash.

Step 6

Open the Extensions folder (inside the System Folder) and drag the following items to the Trash:

- AppleTalk Service (the PowerTalk extension)
- Catalogs Extension (system extension)
- Mailbox Extension (system extension)
- PowerTalk Extension (system extension)
- PowerTalk Guide (Apple Guide document)
- PowerTalk Manager (system extension)

Step 7

Open the Preferences folder (inside the System Folder) and drag the following items to the Trash:

- AppleMail Letterheads (folder)
- PowerTalk Setup Preferences (PowerTalk Manager document)
- PowerTalk Startup Preferences (PowerTalk Manager document)

Step 8

Close the System Folder.

Step 9

Open the Apple Extras folder (on your hard drive) and drag the PowerTalk folder to the Trash.

Step 10

Choose Empty Trash from the Special menu.

Step 11

Restart your computer.

Article Change History:

16 Oct 1995 - Removed keyword.
22 Mar 1995 - Reviewed for technical accuracy.
20 Mar 1995 - Corrected titles of diskettes.

Support Information Services

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Tech Info Library Article Number:17350



Tech Info Library

Network Software Installer ZM-1.5 Read Me (3/95)

Revised: 3/22/95
Security: Everyone

Network Software Installer ZM-1.5 Read Me (3/95)

Article Created: 10 March 1995
Article Reviewed/Updated: 22 March 1995

TOPIC -----

This article is the Network Software Installer (NSI) Version ZM-1.5 Read Me file.

DISCUSSION -----

PLEASE NOTE: "ZM" indicates multi-country. This disk can be used to install NSI on systems with international versions of System Software as well as U.S. System Software.

Contents:

-
- 1) Interactions with other products
 - If you are using System 6.0.8 or earlier
 - If you are using MacIPX
 - If you are using SoftWindows
 - If you are using the Apple Internet Router
 - If you are using the SNA*ps gateway
 - If you are using 3rd party ethernet cards
 - If you are using a system with a 68040 microprocessor

2) What the Network Software Installer disk includes:

-
- Release notes
 - LaserWriter Bridge version 2.0
 - AppleTalk version 58.1.5
 - Apple Built-In Ethernet driver file version 1.0.1
 - Apple Ethernet NB driver file version 1.0.1
 - Apple Ethernet LC driver file version 1.0.1
 - Apple Ethernet CS driver file version 1.0.1
 - Apple Token Ring NB driver file version 1.0.2

1) Interactions with other products:

- If you are using System 6.0.8 or earlier: This installer works on only System 7 or later Macintosh computers. The last version of the Network Software Installer to support System 6 was version 1.4.5.
- If you are using MacIPX: The new token ring driver is not compatible with MacIPX versions 1.1 and older. Contact Novell(r) Technical Support to obtain an update to newer MacIPX software which will work with this token ring driver.
- If you are using SoftWindows: SoftWindows versions 1.0 and 1.0.1 using SMB (NetBEUI) protocols over Token Ring are not 100% compatible with the AppleTalk version included on this disk. Contact Insignia Solutions regarding availability of an update to the SoftWindows software which will work with this driver.
- If you are using the Apple Internet Router: If this release of the Network Software Installer is being used in conjunction with an Apple Internet Router v.3.0 Installer, Apple Internet Router 3.0 must be installed first. This will ensure that the Router installation does not overwrite the newer AppleTalk software contained on NSI 1.5.

The LaserWriter Bridge cannot be used on a Macintosh that has any version of the Apple Internet Router software installed.

- If you are using the SNA•ps gateway: To use this release of the Network Software Installer with a SNA•ps gateway, a special custom install option is provided that installs a compatible token ring driver for the Token Ring 4/16 NB card. SNA•ps gateway is not currently supported on the TokenTalk NB or Token Ring NB/c cards. A future version of the SNA•ps gateway will not require the custom-installed driver.
- If you are using 3rd party ethernet cards: The drivers contained in the new driver files do not support 3rd party ethernet cards. A 3rd party card that has duplicated an Apple ethernet board will use the appropriate ethernet driver from the system file instead of the Apple driver in the extensions folder file. A system with a 3rd party ethernet card will continue to operate using the previously-installed driver after installing this version of the Network Software Installer. Such systems will get the benefit of all of the other updates installed by this Network Software Installer, including the ability to install and use the LaserWriter Bridge.
- If you are using a system with a 68040 microprocessor: Some programs may quit unexpectedly or cause the computer to freeze when you attempt to open them over the network. This problem, as well as others, is fixed by installing the System Update 3.0 available from Apple Software Updates libraries on commercial online services and the Internet. (For a current list of locations, search the Apple Tech Info Library by the phrase: Apple Software Updates.) This fix has also been incorporated into System 7.5.

2) What the Network Software Installer disk includes:

You can use this Network Software Installer to install the following networking products:

- LaserWriter Bridge version 2.0
- AppleTalk version 58.1.5
- Network Control Panel version 3.0.2
- EtherTalk version 2.5.7
- Apple Ethernet NB file version 1.0.1, containing drivers for all Apple NuBus ethernet cards
- Apple Ethernet LC file version 1.0.1, containing drivers for all Apple LC ethernet cards
- Apple Ethernet CS file version 1.0.1, containing drivers for all Apple Comm Slot ethernet cards
- Apple Built-In Ethernet version 1.0.1, containing drivers for all built-in ethernets
- TokenTalk version 2.5.7
- Token Ring Control Panel version 1.0.1
- Token Ring driver version 2.5.2 for the TokenTalk NB Card
- Token Ring driver version 1.0.2 for the Token Ring 4/16 NB and Token Ring NB/c Card
- A/ROSE 1.2.1, for use in some token ring configurations

Release notes:

The following section provides some more technical information on the updates provided by this installer. Many readers will not be interested in these details.

LaserWriter Bridge version 2.0

This control panel provides for activating the LocalTalk port while ethernet or token ring is in use. AppleTalk traffic can be passed from the ethernet or token ring to a LaserWriter connected to the LocalTalk port. The LaserWriter Bridge can only be used in conjunction with this version of the Network Software Installer and is not supported on System 6. The LaserWriter Bridge can only be installed from the custom installation area of the Network Software Installer. Please see the "LaserWriter Bridge User's Guide" document for more information on this program.

AppleTalk version 58.1.5

An address-mapping problem that could cause slowdowns in EtherTalk or TokenTalk networks was fixed.

The LAP Manager was fixed to avoid sending corrupted TEST and XID response

packets in certain heavy traffic situations.

A bug that passed a corrupted length indication to multi-node clients was fixed.

A VM problem that could cause hangs was fixed (this could also have occurred when Connectix Ram Doubler was active).

A LocalTalk problem on Power Macintosh computers was fixed that prevented LaserWriter Bridge from working properly.

An additional LocalTalk problem on Power Macintosh computers was fixed that caused slow performance when both LocalTalk and GeoPort were in use.

Apple Built-In Ethernet driver file version 1.0.1

This driver file contains drivers for all Apple built-in ethernet implementations and is installed in the extensions folder.

The Macintosh Quadra 840AV and 660AV, Power Macintosh 6100, 7100 and 8100 and Workgroup Server 6150, 8150 and 9150 ethernet drivers were updated to eliminate slowdowns, hangs, lost connections and data corruptions that were possible on some ethernets.

The Duo Dock II driver was updated to properly support locally-administered addresses, which are often used in DECnet environments.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

The driver configuration now properly supports machines with Macintosh Processor Upgrade with PowerPC 601 Processor cards.

Changed DMA parameters for the Macintosh Quadra 610, 650, 700, 800, 900 and 950 and Macintosh Centris 610 and 650 and Workgroup Server 60 and 80 to avoid packet loss when sharing the bus with other DMA masters such as SCSI cards and codec cards.

Apple Ethernet NB driver file version 1.0.1

This driver file contains drivers for all Apple NuBus ethernet cards and is installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Ethernet LC driver file version 1.0.1

This driver file contains drivers for all Apple LC PDS ethernet cards and is installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Ethernet CS driver file version 1.0.1

This driver file contains drivers for all Apple Comm-Slot ethernet cards and is

installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Token Ring NB driver file version 1.0.2

This token ring driver file handles all Apple Token Ring cards for the NuBus -the TokenTalk NB, Token Ring 4/16 NB and Token Ring NB/c. The file is installed into the extensions folder. The new driver for the Token Ring 4/16 NB and Token Ring NB/c cards has significantly better performance and fewer problems in large source-routed environments than earlier drivers.

Version 1.0 had a problem when used with Token Ring 4/16 NB cards in 24-bit memory mode - attempting to create a resource file on a network volume would fail. Version 1.0.2 fixes this problem.

Version 1.0 uncovered a problem with the LLC implementation on NetWare servers using certain token ring cards. Version 1.0.2 provides a work-around for the problem.

This version fixes a hanging problem that could occur when a token ring cable was disconnected while the Macintosh was active on the token ring. This could have happened when either the Token Ring 4/16 NB card or the Token Ring NB/c card was in use.

This version now attempts to work-around a problem that occurs when a NetWare server using a version of APPLETLK.NLM prior to version 4.50C without a functioning ATTOKLLC.NLM installed. Lack of ATTOKLLC.NLM in such a NetWare server prevents the normal source route discovery process from working (as documented in the IBM® Token Ring Architecture Reference). NetWare servers using APPLETLK.NLM version 4.50C or later require the LLC8022.NLM for proper operation.

Article Change History:

22 Mar 1995 - Corrected wording of Duo Dock.

Support Information Services

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Tech Info Library Article Number:17351



Tech Info Library

DOS Compatibility Card: DOS SCSI Drive Retry Error (3/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: DOS SCSI Drive Retry Error (3/95)

Article Created: 13 March 1995
Article Reviewed/Updated: 30 March 1995

TOPIC -----

I have a DOS Compatibility Card and I have installed a DOS formatted SCSI hard drive on my Macintosh. When I switch to MS-DOS and attempt to read or write to the DOS SCSI drive, I frequently get "X: Drive Unavailable" errors, Drive retry errors, and general protection errors. Why do I get these problems so often?

DISCUSSION -----

To find out what is causing the problem, first turn off filesharing in the Mac OS. Restart the DOS Compatibility Card and try to access the programs you had problems with. While doing this, do not insert any floppy disks and make sure nothing in the Mac OS is accessing the hard disk. You should also run CHKDSK or SCANDISK to make sure the drive media, file allocation tables and directory structure is in proper working order. If CHKDSK and SCANDISK do not find problems, the errors you are receiving may be related to the fact that only one operating system can access the SCSI bus at one time. If you are working in DOS/Window and some Macintosh operation needs to read or write to the SCSI drive, the Mac OS has priority and forces the DOS/Windows software to wait. This can cause the errors you mentioned. If filesharing is on and someone is accessing your hard disks while a program on the DOS/Windows side is reading or writing to its SCSI drive, it is forced to wait for the Mac OS to complete its tasks. In some cases, if you insert a floppy disk while DOS/Windows is doing a read or write, the Mac OS again takes precedence and force DOS/Windows to wait, sometimes causing the errors you described. In most cases, selecting "retry" may allow the DOS/Windows program to access to the SCSI resources it is trying to read or write to. However, DOS/Windows still has to wait for the Mac OS to finish using the SCSI bus.

If you have a problem starting up windows or you are getting errors with the windows swap file (sometimes its OK and Windows just thinks it's corrupted), examine the same items discussed above. Remember, the MacOS has priority over the SCSI Bus and if Windows is trying to startup using its files while a Mac OS

application is reading or writing, Windows is forced to wait causing an error.

Article Change History:

30 Mar 1995 - Corrected Mac OS name.

Support Information Services

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Tech Info Library Article Number:17353



Tech Info Library

Macintosh 630 family: Low Audio Level When Recording (9/95)

Revised: 9/7/95
Security: Everyone

Macintosh 630 family: Low Audio Level When Recording (9/95)

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Article Created: 30 March 1995
Article Reviewed/Updated: 7 September 1995

TOPIC -----

After using the Sound control panel or various third-party applications to record 8-bit sound into my Macintosh 630 family computer, I notice a lower audio level and some hiss when played back.

When I record with the TV/Tuner Card, the sound is normal. What is causing this and what can I do to get higher quality recordings?

DISCUSSION -----

Lower quality recording of sounds is normal when recorded as you describe because the Macintosh 630 series computers record sound at 8-bit, 22khz. However, since you can play back audio at 16-bit, noise not audible at 8-bit will become audible at 16-bit.

To record higher quality audio tracks, use the QuickTime Movie Import component to open audio CD tracks from QuickTime's Standard File Preview dialog.

If you have an AppleCD 300 or 300i drive, you can use QuickTime 1.6, or later, to convert tracks from audio compact discs directly into QuickTime movies.

The Tech Info Library article titled "QuickTime 1.6: Saving Sound in a QuickTime Movie", provides additional information on recording sound at higher quality levels.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, Performa 640, LC 630, and Quadra 630.

Article Change History:
07 Sep 1995 - Made minor correction.

Support Information Services

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Tech Info Library Article Number:17355



Tech Info Library

MS-DOS/Windows: Downloading Executable Macintosh Files (11/95)

Revised: 11/27/95
Security: Everyone

MS-DOS/Windows: Downloading Executable Macintosh Files (11/95)

Article Created: 15 March 1995
Article Reviewed/Updated: 22 November 1995

TOPIC -----

I downloaded two Macintosh SEA (Self-Extracting Archive) files to my Windows computer, then transferred the files to my Macintosh through our local area network. Now when I try to double-click the files, they do not work. Why?

DISCUSSION -----

Macintosh files consists of two parts -- a resource fork and a data fork. When you download files on a MS-DOS computer, you loose resource fork since MS-DOS/Windows only understands how to handle the data portion of the file. However since Macintosh files are upload using the MacBinary file format, you can occasionally fix the file (this does not always work).

The MacBinary format places a 128 byte header on the uploaded file. This header, if not removed from the file, makes the file unusable on the Macintosh. There are some public domain and commercial application programs for the Macintosh that can remove the 128 byte MacBinary header to make the file usable again. Sometimes after transferring the file from one platform the file is corrupted and there is nothing you can do to fix the file other than download the file again using a Macintosh computer.

Article Change History:
22 Nov 1995 - Corrected the byte count.

Support Information Services

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Tech Info Library Article Number:17356



Tech Info Library

Apple MessagePad 110/120: Battery Recharging Explanation (5/95)

Revised: 10/13/95
Security: Everyone

Apple MessagePad 110/120: Battery Recharging Explanation (5/95)

Article Created: 15 March 1995
Article Reviewed/Updated: 3 May 1995

TOPIC -----

Is there a difference between the way the Rechargeable Battery Packs are recharged in the Apple MessagePad 110 and Apple MessagePad 120 while connected to the AC Power Supply verses being left in the MessagePad Charging Station? Also, is there a difference between the two previous methods and putting the battery packs into the charging station?

DISCUSSION -----

The Rechargeable Battery Packs charge in the same manner whether they are recharged in the Apple MessagePad 110 or Apple MessagePad 120 connected to the AC Power Supply, left in the MessagePad Charging Station, or if the battery packs themselves are put into the Charging Station.

The Charging Station, MessagePad 110, and MessagePad 120 have a smart charging circuitry that limits the damage of the fast charge cycle so the battery can last a long time. This means that if the batteries are recharged using either method, this circuitry is protecting the batteries. This lets you place batteries back on the recharger with more than a 50% charge without affecting the overall battery life.

The manual states that the Rechargeable Battery Pack should be 50% discharged before a recharge. While this is still important, the statement is misleading. The charging technology used in the current circuitry lets you charge the batteries at any time. Current information on NiCad and recharging technology, memory effect, and life problems of NiCad batteries, is the basis for this statement.

Memory Effect

NiCad rechargeable batteries suffer from an effect commonly called "memory", where if the battery is partially discharged, then recharged, it reaches a point

where the perceived capacity of the battery is that level to which it has been draining to. If the battery is fully drained periodically, this effect can be minimized or eliminated.

Batteries Used In Apple MessagePad

The batteries used with the Apple MessagePad 110 and MessagePad 120 are of a higher quality than commercial NiCad batteries you can purchase. Quality is measured with a "C" value. The "C" refers to the amount of time and current a battery needs for a "fast charge." The more times a battery has to go through the fast charge, the shorter its life before it needs replacing. The batteries used for the original MessagePad and MessagePad 100 were a C10, and the new batteries are a C20. The batteries used in the MessagePad 110 and MessagePad 120 can sustain a faster "fast" charge than the older batteries. This lets the new batteries charge faster even under a trickle charge.

The Charging Station and MessagePad 110/120 will trickle charge, or adjust the amount it charges, as the battery comes close to full. Most commercial NiCad batteries last 9-12 months if you recharge them when they still have 50% or more charge. The MessagePad 110/120 batteries typically last 12-16 months. These batteries last longer if you recharge them with 50% or more life left. This is because the Charging Station and the MessagePad 110/120 do a full fast charge once the batteries are over 50% full, which prolongs their life. In addition, you can get additional battery life by occasionally letting the batteries drain all the way, then recharging them.

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Volume II, Issue 1, Page 15

Article Change History:

03 May 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17357



Tech Info Library

Apple Mobile Messaging System: Replacement Batteries (3/95)

Revised: 3/15/95
Security: Everyone

Apple Mobile Messaging System: Replacement Batteries (3/95)

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Article Created: 15 March 1995

TOPIC -----

What batteries do I need to use in the Apple Mobil Messaging System PageCard?
Where can I get these batteries?

DISCUSSION -----

Replacement Batteries

Duracell: DA630

Panasonic: 1662

You can find these batteries at most electronic stores or you can order
replacements by calling Wireless Messaging Accessories at (415) 424-8485.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17359



Tech Info Library

Apple Guide 1.2.5: Older Guide Files Issue (10/95)

Revised: 10/5/95
Security: Everyone

Apple Guide 1.2.5: Older Guide Files Issue (10/95)

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Article Created: 15 March 1995
Article Reviewed/Updated: 5 October 1995

TOPIC -----

After installing System 7.5 Update 1.0 onto my Power Macintosh, I cannot open any of my Apple Guide files. What can I do to use Apple Guide?

DISCUSSION -----

If you have a Power Macintosh and have trouble opening the Tutorial, Macintosh Guide, Shortcuts, or other Apple Guide databases, you may have extra files that do not belong on your computer. To solve the problem, follow the steps below:

1. Open the Extensions folder (inside the System Folder) and drag the PowerBook Guide Additions file to the Trash
2. Unless your computer is an AV model*, drag the following items to the Trash:
 - Video Guide Additions
 - Video Player Guide Additions
 - Speech Guide Additions
3. Choose Empty Trash from the Special menu
4. Restart your computer

* If you have a Power Macintosh 6100 AV, 7100 AV, or 8100 AV, you should remove these files. Even though it may work, Video Player is not supported on these computers.

What has happened is that an older guide file has been found by the new version of Apple Guide and it will not load the database. Removal of the above mentioned files will resolve the issue.

Article Change History:

05 Oct 1995 - Added information on early Power Macintosh AV models.

Support Information Services

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Tech Info Library Article Number:17360



Tech Info Library

AppleScan: Does Not Print In Grayscale (3/95)

Revised: 3/15/95
Security: Everyone

AppleScan: Does Not Print In Grayscale (3/95)

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Article Created: 15 March 1995

TOPIC -----

Will the AppleScan software allow me to print grayscale?

DISCUSSION -----

The AppleScan software will not print greyscale images, since it was not designed to offer this option. AppleScan gives you the ability to scan grayscale images, which can be used in other application programs that support grayscale printing.

It is possible to scan different images as "line art" or "halftones" and then print them directly from AppleScan. However, when images are scanned as "grayscale" there is no option for printing them from AppleScan.

Support Information Services

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Tech Info Library Article Number:17361



Tech Info Library

Fat Binary: What Is It? (7/95)

Revised: 7/19/95
Security: Everyone

Fat Binary: What Is It? (7/95)

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Article Created: 15 March 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

What exactly is a fat binary in relation to a particular software application?

DISCUSSION -----

A fat binary is any executable file, such as an application or code resource, that contains both 680x0 and PowerPC code. Creating a fat binary requires a little more work for the software developer, but the reward is optimal code performance in either environment.

A fat application contains PowerPC code in its data fork and a 680x0 version of the same code in its resource fork. You can run a fat application on both types of Macintosh computers.

Remember that PowerPC code is stored in the data fork of the application file by default when you build a PowerPC application. This makes building fat applications possible.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 11

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17364



Tech Info Library

Apple Shared Library Manager and Shared Libraries (7/95)

Revised: 7/6/95
Security: Everyone

Apple Shared Library Manager and Shared Libraries (7/95)

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Article Created: 15 March 1995
Article Reviewed/Updated: 06 July 1995

TOPIC -----

This article describes the Apple Shared Library Manager (ASLM) and shared libraries.

DISCUSSION -----

Apple Shared Library Manager is a piece of code that lets other programs share common code. Historically each application was required to link in any necessary library modules at compile time. The shared library manager lets any common code be loaded into memory only once by all running applications and then shared by others who also need to make the same calls thus reducing the memory foot print for application.

ASLM ships with several Apple as well as some third-party products. Any application that requires ASLM ships with a copy of the application. ASLM maintains the relationship of applications to shared libraries at the system level.

Shared Libraries

A shared library is a library of functions or classes (for C++ programmers) that are compiled, linked, and stored separately from the clients (applications) that use them. By accessing the functions or classes that are stored in a shared library, a client (application) can call functions that are not part of its executable code. Furthermore, functions or classes that are stored in a shared library can be called by different applications that are running at the same time.

Because shared libraries can contain shared code and are loaded and linked at run time, they save enormous amounts of RAM and disk space. Shared libraries eliminate the necessity for keeping multiple copies of code in memory when multiple applications use the same code. Shared libraries help software

developers design independent, modular, compact libraries that applications can share. It also helps software designers develop their products faster, and it makes the products easier to improve and maintain.

A shared library file is a binary file that can contain object code for functions, classes, methods (member functions), data, and resources. A shared library file can contain one or more shared libraries. When a shared library file is made available, developers can share, and dynamically link with, the code stored in the shared library.

Clients

A client is any application or library that creates objects or uses methods or functions that are implemented in shared libraries. Clients can include applications, system extensions, INITs, CDEVs, XFCNs, and XCMDs, other kinds of stand-alone code resources, and even shared libraries themselves, because shared libraries typically use other shared libraries.

A client written in a non-object-oriented language, such as C or Pascal, can call routines that are stored in a shared library in the same way that it would call any other function. A C++ client can instantiate objects from classes that are stored in the shared library in the same way that it would instantiate objects from any class.

This article was published in the "Information Alley":
Volume II, Issue 2, Page 4

Article Change History:

06 Jul 1995 - Corrected minor typos.
18 May 1995 - Updated to reflect Info Alley information. Other minor changes.
05 May 1995 - Changed title and added more information on ASLM.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17365



Tech Info Library

Apple LocalTalk Bridge: Description (7/95)

Revised: 7/7/95
Security: Everyone

Apple LocalTalk Bridge: Description (7/95)

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Article Created: 15 March 1995
Article Reviewed/Updated: 07 Jul 1995

TOPIC -----

This article describes the Apple LocalTalk Bridge.

DISCUSSION -----

The Apple LocalTalk Bridge lets you extend the networking reach of your current Macintosh system, whether you are running an Ethernet network or a Token Ring only network. By effectively uniting two different networks, the Apple LocalTalk Bridge provides an inexpensive software solution that creates a single virtual network -- eliminating the need to install a router or repeatedly switch network connections.

The Apple LocalTalk Bridge is a control panel that bridges a LocalTalk network to another network selected from the Network control panel. This simple and effective solution lets you upgrade some, or all, of your Macintosh computers to a higher-speed network (for example, Ethernet or Token Ring) while maintaining the ability to print to LocalTalk-only LaserWriter printers or share files with PowerBook computers that lack high-speed network capabilities. Similarly, if you have an Ethernet or Token Ring only network, the LocalTalk Bridge provides a convenient way for your LocalTalk-only PowerBook computer or Newton MessagePad communications device to gain access to network services.

Designed with the end user in mind, the LocalTalk Bridge features dynamic, user-selectable access modes. When access is set to Private, the LocalTalk devices and services--such as LaserWriter printers and shared Macintosh volumes--are hidden from users on the Ethernet or Token Ring network, while LocalTalk-only devices retain full access to the services on both sides of the network. In contrast, when access is set to Public, all devices are visible from both sides of the network.

Used in conjunction with the Apple Ethernet 10T/5 Hub and the appropriate media adapters, network cards, or connectors, the Apple LocalTalk Bridge can provide a

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complete upgrade to an integrated Ethernet or Token Ring and LocalTalk network without the high degree of cost and complexity normally associated with bridging or routing different networks. So if you want to upgrade or simply extend the network access of your current system—but do not want to spend a lot of time and money in the process—the Apple LocalTalk Bridge is the answer.

Features

=====

Ease of use

- Offers easy installation
- Configures simply; just run the installation program and restart the computer
- Eliminates the need to switch network connections whenever you want to print
- Eliminates the need to set network numbers

Flexibility

- Preserves your investment in LocalTalk printers and computers
- Makes it easy to upgrade your LocalTalk network to Ethernet or Token Ring
- Enables users to connect to and use LocalTalk-only devices on an Ethernet or Token Ring network such as:
 - Some LaserWriter printers
 - ImageWriter II and Color StyleWriter 2400 with their respective LocalTalk options installed
 - PowerBook notebook computers
 - Newton MessagePad communications devices
- Lets you access file servers, email, host-based systems, and databases on an Ethernet or Token Ring network while maintaining a seamless connection to your LocalTalk network
- Supports multiple LocalTalk devices, up to 32 per bridged twisted-pair segment, however 20 are recommended when the bridge is also being used as a workstation

Compatibility

- Works with all Macintosh computers running System 7 or later software that are equipped with a LocalTalk connection and one other network (Ethernet, Token Ring, or Infrared) connection
- Is compatible with Apple Internet Router 3.0.1 networks, Apple Remote Access, MacTCP, and the Apple IP Gateway

Security

- Features a "Private" mode that allows users to determine whether to allow

non-LocalTalk users access to their LocalTalk segments

Convenience

- Offers dynamic On/Off capabilities that allow users to maintain separate networks without having to restart
- Makes it easy to create, expand, administer, and troubleshoot your network
- Provides affordable plug-and-play LocalTalk to Ethernet or Token Ring network connection

This article was published in the "Information Alley":
Volume I, Issue 25, Page 16

Article Change History:

- 07 Jul 1995 - Added additional compatible device information.
- 21 Apr 1995 - Added keyword; made minor technical updates.
- 07 Apr 1995 - Revised for clarity.

Support Information Services

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Tech Info Library Article Number:17366



Tech Info Library

Apple LocalTalk Bridge: Specifications (3/95)

Revised: 3/15/95
Security: Everyone

Apple LocalTalk Bridge: Specifications (3/95)

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Article Created: 15 March 1995

TOPIC -----

This article describes the specifications and order information for the Apple LocalTalk Bridge.

DISCUSSION -----

Technical Specifications
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Network types supported

Supports any AppleTalk network, including:

- LocalTalk
- Ethernet
- Token Ring
- Infrared

Resulting bridged networks

- LocalTalk to Ethernet
- LocalTalk to Token Ring
- LocalTalk to Infrared

Security options

- Public mode
 - Allows all users on both sides of the network to see all devices
- Private mode
 - Allows users on the LocalTalk side to connect to all services and printers
 - Allows the Macintosh functioning as the bridge to connect to all services and use all printers
 - Can prevent users on the Ethernet/Token Ring network from connecting to or

printing on devices on the LocalTalk/Infrared side of the network

Specifications

- Dynamic On/Off switch
- Supports multiple LocalTalk devices (up to 32)
- Control panel device

Compatibility

- Apple Internet Router 3.0.1
- Apple Remote Access 2.0 family of products
- AppleShare Client for Windows
- MacTCP

System requirements

- A Macintosh or Workgroup Server running Mac OS version 7.0 or later
- At least 70K of RAM
- An available LocalTalk port
- A LocalTalk connector and cable
- An Ethernet connection or Token Ring connection
- Appropriate network cables

Ordering Information

=====

Apple LocalTalk Bridge

Order No. M3246Z/A

- Apple LocalTalk Bridge software and installer
- Apple LocalTalk Bridge User's Guide

Apple Ethernet 10T/5 Workgroup Hub

Order No. M3351Z/A

Apple Ethernet Twisted-Pair Transceiver

Order No. M0437Z/B

Apple Ethernet NB Twisted-Pair Card

Order No. M1768Z/A

Apple Ethernet LC Twisted-Pair Card

Order No. M2460Z/A

Apple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

Apple Ethernet Thin Coax Transceiver

Order No. M0329Z/B

Apple Ethernet NB Thin Coax Connection

Order No. M3345Z/A

Apple Ethernet LC Thin Coax Connection
Order No. M3346Z/A

Apple Ethernet CS Thin Coax Card
Order No. M2708Z/A

Apple LocalTalk Locking
Connector - DIN8
Order No. M2068LL/B

Apple LocalTalk RJ-11
Connector - DIN8
Order No. M1657Z/A

For more information about AppleTalk network design and management, see Planning and Managing AppleTalk Networks by Apple Computer, Inc., published by Addison-Wesley Publishing Company, Inc.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

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Tech Info Library Article Number:17367



Tech Info Library

MAE 2.0: Has Modified Macintosh Network Resources (3/95)

Revised: 3/22/95
Security: Everyone

MAE 2.0: Has Modified Macintosh Network Resources (3/95)

Article Created: 16 March 1995
Article Reviewed/Updated: 22 March 1995

TOPIC -----

This article describes the presence of several modified Macintosh extensions and control panels used in AppleTalk for Macintosh Application Environment (MAE).

DISCUSSION -----

AppleTalk for MAE 2.0 relies on the presence of several modified Macintosh extensions and control panels to provide AppleTalk network services. These extensions and control panels, shown below, are different from those of Mac OS system releases and should not be replaced, modified, or upgraded. If these files are corrupted, they can be recreated by removing the System Folder and restarting MAE.

AppleTalk System Resources

- AppleShare: A Chooser extension that lets clients access to AppleShare File Servers.
- LaserWriter 8: A Chooser extension that enables Printing to AppleTalk Laser Printers.
- File Sharing Extension: An extension that implements System 7 Personal File Sharing.
- EtherNet Phase 2: A network extension that implements AppleTalk over an Ethernet data link.
- Network Extension: An extension that implements additional AppleTalk drivers.
- Sharing Setup control panel: Lets the user set owner name, password, and Machine Name, and to disable or enable Program Linking and File Sharing.

- File Sharing Monitor control panel: Monitors the use of File Share volumes by remote users.
- Users & Groups control panel: Lets the Macintosh owner create users and groups to control access to File Share volumes.
- Network control panel: Lets the Macintosh user set the zone and select an AppleTalk interface.

Article Change History:

22 Mar 1995 - Made correction for technical accuracy.

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Tech Info Library Article Number:17368



Tech Info Library

MAE 2.0: AppleTalk Protocols Implemented (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: AppleTalk Protocols Implemented (3/95)

Article Created: 16 March 1995

TOPIC -----

This article describes the AppleTalk protocols implemented in Macintosh Application Environment (MAE).

DISCUSSION -----

AppleTalk, a network system designed and developed by Apple Computer, provides an easy way to share network resources such as printers, file servers, and groupware services.

AppleTalk for MAE is an implementation of the AppleTalk version 56 protocol specification, based on streams, which makes AppleTalk functionality available to Macintosh applications and system software running under MAE. It is compatible with other versions of AppleTalk Phase 2.

Implementation

AppleTalk for MAE maintains the Macintosh Toolbox Application Programming Interface to AppleTalk routines, as described in "Inside Macintosh: Networking."

AppleTalk consists of a number of protocols that correspond roughly to the layers of the OSI model. AppleTalk for MAE uses streams to configure the following AppleTalk protocols into the UNIX kernel:

- AppleTalk Address Resolution Protocol (AARP)
- AppleTalk Data Stream Protocol (ADSP)
- AppleTalk Echo Protocol (AEP)
- AppleTalk Transaction Protocol (ATP)
- Datagram Delivery Protocol (DDP)
- EtherTalk Link Access Protocol (ELAP)
- Name Binding Protocol (NBP)
- Routing Table Maintenance Protocol (RTMP)

- Zone Information Protocol (ZIP)

The remaining protocols are implemented as Macintosh-style drivers and extensions:

- AppleTalk Filing Protocol (AFP)
- AppleTalk Session Protocol (ASP)
- Printer Access Protocol (PAP)

AppleTalk for MAE implements the version 56 specification of AppleTalk, which does NOT include support for some extensions found in later versions, such as:

- Apple Open Collaboration Environment (AOCE)
- AppleTalk Remote Access
- AppleTalk SNMP MIB

AppleTalk for MAE maintains compatibility with all versions of AppleTalk that conform to the AppleTalk Phase 2 specification (see "Inside AppleTalk, Second Edition"). Workstations using AppleTalk for MAE can interact with any device that uses AppleTalk Phase 2.

AppleTalk for MAE does not support the use of AppleTalk outside of the Macintosh Application Environment. There is no API available to UNIX processes for accessing AppleTalk services. Applications that rely on the availability of both Macintosh and UNIX APIs, such as AppleShare Pro, will not run on MAE.

AppleTalk for MAE cannot be used if a third-party AppleTalk stack is installed on the host workstation, and AppleTalk services will not be available to MAE running on a machine that does not have AppleTalk kernel modules for MAE installed.

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Tech Info Library

AppleTalk For MAE 2.0: Troubleshooting (5/95)

Revised: 5/19/95
Security: Everyone

AppleTalk For MAE 2.0: Troubleshooting (5/95)

Article Created: 16 March 1995
Article Review/Update: 18 May 1995

TOPIC -----

This article provides help for common problems with AppleTalk for Macintosh Application Environment (MAE).

DISCUSSION -----

No AppleTalk Zone list in the Chooser

If the Chooser does not display a list of zones when MAE is used on a network with multiple zones, then the AppleTalk kernel stack is not communicating properly with the router. Please check your router configuration and network interface.

No Personal File Sharing

Many networks with only UNIX workstations will be routing IP. If you cannot see another MAE application or Macintosh doing Personal File Sharing on the network, try using the "appleping" utility to make sure AppleTalk is getting through.

Using network diagnostic tools

Standard AppleTalk diagnostic tools can be used to investigate the behavior of AppleTalk for MAE. However, most Macintosh-based tools that diagnose low-level hardware drivers cannot be run on MAE itself.

Reinstalling AppleTalk for MAE

If an AppleTalk streams module is corrupted or deleted, it is safest to shut down all MAE processes that may be executing and then reinstall the AppleTalk Kernel Module package with the MAE Installer.

Restoring network extensions

Do not replace the network extensions that ship with MAE. These extensions are specially tailored for the MAE environment. If these extensions are removed, corrupted, or altered, you can restore them by removing the current System Folder and restarting MAE. This will cause the entire System Folder to be recreated.

Other extensions, such as Chooser extensions, may be added without conflict.

An AppleTalk router comes up

If you are administering an MAE server and you change the network topology while the AppleTalk kernel stack is active, one of the following messages may appear:

An AppleTalk Router just came up.
This Node's address is in startup range.
Shutdown or Restart MAE to use full AppleTalk functionality.

or:

An AppleTalk Router just came up.
This Node's address is invalid for this cable.
Shutdown or Restart MAE to use full AppleTalk functionality.

Quit all active MAE sessions, ensuring that the kernel stack is inactive (run `appletalk -D` and `appletalk -s`), and then restarting the sessions.

Booting HP-UX from the saved kernel

When you install MAE onto a Hewlett Packard (HP) workstation, MAE alters the kernel and saves the old HP-UX kernel in a file called `hp-ux.save`. If you need to reboot from the old kernel (for example, if the altered HP-UX kernel has become corrupted), you may do so either by copying `/hp-ux.save` to `/hp-ux`, and then rebooting, or rebooting from the `/hp-ux.save` kernel.

To reboot from the `/hp-ux.save` kernel, follow these instructions:

Step 1

Shut down the workstation.

Step 2

Restart the workstation. When the power goes on, the console displays a message similar to the following:

"Search for potential boot devices."

To terminate search, press and hold the ESCAPE key.

Step 3

Press and hold the (Esc) key until you see the following message:

"Selection process stopped."

"Searching for potential boot devices."

After a moment, the console displays a list of SCSI device options from which to boot.

Step 4

Choose the appropriate boot device. For example, if SCSI device 6 is the appropriate option, enter the following:

"b scsi.6.0 ipl"

This will cause an ISL prompt (ISL>) to be displayed.

Step 5

At the ISL prompt, enter the following:

"hpux boot disc(;0)/hp-ux.save"

This will result in booting the alternate kernel in /hp-ux.save.

Article Change History:

18 May 1995 - Added section on Personal File Sharing.

Support Information Services

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Tech Info Library Article Number:17370



Tech Info Library

MAE 2.0: Product Description (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: Product Description (3/95)

=====

Article Created: 16 March 1995

TOPIC -----

This article is a description of Macintosh Application Environment (MAE) version 2.0.

DISCUSSION -----

Macintosh Application Environment (MAE) -- the virtual Macintosh for open systems -- is an innovative software product that provides a complete Macintosh environment in an X Window, allowing you to run Macintosh 680x0 applications right on your workstation.

MAE brings the functionality and ease of use of the Macintosh computer to Sun Microsystems SPARCstations running the SunSoft Solaris operating system, as well as to Hewlett Packard (HP) Series 700 workstations running HP-UX.

Version 2.0 extends the power of MAE with the inclusion of AppleTalk networking, making it easy to share printers, files, and email with other Macintosh and MAE users on a network. Other new features include support for MacTCP, dramatic performance gains, support for Macintosh sound-based applications, and much more.

Since MAE is based on Macintosh System 7.1 (and includes several handy features of Macintosh System 7.5), you can run the most popular off-the-shelf Macintosh software -- including popular spreadsheet, desktop publishing, word processing, graphics, email, calendar, and business applications -- on your workstation.

MAE also seamlessly integrates with the UNIX environment, allowing you to copy and paste text and graphics between UNIX and Macintosh applications. MAE lets you open UNIX files (including NFS-mounted volumes), access UNIX applications through the Macintosh interface, and use system services (such as UNIX PostScript printers). And support for MacTCP allows access to the Internet and TCP/IP-based applications.

Features

=====

It's a virtual Macintosh

- Supplies the Macintosh graphical user interface and desktop manager in an X Window
- Provides the Macintosh System 7.1 environment
- NEW! Offers several features of Macintosh System 7.5
- Allows you to cut and paste data between Macintosh applications
- NEW! Lets you resize the Macintosh X Window to any size -- without restarting MAE

It runs Macintosh applications

- Lets you run off-the-shelf Macintosh software applications
- NEW! Offers Dynamic Recompilation for performance gains of more than 50%
- NEW! Supports Macintosh sound-based applications
- NEW! Includes QuickTime Player and HyperCard Player software

Integrates smoothly with UNIX

- Provides an easy-to-use Macintosh interface to navigate local and NFS-mounted UNIX files
- Allows access to UNIX resources and services from within the MAE X Window
- Lets you copy and paste text and graphics between the UNIX and Macintosh environments
- Prints UNIX and Macintosh files on printers that support PostScript using the Apple Chooser and the Print command

It makes networking easy

- NEW! Makes MAE-to-Macintosh networking easy with built-in support for AppleTalk
- Lets you share documents, email, and printers with Macintosh users and other users of MAE
- NEW! MacTCP support allows access to the Internet and TCP/IP-based applications
- Takes advantage of NFS (Network File System), allowing file sharing and file

services across the network

- Displays and allows manipulation of remote as well as local Macintosh and UNIX files and applications
- NEW! Offers better support for remote file access under NFS

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Tech Info Library Article Number:17371



Tech Info Library

MAE 2.0: Personal File Sharing and root Directory (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: Personal File Sharing and root Directory (3/95)

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Article Created: 16 March 1995

TOPIC -----

This article provides a description of personal file sharing in Macintosh Application Environment (MAE) and an important notice about not sharing the root directory.

DISCUSSION -----

The File Sharing extension included with MAE allows any MAE workstation with AppleTalk active to act as a personal file sharing server. Macintosh personal file sharing is an AppleTalk-based network file system that is separate and distinct from other network file systems, such as NFS. However, MAE's integration of UNIX file systems into the Macintosh Finder enables users to share both UNIX and HFS volumes and folders from their MAE workstations. These directories can be mounted by authorized AppleShare clients on the AppleTalk network.

IMPORTANT: In most cases, a user should NOT share the root directory without careful configuration of access privileges. For example, sharing the root directory with read only permission allows remote users to view files such as /etc/passwd. Users should be especially cautious when sharing folders on NFS volumes via file sharing.

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Tech Info Library Article Number:17372



Tech Info Library

MAE 2.0: Running Several MAE Sessions Simultaneously (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: Running Several MAE Sessions Simultaneously (3/95)

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Article Created: 16 March 1995

TOPIC -----

This article provides information on running several Macintosh Application Environment (MAE) sessions simultaneously on a workstation.

DISCUSSION -----

Users can run several MAE sessions simultaneously on a workstation. The first MAE session constructs an AppleTalk kernel stack that remains active until the final MAE session is shut down. Each session appears to the user as an independent Macintosh.

The sessions share the AppleTalk kernel stack and consequently have the same AppleTalk address and the same set of AppleTalk DDP sockets. These DDP (Datagram Delivery Protocol) sockets are allocated on a first-come first-serve basis from a pool of 125 sockets.

Since the AppleTalk zone and network interface are associated with the AppleTalk kernel stack, they cannot differ among concurrent MAE sessions. Also, a user cannot change the AppleTalk zone and network interface while another MAE session running AppleTalk is active.

When a single MAE session is active, you can use the Network control panel to select an AppleTalk zone and a network interface. However, you cannot change the Network control panel when several MAE AppleTalk sessions are running concurrently. You should set the zone and network interface before making the node available to several concurrent users.

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Tech Info Library Article Number:17373



Tech Info Library

MAE 2.0: Product Specifications (5/96)

Revised: 5/13/96
Security: Everyone

MAE 2.0: Product Specifications (5/96)

Article Created: 16 March 1995
Article Reviewed/Updated: 13 May 1996

TOPIC -----

This article provides the Macintosh Application Environment (MAE) version 2.0 product specifications.

DISCUSSION -----

Specifications
=====

Macintosh desktop manager

- Includes complete Macintosh Finder and desktop manager
- Graphically depicts files as icons, including non-Macintosh documents and applications
- Lets you point and click to copy, move, or open files, or to launch applications

Macintosh Finder

- Organizes files and applications in an easy-to-use folder hierarchy
- Provides a Macintosh consistent interface for all Macintosh applications

Macintosh toolbox

- Includes QuickDraw to manage all graphics operations required by Macintosh applications
- Allows you to share data that is going to be updated dynamically using publish-and-subscribe capabilities

- Includes the Toolbox Event Manager to translate the X Window System user keyboard and mouse input
- Includes routines that enable QuickDraw to interoperate with the X Window System

Macintosh system services

- Allows you to manipulate UNIX files using Macintosh operations (moving, copying, deleting, and so on)
- Supports printing on system printers such as PostScript printers on UNIX networks
- Takes advantage of NFS to allow file sharing and file services across the network
- Simplifies MAE-to-Macintosh networking with built-in AppleTalk support
- Supports MacTCP for access to the Internet and TCP/IP-based applications
- Includes the Cursor Manager, which keeps the Macintosh cursor within the MAE window so you can focus on Macintosh tasks

Mixed-mode manager

- Enables faster performance by directly accessing the native RISC processor for certain routines, using the inherent power and speed of the host operating system

Macintosh 68040LC emulator

- Provides high-speed emulation of 68040 code
- Delivers optimum compatibility with the Macintosh architecture

Industry-standard compliance

- Complies with X Window System version 11, release 4 and 5
- Operates under Motif, HP VUE, and OPEN LOOK

Hardware and software requirements

- HP Series 700 workstation running HP-UX 9.0x or HP-UX 10.01
NOTE: As of April 1996, HP-UX 10.1 is not supported with MAE 2.0.2.
- Sun SPARCstation running Solaris 2.3, 2.4 and 2.5
- X Window System version 11, release 4 or 5
- Window manager such as Motif, HP VUE, or OPEN LOOK

- Memory: 16MB minimum; 32MB recommended
- Hard disk space: 16MB minimum; 22MB recommended
- MAE includes STREAMS/UX to enable AppleTalk connectivity on HP Series 700 workstations running HP-UX

NOTE: HP-UX 10.0.1 does not require STREAMS

Ordering Information

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To order MAE, or to upgrade from version 1.0 to version 2.0, call 1-800-293-6617, ext. 940 (in the United States), or contact your local reseller.

- MAE for Solaris, Version 2.0 (1 user)

Order No. M2191Z/B

- MAE for HP-UX, Version 2.0 (1 user)

Order No. M3128Z/B

Also available are 20- and 50-user packages and volume licenses. Please contact your local Apple reseller or representative for pricing and other information.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

13 May 1996 - Added HP-UX 10.1 note and other minor modifications.

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Tech Info Library

MAE 2.0: AppleTalk Access Privileges (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: AppleTalk Access Privileges (3/95)

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Article Created: 16 March 1995

TOPIC -----

This article describes AppleTalk access privileges and UNIX permissions when sharing files (directories) under Macintosh Application Environment (MAE) 2.0.

DISCUSSION -----

When you share a folder or a disk, by default anyone on the network can open it, read it, or change it. However, you can set access privileges to files and folders you own (that is, those that you have created or whose ownership has been transferred to you) to specify who can use your shared items. You can also allow access to guest users; see "Naming Specific Users," later in this section.

There are three types of FileShare access privileges:

- See Folders: You can open the folder.
- See Files: You can open any file within the folder.
- Make Changes: You can change the contents of any file within the folder.

IMPORTANT: When MAE users export part of a UNIX file system via file sharing, they can grant FileShare access only to the extent that the UNIX permissions allow them that access. For example, if an MAE user does not have write access to a file, the user cannot export that file with FileShare write access. Thus, the privileges another user has when accessing files are the most restrictive combination of the UNIX permissions and the file sharing privileges.

Differences between UNIX and Macintosh access permissions

The differences between UNIX permissions and Macintosh file-sharing privileges can be summarized as follows:

- Macintosh file-sharing privileges affect file sharing over AppleTalk. UNIX permissions affect permissions across all UNIX networks.
- All files and folders (directories) created within UNIX are assigned default UNIX permissions automatically. Folders and their contents are assigned Macintosh file-sharing permissions only if the owner of the folder has made the folder available to others.
- UNIX permits the owner to assign different permissions to every item within a directory; Macintosh file sharing allows the owner to set privileges for the folder. These privileges are transferred to all the contents of the folder collectively.
- In most cases, a user should not share the root directory without careful configuration of access privileges. For example, sharing the root directory with read-only permission allows remote users to view files such as /etc/passwd. Users should be especially cautious when sharing folders on NFS volumes via file sharing.

The following table shows UNIX permissions compared with file sharing privileges:

If UNIX permissions are			Then file sharing privileges are	
Read	Write	Execute	See Folders and See Files	Make Changes
No	No	No	No	No
No	No	Yes	No	No
No	Yes	No	No	Yes
No	Yes	Yes	No	Yes
Yes	No	No	No	No
Yes	No	Yes	Yes	No
Yes	Yes	No	No	Yes
Yes	Yes	Yes	Yes	Yes

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Tech Info Library

MAE 2.0: Release Notes and Read Me, Part 1 of 2 (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: Release Notes and Read Me, Part 1 of 2 (3/95)

Article Created: 16 March 1995

TOPIC -----

This article is part 1 of 2 of the README.TXT file for Macintosh Application Environment (MAE) version 2.0. This Read Me document should be read before installing or using MAE 2.0.

DISCUSSION -----

About This Document

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READ THIS DOCUMENT BEFORE INSTALLING OR USING MAE 2.0! It is a road map to the other MAE documentation and the MAE installation process. It is the only source for some information, including last-minute tips, and cautions relating to the software and the documentation. You may want to keep a printed copy of this document; it is designed to be printed directly by lp or lpr at 66 lines per page.

Supported Workstations And Operating Systems

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This release of MAE is compatible with Sun workstations running Solaris 2.3 and later, and with Hewlett Packard (HP) workstations running HP-UX 9.0x. Ross HyperSPARC processors are also supported. Recommended RAM is 32MB or more; configurations smaller than 16MB are not supported. This version has not been tested with HP series 800 machines.

What's New In MAE 2.0

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- FULLY SUPPORTED APPLETALK NETWORKING: You can use the Chooser desk accessory to access other machines running MAE as well as Macintoshes. You can use

AppleTalk printers, share files with other users, and run popular AppleTalk applications such as mail, scheduling and database group-ware. See Chapter 7 of the MAE USER'S GUIDE, "Networking with MAE."

- PERFORMANCE ENGINEERING: Sophisticated software techniques substantially improve the performance of most applications under MAE 2.0.
- MACINTOSH SOUND OUTPUT SUPPORT: Most applications that produce sound work with MAE 2.0. See Appendix B of the MAE USER'S GUIDE, "Using Sound."
- AFS AND NFS FILE SYSTEM SUPPORT: Significantly enhanced network file system support; performance is improved for all file system types.
- DYNAMIC RESIZE: Resizing the MAE desktop does not require restarting MAE.
- IMPROVED APPLICATION INSTALLATION: A "Temporary Installer Volume" (TIV) is a virtual Macintosh hard disk on your MAE Desktop. Normally, applications that could not be readily installed in MAE 1.0 install correctly to a TIV. See Chapter 3 of the MAE USER'S GUIDE, "Installing Macintosh Applications."
- MacTCP SUPPORT: MAE 2.0 supports MacTCP applications such as NCSA Telnet.
- EXTENSION MANAGEMENT: The Extensions Manager Control panel turns on and off startup programs, and switches between sets of extensions.
- SIMPLIFIED PROGRAM LAUNCH: The Launcher control panel opens a window that lets you launch frequently-used programs with one click.
- STICKIES: On-screen "yellow stickies" let you add notations to your desktop. They need not even all be yellow. Look for "Stickies" in the Apple Menu.
- WINDOW SHADE CONTROL PANEL: This new control panel allows you to reduce screen clutter by shrinking windows.
- SOFTWARE FPU: Support for SoftwareFPU (a shareware virtual 68881).
- CONTROL PANELS: New look for MAE General Control Panel; Network Control Panel for MAE allows the user to choose a default zone and to pick a network interface if the user has more than one; default RAM in Memory control panel is now 8MB (up from 5MB); the Desktop Patterns control panel provides a larger set of desktop patterns and textures.
- SOFTWARE TOOLS AND UTILITIES: HyperCard Player (apple/Tools); MoviePlayer (apple/Tools); third party utilities: Fetch, SoftwareFPU, and Disinfectant (apple/tools/Shareware); appleping and atlookup, AppleTalk debugging utilities (apple/bin).

MAE 2.0 Information Resources

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This Read Me File

This document contains vital last-minute notes on this version of MAE and its documentation. Please read the entire document before installing MAE. It is included as README.TXT in the root directory of the CD-ROM. In addition, when MAE 2.0 is installed on your workstation, a copy of this Readme file is made in the file "MAE_ReadMe_2.0" within the "apple" directory.

MAE Documentation

MAE 2.0 includes three manuals:

- MAE USERS GUIDE ("Macintosh Application Environment User's Guide"),
- MAE INSTALLATION MANUAL ("Macintosh Application Environment Setup and Installation Guide"),
- MAE SYSTEM ADMINISTRATOR'S MANUAL ("Macintosh Application Environment System Administrator's Guide")

A printed copy of the Installation manual accompanies the product CD-ROM. The other two documents, in Apple DocViewer format, are located in the subdirectory "DOCS" of your "apple" directory, and can be printed once MAE 2.0 is installed.

The MAE Internet Server Site

The MAE project maintains up-to-date MAE related information on world-wide-web and ftp servers, as follows:

www site URL: <http://www.mae.apple.com/>
ftp site: <ftp.support.apple.com>.

The following information is available:

- MAE Tech Notes: The most up-to-date list of current issues applicable to MAE 2.0
- Frequently-Asked Questions (FAQ): The questions most often asked by MAE users

MAE email Resources

Two mailing lists and one email address support MAE users:

- mae-announce is a moderated mailing list that will be used to distribute "official" product announcements and information about MAE from Apple. It is a very low traffic mailer aimed at people who want to keep informed on the product, but don't want to sift through all of the mail that is distributed through an open mailing list.

IMPORTANT: Apple strongly suggests that all MAE users subscribe to mae-announce. This mailing list is the primary means Apple will use to inform the MAE customer base about updates, patch availability and other significant MAE news.

- mae-users is an unmoderated mailing list that allows users to discuss the product in an informal atmosphere. mae-users will let users assist each other

and distribute hints and other information about the product.

- mae-bugs is a "one-way" email address to MAE Engineering. Its purpose is to allow users to submit comments, bugs and suggestions about MAE to Apple. Note that mae-bugs is NOT a replacement for your standard support channel. If Apple decides to respond to an mae-bugs submission, it will be done through the general mae-users mailing list.

To request information about how to subscribe to mae-announce or mae-users, or about submitting reports to mae-bugs, please send mail to "mae-info-mail@webster.mae.apple.com".

How To Proceed

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Before installing MAE, read the MAE INSTALLATION MANUAL, then the balance of this document. After you have installed MAE, you may find the information on the MAE ftp server, in the FAQ and MAE Tech Notes useful for solving commonly-encountered problems.

Tips, Cautions, And Last-Minute Release Notes

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The remainder of this document is functionally organized:

- I. Installing The Required Vendor Patches In Your Workstation Software
- II. Running The MAE Installer
- III. Running MAE For The First Time After Installation
- IV. Starting and Exiting MAE
- V. Issues Related To AppleTalk and Networking
- VI. Issues Related To Sound
- VII. Installing and Working With Application Programs
- VIII. Floppy Disks and CD-ROM Discs
- IX. Other Issues

Items applicable only to Sun workstations are labeled "(Sun only)"; those applicable only to HP workstations are labeled "(HP only)". All other items apply to all workstation types.

I. Installing The Required Vendor Patches In Your Workstation Software

The following patches for HP_UX and Solaris are the earliest versions that have been tested with MAE; Apple suggests that your system administrator apply the latest patch releases recommended by Sun and HP.

- (HP only): Copies of all HP patches can be obtained from the HP Support WWW server, whose URL is:

<http://support.mayfield.hp.com/>

The Patch Browse/Search/Download screen itself can be found at this URL:

http://support.mayfield.hp.com/slx/html/ptc_hpux.html

- (Sun only): Copies of Solaris patches are available on the Sun FTP site sunsite.unc.edu. Sun also maintains a WWW site, whose home page is at URL:

SunSolve home page: <http://sunsolve1.sun.com/>

The URL of the patches pages is:

SunSolve patches: <http://sunsolve1.sun.com/sunsolve/patches.html>

- (HP only): AppleTalk requires that the HPStreams module be installed in HP-UX. The STREAMS file sets are supplied on the CD in a "tar" file in directory STREAMS. Do not un-tar this file! The /etc/update program understands how to read the tar format. Two STREAMS packages are included: 3STREAMS.TAR and 5STREAMS.TAR. Please install 3STREAMS.TAR on HP-UX 9.03 and 5STREAMS.TAR on HP-UX 9.05.

The following file sets are included:

STREAMS
STREAMS-DLPI
STREAMS-MAN
TLI-XTI-MAN

Install all four file sets by using the /etc/update command:

```
/etc/update -rs /cdrom/STREAMS/3STREAMS.TAR '*'
```

-or-

```
/etc/update -rs /cdrom/STREAMS/5STREAMS.TAR '*'
```

WARNING: This command will reboot your workstation!

- (HP only): The recommended patches can be found in a single tar archive named HP_PATCH.TAR on the MAE CD-ROM in the PATCHES directory. Do not un-tar this file! The /etc/update program understands how to read the tar format.

The four patch file sets are listed below. (The versions of these patches may not be the latest available from HP, but have been tested with this release.)

PHKL_4605: This is a kernel "mega-patch" that fixes a number of important performance and reliability bugs, including an NFS memory leak and several bugs that can lead to kernel panics. This patch is relevant for users of HP-UX 9.03-9.05.

PHNE_3939: Kernel networking patch.

PHSS_4341: This patch fixes bugs in HP's audio server. "Issues Related to Sound" details the procedure required to install and enable this patch.

PHSS_4485: An X server patch.

To install any of these file sets, use the `/etc/update` command. This command requires the absolute path of the tar file and a list of the file sets to be installed. Use the `-r` option flag to tell update to reboot the system after installing the patches.

To install all four patches, use the following command:

```
/etc/update -rs /cdrom/PATCHES/HP_PATCH.TAR '*'
```

WARNING: This command will reboot your workstation!

- (Sun only): SOLARIS 2.4 SYSTEMS: ask your system administrator to verify that volume manager patch 102077 has been installed. This patch must be in place before you install MAE.

SOLARIS 2.3 SYSTEMS: we recommend you install Kernel Jumbo Patch 101318-59 (Sun has recalled version -60 through -68 of this patch)

These Solaris patches are available on the Sun FTP site sunsolve1.sun.com. Sun also maintains a WWW site, whose home page is at URL:

SunSolve home page: <http://sunsolve1.sun.com/>

The URL of the patches pages is:

SunSolve patches: <http://sunsolve1.sun.com/sunsolve/patches.html>

II. Running The MAE 2.0 Installer

- BACK UP ALL IMPORTANT FILES ON YOUR WORKSTATION. If you are upgrading an existing MAE installation, be sure to back up your MAE files. Beware: some UNIX backup utilities are incompatible with Macintosh file names (which contain spaces and 8-bit special characters, for example). Test yours!
- Read Chapter 1 of the MAE INSTALLATION MANUAL before running the installer.
- The most straightforward way to install MAE is to run the installer while logged onto your workstation as root. If you run as an ordinary user, it will be impossible for the installer to install system-level facilities, such as the Solaris Volume Manager Extensions and the AppleTalk kernel modules. You will also have to be root to install vendor patches on either Sun or HP.
- When you use the MAE 2.0 Installer to remove packages (such as the documentation of Reference Man Pages packages) you will be asked "In which directory do you want to install the <package>?"

This question should read "In which directory is the <package> installed?"

- If you have previously installed any version of MAE, and do not have a system folder, remove the file ~/.mac/hostname/sm.vpram

- IMPORTANT: RE-INSTALLING APPLTALK: If you have previously installed any release of MAE 2.0 (including any Beta release), be sure to use the MAE 2.0 Installer to remove AppleTalk BEFORE INSTALLING THIS RELEASE. Follow this procedure:

Step 1

Shut down any MAE sessions currently running.

Step 2

Log in as root.

ON HP, CONTINUE AS FOLLOWS:

Step 3

Rename the AppleTalk command in your target install directory. Example:

```
mv /u/MAEuser/apple/bin/appletalk /u/MAEuser/apple/bin/appletalk.old
```

Step 4

Use the Installer to remove the old AppleTalk kernel modules. Invoke the installer with ./INSTALL.SH -r, then, when prompted, verify that you want to remove the AppleTalk component.

Step 5

Use the installer to install the latest MAE in its entirety, including the new AppleTalk kernel modules.

Step 6

REBOOT your workstation.

Step 7

Remove the OLD AppleTalk command created in step 3 above. Example:

```
rm /u/MAEuser/apple/bin/appletalk.old
```

ON SOLARIS, FROM STEP 2 ABOVE:

Step 3

Use the installer to install the latest MAE in its entirety, including the AppleTalk new kernel modules.

Step 4

Reboot your machine to unload dynamically loaded AppleTalk kernel modules.

On either workstation type, the resulting MAE will come up with AppleTalk when the first session is invoked.

IMPORTANT: If you are running MAE off a (remote) NFS file server, you must still install the AppleTalk kernel modules on the local machine, if you want to use

AppleTalk. For example, if you are running the MAE process on workstation A, using a copy of apple/bin/MAE on workstation B, you must have the AppleTalk kernel modules installed on workstation A.

- The installer correctly upgrades your existing MAE 1.0 "apple" directory, if it exists, to version 2.0. The installer also updates the MAE documents and manual pages. Applications you have stored in the apple/Tools directory will not be removed. (However, if you have modified the MAE 1.0 versions of files that are replaced during the MAE 2.0 installation, your modifications will not be preserved during the installation.)

- If you are upgrading an existing MAE installation and will be installing new demo applications, remove the old directories "ClarisWorks", "FileMaker Pro", and "MacProject Pro" from the apple/Demos directory. Files from the old Demos directories that are not part of the new Demo set will otherwise be merged with the new Demo versions.

- MAE apple directories and System Folders cannot be cross-shared between Sun and HP workstations (as Macintosh applications and documents can).

- Installing MAE on an AFS volume may be problematic. MAE cannot be installed on an AFS volume at all unless the installing user is the superuser and has AFS administration privileges. Possible workarounds for residual difficulties: (1) upgrade to the latest release of AFS, which supports 8-bit characters in file names (2) install MAE onto a local or NFS mounted volume and then copy the MAE apple directory onto your AFS volume. (Remember: if you move the "apple" directory, you must use the "-appledir" command line option to start MAE.)

- (Sun only): During installation of MAE 2.0 into an AFS file system, very long AFS path names, or very large AFS volumes, may cause the installer to fail. The installer parses the output from the command "df -k"; the failure condition occurs when the path name or volume size fields run together without an intervening space. Before executing the installer, execute a "df -k" command to verify that these two fields are properly space-separated.

- (HP only) If you are running automounter and install MAE 2.0 into an automounted directory, specify the path in /tmp_mnt rather than /net (for example /tmp_mnt/net/foo/apple instead of /net/foo/apple).

- When running the installer, do not use destination directory names ending in special characters such as +, -, or &.

- Customizing the Install process for mass installation: Some sites have installed MAE on a central NFS or AFS server. Before undertaking support of such an installation, read Chapter 2 of the System Administrator's Guide, "Customizing MAE and Your Workstation."

- Problems with ISO 9660 format CD-ROM discs.

Some CD-ROM drivers (for example IBM, Data General) may translate filenames on ISO 9660 format CD's (such as the MAE CD) to lower case. If this occurs, the MAE Installer will not be able to find the files needed for installation.

To work around this, copy the files from the CD to a local volume and manually change the filenames to upper case before installing MAE. A shell script will be made available via anonymous ftp at some future time to automate the conversion of these file names.

This translation does not occur for Macintosh CDs.

Support Information Services

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Tech Info Library Article Number:17376



Tech Info Library

MAE 2.0: Release Notes and Read Me, Part 2 of 2 (3/95)

Revised: 3/15/95
Security: Everyone

MAE 2.0: Release Notes and Read Me, Part 2 of 2 (3/95)

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Article Created: 16 March 1995

TOPIC -----

This article is part 2 of 2 of the README.TXT file for Macintosh Application Environment (MAE) version 2.0. This Read Me document should be read before installing or using MAE 2.0.

DISCUSSION -----

III. Running MAE For The First Time After Installation

- Before you can run MAE successfully, you must run the LICENSE BINDER utility, "license_binder". When you run the license binder, it will ask you to input a serial number. Your MAE 2.0 serial number is printed in two places: on the inside of the CD-ROM package, and on the plastic CD-ROM sleeve.
- The first time you launch MAE, it creates several files in your home directory:

These two directories are required to run MAE:

"System Folder"
".mac"

These are Macintosh aliases to the corresponding files inside the apple directory. Which aliases are created depends on which packages are installed; for example, if no demo packages were installed, there will not be a "demos" alias. These aliases are there for convenience to the MAE user, and may be removed at any time. To control which aliases are created, you can modify the AliasList file found in apple/lib and described in the MAE System Administrator's Guide.

"docs"
"demos"
"Tools"

"lib"
"man1"

• When MAE 2.0 is launched for the first time in a new installation, and encounters a System Folder from MAE 1.0 or from a beta version of MAE 2.0, it automatically converts the System Folder to the format correct for MAE 2.0. If you have installed a previous version of MAE 2.0, MAE will not create backup versions of the files it replaces in this process. (Upgrading from MAE 1.0, the updater will back up your original files.) In the unlikely event that you have trouble running MAE after the System Folder update occurs, follow this procedure:

Step 1
Quit MAE.

Step 2
Rename your System Folder; for example, 'mv System\ Folder old.system.folder

Step 3
Relaunch MAE to create a new System Folder.

Step 4
If you need Extensions or other files from the renamed System Folder, copy them to the new System Folder one at a time, restarting MAE after each new file is added to verify correct operation.

IV. Starting and Exiting MAE

- Do NOT delete or move any of the MAE files or folders located in the "apple" directory.
- Shift-Control-E forces MAE to quit

If you cannot quit MAE by using the Shut Down command in the Special menu (on the MAE desktop) or by using the capabilities provided by your X window manager, force MAE to terminate by pressing Shift-Control-E.

- If the Message "Can't open X display" Appears on Startup

If you are running MAE on the same workstation that you are running the X Server, set the DISPLAY environment variable to be "local:0" before running MAE. If you are running MAE on a machine other than the X Server, set the DISPLAY environment variable to the string "X_server_hostname:0" where X_server_hostname is the network hostname of the X server.

If MAE still will not open the display, run the program "xhost" on the X Server machine to ensure that you have access to the server; see the man page for xhost. If MAE is running on a workstation named WORKSTATION and the X-Server is on a machine named TERMINAL, then on TERMINAL run the command "xhost +WORKSTATION". This allows MAE on WORKSTATION to open a display on TERMINAL.

- If a message appears on startup similar to "Unable to locate <directory>;

please use the `-appledir` option to give the path to the apple directory."

When you start MAE, it expects the directory containing the MAE files to be in a directory specified at installation (by default, the directory is named "apple"). You can also specify the location of the "apple" directory to MAE by using the `-appledir` command option when you start MAE (see Chapter 2 of the MAE USER'S GUIDE). Alternatively, you can specify an alternate location of the "apple" directory in your X Resources file. To edit your X Resources file, open your `.Xdefaults` file and edit the line that begins with `"Apple.appleDirectory."` Replace the name of the directory that appears in the line with the name of the directory that contains the MAE files. For example, if the MAE files are located in `/usr/local/apple`, the line would look like this:

```
Mae.appleDirectory: /usr/local/apple
```

V. Issues Related To AppleTalk and Networking

- MAE is not compatible with third-party AppleTalk stacks. If you run on a machine with one of these stacks, you cannot use AppleTalk with MAE. If you want to run AppleTalk on MAE, you must first remove any third-party stacks.
- (HP only): MAE AppleTalk requires streams. To determine whether streams is installed on your system, run the command `'strv'` (normally in `/usr/bin`). To see which version of streams is installed, inspect the file `/system/STREAMS-DLPI/index` and look for the version in the `'fv:'` field.
- (Sun only): If you have a single network interface configured, and this interface is not `le0`, you will see the following message if you open the Network Control panel:

The AppleTalk connection is unknown. Please select a different AppleTalk connection, or built-in LocalTalk will be the AppleTalk connection when you restart.

This message is incorrect. Click 'OK'; the Network Control panel lets you switch between zones normally. AppleTalk and EtherTalk are unaffected, and will be normal after restart.

- By default, when you enable FileShare, anyone connecting as "owner" can see the entire `"/"` directory and its descendants. To allow access to only explicitly shared items, open the "Users & Groups" control panel, and turn off the option "Allow user to see entire disk" for the File Share owner.
- If multiple users invoke MAE and FileShare on the same workstation, some coordination is required in exporting filesystems with FileShare. If two users independently export a single directory or volume under two different names, then a second workstation, unable to recognize that the two exported names refer to the same volume, can mount them both independently, referring to them by different names. This has potentially serious consequences, including loss of files.

Sites that use multiple instances of MAE on a single workstation should provide

guidelines for exporting filesystems via FileShare. These guidelines should follow one of two models:

Item a

Run a single FileShare on the workstation, and set up Users&Groups to allow clients appropriate access to the File system.

Item b

Allow each user to run a FileShare server, but to export only parts of the file system they "own" in the UNIX sense. Default sharing of the root volume should be disabled.

- When using some MacTCP applications, erroneous login information may cause all subsequent connection attempts to fail. Work around this problem by restarting the application (it is not necessary to restart MAE).
- MacTCP and multiple network interface cards: MacTCP uses the first configured network interface card and ignores any others.
- Wrong zone: if the Chooser displays no network-visible entities (NVEs) (printers, servers, etc), the Chooser indicates that you are in an invalid zone, restart MAE.
- AppleTalk installation/initialization errors

If you see problems with AppleTalk initialization (for example, "Lap Init: ..."), do the following in order to determine the source of the problem:

Step 1

Check the system console messages.

Step 2

Verify that the AppleTalk kernel modules are installed correctly. See "Installing AppleTalk for MAE" in Chapter 5 of the MAE SYSTEM ADMINISTRATOR'S GUIDE.

Step 3

Be sure you have write permission to the /tmp directory.

Step 4

Look for error messages in the window from which you launched MAE. If AppleTalk is unable to open a file, an error message will appear here.

Step 5

Open the Network Control Panel; verify that you are running AppleTalk on the correct network interface.

Step 6

The MAE installer may have informed you that a log file was written. Please consult this file.

Step 7

For more information, see "Troubleshooting" and "UNIX AppleTalk commands" in

Chapter 5 of the MAE SYSTEM ADMINISTRATOR'S GUIDE.

- This release includes three UNIX-style commands for troubleshooting network problems. These commands are located in the apple/bin directory:

- appletalk
- appleping
- atlookup

Man pages for all three are included in the product release.

VI. Issues Related To Sound

- (HP only): MAE 2.0 will not support sound on HP-UX 9.01.
- (HP only): MAE 2.0 will not support sound on HP-UX workstations that are not connected to a network. If your HP workstation is not attached to a network, include the -nosound option on the MAE command line.
- MAE sound quality depends on the quality of the source sound, the processor speed, and the settings of the Sound control panel.
- MAE 2.0 does not support sound input.
- (HP only): Sound on HP workstations may include brief audio hesitations. This effect is most pronounced with higher sampling rates and slower machines.
- (Sun only): When changing sound rate on Sparc5s by using the Sound Out subpanel in the Sound control panel, there may be a slight delay during which your cursor stops moving. This is normal.
- (Sun only): The external mute and volume controls on the Sparc speaker box have no effect under MAE; sound is controlled only from the Sound Control panel.
- If multiple instances of MAE are run on the same workstation, only the first to be executed will play sounds normally. The other copies of MAE play no sounds until the first MAE terminates -- then they play all queued sounds at once. To avoid this, add the -nosound option to the MAE command line whenever another copy of MAE is already executing on the same workstation. This disables sound completely for all but the first copy of MAE to be executed.
- (HP only): UNIX applications that attempt to play sounds while MAE is running will have those sounds queued. These queued sounds will be played after the (first) MAE session quits.

This occurs because MAE takes exclusive control of the audio server in order to achieve acceptable sound performance. If you do not want this situation to occur and do not require sound support from MAE, start up MAE with the "-nosound" command line option.

- (HP only): If you don't get sound out of your machine even though it is sound

capable, check the following:

Step 1

Make sure the AUDIO environment variable is set to your local machine. That is, AUDIO=hostname:0

Step 2

Install HP Patch "PHSS_4341" and reboot. This patch is necessary for correct sound operation.

Step 3

Make sure the LLBD (local location broker daemon) is running. As root, edit the /etc/netnsrc file and make sure the line START_LLBD=1 is there, and reboot.

Step 4

Make sure the audio server is running (ps -e | grep -i aserver). There should be two Aserver processes running. Use the command "/usr/audio/bin/Aserver" to start the audio server if necessary.

Step 5

Make sure you have access to the Aserver. "/usr/audio/bin/asecure -C" creates an audio access file. Then "/usr/audio/bin/asecure -d" disables security (or read the man page and enable for the users to whom you wish to grant access).

Step 6

To get audio out of the output jacks (rather than the internal speaker) set the environment variable SPEAKER="external".

Step 7

If you're still having problems, try to get HP's audio tools to work following their documentation. When HP's audio tools work, MAE sound should work.

- (Sun only): Sound problems related to running MAE as a user different from the one who is logged in at the console:

Change the permissions of the /dev/audio and /dev/audioctl audio devices. To change the permissions of /dev/audio, execute the command "ls -l /dev/audio" and follow the symbolic links to the actual device (expect three or four levels of indirection). Change the permissions on the audio device for read/write access.

VII. Installing and Working With Application Programs

- Using Temporary Installer Volumes (TIVs) to ease application installation: Installation of some applications can be complicated by space and permissions constraints on the UNIX root volume. The resulting problems are likely to produce error messages such as

"Not enough free space on <directory>"

"Cannot create directory <directory>"

MAE 2.0 provides a workaround: a TIV, which is a virtual hard disk on the MAE

desktop. By creating, and installing to, a TIV, you can sidestep problems associated with the root volume.

Detailed instructions for creating and using TIVs are in Chapter 3 of the MAE USER'S GUIDE.

- Installation of certain software packages can be done only by using a TIV that contains a copy of your System folder. Attempts to install on a TIV without a System Folder result in various error messages, depending on the installer. See Chapter 3 of the MAE USER'S GUIDE.

- TIV size: We recommend a TIV size greater than 10 Megabytes.

- If you get a message such as "ClariscDraw requires a hard disk" when installing a Claris application

Some Claris applications require that the destination volume have more than 10 MB free space, even though the application does not require that much space. To work around the problem, install to a TIV whose size is greater than 10 Megabytes.

- Resizing MAE while an application is running

Some applications may not correctly handle an MAE resize while the application is running.

- Colors Are Not Displayed Accurately in Certain Applications

In certain applications that use color extensively (for example, Adobe Photoshop), colors used in the document may not be displayed correctly. To fix this problem, open the MAE General control panel; click the button "use standard Mac colors" under "Color flash reduction" and restart MAE.

- Use only printer drivers that are shipped with MAE

Some Macintosh applications (for example, Aldus PageMaker 5.0) install their own printer drivers (and related files) when installed. The only printer drivers that have been tested for compatibility with MAE are shipped with the product: LprWriter and LaserWriter 8. Other printer drivers have not been tested with MAE and may not work.

For instructions for setting up and using the LprWriter and LaserWriter drivers, see Chapter 4 of the MAE USER'S GUIDE, "Printing in MAE."

- PPD files for non-Apple printers

Apple supports only PPD files for Apple printers. It is a printer vendor's responsibility to make PPD files for its printers available. If the PPD for your non-Apple printer isn't shipped with MAE, contact the printer vendor or use the ftp archive at <ftp.adobe.com>. See Chapter 4 of the User's Guide for more information.

- Problems with Microsoft Office

The specialized Microsoft Office Control panel "Microsoft Office Manager" is not compatible with MAE. If you install Microsoft Office, remove this control panel from the System Folder before you restart MAE.

- Use the Option Key When Printing PageMaker 5.0 Documents with LprWriter

There is an incompatibility between the LprWriter driver and PageMaker. If you are printing using the LprWriter driver, you must hold down the Option key while you choose Print from the File menu in PageMaker. There is no incompatibility with the LaserWriter 8 driver.

VIII. Floppy Disks and CD-ROM Discs

- (Sun only): Volume manager patch

Solaris 2.4 users: Before using floppy or CD-ROM with MAE on Sun, you must install the Solaris Volume Manager Patch.

- Problems mounting CD-ROM discs and floppy disks

Read "Mounting CD-ROM Discs and Floppy Disks" in Chapter 6 of the User's Guide. If your problem is not covered, read on (this material assumes that you know the concepts covered in the User's Guide).

You need to know the exact path name of the device file that references the CD-ROM or floppy (ask your system administrator). On HP, the command:

```
ioscan -f
```

Lists the available devices on your workstation. On Solaris, you should be able to determine the path name(s) by looking in the /etc/vold.conf file for the lines that start with "use floppy" or "use cdrom".

The driver for the device in question may not be configured in your kernel. Ask your administrator for help if this is the case.

Once you know the path name of the device file, try to access the floppy drive from UNIX. Once you have determined that the floppy drive works, enter full path name for the floppy in the macdisks.OS file (where OS is 'hpux' or 'solaris').

Example SCSI entry for a CD-ROM drive:
scsi6:removable:ro:<PUT PATH NAME HERE>

Example line for a floppy drive:
floppy0:rw:<PUT PATH NAME HERE>

Common path names for devices:

On HP, CD-ROM drives are often at SCSI address 2. The following example line should work if your CD-ROM drive is at SCSI address 2:


```
scsi2:removable:ro:/dev/dsk/c201d2s0
```

On HP, Floppy drives are often one of the following:

```
floppy0:rw:/dev/rfloppy/c201d0s0
```

```
floppy0:rw:/dev/rfloppy/c20Ad1s0
```

In some cases, you may need to restart MAE before the modifications to the macdisks.OS file will be taken into account, especially if you specify "default" for one of the devices.

- Do not eject a diskette and physically remove it from the drive until MAE is finished with it (that is, until MAE shuts down, requests another disk with a dialog, or deletes the floppy disk icon from the desktop). Disregarding this caution risks physical diskette damage.

- (HP only): If you manually eject a floppy without dismounting it first (dismount it by dragging its icon to the trash, or selecting Put Away from the File menu), and then insert another floppy, the second floppy may be corrupted.

IX. Other Issues

- Find File and UNIX file systems

The "Find File" facility included with MAE 2.0 is optimized for searching Macintosh HFS volumes and is not well suited to large UNIX filesystems. Avoid using this facility to search UNIX volumes as it will traverse the entire volume and any mounted filesystems within it. This behavior is especially noticeable when "Find File" is invoked by a remote client to search a UNIX volume exported from MAE via File Sharing. Using "Find File" on HFS volumes (such as TIV files or remote HFS volumes) should present no difficulties.

- File System anomalies

If MAE fails to show items in a UNIX directory (possibly even after the window is closed and re-opened), use the touch command to update the time on some item in the directory. (This anomaly is the result of a difference in basic assumptions between UNIX and the Macintosh: Using UNIX, it is possible to replace an entire directory, with entirely new contents, without updating its modification date or time.)

- Using -memory Option When Starting MAE

When you start MAE with the -memory command option, memory size is set to the specified value. (See "Adjusting the Memory Size of MAE" in the MAE USER'S GUIDE, Chapter 10.) If MAE is restarted, this stipulation will remain in effect unless it has been subsequently changed by using the Memory Control panel.

- OPTION and SHIFT keys after MAE restart

After an MAE restart (not a startup), MAE may appear not to respond fully to the Option and Shift keys. A simple workaround technique is effective: click

anywhere OUTSIDE THE MAE WINDOW on your X screen, then click inside the MAE window. Thereafter the problem disappears.

- Scrapbook conversion: The Scrapbook file format of MAE 2.0 is not compatible with that of MAE 1.0. If you update from MAE 1.0, your Scrapbook file will be unusable. To work around this, copy the new Scrapbook file from apple/sys into your System Folder, replacing the one there. To recover the contents of your MAE 1.0 Scrapbook:

- run MAE 1.0, using your old MAE 1.0 appledir and System Folder; the old system folder is saved in "MAE 1.0 System Files", within your MAE 2.0 System Folder.

- Paste the Scrapbook contents into an application document and save it.

- Terminate MAE 1.0, run MAE 2.0, open the application, and paste the contents into the Scrapbook.

- MEMORY CONTROL PANEL: Allocating the maximum memory allowed in the Memory control panel may result in an MAE crash with "mmap failed" or other error messages.

- ALIASES: installing this release invalidates Macintosh aliases from the previous installation. Discard these aliases and re-create them.

- WARNING: Some versions of AFS support only 7 bit characters in filenames, while MAE supports 8 bit characters. This may cause problems in some situations: BEWARE!

- MAE does not support changing the date and time settings in the General Controls and Date & Time control panels.

- SCSI device compatibility problems

Workstations that support MAE 2.0 typically use the SCSI 2 interface Standard. Depending on how your workstation is configured, you may have problems using a SCSI or single-ended SCSI 2 peripheral. Before attempting to connect an Apple or other third-party peripheral to your HP or Sun workstation, see your system administrator or the documentation that came with your workstation for information.

- (HP only): Problems Using CD-ROM Discs on HP 712 Workstations

If you try to mount a CD-ROM disc on certain HP 712 workstations attached to some CD-ROM drives, MAE may display an alert message, asking if you want to initialize the disk. Click Cancel in the alert box. For information about possible solutions to this situation, see your HP dealer or contact technical support at Hewlett-Packard.

- If MAE "hangs" when an NFS server goes down:

MAE 2.0 no longer hangs on NFS mounts when an NFS server goes down, unless the server was mounted "hard/nointr." Hard/nointr mounts cannot be interrupted while hard/intr are interruptible. To prevent NFS-related hangups, verify that all NFS

mounts on your workstation are interruptible.

- If you need to refer to the wide-area part of a distributed AFS filesystem:

MAE does not permit the Finder or applications to see the wide-area part of the distributed AFS filesystem. To access a file contained in the wide-area part of an AFS system, use a UNIX shell to copy the file to a directory within the local cell, such as your home directory.

- If resizing the MAE window when CloseView is active causes MAE problems:

This is a known problem in the current version. Avoid resizing the MAE window when CloseView is active.

- (Sun only): If you are using OpenLook

If you are having trouble importing X data into the MAE environment (for example, text in an xterm window), make sure that you do not click on any olwm title bar after you have selected the X data. If you do so, the X Windows selection may become lost, and MAE will not be able to import it. To work around this problem, position the MAE window so the "Import from X" button (on the MAE toolbar) is visible, select the X data, then before clicking on any olwm titlebar, select the "Import from X" button.

- Displaying MAE on a Macintosh using MacX.

MAE may hang when its display appears on a Macintosh via MacX, when MAE is also mounting a fileshared volume from the same Macintosh.

- AfterDark 3.0

The files "Screen Posters" and "Bad Dog" in AfterDark version 3.0 are incompatible with MAE 2.0. After installing After Dark, remove these two files from your System Folder before restarting MAE.

- Shareware/freeware issues

MAE 2.0 includes three shareware/freeware programs, in the directory apple/Tools/Shareware. Observe these points when using these shareware programs:

- Third party software posted to this CD may be protected by federal copyright laws which prohibit copying unless authorized by the copyright owner. Before using any posted software, refer to the start up screen of the software, to the accompanying software license, or to the individual an/or company posting the software to determine if copying is authorized. Posted software is the sole responsibility of the individual and/or company posting it. Apple Computer, Inc. does not endorse, warrant, guarantee, or make any representations, express or implied, with respect to software posted to this CD, its quality, performance, merchantability, or fitness for a particular purpose. In no event will Apple be liable for direct, indirect, special, incidental, or consequential damages resulting from the use of posted software.

- Some software in this folder is shareware; if you use a shareware utility, please honor its shareware fee.

- FETCH: Using Fetch to "get" and "put" non-text Macintosh files from or to UNIX filesystems requires special care to insure the files are transferred in a usable state by MAE (that is preserving their AppleSingle format).

When "get"ing a non-text Macintosh file, always select "binary" transfer mode. When "put"ing a non-text Macintosh file, always select "AppleSingle" as the file format when prompted by the dialog. Macintosh and UNIX text files should always be transferred by selecting "text" (ASCII) transfer mode.

For complete instructions about using Fetch, read the online "Fetch Help".

- SOFTWAREFPU - Floating Point Unit Extension

This extension simulates the FPU coprocessor chip found in some Macintoshes and integrated into certain 68K CPU's. It is only useful for (the very few) Macintosh applications that require this FPU.

Complete instructions about using SoftwareFPU are included with the utility.

- DISINFECTANT - Virus Utility

MAE is susceptible to the same viruses that plague the Macintosh. However, there is no need to scan your entire UNIX filesystem for Macintosh viruses. When scanning with Disinfectant, hold down the Option key and press the "Scan" button, this will display a dialog that will allow you to limit the scope of the search.

For complete instructions about using Disinfectant, please read the online "Disinfectant Help".

Support Information Services

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Tech Info Library Article Number:17377



Tech Info Library

PowerMac DebugServices 2.0b12 Incompatibility (3/95)

Revised: 3/16/95
Security: Everyone

PowerMac DebugServices 2.0b12 Incompatibility (3/95)

=====

Article Created: 16 March 1995

TOPIC -----

This article describes a PowerMac DebugServices 2.0b12 and Macintosh System 7.5 Update 1.0 incompatibility.

DISCUSSION -----

PowerMac DebugServices 2.0b12 is not compatible with Macintosh System 7.5 Update 1.0. You need to upgrade to PowerMac DebugServices 2.0b14. This version of PowerMac DebugServices may not work with hosts earlier than those found on ETO 16. Please contact the manufacturer of your development environment if you encounter a problem using PowerMac DebugServices 2.0b14 with your development environment.

Support Information Services

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Tech Info Library Article Number:17378



Tech Info Library

MAE 2.0: Using the Sound Manager (3/95)

Revised: 3/16/95
Security: Everyone

MAE 2.0: Using the Sound Manager (3/95)

=====

Article Created: 16 March 1995

TOPIC -----

This article describes the Sound Manager in Macintosh Application Environment (MAE) version 2.

DISCUSSION -----

The Sound Manager in MAE version 2 acts transparently, much like the sound manager on the Macintosh. However, there are some setup issues and concerns for the different platforms. In addition, MAE is constrained by the host resources, which add performance issues.

Most current Macintosh programs that utilize sound use a sampling rate of 22kHz or less. The MAE Sound control panel allows you to set the audio output resolution to whatever the hardware allows. For best performance, set the sampling rate to 11 or 22kHz.

When executing multiple instances of MAE on a single workstation, only the first MAE instance will be able to use sound.

Hewlett Packard (HP) workstations

The Hewlett Packard sound implementation uses the Audio Server that is available on all sound-enabled HP platforms. The Audio Server should be updated with HP's patches to the latest level in order to make sound work correctly. The patch PHSS_4341 is currently necessary for correct operation. See the Read Me file (README.TXT) on the MAE CD-ROM for the latest information on patches.

Sound is not supported in HP-UX releases earlier than 9.03.

To determine if the patch has been installed, check for the file /usr/audio/bin/asecure. If this file is present, it is likely that the patch has been installed and MAE should function correctly.

HP audio will work only locally on the host Audio Server, by default. To enable a remote Audio Server, set the AUDIO environment variable to the Audio Server to which you want to send sound output.

There are a number of useful environment variables for sound.

- AUDIO specifies the Audio Server to send data to; for example, set the AUDIO environment variable to <hostname>:0.
- SPEAKER specifies destination for the sound. Set the SPEAKER variable to INTERNAL (which is the default) to use the internal speaker. Set it to EXTERNAL to send the sound to an output jack.

Troubleshooting for HP workstations

A list of potential problems and their solutions follows.

- Problem: Audio Server has been updated but no sound is produced.

Solution 1: Audio security may be enabled. Refer to the man page for the asecure command to enable sound output. The default configuration for the audio security is to disable sound output for all users. The asecure program enables access for any or all users of the target machine.

Solution 2: Increase the system volume. Use the program /usr/audio/bin/acontrol and increase the playback volume.

- Problem: MAE is running remotely, but no sound is produced.

Solution: If the display server is not equipped with an Audio Server (that is, it is not an HP workstation) you cannot get sound on it. If it is, before launching MAE set the AUDIO environment variable to the name of your display (that is, export AUDIO=<hostname>:0) on the machine that will run the MAE process.

- Problem: MAE sound hesitates; that is, there are intermittent silent portions in the sound output.

Solution: Run MAE on a faster machine or turn down the sampling rate in the Sound control panel. The higher the resolution of the sound, the more resources are necessary to produce the sound. Reduce the resources necessary by lowering the sampling rate.

Sun workstations

If the Sun workstation is sound capable, MAE sound will work with it. If the user who is running MAE is different from the one logged into the console, you must change the permissions of the audio devices with the following command line:

```
ls -la /dev/audio
```

Then follow the links to find the actual device (there are three or four levels of symbolic links). As superuser, you will need to change the permissions of the audio device to read/write access in order to enable sound.

NOTE: You must change the permissions for both /dev/audio and /dev/audioctl for sound to operate.

Troubleshooting for Sun workstations

- Problem: MAE does not produce sound.

Solution 1: Make sure you are logged into the console or have the permissions on /dev/audio and /dev/audioctl set correctly for your user. See the first two paragraphs under "Sun Workstations," above, for details about permissions on added devices.

Solution 2: Press the mute button on the speaker box (if available). If the speaker box is muted, no sound is available.

Solution 3: Turn up the volume on the speaker box or in the Sound control panel.

- Problem: MAE sound hesitates.

Solution: Run MAE on a faster machine or turn down the sampling rate in the Sound control panel. The higher the resolution of the sound, the more resources are necessary to produce the sound. Reduce the resources necessary by lowering the sampling rate.

Support Information Services

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Tech Info Library Article Number:17379



Tech Info Library

Power Performa: Flashing Phone Icon in Menu Bar (3/95)

Revised: 3/17/95
Security: Everyone

Power Performa: Flashing Phone Icon in Menu Bar (3/95)

=====

Article Created: 17 March 1995

TOPIC -----

I have a flashing, green telephone icon over the date and time on my menu bar. When I click on the telephone icon, a message states "Select a contact file...". Another dialog box then asks me to "Select a contact file...".

I have a Power Performa 611X. What is this and how do I turn it off?

DISCUSSION -----

The Power Performa computers have the Now Contact software installed. A part of the Now Contact software is a control panel called QuickContact. When the QuickContact menu icon is turned on in the control panel, this flashing telephone icon appears over the date and time on the menu bar. It's purpose is to allow quick access to a user's contact files.

To turn it off, open the QuickContact control panel and click off on the QuickContact menu icon setting.

This issue will hold true for any computer running Now Contact 1.1.

Support Information Services

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Tech Info Library Article Number:17380



Tech Info Library

LaserWriter 16/600 PS: Fuser Temperature (1/97)

Revised: 1/29/97
Security: Everyone

LaserWriter 16/600 PS: Fuser Temperature (1/97)

Article Created: 17 March 1995
Article Reviewed/Updated: 29 January 1997

TOPIC -----

What is the fuser temperature for the LaserWriter 16/600 PS?

DISCUSSION -----

The target fuser temperatures for the LaserWriter 16/600 PS are as follows:

	Normal Temp. Control	Initial Warm-Up Control
=====	=====	=====
NON-PRINTING		

Wait	175°C (347°F)	190°C (374°F)
Standby	175°C (347°F)	190°C (374°F)
Auto Delivery	175°C (347°F)	190°C (374°F)
Initial Rotation	175°C (347°F)	190°C (374°F)

PRINTING		

Long Interval Printing	195°C (383°F)	195°C (383°F)
Continuous Printing	200°C (392°F)	205°C (401°F)
Intermittent Printing	185°C (365°F)	195°C (383°F)
Envelopes (<25)	190°C (374°F)	190°C (374°F)
Envelopes (>25)	180°C (356°F)	190°C (374°F)
B5 Envelope	200°C (392°F)	205°C (401°F)
1st Print from MP Tray	195°C (383°F)	195°C (383°F)

The initial warm-up control is initiated for the first 5 minutes whenever the initial temperature detected by the thermistor is 50°C (122°F) or less to improve fusing.

The fuser is not kept warm whenever the printer is in the Energy Saver mode.

Article Change History:

29 Jan 1997 - Changed distribution status.

01 May 1995 - Corrected product name.

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Tech Info Library Article Number:17381



Tech Info Library

HyperCard: MacPaint Setting Prints 4 Pages Per Card (5/95)

Revised: 5/19/95
Security: Everyone

HyperCard: MacPaint Setting Prints 4 Pages Per Card (5/95)

=====

Article Created: 17 March 1995
Article Reviewed/Updated 18 May 1995

TOPIC -----

I am having some difficulty printing from HyperCard. I create a stack with the card size set to MacPaint. Then I choose Print Card from the File menu. Multiple pages print out for each card! The first page has the card with all the correct information. The second, third, and fourth pages will be blank.

Is this the way HyperCard is suppose to work? Why does it print out 4 pages for every 1 card? Is there a fix for this, or some workaround?

DISCUSSION -----

This HyperCard behavior is not entirely unexpected because some applications have a large print area (for example, the typical MacPaint card size has a fairly large print area). This can result in each card actually requiring more than a single page to print.

Examples Using Different Printers

This example uses a one card stack with a MacPaint sized card. The paint bucket tool was used to fill in a fairly dense pattern on the card to help see what is being printed. Two pages printed on a LaserWriter Pro 630.

The MacPaint card size is 576 pixels by 720 pixels. This card image is a little wider than the image area of the LaserWriter Pro 630, so the second page held a "sliver" of the right hand side of the card.

When resizing the card size of a stack, HyperCard forces pixel sizes of a multiple of 32 pixels for the width and 8 pixels for the height.

By resizing the card width from 576 pixels down to 544 pixels, the card printed on one page. A stack sized at 544 pixels wide by 736 pixels high printed on two pages with a sliver of the bottom of the card on the second page. A stack sized

at 576 pixels wide by 736 pixels high, printed on four pages with a slivers of the right and bottom of the card on the second and third pages and the fourth page had a tiny square from the lower right of the card.

Depending on the printer used, a large sized card may need to be spread over multiple pages to show the whole card image. If there is not any kind of pattern near the right and bottom of the cards then the extra pages may appear to be just extra blank pages, when actually they represent boundaries of the card image. Be sure after resizing a stack that the fill pattern extends to the bottom of the newly sized cards. The pattern does not propagate just because the card is made larger.

The way the card prints out depends on the pixel imaging size of your printer. Another factor that could have an effect on this printing situation, in a non-QuickDraw GX environment, is whether you have set the Page Setup Options to have a larger imaging area available by choosing fewer downloadable fonts.

This article was published in the "Information Alley":
Volume II, Issue 2, Page 7

Article Change History:
18 May 1995 - Made several modifications; added Info Alley information.

Support Information Services

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Tech Info Library Article Number:17382



Tech Info Library

At Ease Version 2.0.4 Not Available in the U.S. (3/95)

Revised: 3/17/95
Security: Everyone

At Ease Version 2.0.4 Not Available in the U.S. (3/95)

=====

Article Created: 17 March 1995

TOPIC -----

I have heard about an At Ease version 2.0.4. How do I get it, or does it even exist?

DISCUSSION -----

It does exist, however, it is not supported or available in the United States. It was created specifically to fix some problems with At Ease unique to the Japanese version. It has no new features as compared to version 2.0.3. At Ease version 2.0.3 is the latest version intended for and supported in U.S. markets.

Support Information Services

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Tech Info Library Article Number:17383



Tech Info Library

Application Size: Different for Native PowerPC and 680x0 (5/95)

Revised: 5/19/95
Security: Everyone

Application Size: Different for Native PowerPC and 680x0 (5/95)

=====

Article Created: 20 March 1995
Article Reviewed/Updated: 3 May 1995

TOPIC -----

I have noticed that the amount of memory in use by an application in the "About This Macintosh" dialog box does not always match the memory allocated to the application in the Get Info dialog. This only seems to occur with PowerPC native applications when running with Extensions off.

For example, using ClarisWorks 3.0, the preferred memory size shown in the Get Info dialog box is 950K, but after launching the application, "About this Macintosh" shows it using 2,054K.

DISCUSSION -----

A PowerPC native application has different memory requirements when running on a 680x0 or a PowerPC based computer. Additionally, the Finder does not recognize the memory allocation settings of native applications. To do so, it requires the PowerPC Finder Update (7.1.2 or 7.5) or Finder Update (7.5 with System 7.5 Update 1.0). Starting your computer with extensions off disables the Update. Without the Update active, the Get Info dialog box shows the memory allocation for the application as if it were running on a 680x0 based computer.

The system software, however, sees the proper memory allocation for the native application and allocates the correct amount of memory to the application when it loads. This is why the higher memory usage appears in the About This Macintosh dialog box.

In the preceding example, ClarisWorks on a 680x0 computer has a preferred size of 950K by default. On a Power Macintosh, because it is a native application, it has a preferred size of 2,054K. Without the Finder Update, the Finder reports the first preferred size in the Get Info dialog but the System uses the second size.

Always make sure that the proper Finder Update has loaded at startup before

trying to adjust memory allocation on a native Power Macintosh application. The Finder Updates also generate the message at the bottom of the Get Info dialog explaining that memory allocations go up or down if you turn virtual memory on or off. If you do not see this message when looking at the Get Info dialog of native application, the Finder Update did not load.

The Update does not show up in the Extensions Manager control panel. You must look in the Extensions folder to confirm its presence.

This article was published in the "Information Alley":
Volume II, Issue 1, Page 7

Article Change History:
03 May 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17384



Tech Info Library

Macintosh Tutorial: Where is Part II? (5/95)

Revised: 5/19/95
Security: Everyone

Macintosh Tutorial: Where is Part II? (5/95)

=====

Article Created: 20 March 1995
Article Reviewed/Updated: 5 May 1995

TOPIC -----

Some customers have reported that they can find Part I of the Macintosh Tutorial on their hard drives, but cannot find Part II anywhere either on the System 7.5 CD-ROM or on the hard drive.

DISCUSSION -----

Part I and Part II of the Macintosh Tutorial were created in different applications and saved as different types of documents, which is causing the confusion.

Installation
=====

To make sure that the Macintosh Tutorial runs correctly, you must first run the Macintosh Tutorial Installer from the System 7.5 CD that came with your Macintosh computer. To run the Installer, double-click its icon and select Install (onto your hard drive).

Note:
The Macintosh Tutorial does not come on the System 7.5 floppy disks; it only comes on the System 7.5 CD.

The software installs a file called Macintosh Tutorial (an Apple Guide file) and a folder called Tutorial Items into the Extensions folder inside the System Folder. You cannot run the Macintosh Tutorial program directly from the CD.

Correct Way to Run Tutorial
=====

From the Finder, At Ease Not Installed

Select the Macintosh Tutorial option in the Help menu (the balloon with a question mark in the upper right of the Menu Bar). This opens an Apple Guide screen giving you the option to open Part I or Part II. If you select Part I, Apple Guide automatically opens the MacroMind Director file and runs through it.

When you quit or finish Part I, it takes you back to the initial Apple Guide Macintosh Tutorial screen, where you can select either Part I or Part II. If you select Part II, the tutorial starts into an Apple Guide tutorial (not MacroMind Director). In other words, Part II is encapsulated in the Macintosh Tutorial Apple Guide file while Part I is a stand-alone MacroMind Director file.

From the Finder, At Ease Installed

If At Ease is installed, the computer must be set to Go to the Finder at startup in order to properly access the Macintosh Tutorial through Apple Guide. If you are running At Ease, and your computer goes into At Ease at startup rather than the Finder, then you do not have access to the Apple Guide. In this case, the only access to Macintosh Tutorial is through the Tutorial Items folder, which does not find Part II because it is an Apple Guide file, not a MacroMind Director file.

NOTE:

See the TIL article titled "System 7.5: At Ease, KidDesk & Apple Guide Are Compatible" for more information about using Apple Guide with At Ease.

Incorrect Way to Run Tutorial

=====

Many users try to run the tutorial from within the Tutorial Items folder instead of using the Help menu. This folder contains a MacroMind Director file called Macintosh Tutorial Part I and its associated data files. If you double click on Part I, it opens and runs Part I of the tutorial. When you get to the end or quit in the middle, it takes you back to the Finder without the option of going to Part II. This is not the way the Macintosh Tutorial was intended to be used. It was only intended to be run from within Apple Guide.

Summary

=====

You cannot run the tutorial from the CD-ROM without first installing it onto your hard drive. Nor can you properly run the Macintosh Tutorial from inside the System Folder by double-clicking on the Part I MacroMind Director file. For the tutorial to run properly, you must run it from the Help Menu. This is the only way you can "find" and run Part II of the tutorial.

This article was published in the "Information Alley":
Volume II, Issue 1, Page 9

Article Change History:

05 May 1995 - Added information about Macintosh Tutorial only coming on CD.

03 May 1995 - Added keyword; made minor technical updates.

31 Mar 1995 - Added information about At Ease.

Support Information Services

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Tech Info Library Article Number:17385



Tech Info Library

AWS 95: Install Oracle on Raw Slice or Free Slice 3 (3/95)

Revised: 3/20/95
Security: Everyone

AWS 95: Install Oracle on Raw Slice or Free Slice 3 (3/95)

Article Created: 20 March 1995

TOPIC -----

On an Apple Workgroup Server (AWS) 95 I have a question about an Oracle installation and partitions. I've been told that Oracle data drives require a raw partition, and are not mounted as a mount point. Is this true?

DISCUSSION -----

Oracle does work in a raw partition, however, Oracle does NOT require a raw partition. Oracle will work fine on a free UNIX Slice 3 partition.

Oracle Tech Support suggests using a Slice 3 partition instead of a Raw partition. They claim the increase in speed with a Raw partition is not worth the trouble for Macintosh users to deal with UNIX directly. It's much easier for most users to be in the familiar Macintosh environment to manipulate their Oracle Database files.

Below are some of the advantages and disadvantages of both:

Raw Slice

Advantages:

- Fastest access to hard drive (no file system overhead)

Disadvantages:

- Have to use tar or other UNIX utilities to backup partition
- Can't use Finder to see directory structure

Free UNIX Slice 3

Advantages:

- Can use Retrospect to backup the partition
- Can use finder to navigate file structure

Disadvantages:

- Slightly slower

Support Information Services

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Tech Info Library Article Number:17386



Tech Info Library

PowerBook 500 series: Battery Identification (3/95)

Revised: 3/20/95
Security: Everyone

PowerBook 500 series: Battery Identification (3/95)

Article Created: 20 March 1995

TOPIC -----

This article describes the differences between the PowerBook 500 series batteries.

DISCUSSION -----

Rev A

BP416 or earlier, no dot.

Rev B

BP417 or later, no dot.

Rev C

BSxxx, BP with black dot

Rev D

BSxxxxxxxxxD

Manufacturer code

BP = Panasonic
BS = Sanyo

Support Information Services

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Tech Info Library Article Number:17387



Tech Info Library

Apple LocalTalk Bridge 2.0: Read Me (4/97)

Revised: 4/28/97
Security: Everyone

Apple LocalTalk Bridge 2.0: Read Me (4/97)

Article Created: 20 March 1995
Reviewed/Updated: 9 April 1997

TOPIC -----

This article is the Apple LocalTalk Bridge version 2.0 Read Me file.

DISCUSSION -----

Contents

Using the Bridge along with other network products

- If you already have the LaserWriter Bridge installed
- If you are using the Apple Internet Router
- If you are using the SNA•ps Gateway
- If you are using MacIPX
- If you are using SoftWindows

If printers don't show up on the network

Summary of enhancements

What the LocalTalk Bridge Installer disk includes

For more network software information

Using the Bridge along with other network products

• If you already have the LaserWriter Bridge installed: Installing the LocalTalk Bridge automatically removes any existing version of the LaserWriter Bridge. Only one bridge product can operate on a computer at a time, and the LocalTalk Bridge provides all the functions of the LaserWriter Bridge, and more.

• If you are using the Apple Internet Router: Note that you can't install or use the Bridge on a computer that has the Router installed. If there is a Router on your network, be sure to install the Bridge on a computer other than the one

that has the Router software.

Also, the Apple Internet Router can run on the Ethernet or Token Ring network to which the bridge computer is connected. However, you can't run the Bridge software and the Router software on the same LocalTalk segment.

- If you are using the SNA•ps gateway: To use this release of the LocalTalk Bridge Installer with a SNA•ps gateway, use Custom Install to install TokenTalk for Token Ring 4/16 NB Card w/SNA•ps. The SNA•ps gateway is not currently supported on the Token Ring NB or Token Ring NB/c cards.
- If you are using MacIPX: The Token Ring driver is not compatible with MacIPX versions 1.1 and older. Contact Novell Technical Support to obtain newer MacIPX software that works with the Token Ring drivers on this disk.
- If you are using SoftWindows: SoftWindows versions 1.0 and 1.0.1 using SMB (NetBEUI) protocols over Token Ring aren't completely compatible with the latest version of AppleTalk. Contact Insignia Solutions to obtain the SoftWindows software update that works with the AppleTalk drivers provided on this disk.

If printers don't show up on the network

If there are printers on the network that don't appear after you install the LocalTalk Bridge, turn the printer power off and then back on again. This enables the printer to acquire a current network address.

What the LocalTalk Bridge Installer disk includes

Easy Install installs this software on your computer:

- Apple LocalTalk Bridge version 2.0
- AppleTalk version 58.1.5
- Network Control Panel version 3.0.2
- EtherTalk version 2.5.7 or TokenTalk version 2.5.7, depending on your network

You can use Custom Install to install any of these additional software products:

- Apple Built-In Ethernet version 1.0.1
- Apple Ethernet NB version 1.0.1
- Apple Ethernet LC version 1.0.1
- Apple Ethernet CS version 1.0.1
- TokenTalk version 2.5.7
- Token Ring Control Panel version 1.0.1

- Update to Token Ring driver version 2.5.2 for the TokenTalk NB Card
- Update to Token Ring driver version 1.0.2 for the Token Ring 4/16 NB and Token Ring NB/c Card
- A/ROSE 1.2.1, for use in some Token Ring configurations

For a more complete description of these items, click the "i" box that appears on the Custom Install menu. For full descriptions of these drivers and other network software information, you may want to obtain a copy of the Network Software Installer, as described in the following section.

For More Network Software Information

The Network Software Installer (NSI) contains information and software that might be of use in certain network configurations, for example, to ensure compatibility in mixed-network environments, or to remedy some network problems. You can obtain the NSI free-of-charge by requesting it through the Internet (ftp.apple.com). You can also request the Network Software Installer through the Apple Network Information Fax line at (408) 974-7977.

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Tech Info Library Article Number:17388



Tech Info Library

Ile Startup: Version 2.2.2d1 Description (3/95)

Revised: 3/20/95
Security: Everyone

Ile Startup: Version 2.2.2d1 Description (3/95)

=====

Article Created: 20 March 1995

TOPIC -----

What is the purpose of version 2.2.2d1 of the Ile Card Startup application?

DISCUSSION -----

The 2.2.2d1 version is intended for use with the Macintosh LC 575/Performa 575 computers to resolve an issue at startup. This version provides no additional functionality to computers using the Ile Card.

Support Information Services

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Tech Info Library Article Number:17390



Tech Info Library

System 7.5.1: PC Setup 1.0.2 Not Compat w/DOS Compat (10/95)

Revised: 10/23/95
Security: Everyone

System 7.5.1: PC Setup 1.0.2 Not Compat w/DOS Compat (10/95)

Article Created: 20 March 1995
Article Reviewed/Updated: 23 October 1995

TOPIC -----

When I installed the System 7.5 Update 1.0, I ended up with an older version of the PC Setup Control Panel than what I used to have. What happened?

DISCUSSION -----

The System 7.5 Update 1.0 includes PC Setup control panel version 1.0.2, which is older than the PC Setup control panel that came with Macintosh DOS Compatible computers.

If you choose the Custom Install option for the Macintosh DOS Compatible when you run the System 7.5 Update 1.0 Installer, your newer version of the PC Setup control panel is replaced. The Easy Install option leaves the newer version in your system untouched.

Older Control Panel Not Compatible

PC Setup Control Panel version 1.0.2 is not compatible with the Power Macintosh 6100, Macintosh LC 630, or Performa 640 DOS Compatible computers. The Macintosh Quadra 610 DOS Compatible, however, works fine with PC Setup Control Panel 1.0.2 or earlier, so installing the System 7.5 Update 1.0 on this computer has no affect on compatibility of the PC Setup control panel.

Reinstalling the System 7.5 Update

If you need to reinstall System 7.5 Update 1.0, please note the following installation order. To avoid reinstalling PC Setup v.1.0.2, reinstall System Software in the following order:

Step 1

Install System 7.5.

Step 2

Install software for your DOS Compatibility card. Follow the installation instructions in the DOS Compatibility ReadMe.

Step 3

Install System 7.5 Update 1.0 (Easy Install).

Step 4

Install any other software.

IMPORTANT NOTE:

Installing System 7.5 Update 1.0 prior to the installation of your DOS Compatibility software will first install PC Setup v.1.0.2, which may prevent you from proceeding with DOS installation.

Custom Install

Doing a Custom Install of either System 7.5 Update or control panels installs PC Setup v.1.0.2 on your system. This control panel is not compatible with your system. If you need to do a custom install, you must specifically exclude PC Setup v.1.0.2 by expanding the Custom Install menu selections and selecting all control panel items with the exception of PC Setup v.1.0.2. Refer to your User's Guide for instructions on using the Custom Install option.

Easy Install

An Easy Install of System 7.5 Update 1.0 does not install over the more current version of the PC Setup control panel that shipped with your system.

Article Change History:

23 Oct 1995 - Clarified Quadra 610 DOS Compatible information.

28 Sep 1995 - Added PC Setup 1.0.2 compatibility information.

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Tech Info Library Article Number:17391

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Tech Info Library

TITLE

Extensions Manager: Extensions Off Compared To Shift
Down

Article ID: 17392
Created: 3/20/95
Modified: 3/30/99

TOPIC

Does using the Extension Manger "All Off" set do the same thing as holding down the Shift key at startup?

DISCUSSION

The Extensions Manager's All Off set and restarting while holding down the Shift key do not have the same effect. Each method "switches off" or "disables" some types of extensions that the other does not.

For example, the Extensions Manager switches off Chooser extensions while holding the Shift key down during restart does not. The Extensions Manager does not show or switch off most of the more esoteric extensions, such as System Updates, whereas the Shift down restart usually does.

In general, the Shift down restart usually switches off more extensions than the Extensions Manager. When you are trying to isolate an extension conflict and are not sure if it is an Apple System extension or a third party extension, restart while holding down the Shift key.

Few third party software items use extension types that the Extensions Manager does not recognize and turn off in the All Off set. The rare exception may be a monitor or other device driver. A Shift down restart usually does not disable these extensions either. Starting up from another volume (hard drive or floppy disk) or performing a clean install allows the bypassing of these types of extensions.

This article was published in the "Information Alley": Volume II, Issue 5, Page 17

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software
Category: General OS
Sub Category: General Topics



Tech Info Library

Extensions Off: Extensions Manager Compared To Shift Down (7/95)

Revised: 7/19/95
Security: Everyone

Extensions Off: Extensions Manager Compared To Shift Down (7/95)

=====

Article Created: 20 March 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

Does using the Extension Manger "All Off" set do the same thing as holding down the Shift key at startup?

DISCUSSION -----

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This article was published in the "Information Alley":
Volume II, Issue 5, Page 17

Article Change History:

19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17392



Tech Info Library

Macintosh IIci: System Update and Daystar Digital Compat. (3/95)

Revised: 3/21/95
Security: Everyone

Macintosh IIci: System Update and Daystar Digital Compat. (3/95)

=====

Article Created: 21 March 1995

TOPIC -----

Are there any known issues with the DayStar Digital Turbo 601 and the System 7.5 Update 1.0?

DISCUSSION -----

A Macintosh IIci with the DayStar Digital Turbo 601 will not boot with the System 7.5 Update 1.0 installed if you are using a version earlier than 1.1 of the "Turbo 601" control panel.

Please contact DayStar Digital for an update.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number. You can also search the Tech Info Library using the vendors name as a search string.

Support Information Services

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Tech Info Library Article Number:17393



Tech Info Library

Power Mac: Apple Guide Doesn't Work After System Update (10/95)

Revised: 10/20/95
Security: Everyone

Power Mac: Apple Guide Doesn't Work After System Update (10/95)

=====

Article Created: 21 March 1995
Article Reviewed/Updated: 20 October 1995

TOPIC -----

I have a Power Macintosh 7100/66. Since I installed the System 7.5 Update 1.0, I have not been able to get the Apple Guides to work.

I found that if I remove the Video Guide Additions and PowerBook Additions from the Extensions folder that the Guides work fine. What's wrong?

DISCUSSION -----

This is a known issue with AppleGuide 1.2.5, which is installed by System 7.5 Update 1.0, on Power Macintosh computers. Mixins installed for features that are not present in the computer (like AV Mixins installed on a machine which has no AV technology) will cause Apple Guide to "lose contact" with the Macintosh Guide and Tutorial files, thus causing all of the Guides to no longer work.

A "Mixin" is an Apple Guide content file that merges with the main Apple Guide file to add extra options. On any Macintosh computer running System 7.5 there is a standard Apple Guide file and there may also be another Apple Guide file added to the system depending on the features of that particular Macintosh computer. For example, there could be a file called Speech Guide Additions installed when you install Plaintalk. All of the Apple Guide files may stop working if the Speech Guide Additions file is present in the Extensions folder, but Plaintalk has been removed or is not installed.

The solution is to remove the extra unnecessary Mixins that do not belong on your Macintosh computer.

The only way to mistakenly install Mixins that are not needed by your computer is to do a Custom Install of the System 7.5 Update 1.0 for ANY Macintosh. An Easy Install or Custom Install for your particular Macintosh computer will not install unnecessary Mixins.

This issue is documented in the System 7.5 Update 1.0 Read Me file. The following text is an excerpt from that ReadMe file.

Problem with Guides on Some Power Macintosh Models

If you have a Power Macintosh and have trouble opening the Tutorial, Macintosh Guide, Shortcuts, or other Apple Guide databases, you may have extra files that don't belong on your computer. To solve the problem, follow the steps below:

Step 1

Open the Extensions folder (inside the System Folder) and drag the PowerBook Guide Additions file to the Trash.

Step 2

Unless your computer is an AV model, drag the following items to the Trash:

- Video Guide Additions
- Video Player Guide Additions
- Speech Guide Additions

Step 3

Choose Empty Trash from the Special menu.

Step 4

Restart your computer.

Other Guide Mixins from Apple or third party applications may prevent the Macintosh Guide from opening. In some cases, you may need to choose which Guide is more important to you and remove any extra guides which are causing the problem.

Article Change History:

20 Oct 1995 - Added additional information on third party guides.
06 Jul 1995 - Corrected typos.

Support Information Services

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Tech Info Library Article Number:17394



Tech Info Library

DOS Compatibility Card: Adapter for Projection Equipment (3/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Adapter for Projection Equipment (3/95)

=====

Article Created: 21 March 1995

TOPIC -----

I am having problems getting the DOS Compatibility Card to sync properly to the projection equipment I am using. Is there a way to do this?

DISCUSSION -----

You can use the Sony MacView Cable Adapter (part # T-9985-647-1) to get the proper sync from both DOS and Windows. You need to use these settings on the MacView Cable Adapter:

Adapter Setting: M
Dip Switches: 1-6 OFF, 7-9 ON

The adapter can be purchased from Sony Service Parts at (800) 488-7669.

Support Information Services

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Tech Info Library Article Number:17396



Tech Info Library

Apple IP Gateway: Incompatible with Some Ethernet Cards (3/95)

Revised: 3/21/95
Security: Everyone

Apple IP Gateway: Incompatible with Some Ethernet Cards (3/95)

=====

Article Created: 21 March 1995

TOPIC -----

Is the IP Gateway incompatible with some Ethernet cards?

DISCUSSION -----

Yes, the IP Gateway seems to be incompatible with some Ethernet cards. Whenever the IP Gateway software is invoked, some Ethernet cards may cause the computer on which it is installed to lock up. You must press the restart button to get the machine running again.

The Apple IP Gateway was tested with some third-party Ethernet cards (no list is available) but obviously not with all. If you are having difficulty with your particular Ethernet card, contact the vendor for your specific card.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17397



Tech Info Library

PowerBook 500 series: Audio Playthrough from External CD (3/95)

Revised: 3/22/95
Security: Everyone

PowerBook 500 series: Audio Playthrough from External CD (3/95)

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Article Created: 22 March 1995

TOPIC -----

I have a customer who wants to play audio CD's through his internal speakers. He has a PowerBook 500 series computer and a CD300 external drive. He has the audio cables connected to the sound input port. When he attempts to select the Play Through option as described in the Macintosh guide, he does not have that option available.

How can he play audio CDs through the internal speaker? I know that this is an option on AV units and Power Macintosh computers. Why can't he get this selection on the PowerBook 500 series?

DISCUSSION -----

The Audio playthrough option will appear in Macintosh models which have an internal CD player which has the audio input connected to the logic board of the Macintosh via an internal audio cable. This connector is a four prong connector which essentially supplies the same capability as the positive and negative terminal on standard home stereo speakers right and left channel.

The computer will acknowledge this audio connector being present and provide the option for playthrough in the Sound Control panel. The PowerBook 500 series does not provide a connection for audio on it's logic board (the microphone connector does not count, see below). Because of this, it cannot monitor an audio signal from an external audio connector.

An audio connection made to the microphone port on the PowerBook 500 is unable to be monitored by the speakers of the PowerBook 500, until the signal is digitized and then played back through the speakers.

All Macintosh computers with internal CD support have the internal audio connection which will allow the playback of audio CDs through the internal speaker.

Support Information Services

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Tech Info Library Article Number:17400



Tech Info Library

Macintosh: About this Macintosh vs. Actual RAM Installed (4/95)

Revised: 4/13/95
Security: Everyone

Macintosh: About this Macintosh vs. Actual RAM Installed (4/95)

=====

Article Created: 13 April 1995

TOPIC -----

I have a Macintosh with 24MB of RAM installed but when I look in the About this Macintosh, it shows I have 24,576K installed. I don't have virtual memory enabled or RAM Doubler installed.

Where did the 576k of extra memory come from?

DISCUSSION -----

The discrepancy arises in the translation from base 2, which the computer uses, to base 10 which people use. In base 10 the easiest number to deal with divide easily by 10 such as 100, 1000, 10,000 etc. In base two the easiest number to deal with differ such as 128, 256, 1024 etc.

A thousand bytes, commonly called a kilobyte, is not exactly a 1000 bytes (base 10) but rather 1,024 bytes (base 2). Likewise a million bytes, commonly called a megabyte, is not 1000 kilobytes (base 10) but 1,024 kilobytes (base 2).

As the amount of RAM installed increases the differences between the two numbers compounds as the table below shows:

MB	=	Kilobytes
---		-----
1MB	=	1,024
2MB	=	2,048
3MB	=	3,096
...	=	...
16MB	=	16,384
20MB	=	20,480
24MB	=	24,576

Multiplying the number or megabytes of RAM installed by 1,024 gives the total kilobytes of RAM shown in the About this Macintosh window.

Support Information Services

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Tech Info Library Article Number:17401



Tech Info Library

Power Macintosh: Oscillator Chip & Warranty Implications (5/95)

Revised: 5/9/95
Security: Everyone

Power Macintosh: Oscillator Chip & Warranty Implications (5/95)

Article Created: 22 March 1995
Article Reviewed/Updated: 9 May 1995

TOPIC -----

I have seen several advertisements for 'clock chipping' devices, sometimes referred to as "Clipper Chips", "Clock Boosters", or "Oscillator Chips" that will increase the speed of my Power Macintosh. Does Apple support the use of these products in its systems? Will they affect my Apple warranty?

DISCUSSION -----

Apple has tested its products under the conditions and environments that they were designed and intended to be used. Installing a clock accelerator device that increases the clock speed of the Power Macintosh may introduce conditions that the Power Macintosh was not designed and/or tested to handle. The results may be unpredictable or produce unreliable operation and may also cause damage to the computer.

Clock chipping devices make assumptions about the software and hardware of the systems that they are installed into. Due to slightly varying tolerances of individual components used inside the Power Macintosh, some of these assumptions prevent such a device from working properly.

In addition, installing an add-on device may present additional stresses on the Power Macintosh that may cause premature failure of certain components. There are also risks involved in the installation of a clock chipping device. As outlined in the Apple Limited Warranty included with Apple products, Apple's warranty "does not apply to damage caused by accident, abuse, misuse, misapplication, or service (including upgrades and expansions) performed by anyone who is not an Apple Authorized Service Provider; if the product has been modified without the written permission of Apple....." Any damage caused by the installation of such a device will not be covered under the Apple limited warranty.

Article Reviewed/Updated:

09 May 1995 - Changed the title to better match discussion.

Support Information Services

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Tech Info Library Article Number:17402



Tech Info Library

QuickDraw GX: Installing Printing Extensions (3/95)

Revised: 3/22/95
Security: Everyone

QuickDraw GX: Installing Printing Extensions (3/95)

=====

Article Created: 22 March 1995

TOPIC -----

This article describes installing the QuickDraw GX printing extensions that come with System 7.5 CD-ROMs (both Personal and Multi-User Kits).

DISCUSSION -----

In order to use QuickDraw GX printing extensions you must have QuickDraw GX installed. If you are not using QuickDraw GX, you cannot use the printing extensions.

Peirce Software, Inc. in conjunction with Apple Computer, provides a free copy of Peirce Paper Saver and Peirce Watermark. Peirce Paper Saver and Peirce Watermark are QuickDraw GX printing extensions that enhance your printing capabilities when using QuickDraw GX printing and applications that support the new GX printing dialogs. Peirce Paper Saver allows you to print multiple pages on a single sheet of paper. You can print handouts or thumbnail printouts in configurations of 2, 3, 4, 6, 9, or 16 pages per printout, saving you paper and hassles when printing out handouts or proofing pages. Peirce Watermark lets you choose between six different text "Watermarks" to print in outline style on top of your pages.

Installations instructions
=====

Step 1

Drag the Peirce Paper Saver and Peirce Watermark files from the QuickDraw GX Extras folder on the System 7.5 CD to your system folder (or to the extensions folder inside your system folder).

Step 2

Restart your Macintosh.

Step 3

After doing this you will be able to use Peirce Paper Saver and Peirce Watermark with any applications that support the new QuickDraw GX printing dialogs (such as the Finder, SimpleText, and third party applications) by clicking on the "More Choices" button on the left side of the printing dialog to see the installed GX printing extensions. You will also be able to access additional instructions and information directly from the Peirce Paper Saver and Peirce Watermark dialogs by clicking on the "More Info" button.

For technical support on Peirce Paper Saver or Peirce Watermark call Peirce Software, Inc.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17403



Tech Info Library

Peirce Software, Inc.

Revised: 3/22/95
Security: Everyone

Peirce Software, Inc.

=====

Article Created: 22 March 1995

Peirce Software, Inc.

719 Hibiscus Pl., Ste. 301
San Jose, CA 95117

408-244-6554 (Technical Support)
800-828-6554 (Sales)
408-244-6882 (fax)

Company Profile: Peirce Software produces software for the Macintosh. Their titles include Peirce Printing Tools, and Smoothie.

Support Information Services

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Tech Info Library Article Number:17404



Tech Info Library

LaserWriter 8.2: Read Me File (8/95)

Revised: 8/22/95
Security: Everyone

LaserWriter 8.2: Read Me File (8/95)

=====
Article Created: 22 March 1995
Article Review/Updated: 22 August 1995

TOPIC -----

This article contains the LaserWriter 8.2 Read Me file.

DISCUSSION -----

Information About LaserWriter 8 Printer Driver Version 8.2

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference.

The software on this disk includes version 8.2 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This document includes information about the software, as well as about several of the printers.

Installing the Printer Driver Software

The manual that comes with your printer contains detailed installation instructions. You cannot install the software by dragging their icons; you must use the Installer program as described in the printer manual.

Please note: before installing the printer software, you should restart your system with all Extensions turned off. To do this, hold down the Shift key while you restart your computer.

The Installer does not remove versions of the LaserWriter printer driver that are older than version 8.0. You may remove these files from your System Folder if you no longer need them.

The Installer does remove older versions of the LaserWriter 8 driver (for example, LaserWriter 8.0) and replaces the PPD files for Apple LaserWriter

printers with the latest versions.

When you choose Easy Install, the Installer places the following files in the System Folder on your hard disk. LaserWriter 8 is placed in the Extensions folder. The PPD files which are used by LaserWriter 8 are in a folder called Printer Descriptions also located in the Extensions folder. The Apple Printer Utility and LaserWriter Utility are placed in the System Folder.

Please note: if the Installer is unable to remove old files from your hard disk, it will terminate the installation procedure. If this happens, please remove old copies of the LaserWriter 8 driver and the PPD files. Run the installer again.

About PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, click the Setup button in the Chooser when selecting your printer for the first time, or after installing an additional option. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

About Creating EPS Files

You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other applications that create their own PostScript code may not display the EPS file accurately on the screen.

About the LaserWriter Utility and the Apple Printer Utility

Installing the LaserWriter 8 driver and printer software places the Apple Printer Utility program in your System Folder. The Apple Printer Utility program is designed to work with the LaserWriter 16/600 PS printer and succeeding releases of new printers.

To configure and work with previously released LaserWriter models, use the

LaserWriter Utility that came with your printer. The LaserWriter Utility is also provided on your printer software disks. You can install the LaserWriter Utility on your computer's hard disk by using the Custom install option of the Installer.

Using the LaserWriter 8 Driver With LaserWriter Printers

When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- The LaserWriter 8 driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text in some documents reflows or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.
- Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless the Unlimited Downloadable Fonts option is selected in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.
- Printing multiple documents with the Finder may not work if the documents have been created by different application programs.
- If you encounter a time-out (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

LaserWriter IIg and IIx

- When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter IIx/IIg printers to be more compatible with other Apple LaserWriter printers. If your legal-sized documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.
- Some form-printing applications cannot print forms using the Layout settings in the Page Setup dialog box.

LaserWriter IINT and IINTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.
- Do not use the B5 tray to print envelopes on a LaserWriter IINT. Use the letter tray instead.

LaserWriter Pro 600 and 630

- You cannot use Auto Select as the Paper Source in the Print dialog box to print envelopes from the optional envelope feeder.
- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter Pro 810

- With some graphics applications, bitmapped graphics will be reduced by 25% in size when printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box.
- When you create a PostScript file with a LaserWriter Pro 810 selected as the printer and send the file to a printer that uses PostScript Level 1, a PostScript error will occur.

LaserWriter 16/600 PS

- If Tray Switching is turned on and you have installed the optional 500-sheet feeder, and it contains the same paper size as the 250-sheet feeder, you should set up the driver to use the 500-sheet feeder as the preferred paper source for optimal printing performance. See Chapter 5 in the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.1.1 or later.

Using the LaserWriter 8 Driver With Application Programs

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- With many applications, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.

Aldus Freehand 4.0

- Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

- EPS files created using the LaserWriter 8 driver from within Freehand cannot be used in other programs.

Aldus PageMaker 5.0

- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if fonts Geneva, New York or Monaco are used.

CricketDraw III 2.01

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Manager 1.4

- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

Lotus 1-2-3 1.1

- Text printed with the Outline or Shadow text style appears filled with gray.

MacDraft 3.01 and earlier versions

- When you print using the Cut Marks option, a PostScript error results.

Microsoft PowerPoint 3.0

- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Painter 2.0

- When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0

- When printing using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

RagTime 3.2

- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 with the LaserWriter 8 printer driver; earlier versions will not work.
- You cannot print documents that use pen patterns.

Studio/8 & Studio/32

- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0

- When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.

How to Get Updated Printer Software

If you need to update your printer software and you have an AppleLink account, you can obtain the latest versions of the LaserWriter 8 software from AppleLink.

Follow this path to locate the LaserWriter 8 software:

Apple Products

Apple Software Updates

Macintosh
Printing Software

The latest LaserWriter 8 software is also available from Apple's ftp site on the Internet. The path is:

/ftp/dts/mac/sys.soft/laserwriter.8.2.

Article Change History:
22 Aug 1995 - Made minor corrections.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17405



Tech Info Library

System 7.5: Progress Bar and Welcome To Macintosh Screen (3/95)

Revised: 3/22/95
Security: Everyone

System 7.5: Progress Bar and Welcome To Macintosh Screen (3/95)

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Article Created: 22 March 1995

TOPIC -----

I have noticed that in System 7.5, when I invoke the Extensions Manager during startup, only the progress bar shows up and not the complete Welcome to Macintosh screen. The same thing happens if I have a StartUpScreen file in my system folder.

Does this indicate a problem?

DISCUSSION -----

System 7.5 Update 1.0 resolves the problems you described. We have verified that a 32 bit color StartUpScreen on a PowerBook 540c with System 7.5 Update 1.0 has the start up process displayed as expected.

also, when you invoke Extensions Manager at startup, there is no floating progress bar when the Extensions Manager window closes and the startup process is continued.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17406



Tech Info Library

LaserWriter 16/600: Printing From UNIX, Troubleshooting (3/95)

Revised: 3/22/95
Security: Everyone

LaserWriter 16/600: Printing From UNIX, Troubleshooting (3/95)

=====

Article Created: 22 March 1995

TOPIC -----

The files I send to my LaserWriter 16/600 PS are not being printed, or they are not being printed correctly. How can I correct this?

DISCUSSION -----

The first thing to check is the LaserWriter setup. UNIX administrators know how to set up the /etc/printcap file, but they assume the printer does not need configuration for text.

The LaserWriter 16/600 PS defaults to PostScript as the TCP/IP mode, however, PostScript cannot handle text files. PCL5 handles text files, so the TCP/IP mode should to be changed to PCL5. If PostScript is also expected from this printer, choose AutoSelect. Here are the instructions:

Step 1

Move the configuration switch located above the Parallel port on the back of the printer to the up position.

Step 2

Launch the Apple Printer Utility.

Step 3

Open the Communication Configuration category.

Step 4

Open the Up Switch Position category (Custom)

Step 5

Set the TCP/IP mode to AutoSelect

Step 6

Press the Send button

Also check the `/etc/printcap` file. Follow the example on page 125 of the "Apple LaserWriter 16/600 PS: Setting Up, Connecting, and Using Your Printer" manual that came with your LaserWriter 16/600 PS. More specifically, check the type to which "rp" is set. If "rp=text" and the printer is not working correctly, try "rp=raw", or visa-versa.

More in-depth information on setting up the `/etc/printcap` file can be found in the Tech Info Library article "LaserWriter 16/600 PS & Sun Solaris Through TCP/IP".

Support Information Services

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Tech Info Library Article Number:17408



Tech Info Library

PowerTalk Direct Dialup Read Me (3/95)

Revised: 3/22/95
Security: Everyone

PowerTalk Direct Dialup Read Me (3/95)

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Article Created: 21 March 1995

TOPIC -----

This article is the PowerTalk Direct Dialup Read Me.

DISCUSSION -----

PowerTalk Direct Dialup Mail allows you to send mail between two computers connected via modem. For instructions on the use of PowerTalk Direct Dialup Mail, please refer to the "PowerTalk User's Guide." To use Direct Dialup mail, you need to have PowerTalk and Direct Dialup mail installed and a modem connected to your Macintosh or PowerBook.

Installation and Compatibility

Apple Remote Access (ARA) 1.0 is not compatible with Direct Dialup mail. It is automatically removed from your hard disk when you install Direct Dialup mail. To use ARA with Direct Dialup mail, you must upgrade to Apple Remote Access version 2.0 or later.

ARA MultiPort Server is not compatible with Direct Dialup mail. Do not install both ARA Multiport Server and Direct Dialup mail on the same computer.

Support Information Services

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Tech Info Library Article Number:17409



Tech Info Library

QuickTake 150: Specifications (9/96)

Revised: 9/17/96
Security: Everyone

QuickTake 150: Specifications (9/96)

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Article Created: 22 March 1995
Article Reviewed/Updated: 17 September 1996

TOPIC -----

This article provides the specifications of the Apple QuickTake 150 digital camera.

DISCUSSION -----

Image

24-bit color

Memory

1MB of FLASH EEPROM stores up to 32 standard-resolution images, 16 high-resolution images or a combination of high- and standard-resolution images

Storage time: up to one year

Resolution

- 640 by 480 pixels (for both high- and standard-quality)

Optics

- Fixed-focus lens
- Lens Field of view: 8 mm (equivalent to 50-mm lens on a 35-mm camera).
- ISO: equivalent to approximately ISO 85
- Focus range: 4 feet to infinity
- Focus range with closeup lens: 10-14 inches
- Aperture from f2.8 to f16
- Optical viewfinder

Speed

- Shutter speed: from 1/30 to 1/175 of a second
- Cycle time: average 4 seconds
- Self-timer: 10 seconds

Built-in Flash

- Three modes: Automatic, On, or Off
- Range 4 to 9 feet
- Range with close-up lens: 10-14 inches
- Flash cycle time: 7 seconds

Power

- Includes three AA lithium batteries
- Supports three 1.5 V AA, R6P, LR-6, or SUM-3 NiCad or lithium batteries
- Optional AC adapter (use only the QuickTake AC adapter M2851LL/A or the Macintosh PowerBook AC Adapter M4662LL/A)
- Optional QuickTake Batter Booster Pack (M265G/A)

Note:

1.5 V Alkaline batteries are NOT compatible with the QuickTake 150 camera and can damage the camera if used.

Interface

- Serial port supporting connections to a Macintosh and PC-Compatible:
 - RS-422 serial for the Macintosh printer or modem port
 - RS-232C serial for the PC-compatible serial port (COM1-COM4)

User Controls

- Shutter release, resolution, flash, self-timer, and Erase All Images

LCD Status Window

- Number of images that have been taken
- Number of images remaining
- Resolution, flash, and self-timer settings
- Erase All Images
- Battery level

Operating Environment

- Operating - 0 to 40 deg. C (32 to 104 deg. F)
- Storage (6 months) - -40 to 47 deg. C (-40 to 117 deg. F)
- Transit (72 hours) - -40 to 65 deg. C (-40 to 149 deg. F)
- Humidity - 20 to 95 percent, non-condensing
- Altitude - No limitation other than specified temperature and humidity limits

System Requirements

=====

Macintosh

- A Macintosh with a 68020 or higher central processing unit (any Macintosh except a Macintosh Plus, SE, Classic, Portable, or Powerbook 100)
- System software version 7.1 or a later version
- If you have system software version 7.1 or 7.1.2, it is recommended that you have at least 4 MB of RAM with 8 MB of virtual memory or 8 MB of RAM.
- If you have system software version 7.5, it is recommended that you have at least 8 MB of RAM.
- Hard drive with at least 10 MB available

Windows

- An IBM or IBM-compatible personal computer with an 80386 or later processor
- Windows version 3.1, 3.1.1 for WorkGroups, or Windows NT 3.5
- MS-DOS 3.3 or later
- 2 MB of available RAM
- 3.5-inch, 1.44 MB floppy disk drive
- A hard drive with at least 10 MB available

QuickTake 150 Contents

QuickTake 150 camera
Closeup lens
Macintosh serial cable
Neck strap
Batteries
QuickTake software

QuickTake 150 Accessories

QuickTake Travel Case (M2848G/A)
QuickTake Battery Booster Pack (M2655G/A)
QuickTake AC Adapter (M2851LL/A)
QuickTake Connection Kit for Windows (M3793LL/A)

Article Change History:

17 Sep 1996 - Minor typographical correction.
25 Oct 1995 - Added alkaline battery note.
25 Apr 1995 - Corrected resolution and added Windows requirements.

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Tech Info Library Article Number:17410



Tech Info Library

QuickDraw 3D: Questions and Answers (3/95)

Revised: 3/22/95
Security: Everyone

QuickDraw 3D: Questions and Answers (3/95)

Article Created: 22 March 1995

TOPIC -----

This article provides questions and answers about QuickDraw 3D.

DISCUSSION -----

Question: What are you announcing?

Answer: The February announcement is a technology announcement with regards to QuickDraw 3D and Apple's new 3D metafile format (3DMF)

Question: What is QuickDraw 3D?

Answer: QuickDraw 3D is a system extension for creating, manipulating, rendering, and sharing 3D graphics. It consists of human interface guidelines and toolkit, a 3D file format, a high-level geometry engine, a shading and rendering architecture, and a device and acceleration manager for hardware acceleration.

Question: Why is Apple doing 3D?

Answer: The addition of 3D graphics technologies to the platform will enable Apple to extend its lead in the markets where we are currently strong, including publishing, multimedia authoring, and education, by providing these customers with next-generation 3D solutions. It will also make Apple even more competitive in the technical markets as well as in the rapid growing consumer markets, where games and entertainment are all using 3D graphics.

Question: When will it be available?

Answer: Apple expects to ship the software this summer.

Question: How will it be distributed?

Answer: QuickDraw 3D will be licensed to developers for shipment with their applications, shipped on the hard disk of new Power Macintosh computers, and integrated into the next major system software release, Copland.

Question: What about 680x0 Macintosh computers?

Answer: QuickDraw 3D is the first new software designed to take advantage of the PowerPC chip, and as such is not designed to run on 68K machines. However, the file format is designed for ANY platform; therefore, 68K-based applications will be able to read and write 3D data—they will display and manipulate the data with their own software, as they do today.

Question: Will it be cross-platform?

Answer: Yes. Apple has made the commitment to release a Windows version QuickDraw 3D roughly six months after the release of QuickDraw 3D 1.0 for versions of MacOS running on PowerPC.

Question: What are developers saying about it?

Answer: To date, developer support has been outstanding. Both major hardware and software developers are announcing support to the technology. QuickDraw 3D has also attracted some new players to the MacOS running on the Power Macintosh platform.

Question: What is the minimum configuration?

Answer: The minimum configuration is:

- A PowerPC processor
- Macintosh System 7.1.2 (or later)
- A hard drive
- 16MB of DRAM

Question: Will QuickDraw 3D support OpenDoc?

Answer: Yes. If a developer decides to make a 3D part with QuickDraw 3D, then any OpenDoc container will get 3D functionality without further modification!

Question: What is the difference between QuickDraw 3D and QuickTime VR?

Answer: QuickDraw 3D helps developers in the creation and rendering of synthetic 3D graphics. QuickTime VR is a very sophisticated playback engine that enables developers to stitch together either photographs or pre-rendered 3D scenes so

that they can be "navigated" interactively.

Question: How does QuickDraw 3D compare to OpenGL?

Answer: The QuickDraw 3D API addresses the needs of developers and customers by providing user interface guidelines, a high-level geometry engine, an extensible shading and rendering architecture, and a file format. OpenGL provides support for low-level geometry and rendering.

Support Information Services

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Tech Info Library Article Number:17411



Tech Info Library

Apple Education Series: Early Versions Require Password (12/95)

Revised: 12/20/95
Security: Everyone

Apple Education Series: Early Versions Require Password (12/95)

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Article Created: 22 March 1995
Article Reviewed/Updated: 20 December 1995

TOPIC -----

I cannot seem to reinstall my Apple Early Childhood Connections software without a password. I do not remember the password and it does not seem to be published anywhere. Where can I get it?

DISCUSSION -----

Early versions of Apple Education Series bundles required a password for reinstalling the software from the backup CD-ROM discs.

These bundles include:

- The Apple Early Language Connections bundle
- The Apple Early Childhood Connections bundle
- The Biology Bundle

You can call the Education Support Group at the Apple Assistance Center (800-SOS-APPL). They will provide the password for the time frame during which the bundle was purchased. Due to security reasons, Apple does not publish these passwords.

Beginning in October 1995, the following software bundles were no longer pre-installed on your hard drive and shipped on CD-ROM disc only. Versions of these bundles released after October 1995 can be installed or reinstalled without a password:

- The Apple Early Language Connections bundle
- The Apple Early Childhood Connections bundle
- The Apple Spanish Language Connections bundle

Article Change History:

20 Dec 1995 - Updated support group's official name.

28 Nov 1995 - Updated which bundles require password.

Support Information Services

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Tech Info Library Article Number:17412



Tech Info Library

QuickDraw GX 1.1.1: System Crashes at Finder Launch (3/95)

Revised: 3/22/95
Security: Everyone

QuickDraw GX 1.1.1: System Crashes at Finder Launch (3/95)

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Article Created: 22 March 1995

TOPIC -----

I am experiencing a consistant crash at the Finder launch after installing QuickDraw GX 1.1.1. I have tried removing all of my extensions and nothing has changed.

DISCUSSION -----

Start up with Shift key held down. Then remove the Finder Preferences file from the System Folder's Preferences folder.

If you have and know how to use ResEdit or a similar editing program you can just remove all 'sgci' resources from a copy of the Finder Preferences file and replace it. This latter approach preserves all other Finder preferences.

WARNING:

The instructions in this article refer to using ResEdit to alter your system software. Apple Computer, Inc., is not liable for any damage done to your software through the use of ResEdit to alter the software. The User Assistance Center phone representatives (at 800-SOS-APPL) do not provide technical support for ResEdit. It is supported by APDA. For contact information on APDA, search the Tech Info Library under "APDA".

Support Information Services

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Tech Info Library Article Number:17413



Tech Info Library

Blind Dialing Problem With Express Modem II v1.5.4 (3/95)

Revised: 3/22/95
Security: Everyone

Blind Dialing Problem With Express Modem II v1.5.4 (3/95)

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Article Created: 22 March 1995

TOPIC -----

I have a problem concerning the blind dialing capability of the Express Modem (version 1.5.4). When I check the box "without dial tone detection," the modem does not dial. Instead a dialog box appears in the screen saying that modem could not acquire dial tone.

This problem appears only in the PowerBook 500 Series (520 and 540c tested). Also we believe that the problem appears only in the European modem version because we have tested it in the U.S. and the European modem was (Express Modem II) working properly.

Could you please tell me if there is any possible workaround for this?

DISCUSSION -----

The problem you are experiencing is not tied to a specific Express Modem hardware. It depends on what country settings you are currently using with your Express Modem software. On a PowerBook 200 Series (Duo) the country settings are controlled by an external DAA country code. On a PowerBook 500 Series with Express Modem II the System software country code controls the settings.

There are countries like France and Spain where PTT protocols do not allow blind dialing. Hence, the atx3 command or EM CDEV checkbox have no effect in these countries. If you are using Express Modem v1.5.4, only the ';d' "hack" works to enable blind dialing in this situation.

In next release of the Express Modem software (v2.0) the checkbox will not be displayed when you are in a country where the feature is not allowed.

Workaround

Put ;d in the Dial Prefix box or as the first two characters of the phone number (for example, ;d5551212). This will force the modem to blind dial.

Support Information Services

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Tech Info Library Article Number:17415



Tech Info Library

PowerBook: Text to Speech from PlainTalk (3/95)

Revised: 3/23/95
Security: Everyone

PowerBook: Text to Speech from PlainTalk (3/95)

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Article Created: 23 March 1995

TOPIC -----

I used to be able to have my PowerBook read files out loud using SimpleText, but now the Sound menu items are dimmed. I've reinstalled the System software but SimpleText won't talk anymore.

What file is missing and how do I get it installed?

DISCUSSION -----

The PlainTalk Product consists of two parts. Part one is related to speech input and only functions on Quadra AV models and Power Macintosh computers. Part two is related to speech output and is referred to as TTS or Text-to-Speech.

Text-to-Speech is currently shipping with PowerBook 200 & 500 models. It can be acquired from an Apple Software updates site and installed on any PowerBook, though.

The TTS software is included in the Extras / Apple Extras folder. A minimum installation is just the Speech Manager extension which supplies the built-in "Fred" voice. If more voices are desired and the machine has enough memory to support them, then the MacinTalk Pro extension and the Voices folder can be copied to the Extensions folder for additional voices.

Support Information Services

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Tech Info Library Article Number:17416



Tech Info Library

Power Macintosh 6100 DOS Compatible Card: Memory Map (3/95)

Revised: 3/23/95
Security: Everyone

Power Macintosh 6100 DOS Compatible Card: Memory Map (3/95)

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Article Created: 23 March 1995

TOPIC -----

Is it possible to get a memory map of the DOS Compatibility Card for the Power Macintosh 6100? Many of the conventional memory monitors don't work, so it would be useful to understand how things are mapped.

DISCUSSION -----

Here's what the DOS Card memory map looks like.

	Address	Address	Address
Region	Range Hex	Range KB	Size KB
BIOS	F000-FFFF	960-1024	64
Free UMB	E000-EFFF	896-960	64
EMS Frame/Free UMB	D000-DFFF	832-896	64
Read-only Block	C980-CFFF	806-832	26
Option BIOS	C800-C97F	800-806	6
Video BIOS	C000-C7FF	768-800	32
Video Buffers	A000-BFFF	640-768	128
Conventional RAM	0000-9FFF	0-640	640
			1024

Support Information Services

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Tech Info Library Article Number:17418



Tech Info Library

Composite/S-Video: Maximum Cable Length (3/95)

Revised: 3/23/95
Security: Everyone

Composite/S-Video: Maximum Cable Length (3/95)

Article Created: 23 March 1995

TOPIC -----

I have a customer who wants to use the Apple Presentation System in their school. They want to wire the building for S-Video. Is there a maximum S-Video cable length restriction for the Apple Presentation System, from the box to the video monitor?

DISCUSSION -----

Generally speaking, the video industry has not defined limits for the maximum length of composite or S-video cables (whether they are attached to the Apple Presentation System, or any other video source, like a VCR).

Composite and S-video cables carry an analog video signal. Due to the characteristics of these signals, they can travel over much longer cables, with much less degradation, than, for example, digital data on a Macintosh SCSI bus.

As longer cables are used, an analog video signal will become weaker and have less quality. How weak the signal gets depends on the quality of the cable. If the customer connected a 500-foot cable to the Apple Presentation System, a weak video signal may still be visible on the attached video monitor.

Since digital signals cannot usually afford to "lose" data due to low quality, the cables must have a specified maximum cable length, over which 100% of the data is guaranteed to travel. This is why there are cable length specifications for technologies like SCSI, ADB, and LocalTalk.

Here's the bottom line:

Although we are not aware of a length specification for this kind of cable, it is probably a good idea to use cables that are shorter than about 50 feet. However, it's possible to use high quality cables that are 100 feet, or longer, without a perceptible loss in signal quality. The customer will see the "best" performance when using the shortest cables.

If your customer finds that they are unable to get a high quality video signal using longer cables, they could also consider using a video distribution amplifier. Video distribution amplifiers take an incoming video signal, such as from the Apple Presentation System, and boost it, so that it can travel over greater distances. These devices are usually available from high-quality video equipment dealers.

Support Information Services

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Tech Info Library Article Number:17419



Tech Info Library

Edmark Corporation (5/95)

Revised: 5/16/95
Security: Everyone

Edmark Corporation (5/95)

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Article Created: 23 March 1995
Article Reviewed/Updated: 16 May 1995

Edmark Corporation

6727 185th Ave. NE
PO Box 3218
Redmond, WA 98073

206-556-8407

206-556-8484 -- Main number

206-556-8480 -- Tech support

206-556-8998 (fax)

Internet: support@edmark.com

Company Profile:

Specializes in educational software for children. Products include: KidDesk, TouchWindow, Bailey's Book House, Millie's Math House.

Article Change History:

16 May 1995 - Added tech support number

Support Information Services

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Tech Info Library Article Number:17420



Tech Info Library

Apple Adjustable Keyboard: Caps Lock with Microsoft Apps (3/95)

Revised: 3/23/95
Security: Everyone

Apple Adjustable Keyboard: Caps Lock with Microsoft Apps (3/95)

=====

Article Created: 23 March 1995

TOPIC -----

I am using the Apple Adjustable Keyboard with Caps Lock active. I launch Microsoft Word and halfway thru launching, the LED indicating that Caps Lock is active goes off.

The keyboard remains in Caps Lock although the LED is off. If I press the Caps Lock key again, the LED comes on and Caps Lock is still active. If you press Caps Lock again, it will go to lowercase and the LED turns off.

Is there a fix to this problem?

DISCUSSION -----

This problem only seems to occur with the Apple Adjustable Keyboard and Microsoft Word 6.0, Excel 4.0, and Excel 5.0. It does not occur with Word 5.1a.

Microsoft Technical Support stated that the problem with the Caps Lock on the Apple Adjustable Keyboard has not been addressed at this time. The upcoming Microsoft Word and Excel maintenance releases do not fix this problem.

Microsoft Technical Support added that they expect to resolve this problem in a future release of their software.

Support Information Services

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Tech Info Library Article Number:17421



Tech Info Library

QuickTake 2.0 Software: List of Files Installed (3/95)

Revised: 3/23/95
Security: Everyone

QuickTake 2.0 Software: List of Files Installed (3/95)

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Article Created: 23 March 1995

TOPIC -----

What are the different files installed by the QuickTake 2.0 software?

DISCUSSION -----

The QuickTake 2.0 software installs two main sets of files.

First, it installs the PhotoFlash 2.0 application software, which is now used to access and manipulate the images stored in a QuickTake camera. PhotoFlash is now used instead of the QuickTake application, which came with version 1.0 of the QuickTake software.

Second, the QuickTake installer also puts several files in the System Folder. Here is a brief explanation of those system files:

- ColorSync 1.0.5 (system extension) -- The ColorSync software is used to get the best quality color output from your QuickTake digital camera.
- ColorSync System Profile 1.0.5 (control panel) -- This file is used to choose the ColorSync System Profile that matches the main monitor to which the Macintosh is attached.
- Foreign File Access 5.0 (system extension) -- This file is used for mounting non-Macintosh volumes in the Finder. It is used with the "QuickTake Access" file to read images from the QuickTake camera.
- GeoPort Serial Driver 2.0 (Shared Library Manager document) -- This file contains the serial driver needed for the Macintosh to communicate with the QuickTake digital camera.
- PhotoFlash Camera Utilities 2.0.1 (AppleScript scripting addition) -- This file contains QuickTake Scripting Additions used by PhotoFlash scripts for accessing a QuickTake digital camera.

- QuickTake Access 2.0 (Foreign File Access document) -- This file works with Foreign File Access to access the QuickTake camera as a volume on the desktop, just like an AppleShare volume. This file gives Foreign File Access the necessary information to access the camera as a regular Macintosh volume.
- QuickTake Camera 2.0 (system extension) -- This file contains the driver needed for your Macintosh to communicate with the camera.
- QuickTake Image 2.0.1 (system extension) -- This file contains the QuickTime decompressor component for viewing QuickTake images.
- QuickTake Image Access 2.0 (control panel) -- This file makes it possible to mount the camera on your desktop.
- QuickTime 2.0 (system extension) -- This file contains the software necessary for decompressing QuickTake images with the QuickTake Image extension.
- Serial Extension 2.2 (Shared Library Manager document) -- This file contains additional serial port configuration information, so that the Macintosh can communicate with the QuickTake digital camera.
- Shared Library Manager 1.1.2 (system extension) -- This file is used to load the GeoPort Serial Driver and Serial Extension files.

Support Information Services

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Tech Info Library Article Number:17422



Tech Info Library

Extension Versions Inconsistent After Update (4/95)

Revised: 4/7/95
Security: Everyone

Extension Versions Inconsistent After Update (4/95)

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Article Created: 23 March 1995
Article Reviewed/Updated: 7 April 1995

TOPIC -----

Users who have updated their operating system with Network Software Installer 1.5 or System 7.5 Update 1.0 may have versions of extensions and control panels inconsistent with the installed update.

DISCUSSION -----

One likely cause can be that disabled extensions and control panels are NOT being updated. The installer does not look for extensions or control panels in unusual locations like the Extensions (Disabled) or Control Panels (Disabled) folders. Users who use Extension Manager or similar third-party software should complete the following steps to ensure a proper and complete update when running the installer:

Step 1

Turn all extensions and control panels ON with the Extension Manager control panel.

Step 2

Restart and hold the shift key down to keep extensions from loading. Even though extensions do not load into RAM during startup, they reside in the Extensions folder where the installer can find them.

Step 3

Run the update installer.

Article Change History:
07 Apr 1995 - Made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17423



Tech Info Library

AppleSearch 1.5 and Searches with Wildcards (11/95)

Revised: 1/4/96
Security: Everyone

AppleSearch 1.5 and Searches with Wildcards (11/95)

=====

Article Created: 24 March 1995
Article Rewviewed/Updated: 20 November 1995

TOPIC -----

We have an issue with AppleSearch using wildcards. We are attempting to put our HR records into AppleSearch. We have noticed a number of occurrences of wildcards not working very well. One glaring example is the variations of the word manage. For example, management will not be found with any wildcards except for managemen*, and even then does not find many of the hits that using management will find. What am I doing wrong?

DISCUSSION -----

At the heart of this issue is the stemming technique used by AppleSearch for search strings. When you enter a wildcard string, you expect AppleSearch to use the entire string, as entered, and the wildcard to find matches. Unfortunately AppleSearch does not do this. It first stems the string and then places the wildcard. It then uses this string to search the index, where the index is composed of stemmed references to document text. This is how a search for "representing" can find such words like represent, represents, and representative. AppleSearch stems representing to "repres", as do the words represent, represents, and representative. In essence, AppleSearch believes these words are the same, because its index only contains the stemming results, not the whole string.

Unfortunately, stemming is not always a predictable science. From your example, we will use the manage* string. Stemming of this string produces "manage*". However, many of the words desired by the search (such as management, manager, managing, and so on) stem to manag, which is why many of the expected hits are not returned.

Here is a general guideline that should be useful for users that are having problems with search strings:

In general, wildcards are not necessary for AppleSearch queries as stemming

provides the same results. When wildcards are unavoidable, try to make the provided information as small as possible, usually four or five characters maximum.

Article Change History:

20 Nov 1995 - added new keyword and reviewed for technical accuracy.
Support Information Services

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Tech Info Library Article Number:17424



Tech Info Library

System 7.5: PageMaker Can't Place From Scrapbook Files (3/95)

Revised: 3/23/95
Security: Everyone

System 7.5: PageMaker Can't Place From Scrapbook Files (3/95)

=====

Article Created: 23 March 1995

TOPIC -----

I have a customer who was running PageMaker 5.0 on a Macintosh Centris 610 running System Software 7.1. One of the features of PageMaker is its ability to open the scrapbook file in the System Folder thereby allowing the user to place PICT and TEXT files one at a time from the scrapbook file. Under System 7.1 this PageMaker feature was working fine.

The customer has just upgraded to a Power Macintosh 8100/100AV running System Software 7.5. Now when they choose the Place command, they can no longer see the scrapbook file in the System Folder.

Why is this happening? What can this customer do to get this functionality back?

DISCUSSION -----

Problem Description

Scrapbook versions 7.0 through 7.1.2 are Desk Accessories that look for a scrapbook file of type 'scbk' in the System Folder. With the introduction of System Software 7.5, a new version of the Scrapbook is included. Scrapbook version 7.5 is now an application (instead of a DA) which looks for a scrapbook file of type 'sbkt'. New features of the Scrapbook 7.5 application include:

- A Growable/resizable window
- Application is now Drag and Drop Aware
- Gives more information about data types

PageMaker 5.0 only knows how to open the older type of scrapbook files: 'scbk'. It has not yet been updated to open the newer type of scrapbook files: 'sbkt'. PageMaker will need to be updated by Adobe/Aldus to support this new file type.

The Power Macintosh 8100/100AV ships standard with System Software 7.5 and the

new Scrapbook application. This Macintosh will not run on any operating system other than System Software 7.5. This explains why this particular user is unable to open their scrapbook file.

Workaround

Until Adobe/Aldus updates PageMaker, a solution is to change the file type of the new scrapbook file to 'scbk'. This can be done fairly easily with ResEdit or some shareware applications like File Buddy and Drop•GetInfo. After changing the file type of the Scrapbook file, PageMaker should be able to open it just as it would the older type of file.

NOTE:

If the user launches the Scrapbook application and the scrapbook file is in the System Folder, the Scrapbook application will automatically update the file and creator type to the newer type. In other words, if the customer is going to alter the scrapbook file as suggested in the workaround above, they should not keep the scrapbook file in the System Folder because the next time they open the application the file type will change back to the new file type.

WARNING:

The instructions in this article refer to using ResEdit to alter your software. Apple Computer, Inc., is not liable for any damage done to your software through the use of ResEdit. The User Assistance Center phone representatives (at 800-SOS-APPL) do not provide technical support for ResEdit. It is supported by APDA. For contact information on APDA, search the Tech Info Library under "APDA".

Support Information Services

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Tech Info Library Article Number:17425



Tech Info Library

System 7.5 Update 1.0 Install: Lose Fax LW Driver (3/95)

Revised: 3/24/95
Security: Everyone

System 7.5 Update 1.0 Install: Lose Fax LW Driver (3/95)

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Article Created: 24 March 1995

TOPIC -----

I just installed the System 7.5 Update 1.0, and lost the capability to access the Fax phone book through the LaserWriter (LW) 8.2 driver.

Where is the Fax phone book capability? Was the functionality removed?

DISCUSSION -----

System 7.5 Update 1.0 contains the "generic" LaserWriter 8.2 driver not a fax version. This driver does enable you to fax documents if you have the proper PPD for your PostScript fax equipped printer, you do not have access to the Fax Phone Book and, therefore, cannot store multiple fax destinations. The 8.2 driver will remember the last phone number you Faxed to, but if you wish to fax to a different destination, you will need to enter that phone number.

To gain access to the Fax Phone Book, you will need to use the fax LaserWriter driver that came with your printer, such as 8.1.2f or the newer 8.2f.

Support Information Services

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Tech Info Library Article Number:17427



Tech Info Library

PowerBook 280c: Hangs at Shut Down or Eject (9/95)

Revised: 9/5/95
Security: Everyone

PowerBook 280c: Hangs at Shut Down or Eject (9/95)

Article Created: 27 March 1995
Article Reviewed/Updated: 5 September 1995

TOPIC -----

When I try to shut down my Powerbook 280c Duo is shutdown , it closes all open applications and then the cursor freezes. I have to use the back button to power down the computer. Why?

DISCUSSION -----

You are using an older version of the Express Modem software. To correct this problem, use version v1.6 or greater of the Express Modem Software.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:
05 Sep 1995 - Reviewed and added where to locate information.

Support Information Services

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Tech Info Library Article Number:17438



Tech Info Library

PowerBook 280c: Global Village Power Up Issue (5/96)

Revised: 5/30/96
Security: Everyone

PowerBook 280c: Global Village Power Up Issue (5/96)

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Article Created: 27 March 1995
Article Reviewed/Updated: 30 May 1996

TOPIC -----

The PowerBook Duo 280 and 280c have seen intermittent power up problems with Global Village PowerPort Mercury modems installed. Affected units have a problem starting up on battery power. Most cases also have a large memory card installed.

DISCUSSION -----

Global Village recommends loading their modem software before installing their modem. You may need to start up using AC power the first time after installing the modem, but after that first startup, things should work fine. Here are the recommended steps to correctly install the modem.

Step 1

Make sure all Express Modem software has been removed (if applicable).

Step 2

Install Global Village modem software (v 2.08a or 2.5) BEFORE installing the modem.

Step 3

Shutdown the PowerBook Duo and install the Global Village Mercury modem following the installation instructions provided by Global Village.

Step 4

Start up the PowerBook Duo with AC adapter plugged in or in Duo Dock. You may have to try the back button two or three times to get the machine to start up. When the PowerBook has completed the startup process, the Global Village

extension downloads new power management code to correct the problem.

If you have a PowerBook with the modem installed already, Step 2 and 4 above can be done with the same end result. The only problem is getting the unit to startup to load the modem software from disk, and then rebooting again to download the new power management software. The main reason to load the modem software first, is to avoid the symptoms associated with trying to get the unit to startup with Global Village modem and no Global Village software installed.

Other possible workarounds include:

- Reset the power manager by holding these keys down while starting up: Command-Escape-d. This power manager@ similar to pressing the power button in the back of the computer for 30 seconds.
- Reset the power manager by holding these keys down while starting up: Command-Option-front power on key. This power manager reset is similar to disconnecting the internal backup battery of the computer.
- Install an Apple Express Modem.
- Replace the large RAM card with an Apple 8 MB RAM card.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

30 May 1996 - Added workaround options.

05 Sep 1995 - Reviewed and reformatted discussion.

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Tech Info Library Article Number:17441



Tech Info Library

MAE 2.0: KeyAccess Is Compatible (3/95)

Revised: 3/27/95
Security: Everyone

MAE 2.0: KeyAccess Is Compatible (3/95)

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Article Created: 27 March 1995

TOPIC -----

Is KeyAccess compatible with MAE 2.0?

Can I hold the shift key down while launching MAE and get the same result (all extensions off) as holding the shift key down while restarting a Macintosh computer?

DISCUSSION -----

Yes, MAE 2.0 is compatible with KeyAccess which lets users access applications on a KeyServer.

No, holding the shift key down does NOT disable extensions while launching MAE. An alternative is to use either the -noextensions option on the mae command line, or the Extensions Manager in MAE 2.0 which turns extensions on or off.

Support Information Services

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Tech Info Library Article Number:17448



Tech Info Library

DOS Compatibility Card: Two-Button Mouse Available (3/95)

Revised: 5/24/95
Security: Everyone

DOS Compatibility Card: Two-Button Mouse Available (3/95)

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Article Created: 27 March 1995
Article Reviewed/Updated: 30 March 1995

TOPIC -----

Are there any two-button mouse devices available for the DOS Compatibility Card that work in both the Mac OS and Windows?

DISCUSSION -----

There are several ADB multi-button mouse devices available for the Macintosh that support the DOS Compatibility Card. Logitech offers a three button version, while Kensington offers the Turbo Mouse and a new model called Thinking Mouse which is a 4 button mouse.

Both of the Logitech three button mouse and the Kensington Turbo Mouse have been tested and work with the DOS Compatibility Card. Each of these mouse devices use a control panel to map the button functions, so to use these with the DOS Compatibility Card, you need to set up the right button to represent '=' in the control panel. The configuration changes when the Control Panel is closed.

The Thinking Mouse product literature says it works with PC and Macintosh. The Control Panel appears to provide more options than other multi-button mouse devices, however it has not been tested with the DOS Compatibility Card.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
30 March 1995 - Corrected Mac OS name.

Support Information Services

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Tech Info Library

Apple MultiMedia Tuner: What it does and what it fixes (3/95)

Revised: 3/27/95
Security: Everyone

Apple MultiMedia Tuner: What it does and what it fixes (3/95)

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Article Created: 27 March 1995

TOPIC -----

This article describes the Apple Multimedia Tuner extension and what it does.

DISCUSSION -----

Apple Multimedia Tuner 2.0.1

What is the Apple Multimedia Tuner?

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The Apple Multimedia Tuner system extension includes a set of software enhancements that improve the performance and reliability of some software applications and multimedia titles that utilize QuickTime 2.0 and Sound Manager 3.0 software.

System software compatibility

The Tuner is compatible with all system software versions from System 6.0.7 through System 7.5.

Hardware compatibility

The Tuner is compatible across all CPU families that support QuickTime.

Specific problems addressed by the Apple Multimedia Tuner

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Provided workaround for incorrect movie pre-rolling by some applications

Several applications and titles, most notably titles created using Macromedia's Director, have not been properly pre-rolling movies to prepare them for playback. This resulted in jerky movie playback. Prior versions of QuickTime

were tolerant of this application bug; however, QuickTime 2.0 with its higher performance requires that movies be pre-rolled. The Tuner will help these applications by automatically pre-rolling movies under many situations.

Fixed some performance problems that resulted in "jerky" movie playback

Under low-memory conditions, some parts of the movie toolbox were not managing memory efficiently and movie playback performance was degraded. These problems were showing up in Adobe Premiere 4.0.x..

Fixed DrawPicture problem on 68K systems

Fixed problem in DrawPicture where qdErr was not being cleared in all cases. The Tuner patches DrawPicture to ensure that qdErr is always cleared on entry. This patch is only installed on 68K CPUs.

DSP Manager problem on 660AV & 840AV systems

The DSP Manager calls the Memory Manager from interrupt level. This is completely illegal to do and was causing some memory mgr errors to be lost. The Tuner patches the DSP Manager to detect and avoid this situation. Problem was originally driven by Adobe Premiere 4.0.x.

Fixed problem where some images were not being decompressed

Fixed a problem (originally driven by the New Grolier Multimedia Encyclopedia) that resulted in some compressed images not being decompressed due to a bug in the Image Compression Manager. The problem resulted in blank pictures instead of the desired image.

Unable to open Sound Channels in some "low-memory" situations

Several developers reported problems being able to open Sound Channels under certain memory conditions (mainly when there was very little System Heap available). The Tuner installs code that helps the Sound Manager find the needed memory by attempting to allocate out of the application heap.

Fixed flatten movie problem

Flattening certain types of movies would result in movies that had garbled video tracks.

Sound "break-up" problems fixed

Fixed some performance problems that were causing sound drop outs in certain situations.

Fixed problem decompressing some types of pictures

Some types of images were garbled when decompressed.

Other Problems fixed

Fixed problem importing some types of picture files

Fixed problem saving looped movies

Fixed problem with garbled movie preview displays

Fixed problem sending QuickTime movies in AppleMail

Support Information Services

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Tech Info Library Article Number:17450



Tech Info Library

Apple Multimedia Kit for PC: No Speed Switch in DOS (9/95)

Revised: 9/7/95
Security: Everyone

Apple Multimedia Kit for PC: No Speed Switch in DOS (9/95)

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Article Created: 27 March 1995
Article Reviewed/Updated: 7 September 1995

TOPIC -----

The Macintosh Apple CD-ROM Setup control panel allows you to switch the AppleCD 300 CD-ROM drive to either double or single speed. How can I do this under MS-DOS?

DISCUSSION -----

Only version 4.x.x of the Apple CD-ROM Setup software was there a speed switch for switching between single and double speed drives. This control panel was discontinued in CD-ROM Setup software versions 5.0 and beyond because engineering found that it was unnecessary.

The speed switch was never a feature of the Windows CD-ROM software driver.

Article Change History:
07 Sep 1995 - Made minor correction.

Support Information Services

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Tech Info Library Article Number:17452



Tech Info Library

Apple 350 MB Hard Disks: Buzz Sound Normal (4/95)

Revised: 4/7/95
Security: Everyone

Apple 350 MB Hard Disks: Buzz Sound Normal (4/95)

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Article Created: 27 March 1995
Article Reviewed/Updated: 7 April 1995

TOPIC -----

Periodically the hard disk in my Macintosh Performa 6115CD makes a buzzing sound. The hard drive is a 350 MB drive. Is this drive defective?

DISCUSSION -----

If you have a Macintosh computer with a 350, 500, or 700 MB hard drive, you may find that the drive periodically makes a buzzing sound. There is nothing wrong with the drive. The 350 MB drives have a feature that performs a small set of seeks after 10 minutes of idle spinning activity. This is done to increase the reliability of the drive by preventing heads from staying on a single track for a prolonged period. These seeks help to avoid accelerated wear; flying characteristics change due to debris buildup on the head or lubrication being affected. You may hear a brief buzz sound when this seek activity happens. It does not affect the drive's ability to respond quickly to host requests during that period.

Data integrity and system operation are NOT compromised by this activity, and there is no reason to replace the hard disk because of the buzzing sound.

The same mechanism is utilized in 500 MB and 700 MB 3.5-in. SCSI drives, so this feature is also included on these hard disks.

Article Change History:
07 Apr 1995 - Made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17453



Tech Info Library

LaserWriter Select 310: Legal Paper Requires RAM Upgrade (3/95)

Revised: 3/27/95
Security: Everyone

LaserWriter Select 310: Legal Paper Requires RAM Upgrade (3/95)

Article Created: 27 March 1995

TOPIC -----

I am trying to print a legal size page on my LaserWriter Select 310 using the multi-purpose tray, but the bottom three inches of the page are always blank. It looks like the printer is printing only on a letter size page. What is required to print on legal paper?

DISCUSSION -----

The LaserWriter Select 310 shipped with a standard 1.5 megabyte memory configuration. This is sufficient for printing standard letter size documents, but does not provide sufficient memory for PostScript to create a legal size page buffer. Attempting to print legal size pages on a LaserWriter Select 310 that only has 1.5 megabytes of memory causes the bottom few inches of the page to be clipped. To enable legal size printing, install either the 1MB or 4MB memory upgrade. The LaserWriter Select 310 uses standard 72 pin, 100ns or faster memory SIMMs.

Once the memory upgrade has been performed the LaserWriter Select 310 preference file must be updated. To do this perform the following steps:

Step 1

Open the chooser and select the LaserWriter Select 310 driver and port

Step 2

Press the 'Setup' button to obtain the current printer configuration

Step 3

Press the 'Done' button to save the current configuration information

To confirm that the memory has been properly installed and the driver configured

try printing a legal size page. If the page prints properly then the additional memory has been recognized by the printer. For further confirmation, the Technical Information Library article titled "LaserWriter Select 310: Determining Configuration" contains PostScript code you can download to the printer to confirm the memory amount.

Support Information Services

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Tech Info Library Article Number:17454



Tech Info Library

LaserWriter 16/600 PS: Minimum Print Margins (3/95)

Revised: 3/27/95
Security: Everyone

LaserWriter 16/600 PS: Minimum Print Margins (3/95)

Article Created: 27 March 1995

TOPIC -----

What are the minimum margins on the LaserWriter Pro 16/600 PS printer?

DISCUSSION -----

The default minimal margin area for all papaer sizes (in inches) on the Laserwriter 16/600 are as follows:

Margins	Right	Bottom	Left	Top
-----	-----	-----	-----	---
Letter/US Letter	0.16	0.197	0.18	0.138
Legal/US Legal	0.16	0.197	0.18	0.138
A4	0.148	0.197	0.169	0.139
B5	0.16	0.198	0.18	0.138
A5	0.147	0.197	0.14	0.139
LetterSmall/US Letter Small	0.431	0.431	0.403	0.431
A4Small/A4 Small	0.403	0.431	0.389	0.417
LegalSmall/US Legal Small	0.889	0.75	0.889	0.75
Com10/Comm10 Envelope	0.158	0.197	0.18	0.138
Monarch/Monarch Envelope	0.14	0.197	0.162	0.138
C5/C5 Envelope	0.163	0.197	0.185	0.139
DL/DL Envelope	0.157	0.197	0.177	0.138

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Support Information Services

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Tech Info Library Article Number:17457



Tech Info Library

GeoPort 2.0 Telecom Adapter Read Me (5/96)

Revised: 5/27/96
Security: Everyone

GeoPort 2.0 Telecom Adapter Read Me (5/96)

Article Created: 27 March 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the GeoPort Telecom Adapter ReadMe file.

DISCUSSION -----

Software included in the GeoPort Telecom Adapter Kit

Apple Telecom Software

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV, and Quadra 840AV.
- Power Macintosh 6100/60, 6100/66, 7100/66, 7100/80, 8100/80, 8100/100, and 8100/110.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.0 software on Macintosh systems equipped with an Express Modem card.

MegaPhone

This is a screen-based telephone application that delivers full support of the telephony capabilities of the Apple Telecom 2.0 software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, dragging and dropping business card information, and voice-mail functions.

The GeoPort Telecom Adapter Kit also includes a free 30-day trial of call

logging, MegaDial dialing manager, intelligent synchronization with directory information (saving telephone numbers to a PowerTalk catalog, for example), and other extended capabilities.

See also: the MegaPhone electronic manual included on Disk 3 (Telecom Applications).

Note: MegaPhone is not installed by the Apple Telecom Installer program. You must install it separately.

Note: MegaPhone is not included with free upgrades.

SITcomm SE/GTA

This is a terminal emulator application. With SITcomm SE/GTA (Special Edition for GeoPort Telecom Adapter), your Macintosh can communicate with a variety of other computers, linked by serial cables or by telephone lines.

With SITcomm you can exchange information with

- A colleague who is using another computer with similar communications software.
- Text-based information and electronic mail services, such as CompuServe or MCI Mail.
- Your company or school's remote minicomputer or mainframe.

See also: the SITcomm SE electronic manual included on Disk 4 (Telecom Applications).

Note: SITcomm is not installed by the Apple Telecom Installer program. You must install it separately.

Note: Disk 4 is not included with free upgrades. You can order the full upgrade, including SITcomm SE and the Apple Telecom User's Guide manual, by calling the Apple Order Center. Ask for the Apple Telecom software version 2.0 upgrade for use with your GeoPort Telecom Adapter.

Upgrading from Previous Releases of GeoPort Telecom Adapter Software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

Note: if you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version;

you may delete them.

Connection (CCL) scripts for Apple Remote Access

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)

ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

Note: These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center.

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter) you should select it in the Apple Remote Access Setup control panel.

Note: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Note: If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex greyscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

Note: the Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed. Both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document) it will be skipped and not be included in the fax.

See also: the About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript printers.

Troubleshooting

Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string." If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the

CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication Settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying Incoming Calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone) we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server) we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing Fax Storage Folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Note: If you want to throw away the fax storage folders using the steps given

above, they must not be enclosed in other folders when they are dragged to the trash or they will not be deleted.

Using a Centris 660AV or Quadra 660AV/840AV

If you are using a Centris 660AV or Quadra 660AV/840AV and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with the GeoPort Telecom Adapter. To change this setting open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a Blacklisting Error Message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning on and off a hardware modem, is compliant with PTT regulations.

Clicking Sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660AV/840AV). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

Optimized LocalTalk Performance

When you install the Apple Telecom software on a Power Macintosh, the Apple Telecom installer checks the version of LocalTalk on your machine and installs

..TIL17460-GeoPort_2-0_Telecom_Adapter_Read_Me_5-96_(TA33518).pdf

the latest version of LocalTalk if necessary. This version contains enhancements for the GeoPort Telecom Adapter.

What Goes Where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter Read Me
- SimpleText

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- Modem AT Command Set

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)
- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

26 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:17460



Tech Info Library

VBL Task: What Is It? (4/95)

Revised: 5/19/95
Security: Everyone

VBL Task: What Is It? (4/95)

=====

Article Created: 28 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

What is a VBL task?

DISCUSSION -----

VBL refers to Vertical Blanking. The Macintosh video circuitry generates a vertical retrace interrupt (also known as the vertical blanking interrupt) 60 times a second when the beam of the display tube returns from the bottom of the screen to the top of the screen. This interrupt can be used to schedule periodic or recurrent tasks.

The vertical Retrace Manager of the Mac OS defines an Application Program Interface (API) to install or remove a routine that is to be executed during these interrupts. The Mac OS registers (installs) several Vertical Blanking (VBL) tasks to manage activities. Examples of System VBL tasks are:

- Increment the number of ticks (1/60 of a second) since system startup time.
- Check whether the stack has expanded into the heap.
- Handle cursor movement.
- Recognize a change in state of mouse button up or mouse button down.
- Recognize that a floppy disk has been inserted.
- Reset the keyboard if its is reattached.

Applications can also install VBL tasks that exist while it is running or are persistent in the System after its termination.

This article was published in the "Information Alley":
Volume I, Issue 25, Page 13

Article Change History:

..TIL17464-VBL_Task-What_Is_It-4-95_(TA33519).pdf

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17464



Tech Info Library

ImageWriter II: Problem When Using A/B Switchbox (3/95)

Revised: 3/28/95
Security: Everyone

ImageWriter II: Problem When Using A/B Switchbox (3/95)

=====

Article Created: 30 January 1995
Article Reviewed/Updated: 28 March 1995

TOPIC -----

Our customer currently has an ImageWriter II and Color StyleWriter Pro connected to their computer via an A/B switch box. They are able to print to the StyleWriter, then switch and print to the ImageWriter, but when they switch back to print to the StyleWriter, they get the message "The serial port is currently in use by another program, please quit that program and try printing again."

This message will continue to appear until they restart the machine and then it prints fine. In trying the same setup when using the modem and printer port instead of the switch box, it seems to work fine.

What is the problem?

DISCUSSION -----

This has been a long-standing issue with the ImageWriter driver where it captures the serial port for its use and then does not release it. The workaround you provided for your customer is the best suggestion, and should work.

There are currently no plans to revise the driver.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17465



Tech Info Library

ARA 2.0 & MS Mail 3.1d: Remote Server Connection Issue (3/95)

Revised: 3/28/95
Security: Everyone

ARA 2.0 & MS Mail 3.1d: Remote Server Connection Issue (3/95)

=====

Article Created: 28 March 1995

TOPIC -----

This article is a Microsoft Product Support Services Application Note (Text File). The following information applies to Microsoft Mail for AppleTalk Networks, version 3.1d and Apple Remote Access (ARA) version 2.0.

This information is provided by Microsoft Corporation. Apple Computer, Inc. is not responsible for its content. Please contact Microsoft for additional information. This Microsoft Product Support Services Application Note and MM1048: REMOTE SERVER CONNECTION--ARA 2.0 COMPATIBILITY PATCH software can be found on Microsoft's ftp site at <ftp.microsoft.com> or the Web site at www.microsoft.com.

DISCUSSION -----

Introduction

The disk provided with this Application Note contains a patch program for use with version 3.1d of Microsoft Mail for AppleTalk Networks. This patch program fixes a compatibility problem that exists between Remote Server Connection and Apple Remote Access (ARA) version 2.0. In order to use Remote Server Connection with ARA 2.0, you must run the patch program to update the Mail server.

NOTE: If you do not plan to use Remote Server Connection with ARA 2.0, this patch is not necessary. No other changes to the Mail Server are made by this patch.

Running the Patch Program

This patch was designed to update version 3.1d of the Mail server. If you have an earlier version of Mail, you must upgrade to 3.1d before you run this patch.

1) While holding down the M key, restart the Mail server.

NOTE: This prevents the Mail server from loading.

2) Insert the enclosed MM1048 disk in your floppy disk drive.

3) If you are running your server as an Application, double-click the Mail 3.1d Application Patch icon. If your server is running as an INIT, double-click the Mail 3.1d INIT Patch icon.

NOTE: The default for the Mail server is to run as an INIT. If you have not converted your server to an Application using Mail Tools, then it is running as an INIT.

4) Read the information displayed and click OK.

5) When you are prompted to "Please Locate the Microsoft Mail Server," select the Mail server and choose Patch. The patch will run and update the Mail server. It will not affect any other parts of the server or the Microsoft Mail Data file.

6) Restart the Macintosh to enable the Mail server.

NOTE: Although this patch addresses compatibility issues with ARA 2.0, version 3.1d of Mail for AppleTalk Networks is not designed to take advantage of the new DialAssist feature in ARA 2.0. Any additional information entered in the DialAssist Control Panel will be ignored when Remote Server Connection connects to a remote site.

Support Information Services

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Tech Info Library Article Number:17466



Tech Info Library

Communications Toolbox Tools: Basic Connectivity Set (3/95)

Revised: 3/28/95
Security: Everyone

Communications Toolbox Tools: Basic Connectivity Set (3/95)

=====

Article Created: 28 March 1995

TOPIC -----

This article describes the Communications Toolbox basic connectivity set of tools, and how to obtain them.

DISCUSSION -----

Communications Toolbox tools are designed to be used with Communications Toolbox aware applications. There are three types of tools; connection, terminal, and file transfer. The Basic Connectivity Tools are available via AppleLink, the Internet, and other online services. Most software packages that support the use of Communication Toolbox Tools will include some basic tools, for example MacTerminal 3.0 and ClarisWorks. There are also additional tools available from third parties, for example Kermit, LAT Tool and VT 320. For details on using these tools see the documentation for the Communications Toolbox aware application you will be using them with.

The Basic Connectivity Tools include:

Connection tools

Serial Tool
Modem Tool
AppleTalk ADSP Tool

Terminal tools

TTY
VT-102

File Transfer tools

Text
XMODEM

These articles can help you locate the software mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17467



Tech Info Library

AppleSearch 1.5: Max. Users & Terminate Inactive Users (3/95)

Revised: 3/28/95
Security: Everyone

AppleSearch 1.5: Max. Users & Terminate Inactive Users (3/95)

=====

Article Created: 28 March 1995

TOPIC -----

I'm evaluating AppleSearch 1.5 Server running on a Power Macintosh 8100/100 to serve a client base of approximately 4,000 users. I need confirmation of the maximum number of simultaneous connected clients. I assume this number would be 150 since that is the number supported by AppleShare 4.0.x. Is this assumption correct? If not, are they limited by the number of clients signed on to the server or by the number of clients actually performing searches?

Also, is there any recommended way to force AppleSearch clients off the server after a specified period of inactivity?

DISCUSSION -----

AppleSearch has a limit of 50 simultaneous user connections, in other words, users logged into AppleSearch. See page 50 of the "AppleSearch Administrator's Guide."

As of March, 1995 there is no mechanism that would terminate inactive AppleSearch clients from the server. Scheduled reporters and the way they work make terminating inactive clients difficult to implement. This is because users need to be connected to the server in order to receive the data obtained from a scheduled reporter, so users could be inactive for extended periods of the time.

Support Information Services

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Tech Info Library Article Number:17468



Tech Info Library

PlainTalk: No Custom Voices, An Explanation & Description (1/96)

Revised: 1/4/96
Security: Everyone

PlainTalk: No Custom Voices, An Explanation & Description (1/96)

Article Created: 28 March 1995
Article Reviewed/Updated: 4 January 1996

TOPIC -----

Did you ever wonder how to make your Macintosh speak what you have typed? The technology does exist. This article answers some commonly asked questions about PlainTalk and Text to Speech technology.

DISCUSSION -----

Question: Can I record a voice or create a new voice for Text to Speech? If yes, can I speak into the microphone to record this voice?

Answer: It is not possible for users to create PlainTalk voices by speaking into the microphone and recording their own speech. Creating PlainTalk voices is considerably more complex than that.

Question: In how many different voices can the Text-to-Speech/PlainTalk software speak?

Answer: The number of different voices available depends on the number of voices installed in the Voices folder, which is stored in the Extensions folder of your System Folder. Any application that has Text-to-Speech capabilities, such as SimpleText, can speak in any of the different voices in this folder.

Question: How does Text to Speech work?

Answer: Applications initiate speech generation by sending a set of words to the Speech Manager. The Speech Manager is responsible for sending the text to a speech synthesizer, the piece of software that manages all of the communication between the Speech Manager and the Sound Manager.

This synthesizer is like a speech engine. It uses built-in dictionaries and

pronunciation rules to help determine how to pronounce text. The speech synthesizer uses these rules and the available PlainTalk voices to convert typed text into different kinds of sound, with different tonal qualities, to produce speech.

Synthesizers have different rules, depending on the quality of the voices that are available. Users who have more RAM and processing power may choose a higher-quality voice, which may use a higher-quality synthesizer. A higher-quality synthesizer spends more time analyzing the original text, to try and produce sound that we more easily recognize as regular speech.

Question: How many words does the Text to Speech/PlainTalk dictionary know?

Answer: Because synthesizers use a combination of pronunciation rules and dictionaries, there is not necessarily a limit to the number of words that it can pronounce. The pronunciation rules are used to speak many of the words that are sent to the synthesizer.

The speech technology is not limited to a certain number of words the dictionary "knows". The dictionary mainly handles exceptions to the rules. For example, the dictionary is probably used to store the pronunciations for the abbreviation "St.". Depending on the context, PlainTalk pronounces this as "Saint" or "Street". Likewise, "Dr." could be pronounced "Doctor" or "Drive". Other exceptions, like the difference between pronouncing the vowel sounds in the words "height" and "weight" are included here as well.

This article was published in the "Information Alley":
Volume II, Issue 1, Page 12

Article Change History:

04 Jan 1996 - Added voice option information.

03 May 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17470



Tech Info Library

PowerBook: Sizes and Suppliers for Torx Drivers (1/97)

Revised: 1/24/97
Security: Everyone

PowerBook: Sizes and Suppliers for Torx Drivers (1/97)

=====

Article Created: 29 March 1995
Article Reviewed/Updated: 24 January 1997

TOPIC -----

Where can I obtain the Torx drivers used on the PowerBook computers?

DISCUSSION -----

PowerBook 100 computers use the Torx #8 and Torx #10 driver size.

PowerBook 200 and 2300 series computers use the Torx #8 and either Torx #6 driver size or phillips screws (for the floppy mechanism).

PowerBook 500 series computers use the Torx #6 and Torx #8 driver size.

PowerBook 5300 series computers use the Torx #8 driver size.

PowerBook 1400 series computers use the metric phillips screws 00 and 01.

Suppliers for these tools include:

* Apple Computer: (available through your local Service Provider)
Torx #6 077-0064
Torx #8 077-0677
Torx #10 077-0676

* Parts Express 800-338-0531

* Snap-On Tools (call 800-555-1212 for local Snap-On office)

* Jensen Tools, Inc. 800-426-1194

Article Change History:

24 Jan 1997 - Added new models and reseller info.

..TIL17471-PowerBook-Sizes_and_Suppliers_for_Torx_Drivers_1-97_(TA33526).pdf

14 Nov 1995 - Updated reseller information.

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Tech Info Library Article Number:17471



Tech Info Library

A/UX Error: Cannot Mount Drive, Dirty File System (3/95)

Revised: 3/29/95
Security: Everyone

A/UX Error: Cannot Mount Drive, Dirty File System (3/95)

=====

Article Created: 29 March 1995

TOPIC -----

I'm having problems re-installing the A/UX core. I get a message from the installer when I select software stating, "cannot mount drive c300d0s0: dirty file system".

Here is the procedure I followed to correct this:

- 1) In single user mode, I got hung trying to continue boot process.
- 2) Shut down with key.
- 3) From the startup shell, I used the fsck command on the drive with the -b16 option, which fixed a bad block count. I then ran fsck again with no -b16 option and it all went through fine
- 4) I opened the computer and verified that this wasn't an improperly terminated system, that all connectors are properly seated, and that I indeed had but one drive.
- 5) I attempted again to install A/UX, and I still got the error message.
- 6) I checked the partition map, and found that this drive is formatted as follows:
 - Mac Partition 133 MB
 - Slice 0 204 MB
 - Slice 3 6xx MB

I ran the installer again, but got the same error, file system is marked as dirty, slice 0 160030 used; 31961 free. What is wrong?

DISCUSSION -----

You should check to make certain your drive isn't full (both slice 0 and slice 3), and then use the fsck (file system check) command on BOTH slices on the drive. You can only fsck the root partition from within the startup shell, in order to fsck any other slices you will need to launch A/UX and use the fsck command. If this does not work, you will need to reformat the drive and re-install A/UX.

WARNING: You need to have a back up of your hard drive before formatting. The format process will erase all data.

You may find when you run the fsck command on slice 0 again, it will report dirty even though it was not used since the previous clean up. Then run the fsck command on slice 3. On completion of fsck, if you see a message that says "FILE SYSTEM WAS MODIFIED" it is recommended that you run fsck again using the same command. You want fsck to make a complete check without any changes.

You should now be able to install A/UX.

If your hard drive has slice 0, and also has a slice 3 data partition which is dirty, the installer may believe that slice 0 is dirty too. Somehow, slice 0 gets flagged as dirty as a result. You will need to run the fsck command on both partitions. This is an anomalous behavior.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17472



Tech Info Library

MAE: PPD File For The HP LaserJet 4M Printer (3/95)

Revised: 3/29/95
Security: Everyone

MAE: PPD File For The HP LaserJet 4M Printer (3/95)

=====

Article Created: 29 March 1995

TOPIC -----

I'm using MAE 1.0 and I'm trying to use the HP 4M PPD file. I've gone into the Chooser, clicked on "lprwriter", clicked setup, then clicked select PPD, and selected HP LASERJET 4M.

I get a dialog that states, "Does not appear to be a valid Postscript Printer Description file." What is wrong?

DISCUSSION -----

The file you are selecting is NOT a Postscript Printer Description (PPD) file. It is a text file that reads:

Only Hewlett-Packard (HP) is distributing the PPD file for the LaserJet 4M. To receive this file, you must call 303-353-7650 and ask for the PPD Disk for LaserJet 4M.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17473



Tech Info Library

System 7.5: Quadra 900/950 Sound Input Not Correct (8/95)

Revised: 8/25/95
Security: Everyone

System 7.5: Quadra 900/950 Sound Input Not Correct (8/95)

=====

Article Created: 29 March 1995
Article Review/Updated: 25 August 1995

TOPIC -----

I have just upgraded to System 7.5 from System 7.1 on my Quadra 900 and 950 computers in our office. Now when I try to record sound from the external RCA jack via the Sound Control Panel, I do not get any sound until we choose the "Internal CD" sound option.

I have installed System 7.5 Update 1.0 and the problem still exists. Why?

DISCUSSION -----

All of the sound input drivers were changed in System 7.5. Unfortunately on a Macintosh Quadra 900 and 950, the "Internal CD" and "External Audio" Sound input options were inadvertently switched. This means that Macintosh Quadra 900 and 950 users need to select the "Internal CD" Sound input option to record audio from external audio sources via the RCA jack. Users who have an internal CD-ROM drive installed need to choose the "External Audio" input option to record audio from their internal CD-ROM drive.

System 7.5 Update 1.0 does not correct the problem. This problem will be corrected in the next update to System 7.5.

Article Change History:
25 Aug 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:17474



Tech Info Library

Apple RAID: Generic Document Icon On Users Workstation (3/95)

Revised: 3/29/95
Security: Everyone

Apple RAID: Generic Document Icon On Users Workstation (3/95)

=====

Article Created: 29 March 1995

TOPIC -----

If I define an Apple RAID volume on a server, and set permissions to See Folder privileges, when users mount the volume from a client workstation they get a generic document icon on their desktop instead of the Apple RAID volume icon. How do I get the regular Apple RAID icon to appear?

DISCUSSION -----

Seeing a generic document icon will happen with any AppleShare server volume with a custom icon. Apple RAID's icon gets created as a custom icon. When you create a custom icon for a hard drive, the system creates an invisible file on the drive named "Icon" where the icon is stored. If the user is not allowed to see this file, they get no custom icon. Enabling a user to See Files permission will show the custom icon on the client's workstation.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17475



Tech Info Library

LaserWriter Bridge 2.0: How To Use (3/97)

Revised: 4/21/97
Security: Everyone

LaserWriter Bridge 2.0: How To Use (3/97)

Article Created: 29 March 1995
Article Reviewed/Updated: 13 March 1997

TOPIC -----

This article describes using the LaserWriter Bridge software to connect your LocalTalk printer to an extended network.

DISCUSSION -----

Your LaserWriter printer has built-in support for a LocalTalk network. This allows you to connect the printer either to a single Macintosh computer or to a LocalTalk network of several computers and other devices. If you plan to use your printer with a single computer or as part of a LocalTalk network, you don't need to read this booklet.

In addition, you can create a "bridge" between your printer and an extended network such as Ethernet. To do so, you need to complete the following steps, described in this booklet:

- Connect the printer to a "host" Macintosh that is already part of an extended network.
- Install the LaserWriter Bridge software on the host Macintosh.
- Activate the LaserWriter Bridge software.

Connecting your printer to the network

Follow the instructions in the owner's guide that came with your printer to connect it to the Macintosh computer that will serve as the host computer. The host computer requires the following:

- The appropriate hardware and software for an extended network connection. For example, if you are connecting to an Ethernet network you need either an Ethernet card, or built-in Ethernet adapter, and EtherTalk software.

- System software version 7.0 or later.
- At least 4 MB of RAM (random access memory).

Installing the LaserWriter Bridge software

Follow these steps to install the LaserWriter Bridge software on the host Macintosh:

Step 1

Turn on the host Macintosh.

Step 2

Choose Control Panels from the Apple menu and double-click the Network icon.

Step 3

Select the network (such as EtherTalk) to which the host Macintosh is connected and close the Network control panel.

Step 4

Insert the LaserWriter Bridge disk in the floppy disk drive of the host computer.

Step 5

Drag the LaserWriter Bridge icon to the System Folder of your startup disk. A message appears asking whether you want to place LaserWriter Bridge in the Control Panels folder inside the System Folder.

Step 6

Click OK.

Step 7

Restart the host Macintosh.

Activating the LaserWriter Bridge software

Now that you have installed the LaserWriter Bridge software on your host Macintosh, you need to activate it. Follow these steps:

Step 1

Choose Control Panels from the Apple menu and double-click the LaserWriter Bridge icon.

Step 2

Click the On button to activate the LaserWriter Bridge software.

Step 3

Close the LaserWriter Bridge control panel.

Step 4

Restart the host Macintosh.

Whenever you start up the host Macintosh, the LaserWriter Bridge software will be active.

How the LaserWriter Bridge software works

Once you have installed and activated the LaserWriter Bridge software, the LocalTalk printer connected to the host Macintosh is available on the extended network whenever the host Macintosh is on. Network users can choose the printer in the Chooser, just as if it were a part of the extended network.

If there are AppleTalk routers on your extended network, multiple zones may be available to network users. In this case, the LocalTalk printer connected to the host Macintosh will appear in the same zone as the host Macintosh.

Because the host Macintosh must be on in order for the LocalTalk printer to be available to users on the extended network, you will see a dialog box when you choose Restart or Shut Down on the host Macintosh.

Click OK if you want to restart or shut down the computer. Click Cancel if you don't want to interrupt network users' access to the LocalTalk printer.

IMPORTANT: If File Sharing was active on the host Macintosh, choosing Restart or Shut Down will turn it off. It will be turned on again automatically the next time you start up the host Macintosh. If you clicked Cancel in the dialog box and want to reactivate File Sharing without restarting the computer, you need to click Start in the File Sharing section of the Sharing Setup control panel.

If you don't want this dialog box to appear each time you choose Restart or Shut Down, select the Disable shutdown warning checkbox in the LaserWriter Bridge control panel.

This article was published in the 13 March 1997 "Information Alley."

Article Change History:

13 Mar 1997 - Added Information Alley notification.

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Tech Info Library Article Number:17476



Tech Info Library

Apple MessagePad: MessagePad 110/120 differences (3/95)

Revised: 3/29/95
Security: Everyone

Apple MessagePad: MessagePad 110/120 differences (3/95)

=====

Article Created: 28 March 1995

TOPIC -----

What are the differences between the Apple MessagePad 110 and the Apple MessagePad 120?

DISCUSSION -----

The Apple MessagePad 120 contains all the features of the Apple MessagePad 110. In addition to these features, the Apple MessagePad includes:

1 or 2 Mb configurations

A nonglare screen

A removable flip-top display cover

An accessible PCMCIA card lock switch

Socketed ROM

Incremental improvements in System Software 1.3

Bundled software, including Notion and Pocket Quicken

The external 2400/9600 bps Newton Fax Modem (for the 2MB version only)

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17477



Tech Info Library

LaserWriter Fax: Using the WorldModem Without a Dialtone (3/95)

Revised: 3/29/95
Security: Everyone

LaserWriter Fax: Using the WorldModem Without a Dialtone (3/95)

=====

Article Created: 28 March 1995

TOPIC -----

My European customers have LaserWriter 16/600 PS printers with the International PostScript Fax Modem. They need for the printer fax modem to dial without first having to receive a dialtone.

Is there a setting somewhere to do this?

DISCUSSION -----

Posted to Apple supported online services is a patcher that enables blind dialing on the LaserWriter 16/600 PS International (WorldModem) PostScript Fax Modems. The patcher is called "Ignore Dialtone.sea

Using Ignore Dialtone

This software only works with the LaserWriter 16/600 PS International modem, also known as the "WorldModem."

Step 1

Open the Chooser and select a LaserWriter 16/600 PS having an International Fax Modem. Close Chooser.

Step 2

Launch the Ignore Dialtone patcher.

Thereafter, your fax modem will not wait for a dialtone prior to dialing. This change will be in effect until you power cycle your printer.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates

Lists online services for "free" Apple software updates

- Obtaining Apple Product Support in the USA

Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17478



Tech Info Library

What is a System Error 25? (4/95)

Revised: 5/19/95
Security: Everyone

What is a System Error 25? (4/95)

=====

Article Created: 29 March 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

My system crashes into MacsBug and each time, I am being dumped into the same routine. The current instructions look like this:

```
System Error 25 at 408314A _Jackson
_Jackson
+0000 408314A *Debugger
+0002 408314C _NewHandle, Immed
+0004 408314E BNE.S _DisposeCIcon+0032
```

It looks like I am hitting debug code. What is happening?

DISCUSSION -----

What you are running into is not debug code. The area of code you are seeing here is in the Macintosh ROM.

The label _Jackson is an abbreviated label for _JacksonPollack. Jackson Pollack was the development name for Color QuickDraw project and this area of ROM contains routines of Color QuickDraw.

A System Error 25 is a stack and heap collision detection. The Mac OS registers a routine to run on a periodic basis to check for the stack and heap overrunning each other. When the periodic routine runs, it checks two pointers that indicate the boundaries of the heap and stack. If, while the Vertical Blanking (VBL) task is running, it finds the bottom of the stack to be less than the top of the heap, an error 25 is reflected. If it was not for the routing checking performed by the periodic routine, this error could go undetected.

If MacsBug is installed, these error 25 problems usually show up in MacsBug as being at the _Jackson entry point. Without Macsbug installed, you may get a System Error 25 message or the "bomb" dialog box containing the Restart button.

The meaning of System Error 25 is often listed as "out of memory." It is usually an indication that the stack has temporarily overrun the heap and the computer should be restarted. The error might be eliminated by increasing the application's partition size (memory allocation) in the Get Info window to allow for more heap and stack space for that application. It could also be that the application is being driven into some improper calling sequence that causes the stack to grow until it overlaps the heap. If this is the case, you would need to contact the vendor of that application for further information about their software.

For more information about VBL technology see TIL article titled "VBL Task: What Is It?".

This article was published in the "Information Alley":
Volume I, Issue 25, Page 12

Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17480



Tech Info Library

AWS 95: Server Disappearing From Network (5/95)

Revised: 5/31/95
Security: Everyone

AWS 95: Server Disappearing From Network (5/95)

Article Created: 30 March 1995
Article Reviewed/Updated: 31 May 1995

TOPIC -----

My Apple Workgroup Server (AWS) 95 cannot be seen from certain zones. It appears in the chooser, but after a few seconds gives a "no response from server" error when trying to access it.

I have completely rebuilt the AWS 80 computers that are serving as routers, with no change in this situation.

I have run the Update 2.0 on the AWS 95, with no change in this situation.

The trace I sent is for two attempts to access the AWS 95, when network traffic was very low. Could you please tell me what to do.

DISCUSSION -----

Trace of Access Attempts

From the following network trace, you can see a problem with the Apple Internet Routers on the network. However, the actual problem is with the AppleTalk stack, not with the Apple Internet Router code. This problem happens with other AppleTalk based services also, and is not exclusive to the AWS 95.

The problem can be see early in the trace in packets 3 - 10.

Packet 3 is an RTMP broadcast from Router 1
Packet 4 is an NBP LkUp from Router 2 requested by the end node
Packet 5 is an NBP Repl sent to Router 1
Packet 6 is the forwarded packet from Router 1 to Router 2
Packet 7 is an NBP LkUp from Router 2 requested by the end node
Packet 8 is an NBP Repl sent to Router 1
Packet 9 is the forwarded packet from Router 1 to Router 2
Packet 10 is an echo packet sent from Router 2 to the Ethernet address of Router

1 with the AppleTalk address of the AWS 95

Here Router 1 looks at the packet and determines it is not its packet. Since there is no need to forward it, the packet is dropped.

The problem is with the Address Mapping Table (AMT) in Router 2 that has gotten an erroneous entry in its cache. The problem occurred when the Server responded to Router 1 and Router 1 forwarded the Packet to Router 2. At which point Router 2 cached the AppleTalk address of the Server with the Ethernet address of Router 1.

Workaround

The workaround is to install the Network Software Installer (NSI) 1.5 on the Macintosh computers that are running the Apple Internet Router software. You might also want to consider moving the server behind a router; in other words to a segment of the network with only one router. If you do this, be sure the router is fast enough to handle the traffic to and from the server.

This article was published in the "Information Alley":
Volume II, Issue 3, Page 10

Article Change History:

31 May 1995 - Added Info Alley information; made minor updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17481



Tech Info Library

Macintosh 630: TV Tuner Card only for U.S. (3/95)

Revised: 3/30/95
Security: Everyone

Macintosh 630: TV Tuner Card only for U.S. (3/95)

=====

Article Created: 30 March 1995

TOPIC -----

I want to purchase the Macintosh 630 TV Tuner card, but I also want to use it when I travel to Europe and Australia. Can I use the TV Tuner Card outside the United States?

DISCUSSION -----

The United States uses an NTSC video signal, Australia and most European countries use a PAL video signal, which makes it impossible to use the Macintosh 630 family TV Tuner Card outside the United States.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17484



Tech Info Library

Power Macintosh 5200/75 LC: Technical Specifications (10/95)

Revised: 10/5/95
Security: Everyone

Power Macintosh 5200/75 LC: Technical Specifications (10/95)

=====

Article Created: 31 March 1995
Article Reviewed/Updated: 5 October 1995

TOPIC -----

This article gives the technical specifications for the Power Macintosh 5200/75 LC computer.

DISCUSSION -----

Microprocessor

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus
- Bus speed is 37.5 MHz. (processor speed/2)

Memory

- 8 MB RAM (one 8 MB SIMM installed)
- expandable up to 64 MB
- two 72-pin SIMM slots
- expandable one SIMM at a time (do not have to be similar density)
- 32-bit memory bus
- 80 ns or faster
- 1 MB DRAM frame buffer (separate from RAM) for video memory, not expandable
- 4 MB ROM on 64-bit PowerPC bus

Form Factor

- All in one enclosure
- Tilt from - 5° to +15°, Swivel 360°
- Front controls for volume and contrast
- Front headphone jack
- Infrared remote control
- Single power plug for system
- Power on/off from keyboard

Disk Drives

- 1.4 MB Apple SuperDrive disk drive - read and write MS-DOS disks
- 500 MB IDE hard drive, 1/3 height
- AppleCD 300i CD-ROM drive

Video Display

- 15" flat square shadow mask CRT
- .28 mm dot pitch
- User adjustable resolutions from 640x480 (63 DPI) to 832x624 (81 DPI) without restarting
- Refresh rate up to 75 Hz
- Low emissions (ELF, VLF)

Video Resolutions

Begin_Table

Resolution	Max. Bit Depth	Max. Number of Colors
-----	-----	-----
640 x 480	16	32,768
800 x 600	8	256
832 x 624	8	256

End_Table

Interfaces

- LC processor direct slot
- Video-in slot for optional video capture card
- TV tuner slot
- Communications slot
- SCSI interface for connecting up to five external devices
- Two serial (RS-232/RS-422) ports
- ADB port
- Sound-in (requires PlainTalk microphone)
- Sound-out
- Apple External Video Connector (M4099LL/A)
 - . - Purchased separately, this internal cable allows you to connect a Macintosh compatible display externally for video mirroring functionality.

Audio System

- Integrated stereo speakers
- Built-in microphone
- 16-bit CD audio, 8-bit sound

Networking

- Macintosh LC-compatible Processor-Direct Slot (PDS)
- I/O Communications Slot for installation of EITHER a high-speed, 14.4 fax/modem OR a low-cost Ethernet networking card supporting the following
- Apple Ethernet cards:

- Apple Ethernet CS Twisted Pair Card
- Apple Ethernet CS Thin Coax Card
- Apple Ethernet CS AAUI Card

Keyboard

- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Apple Desktop Mouse 11: mechanical tracking, optical shaft, or contact encoding

Clock/Calendar

- CMOS customer chip and battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.
- Third-party options provide alternative input and output devices

Electrical Requirements

- 110 - 240v, 50 - 60 Hz
- Power consumption 125 watts
- EPA Energy Star compliant

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height: 17.5 in. (44.5 cm)
- Width: 15.1 in. (38.3 cm)
- Depth: 16.0 in. (40.6 cm)
- Weight: 47 lb. (21.15 kg)

Operating Environment

- 10°C to 40° C (50°F to 104°F)

System Software Requirements

- Mac OS System 7.5 with Apple Guide, AppleScript and PC Exchange included

Article Change History:

05 Oct 1995 - Added video memory information.

..TIL17486-Power_Macintosh_5200-75_LC-Technical_Specifications_10-95_(303_Pow).pdf

11 Aug 1995 - Reformatted to make more readable on the World Wide Web.

19 Jul 1995 - Corrected memory speed requirements.

Support Information Services

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Tech Info Library Article Number:17486



Tech Info Library

Macintosh LC 580: Technical Specifications (5/95)

Revised: 5/24/95
Security: Everyone

Macintosh LC 580: Technical Specifications (5/95)

Article Created: 31 March 1995
Article Reviewed/Updated: 24 May 1995

TOPIC -----

This article gives the technical specifications for the Macintosh LC 580 computer.

DISCUSSION -----

Microprocessor

- 66/33 MHz 68LC040
- Socketed for easy microprocessor replacement for future upgrades (PowerPC)
- . or third party expansion (microprocessor with built-in FPU)

Memory

- 8 MB of RAM (4 MB soldered to logic board, one 4 MB SIMM installed)
- expandable to 52 MB
- two 72-pin SIMM sockets
- 32-bit memory bus
- 80 ns or faster

Form Factor

All-in-one design similar to Macintosh LC 575.

Disk Drives

- 1.4 MB Apple SuperDrive floppy - read and write MS-DOS disks
- 500 MB IDE hard drive, 1/3 height
- Dual speed CD-ROM drive
- 650+ MB capacity
- 295 ms average access time

Video Display

- 14" high resolution display
- .28 mm dot pitch
- 640 x 480 pixel resolution
- 32K colors built-in
- Low emissions (ELF/VLF)

Expansion & Ports

- LC Processor direct slot
- Video-in slot
- SCSI interface for connecting up to five external devices
- Communication slot can be easily configured -- by the user -- to accept any of three Ethernet cards (10BASE-T, Thin Coax, Apple AUI), or a high-speed 14.4 KB fax/modem (based on PowerBook Express Modem).
- Two serial (RS-232/RS-422) ports
- One stereo sound-output port for external audio amplifier or headphones
- One Apple Desktop Bus (ADB) ports for keyboard, mouse, and other devices
- Apple EVC (External Video Connector, part number M4099LL/A)
 - Purchased separately from the computer itself, this internal cable allows you to connect a Macintosh compatible display externally for video mirroring functionality.
- Built-in microphone above display
- One sound-input port for internal or external microphone*, internal CD-ROM

* - Note: Requires PlainTalk microphone.

Audio System

- Plays and Records at 11 k-Hz or 22kHz sample rate
- Two speakers with enhanced stereo sound
- Plays ordinary compact disks w/ CD ROM drive

Networking

- User installable Ethernet cards for 10Base-T, Thin Coax, and AAUI
- User installable 14.4KB Fax Modem card

Keyboard

- Supports all Apple Desktop Bus (ADB) keyboard

Mouse

- Apple Desktop Mouse II: mechanical tracking, optical shaft, or contact encoding
- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA

Clock/Calendar

- CMOS custom chip with battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.
- Third-party options provide alternative input and output devices

Electrical Requirements

- Line voltage:100 to 240V AC, RMS automatically configured
- Frequency: 50 to 60 Hz(+/-) 3 Hz single phase
- Power:120 W maximum

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height 17.9 in. (45.5 cm)
- Width 13.5 in. (34.4 cm)
- Depth 16.5 in. (42.0 cm)
- Weight 40.5 lb. (18.4 kg)

Operating Environment

- 10°C to 40° C (50°F to 104°F)

System Software Requirements

- Mac OS System 7.5 with Apple Guide, AppleScript and PC Exchange included

Article Change History:

24 May 1995 - Further clarified optional FPU information.

22 May 1995 - Added information about external video connector option.

19 May 1995 - Clarified optional FPU.

Support Information Services

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Tech Info Library Article Number:17487



Tech Info Library

Workgroup Server 6150/66: Description (3/95)

Revised: 3/31/95
Security: Everyone

Workgroup Server 6150/66: Description (3/95)

Article Created: 31 March 1995

TOPIC -----

This article describes the Workgroup Server 6150/66.

DISCUSSION -----

The Workgroup Server 6150/66 is the most affordable member of the PowerPC processor-based Workgroup Server family from Apple. It delivers the file and print, Internet, and applications server performance that small workgroups in business and education demand. And it's ideal for workgroups that use both Macintosh and Windows software-based computers.

Servers are high-performance, highly reliable systems that provide organizations with faster, more efficient shared network services and secure centralized storage. The Workgroup Server 6150/66 not only meets these criteria, it also runs the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 66-megahertz PowerPC 601 processor with on-chip and level-2 cache, the Workgroup Server 6150/66 delivers outstanding performance. This power is supported by a large-capacity hard disk drive for convenient, comprehensive storage and a quadruple-speed CD-ROM drive. And increased reliability is provided by the inclusion of Apple RAID (Redundant Array of Independent Disks) Software, which supports disk mirroring, so your mission-critical information and applications are always accessible. Apple RAID Software also supports disk striping for improved performance. (Apple RAID mirroring or striping requires at least two disk drives.)

To make sure that you get the most out of all that power and capacity, the Workgroup Server 6150/66 comes bundled with software designed to streamline the tasks for both users and network managers. For users, there's everything from server-based contact management and scheduling software to solutions that allow workgroups to create, share, and review information electronically. For network managers, there's software to help manage application distribution and updates, server usage, and remote AppleShare administration. And the Workgroup Server

..TIL17488-Workgroup_Server_6150-66-Description_3-95.pdf

6150/66 includes AppleShare Client for Windows software, so Windows users on the network can access networked printers and files stored on a Workgroup Server running AppleShare file and print sharing software.

If you're considering a server for your workgroup, or an additional server for your network, look closely at the Workgroup 6150/66. It offers all of the server features small workgroups need at an affordable price.

Features

Expansion and storage

- Slot for processor-direct card or NuBus expansion card (7-inch)
- Internal 700MB hard disk drive
- Internal quadruple-speed CD-ROM drive
- SCSI bus to support up to seven devices (two internal, five external)
- Eight ports support a wide range of peripherals

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with 7-inch NuBus card)

Power, speed, and memory

- 66-MHz PowerPC 601 RISC microprocessor with floating-point processor and 32K on-chip cache
- 256K level-2 cache
- 16MB of RAM, expandable to 72MB

Features Built Into Every Workgroup Server

Fast, easy setup

- Comes with System 7.5.1 software installed
- Includes AppleShare 4.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows
- Can be ordered as part of the Apple Internet Server Solution for the World Wide Web

Bundled software

- Includes a variety of server administration and user productivity tools, including Apple RAID Software

Service and support*

- Includes 24-hour telephone support
- Includes within-two-business-day, on-site service response
- Offers optional within-four-hour or next-business-day on-site service response

* These services are available only in certain areas of the U.S.

Support Information Services

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Tech Info Library Article Number:17488



Tech Info Library

Workgroup Server 6150/66: Technical Specifications (3/95)

Revised: 3/31/95
Security: Everyone

Workgroup Server 6150/66: Technical Specifications (3/95)

=====

Article Created: 31 March 1995

TOPIC -----

This article provides the technical specifications and ordering information for the Workgroup Server 6150/66.

DISCUSSION -----

Technical Specifications
=====

Microprocessor

- PowerPC 601 RISC microprocessor running at 66 MHz
- Integrated floating-point unit and 32K on-chip cache
- 256K level-2 cache

Memory

- 16MB of RAM
- Can be expanded to up to 72MB of RAM

Drives

- One 700MB internal hard disk drive
- One AppleCD 600i Plus CD-ROM drive (up to 600KB/s data-transfer rate)
- One Apple SuperDrive 1.4MB floppy disk drive that reads, writes, and formats Macintosh, Windows, MS-DOS, and OS/2 disks

Bundled software

Server administration tools

- FileWave - Automated software and data distribution
- Server Manager* - Remote AppleShare management tools
- Apple RAID Software - Disk striping and data mirroring

* Only included in AppleShare configurations

User productivity tools

- AppleShare Client for Windows - Enables Windows clients to connect to an AppleShare server
- Now Contact - Contact management software
- Now Up•to•Date - Group scheduling software
- Viper Instant-Access - Cross-platform information retrieval system
- Adobe Acrobat Reader - Viewing application for portable document format (PDF) files

Note: The only software bundled with the 6150/66 when it is used as part of the Apple Internet Server Solution for the World Wide Web is Apple RAID Software and AppleShare Client for Windows

Networking

- Built-in Ethernet
- Two serial ports for LocalTalk
- Supports TCP/IP networking software with MacTCP

Displays

- Supports up to 14-inch Apple displays at 32,768 colors, and 16- and 17-inch Apple displays at 256 colors
- Supports most third-party displays as well as VGA and SVGA monitors

Video support

- Built-in DRAM display support

Interfaces

- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other device
- AAUI-15 Ethernet connector
- High-density display port supports Apple AudioVision monitors directly and supports other displays via a Power Macintosh Display Adapter (included)
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- High-speed asynchronous SCSI interface connects up to seven SCSI devices
- 16-bit stereo sound input and output ports
- Internal expansion slot for processor-direct or 7-inch NuBus expansion card (both require adapter that must be purchased separately)

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

- Easy Access and visible beep included with system software to provide alternative input and output devices for people with disabilities

Electrical requirements

- Line voltage: 100 to 240 volts AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 86 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Keyboard and mouse

- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Size and weight

- Height: 3.4 in. (8.5 cm)
- Width: 16.3 in. (41.5 cm)
- Depth: 15.6 in. (39.9 cm)
- Weight: 14.0 lb. (6.4 kg) (varies based on internal devices installed)

Operating environment

- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Regulatory approval

- FCC Class B

Ordering Information

Workgroup Server 6150/66 (16MB/700MB/CD)

Order No. M4066LL/A

- Workgroup Server 6150/66 with 16MB of RAM, 256K level-2 cache, 700MB disk drive, internal quadruple-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- System 7.5.1 and bundled software
- Power Macintosh Display Adapter
- Complete setup, learning, and reference documentation
- Limited one-year warranty

Workgroup Server 6150/66 (16MB/700MB/CD) with AppleShare

Order No. M4067LL/A

- Identical to the above configuration, with the addition of AppleShare 4.1 software

Apple Internet Server Solution for the World Wide Web 6150/66

Order No. M4140LL/A

- Identical to order No. M4066LL/A, but includes Apple Internet Server Solution software

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. Check with your Apple reseller for details.

Power Macintosh 6100/60 NuBus Adapter Card

Order No. M2337LL/A

- Allows you to add support for one 7-inch NuBus card to Workgroup Server 6150/66

Apple Token Ring NB/c Card

Order No. M1769Z/A (7-inch)

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Support Information Services

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Tech Info Library Article Number:17489



Tech Info Library

Workgroup Server 8150/110: Description (7/95)

Revised: 7/7/95
Security: Everyone

Workgroup Server 8150/110: Description (7/95)

Article Created: 31 March 1995
Article Reviewed/Updated: 7 July 1995

TOPIC -----

This article describes the Workgroup Server 8150/110.

DISCUSSION -----

The Workgroup Server 8150/110 is the midrange member of the PowerPC processor-based Workgroup Server family from Apple. It delivers the file and print, database, Internet, and applications server capabilities that meet the needs of medium sized workgroups in education, business, and publishing. And it's ideal for workgroups that use both Macintosh and Windows software-based computers.

Servers are high performance, highly reliable systems that provide organizations with faster, more efficient shared network services and secure centralized storage. The Workgroup Server 8150/110 not only meets these criteria, it also runs the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 110-megahertz PowerPC 601 processor with on-chip and level-2 cache, the Workgroup Server 8150/110 delivers outstanding performance. This power is supported by a large capacity hard disk drive for convenient, comprehensive storage and a quadruple speed CD-ROM drive. And increased reliability is provided by a DAT drive, Retrospect Remote backup software, and Apple RAID (Redundant Array of Independent Disks) Software, which supports disk mirroring for increased data reliability and disk striping for improved performance. (Apple RAID mirroring or striping requires at least two disk drives.)

To make sure that you get the most out of all that power and capacity, the Workgroup Server 8150/110 comes with additional software. For users, there's everything from server-based contact management and scheduling software to solutions that allow workgroups to create, share, and review information electronically. For network managers, there's software to help manage application distribution and updates, server usage, and remote administration.

And the Workgroup Server 8150/110 includes AppleShare Client for Windows software, so Windows users on the network can access networked printers and files stored on a Workgroup Server running AppleShare file and print sharing software.

So if you want a server that can accommodate today's budget and expand to handle tomorrow's demands, the Workgroup Server 8150/110 is the server you've been waiting for.

Features

Expansion and storage

- Three NuBus slots for expansion cards
- One processor-direct slot
- Up to two internal drive bays for 1GB, 2GB, or 4GB hard disk drives or a DDS-2 Digital Audio Tape (DAT) drive (some configurations)
- Internal quadruple-speed CD-ROM drive
- Eight ports support a wide range of peripherals
- Two SCSI DMA buses to support up to nine devices (three internal, six external)

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with NuBus card)

Power, speed, and memory

- 110-MHz PowerPC 601 RISC processor with floating-point processor and 32K on-chip cache
- 256K level-2 cache
- 16MB of RAM, expandable to 264MB

Features Built Into Every Workgroup Server

Fast, easy setup

- Comes with System 7.5.1 software installed
- Includes AppleShare 4.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows
- Can be ordered as part of the Apple Internet Server Solution for the World Wide Web

Bundled software

- Includes a variety of server administration and user productivity tools, including Apple RAID Software and Retrospect Remote (with DAT drive configurations)

Service and support*

- Includes 24-hour telephone support
- Includes within-two-business-day, on-site service response
- Offers optional within-four-hour or next-business-day on-site service response

* These services are available only in certain areas of the U.S.

Article Change History:

07 Jul 1995 - Updated for clarity.

Support Information Services

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Tech Info Library Article Number:17490



Tech Info Library

Workgroup Server 8150/110: Technical Specifications (7/95)

Revised: 7/7/95
Security: Everyone

Workgroup Server 8150/110: Technical Specifications (7/95)

Article Created: 31 March 1995
Article Reviewed/Updated: 7 July 1995

TOPIC -----

This article provides the technical specifications and order information for the Workgroup Server 8150/110.

DISCUSSION -----

Technical Specifications
=====

Microprocessor

- PowerPC 601 RISC microprocessor running at 110 MHz
- Integrated floating-point unit and 32K on-chip cache
- 256K level-2 cache; 1MB available in Build-to-Order configuration

Memory

- 16MB of RAM
- Can be expanded to up to 264MB of RAM

Drives

- Up to two internal driv bays for 1GB, 2GB, or 4GB hard disk drives or a DDS-2 Digital Audio Tape (DAT) drive (some configurations)
- One AppleCD 600i Plus CD-ROM drive (up to 600KB/s streaming data-transfer rate)
- One Apple SuperDrive 1.4MB floppy disk drive that reads, writes, and formats Macintosh, Windows, MS-DOS, and OS/2 disks

Bundled software

Server administration tools

- FileWave - Automated software and data distribution
- Server Manager* - Remote AppleShare management tools
- Apple RAID Software - Disk striping and data mirroring
- Retrospect Remote** - Automated backup software

* Only included in AppleShare configurations

** Only included in DAT drive configurations

User productivity tools

- AppleShare Client for Windows - Enables Windows clients to connect to an AppleShare server
- Now Contact - Contact management software
- Now Up•to•Date - Group scheduling software
- Viper Instant-Access - Cross-platform information retrieval system
- Adobe Acrobat Reader - Viewing application for portable document format (PDF) files

NOTE: The only software bundled with the 8150/110 when it is used as part of the Apple Internet Server Solution for the World Wide Web is Apple RAID Software and AppleShare Client for Windows.

Displays

- Supports up to 14-inch Apple displays at 32,768 colors, and 16- and 17-inch Apple displays at 256 colors
- Supports most third-party displays as well as VGA and SVGA monitors

Video support

- Built-in DRAM display support

Interfaces

- Three NuBus expansion slots
- One processor-direct slot
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other device
- AAUI-15 Ethernet connector
- High-density display port supports Apple AudioVision monitors directly and supports other displays by a Power Macintosh Display Adapter (included)
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Two high-speed asynchronous SCSI DMA buses; one supports up to five external and two internal SCSI devices, the other supports up to two internal hard disks
- 16-bit stereo sound input and output ports

Networking

- Built-in Ethernet
- Two serial ports for LocalTalk
- Supports TCP/IP networking software with MacTCP

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

- Easy Access and visible beep included with system software to provide alternative input and output devices for people with disabilities

Electrical requirements

- Line voltage: 100 to 240 volts AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 200 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Keyboard and mouse

- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Size and weight

- Height: 14.25 in. (30.6 cm)
- Width: 8.9 in. (19.6 cm)
- Depth: 16.0 in. (39.6 cm)
- Weight: 25.3 lb. (11.5 kg) (varies based on internal devices installed)

Operating environment

- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Regulatory approval

- FCC Class A

Ordering Information

Workgroup Server 8150/110 (16MB/1GB/CD/DAT)

Order No. M4042LL/A

- Workgroup Server 8150/110 with 16MB of RAM, 256K level-2 cache, 1GB hard disk drive, DDS-2 DAT drive, quadruple-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, and mouse

- System 7.5.1 and bundled software
- Power Macintosh Display Adapter

Workgroup Server 8150/110 (16MB/1GB/CD/DAT) with AppleShare

Order No. M4065LL/A

- Identical to the above configuration, with the addition of AppleShare 4.1 software

Workgroup Server 8150/110 (16MB/1GB/CD) with AppleShare

Order No. M4007LL/A

- Workgroup Server 8150/110 with 16MB of RAM, 256K level-2 cache, 1GB hard disk drive, 1.4MB Apple SuperDrive floppy disk drive, quadruple-speed CD-ROM drive, System 7.5.1, AppleShare 4.1 software, and bundled software

Workgroup Server 8150/110 Build-to-Order

Order No. M4043LL/A

- Base chassis includes 8MB RAM, 1.4MB Apple SuperDrive floppy disk drive, quadruple-speed CD-ROM drive, System 7.5.1 software, and Apple RAID Software

Apple Internet Server Solution for the World Wide Web 8150/110

Order No. M4141LL/A

- Identical to Order No. M4007LL/A (without AppleShare 4.1) but includes Apple Internet Server Solution software

Workgroup Server 8150/110 Logic Board Upgrade

Order No. M4046LL/A

- Upgrades a Workgroup Server 80 or Workgroup Server 8150 to a Workgroup Server 8150/110
- Includes AppleShare 4.1 Update Kit, System 7.5.1, Apple RAID Software and 8MB of RAM. Additional RAM may be required.

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. Check with your Apple reseller for details.

Apple Token Ring NB/c Card

Order No. M1769Z/A (7-inch)

Apple Token Ring 4/16 NB/c Card

Order No. M0415LL/B (12-inch)

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

07 Jul 1995 - Updated for clarity.

Support Information Services

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Tech Info Library Article Number:17491



Tech Info Library

Workgroup Server 9150/120: Description (3/95)

Revised: 3/31/95
Security: Everyone

Workgroup Server 9150/120: Description (3/95)

Article Created: 31 March 1995

TOPIC -----

This article describes the Workgroup Server 9150/120.

DISCUSSION -----

The Workgroup Server 9150/120 is the most expandable and powerful member of the PowerPC processor-based Workgroup Server family from Apple. It delivers file and print, database, Internet, and communications capabilities that meet the needs of growing workgroups in education, business, and publishing. And it's ideal for work-groups that use both Macintosh and Windows software-based computers.

Servers are high-performance, highly reliable systems that provide organizations with faster, more efficient shared network services and secure centralized storage. The Workgroup Server 9150/120 not only meets these criteria, it also runs the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 120-megahertz PowerPC 601 processor with on-chip and 1-megabyte level-2 cache, the Workgroup Server 9150/120 delivers all the performance benefits of state-of-the-art RISC technology. This power is supported by two large-capacity hard disk drives for convenient, comprehensive storage with space for three more, and a quadruple-speed CD-ROM drive. And increased reliability is provided by a DAT drive, Retrospect Remote automatic server and client backup software, and Apple RAID (Redundant Array of Independent Disks) Software, which supports disk mirroring for increased data reliability and disk striping for improved performance. (Apple RAID mirroring or striping requires at least two disk drives.)

To make sure that you get the most out of all that power and capacity, the Workgroup Server 9150/120 comes with additional software. For users, there's everything from server-based contact management and scheduling software to solutions that allow workgroups to create, share, and review information electronically. For network managers, there's software to help manage

application distribution and updates, server usage, and remote AppleShare administration. And the Workgroup Server 9150/120 includes AppleShare Client for Windows software, so Windows users on the network can access networked printers and files stored on a Workgroup Server running AppleShare file and print sharing software.

So if you need a high-performance server for a large and expanding workgroup, we have the solution: the powerful and expandable Workgroup Server 9150/120.

Features

Expansion and storage

- Four NuBus slots for expansion cards
- One processor-direct slot (PDS)
- One or two internal 1GB, 2GB, or 4GB hard disk drives
- Space for up to five internal 3.5-inch half-height hard disk drives (20GB total)
- Internal DDS-2 Digital Audio Tape (DAT) drive (some configurations)
- Internal quadruple-speed CD-ROM drive
- Two SCSI DMA buses to support up to 14 devices (7 internal, 7 external)
- Ten ports support a wide range of peripherals

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with NuBus card)

Power, speed, and memory

- 120-MHz PowerPC 601 RISC micro-processor with floating-point processor and 32K on-chip cache
- 1MB level-2 cache
- 16MB of RAM, expandable to 264MB

Features Built Into Every Workgroup Server

Fast, easy setup

- Comes with System 7.5.1 software installed
- Includes AppleShare 4.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows
- Can be ordered as part of the Apple Internet Server Solution for the World Wide Web

Bundled software

- Includes a variety of server administration and user productivity tools including Apple RAID Software and Retrospect Remote (with DAT drive configurations)

Service and support*

- Includes 24-hour telephone support
- Includes within-two-business-day, on-site service response
- Offers optional within-four-hour or next-business-day on-site service

response

* These services are available only in certain areas of the U.S.

Support Information Services

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Tech Info Library Article Number:17492



Tech Info Library

Workgroup Server 9150/120: Technical Specifications (3/95)

Revised: 3/31/95
Security: Everyone

Workgroup Server 9150/120: Technical Specifications (3/95)

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Article Created: 31 March 1995

TOPIC -----

This article provides the technical specifications for the Workgroup Server 9150/120.

DISCUSSION -----

Technical Specifications

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Microprocessor

- PowerPC 601 RISC microprocessor running at 120 MHz
- Integrated floating-point unit and 32K on-chip cache
- 1MB level-2 cache; 256KB available in Build-to-Order configuration

Memory

- 16MB of RAM
- Can be expanded to up to 264MB of RAM

Drives

- Up to five internal 1GB, 2GB, or 4GB Apple hard disk drives
- One DDS-2 DAT drive (4GB uncompressed, 10 to 14GB compressed); some configurations
- One AppleCD 600i Plus CD-ROM drive (up to 600KB/s data-transfer rate)
- One Apple SuperDrive 1.4MB floppy disk drive that reads, writes, and formats Macintosh, Windows, MS-DOS, and OS/2 disks

Bundled software

Server administration tools

- FileWave - Automated software and data distribution

- Server Manager* - Remote AppleShare management tools
- Apple RAID Software - Disk striping and data mirroring
- Retrospect Remote** - Automated backup software

* Only included in AppleShare configurations

** Only included in DAT drive configurations

User productivity tools

- AppleShare Client for Windows - Enables Windows clients to connect to an AppleShare Server
- Now Contact - Contact management software
- Now Up•to•Date - Group scheduling software
- Viper Instant-Access - Cross-platform information retrieval system
- Adobe Acrobat Reader - Viewing application for portable document format (PDF) files

NOTE: The only software bundled with the 9150/120 when it is used as part of the Apple Internet Server Solution for the World Wide Web is Apple RAID Software, AppleShare Client for Windows, and Retrospect Remote.

Displays

- Supports up to 14-inch Apple displays at 32,768 colors, and 16- and 17-inch Apple displays at 256 colors
- Supports most third-party displays as well as VGA and SVGA monitors

Video support

- Built-in DRAM display support

Interfaces

- Four NuBus expansion slots
- One processor-direct slot
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other device
- AAUI-15 Ethernet connector
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Two high-speed asynchronous SCSI DMA buses; one supports up to 7 external SCSI devices, the other supports up to 7 internal SCSI devices (for a total of 14)
- 16-bit stereo sound input and output ports
- DB-15 video port for display support

Networking

- Built-in Ethernet
- Two serial ports for LocalTalk
- Supports TCP/IP networking software with MacTCP

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

-
- Easy Access and visible beep included with system software to provide alternative input and output devices for people with disabilities

Electrical requirements

- Line voltage: 100 to 240 volts AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 303 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Keyboard and mouse

- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Size and weight

- Height: 18.6 in. (47.3 cm)
 - Width: 8.9 in. (22.4 cm)
 - Depth: 20.6 in. (52.3 cm)
 - Weight: 36.8 lb. (16.7 kg)
- (varies based on internal devices installed)

Operating environment

- Operating temperature: 50 to 95 degrees F (10 to 35 degrees C)
- Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Regulatory approval

- FCC Class A

Ordering Information

=====

Workgroup Server 9150/120 (16MB/2 x 1GB/DAT/CD)

Order No. M4064LL/A

- Workgroup Server 9150/120 with 16MB of RAM, 1MB level-2 cache, two 1GB hard disk drives quadruple-speed CD-ROM drive, DDS-2 DAT drive, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- System 7.5.1 and bundled software
- Power Macintosh Display Adapter

Workgroup Server 9150/120 (16MB/2 x 1GB/DAT/CD) with AppleShare

Order No. M4038LL/A

- Identical to the above configuration, with the addition of AppleShare 4.1 software

Workgroup Server 9150/120 (16MB/2GB/CD)

Order No. M4008LL/A

- Workgroup Server 9150/120 with 16MB of RAM, 1MB of level-2 cache, one 2GB hard disk drive, quadruple-speed CD-ROM drive, 1.4MB Apple SuperDrive floppy disk drive, System 7.5.1, and bundled software

Workgroup Server 9150/120 Build-to-Order

Order No. M4041LL/A

- Base chassis includes 8MB of RAM, 1.4MB Apple SuperDrive floppy disk drive, quadruple-speed CD-ROM drive, System 7.5.1 software, and Apple RAID Software

Apple Internet Server Solution for the World Wide Web 9150/120

Order No. M4145LL/A

- Identical to Order No. M4064LL/A, but includes Apple Internet Server Solution software

Workgroup Server 9150 Logic Board Upgrade

Order No. M4047LL/A

- Upgrades a Macintosh Quadra 900, 950 or a Workgroup Server 9150 to a Workgroup Server 9150/120
- Includes 8MB of RAM, Apple RAID Software, AppleShare 4.1 Update Kit, and System 7.5.1 software. Additional RAM may be required.

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. Check with your Apple reseller for details.

Apple Token Ring NB/c Card

Order No. M1769Z/A (7-inch)

Apple Token Ring 4/16 NB Card

Order No. M1769Z/A (12-inch)

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Support Information Services

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Tech Info Library Article Number:17493



Tech Info Library

AppleShare 4.1 & Client for Windows: Description (9/95)

Revised: 9/25/95
Security: Everyone

AppleShare 4.1 & Client for Windows: Description (9/95)

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Article Created: 31 March 1995
Article Reviewed/Updated: 25 September 1995

TOPIC -----

This article describes and product details for AppleShare 4.1.

DISCUSSION -----

AppleShare is high-performance, easy-to-use file and print sharing software that allows networked Macintosh and Microsoft Windows software-based computers to share files, applications, and printers.

With AppleShare file server software, organizations can store all of their shared files and applications in a single, central location, providing convenient, easy access to every user on the local area network. By allowing networked users to centralize all key files and applications for easy sharing, AppleShare improves everyone's productivity. It eliminates time spent looking for files, worrying about misplaced documents, and determining the file or application version.

AppleShare print server software offers all users queued access to up to five networked printers. This time saving function allows users to be more productive because they can use their computers to tackle other tasks instead of waiting for documents to print.

Now, all networked users can connect easily to an AppleShare server. AppleShare lets Macintosh users access shared resources via the Mac OS, and Windows software-based computers users via the Windows interface. AppleShare's network architecture coexists with other application programs and networking services such as Novell NetWare, Windows for Workgroups, and even the Internet.

Yet for all of its power and capabilities, AppleShare is extremely reliable and easy to set up, use, and maintain.

It continues in the "plug and play" tradition established by the Macintosh more

than a decade ago; most system administrators find that they can get an AppleShare server up and running within 15 minutes. And overall maintenance including the addition and deletion of users is so simple that a dedicated, full-time administrator is not required. In fact, because AppleShare is so easy to install, maintain, reconfigure, and expand, it offers the lowest long-term cost of ownership of any product in its class.

Whether your organization is a small or medium-size business, a classroom, or a department within a global enterprise, AppleShare improves collaboration and increases efficiency for all users.

Features

=====

Powerful file and print services

- Lets users store their files and applications in a single, central location
- Makes it easy and efficient to print documents to networked printers
- Provides comprehensive, easy-to-implement security

Ease of use

- Installs with a single click of the mouse
- Can be up and running in minutes
- Makes day-to-day management quick and easy
- Users can take advantage of file and print services from either Macintosh computers or Windows software-based PCs
- Allows users to work in the operating system environment with which they are most familiar (Mac OS or Windows)

Compatibility

- Includes full support for both Macintosh and Windows clients
- Macintosh client built into the Mac OS; Windows client sold separately
- Server works with all Mac OS-compatible applications

Performance and scalability

- Supports up to 150 users
- Performs up to 10 times faster than built-in Mac OS file sharing
- Can be configured for use in an AppleTalk network of any size
- Is scalable from LocalTalk to Ethernet networks, and beyond
- Offers highest performance when running on PowerPC-based Workgroup Servers

Ordering and Licensing Information

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AppleShare 3.0.1

Order No. M0090LL/B

AppleShare 4.0.2

Order No. M3995Z/A

AppleShare 4.1

(Included in some PowerPC-based Workgroup Server configurations)

AppleShare Client for Windows

Order No. M3481Z/A

(Also included in PowerPC processor-based Workgroup Server configurations; client network license is included and allows the installation of the client software on any Windows software-based PC on the network)

AppleShare Product Family

=====

AppleShare software comes in three versions that are designed to accommodate a variety of workgroup sizes and performance needs.

AppleShare 3.0.1 is designed for smaller workgroups of Macintosh and Windows software-based computers that have outgrown the basic file sharing capabilities of the Mac OS. It runs on 68030-based, or earlier, Macintosh computers.

AppleShare 4.0.2 offers significant performance improvements over AppleShare 3.0.1, and runs on 68040-based Macintosh computers. Like AppleShare 3.0.1, it's appropriate for smaller, cross-platform workgroups that want to move beyond simple Mac OS file sharing and is extremely easy to set up and administer.

AppleShare 4.1 is the highest-performance AppleShare version available. Designed for Apple PowerPC processor-based Workgroup Servers, it offers outstanding performance and functionality, yet retains the ease of use shared by the other product offerings in the AppleShare family.

Product Details

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Capabilities and services

- Includes file and print servers
- Supports Mac OS program linking and publish and subscribe
- Features an open environment that allows additional network services
- Macintosh client software built into every Macintosh; Windows client software sold separately

Sharing options

- On-line CD-ROM exchange
- Sharing of folders or entire disks
- Easy server selection through the Chooser
- Intuitive, consistent access to shared resources
- User-controlled access to information

Print spooling

- Provides spooling for up to five networked printers

- Offers centralized queue management
- Accepts simultaneous print requests
- Frees client workstations for use immediately
- Includes print log for up to 1,000 print jobs

Administrator control

- Administrator can set number of connected users
- Server messages can be broadcast or sent to selected users
- Administrator can set cache sizes to maximize performance

Security

- Minimum password length
- Password aging
- Password history to prevent immediate reuse
- Ability to disallow saved passwords
- Account disabled after specified number of password failures
- Adjustable time limit for temporary accounts
- Guest access allowed; turned off by default
- Copy-protection setting for documents
- "Lock" setting for folders
- Adjustable number of concurrent application launches
- Inherited folder privileges
- Administrator log-off of any user

AppleShare Specifications

.	3.0.1	4.0.2	4.1
.	-----	-----	----
Concurrent logons	120	150	150
Open files	346	346	346
Users	8,192	8,192	8,192
Groups	8,192	8,192	8,192
Users in group	8,191	8,191	8,191
Groups per user	42	42	42
Locked ranges/user	20	20	20
Apple II logon	yes	yes	yes
Apple II network startups	40	n/a	n/a
Minimum RAM	4MB	8MB	16MB
System software	7.0	7.1	7.5

AppleShare Server

- AppleShare 3.0.1: 68030-based (or earlier) Macintosh computers
- AppleShare 4.0.2: 68040-based Macintosh computers*
- AppleShare 4.1: PowerPC processor-based Workgroup Servers

* AppleShare 4.0.2 is not designed to run on the Macintosh Quadra 660AV and Macintosh Quadra 840AV computers.

AppleShare Client

Macintosh

- An Apple Macintosh computer with an internal hard disk drive and at least 4MB of RAM
- Mac OS software version 6.0.7 or later
- System 7.5 required for performance of AppleShare 4.1

Windows

- Any IBM or 100 percent compatible computer running Intel processor 386 or greater; ISA, MicroChannel, VISA, and EISA internal buses; 4MB of RAM
- Windows 3.1, 3.11, or Windows for Workgroups 3.11 software
- MS-DOS 5.0 or later
- Ethernet network adapter card
- NDIS 3.0 or ODI network interface driver

Network requirements

-
- An AppleTalk network connection (via LocalTalk, Ethernet, Token Ring, or Apple Remote Access software); Windows software-based computers must be connected via Ethernet

Article Change History:

25 Sep 1995 - Changed title to show AppleShare 4.1 information.

Support Information Services

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Tech Info Library Article Number:17494



Tech Info Library

Apple Software: System 7.1 Compatibility (4/97)

Revised: 4/28/97
Security: Everyone

Apple Software: System 7.1 Compatibility (4/97)

Article Created: 7 December 1992
Article Reviewed/Updated: 9 April 1997

TOPIC -----

****IMPORTANT NOTE**:**

The following information is correct as of March 31, 1995. There will be NO further updates to this article. System 7.5 is currently the standard operating system for all Macintosh computer systems. Hence, all testing of any new Apple software updates will be done with System 7.5, the current desktop standard, not with System 7.1.

A separate article will be maintained and updated regularly with information pertaining to compatibility of all shipping Apple software products and System 7.5. See the article titled "Apple Software: Current Versions" for more information.

The table below lists "current" Apple software products (both Apple II and Macintosh) and provides for each:

* Version The "current" version number as of 3/95.
* 7.1? Whether the product is compatible with System 7.1.
* Notes Additional information on the product

If it is not 32-bit clean, it will be noted in the notes section.

Additional articles in the Tech Info Library describe many of the products listed below. This article does not cover any announced Apple products which are not currently shipping.

DISCUSSION -----

Begin_Table

Product	Version	7.1?	Notes
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32-Bit System Enabler	1.0.3	ONLY	For Mac II, IIX, IICx, SE/30
3270 API Developer's Kit	2.0	N/A	APDA
8*24 GC (Extension)	7.0.1	YES	
950 Color Addition	1.0	----	Only for Quadra 950 running 7.0.1, fix is included in SSW 7.1.
A/UX	3.0.1	N/A	Incompatible with Centris 610, 650. With optional FPU installed in Centris 650, it is compatible.
A/UX	3.1	N/A	Only supports the AWS 95.
A/ROSE	1.2.1	YES	On NSI 1.4.4
ADSP	1.5.1		Not required, built-in part of SSW 7.0 & higher
Apple Backup	1.1	7.1P	Part of Performa OS only
Apple Color Printer	1.0	YES	Printer System Extension
Apple DocViewer	1.1.1	YES	Apple Extras folder of Power Macs
Apple Event Manager	1.0.3	YES	Part of AppleScript 1.1
Apple File Exchange	7.0	YES	Part of SSW 7.1
Apple Font Pack	1.0	YES	See separate article in Tech Info Library for contents
Apple Access II	1.3.1	N/A	For Apple II
Apple II System	3.2	N/A	For Apple II systems
Apple IIGS System	6.0.1	N/A	For Apple IIGS only.
Apple IIe Card Software	2.2.1	YES	
Apple Guide	1.2	NO	System 7.5 only
Apple Internet Router	3.0.1	YES	3.0.1 is a patch to 3.0
Apple Media Tool	1.0.1	YES	Ships with QT 1.6.1
Apple Modem Tool	1.5.3	YES	
Apple Personal Diag	1.1.1	YES	
Apple Phone	1.0.1	YES	Application bundled with AV models.
Apple Photo Access	2.0	YES	System Ext. comes w/ CD-ROM SW
Apple Restore	1.1	7.1P	Performa OS only, restores Apple Backup items
AppleScript	1.1	YES	Available from APDA or reseller
AppleSearch Client	1.0	YES	Part of AppleSearch package
AppleSearch Server	1.1	YES	1.1 patch for Power Macintosh
AppleShare File Server	3.0.3	YES	For any Macintosh, patch
AppleShare Print Server	3.0.2	YES	For any Macintosh, patchU
AppleShare File Server	4.0.1	YES	For most 68040 based Macintosh models
AppleShare File Server	4.0.2	YES	Version for Power Macintosh
AppleShare Print Server	4.0.1	YES	For most 68040 based Macintosh models
AppleShare Print Server	4.0.2	YES	Version for Power Macintosh
AppleShare Pro (File Svr)	1.1	N/A	Apple Workgroup Server 95 only
AppleShare Pro (print)	1.1	N/A	Apple Workgroup Server 95 only
Apple Shared Library Mgr	1.1	YES	1.0 ships with SSW 7.1.2. Used to make system more efficient For developers
AppleTalk	v.58.1.4	N/A	Use Network SW Installer 1.4.5
AppleTalk ImageWriter	7.0.1	YES	
Apple Remote Access	2.0.1	YES	Separate Client, Personal Server & Multiport Server versions.

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AppleTalk-DECnet Tool	1.1	YES	
AppleTalk-LAT Gateway	1.0	YES	
AppleTalk-LAT Tool	1.0	YES	
Aristotle	xxx	N/A	For Apple II
Assistant Tidbit 1	1.0	YES	Part of PowerBook File Assistant 1.0
Assistant Tidbit 2	1.0	YES	Part of PowerBook File Assistant 1.0
Assistant Toolbox	1.0	YES	Part of PowerBook File Assistant 1.0
At Ease	2.0.3	YES	
At Ease for Workgroups	2.0.3	YES	
AudioVision (extension)	1.0	YES	Extension for AudioVision 14 Monitor
AutoRemounter	1.2	YES	PowerBook control panel
AV Serial Extension	1.0	YES	
AW Server 95	1.1	N/A	Part of AWS 95 Update 1.1
AWS 95 Tune-Up	1.0	N/A	System update disks (2) for the Apple Workgroup Server 95
Basic Color Monitor	1.0	YES	Eliminates overly green color on monitors attached to Macintosh Centris and Quadra models. Not required if HSU 2.0.1 is installed.
Basic Connectivity Set	1.1.1	YES	
Battery DA	7.1.1	YES	
Battery Recondition	1.0		
CD-ROM Setup	5.0.1	YES	
Chinese Language Kit	1.0	YES	Includes WorldScript II 7.1.2
Chooser	7.3	YES	For Jan 93 Printers Only
CloseView	7.1	YES	SSW 7.1, Fixes problems in 7.0 with Virtual Memory
ColorSync	1.0.5	YES	Color Imaging System Extension
Compatibility Checker	7.1.1	YES	SSW 7.1
CPU Energy Saver	1.0.1	YES	
Curare	1.0	YES	APDA Product
DAL Software	N/A		Contact ITI at 510-438-2095
DART	1.5.3	YES	
Disk Copy	4.2	YES	7.1 MUK
Disk First Aid	7.2.2	YES	Part of Software Utility Update 2.0.1
Display Enabler	1.2	YES	Part of Apple Multiple Scan Display SW 1.0DOS
DocViewer	1.1.1	YES	
Compatibility Software	1.0	YES	Quadra 610 DOS Compatible
Duo Battery Patch	1.0	YES	For Duo 210, 230, 250
Easy Access Ctrl Panel	7.2	YES	
Energy Saver	1.0	YES	Control panel
EtherTalk	2.5.6	YES	Use Network SW Installer 1.4.4
Express Modem**	1.5.5	YES	Control panel for Express Modem, GeoPort
Express Modem Tool**	1.5.3	YES	CTB Extension for Express Modem, GeoPort
Express Modem 14400**	1.0	N/A	AppleTalk Remote Access CCL file
Extension Manager	3.0	YES	
Fax Extension**	1.5.2	YES	PB Modem, Express Modem, GeoPort
Fax Sender**	1.5.2	YES	PB Modem, Express Modem, GeoPort
Fax Terminal**	1.5.2	YES	PB Modem, Express Modem, GeoPort
Fax Viewer**	1.5.2	YES	PB Modem, Express Modem, GeoPort

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Fax Cover**	1.5.2	YES	PB Modem, Express Modem, GeoPort
Font/DA Mover	4.1		Not required, built into System 7.x Finder
GeoPort Extension	1.2	YES	For Quadra and Power Macintosh
GeoPort for Power Mac	1.0.2		Diskette containing GeoPort Software
Hardware System Update	2.0.1	YES	Obsolete-should use System Update v 3.0
HD SC Setup	7.3.1	YES	
HyperCard	2.2	YES	APDA, reseller
HyperCard IIIGS	1.1	N/A	
HyperCard Player	2.2	YES	Bundled with Power Macintosh
HyperMover	1.1	N/A	HyperCard IIIGS
HyperScan	2.0	YES	OneScanner
ImageWriter	7.0.1	YES	
ImageWriter GX	1.0.1	NO	Part of QuickDraw GX
ImageWriter LQ GX	1.0.1	NO	Part of QuickDraw GX
Installer	3.4.3	YES	
Inter*Poll	1.0.1	YES	
ISDN	1.0	YES	APDA
Japanese Language Kit	1.1	YES	(Includes WorldScript II 7.1.1)
LaserWriter	8.1.1	YES	For LaserWriter Pro family
LaserWriter GX	1.0.1	NO	Part of QuickDraw GX
LaserWriter IIIS GX	1.0.1	NO	Part of QuickDraw GX
LaserWriter Pro Energy Star Software			Postscript document
LaserWriter Pro Windows	1.0	N/A	
LaserWriter Utility	7.6.1	YES	LaserWriter Pro family support
LAT	1.1	YES	APDA
LaserWriter Select 300	1.2	YES	Shipped with LaserWriter Select 300
LaserWriter 300 GX	1.0.1	NO	Part of QuickDraw GX
LaserWriter Select 310	1.0.1	YES	Shipped with LaserWriter Select 310
LaserWriter Select 360	1.1	YES	Shipped with LaserWriter Select 360
LaserWriter Select 360 Fax	1.1	YES	Shipped with LaserWriter Select 360
Likewise	1.0.1	YES	Discontinued 12/93
LW Select 310 for Windows	1.0	N/A	
MacApp	3.0.1	YES	APDA
MacCheck	1.0.5	YES	Part of Software Util. Update 2.0.1
Macintosh Basics	5.0	YES	Tour, bundled with Macintosh
Macintosh Common Lisp	2.0.1	YES	APDA
Macintosh Easy Open	1.1.1	YES	Shipped with System 7.5
Macintosh Networking			
Basics	1.0	YES	"Tour" disk
Macintosh PC Exchange	2.0.1	YES	See separate TIL article
Macintosh Quadra Extra	1.0	YES	Quadra 950 only rolled in SSW 7.1
Macintosh TV Setup	1.0.1	YES	Control Panel for Macintosh TV model
Macintosh Visca Driver	1.2	YES	ADPA
MacODA	1.0	YES	
MacOSI Transport	1.0	YES	
MacsBug	6.2.2	YES	APDA, not compat. w/Centris/Quadra 610 models without FPU.
MacSNMP Admin	1.0.2	YES	
MacSNMP Client	1.0.2	YES	
MacTCP	2.0.4	YES	
MacTCP Admin	2.0.4	YES	
MacTCP Developer's Kit	N/A	N/A	APDA Product

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MacTCP Token Ring Ext.	2.0.2	YES	System extension
MacTerminal	3.0	YES	
MacX	1.2	YES	
MacX.400	1.0	YES	
MacX25	1.2	YES	Patch from v1.1
Monitor Energy Saver	1.0	YES	Control Panel
Mouse Basics	4.5	YES	"Tour" disk
MPW	3.3	YES	APDA
MPW 411	N/A	YES	APDA
MPW C++	3.2	YES	APDA
NetTrax	1.2	YES	APDA
Network Launch Fix	1.0.2	YES	See separate TIL article
Network Software			
Installer	1.4.5	YES	See separate TIL article
Newton Connection	2.0	YES	For Macintosh
Newton System Update	1.0.5	N/A	For Newton MessagePad 100
Ofoto	2.0.1	YES	Color OneScanner Support
OfotoColor	1.0	YES	System Extension
PC Exchange	2.0.2	YES	
Personal LaserWriter 300	1.2	YES	Printer Extension
Personal LaserWriter 320	1.0.1	YES	Printer Extension
Personal LaserWriter NTR	2.0	YES	Printer Extension
PhotoFlash	1.0	YES	
PhotoFlash Browser	1.0	YES	Bundled with PhotoFlash
PlainTalk	1.3	YES	Bundled with AV/Power Macs in USA, Purchase separately outside USA.
PDD Maker GX	1.0.1	NO	Part of QuickDraw GX
PowerBook Control Panel	7.3.1	YES	Comes with System Update v 3.0
PowerBook/DOS Companion			See separate TIL article
PowerBook Display	1.1	YES	Control panel for PowerBook Video output control.
PowerBook File Assistant	1.1	YES	
PowerBook Setup Ctl Pnl	7.3.1	YES	
PowerCD Setup	1.0.1	YES	
PowerShare	1.0	YES	
Collaboration Server			
PowerTalk	1.0	YES	Part of System 7 Pro (v7.1.1)
PowerTalk for PowerPC	1.0.2	YES	Requires System 7 Pro Kit
Portable StyleWriter	1.0.1	YES	
PrinterShare	1.1	YES	System extension, part of GrayShare
Quadra 950 Color Addition	1.0	YES	For Quadra 950 only
QuickDraw GX	1.0.1	NO	Requires System 7.5.
QuickTake	1.0	YES	
QuickTake	1.1	YES	Power Macintosh compatible
QuickTime	2.0	YES	
QuickTime for Windows SDK	1.1	N/A	Apple SW Licensing
QuickTime Starter Kit	1.0	YES	
Rename Rescue	1.0	YES	Apple's UNLOCKFOLDER
ResEdit	2.1.3	YES	APDA
Responder	1.1.1		Not required, built into System 7.x
SADE	1.3.2	YES	APDA
Scanner	3.0	YES	Color OneScanner Support
Screen	1.0.4	YES	Comes with System Update v 3.0

Script Editor	1.0	YES	AppleScript Developer's Kit
Scriptable Text Editor	1.0	YES	AppleScript Developer's Kit
Serial Switch	1.1	YES	For Macintosh IIfx only
Serial Tool	1.0.2	YES	Basic Connectivity Set 1.1.1
SimpleText	1.1	YES	System Update Disk v 3.0
SNA*ps APPC Developer's	N/A	N/A	APDA Kit
SNA*ps	N/A		Contact Wall Data at 800-927-8622
Sound Control Panel	8.0.1	YES	
Sound Effects	1.0	YES	System Ext bundled w/ AV Macintosh models.
Sound Manager	3.0	YES	Part of HSU 2.0.1
Speech Manager	1.1.1	YES	System Ext bundled with AV Macintosh models.
StyleWriter GX	1.0.1	NO	Part of QuickDraw GX
StyleWriter II	1.2	YES	Printer Extension
System 7.1	7.1	N/A	
System 7.1.1 Pro	7.1.1	N/A	Includes PowerTalk, AScript 1.1
System 7.1.2	7.1.2	N/A	
System 7.5	7.5	N/A	Current base release
System 7 Tune-Up	1.1.1	YES	Built into System 7.1 & higher.
System Enablers - Please see separate Tech Info Library article:			
			"System Enablers: Current Versions"
System Picker	1.0	YES	NOT APPLE SOFTWARE use at own risk
System Update	3.0	YES	Update for all Macintosh Computers
TeachText	7.2	YES	New version for AV Computers & Text to Speech
Telephone Manager	1.1.1	YES	APDA/System 7.5
Thread Manager	2.0.1	YES	Comes with PowerTalk/System 7.5
Token Ring	1.0.1	YES	Control Panel, Use NSI 1.4.4
TokenTalk	2.5.6	YES	Use Network SW installer 1.4.4
TV Setup Cntl Panel	1.0.1	YES	System Update Disk v 3.0
Video (control panel)	1.0	YES	Cntl pnl for AudioVision 14 Monitor
Video Monitor	1.0.1	YES	Bundled with AVs and Power Macs
VideoSync	1.0	YES	APDA
Virtual Monitor Switch	1.0	YES	
Virtual User	2.0.1	YES	APDA
WorldScript II	7.1.2	YES	
Xmodem Tool	1.1	YES	Basic Connectivity Set 1.1.1

End_Table

NOTES:

* System Enablers provide machine specific support for new Macintosh Computers introduced beginning in October 1992. System 7.5 introduced a universal enabler which eliminates the need for a machine specific enabler.

**All of these Express Modem files are part of the Express Modem 1.5 release of March, 1994.

Article Change History:

09 Apr 1997 - Removed out dated on line references.

06 Oct 1995 - Removed keyword.

31 Mar 1995 - Clarified that this article will remain posted, but will no longer be updated for new Apple software compatibility information.

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Tech Info Library Article Number:17496



Tech Info Library

WS 6150/66, 8150/110, and 9150/120: Q & A (3/97)

Revised: 3/10/97
Security: Everyone

WS 6150/66, 8150/110, and 9150/120: Q & A (3/97)

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Article Created: 31 March 1995
Article Reviewed/Updated: 10 March 1997

TOPIC -----

This article answers common questions about the Workgroup Server (WS) 6150/66, 8150/110, and 9150/120.

DISCUSSION -----

General Questions
=====

Question: How are these new Workgroup Servers different from their predecessors?

Answer: Apple's enhanced line of PowerPC-based Workgroup Servers are different from their predecessors (the Workgroup Server 6150, 8150 and 9150) because the new products offer faster processors, high performance CD ROM, larger capacity hard disks, faster AppleShare 4.1 software, new bundled server software, and the new AppleShare Client for Windows.

Question: How much faster are the enhanced Workgroup Servers over their predecessors?

Answer: The enhanced Workgroup Servers offer faster processor speeds than their PowerPC 601 CPU predecessors: The 6150 runs at 66 Mhz, formerly 60 Mhz, the 8150 runs at 110 Mhz, formerly 80 Mhz, and the 9150 runs at 120 Mhz, formerly 80 Mhz. New higher capacity hard disks and quad-speed CD ROM players are available.

Question: What new server software comes with the Workgroup Servers? How much does it cost?

Answer: For Apple customers in the USA, Apple now bundles a server management

tools for the network manager and productivity tools for the network user. For the network manager Server Manager from Santorini, Apple RAID, FileWave from Wave Research, and Retrospect Remote are included. For the network user Now Up To Date, Now Contact and Viper from IT Designs are included. The bundled software, included at no additional cost, brings a great deal of added-value to the Workgroup Server.

Question: What is the future of NuBus equipped Workgroup Servers?

Answer: Apple is building Workgroup Servers today to use the NuBus bus architecture to allow Workgroup Server customers to plug-and-play any of the hundreds of NuBus-based expansion options, including network interface adapters, WAN connectivity solutions, and publishing-related peripherals. As part of Apple's commitment to improve the performance of the server line, future Workgroup Servers will come equipped with the new high-performance PCI (Peripheral Connect Interface) bus adaptor. PCI-based expansion options are expected to offer throughput several times faster than equivalent NuBus-based cards. Apple will continue to sell NuBus-based Workgroup Servers as long as customers demand.

Vision Questions

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Question: What is the compelling difference between a Workgroup Server and a Macintosh?

Answer: In the early 1990's Apple found that workgroups increasingly needed sophisticated network-based features to get their work done although they did not necessarily have an experienced network manager to run the workgroup's network. Apple Business Systems built a business around the Workgroup Server product family to deliver inexpensive servers that are easy to use and administer while offering high performance processors with high capacity disks, high reliability from bundled hardware (RAID, DAT Tape Backup) and software (Retrospect Remote), lifetime comprehensive customer technical support, and valuable bundled network management and client software. These features offer a compelling difference between a Workgroup Server as a network solution for workgroups and Macintosh for desktop computing.

Question: Will a Workgroup Server support services beyond those running on AppleTalk, such as IPX and TCP/IP?

Answer: Network managers in workgroups needing easy-to-manage network solutions may believe that they have to choose between TCP/IP, IPX or AppleTalk solutions. Ethernet or Token Ring networks allow TCP/IP, IPX and AppleTalk network transport protocols to coexist beautifully on the same network. AppleTalk-based network products and technologies are the easiest to use of any network standard. Apple customers find a whole industry devoted to delivering a wide range of supporting AppleTalk-based network products, such as routers, hubs, and network adapters. Consequently, Apple Workgroup Servers play an important part in providing workgroups with solutions that make use of the AppleTalk, TCP/IP

and IPX network transport protocols. Workgroup Servers can speak all of these protocols to enable server applications to serve Macintosh and Windows users using any or all of the network protocols.

Question: How long will it be before you introduce even faster or more powerful Workgroup Servers?

Answer: Although Apple continues today to work towards even faster and more powerful Workgroup Servers, Apple customers need a longer selling cycle - usually up to six months - to evaluate and adopt server products over the rapid introduction of new Macintosh desktop systems. Delivery of the new AppleShare 4.1 demonstrates Apple's continued commitment to increase the value and performance of a Workgroup Server.

Question: How will Workgroup Servers provide more valuable services in the future?

Answer: Apple is building new services that deliver sophisticated network features to workgroups using Workgroup Servers. Apple's commitment to Workgroup Server customers will make these new services available at a nominal cost, sometimes at no cost. For example, the new AppleShare 4.1 server software is available to Workgroup Server 6150, 8150, 9150 customers at no cost to the customer. Apple is also working closely with developers to bring their client/server applications onto the PowerPC processor.

Question: Why will Workgroup Servers performance increase in the future?

Answer: Apple is developing optimized operating system technology and faster network application software to enhance the performance of Workgroup Servers. Apple's commitment to Workgroup Server customers will make these new services available at a nominal cost, sometimes at no cost.

Question: Will Microsoft Windows NT for PowerPC be available for Workgroup Servers?

Answer: Apple has made no announcement that Windows NT for PowerPC will be available for Workgroup Servers. Apple continues to evaluate the needs of customers in its core marketplaces.

Question: What products are entering the end of their lives and how will you support those customers?

Answer: Apple supports its customers with logic-board upgrades to Workgroup Servers that are entering the end of their life, including an upgrade from the Workgroup Server 9150/80 (or Quadra 950) to the 9150/120, from the Workgroup Server 8150 to the 8150/110, and from the Workgroup Server 60 or 80 (both 680x0-based servers) to the 6150/66 and 8150/110 respectively. Apple will offer System 7.5 and Apple RAID to Workgroup Server customers wanting to upgrade their

system software for the existing Workgroup Server 6150, 8150 and 9150.

Apple will provide Workgroup Server 60 customers upgrades to the Workgroup Server 6150/60 until demand wanes. There is no upgrade from the Workgroup Server 6150/60 to the 6150/66 because Apple found it was not cost effective considering the small incremental difference in processor performance. However, Workgroup Server 6150/60 customers will see a tremendous performance increase when running the new AppleShare 4.1 software.

Question: What is happening to the Workgroup Server 95? Are you abandoning Unix?

Answer: Apple continues selling and supporting the Workgroup Server 95, the Workgroup Server that runs the A/UX UNIX-based operating system. Apple found that customers purchase the Workgroup Server 95 either as a fast platform to run AppleShare or as a Unix platform running applications such as Oracle7. AppleShare 4.1 on a Locomotion server is now the fastest AppleShare server. In 1994, Apple announced a strategic alliance with IBM under which Apple intends to offer AIX-based servers in the future.

Compatible Equipment Questions =====

Question: Which Windows machines are compatible with the AppleShare Client for Windows?

Answer: The AppleShare Client for Windows software is designed to run on any IBM PC 100% compatible with 80386, 80486 or Pentium processor and 4 MB of RAM, running Windows 3.1, 3.11, and Windows for Workgroups 3.11, equipped with network adaptor cards with NDIS 3.0 and ODI network drivers on ISA, MC, VISA, PCI, PCMCIA and EISA internal buses.

Question: Will the AppleShare Client for Windows run under Windows 95?

Answer: The Windows client software will not install on PCs running prerelease versions of Windows 95. Apple is planning to release a Windows 95 update after Windows 95 finally ships..

Question: Are previous AppleShare clients for Macintosh compatible with the new AppleShare 4.1 server software?

Answer: The new AppleShare 4.1 server software is backwardly compatible with previous versions of the AppleShare client for Macintosh. However, only the new AppleShare 4.1 client used with the new 4.1 server will provide increased performance. The AppleShare 4.1 server software is compatible with the AppleShare Client for Windows 1.0.

Question: Can I run AppleTalk-based network software on the same network as

Netware applications?

Answer: You can run AppleShare using the AppleTalk-protocol, NetWare using the IPX-protocol, Internet services using the TCP/IP-protocol, and others using the same physical network if you are using the Ethernet or Token Ring standards. Modern networks like these let all protocols and services coexist beautifully.

Server Software Bundle Questions

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Question: What software is now bundled with the Workgroup Servers?

Answer: Although the bundled software will vary by configuration, geography, market, and reseller, Apple USA customers will find a library of network software for the network manager and the network user. For the network manager Server Manager from Santorini, Apple RAID, FileWave from Wave Research, and Retrospect Remote (bundled only with DAT equipped Workgroup Servers) are included. For the network user Now Up To Date, Now Contact and Viper from IT Designs are included. The software is included at no additional cost.

Question: Is Apple bundling the complete version of each software product? What do these bundled software products offer to customer?

Answer: The bundled software is feature complete, as if the Workgroup Server customer purchased the stand-alone software product, with the following notes:

Apple RAID now provides software RAID level 0 and level 1. RAID level 0 is disk striping does not protect data but will improve disk performance in certain applications by writing data across two or more disks. RAID level 1 protects data by mirroring data to another disk drive. Since disks are vulnerable components, RAID can save customers from disk crashes.

Retrospect Remote supports Macintosh clients. Dantz is working towards a Windows client.

Santorini Server Manager, formerly GraceLan Server Manager from Techworks, comes bundled with AppleShare-based configurations. Server Manager allows a customer to manage their server locally or remotely. Server Manager includes automatic notification via beeper/QuickMail and tools to manage users and groups.

FileWave automates software distribution across the network and helps manage compliance with software license agreements. The bundled FileWave includes a license for 10 clients. Additional client packs are available from Wave Research.

Now Up-To-Date is a server-based calendar that provides scheduling and to-do list management. Now Contact provides network access to contact database and is integrated with Up-To-Date. These products ship with 10 user licenses. Additional client packs are available from Now.

Viper is a client/server application (similar to Apple's internal employee information DA Directory), that provides easy delivery of customer business

information from a database on the server to clients across the network. For example, Viper could provide users with a common directory of employee phone numbers and addresses. The bundled Viper includes a license for 10 clients. Additional client packs are available from IT Designs.

Adobe Acrobat enables platform and application independent document publishing.

Question: How will Apple deliver documentation for the bundled software?

Answer: Apple will deliver the software and product documentation on a CD-ROM with the Workgroup Server. Adobe Acrobat reader will give access to on line documentation such as the Server User Guide and the Apple RAID user guide.

Article Change History:

10 Mar 1997 - Minor typographical correction.

15 Nov 1995 - Updated for accuracy.

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Tech Info Library Article Number:17497



Tech Info Library

Apple MessagePad: Problem Viewing Consecutive Day Notes (3/95)

Revised: 4/5/95
Security: Everyone

Apple MessagePad: Problem Viewing Consecutive Day Notes (3/95)

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Article Created: 31 March 1995

TOPIC -----

I have entered several birthdays as day notes on my Apple MessagePad 120. However, when I select several consecutive days in the calendar that contain some of them, none of them are displayed. If I select the day the day note is created on, the day note is displayed. I'm following the example on page 93 in the 120 MessagePad Handbook.

DISCUSSION -----

The Handbook is not clear. Only, non-repeating day notes can be viewed in this manner.

WORK AROUND

If it is important to view day notes in this way, change the frequency in the day note to "Don't Repeat". Please be aware that these will only occur once after changing this.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17499



Tech Info Library

Multiple Scan 15 Display: No 512x384 Resolution (3/95)

Revised: 3/31/95
Security: Everyone

Multiple Scan 15 Display: No 512x384 Resolution (3/95)

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Article Created: 31 March 1995

TOPIC -----

I want to use the Multiple Scan 15 Display in a resolution of 512x384. I tried using Display Enabler 1.2 and the System 7.5 Update 1.0, however we still cannot get a resolution of 512x384.

DISCUSSION -----

We are not aware of any software that will allow the Multiple Scan 15 Display to correctly display a 512x384 signal. Loading Display Enabler 1.2 or System 7.5 Update 1.0 will not help.

The video signal used by the 512x384 resolution is not compatible with the Multiple Scan 15 Display. This resolution uses a vertical frame rate of 60.15 Hz, and a horizontal line rate of 24.48 kHz. However, the Multiple Scan 15 Display only supports vertical rates from 60 to 75 Hz, and horizontal rates from 31 to 57 kHz. The Multiple Scan 15 monitor cannot display any video signal with a horizontal rate under 31 kHz.

Support Information Services

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Tech Info Library Article Number:17501



Tech Info Library

System 7.5: Improper Shutdown Message (3/95)

Revised: 3/31/95
Security: Everyone

System 7.5: Improper Shutdown Message (3/95)

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Article Created: 31 March 1995

TOPIC -----

When I see the System 7.5 improper shutdown message dialog box, why does it not include as one of my options "Shutdown via the Special Menu" in the Finder? Is Apple is going to make this menu option command obsolete? Is Apple discouraging the use of Shutdown from the Finder?

DISCUSSION -----

Apple is not discouraging the use of the Shutdown menu item from the Finder's Special menu. We are simply offering system shut down alternatives and allowing the customer to choose the most convenient method to shut down.

At this time, Apple has not made definite plans whether the Shut Down menu item from the Finder's Special menu will be implemented or made obsolete in future System software releases.

Support Information Services

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Tech Info Library Article Number:17502



Tech Info Library

LaserWriter Utility: Can't Print Windows PostScript File (4/95)

Revised: 4/3/95
Security: Everyone

LaserWriter Utility: Can't Print Windows PostScript File (4/95)

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Article Created: 3 April 1995

TOPIC -----

I saved a Postscript file from Windows and I'm trying to download it to the LaserWriter using the LaserWriter Utility, but the file will not print. Have you heard of this problem?

DISCUSSION -----

The PostScript file does not print because the Windows driver inserts the control character ^D at the beginning and the end of the file. Just delete the hidden control character ^D before "%!" and after "%EOF".

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17503



Tech Info Library

Color StyleWriter 2400: Random Network Printer Selected (4/95)

Revised: 4/3/95
Security: Everyone

Color StyleWriter 2400: Random Network Printer Selected (4/95)

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Article Created: 3 April 1995

TOPIC -----

I have four Color StyleWriter 2400 printers on my network. When I send a print job to a printer while it is asleep or busy printing another job, the print job I sent is sent to another printer at random. What causes this?

DISCUSSION -----

You must rename each printer. What you see is normal if the printers are named the same (default is "Color Stylewriter 2400"). If one printer is sleeping or busy it starts printing to one of the other Color StyleWriter 2400 on the network. If the printers have unique names, a standard error message appears indicating that the printer is busy and the file will print soon.

Renaming Your Printer

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Step 1

Open the Chooser

Step 2

Click Setup

Step 3

Change the name of the printer in the Name area and click OK.

Support Information Services

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Tech Info Library Article Number:17505



Tech Info Library

System 7.5: Out of Memory Error and Shared Printer (4/95)

Revised: 4/3/95
Security: Everyone

System 7.5: Out of Memory Error and Shared Printer (4/95)

Article Created: 3 April 1995

TOPIC -----

A user has a Macintosh LC 575 with 5 MB of RAM and Color StyleWriter Pro shared on a network. They are running System software 7.5 and Microsoft Word 5.1a. This user is getting an "Out of Memory" error when a remote user tries to print. This only happens if Microsoft Word is launched prior to the Print Monitor being launched.

The company's technician says that there is 379K of available memory when Microsoft Word is running. If the user quits Microsoft Word when this problem occurs, then Print Monitor will then launch and print the document in its queue. If Microsoft Word is launched again after this successful print job the problem will not occur for the rest of the day. Any ideas?

DISCUSSION -----

With just Microsoft Word running on the Macintosh LC 575 with 5 MB of RAM, the System software uses 2861k and Microsoft Word uses 2048k. The largest unused block is 102k. Since Print Monitor requires 160k, the Macintosh LC 575 will not print in the background until that much memory is available.

If you quit Microsoft Word on the Macintosh LC 575, Print Monitor will launch, occupying 160k of memory. If you restart Microsoft Word while Print Monitor is running, Microsoft Word will use what is available, approximately 1943k. If you quit Microsoft Word when Print Monitor is no longer running, Microsoft Word will use 2048k and you will encounter the same problem as before.

Microsoft Word does not require the full 2048k for everyday word processing. If you consult the About This Macintosh window while running Microsoft Word, you will see that less than half of the 2048k allocated is actually being used. We recommend that you set the preferred size lower in the Get Info window of Microsoft Word. This will make enough memory available to allow Print Monitor to launch if Microsoft Word is launched first. With 1024k allocated to Microsoft Word, you can do general word processing (such as: spell checking, and so on).

However, Microsoft Word's grammar checking feature will require more than 1024k.

Other workarounds are:

- Upgrade the RAM in the computer to greater than 5 MB
- Turn on Virtual Memory in the Memory control panel
- Decrease the memory allocated to Print Monitor (not recommended)

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17508



Tech Info Library

Install Apple Telecom 2.3.3 on Quadra 660AV, 840AV (3/97)

Revised: 3/13/97
Security: Everyone

Install Apple Telecom 2.3.3 on Quadra 660AV, 840AV (3/97)

Article Created: 3 April 1995
Article Reviewed/Updated: 13 March 1997

TOPIC -----

This article describes installing Apple Telecom 2.3.3 on a Quadra 660AV, 840AV, or Centris 660AV.

DISCUSSION -----

The Quadra 840AV, Quadra 660AV, and Centris 660AV, use a Digital Signal Processor (DSP) to implement GeoPort functionality. The code that runs on the DSP requires Apple to pay a royalty for every GeoPort that is used on one of these systems.

This DSP code is installed by the disks that originally came with the GeoPort for AV Kit, M1694LL/B. In order to comply with the licensing agreement, Apple Telecom 2.3.3 software checks for the presence of the DSP code and only installs an updated version if an old one exists.

If for any reason, you need to install the Apple Telecom software on a clean system, you must first install the software from the disks that came with the GeoPort, then you can upgrade to Apple Telecom 2.3.3.

If a customer has lost their original GeoPort AV disks, they must contact 1-800-SOS-APPL to replace the missing disks.

NOTE: Apple Telecom 3.0 or greater is not supported on these AV systems.

Article Change History:
13 Mar 1997 - Rewrite with new information.

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Tech Info Library Article Number:17509



Tech Info Library

AppleShare Print Server: DOS Jobs and Correct Logging (4/95)

Revised: 4/3/95
Security: Everyone

AppleShare Print Server: DOS Jobs and Correct Logging (4/95)

=====

Article Created: 3 April 1995

TOPIC -----

When I spool print jobs from the DOS Compatibility Card to an AppleShare Print server, the print spooler log does not report the user name. However, print jobs from the Macintosh are logged correctly. How do I get the DOS Compatibility card to log the user's name in the print spooler log?

DISCUSSION -----

As of April, 1995 there is no workaround for this. The Macintosh LaserWriter driver looks for the computer name in the AppleShare name field from the Sharing Setup control panel, and puts it into the PostScript job in a field called %%FOR. The AppleShare Print Server reads this field and reports it in the log when a file is spooled.

The PostScript output from the DOS Compatibility card does not have the %%FOR field therefore, the print spooler has no name to report.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17511



Tech Info Library

System 7.5 Update: Control Panels & Extensions Not Replaced 3/95

Revised: 4/3/95
Security: Everyone

System 7.5 Update: Control Panels & Extensions Not Replaced 3/95

=====

Article Created: 3 April 1995

TOPIC -----

First Scenario:

A Power Macintosh already had System 7.5 installed and running. In the Extension Manager control panel the Apple Menu Options control panel was disabled. Easy Install option was used to install System 7.5 Update 1.0. But when Extensions Manager is used to turn Apple Menu Options back on, version 1.0 is still installed, not the 1.0.1 version that comes with the update.

Second Scenario:

A Power Macintosh already had System 7.5 installed and running. In the Extension Manager cdev the Apple Menu Options control panel was disabled. Using the Custom Install option, Apple Menu Options control panel portion of System 7.5 Update 1.0 was installed. After restarting, Apple Menu Options is running. But if Extensions Manager is opened, it lists Apple Menu Options twice, and asks if the duplicate should be replaced. It gives no indication of which is the later version.

Nowhere in the Installer or in the Read Me is there a warning about either of these situations.

DISCUSSION -----

This interaction between the Extensions Manager and the System 7.5 Update 1.0 installer is normal (that is; it functions as it was intended to). Before installing System 7.5 Update 1.0, open the Extensions Manager and choose the "System 7.5 only" extension set. This will help to ensure that any disabled extensions are updated, when the System 7.5 Update 1.0 is installed.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17512



Tech Info Library

Startup Items Won't Load If Initial Item Is Cancelled (4/95)

Revised: 4/3/95
Security: Everyone

Startup Items Won't Load If Initial Item Is Cancelled (4/95)

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Article Created: 3 April 1995

TOPIC -----

A customer has an alias to a server, a document, and an application in his Startup Items folder in his System Folder. If he cancels the connection to the server at startup, then the rest of the start up items do not open.

DISCUSSION -----

The behavior the customer is encountering is correct. If an alias to a server is launched from the Startup Items folder, and the user presses the cancel button when asked to connect, the rest of the startup items will not launch.

This behavior is common to the startup items folder, and is not specific to server connections. For example, if a series of startup sounds are placed in the Startup Items folder, and the user presses Command-period to cancel the playback while the first sound is playing, the remaining sounds will not be played.

There are a couple of ways for this customer to work around this behavior. The first is to use AppleShare's server mounting feature. When the customer uses the Chooser to mount a server volume, he should check the box next to the name of the server volume he wants mounted at every startup. Cancelling a password dialog generated by this method will have no effect on the file in the Startup Items folder.

Second, the customer could change the names of the server aliases in his Startup Items folder, so that they appear alphabetically after any other files, such as applications, that must always be loaded.

Third, the customer could use a third-party macro utility, which might be able to use a macro sequence to mount a server volume at startup.

Support Information Services

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Tech Info Library Article Number:17513



Tech Info Library

QuickDraw GX: Corrupt Fonts and Error -27,949 (4/95)

Revised: 4/3/95
Security: Everyone

QuickDraw GX: Corrupt Fonts and Error -27,949 (4/95)

=====

Article Created: 3 April 1995

TOPIC -----

I just installed QuickDraw GX and now I get an error -27949 when I print. What's wrong?

DISCUSSION -----

The error you are getting (-27949 internal_font_error) is caused by a corrupted or GX-incompatible font. One way to troubleshoot this error would be as follows:

Step 1

Drag the Fonts folder from the System Folder to the desktop and restart the computer.

Step 2

Try to print the desktop. If successful, go to step 3; if not, perform a clean install of System Software.

Step 3

Move 5-10 fonts back into the System Folder and restart.

Step 4

Try to print the desktop. If successful, repeat steps 3-4; if not, one of the last fonts installed is the problem. Isolate the bad font and remove it.

Once the bad font is found, reinstall a clean copy. If problem persists with the fresh copy of the font, contact the developer of that font for a GX-compatible update.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17514



Tech Info Library

Macintosh 630 family: Radius Products Compatibility (4/95)

Revised: 4/4/95
Security: Everyone

Macintosh 630 family: Radius Products Compatibility (4/95)

=====

Article Created: 04 April 1995

TOPIC -----

I have just purchased a Performa 630 CD and would like to have the option of connecting a Radius Full Page Display GS display Model #0632 to it.

Is this possible? If so, what cable(s) are required?

DISCUSSION -----

As of this writing, Radius technical support has stated that no Radius products are compatible with the Macintosh 630 family.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17516



Tech Info Library

Color StyleWriter 2400: Printer Port In Use Error (9/95)

Revised: 9/5/95
Security: Everyone

Color StyleWriter 2400: Printer Port In Use Error (9/95)

Article Created: 4 April 1995
Article Reviewed/Updated: 5 September 1995

TOPIC -----

Some Color StyleWriter 2400 customers are receiving a 'Printer Port In Use' or other similar error message when trying to select the printer port. Here are some suggestions for eliminating the problem.

DISCUSSION -----

The 'Printer Port In Use' message indicates that there may be a software conflict that can be easily corrected.

In many cases a software control panel creates this conflict. The LaserWriter Bridge 1.0 and 2.0 software by Sonic Systems is a control panel which is installed with the LaserWriter Select 360 printer software and the Network Software Installer 1.5. The LaserWriter Bridge software is automatically turned 'on' when installed and can prevent the user from selecting the printer port unless AppleTalk is turned off first.

The LaserWriter Bridge software resides in the Control Panels folder and allows a networked LocalTalk device such as the LaserWriter Select 360 to be visible on an Ethernet network. If the LaserWriter Bridge software features are not required then simply turning it off from within the control panel allows the printer port to be used with the Color StyleWriter 2400, Color StyleWriter Pro, StyleWriter II, and other serial based printers.

Article Change History:
5 Sep 1995 - Reviewed and reformatted Discussion.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17517



Tech Info Library

AppleCD 600e: Technical Specifications (7/95)

Revised: 5/7/96
Security: Everyone

AppleCD 600e: Technical Specifications (7/95)

=====

Article Created: 3 April 1995
Article Reviewed/Updated: 25 July 1995

TOPIC -----

This article contains the technical specifications for the AppleCD 600e

DISCUSSION -----

The AppleCD 600e is a quad-speed (4x) external CD-ROM drive.

Playback media

8- or 12-cm optical disc (any standard CD-ROM or audio compact disc is compatible.)

Capacity

-Mode 1: 656 MB
-Mode 2: 748 MB

CD-Audio playback

-Maximum playing time: 74 minutes, 42 seconds
-Frequency response: 20 to 20,000 Hz
-Stereo at 44KHz sampling rate

CD-ROM playback characteristics

-Random Seek Time: 167.5 ms
-Random Access Time: less than 200 ms
-Data streaming rate single speed:
 Mode 1 150 KB/sec
 Mode 2 171 KB/sec
-Data streaming rate double speed:
 Mode 1 300 KB/sec

Mode 2 342 KB/sec

-Data streaming rate quad speed:

Mode 1 600 KB/sec

Mode 2 684.4 KB/sec

-SCSI bus transfer rate (over one CD-ROM block): 5.1 MB/sec

-Buffer size: 256 KB

Formats supported

-Multisession Kodak Photo CD

-ISO 9660/High Sierra

-Macintosh HFS

-CD-ROM XA

-CD+G

-CD+MIDI

-Standard audio CD's

CD digital audio data export via SCSI bus

Interfaces

-Two SCSI peripheral 50 pin connectors for connection to the Macintosh and other SCSI devices

-Stereo audio outputs (RCA jacks) for external amplifier or Powered Speakers

-Stereo headphone output port

-Front panel volume control

-Front panel LED busy indicator

Electrical requirements

=====

Power requirements

100-240 volts AC 50/60 Hz, 0.28 A maximum

Operating environment

Temperature: -41° to 104° F (5° to 40° C)

Relative humidity: 5% to 90% noncondensing

Nonoperating environment

Temperature: -22° to 122° F (-30° to 50° C)

Relative humidity: 5% to 90% noncondensing

Size and Weight

Height 2.32 in (5.9 cm)

Width 6.22 in. (15.8 cm)

Depth 13.1 in (32.3 cm)

Weight 5.73 lb (2.60 kg)

System Requirements

=====

- Macintosh Computer with a 68030 @ 25 MHz
- System 7.1 or later

Article Change History:

25 Jul 1995 - Reviewed for technical accuracy.

26 Jun 1995 - Removed CD-I from discussion.

01 Jun 1995 - Added system requirements.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17518



Tech Info Library

Lazarus Data Recovery

Revised: 4/4/95
Security: Everyone

Lazarus Data Recovery

=====

Article Created: 4 April 1995

Lazarus Data Recovery

381 Clementina Street
San Francisco, CA 94103

Phone: (800) 341-DATA (341-3282)

Phone: (415) 495-5556

Fax: (415) 495-5553

Company Profile: Data recovery service. Provides data recovery from crashed drives, cartridges and many types of removable media. Macintosh, DOS, Windows, and other platforms supported.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17519



Tech Info Library

System 7.5 Update 1.0: Why Skip Disk 4? Disk Contents List 4/95

Revised: 4/4/95
Security: Everyone

System 7.5 Update 1.0: Why Skip Disk 4? Disk Contents List 4/95

Article Created: 4 April 1995

TOPIC -----

Can you tell me what pieces of system software are on the fourth disk of the new System 7.5 Update 1.0 disk set?

I have several customers who are concerned that the Installer does not ask for the fourth disk during installation. Although they and I both know that the Installer is smart enough to only ask for what it needs, I would like to calm their concerns about this installation.

DISCUSSION -----

After a little bit of experimentation with the installation diskettes, I have found what each disk contains. I have listed the results at the bottom of this article.

As you can see, most of the information on the fourth disk, "System 7.5 Update 1.0 - 4", pertains to PowerTalk updates with the exception of the Automated AppleScript updates. So, if a user is not using PowerTalk or AppleScript on their system, the Installer is smart enough to know this, hence, it does not ask for the fourth disk.

System 7.5 Update 1.0 Installation Disk Contents

System 7.5 Update 1.0 - 1

Description	Version	Where Installed?
System 7.5 Update	1.0.2	System Folder
Finder	7.5.1	System Folder
Finder Update	1.1	Extensions Folder
7.5 Update Read Me	N/A	Hard Drive (Top Level)

SimpleText 7.5.1 Hard Drive (Top Level)

System 7.5 Update 1.0 - 2

Description	Version	Where Installed?
Apple Guide	1.2.5	Extensions Folder
Color StyleWriter Pro	1.5.2	Extensions Folder
File Sharing Extension	7.6.1	Extensions Folder
LaserWriter 8	8.2	Extensions Folder
Printer Descriptions	N/A	Extensions Folder
SCSI Manager	4.3.1	Extensions Folder
Speech Manager	1.3	Extensions Folder

System 7.5 Update 1.0 - 3

Description	Version	Where Installed?
Find File	1.1.1	Apple Menu Items
Find File Extension	1.1.1	Extensions Folder
Jigsaw Puzzle	1.0.1	Apple Menu Items
Stickies	1.0.1	Apple Menu Items
•Shut Down DA	1.1	Apple Menu Items
Apple Menu Options	1.0.1	Control Panels Folder
General Controls	7.5.3	Control Panels Folder
Keyboard	7.5.1	Control Panels Folder
Launcher	2.7	Control Panels Folder
MacTCP	2.0.6	Control Panels Folder
Macintosh Easy Open	1.1.1	Control Panels Folder
Monitors	7.5.1	Control Panels Folder
PC Exchange	2.0.3	Control Panels Folder
PC Setup	1.0.2	Control Panels Folder
WindowShade	1.3.1	Control Panels Folder
MathLib	2.0.1	Extensions Folder
ThreadsLib	2.1	Extensions Folder

System 7.5 Update 1.0 - 4

Description	Version	Where Installed?
Mailbox Extension	1.1.1	Extensions Folder
DigiSign Utility	1.1.1	Apple Extras -> PowerTalk Folder
.		
Apple Mail	1.1.2	Apple Extras -> PowerTalk Folder
.		
Catalogs Extension	1.1.1	Extensions Folder
Direct Dialup	1.1.1	Extensions Folder
Synchronize Folders	7.5.1	Apple Extras ->
.		AppleScript ->
.		More Automated Tasks

.		folder
Share a Folder	7.5.1	Apple Extras ->
.		AppleScript ->
.		Automated Tasks folder
Share a Folder (no Guest)	7.5.1	Apple Extras ->
.		AppleScript ->
.		Automated Tasks folder

Support Information Services

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Tech Info Library Article Number:17520



Tech Info Library

Shutdown Items Can Be Disabled By Shift Key (4/95)

Revised: 4/4/95
Security: Everyone

Shutdown Items Can Be Disabled By Shift Key (4/95)

=====

Article Created: 4 April 1995

TOPIC -----

Does holding the Shift key down during startup prevent the Shutdown Items from activating like it does for the Startup Items folder?

DISCUSSION -----

Yes, the Finder Scripting extension activates the System 7.5 Shutdown Items folder. Both Shift down and the Extensions Manager will deactivate Finder Scripting extension.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17521



Tech Info Library

PowerBook 500: Method For Best Quality When Recording (4/95)

Revised: 4/5/95
Security: Everyone

PowerBook 500: Method For Best Quality When Recording (4/95)

=====

Article Created: 05 April 1995

TOPIC -----

I'm trying to record a signal from an external CD-ROM to my PowerBook 500 but the record level is quite low. I have selected "Line In" in the Sound control panel but that doesn't help. This even happens when recording beep sounds in the Sound control panel.

DISCUSSION -----

To get the best recording from an external audio source, it is best to use a capable piece of software to do it, preferably software with an "auto gain" feature.

You can use the software you're recording with to amplify the sound after it's been recorded, although this may create some distortion. The Sound control panel does not have an "auto gain" feature so it will not be sufficient to record sounds at the best quality.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17522



Tech Info Library

Power Macintosh: System 7.5 Update 1.0 and APD 1.1 Issue (5/96)

Revised: 5/27/96
Security: Everyone

Power Macintosh: System 7.5 Update 1.0 and APD 1.1 Issue (5/96)

Article Created: 05 April 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

Apple Personal Diagnostics (APD) 1.1 will incorrectly report problems with the logic board on any Power Macintosh with System 7.5 Update 1.0 installed. This problem is fixed in version 1.1.1. All currently shipping APD software is version 1.1.1.

DISCUSSION -----

Beginning April 10, 1995, customers who own a Power Macintosh with System 7.5 Update 1.0 (System 7.5.1) and Apple Personal Diagnostics (APD) 1.1 can order an upgrade to APD 1.1.1 for no charge (no shipping/handling/tax). These customers will be allowed to participate in the existing APD 1.1.1 program.

APD 1.1.1 program details

- Between April 10 and June 30, 1995, customers with a Power Macintosh, System 7.5.1, and APD 1.1 can call the Apple Order Center to order APD 1.1.1 for no charge.
- Customers will be required to provide proof-of-purchase to order.
- This offer is only good in the United States (50 states and DC)
- The software will ship via US Priority Mail.
- Customers can provide an express courier account number to receive the software overnight.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:
27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:17523



Tech Info Library

Launcher Closes With Close All Windows Command (9/95)

Revised: 9/8/95
Security: Everyone

Launcher Closes With Close All Windows Command (9/95)

=====

Article Created: 5 April 1995
Article Reviewed/Updated: 7 September 1995

TOPIC -----

When you perform the "close all" command (press the Option key and click the Close box) all the windows on your desktop, including the Launcher, close. Is there away to close all except Launcher.

DISCUSSION -----

Since the Launcher is a window, it closes when you perform the "close all" command.

Here are two ways of easily reopening the Launcher and an AppleScript solution:

Create an Alias on the Desktop

You can create an alias of the Launcher on the desktop, which would normally be hidden under the Launcher window when it is open. Any time you close all of the windows, you could then simply double-click the Launcher alias, now visible, and open it again.

Create an Alias in the Apple Menu

You can create an alias to the Launcher and put it in the Apple Menu Items folder in the System Folder. You then easily access it by pulling down the Apple Menu.

AppleScript Solution

If you have System 7.5 and AppleScript, you can create a script to close all windows except Launcher with the following statements:

```
tell application "Finder"
    close (every window whose name is not "Launcher")
```

end tell

Place the saved Applet in the Apple Menu so you can invoke it readily. This Applet does exactly what is desired without having to reopen the Launcher!

This article was published in the "Information Alley":
Volume II, Issue 2, Page 14

Article Change History:

07 Sep 1995 - Added AppleScript workaround.

18 May 1995 - Reworded workaround to clarify; added Info Alley information.

Support Information Services

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Tech Info Library Article Number:17525



Tech Info Library

MacX: How To Choose A Missing Font (4/95)

Revised: 4/5/95
Security: Everyone

MacX: How To Choose A Missing Font (4/95)

=====

Article Created: 5 April 1995

TOPIC -----

I've got a client program that works fine on my friend's host, but displays garbled text in MacX. I know I need to load the missing fonts on my Macintosh for MacX, but I don't know which fonts I need because the host computer has about 300 fonts. How do I find out which fonts to copy to my Macintosh?

DISCUSSION -----

Most well designed X clients will support your choice of fonts or document which fonts are required. Program documentation should also explain what fonts are being used by the clients.

If you need to find the name of a font manually, you can use xfontsel, the font display program that comes with most X windows software.

Run xfontsel on the host computer, and use the menus to change fonts until you find the font you are interested in. Locate that font on your host computer, and then transfer the file to your Macintosh. You can then move that font to your Macintosh and install it under the MacX Font Director.

For more information on MacX and fonts, consult Chapter 5 of the "Apple MacX" manual or see the "MacX Users Guide."

Support Information Services

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Tech Info Library Article Number:17526



Tech Info Library

LaserWriter Pro 810: HP/UX Configuration (4/95)

Revised: 4/5/95
Security: Everyone

LaserWriter Pro 810: HP/UX Configuration (4/95)

Article Created: 5 April 1995

TOPIC -----

The LaserWriter Pro 810 can print using three types of print jobs: text, PCL, or PostScript. If you plan on using only one type of print job, you can configure your printer directly with SAM, the Hewlett Packard (HP) administration tool. This article describes how to configure a LaserWriter Pro 810 and HP/UX workstation to print using only one print job type either text, or PCL, or PostScript.

DISCUSSION -----

HP/UX and LaserWriter Pro 810 for only one type of print job.

Part 1 - Configure the LaserWriter Pro 810

These instructions assume your LaserWriter Pro 810 has an IP address already assigned.

Step 1

Using the LaserWriter Pro 810 control panel (located on the printer), print the virtual printer list by doing the following:

- 1) Press the "online" button to deactivate the printer temporarily.
- 2) Press the "print status" button to print the printer status pages.
- 3) Press the "online" button to restore the printer to service.

Step 2

Examine the Virtual Printers report (second sheet to print). There will be a virtual printer entry called "lpd." Look for the Interpreter entry, top row, left most column. The different values can be; none, PCL4, or PostScript. The

table below shows the print job type with its corresponding Interpreter entry:

Interpreter entry	Print job
-----	-----
PCL4 or none	Text
PCL4	PCL
PostScript	Postscript

Step 3

If you need to change the Interpreter setting, you must connect to the LaserWriter Pro 810 through either NCP, or Telnet, or the maintenance port. Sign on as the super user, and use the following command:

```
change service lpd <PCL or PostScript>
```

If you want to print text, you should use PCL in the command line.

Step 4

Turn the printer off and back on. Then confirm your changes by again printing the printer status pages as done in step 1.

Part 2 - Configure the HP workstation

=====

- 1) Login as root
 - 2) Run SAM
 - 3) Open "printers and plotters"
 - 4) Open the "printers/plotters" menu
 - 5) Select "actions: add remote printer/plotter"
 - 6) Fill in the fields of "add remote printer window"
 - 7) Printer name: <the local name of the printer the users will see.>
 - 8) Remote system name: <hostname of your printer from DNS or /etc/hosts>
 - 9) Remote printer name: <PASSTHRU or TEXT>
"PASSTHRU" if you are sending postscript, and "TEXT" if you are sending text or PCL.
- NOTE: PASSTHRU or TEXT must be in upper case.
- 10) Click on "remote printer is on a BSD System"

11) Click okay

If you need to print all job types: text, PCL, and Postscript. You will need to configure a virtual printer on the LaserWriter Pro 810 for each, and install the UNIX apprint software that comes with the LaserWriter Pro 810.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17527



Tech Info Library

LaserWriter 16/600 PS: HP/UX Configuration (4/95)

Revised: 4/5/95
Security: Everyone

LaserWriter 16/600 PS: HP/UX Configuration (4/95)

=====

Article Created: 5 April 1995

TOPIC -----

I want to print to my LaserWriter Pro 16/600 PS from my HP/UX workstation.
How do I configure it?

DISCUSSION -----

The LaserWriter 16/600 PS auto-recognizes text, PCL, or PostScript, and it emulates a Berkley Remote Printing lpd. However, you need to route your text/PCL print jobs to a different remote printer than PostScript.

HP/UX uses SAM, the Hewlett Packard (HP) administration tool, to configure the System V printing facilities. You can use SAM to create two remote printers, one for text/PCL, and the other for PostScript.

Part 1- Configure LaserWriter 16/600 PS

=====

This article assumes your LaserWriter 16/600 PS has an IP address already assigned.

If the configuration switch, located above the Parallel port on the back of the printer, is in the down position no further LaserWriter 16/600 PS configuration is necessary.

If the configuration switch is in the UP position:

- 1) Launch Apple Printer Utility
- 2) Open Communications Configuration category
- 3) Open the Up Switch Position (Custom)

4) Set TCP/IP menu to Autoselect

If you plan to send only text or PCL, you may set the TCP/IP menu to PCL5. If you plan to send only PostScript, you may set the menu to PostScript.

5) Click "Send"

6) Quit from Apple Printer Utility

7) Turn the printer off and back on. Then confirm your changes by reading the test page.

Part 2- configure the HP workstation

=====

You will create one entry for text/PCL and one for PostScript.

1) Login as root

2) Run SAM

3) Open "printers and plotters"

4) Open the "printers/plotters" menu

5) Select "action: add remote printer/plotter"

6) Fill in the fields of "add remote printer window"

7) Printer name: <the local name of the printer the users will see.>

8) Remote system name: <hostname of your printer from DNS or /etc/hosts>

9) Remote printer name: <raw or text>

"raw" if you are sending postscript, and "text" if you are sending text or PCL

NOTE: You must use lower case for raw or text.

10) Click on "remote printer is on a BSD System"

11) Click okay

If you need to create a second remote printer entry, repeat from step 5.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17528



Tech Info Library

Color StyleWriter 2400: Will Not Print In Color (9/95)

Revised: 9/5/95
Security: Everyone

Color StyleWriter 2400: Will Not Print In Color (9/95)

Article Created: 5 April 1995
Article Reviewed/Updated: 5 September 1995

TOPIC -----

I cannot get my Color StyleWriter 2400 to print in color, it only prints in black and white.

DISCUSSION -----

You should be able to print in color, however if you are using a program that does not support color printing you will not be able to use color. For example, the Grolier's Encyclopedia which is included with certain Performa computers, does not support color printing. So, you should make sure your application supports color printing. You should also make sure you have the print driver configured for color, the color ink cartridge has ink, and the color ink cartridge is properly installed.

In order to determine the cause of the problem perform the following tasks:

1) Generate a test page by powering on the printing and holding the power button until the power light starts to blink. See page 15-16 of the user's manual for more information.

If the test page appears in full color then the printer is working fine.

If the page is normal but the only color is black then the color ink cartridge is not installed in the printer. Install the color ink cartridge for color printing.

If the black sections of the test page appear normal, but the color sections are missing or more of the colors then the color ink tank is either missing or empty.

2) Try printing a simple document that has color in it. Make sure that the user

selects 'Color' instead of 'Grayscale' or 'Black & White' in the print dialog box. If the document doesn't print in color then try printing another color document from a different application. If the inability to print in color is specific to an application, customers should also contact the vendor of that application for assistance.

Note:

This situation can occur with any color printers, including other Apple printers such as the ImageWriter II, Apple Color Printer, Color StyleWriter Pro, Color StyleWriter 2400, or the Color LaserWriter 12/600.

Article Change History:

05 Sep 1995 - Reviewed and reformatted Discussion.

28 Jul 1995 - Updated information

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17530



Tech Info Library

LaserWriter Select 310: No Upgrades to LaserWriter 360 (4/95)

Revised: 4/5/95
Security: Everyone

LaserWriter Select 310: No Upgrades to LaserWriter 360 (4/95)

=====

Article Created: 5 April 1995

TOPIC -----

Can I upgrade my LaserWriter Select 310 to the LaserWriter Select 360?

DISCUSSION -----

While the LaserWriter Select 310 and 360 look similar from the outside, internally these printers are very different. They have different I/O boards, controller boards, fuser assemblies, and print engines. While it is possible to replace all these items, it would end up costing more than purchasing a new LaserWriter Select 360.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17532



Tech Info Library

LC 630 DOS Compatibility Card: Read Me (4/95)

Revised: 9/29/95
Security: Everyone

LC 630 DOS Compatibility Card: Read Me (4/95)

Article Created: 5 April 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

This article contains the Read Me file from the Macintosh LC 630 DOS Compatibility Card.

DISCUSSION -----

Addendum to the Macintosh User's Guide
for the Macintosh LC 630 DOS Compatible

This document contains important information about using your Macintosh LC 630 DOS Compatible that is not included in your user's guide.

Contents

- Using the Floppy Drive
- Use of Floppy Disks as Drive Containers
- Startup Folder/Auto-start PC Conflict
- MIDI Transfers Supported on Macintosh Only
- Use of Two Button Mouse
- Using a Flightstick Pro Joystick
- Bypassing the CONFIG.SYS and AUTOEXEC.BAT files
- Installing Corel Draw
- Using Norton Utilities
- Amendments to Appendix E of the Macintosh User's Guide
- Using SAM 4.0
- SAM Intercept v4.0.2 Virus Checking
- Reinstalling DOS/Windows Software - WB.EXE File
- Rebuilding the Desktop
- Using PC Tools Pro 9.0
- Using MWUNDEL
- Using After Dark 3.0
- Using the Serial Port

Using the Floppy Drive

=====

Both PC and Macintosh floppies are automatically mounted when inserted into the floppy drive, in either operating environment. This mounting process takes a few seconds. Macintosh users are familiar with this process; PC users will find that they should wait a few seconds before accessing the data on the floppy disk.

Certain DOS or Windows floppy disk utilities will not work with the DOS Compatibility Card. These utilities attempt to exercise direct control over the floppy drive, which they cannot do, since it is a Macintosh-controlled floppy drive. Instead, Macintosh disk utility applications should be used.

Use of Floppy Disks as Drive Containers

=====

The LC630 DOS Compatible does not support the use of 3.5" floppy disks as drive containers. Floppy disks are intended for data use only.

Startup Folder/Auto-start PC Conflict

=====

When two or more Macintosh applications are included in the Startup folder, be sure that the "Auto-start PC" is not selected in the PC Setup control panel. Under this circumstance you must switch to the PC mode manually and you must switch only after all Macintosh startup applications have finished launching.

MIDI Transfers Supported on Macintosh Only

=====

The LC 630 DOS Compatible does not have the capability of sending and receiving MIDI data through the serial port for DOS and Windows. MIDI data does travel internally on the PC side, but when connected direct for use with a MIDI instrument, no data will transfer. MIDI transfers are fully supported on the Macintosh side.

Use of Two Button Mouse

=====

The standard Apple mouse has no right button and users must press the "extended =" key whenever they intend to use right button functions in one of their PC applications. However, users of a third party programmable mouse or trackball, such as Kensington Turbo Mouse 4.0 or Logitech MouseMan ADB, can use the utilities included with their mouse to map the "extended =" key to the right hand button.

The Kensington Turbo Mouse 4.0 includes two utilities to configure its buttons.

They are: "Turbo Mouse Control 4.0.2" and "Turbo Mouse Basics 4.0.2". "Turbo Mouse Control 4.0.2", an application that requires an extension, does not effectively map the "extended =" key to the right button and should not be used.

"Turbo Mouse Basics 4.0.2", a control panel, correctly maps the "extended =" key to the right button and should be used instead.

Using a Flightstick Pro Joystick

=====

The Flightstick Pro Joystick for the Macintosh triggers the System beep 'Indigo' when entering the DOS environment. It also triggers this sound twice upon bootup. To correct this, remove the Indigo sound from the System file in the Macintosh System Folder.

Bypassing the CONFIG.SYS and AUTOEXEC.BAT files

=====

To bypass these DOS startup files during the boot-up process, press and hold the F5 key (Command-5 on non-extended keyboards) after the memory testing is complete.

Installing Corel Draw

=====

If you allow Corel Draw to update the AUTOEXEC.BAT file, the line:

LH C:\Apple\MacShare

is replaced with the line:

C:\DOS\SHARE.EXE /L:500 /F:5100

If the former line is needed, you should edit the AUTOEXEC.BAT file to add it back.

Using Norton Utilities

=====

If Norton Utilities for the Macintosh v3.0 or v3.1 is being used, the "More Compatible" option should be chosen:

1. Go into Control Panels and Open FileSaver
2. Click More Choices
3. Click Preferences and Update Now
4. Click More Compatible
5. Click Save

Amendments to Appendix E of the Macintosh User's Guide

=====

..TIL17534-LC_630_DOS_Compatibility_Card-Read_Me_4-95_(TA33572).pdf

On page 164 of the Macintosh User's Guide, certain steps may not exactly apply to more recent versions of the Novell Netware Client disk set. For steps 4 through 7 of the procedure in the manual, all that matters is that the following exceptions apply:

The Netware directory is: C:\NWCLIENT

The LASTDRIVE setting in the CONFIG.SYS file is: LASTDRIVE=Z

The AUTOEXEC.BAT file contains the line: CALL C:\NWCLIENT\STARTNET.BAT

And be sure to load the Windows support in the directory where you have loaded Windows.

In steps 5 and 6, the defaults are already preset; you should not be required to edit the CONFIG.SYS file to set the LASTDRIVE setting or the AUTOEXEC.BAT file to add the CALL line.

In steps 8 through 10 of the same procedure:

Step 8 should read "To select the driver for the network board, press return".

The disk required in step 9 is the "DOS Compatibility Installer Disk for PC Environment" disk that came with your computer.

In step 10 select the "Macintosh DOS Compatible Ethernet Adapter" and press return.

In the section entitled "Conserving Memory", you should not need to edit the AUTOEXEC.BAT file. The CALL line should already be included.

Using SAM 4.0

=====

When using SAM 4.0 for the Macintosh with the "Prompt: 'Skip' is the default button" check box selected in the Floppy Drive preferences, inserting a floppy while in the PC environment causes the system to hang. The floppy cannot be accessed nor can the user switch to the Macintosh environment. To avoid this, select the "Always scan" option.

SAM Intercept v4.0.2 Virus Checking

=====

If you have SAM Intercept 4.0.2 running on your LC630 DOS Compatible, and you attempt to mount a drive container on the desktop, the mouse cursor will indicate that you have control when, in fact, you do not. (SAM Intercept is checking the drive container for viruses but has not displayed the spinning "beach ball" cursor.) It takes approximately two minutes to complete the virus scan, after which the LC630 DOS Compatible will function normally. Version 4.0 of SAM Intercept does not exhibit this behavior.

To avoid this delay, turn off the autoscan feature as follows:

1. Launch the SAM Intercept program
2. Select "Scan" in the "Options" menu
3. Deselect the "Scan for known viruses" option.

Reinstalling DOS/Windows Software - WB.EXE File

=====

Should it become necessary for you to re-install the DOS/Windows software, you will also need to install the WB.EXE file for execution when DOS boots. To install WB.EXE on the LC630 DOS Compatible follow these steps from the Macintosh desktop:

Step 1

Select the PCSetup control panel and select "Shut Down PC".

Step 2

Open the PC drive container, located on your internal hard drive, by double clicking the file "PC Drive File".

Step 3

A hard drive icon labeled "PC BOOTDISK" will appear on the desktop. Double click on PC BOOTDISK to open the volume.

Step 4

Insert the disk labeled "DOS Compatibility Installer Disk for PC Environment". Double click on the diskette icon to open the main window and locate the file WB.EXE.

Step 5

Drag it to the folder labeled "Apple".

Step 6

When the Macintosh is finished copying the WB.EXE file, press command-return.

Step 7

When DOS has finished booting, type:

EDIT C:AUTOEXEC.BAT

Step 8

Add the following line to the end of the AUTOEXEC.BAT file:

C:\APPLE\WB.EXE

Step 9

Press option-f to select the file menu.

Step 10

Select the Exit option (using the up-arrow key) and press return.

Step 11

Press return again to save the AUTOEXEC.BAT file and exit the DOS editor.

Step 12

At the DOS prompt type command-return to re-enter the Macintosh desktop.

Step 13

Unmount the PC drive container by dragging the PC BOOTDISK icon to the trash.

Step 14

Select "Shut Down PC" in the PCSetup control panel.

Step 15

Start the PC using the PCSetup control panel or by pressing command-return.

The WB.EXE program runs and exits when DOS boots. It does not stay resident in memory. The WB.EXE program enables the write back mode and prints a string that reads:

"WB.EXE Enable CPU internal cache to Write-Back.", and exits.

Rebuilding the Desktop

=====

If you need to rebuild the Macintosh desktop, you must either wait for the desktop to rebuild while in the Macintosh environment, or switch to the DOS environment and remain there until the rebuild is complete. Switching back to the Macintosh environment during rebuild will cause the Macintosh to crash.

Using PC Tools Pro 9.0

=====

The CPTASK.EXE utility (Central Point Task Manager) is incompatible with the DOS Compatibility Card.

Using MWUNDEL

=====

MWUNDEL does not work on shared folders, so files deleted by the PC in shared folders will not be recoverable. However, files in shared folders can be recovered if they are deleted from the Macintosh. Use a Macintosh utility such as Norton Disk Doctor.

Using After Dark 3.0

=====

Do not use the PC Setup control panel "Switch at Startup" option when using After Dark.

Using the Serial Port

=====

If you are using communications software that uses the serial port, the following are known errors:

- For Procomm, the auto-answer mode does not work.
- For LapLink, transferring files between two machines may not work, especially for large files.

Support Information Services

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Tech Info Library Article Number:17534



Tech Info Library

Apple Video Player: Read Me (4/95)

Revised: 4/5/95
Security: Everyone

Apple Video Player: Read Me (4/95)

=====

Article Created: 5 April 1995

TOPIC -----

This article contains the Apple Video Player ReadMe file.

DISCUSSION -----

Important Information About Apple Video Player

=====

This document provides important information about the Apple Video Player software. You may want to print this document and keep it with your manuals. Most of this information is not in the documentation. If you have questions that are not answered in this document, refer to the manuals that came with your computer.

After you finish reading this document, you can close it by clicking the small box at the upper left of the document window, by typing Command-Q, or by selecting Quit from the File menu.

Video Quality

=====

Video viewing and video capture is supported in window sizes of up to 640 x 480 pixels. For the highest-quality video and TV viewing, use the standard video window sizes (Smallest, Normal, or Largest) in Apple Video Player's Windows menu. If you choose to customize the window size (by choosing Other in the Windows menu), the image's resolution may decrease.

In addition, video resolution is optimized when you view the Apple Video Player video window on the monitor connected to the monitor port on your Macintosh. You can drag the video window to a secondary monitor (connected to an expansion card), but the image resolution will decrease.

Hot Key and MacroMedia Director =====

The Apple Video Player application program allows you to use a keyboard shortcut, called a "hot key," to open and quit the program, and to switch between Apple Video Player and any other open programs. However, due to a minor incompatibility problem with MacroMedia Director, the Apple Video Player hot key doesn't work when MacroMedia Director is open.

If you are installing Apple Video Player for the first time, no hot key is defined. You can set one using the Hot Key item in the Setup Menu. If you are replacing a previous version of Apple Video Player, the hot key setting is retained in the Apple Video Player Preferences file.

Closed Captioning =====

If you have a TV tuner card, the Apple Video Player application program can display closed captions for TV channels that provide them. However, in order for closed captions to be visible, the video window size must be set to Normal Size or greater. Also, for best results, networking or printing should not be active when close captioning is selected.

Capturing Movies =====

Likewise, for best results, networking or printing should not be active when you are recording video from either television or an alternate video source. Virtual memory should also be turned off when capturing video for best results.

Forgetting Your Password =====

If you can't remember your password, you may reset the password by removing the Apple Video Player Prefs file. To remove the Apple Video Player Prefs file, quit Apple Video Player and move the Apple Video Player Prefs file to the Trash. The Apple Video Player Prefs file is located in the Preferences folder, which is in the System Folder.

Support Information Services

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Tech Info Library Article Number:17535



Tech Info Library

System 7.5 Update 1.0:Quadra 840AV Updated Display Manager 5/95

Revised: 5/4/95
Security: Everyone

System 7.5 Update 1.0:Quadra 840AV Updated Display Manager 5/95

Article Created: 6 April 1995
Article Reviewed/Updated: 4 May 1995

TOPIC -----

In the Technical Note for System 7.5 Update 1.0 it reads, "Display Manager update - Quadra 840AV computers did not remember the resolution a multisync monitor was set to between restarts. The monitor would resync as at 640x480 regardless of the value set by the user."

In the System 7.5 Update 1.0 Read Me file it says, "Quadra 840AV: The updated Display Manager ensures that a multi-sync monitor is set to the correct resolution when you restart the computer."

What changed? Customers are calling with questions, because they have installed the System 7.5 Update 1.0 on their Quadra 840AV, and their Multiple Scan monitors do not switch to the higher resolution any sooner.

DISCUSSION -----

The change referred to in the Technical Note for System 7.5 Update 1.0 and the Update's Read Me file is a little-known and infrequent problem which occurred in System 7.5. This problem prevented some Macintosh Quadra AV systems from switching to resolutions higher than 640x480 under certain conditions.

After releasing System 7.5, some users reported that their Macintosh Quadra 840AV would sometimes end up with a screen resolution of 640x480 after restarting, instead of the resolution they had chosen before restarting.

As reported in the Technical Note for System 7.5 Update 1.0, it appeared as though the Macintosh Quadra 840AV did not remember the chosen screen resolution. In order to fix this problem, a change was made to the display manager. This change was included in Display Enabler 1.2 and System 7.5 Update 1.0.

Installing System 7.5 Update 1.0 will not allow the Quadra 840AV to switch to a higher screen resolution earlier in the startup process.

Article Change History:

04 May 1995 - Corrected minor typo.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17538



Tech Info Library

Apple LocalTalk Bridge: Troubleshooting (3/97)

Revised: 3/6/97
Security: Everyone

Apple LocalTalk Bridge: Troubleshooting (3/97)

Article Created: 6 April 1995
Article Reviewed/Updated: 6 March 1997

TOPIC -----

This article offers some guidelines for handling common problems with the Apple LocalTalk Bridge.

DISCUSSION -----

General Troubleshooting
=====

The bridge computer becomes unresponsive

Each time a LocalTalk device starts up, the Bridge obtains an address (node ID) from the Ethernet or Token Ring network, and assigns that address to the LocalTalk device in order to make the device visible on the extended network. The bridge computer might become unresponsive (it could "hang" or "freeze") if it is unable to acquire the node ID. To fix this problem, the network administrator needs to reconfigure the router to make more node IDs available for the Ethernet or Token Ring segment on which the Bridge is running.

The bridge computer cannot access Token Ring zones

If you install the Apple Internet Router and the Apple LocalTalk Bridge on the same computer, and both are running simultaneously, the bridge computer won't have access to Token Ring zones. To remedy this problem, remove either the router or the Bridge.

Error messages
=====

Macintosh printer port already in use

During startup, there are three ways in which the bridge computer's printer (or serial) port can be in use:

- You set the current AppleTalk port to LocalTalk in the Network control panel.
- You selected EtherTalk or TokenTalk in the Network control panel, but an error occurred while switching to the selected network, so the bridge computer used the default AppleTalk port (LocalTalk) instead.
- You installed a software product that reserves the printer (or serial) port before the LocalTalk Bridge is activated.

In order for the LocalTalk Bridge to work, you need to select either EtherTalk (if the bridge computer is connected to an Ethernet network) or TokenTalk (if the bridge computer is connected to a Token Ring network) in the Network control panel. If you installed software that reserves the printer (or serial) port, you need to deactivate the conflicting software in order for the LocalTalk Bridge to run.

LocalTalk Bridge cannot start because the printer port is in use

Please select another AppleTalk connection in the Network control panel, then try again. The printer port automatically uses LocalTalk Built-In as the network connection. To use the LocalTalk Bridge, you need to select either EtherTalk (if the bridge computer is connected to an Ethernet network) or TokenTalk (if the bridge computer is connected to a Token Ring network) in the Network control panel.

LocalTalk Bridge cannot start because AppleTalk is not active

Please use the Chooser to activate AppleTalk, then restart the Macintosh. AppleTalk must be active on the bridge computer. You turn AppleTalk on by opening the Chooser and clicking the AppleTalk Active button to select it. You may need to restart your computer for the change to take effect.

LocalTalk Bridge requires AppleTalk version 58 or later

Please install AppleTalk version 58 or later, then try again. The LocalTalk Bridge requires AppleTalk version 58.1.5 or greater to function. Reinstalling system software or installing a third-party card (with its accompanying driver software) might also install a version of AppleTalk that is too old for the LocalTalk Bridge. To remedy this problem, reinstall the LocalTalk Bridge software, using the Installer on the Apple LocalTalk Bridge floppy disk.

LocalTalk Bridge cannot continue because of a network number conflict

Please restart the Macintosh. The non-LocalTalk network (Ethernet or Token Ring) can have one or more active routers, and additional routers might become active on the network after the LocalTalk Bridge is turned on. The additional routers might cause the network number conflict. If restarting the bridge computer does not fix the problem, contact your network administrator; the remedy may involve network reconfiguration.

LocalTalk Bridge cannot start because of an AppleTalk error

AppleTalk errors are rare, but may be caused by file or resource corruption. Check that network cables are securely attached and that all devices are properly terminated. If the problem persists, you may need to reinstall system software, then reinstall the LocalTalk Bridge.

LocalTalk Bridge could not obtain a LocalTalk address because all addresses are in use by other network devices

Please contact your network administrator. Try restarting the bridge computer. If restarting does not remedy the problem, contact your network administrator. The remedy may involve reconfiguring the network.

LocalTalk Bridge was unable to start because of an unspecified error

This message occurs if you install the LocalTalk Bridge on a 68000-based Macintosh. The LocalTalk Bridge requires at least a 68020 processor.

Making AppleTalk inactive or switching network connections has stopped LocalTalk Bridge services

Open the Chooser and turn AppleTalk on, then restart the bridge computer.

There is a router or a Macintosh running LocalTalk Bridge software on this LocalTalk network

LocalTalk Bridge cannot run on a LocalTalk network that has a router or another LocalTalk Bridge. You can only use the LocalTalk Bridge on a LocalTalk segment that does not already have an active AppleTalk Internet Router, LaserWriter Bridge, or LocalTalk Bridge. If the LocalTalk Bridge software detects a router or another Bridge on the LocalTalk segment, the LocalTalk Bridge will not start up. This error message also occurs if you install the LocalTalk Bridge on a computer that also has a router installed. In order for the LocalTalk Bridge to run, you need to remove the router software, then reinstall the LocalTalk Bridge.

There is not enough memory available to start LocalTalk Bridge

The LocalTalk Bridge driver requires approximately 70K of RAM to run. You can try removing unnecessary system extensions (programs that start automatically when the computer is turned on) or installing more memory.

Token Ring driver not compatible with MacIPX

The Token Ring driver is not compatible with MacIPX versions 1.1 and older. Contact Novell Technical Support to obtain newer MacIPX software that works with the Token Ring drivers. If you are not using Token Ring, remove the MacIPX Token Ring components.

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Volume I, Issue 25, Page 16

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

06 Mar 1997 - Added MacIPX section.

02 Jul 1996 - Added Fax Doc word

21 Apr 1995 - Added keyword; made minor technical updates.

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Tech Info Library Article Number:17540



Tech Info Library

Power Macintosh 5200/75 LC: Video In/Out Options (1/96)

Revised: 1/8/96
Security: Everyone

Power Macintosh 5200/75 LC: Video In/Out Options (1/96)

Article Created: 06 April 1995
Article Reviewed/Updated: 8 January 1996

TOPIC -----

This article documents video in and out options for the Power Macintosh 5200/75 LC and Performa 5200 series computers.

DISCUSSION -----

Built-in Monitor

The Power Macintosh 5200 uses a built-in 15-inch multi scan monitor as its output display device. The monitor supports three pixel display sizes: 640x480, 800x600, and 824x632. The initial power-on display size is 640x480. The monitor's resolution is switchable on the fly from the Control Panel menu.

Optional Video Mirror

Video on the Power Macintosh 5200/75 LC includes an optional feature called video display mirror output. This feature makes the video information concurrently available to the built-in display and to the external display port. Connection for the video mirroring is made possible by installing the Apple External Video Connector (P/N M4099LL/A) to the logic board using a 22-pin connector. This connector adds a standard DB-15 video port to the back of the Power Macintosh 5200 for connecting an external monitor or LCD panel.

When using video mirroring, the image on the second monitor is the same as that on the built-in monitor. This mode is a very useful tool for presentations, so the presenter and audience see the same thing.

The video mirroring port supports several external monitor sizes: 640x480 14-inch color, 800x600 15-inch multi scan, 640x480 VGA, and 800x600 SVGA.

NOTE:

The Apple 12-inch RGB color monitor (512x384) is not supported on the Apple External Video Connector.

Optional Video Input

The Apple Video In System (p/n M2894LL/C) accepts video from an external source and displays it in a window on the computer's internal display. This is the same card used in the Quadra 630 and LC 630 computers. The card installs in a dedicated slot in the Power Macintosh 5200 LC and adds composite video in, S-video in, and stereo audio in ports to the back of the cpu.

The card accepts the following video formats: NTSC, PAL, and SECAM. The card's AV features are functionally the same as the Macintosh Quadra 660 AV with one exception: the video input card digitizes color video using a digital YUV format, not the 16-bit RGB format used by the Macintosh Quadra 660 AV.

This digitizing technique provides a cleaner picture because it leverages the strength of the transmission signal, the chrominance channel. The standard television signal carries more signal information in the chrominance channel than it carries in the luminance channel.

The Apple Video In System accepts input from external sources, such as a VCR or camcorder, or it can accept input from the optional internal TV tuner.

The default window size used to display the video input picture is 320x240; it can be resized up to 640x480 – full screen on a 14" monitor. Pixel-doubling is used on the large screen to enhance the 320 x 240 pixel image.

Note: The Power Macintosh 5200/75 LC can not display live video from the video input module on monitors larger than 800x600 pixels.

Note: The video input card does not work with all monitors.

The optional Apple Video In System has a separate input connector named the DAV (digital audio/video) connector. The DAV connector makes the digitized data available to a card in the expansion slot – a card such as a video compressor or some other type of video processor card.

Note: The DAV connector on the Video-In card only provides limited functionality. It is not compatible with the Power Macintosh and Quadra AV DAV connector.

Optional TV Tuner

The optional TV tuner is a plug-in module that enables the computer, in conjunction with the video input module, to function as a television receiver with a remote control. The software associated with the TV tuner provides customized channel selection, password protection for disabled channels, frame capture, and video recording as a QuickTime movie. The TV Tuner requires the Video In card to work. The Apple Video/TV System (p/n M2896LL/C) includes both the Video in card (p/n M2894LL/C) and the TV tuner module.

These are the same modules used in the Macintosh Quadra 630 and LC 630 computers. The tuner is available in NTSC, PAL, and SECAM versions.

Features include:

- 181 channel tuner (US version)
- Coaxial antenna connector (F-type for U.S. and Japan, ICE-type for Europe)
- TV picture in a resizable and movable window
- YUV format for improved clarity
- Support for closed caption and teletext
- Software password protection
- Automatic and manual channel programming
- Single remote control for TV and audio CD

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

08 Jan 1996 - Added information on 12-inch RGB monitor.

13 Nov 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:17541



Tech Info Library

Color StyleWriter 2400: Feeds Multiple Sheets of Paper (4/95)

Revised: 4/6/95
Security: Everyone

Color StyleWriter 2400: Feeds Multiple Sheets of Paper (4/95)

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Article Created: 6 April 1995

TOPIC -----

Sometimes my Color StyleWriter 2400 picks up multiple sheets of paper when it prints. Why does this happen?

DISCUSSION -----

Overview

=====

Multi-feeds occur when the paper pick-up mechanism pulls multiple sheets of paper out of the sheet feeder and attempts to feed them through the printer. Depending on how many sheets are picked up the printer may experience paper jams or grinding noises if the carriage assembly binds against the extra sheets of paper.

In order to prevent multi-feeds it is important to properly load paper in the Color StyleWriter 2400 sheet feeder. The paper loading procedures are outlined below, and additional information can be found on pages 22-23 of the Color StyleWriter 2400 User's Guide.

- Move the paper select lever located on the right side of the sheet feeder to the correct position for the type of paper being used (envelopes or paper).
- Open the front cover and adjust the internal paper selector lever for the correct printing style and paper type (envelopes or paper). The center position is best for color printing, heavy black ink coverage, and heavier paper.
- Extend the plastic paper support on the sheet feeder so that the paper in the sheet feeder remains flat.
- Do not overload the sheet feeder. The sheet feeder can hold up to 100 sheets of 20 pound paper.

- Adjust the paper guide so that it touches the left edge of the paper. Do not allow the paper to bow out from too much pressure.
- Use only those printing materials that meet the specifications outlined in the user's guide.
- Open the paper output tray.

Support Information Services

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Tech Info Library Article Number:17543



Tech Info Library

Apple MessagePad: International Dialing Using Names (4/95)

Revised: 5/19/95
Security: Everyone

Apple MessagePad: International Dialing Using Names (4/95)

=====

Article Created: 6 April 1995
Article Reviewed/Updated: 21 April 1995

TOPIC -----

This article describes how to dial international numbers on the Apple MessagePad using the Names application.

DISCUSSION -----

This tip makes international dialing using the Names application easier, especially if you travel outside your own country.

For example purposes, assume that you are located in Austin, Texas and that you want to call someone in the Apple office in Oslo, Norway.

Step 1

Tap on Extras, then Time Zones.

If the "I'm here" location does not match the country you are in, set your location as explained in the "Apple MessagePad User's" manual. Use the nearest large city if your city is not listed in the Newton. Since you are located in Austin Texas, your MessagePad is set to Dallas, TX.

Step 2

Tap on Extras, Prefs, and Personal, and set your country.

Assume you have selected "USA" from the pop-up list. (If your country appears in the pop-up list, select it from the pop-up, rather than writing it in.)

Step 3

In the Names application, go to the "Show All Info" view.

Step 4

Enter the country's name on the card, even if it does not appear in the pop-up list. Assume you select "Norway" from the pop-up list.

Step 5

Enter the phone number as you would dial it while in that country. Assume you entered "259 1800".

Step 6

Go to "Show Card" or "Show Card & Notes" and tap twice on the phone number.

This brings up the Call Slip. The phone number should appear with the correct international dialing codes. In this example, your Newton shows "011 47 2591800".

If you traveled to Norway you would set your Time Zone to Oslo, and your Personal Prefs to Norway. Tapping twice on the number again from within the Names application produces a Call Slip with "259 1800".

This article was published in the "Information Alley":
Volume I, Issue 25, Page 14

Article Change History:

21 Apr 1995 - Added keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17544



Tech Info Library

Finder Access Problems With At Ease & Extensions Manager (8/95)

Revised: 8/14/95
Security: Everyone

Finder Access Problems With At Ease & Extensions Manager (8/95)

Article Created: 6 April 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

I have a problem controlling my At Ease users now that all of our Macintosh computers are running System 7.5.

When a Macintosh computer is running System software 7.5 and the user holds down the space bar at startup, the Extensions Manager control panel activates. This creates a problem for me because I use At Ease for some measure of system protection in my classroom.

The problem is that opening the Extensions Manager window at startup allows the user to deselect At Ease Startup, thus turning off At Ease. After deselecting At Ease and closing the Extensions Manager window, the computer will boot normally into At Ease until the computer is restarted. When it is restarted it goes right to the Finder. With At Ease disabled the user has complete access to everything. I can't allow this.

How can I prevent my students from getting access to the Finder, yet still run System 7.5 and At Ease?

DISCUSSION -----

The following suggestions are a couple of workarounds you can try:

Remove Extensions Manager From the Control Panels folder

Move the Extensions Manager control panel out of the Control Panels folder. This will prevent the spacebar from activating the Extensions Manager at startup.

Users with access to the Finder, such as yourself, can still open the Extensions Manager and use it without it actually residing in the Control Panel folder. In other words, moving it out of the Control Panel folder will not disable it entirely, it will only disable the spacebar access to it at startup.

Remove Extensions Manager From the Extensions folder

You can also remove the EM Extension itself, which also prevents the spacebar from opening the control panel window at startup. If you do remove the EM Extension, it will no longer be functional. However, At Ease will NOT let users open this control panel even if they have access to other control panels.

NOTE:

The EM extension will be at the top of your Extensions folder list if you are viewing by name. It has an extra space in front of its name so that it will load first, before the other extensions.

This issue is resolved in the At Ease 3.0.

Article Change History:

14 Aug 1995 - Added information about At Ease 3.0.

Support Information Services

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Tech Info Library Article Number:17545



Tech Info Library

Apple LocalTalk Bridge: Devices on LocalTalk Segment (4/95)

Revised: 4/7/95
Security: Everyone

Apple LocalTalk Bridge: Devices on LocalTalk Segment (4/95)

=====

Article Created: 7 April 1995

TOPIC -----

How many LocalTalk devices can be connected to an Apple LocalTalk Bridge?

DISCUSSION -----

There is no hard limit imposed by the code on the number of devices that can be attached to the LocalTalk segment. However, the number of devices is limited by the LocalTalk network architecture. If the LocalTalk network is properly repeated or bridged, there could be as many as 254 devices attached to the LocalTalk side of the bridge.

NOTE: The LocalTalk bridge will not function if a router is detected on the LocalTalk network.

"Inside AppleTalk, 2nd Edition" states: "The physical characteristics of the LocalTalk twisted-pair cable allow it to reliably support a recommended maximum of 32 devices." So, without a bridge or repeater, the limit is 32 devices.

However, 20 is the recommended number of devices supported when the bridge is also being used as a workstation. For more devices than that the Macintosh should run as a stand-alone bridge, because there will not be enough computing cycles available to process the user's requests in a prompt manner.

Support Information Services

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Tech Info Library Article Number:17547



Tech Info Library

Internet Server For WWW: Description (3/96)

Revised: 3/22/96
Security: Everyone

Internet Server For WWW: Description (3/96)

Article Created: 7 April 1995
Article Reviewed/Updated: 22 March 1996

TOPIC -----

This article describes The Apple Internet Server Solution for the World Wide Web.

DISCUSSION -----

The Apple Internet Server Solution is the easiest and most affordable way to establish a presence on the World Wide Web (WWW). It's the perfect solution for organizations in business, education, or publishing that want to make their information widely accessible on the Internet. And it's a cost-effective choice for organizations that want to publish information for internal use in an electronic format so that all employees have easy access to it.

The Internet, and in particular the WWW, is rapidly gaining in popularity, offering individuals and organizations unparalleled opportunities to get their messages out to the world. The Apple Internet Server Solution is a "WWW server in a box", an all- in-one solution that consists of a Workgroup Server and a CD-ROM that contains all of the software you need to establish a presence on the web.

You get WebSTAR server software; PageMill, a ground-breaking WYSIWYG Hypertext Markup Language (HTML) editor that makes it easy to create a web page; Netscape Navigator client software; RealAudio Server, a web-based audio broadcasting system; and MacDNS domain name server software. You also get NetCloak, a powerful addition to your web server that lets you create dynamic web pages accessible by any browser, and ServerStat to analyze WebSTAR traffic reports.

In addition, the CD-ROM includes AppleSearch and AppleSearch CGI, Adobe Acrobat Pro, Image Maps and Electronic Mail Common Gateway Interfaces (CGIs), and customizable web pages and forms.

With MacDNS, multiple redundant Workgroup Servers can act as one web server to

handle exceptionally high traffic as your site gains popularity. This scalability is quite cost-effective because you can gradually add more power as you need it.

So if you're looking to get noticed on the WWW affordably and easily, but with an eye toward future expansion, the Apple Internet Server Solution is the perfect choice.

Features

Affordability

- Is the lowest-cost World Wide Web server available today

Ease of use

- Includes all of the software tools you need to establish a presence on the web
- Installs with a single click of the mouse
- Gets you up and running in minutes
- Comes with examples and templates to let you create interactive web pages quickly
- Requires no knowledge of UNIX
- Lets you create interactive web pages using Common Gateway Interfaces (CGIs) without complex C programming

Performance and scalability

- Features the high-performance PowerPC processor
- Includes an enhanced networking architecture to optimize your servers performance

Security and reliability

- Is one of the most secure web servers available right out of the box
- Requires no user-installed security patches
- Recovers quickly and easily from power outages

Compatibility

- Lets you create web pages that are accessible to Windows, UNIX, Apple MessagePad, and Mac OS clients

This article was published in the "Information Alley":
Volume II, Issue 3, Page 15

Article Change History:

22 Mar 1996 - Updated article to version 1.1.
03 Jan 1996 - Changed to correct server software.
12 Jul 1995 - Changed title for consistency.

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Tech Info Library Article Number:17548



Tech Info Library

Internet Server For WWW: Details (3/96)

Revised: 3/22/96
Security: Everyone

Internet Server For WWW: Details (3/96)

Article Created: 7 April 1995
Article Reviewed/Updated: 22 March 1996

TOPIC -----

This article provides product details and ordering information on the Apple Internet Server Solution For The World Wide Web.

DISCUSSION -----

Product Details
=====

Server Hardware Options

Workgroup Server 7250/120
• See specifications for M4337LL/A below

Workgroup Server 8550/132
• See specifications for M4341LL/A below

Bundled Apple Internet Server Solution Software

Installer
• One button installs all of the included software and templates

WebSTAR from StarNine
• Allows the Workgroup Server to serve information on the WWW
• Comes with sample web pages that can be customized
• Includes on-line documentation and support
• Supports AppleScript scripting, so you can create web pages that interact with other applications that support AppleScript

Adobe PageMill
• Makes creating web pages an easy, graphical process
• Includes tools to create form-based pages for collecting information

from site visitors

MacDNS from Apple

- Maps an IP address to a recognizable web server name (which enables web clients to find your server)
- Tells other domain name servers your web server's name when asked
- Enables dynamic load balancing over multiple servers (with RAIC)

NetCloak from Maxum Development

- Provides additional capabilities to HTML standards
- Improves security, simplifies server development and maintenance, and controls the appearance of pages to individual clients

ServerStat from Kitchen Sink Software

- Helps you manage your server efficiently by analyzing WebSTAR traffic reports

RealAudio Server from Progressive Networks

- Lets you enhance your web pages with high-quality sound

HyperCard from Apple

- A popular software erector set that is easily customized to perform a variety of tasks, such as serving as a multimedia database
- Includes HyperCard CGI

FileMaker from Claris*

- An easy-to-use, yet powerful flat-file database
- Includes FileMaker Pro CGI

EveryWare Tango and Butler SQL*

- Powerful web database solutions
- Includes solutions for on-line conferencing, catalogs, registration, and classified ads

Netscape Navigator client

- Allows you to preview your web pages before you post them

BBEdit from Bare Bones Software

- A high-performance text editor for advanced HTML coding

Adobe Acrobat Pro

- Creates and translates documents into portable document format (PDF), the cross-platform Internet document standard
- Includes Adobe Acrobat Client software

Image Map software

- Creates hotspots in GIF or PICT graphics to incorporate into web pages
- Includes a CGI to serve the image map

Electronic Mail CGI

- Gives e-mail capability to web browsers that do not have it

Sample web pages

- Offer templates of web pages that you can easily customize to suit your needs, including home pages, a catalog page, and forms

AppleScript

- Lets you take advantage of the power of scripting with-out requiring a knowledge of C programming
- Includes useful scripting additions

AppleSearch 1.5

- Enables you to index documents on local servers or in a database and search them by key words
- Includes AppleSearch CGI, which extends AppleSearch text searching and retrieval functionality to web clients

* Does not include complete application package.

Ordering Information

=====

Apple Internet Server Solution for the World Wide Web 7250/120

Order No. M4337LL/A

- Workgroup Server 7250/120 featuring a 120-MHz PowerPC 601 processor, 16MB of RAM, an internal 1.2GB hard disk drive, and an internal quadruple-speed CD-ROM player
- CD-ROM bundle containing all of the Internet software and examples described in Product Details, as well as Apple RAID Software and AppleShare Client for Windows

Apple Internet Server Solution for the World Wide Web 8550/132

Order No. M4341LL/A

- Workgroup Server 8550/132 featuring a 132-MHz PowerPC 604 processor, 24MB of RAM, an internal 2GB hard disk drive, and an internal quadruple-speed CD-ROM player
- CD-ROM bundle containing all of the Internet software and examples described in Product Details, as well as Apple RAID Software and AppleShare Client for Windows

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

This article was published in the "Information Alley":

Volume II, Issue 3, Page 15

Article Change History:

22 Mar 1996 - Updated to version 1.1.
15 Dec 1995 - Updated bundled server software.
12 Jul 1995 - Changed title for consistency.

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Tech Info Library Article Number:17549



Tech Info Library

StyleWriter 1200: Technical Specifications (12/95)

Revised: 12/4/95
Security: Everyone

StyleWriter 1200: Technical Specifications (12/95)

=====

Article Created: 7 April 1995
Article Reviewed/Updated: 4 December 1995

TOPIC -----

This article contains the technical specifications of the Apple StyleWriter 1200 printer.

DISCUSSION -----

General Specifications
=====

Marking Engine

Thermal ink-jet engine

Resolution

Best: 720x360 dpi (edge smoothing, black and white printing)
. 360x360 dpi (gray printing)
Normal: 360x360 dpi
Draft: 180x180 dpi

The resolution for graphics and text differs according to the quality of printing you select. It is expressed in horizontal by vertical dots per inch (dpi).

Engine Speed

Printing speed depends on the images you print, the options you select, and on the Macintosh computer you use.

Connector Cable

Apple System/Peripheral-8 cable

Interface

High-speed serial (RS-422)

Fonts

- TrueType font support
- 64 TrueType fonts available, consisting of the 43 that come with the StyleWriter 1200 and the 21 that come with the Macintosh system software.
- Adobe PostScript font support when used with Adobe Type Manger (ATM) software. (Sold separately by Adobe Systems, Incorporated).

Sheet Feeder

Holds up to 100 sheets of 20-pound (75 grams/meter²) paper or 15 envelopes.

Printing Materials, Weights in pounds (lb.) and grams/meter² (g/m²)

Plain Paper: Use 16-lb. (60-g/m²) to 24-lb. (90-g/m²) paper.

- Accepts most letterhead and colored stock.
- Accepts medium-weight sheets of labels.
- Use #6 or #10 envelopes.
- You can also use glossy and premium coated paper and back-print film especially designed for StyleWriter printers.
- For fast drying time on overhead transparencies, Apple recommends ink jet transparencies especially designed for StyleWriter printers.

Paper Sizes in millimeters (mm) and inches (in.)

U.S. Letter:	215.9 x 279.4 mm	(8.5 x 11-in.)
U.S. Legal:	215.9 x 355.6 mm	(8.5 x 14-in.)
A4:	210.0 x 297.0 mm	(8.3 x 11.7-in.)
Executive:	184.15 x 266.7 mm	(7.25 x 10.5-in.)
#6 envelopes:	165.1 x 92.1 mm	(6.5 x 3.625-in.)
#10 envelopes:	241.3 x 104.7 mm	(9.5 x 4.125-in.)

Printable Area in millimeters (mm) and inches (in.)

Maximum printable line: 203.2 mm (8.0-in.)

Minimum margins:

- Left and right: 6.35 mm (0.25-in.)
- Top: 5 mm (0.2-in.)
- Bottom: 10 mm (0.39-in.)

Printer Dimension in millimeters (mm) and inches (in.)

Height (paper support down): 180 mm (7-in.)

Width: 345 mm (13.6-in.)

Depth (output tray closed) 200 mm (7.9-in.)

Printer Weight

Approximately 3 kilograms (6.6 pounds)

Operating Environment

=====

Temperature

15 to 30 degrees C (59 to 86 degrees F)

Relative Humidity

10 to 80 percent, noncondensing

Storage Environment

=====

Temperature

0 to 35 degrees C (32 to 95 degrees F)

Humidity

5 to 95 percent, noncondensing

Power

=====

Operating

32 Watts maximum

Input Electrical Requirements

The electrical requirements vary depending on the country for which your model was manufactured:

U.S./Japan: 100-120 VAC, 50-60Hz, 1.0 A*

Europe/Australia: 220 to 240 VAC, 50 Hz, 0.5 A

System Requirements

=====

- The StyleWriter 1200 is compatible with all Power Macintosh, PowerBook, and Macintosh computers with 68020 microprocessors or greater. The following computers are NOT compatible with the StyleWriter 1200:

- . 128K Macintosh
- . 512K Macintosh
- . 512Ke Macintosh
- . Macintosh Plus

- . Macintosh SE
- . Macintosh Classic
- . Macintosh Portable
- . PowerBook 100

- System software version 7.1 or later version
- At least 4MB of RAM (random-access memory)
- Some space on your hard disk (during the installation the tells you if you need more space)

Apple Part Numbers

=====

Printer

Apple StyleWriter 1200: M3886LL

Ink Cartridges

StyleWriter Black Ink Cartridge: M8041G

Connector Cables

Apple System/Peripheral-8 cable: M0197LL

Printing Materials

Though the labels for some of these materials may state that they are for color StyleWriter printers, they also work well with the StyleWriter 1200.

Letter-size transparency: M2658G
Letter-size premium paper: M2952G
Letter-size glossy paper: M3655G
Letter-size back-print film: M2953G
A4-size transparency: M1959G
A4-size premium paper: M2951G
A4-size glossy paper: M3656G
A4-size back-print film: M2954G

*NOTE: The Input Electrical Requirements specified in the manual are incorrect.

Article Change History:

04 Dec 1995 - Removed keyword.
06 Jul 1995 - Added keyword.
22 Jun 1995 - Corrected electrical requirements information

Support Information Services

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Tech Info Library Article Number:17551



Tech Info Library

Apple Token Ring NB/c Card: LED States (4/95)

Revised: 4/7/95
Security: Everyone

Apple Token Ring NB/c Card: LED States (4/95)

=====

Article Created: 7 April 1995

TOPIC -----

This article describes how to determine the state of the Token Ring NB/c card by the state of the LED (light-emitting diode) on the card.

DISCUSSION -----

The LED on the Token Ring NB/c Card upon power-up or any type of reset, will clear, indicating that the card is off-line. If the card is set for 16 Mbps (megabits per second) and you have a good network connection, the LED will be green. If the card is set for 4 Mbps, the LED will be yellow/orange. If the LED is not on, or is not showing the correct color, check the guidelines for handling common problems in "Troubleshooting" in the "Apple Token Ring NB/c Card User's Guide."

Support Information Services

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Tech Info Library Article Number:17552



Tech Info Library

LaserWriter 16/600 PS: Configuration Switch Settings (4/95)

Revised: 4/10/95
Security: Everyone

LaserWriter 16/600 PS: Configuration Switch Settings (4/95)

=====

Article Created: 10 April 1995

TOPIC -----

What is the purpose of the two position configuration switch located on the LaserWriter 16/600 PS?

DISCUSSION -----

The configuration switch on the LaserWriter 16/600 PS printer provides flexibility in configuring the LocalTalk, Ethernet, and Parallel ports. When the switch is in the DOWN position all of the ports are placed in a default configuration which cannot be modified. When the switch is in the UP position the printer uses the custom communication settings that have been configured using the Apple Printer Utility. Allowing both a custom and a default switch position insures that the user will always have communication access to the printer even if the user makes modifications in the custom mode which prevents communication with the printer.

In the default mode (DOWN) the communication ports are configured as follows:

Communication Port	Mode
=====	====
LocalTalk Port:	PostScript
Ethernet Port:	
. EtherTalk:	PostScript
. NetWare:	AutoSelect
. TCP/IP:	AutoSelect
Parallel Port:	
. Speed:	Fast
. Protocol:	Raw

In the custom mode (UP) the communication ports can be configured as follows:

Communication Port =====	Mode =====
LocalTalk Port:	PostScript*
Ethernet Port:	
. EtherTalk:	PostScript*, Off
. NetWare:	PostScript*, PCL5, AutoSelect, Off
. TCP/IP:	PostScript*, PCL5, AutoSelect, Off
Parallel Port:	PostScript*, PCL5, AutoSelect
. Speed:	Fast*, Compatible
. Protocol:	Normal*, Raw, Binary, TBCP

Note:

An asterisk '*' denotes the default values for the custom mode.

For more detailed information consult the LaserWriter 16/600 PS User's Guide.

Support Information Services

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Tech Info Library Article Number:17555



Tech Info Library

Internet Server For WWW: Documentation (1/96)

Revised: 1/3/96
Security: Everyone

Internet Server For WWW: Documentation (1/96)

=====

Article Created: 10 April 1995
Article Reviewed/Updated: 3 January 1996

TOPIC -----

This article describes the documentation on the CD-ROM included with the Apple Internet Server Solution for the World Wide Web.

DISCUSSION -----

Most CD-ROM software is fully documented. The applications come with electronic versions of their standard documentation. Some of the applications, have had their documentation edited and expanded for this release

Documentation for the Internet Server Solution will be in one of two formats:

HyperText Markup Language (HTML) or Adobe Acrobat (PDF)

HTML documentation can be read through Netscape with the "Open File" command. Netscape is automatically configured to point to the "Apple Internet Server Solution"

file//:<Name of drive>/Applications/WebSTAR/HTMLpages/docs/Welcome.html)

This page has a link "Online Documentation" that points to a page that refers to all documentation.

The following documentation is in HTML format and can be viewed by browsing the pages with Netscape:

Some documentation is stored in Portable Document Format (pdf) and requires the installation of Adobe Acrobat Reader or Exchange. The documents are referenced with HTML links, which triggers the launching of Reader or Exchange:

Widgets documentation
Adobe Acrobat 2.1
Applesearch Server

Applesearch Client
Webmaster

The CD-ROM contains the following software:

- WebStar server software
- BBEdit - a hypertext markup language (HTML) editor
- Netscape client software
- Domain Name Server (DNS) software for the Mac OS
- HyperCard software and sample data*
- FileMaker Pro software and sample data*
- Butler SQL software and sample data*
- AppleSearch 1.5 and AppleSearch CGI
- Adobe Acrobat Pro
- Clickable Maps and Electronic Mail Common Gateway Interfaces (CGIs)
- Web "page" that points to a number of client helper applications
- Customizable Web pages and forms.

* Does not include complete application package. Software allows users to modify data, but not the structure of the database.

Article Change History:

03 Jan 1996 - Corrected server software.

12 Jul 1995 - Changed title for consistency, added documentation link paths.

Support Information Services

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Tech Info Library Article Number:17559



Tech Info Library

LaserWriter Select 360 Fax Card Outside The U.S.A. (4/95)

Revised: 4/10/95
Security: Everyone

LaserWriter Select 360 Fax Card Outside The U.S.A. (4/95)

=====

Article Created: 10 April 1995

TOPIC -----

I live in the U.K. and I have a LaserWriter Select 360. The Fax card is not available here, and I would like to know if the Select 360 Fax card that is sold in the U.S. will work here?

Can I get information on what countries the Fax card is support? Also, is there any reason why the Fax cards are not available in certain countries?

DISCUSSION -----

The LaserWriter Select 360 and LaserWriter Pro 810 Fax cards are FCC compliant in the U.S. and Canada only. Therefore, they are not legally usable elsewhere because they have only been "certified" for the U.S. and Canada.

Certification by the equivalent FCC organization in the countries, in addition to providing hardware such as DAAs (Data Access Arrangements) to match the country's physical phone jacks, are the limiting factors to making the cards available to all countries.

Support Information Services

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Tech Info Library Article Number:17560



Tech Info Library

System 7.5 Update 1.0: Incompatible w/Stuffit SpaceSaver (4/95)

Revised: 4/10/95
Security: Everyone

System 7.5 Update 1.0: Incompatible w/Stuffit SpaceSaver (4/95)

=====

Article Created: 10 April 1995

TOPIC -----

If the Stuffit SpaceSaver control panel does not load before General Controls, users may not be able to see all the files on a mounted file server; only a small percentage of files will appear in the Finder.

DISCUSSION -----

Aladdin Systems, Inc., the creator of Stuffit, has recognized an issue involving their software, Stuffit SpaceSaver, and the Apple General Controls control panel (ver 7.5.3), which is the version included with System 7.5 Update 1.0.

To fix the problem, you can force the Stuffit SpaceSaver control panel to load before General Controls by inserting a blank space or other character in its filename as the first character. (For example, any letter prior to "g" in the alphabet would work in this case). This will cause Stuffit SpaceSaver to load before General Controls because control panels load in alphabetical order.

Removing either the SpaceSaver control panel or General Controls control panel also resolves the issue.

NOTE:

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Aladdin Systems, Inc., for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17563



Tech Info Library

ColorSync 2.0: Older Profiles Not Compatible (8/95)

Revised: 8/24/95
Security: Everyone

ColorSync 2.0: Older Profiles Not Compatible (8/95)

Article Created: 11 April 1995
Article Reviewed/Updated: 24 August 1995

TOPIC -----

I just upgraded to ColorSync 2.0 on my Macintosh. My third-party monitor came with a ColorSync Profile and has been working fine. After installing ColorSync 2.0, that profile does not seem to be working.

DISCUSSION -----

ColorSync 1.x Profiles are not compatible with ColorSync 2.0. You need to get a new profile from your display's manufacturer in order to use ColorSync 2.0.

You may be able to substitute one of the other Apple profiles until then. You should first check with the manufacturer of your display.

Article Change History:

24 Aug 1995 - Revised to apply to third party displays only.
24 Apr 1995 - Added information on availability of new profiles.

Support Information Services

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Tech Info Library Article Number:17564



Tech Info Library

Power Macintosh AV: TV Output In Black & White (4/95)

Revised: 4/11/95
Security: Everyone

Power Macintosh AV: TV Output In Black & White (4/95)

=====

Article Created: 11 April 1995

TOPIC -----

I have a Power Macintosh with an AV card installed and I can only get a black and white signal from the AV card to the television. Why?

DISCUSSION -----

You need to switch the S-Video adapter cables around. You are using the S-Video adapter cable designed for the input signal on the output of the Power Macintosh AV card. If you examine the adapter cables, one is marked IN and the other is marked OUT. You can only get a color signal when you use the OUT adapter on the output of the AV card.

This symptom appears only on Power Macintosh AV computers and not Quadra AV computers since the Quadra AV card has a composite output source instead of the S-Video adapter cables.

Support Information Services

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Tech Info Library Article Number:17565



Tech Info Library

Color StyleWriter 2400: Difficulty Installing Cartridge (4/95)

Revised: 4/11/95
Security: Everyone

Color StyleWriter 2400: Difficulty Installing Cartridge (4/95)

=====

Article Created: 11 April 1995

TOPIC -----

I find that replacing the ink cartridges on my Color StyleWriter 2400 difficult because the carrier assembly is not automatically moving to the center position where it can be easily accessed. What am I doing wrong and how can it be corrected?

DISCUSSION -----

Under normal conditions, whenever the front cover is opened and the power is 'on', the Color StyleWriter 2400 moves the carrier assembly to the center position for easy ink cartridge replacement.

Printers which power up with the error LED on (solid LED), keep the carrier assembly in the home position (the right side of the printer) making ink cartridge access difficult.

In the event that the carrier assembly does not move to the center position, power down the printer and gently move the carrier to the center position. Next, check the ink cartridge to make sure it was properly installed and there are no obstructions preventing movement of the carrier assembly. If the problem persists then contact a service provider for further assistance.

Additional ink cartridge replacement information can be found on pages 42-45 of the Color StyleWriter 2400 User's Guide.

Support Information Services

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Tech Info Library Article Number:17566



Tech Info Library

Places That Do Not Observe Daylight Savings Time (4/95)

Revised: 4/11/95
Security: Everyone

Places That Do Not Observe Daylight Savings Time (4/95)

=====

Article Created: 11 April 1995

TOPIC -----

I have a PowerBook 520c which is running System 7.5. I set the Date & Time control panel to Honolulu, with no Daylight Savings time (because Hawaii does not use Daylight Savings time).

When I open the Map control panel, and type in Los Angeles, the time is one hour off; that is, it is only a 2 hour time difference instead of a 3 hour time difference.

It seems like the Map control panel does not support states that do not use Daylight Savings Time. Is there any way to change this?

DISCUSSION -----

The setting in the Date and Time control panel for Daylight Savings time is a universal setting. That is, it assumes everybody in the world is observing Daylight Savings time when its checkbox is selected.

If other areas of the world are not observing Daylight Savings time when the checkbox is selected in the Date & Time control panel, then the Map control panel will be off by an hour for all areas that are not recognizing Daylight Savings time.

Conversely, if you set the Map control panel to an area that does not observe Daylight Savings time and deselect/uncheck the checkbox for Daylight Savings time in the Date & Time control panel, then time in all areas celebrating Daylight Savings time will be off by an hour in the Map control panel.

In the case of Hawaiians, sometimes they are three hours behind Pacific Standard Time (PST) and sometimes two hours behind Pacific Daylight Time (PDT). The Map control panel can only calculate differences between time zones relative to Greenwich Mean Time (GMT). Hawaii will always show up as three hours past the Pacific time zone and five hours past the Central time zone.

When Hawaiians are not observing Daylight Savings time, but the rest of the country is, there is no combination of settings in Map and Date & Time control panels which will enable you to display Hawaiian local time correctly AND concurrently display the correct time in other places that do observe Daylight Savings time.

The knowledge about which countries observe Daylight Savings time and which do not is not built into the Map control panel, so it does not allow for such a complex calculation.

This same situation also occurs in other parts of the world besides Hawaii. Phoenix, Arizona is an example of an area of the U.S. which also does not observe Daylight Savings time.

Support Information Services

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Tech Info Library Article Number:17567



Tech Info Library

Internet Server For WWW: Getting Started (1/96)

Revised: 1/3/96
Security: Everyone

Internet Server For WWW: Getting Started (1/96)

Article Created: 11 April 1995
Article Reviewed/Updated: 3 January 1996

TOPIC -----

This article is a getting started article for Apple Internet Server Solution for the World Wide Web.

DISCUSSION -----

To start learning about and then building your Web server, your first step is to fill out the Installation Checklist and then install and configure all the software you need. Remember, you must have MacTCP installed and running, and have access to an Internet connection to get on the World Wide Web (WWW). Without a connection, you can use the CD, but you cannot go any farther. We provide full MacTCP information, but some of the data you will need to enter is specific to your Internet connection. There are many ways to get an Internet connection. Generally it's obtainable through your network administrator or from a commercial source. It's up to you to find out what you need.

The package contains all the software you need to make a presence on the Internet. However, you must provide the connection to the Internet. If your site does not already have a connection to the Internet, you need to purchase this service from an Internet access provider in your area. Internet access is generally offered in two forms, a dial-up connection through the access provider's server, or a continuous connection through a server at your site. Call your local phone company for the access providers in your area. They will assign you an IP address which you need for the Installation Checklist.

While waiting for an Internet connection, you can get started with the Apple Internet Server Solution for the World Wide Web by opening the sample pages and beginning the process to create the documents you want to publish on the Internet, such as your home page. All the tools necessary to designing and create your home page are on the CD.

Installation Checklist

You must obtain the following information about your network from your network administrator or access provider before proceeding with installation. This information is required to configure MacTCP – the Macintosh version of the TCP/IP networking protocols required by all systems using the Internet.

Get this information:

- IP address
- Gateway address
- Domain Name

A Domain Name maps an Internet address to a name for your site, for example, apple.com. You can type a period (.) in this field and the server will search all IP addresses and use the first one that matches your Internet address.

- Domain Name Server Address (or addresses if there are multiple servers)

You do not need to enter a Class of Address because it is automatically determined from your IP address.

Test Your MacTCP Connection

Test your MacTCP connection to make sure your local host, and hosts and gateways successively farther away are working properly before you enter the Internet. This helps to isolate potential problems. MacTCP Ping is a utility, in the Applications folder on your Internet Server, to help isolate problems.

If you need more information on MacTCP Ping utility, see the "MacTCP Administrator's Guide" on the CD-ROM.

Installation instructions

- 1) Insert the CD-ROM.
- 2) Double click Install Internet Server.
- 3) Click Install to install the applications and documentation. Installation requires a minute or two. All applications are placed in your Applications folder.
- 4) Restart your server. WebStar is launched, along with Netscape which displays the default Home page.

NOTE: If you install the software before configuring MacTCP, you'll see an error message such as "unable to Initialize Network! MacTCP may not be loaded", or when you are using Netscape "Could not create socket, insufficient system resources, or network down." These messages indicate that the applications are unable to reach the Internet and the messages will disappear once MacTCP is configured properly.

Article Change History:

..TIL17570-Internet_Server_For_WWW-Getting_Started_1-96_(TA33597).pdf

03 Jan 1996 - Corrected server.

12 Jul 1995 - Changed title for consistency.

Support Information Services

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Tech Info Library Article Number:17570



Tech Info Library

Internet Service Providers In The U.S. and Canada (6/96)

Revised: 4/28/97
Security: Everyone

Internet Service Providers In The U.S. and Canada (6/96)

=====

Article Created: 11 Apr 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article provides a list of Internet service providers in the U.S. and Canada.

DISCUSSION -----

Internet Service Common Terms
=====

Below are some terms and definitions to common Internet terms and connection methods:

- Shell
Offers a basic connection running on top of an UNIX environment. Services include electronic mail, Usenet news, FTP, telnet, gopher, IRC, and so on. Most providers have a menu-driven interface as well.
- UUCP
Offers a method for computers to transfer files from machine to machine without user intervention.
- SLIP
Allows computers to be temporarily connected the Internet. You can run services such as FTP and telnet directly from a computer. This also allows you to run some of the popular graphical user interface software (such as Mosaic and other World Wide Web clients).
- PPP
Similar to SLIP but a much better protocol.
- FTP
Offers anonymous FTP space.

- LAN

This is for connecting a local area network to the Internet.

- WWW

Offers space for maintaining Web pages.

- ISDN

High-speed network connections that are offered as dial-up access via digital modems.

- 56-T1

These cover the 56K through T3 speeds. These are dedicated line connections that are high-speed and high-bandwidth.

Internet Service Providers

=====

Internet Service Providers in your local area connect you to an Internet account through a regular phone line. If you choose a local company, you will save money on the long distance charges. This list is not complete, and should not be considered a recommendation from Apple Computer. It is provided for your reference. For a more complete listing, refer to the InterNIC (info@internic.net), PDIAL or Nixpub lists available on ZiffNet/Mac or other online services.

Begin_Table

Online Services

America Online	800-827-6364
CompuServe	800-848-8199
Delphi	800-695-4005
GEnie	800-433-3683

SLIP/PPP SERVICE PROVIDERS

NationWide

HoloNet	510-704-0160
Internet Express	800-592-1240
John von Neuman, Computer Network	800-358-4437
Netcom Online Communications Services	800-501-8649
Performance Systems International (PSI)	800-827-7482
Portal Communications	408-973-9111

East

Agate Internet Services	207-947-8248
BBN Internet Services	617-873-8730

Capcon Library	202-331-5771
Clark Internet Services	410-995-0691
Digital Express Group	301-220-2020
Echo Communications	212-255-3839
FishNet	610-337-9994
MV Communications	603-429-2223
PSI Net Pipeline	212-267-3636

CICNet BBB	313-998-6703
Computize	708-290-0088
Concentric	517-895-0500
Databank	913-842-6699
Exodus Software	513-522-0011
Grapevine	913-438-6600
HolliCom	317-883-4562
ICON	314-241-0969
Igloo	502-966-3848
IndyNet	317-251-5208
InterAccess	800-967-1580
InterNet Indiana	317-876-5638
Interstate	913-472-4949
IQuest	800-844-8649 or 317-259-5050
Macro Computer Solutions	312-248-8649
Msen	313-998-4562
Netcom	913-345-2994
Prairienet Freenet	217-244-1962
RustNet	810-650-6812
SkyNET	913-483-0002
StarNet Communications	612-941-9177
StarNet, Inc.	708-382-0099
TFSnet	913-262-4638
Tyrell	913-459-7584
XNet Information Services	708-983-6064

South

CyberGate	305-428-4283
Global Access VNet	704-334-3282
Internet Atlanta	404-410-9000
Nuance Network Services	205-533-4296
OnRamp Technologies in Dallas	214-746-4710
OuterNet Communications	512-345-3573
RealTime Communications	512-451-0046
Telelink	615-321-9100
Texas Metronet	214-705-2900
The Black Box	713-480-2685
Zilker Internet Park	512-472-4914

West

Colorado SuperNet	303-273-3471
Cooperative Library Agency for Systems and Services	800-488-4559

CTS Network Services	619-637-3637
Eskimo North	206-367-7457
Hawaii OnLine	808-533-6981
Internet Direct	602-274-0100
Open Door Networks, Inc.	503-488-4127
Teleport	503-223-4245
West Coast Online	707-586-3060

Canada

HookUp Communications	905-847-8000
UUNET Canada	416-368-6621
UUNorth	416-225-8649

End_Table

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

28 Apr 1997 - Removed reference to inactive on line service.

02 Jul 1996 - Added Fax Doc word

02 Dec 1995 - Updated format and added additional information.

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Tech Info Library Article Number:17571



Tech Info Library

Internet Service Providers In Europe (4/95)

Revised: 4/11/95
Security: Everyone

Internet Service Providers In Europe (4/95)

Article Created: 11 April 1995

TOPIC -----

This article provides a list of Internet service providers in Europe.

DISCUSSION -----

Internet Service Common Terms

Below are some terms and definitions to common Internet terms and connection methods:

- Shell
Offers a basic connection running on top of an UNIX environment. Services include electronic mail, Usenet news, FTP, telnet, gopher, IRC, and so on. Most providers have a menu-driven interface as well.
- UUCP
Offers a method for computers to transfer files from machine to machine without user intervention.
- SLIP
Allows computers to be temporarily connected the Internet. You can run services such as FTP and telnet directly from a computer. This also allows you to run some of the popular graphical user interface software (such as Mosaic and other World Wide Web clients).
- PPP
Similar to SLIP but a much better protocol.
- FTP
Offers anonymous FTP space.
- LAN

This is for connecting a local area network to the Internet.

- WWW

Offers space for maintaining Web pages.

- ISDN

High-speed network connections that are offered as dial-up access via digital modems.

- 56-T1

These cover the 56K through T3 speeds. These are dedicated line connections that are high-speed and high-bandwidth.

Internet Service Providers

=====

Internet Service Providers in your local area connect you to an Internet account through a regular phone line. This list is not complete, and should not be considered a recommendation from Apple Computer. It is provided for your reference.

Belgium

BELNet	Tel : +32.2 2383470
DPWB-SPPS	Fax : +32.2 2305912
Wetenschapsstraat, 8	email: helpdesk@belnet.be
1040 Bruxelles, Belgium	

EUnet Belgium	Tel : +32.16.236099
.	Fax : +32.16.232079
.	email: postmaster@belgium.Eu.net

Switzerland

Active-Net	Tel : 055 24 13 42
Eschenweg 4	Fax : 055 24 13 41
CH-8645 Jona	email: altorfer@active.ch
.	URL : http://www.active.ch/

EUnet	Tel : 01 291 45 80
Zweierstrasse 35	Fax : 01 291 46 42
CH-8004 Zürich	email: info@eunet.ch
.	URL : http://www.eunet.ch/

Internet ProLink	Tel : 022 788 85 55
ICC	Fax : 022 788 85 60
C.P. 1863	email: help@iprolink.ch
CH-1215 Genève 15	URL : http://www.iprolink.ch/

M&C Management & Communications SA	Tel : 037 22 06 36
------------------------------------	--------------------

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Grand-Places 16
CH-1700 Fribourg
.

Fax : 037 22 06 38
email: office@mcnet.ch
URL : <http://www.mcnet.ch/>

Ping Net GmbH
Albisstrasse 48
CH-8932 Mettmenstetten
.

Tel : 01 768 53 16
Fax : 01 768 53 19
email: admin@ping.ch
URL : <http://www.ping.ch/>

SWITCH
Limmatquai 138
CH-8001 Zurich,
.

Tel : 01 268 15 15
Fax : 01 268 15 68
email: info@switch.ch
URL : <http://www.switch.ch/>

Thenet
NetConsult AG
Morgenstrasse 129
CH-3018 Bern
.

Tel : 031 998 41 41
Fax : 031 998 41 50
email: support@thenet.ch
URL : [http://www.marktplatz.ch/
netconsult/thenet-home.html](http://www.marktplatz.ch/netconsult/thenet-home.html)

TINET
Centro Galleria 2. Via Cantonale
CH-6928 Manno-Lugano
.

Tel : 091 50 81 18
Fax : 091 50 81 19
email: info@tinet.ch
URL : <http://www.tinet.ch/>

France -----

Compuserve Information Services
Centre ATRIA
Rueil 2000
21, Avenue Edouard Belin
92566 RUEIL MALMAISON Cedex

Tel : (1) 47 14 21 60
Fax : (1) 47 14 21 51

DX-Net
21, Rue des Bosquets
67300 SCHILTIGHEIN

Tel : 88 83 20 66
Fax : 88 83 20 31

EUNet
52, avenue de la Grande-Armée
75017 PARIS

Tel : (1) 53 81 60 60
Fax : (1) 45 74 52 79

FranceNet
49, Rue du Faubourg-Poissonnière
75009 PARIS

Tel : (1) 40 61 01 76
Fax : (1) 47 83 92 17

FRANCETEASER
17, Rue Corot
92410 VILLE D'AVRAY

Tel : (1) 47 50 64 50
Fax : (1) 47 50 62 93

FRENCHDATA NETWORK
8, Rue Belgrand
75020 PARIS

Tel : (1) 44 62 90 64
Fax : (1) 47 97 58 72

Internet Way	Tel : (1) 41 43 21 10
204, Bld Bineau	Fax : (1) 41 43 21 11
92200 NEUILLY SUR SEINE	

Oléane	Tel : (1) 43 28 32 32
Groupe APYSOFT	Fax : (1) 43 28 46 21
35, Bld de la Libération	
94300 VINCENNES	

Renater	Tel : (1) 44 27 26 12
GIP RENATER	Fax : (1) 44 27 26 13
Université Pierre et Marie Curie	
Bâtiment A, 7° étage	
4, Place Jussieu	
75250 PARIS Cedex 05	

Réseau CALVACOM (Calvanet/ Calvacom 2)	Tel : (1) 34 63 19 19
Réseau Calvacom / STI	Fax : (1) 34 63 19 48
8-10, Rue Nieuport	
78140 VÉLISY	

Transpac Direction Commerciale	Tel : (1) 45 38 88 88
Tour Maine Montparnasse	Fax : (1) 45 38 71 47
33, Avenue du Maine	
75755 PARIS Cedex 15	

WORLD-NETSCT	Tel : (1) 60 20 85 14
20, Avenue Daguerre	Fax : (1) 64 21 65 35
77500 CHELLES	

The Netherlands

Antenna	Tel : +31 (80) 235 372
P.O. Box 1513	Fax : +31 (80) 236 798
6501 Nijmegen	email: support@antenna.nl

Stichting Dataweb	email: info@dataweb.nl
P.O. Box 13433	
2501 EK The Hague	

De Digitale Stad (the Digital City)	Tel : +31206200294
Postbus 22864	Fax : +31206222753
1100 DJ Amsterdam	email: helpdesk@dds.hacktic.nl
.	Dialup access: +31206225222
.	telnet: dds.hacktic.nl
.	(193.78.33.69)

EMSwitch	Tel : +31.20.668.6262
Postbus 139	
1000 AC Amsterdam	

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EUnet The Netherlands . .	Tel : +31.20 5924245 Fax : +31.20 5924199 email: beheer@Netherlands.EU.net
EuroNet Internet Prins Hendrikkade 48 1012 AC Amsterdam	Tel : +31 20 625 6161 Fax : +31 20 625 7435 email: info@euro.net
GDS postbus 473 2600 AL Delft	Tel : 015-624493 email: beheer@gds.nl
Hobbynet H.A. Dijkstra Satiestraat 9 1323 SL Almere	Tel : +31-36-5361683 email: henk@hgatenl.hobby.nl
INFOboard Veldweg 33 6075 NL Herkenbosch	Tel : +31.4752-5858 Fax : +31.4752-6584
Internet Distributie Nederland (IDN) . .	Tel : 050 - 189149 email: Gregor Tee (Gregor@idn.nl) Dialup: 050 - 133623
NEABBS	Tel. BBS: 020.5733533
NetLand Bart de Ligtstraat 4 1097 JE Amsterdam	Tel : 020.6943664 Dialup: 020.6940350 (5 ln) Telnet: netland.nl
NLnet (EUnet Netherlands) Kruislaan 419 1098 VA Amsterdam	Tel : +31.20.6639366 Fax : +31.20.6655311 email: info@NL.net
Openworld foundation PObox 297, 2400AG, Alphen aan den Rijn, The Netherlands	Tel : +31-(0)1720-40005 Fax : +31-(0)1720-30979 email: info@ow.org, staff@ow.org
PSYLINE Postbus 38036 6503 AA Nijmegen	FidoNet: 2:500/276 email: psyline@psyline.nl
Stichting Internet Access Postbus 444 9600 AK Hoogezand	Tel : +031 15 566108 email: voorzitter@iaf.nl
Stichting Knoware Oldambt 69 3524 BD Utrecht	Tel : 030.896775 email: info@knoware.nl
Stichting NEST	Tel : 020.6265566

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postbus 441
1000 AK Amsterdam

email: info@nest.nl

Simplex
postbus 36068
1020 MB Amsterdam

email: simplex@simplex.nl

The Delft Connection (TDC)
p/a Nieuwe Plantage 115
2611 XV Delft

email: info@tdcnet.nl

WLINK (Waterland BBS)
Postbus 1196
1440 BD Purmerend

Tel/Fax : 029.9043030
BBS: 029.9040202 (12 ln)
email: joop@wlink.nl

XS4ALL (Access for All)
Postbus 22864
1100 DJ Amsterdam

Tel : +31206200294
Fax : +31206222753
email: helpdesk@hacktic.nl

Sweden

Telia
.
.

Tel : +46 (0)8 90 200
: +46 (0)8 90 400
email: internet-info@telia.se

Tele2
.
.

Tel : +46 (0)8 562 64 000
: +46 (0)8 562 64 335
email: info@swip.net

France Telecom
.

Tel : +46 (0)8 619 31 00
email: info@transpac.se

Telegate
.

Tel : +46 (0)8 750 30 20
email: inet-info@telegate.se

Personal Internet
Services Dial-up (PPP and SLIP)

Tel : +46 (0)8 783 20 40
email: adm@pi.se

Algonet
.

Tel : +46 (0)8 799 30 11
email: info@algonet.se

Everyday Online
.
.

Tel : +46 (0)8 15 88 10
: +46 (0)8 15 88 30
email: info@everyday.se

Italy

Agorà,

Tel : 06/69917432-3

Galactica,

Tel : 02/29006150

i.net,	Tel : 02/26162258-9
iUnet (ex i2u)	Tel : 02/27001719
Mc-Link,	Tel : 06/418921
Video online	Tel : 167-014630

United Kingdom

Demon	Tel : 0181 371 1234
Pipex	Tel : 01223 250120
UKNet	Tel : 01227 266466

Support Information Services

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Tech Info Library Article Number:17572



Tech Info Library

Power Macintosh: SCSI Termination Explained (1/96)

Revised: 1/29/96
Security: Everyone

Power Macintosh: SCSI Termination Explained (1/96)

Article Created: 12 April 1995
Article Reviewed/Updated: 29 January 1996

TOPIC -----

This article explains the differences between the internal SCSI termination on Power Macintosh 8100 series computers and Power Macintosh 7500, 8500, and 9500 series computers.

DISCUSSION -----

Power Macintosh 8100 series and Power Macintosh 7500, 8500, and 9500 series computers have dual-channel asynchronous SCSI interfaces, which results in two separate SCSI buses: an internal/external SCSI bus, Bus 1, and an internal SCSI bus, Bus 0. However, the specifications and configurations of the two buses differ slightly.

Power Macintosh 8100 Series Computers

Bus 1

Bus 1 consists of a 50-pin flat ribbon cable with two 50-pin connectors on the end of the cable. The CD-ROM drive, if installed, occupies the first connector. The second connector has a 50-pin terminator connector installed on it. To add a second SCSI device to Bus 1, you must remove the 50-pin terminator connector and install a terminated SCSI device.

Bus 1 has automatic termination, which means that circuitry on the logic board senses whether or not there are any external SCSI devices attached. If there are no external SCSI devices connected, the logic board automatically terminates itself at the 50-pin logic board connector, thus terminating both ends of the SCSI chain.

Once an external SCSI device is connected to the 25-pin external connector, the circuitry senses the device and disables termination at the 50-pin logic board

connector. The computer then relies on the external SCSI device to provide the proper termination.

Bus 0

Bus 0 is a completely separate SCSI bus with its own SCSI controller. This bus has a 50-pin flat ribbon cable with two 50-pin connectors on it. Power Macintosh 8100 series computers ship with the internal hard drive connected to this SCSI bus. The internal hard drive is terminated, which terminates the SCSI bus.

Unlike Bus 1, Bus 0 does not have automatic termination because it is exclusively an internal SCSI bus. If additional devices are added to Bus 0, only the last device should contain termination resistors.

Power Macintosh 7500, 8500, and 9500 Series Computers

=====

Bus 1

Unlike Bus 1 in Power Macintosh 8100 computers, there are no devices attached internally to Bus 1 in Power Macintosh 7500, 8500, and 9500 series computers.

Bus 1 has automatic termination, which means that circuitry on the logic board senses whether or not there are any external SCSI devices attached. If there are no external SCSI devices connected, the logic board automatically terminates itself at the 50-pin logic board connector, thus terminating both ends of the SCSI chain.

Once an external SCSI device is connected to the 25-pin external connector, the circuitry senses the device and disables termination at the 50-pin logic board connector. The computer then relies on the external SCSI device to provide the proper termination.

Bus 0

Bus 0 is a completely separate SCSI bus with its own SCSI controller. On Power Macintosh 7500, 8500, and 9500 series computers, Bus 0 provides Fast SCSI communications up to 10 MB per second.

This bus has a 50-pin flat ribbon cable with two 50-pin connectors on it. Power Macintosh 7500, 8500, and 9500 series computers ship with the internal hard drive and CD-ROM drive connected to this SCSI bus. The internal hard drive is terminated, which terminates the SCSI bus.

Unlike Bus 1, Bus 0 does not have automatic termination because it is exclusively an internal SCSI bus. If additional devices are added to Bus 0, only the last device should contain termination resistors.

For additional information on dual-channel SCSI or Fast-SCSI in Power Macintosh series computers, see these related Tech Info Library articles:

"Power Macintosh 7500, 8500, 9500 Series: SCSI-2 Compliance"

..TIL17573-Power_Macintosh-SCSI_Termination_Explained_1-96_(TA33599).pdf

"Dual-Channel Asynchronous SCSI Interface: An Overview"
Specific Macintosh: Specifications

Article Change History:

29 Jan 1996 - Updated technical information.

04 Dec 1995 - Reviewed for technical accuracy and added 8500 information.

Support Information Services

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Tech Info Library Article Number:17573



Tech Info Library

Power Macintosh AV: Greyscale Output from S-Video Port (4/95)

Revised: 4/12/95
Security: Everyone

Power Macintosh AV: Greyscale Output from S-Video Port (4/95)

=====

Article Created: 12 April 1995

TOPIC -----

I am ouputting video from my Power Macintosh AV to an external video source using the S-Video port. My Monitors control panel is set for 256 colors yet the video appearing on the television monitor is in shades of grey.

Does this indicate a problem with the AV card?

DISCUSSION -----

There are two different S-Video cable adapters provided with the Power Macintosh AV computer. Using the S-Video cable adapter marked IN instead of the adapter marked OUT will produce this problem.

Externally, the adapters look identical except for the IN/OUT markings on the flat part of the connector. Internally, they have different wiring which will cause the loss of color signal.

Support Information Services

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Tech Info Library Article Number:17575



Tech Info Library

Workgroup Server 95 Tech Tips: Customers Hear on Hold (4/95)

Revised: 4/12/95
Security: Everyone

Workgroup Server 95 Tech Tips: Customers Hear on Hold (4/95)

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Article Created: 12 April 1995

TOPIC -----

These are the Tech Tips that customers calling in with an Apple Workgroup Server question hear while on hold.

DISCUSSION -----

Tech Tip 1: Recovering From A Crash

The following steps can be followed to recover from a crash on a WorkGroup Server 95. Attempting these steps in the order they are given will assure that the least trouble is encountered with the UNIX file system.

First depress Command-Control-E simultaneously and wait for at least one minute before proceeding. Depressing these three keys simultaneously forces a restart of the Macintosh process running within UNIX.

If no response is generated by Command-Control-E, turn the server off using the key switch on its front panel. Turning the key switch counterclockwise to the "off" position sends a signal to the motherboard to perform an orderly shutdown of UNIX processes. As with Command-Control-E, wait at least one minute for this action to complete before assuming it is unsuccessful.

The last resort for restarting the server involves pressing the reset switch on the front of the server.

After any abrupt restart of the server, it is recommended that a manual file system check be performed from the A/UX Startup Shell. Entering the Startup Shell involves restarting the server and clicking the "Cancel" button OR depressing the Command and Period keys when the Dialog Box appears saying "Welcome to the Apple WorkGroup Server...Launching". This will present a command line interface.

At the prompt type the following UNIX command:

```
fsck -y /dev/default
```

This command will perform a file system check of the default boot drive. It may take a few minutes to complete. If upon completion, a message indicating the file system was modified is displayed, it is a good idea to run the same command once more.

If a message indicating the file system was modified is NOT encountered, entering the command:

```
launch
```

will boot the server into its normal operating mode.

Tech Tip 2: Rebuilding the DeskTop

There are two ways to rebuild the desktop on an Apple WorkGroup Server 95: the Apple way and the UNIX way. Both approaches give the same result, but they also bear some explanation.

You may have already discovered that depressing Command and Option simultaneously while booting the server rebuilds the desktop for the MacPartition but not for the UNIX file system. The latter requires holding down the Command and Option keys as the Finder process is loading within A/UX. A simple way to accomplish this is to select LOGOUT from the Special Menu and depressing Command and Option simultaneously as the Finder loads. A dialog box will then appear asking if you want to rebuild the desktop.

The UNIX approach for rebuilding the desktop involves use of the command line interface. Use the rm command to delete each of the four files in /mac/sys/System Folder which include "desktop" in their name. Once these files have been deleted, the Desktop will automatically be rebuilt the next time the Finder loads.

Support Information Services

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Tech Info Library Article Number:17578



Tech Info Library

ARA CCL Scripts for GeoPort and Express Modem (4/95)

Revised: 4/12/95
Security: Everyone

ARA CCL Scripts for GeoPort and Express Modem (4/95)

=====

Article Created: 12 April 1995

TOPIC -----

This article describes the preferred modem scripts for Apple Remote Access (ARA) when using the GeoPort Telecom Adapter or Express Modem.

DISCUSSION -----

GeoPort 2.0 Telecom Adapter connection (CCL) scripts

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)

ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter) you should select it in the Apple Remote Access Setup control panel.

Note: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Express Modem connection CCL scripts

ARA 1.0: Express Modem 14400

ARA 2.0: Express Modem ARA 2.0 (Modem Documents folder on installer disk)

Support Information Services

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Tech Info Library Article Number:17580



Tech Info Library

ARA MultiPort X.25 Extension: CompuServe X.25 Network (4/95)

Revised: 4/12/95
Security: Everyone

ARA MultiPort X.25 Extension: CompuServe X.25 Network (4/95)

=====

Article Created: 10 April 1995

TOPIC -----

I am setting up an Apple Remote Access (ARA) MultiPort X.25 Extension server through CompuServe's X.25 network, and I'm getting a "Could not connect to host" error. What is wrong?

DISCUSSION -----

The key piece of data that is not being provided by CompuServe on the client is an ASCII string that gets placed in the Call Request Packet. The string should be "ARAX25".

The problem is CompuServe sets up their X.25 services in such a way that all their PAD parameters are set up ahead of time. The client logs into the CompuServe network and is authenticated to use a predetermined service. Other X.25 service providers allow the client to issue PAD commands, therefore the scripts for them look very different than the script for CompuServe. As a comparison look in the Sprint CCL script that comes with ARA MultiPort Server X.25 Extension software to see how the "ARAX25" string gets sent to the PAD. In X.25 terminology, the "ARAX25" string goes in the Call User Data field which ends up being the last 6 bytes of the Call Request packet.

Support Information Services

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Tech Info Library Article Number:17581



Tech Info Library

MAE 2.0: MacInTax 1994 Cannot Save To Hard Disk (4/95)

Revised: 4/12/95
Security: Everyone

MAE 2.0: MacInTax 1994 Cannot Save To Hard Disk (4/95)

=====

Article Created: 12 April 1995

TOPIC -----

This article describes a workaround when MacInTax initially saves a file to the UNIX hard disk with MAE 2.0.

DISCUSSION -----

Here is a workaround, save the MacInTax file to a floppy disk instead of the hard disk. You can then copy the MacInTax file in the Finder from the floppy disk to the UNIX hard disk.

It appears that MacInTax has a problem creating the file on the hard drive but not a floppy disk. Once the file has been dragged to the hard disk, MacInTax can open and update it without difficulty.

Support Information Services

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Tech Info Library Article Number:17582



Tech Info Library

Apple Color Printer: Uneven Margins in Printer Driver (4/95)

Revised: 4/12/95
Security: Everyone

Apple Color Printer: Uneven Margins in Printer Driver (4/95)

=====

Article Created: 12 April 1995

TOPIC -----

When I print from my Apple Color Printer, the top and bottom margins are shifted slightly. How can I correct this?

DISCUSSION -----

When printing from the original Apple Color Printer, the top margin may actually print 1/8-in. less than expected, and the bottom 1/8-in. larger. For example, a margin of 1-in. on all sides may yield a top margin of 7/8-in. and the bottom 1 1/8-in.

The problem is actually with the Apple Color Printer driver. There are no plans to revise the Apple ColorPrinter driver. However, one possible solution is contact GDT Softworks. GDT Softworks makes PowerPrint. PowerPrint contains a newer version of the Apple Color Printer Driver. This may resolve the problem, however Apple does not guarantee this solution).

Another solution would be to adjust for the margin difference through the application being used.

The problem may be more prevalent when printing from Postscript programs.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17583



Tech Info Library

QuickTime for Windows: Differences Between 2.0 and 2.0.1 (4/95)

Revised: 5/24/95
Security: Everyone

QuickTime for Windows: Differences Between 2.0 and 2.0.1 (4/95)

=====

Article Created: 12 April 1995

TOPIC -----

This article describes the differences between QuickTime of Windows 2.0 (QTW) and QuickTime for Windows 2.0.1.

DISCUSSION -----

The main difference between 2.0 and 2.0.1 is a QuickTime for Windows 1.x/2.0 installation/compatibility problem that has been fixed. Other problems corrected are:

- 1) Resource leak in sample codec component fixed by extern "C"
- 2) Resource leaks in components based on sample code in (1)
- 3) Data handler performance enhancements
- 4) Installer changes for ATI Mach 64 compatibility
- 5) Installer now removes [video] optimize= key, to ensure that
. auto-video speed determination in QTW is re-enabled for QTW 2.0
- 6) Updated memory utilization for enhanced performance during rate
. conversion/audio decompression
- 7) Updated all components to peacefully coexist with previous versions
. of the quicktime binaries. (Issue resolved for Premiere 1.x, and some
. CD-ROM titles which run QTW binaries from the CD-ROM instead of from
. the default QTW binary)
- 8) Component manager now supports two entry points to identify
. component:
. THNGIDENTIFY
. THNGIDENTIFY2

- . This allows QTW 1.x to safely ignore newer components which use QTW
 - . 2.0 specific features. (see item 7)
- 9) Byte-swap public macros now use 2-byte XCHG instead of 3-byte ROL
- . instruction
- 10) New support for casting an HGLOBAL handle to a PicHandle on all API
- . calls which take a PicHandle as a parameter. This allows a
 - . programmer to read from a file into a Global memory object, then
 - . have QTW interpret the contents of memory as a PICT.
- 11) Correct the usage of CLUTID = -1 to be the same as on Macintosh.
- 12) Added preference to QTW.INI to allow user to indicate that their
- . windows sound driver is lying about its ability to perform volume
 - . control.
- 13) Added preference to QTW.INI to allow QTW to reset the sound hardware
- . everytime the audio output channel is opened.
- 14) Improved audio sync under low memory conditions.
- 15) Improved audio decompression performance.
- 16) NewMovieFromDataFork parsing improved when there are multiple 'moov'
- . resources in the data fork.
- 17) Switching between multiple sound tracks is now supported at runtime
- . under application control.
- 18) Prevent various malformed JPEG images from causing GPF.
- 19) Corrected editlist processing when media timescale was different
- . from movie timescale.
- 20) Bypass more GDI bugs related to SetBitmapBits.

Support Information Services

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Tech Info Library Article Number:17585



Tech Info Library

LaserWriter 16/600 PS: Europe Uses a Blacklist Option (4/95)

Revised: 4/13/95
Security: Everyone

LaserWriter 16/600 PS: Europe Uses a Blacklist Option (4/95)

=====

Article Created: 13 April 1995

TOPIC -----

We have a customer in Spain who is experiencing random problems with a LaserWriter 16/600 PS Fax. Sometimes, when trying to send a fax, the error "El teléfono está en una lista negra" which means "The telephone is on a black list" appears. This does not always happen with the same phone number, what is going on?

DISCUSSION -----

"El teléfono está en una lista negra" means that the user has reached the limit for retrying the connection. The maximum number for redialing the same phone number is four. This number is set by the customer's Spanish phone company, and once you have exceeded this number you get the error "this phone number is black listed". You must wait a certain amount of time before trying again.

This code is not often used in Spain; it is more prevalent in other European countries.

Support Information Services

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Tech Info Library Article Number:17594



Tech Info Library

IDE Volume Sizes (4/95)

Revised: 4/13/95
Security: Everyone

IDE Volume Sizes (4/95)

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Article Created: 13 April 1995

TOPIC -----

What is the largest volume size that the IDE interface, which is used in the PowerBook 150, Macintosh 630-series, and Power Macintosh 5200/75 LC, can support?

Does the IDE interface (ANSI proposal X3T9.2/90-143, Revision 3.1.) have the same limit as the ATA interface specification which I believe is approximately 500 MB, or does this interface support a larger volume size?

DISCUSSION -----

According to Engineering, the IDE interfaces in the PowerBook 150, Macintosh 630-series, and Power Macintosh 5200/75 LC use a built-in driver that works with volume up to 2 GB in size. However, it's important to note that any IDE drive that is going to be used on these systems must support Logical Block Addressing (LBA). LBA is the method that drive manufacturers have adopted in order to go beyond the 520 MB DOS-BIOS limit.

As long as the IDE drives support Logical Block Addressing, it should be possible to install drives larger than 500 MB in these systems.

Support Information Services

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Tech Info Library Article Number:17595



Tech Info Library

StyleWriter 1200: Description (4/95)

Revised: 4/14/95
Security: Everyone

StyleWriter 1200: Description (4/95)

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Article Created: 14 April 1995

TOPIC -----

This article provides a description of the Apple StyleWriter 1200 printer.

DISCUSSION -----

Features

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Outstanding print quality

- Prints extremely high-resolution documents by smoothing the edges of text and line art using 720 by 360 dots per inch for crisp black-and-white pages; prints pages containing gray-scale images at 360 by 360 dots per inch

- Widens your choice of typefaces to 64 scalable TrueType fonts for printing in any size and in a variety of styles

Convenience

- Takes advantage of the high performance of PowerPC processor-based computers to speed the processing and printing of complex documents

- Features a small, sleek design that fits on virtually any desktop

- Prints quickly (three pages per minute in black-and-white normal mode)

- Offers the option of printing on a wide range of media, including plain paper, transparencies, glossy and premium paper, back-print film, and envelopes

- Takes advantage of built-in GrayShare technology to enable printer sharing over a variety of networks

- Turns itself on automatically when it receives a document and turns itself off when it finishes printing

Ease of use

- Supports plug-and-play connection to any Macintosh with a 68020 or above microprocessor—or PowerBook or Power Macintosh—computer
- Installs easily, in a single step
- Provides "desktop printing"; you can print files by simply dragging them onto a desktop printer icon
- Allows you to place watermarks in the background of your documents quickly and easily
- Lets you print two or four reduced-size pages on a single sheet of paper for fast and easy document review

Description

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The Apple StyleWriter 1200 offers the convenience of laser-quality printing right from your desktop. This ink-jet printer is perfect for home, education, and small-business users who require high-quality text and graphics at an affordable price.

Designed to fit easily into even the smallest of work spaces, the Apple StyleWriter 1200 provides a convenient, quiet, personal printing option—but one with advanced features. It produces output with impressive quality, offering 720- by 360-dpi resolution for edge smoothing on black-and-white pages and 360- by 360-dpi resolution on pages containing gray-scale images. And it prints quickly—three pages per minute for black-and-white pages in normal mode.

To support its outstanding performance, the Apple StyleWriter 1200 uses GrayShare, an Apple technology that offers gray-scale printing capabilities. GrayShare also allows you to share your StyleWriter 1200 over a variety of networks, making this printer an economical option for a small workgroup.

In addition to performance, the Apple StyleWriter 1200 also rates high on convenience and flexibility. It offers plug-and-play connection to virtually any Macintosh computer and installs easily, in a single step. For flexible printing options, the StyleWriter 1200 printer offers 64 TrueType fonts that provide you with a wide range of type styles and sizes. And it can print easily not only on plain paper but also on a wide range of media, including glossy and premium paper, envelopes, transparencies, and back-print film.

So if you want simplicity coupled with quality--all at an affordable price--the StyleWriter 1200 is your ideal printing solution.

Support Information Services

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Tech Info Library Article Number:17596



Tech Info Library

What Is The PowerBook 150 Update Extension? (4/95)

Revised: 4/14/95
Security: Everyone

What Is The PowerBook 150 Update Extension? (4/95)

Article Created: 13 April 1995

TOPIC -----

I have a PowerBook 150 which is running System 7.5. Since I installed a modem, the battery seems to get depleted very quickly. What can I do to save battery power?

DISCUSSION -----

PowerBook 150 Update Extension

When the PowerBook 150 has an internal modem, the modem continues to draw power when not in use. This shortens the battery life. Apple released the PowerBook 150 Update extension to correct this problem.

The update extends battery life by reducing power requirements during sleep mode. It also fixes a potential system freeze problem that occurs when you use the internal modem several times without restarting the computer.

System 7.5 Update 1.0

If you have installed the System 7.5 Update 1.0, you will no longer need the PowerBook 150 Update extension. The same software fix has been incorporated into the System 7.5 Update file. This file resides "loose" in the System Folder.

The System 7.5 Update file contains the functionality of and removes the following extensions: EM Sound Update, PowerBook 150 Update, and Mount IDE Drive.

Since the PowerBook 150 Update system extension is no longer needed, it is automatically removed from the Extensions folder (inside the System Folder) during installation of the System 7.5 Update 1.0.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Support Information Services

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Tech Info Library Article Number:17597



Tech Info Library

Changing Size Of Launcher Buttons (12/95)

Revised: 12/21/95
Security: Everyone

Changing Size Of Launcher Buttons (12/95)

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Article Created: 14 April 1995
Article Reviewed/Updated: 21 December 1995

TOPIC -----

How do I change the size of the buttons in the Launcher? Can I make the buttons a custom size?

DISCUSSION -----

No you cannot make your own custom sized buttons, but you can change their sizes.

The ability to change button sizes in each panel was added with Launcher version 2.5. Previous versions do not support this feature.

Changing Launcher Button Size:

Step 1

Hold down the Command key and press the mouse button while the pointer is over a section of the background pattern in the Launcher window.

Step 2

A menu will appear, with the choices of small buttons, medium buttons, or large buttons.

Step 3

Select the desired size and release the mouse button and the Command key.

NOTE: To change each panel to the same button size, you must change each panel individually. Each panel is independent of the others.

Article Change History:

..TIL17599-Changing_Size_Of_Launcher_Buttons_12-95_(TA33613).pdf

21 Dec 1995 - Added information on panel independence.

Support Information Services

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Tech Info Library Article Number:17599



Tech Info Library

Macintosh 630 Family: 16 Bit Sound Information (4/95)

Revised: 4/14/95
Security: Everyone

Macintosh 630 Family: 16 Bit Sound Information (4/95)

Article Created: 14 April 1995

TOPIC -----

Using one of the following systems:

LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, or the Performa 638.

The Sound Out selection in the Sound Control Panel shows 8 Bit, but the 16 Bit selection is grayed-out. How does one get 16 Bit sound out (especially when using CDs)?

DISCUSSION -----

When Macintosh 630 family computers play CD audio, the sound source is 16-bit digital audio (virtually all CD players are 16-bit). Since a Macintosh 630 family computer just passes the CD-ROM drive's audio signal to its sound output ports (adjusting only the volume), the audio is still a 16-bit digital audio signal when it comes out of these ports.

The quality of the CD audio signal that the Macintosh 630 family computer passes through its sound ports is unaffected by the choice a user makes in the "Sound Out" portion of the Sound control panel. This section of the Sound control panel affects the sounds that come from a Macintosh system's internal sound digitization circuitry.

In other words, the Macintosh 630 family is not capable of 16-bit audio by itself. The 16-bit rating referred to in the literature for Macintosh 630 family computers refers to the playback capabilities of the built-in CD-ROM drive.

Support Information Services

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Tech Info Library

Workgroup Server: Using Multiple Servers w/One Monitor (4/95)

Revised: 4/14/95
Security: Everyone

Workgroup Server: Using Multiple Servers w/One Monitor (4/95)

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Article Created: 12 April 1995

TOPIC -----

Are there any specific considerations I should take into account when using multiple Apple Workgroup Server computers with one monitor?

DISCUSSION -----

The major consideration to be aware of occurs when using a switch box between the computers and the monitor. The Workgroup Server uses sense line information from the monitor to determine what size monitor is connected.

When a Workgroup Server powers on, it checks to see if a monitor is attached to the video port; if no monitor is attached, it disables the video port. When a switch box is used, there is a direct connection between the monitor and only one of the computers, so the video ports on the other servers are disabled since they do not detect a monitor connected to the video port. When you switch to the other computers, no video is available.

There are several solutions but it helps to understand what is happening to understand what can be done to solve the problem.

The Workgroup Server identifies the type of monitor (scan rate and image size) through sense lines in the monitor.

When you are connecting one or more Workgroup Servers to a single monitor through a switch box, the sense line signals can be provided at three different locations; in the monitor cable coming out of the Workgroup Server, in the monitor, or in the switch box.

The best solution is to make sure that you purchase a switch box that provides sense line signals to the Workgroup Servers when the monitor is not connected. The next best solution is to obtain monitor cables for VGA monitors and run them into a switch box. The VGA cables have the sense signal information wired into them.

Support Information Services

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Tech Info Library Article Number:17602



Tech Info Library

LaserWriter Pro 810: Problems Logging Into Virtual Printer 4/95

Revised: 4/14/95
Security: Everyone

LaserWriter Pro 810: Problems Logging Into Virtual Printer 4/95

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Article Created: 14 April 1995

TOPIC -----

I am having problems logging into the virtual printer server on the LaserWriter Pro 810 printer. I have checked to make sure I am using the proper cable, and I am using VT-100 emulation software set to 9600 baud, no parity and 1 stop bit. What might cause this problem?

DISCUSSION -----

Be sure that any terminal emulation software settings that add characters to keyboard input are OFF. If the virtual printer server sees any invisible characters, such as line feeds, after the user name or password, access is denied.

It is important that the terminal emulation software does not send characters other than the required username of 'su', and privileged password of 'system'; any characters are acceptable as a username, whether valid or not, but if EITHER OR BOTH fields are incorrect, access is denied after entering the password.

Sample Session

=====

```
username> su
Server> su
password> system
Server>>
```

Once the 'Server>>' prompt appears, you are logged into supervisor access.

Other Help

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Online help is also available to assist you. For example, 'show services' displays the current services. and 'help show services' displays all the arguments to 'show services' and what they do.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17603



Tech Info Library

LW Pro 810: Postscript Using lp From Solaris 2.3 (4/95)

Revised: 4/14/95
Security: Everyone

LW Pro 810: Postscript Using lp From Solaris 2.3 (4/95)

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Article Created: 14 April 1995

TOPIC -----

How to I print to a LaserWriter Pro 810 from a Solaris 2.3 workstation?

DISCUSSION -----

Follow the steps below to print to a LaserWriter Pro 810 from a Solaris 2.3 workstation:

Step 1

Do an ftp to "ftp.support.apple.com"

Path apple SW Updates/US/UNIX/Printing software for Unix

Step 2

Get enroll utility solaris.tar.z and its readme

Decompress and then Untar the utility.

Step 3

Put enroll utility in current directory.

Step 4

Run enroll with 'enroll -b'

When running the "enroll -b" script, please choose "none" for the predefined printer model interface, not "standard".

Step 5

Use "admintool" to change the File Content from ASCII into Postscript.

Step 6

Now copy(cp) or move(mv) "/home/apple/printcap" to "/usr/apple/printcap".

Step 7

After you get the "printcap" file into "/usr/apple", please delete anything above the line "# ** |UnixExpress| entry maintained by Apple Printer Installation Program **" in "printcap", in other words, the "printcap" file should look like this:

```
# ** |UnixExpress| entry maintained by Apple Printer Installation Program *
# printer type =PRO810
# printer interface type =Ethernet
# printer physical port number =1
# UnixExpress model =standard
UnixExpress|UnixExpress|Apple remote printer on port 1:
.      :lp=UnixExpress:
.      :apple_n=128.252.171.16:
.      :mx#0:
.      :sf:
.      :sh:\
.      :pw#0:
.      :apple_text=disable:
.      :apple_pcs=:
.      :apple_scs=:
.      :apple_p=3102:
```

When you issue a "lpstat -p your_printer_queue_name -l" command, you should get the following result:

The file Content Types should be "Postscript", it should not be "simple."

Support Information Services

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Tech Info Library Article Number:17604



Tech Info Library

Apple LocalTalk PC Card DIP Switch Settings (4/95)

Revised: 4/14/95
Security: Everyone

Apple LocalTalk PC Card DIP Switch Settings (4/95)

Article Created: 14 April 1995

TOPIC -----

What are the DIP switch settings for the original Apple LocalTalk PC Card.

DISCUSSION -----

Here are the recommended settings:

Switch number:	1	2	3	4	5	6	7	8
.	---	---	---	---	---	---	---	---
Switch position:	Off	Off	Off	Off	On	Off	On	On

Below is a detailed explanation of each switch setting.

Switch	1	2	3
.	IRQ4	IRQ3	IRQ2

Selects Interrupt Request (IRQ) priority level.

Only one of these switches can be set to the On position. The other two must be Off. Switch 1 is IRQ4, the same as serial port COM1. Switch 2 is IRQ3, the same as port COM2. Switch 3 is IRQ2, determines the priority level at which the card will interrupt the IBM computer whenever it changes state. Level 2 has the highest priority and level 4 the lowest. Do not use switch 3 if you have an IBM PC-AT computer.

Switch	4	6
.	DRQ3	DAK3

DMA Request and DMA Acknowledge on DMA channel 3.

Both of these switches must be on (and switches 5 and 7 must be off) for the card to communicate with the IBM computer via channel 3.

Switch	5	7
.	DRQ1	DACK1

DMA Request and DMA Acknowledge on DMA channel 1.

Both of these switches must be on (and both switches 4 and 6 must be off) for the card to communicate with the IBM computer via DMA channel 1.

Switch	8
.	\$24x/\$22x

Selects the address range of the card.

If this switch is on, the card will respond to control signals sent to addresses in the range \$240 to \$247. If this switch is off, the card will respond to control signals in the range \$220 to \$227. The IBM addressing scheme allows each card to respond to 32 addresses, but the LocalTalk PC Card uses only 8 of them.

Support Information Services

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Tech Info Library Article Number:17605



Tech Info Library

Which Macintosh Computers Support DMA? (4/95)

Revised: 4/17/95
Security: Everyone

Which Macintosh Computers Support DMA? (4/95)

Article Created: 17 April 1995

TOPIC -----

Which Macintosh models support Direct Memory Addressing (DMA)? From what I can tell Power Macintosh computers support it, some Macintosh Quadras may, and the Macintosh IIfx does to a limited degree. Am I right?

DISCUSSION -----

Direct Memory Access (DMA, also called Direct Memory Addressing) is used extensively in computer systems design to help improve performance. It allows systems to transfer large amounts of data into the computer's memory, without burdening the main microprocessor.

For example, the premise behind SCSI (Small Computer System Interface) DMA is that files can be retrieved from a SCSI hard drive and loaded into memory by a SCSI DMA controller. While the DMA controller is loading files in the background, the main processor (for example: a 68030, 68040, or PowerPC processor) can continue to work on other tasks.

DMA has been used in several Macintosh products, without specifically being called out. There are several interface areas in which Apple has chosen to use DMA techniques to improve performance. These are Apple Desktop Bus (ADB), Ethernet, Floppy drive access, SCSI, serial communications, sound input, sound output, and some other I/O operations.

Standard Implementations

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The following is a summary of some Macintosh systems' DMA capabilities:

Apple Desktop Bus (ADB)

Apple has used ADB DMA in the following systems:

- Macintosh IIfx
- Quadra 900
- Quadra 950

Ethernet

Apple has used DMA to improve the performance of Quadra and Power Macintosh systems with built-in Ethernet ports. If a NuBus Ethernet board is used, then the system's built-in DMA capabilities are not used. The following systems use Ethernet DMA:

- Centris and Quadra systems with built-in Ethernet
- Performa 611x series
- Power Macintosh 6100, 7100, and 8100 series
- Workgroup Server 6150, 8150, 9150 series

Floppy

Some systems use DMA to improve performance when accessing files on a floppy drive. Systems which use DMA for the floppy disk drive controller include:

- Macintosh IIfx
- Centris and Quadra 660AV
- Quadra 840AV
- Quadra 900
- Quadra 950
- Performa 611x series
- Power Macintosh 6100, 7100, and 8100 series
- Workgroup Server 6150, 8150, 9150 series

SCSI

Apple has used DMA to improve SCSI performance in some systems. The following systems have SCSI DMA capability:

- Macintosh IIfx (only with A/UX 2.0 or later)
- Centris and Quadra 660AV
- Quadra 840AV
- Performa 611x series
- Power Macintosh 6100, 7100, and 8100 series
- Apple Workgroup Server 95
- Workgroup Server 6150, 8150, 9150 series

Serial

Several Macintosh systems have DMA support for serial communications. DMA is also used with GeoPort communications on appropriate systems. Systems which use DMA with the serial communications controller include:

- Macintosh IIfx
- Centris and Quadra 660AV
- Quadra 840AV
- Quadra 900
- Quadra 950
- Performa 611x series
- Power Macintosh 6100, 7100, and 8100 series
- Workgroup Server 6150, 8150, 9150 series

Sound

With the introduction of the Centris and Quadra AV systems, Apple started using DMA for sound input and output. This improves the performance and allows greater performance when recording and playing back sound. Systems which use DMA for sound input and output include:

- Centris and Quadra 660AV
- Quadra 840AV
- Performa 611x series
- Power Macintosh 6100, 7100, and 8100 series
- Workgroup Server 6150, 8150, 9150 series

Special Cases

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DMA is also used in the following special cases:

Macintosh SE PC Floppy Drive

The Macintosh SE PC 5.25" Floppy Disk Controller Card uses DMA to transfer PC file data from the 5.25" floppy drive directly to the memory of a Macintosh SE.

DOS Compatibility Card

The Macintosh DOS Compatibility Card uses one 32-bit DMA channel. DMA for shared memory support is provided through Macintosh system software.

Support Information Services

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Tech Info Library Article Number:17606



Tech Info Library

Apple Monitors: How Often Do They Degauss? (4/95)

Revised: 4/17/95
Security: Everyone

Apple Monitors: How Often Do They Degauss? (4/95)

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Article Created: 17 April 1995

TOPIC -----

When does an Apple monitor degauss? If not every time the monitor is powered on, how do we know the degauss circuit is functional? Do any monitors have a manual degauss feature?

DISCUSSION -----

All of Apple's displays activate the degauss coil each time the monitor is powered on. The display can be degaussed by turning it off and powering back up again after waiting 15 minutes to 1/2 hour. After the waiting period, the display will degauss at power-up.

Generally speaking, in comparison to leaving a display on all the time with a screen saver, it's a good idea to power a monitor off and back on occasionally. This will activate the degauss coil to help remove any residual magnetic fields that may reduce CRT performance.

If the degauss coil has failed, magnetic fields may build up around the CRT causing purity and color shift problems in the display. The magnetic fields would be quickly noticed in the display indicating a failure and the need for service. The degauss coil and circuitry components are very reliable and failures are rare.

The older Apple High-Res RGB has a degauss button on the back of the display. Even with a degauss switch, this unit cannot activate the degauss coil any more than about once every 15 minutes to half hour.

Support Information Services

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Tech Info Library Article Number:17607



Tech Info Library

AppleShare: Expired Password and Auto Log On (6/95)

Revised: 6/5/95
Security: Everyone

AppleShare: Expired Password and Auto Log On (6/95)

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Article Created: 17 April 1995

TOPIC -----

With AppleShare 4.0.2, I have my users' passwords set to expire after 90 days. I also have the users set to auto log-on at start up. When a user's password expires and their computer tries to log-on during startup, they receive no notification that their password has expired, unless they connect to the server through the Chooser. Is this normal?

DISCUSSION -----

Yes, this non-response is normal activity when a password expires and your computer is set to auto log-on to the server. This happens with AppleShare 3.0.x, 4.0.x, and 4.1. The password has expired message from the server is not seen by a user until they select the server through the Chooser.

Also a server's alias will report that it can't find the server on the network when a users password has expired. In either case you can choose the Chooser from the Apple menu, select the server, and enter your new password when prompted from the password has expired message.

Support Information Services

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Tech Info Library Article Number:17609



Tech Info Library

PowerBook: Video Out Scan Rates (4/95)

Revised: 4/18/95
Security: Everyone

PowerBook: Video Out Scan Rates (4/95)

Article Created: 18 April 1995

TOPIC -----

What are the Horizontal and Vertical scanning frequencies for the PowerBook family computers which support video output?

DISCUSSION -----

The video output port supports 8-bit video output (512 KB of non-expandable VRAM) for 256 colors on Apple 12-inch, 13-inch, and 16-inch RGB monitors; and 4-bit video with 16 shades of gray on the Apple Portrait Display. VGA and SVGA modes are supported with appropriate adapter cables. The video controller emulates a NuBus card in slot \$E, so the video output system appears to software as a standard video card.

An adapter cable included with the computer allows users to attach a standard Apple video cable. The external video interface is enabled by attaching a monitor and restarting the computer. To connect a VGA monitor to the Macintosh video port, an adapter cable is required. Third-party cable vendors should have these cables available for purchase.

During the boot process, ROM code tests the monitor sense lines and activates the video output system if a recognized monitor is attached. If no monitor is found, the video output system is deactivated to conserve power. Because the video output circuitry consumes additional power, Apple recommends that customers use the AC adapter when using an external monitor.

- Video Scan Rates:

Monitor	Resolution			Dot clock (MHz)
	Width (pixels)	Height (pixels)	Depth (bits)	
12-inch RGB	512	384	8	15.6672
13-inch RGB	640	480	8	30.2400
VGA	640	480	8	25.1750

SVGA	800	600	8	36.000
Portrait	640	870	4	57.2832
16-inch RGB	832	624	8	57.2832

The AudioVision 14 Display is also compatible.

In normal operation the video output circuitry acts like a second monitor to extend the user's desktop. Alternatively, the user can select video mirroring mode, in which the external monitor mirrors the internal LCD. In mirror mode, software blanks the edges of the larger screen to match the horizontal and vertical pixel resolution of the smaller screen.

Support Information Services

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Tech Info Library Article Number:17611



Tech Info Library

LaserWriter 16/600 PS: Using the Envelope Feeder W/ QDrw GX 4/95

Revised: 4/18/95
Security: Everyone

LaserWriter 16/600 PS: Using the Envelope Feeder W/ QDrw GX 4/95

=====

Article Created: 18 April 1995

TOPIC -----

I am using QuickDraw GX 1.1 and a LaserWriter 16/600 PS printer. I want to print envelopes from the envelope feeder, but I have not been able to print from the envelope feeder. Is it possible to print from this feeder?

DISCUSSION -----

Yes, you can use the envelope feeder with QuickDraw GX 1.1. Here are the steps required to setup and use the envelope feeder.

Step 1

Print something from the desktop printer. Until you use the desktop printer, you will not get the options you need to use the envelope feeder.

Step 2

Highlight the LaserWriter 16/600 GX desktop printer icon, and choose Input Trays from the Printing menu.

Step 3

Select Envelope - Edge Fed.

Step 4

Configure the internal paper trays for the paper size installed, and click OK.

Step 5

From the File menu, select Page Setup. For paper type select Envelope - edge fed, and select landscape (sideways) orientation.

Step 6

To the right of Format For, select LaserWriter 16/600 PS and click Format.

Step 7

From the File menu select Print, then click Paper Matching.

Step 8

Make sure that the option Ignore paper matching and direct all document pages to is selected.

Step 9

Select No. 10 Envelope. Do not select Envelope - Edge Fed (Envelope Feeder); If you select this, the printer uses the 250-sheet cassette.

Step 10

Select Print

Step 11

In a few seconds, a message appears explaining that the document size No. 10 Envelope is not installed. Highlight the option Change paper in internal tray to No. 10 Envelope. The words Internal Tray are dimmed. Next, select Make change permanent.

Step 11 only appears the first time you print an envelope. After you print to the envelope feeder, the message no longer appears.

Support Information Services

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Tech Info Library Article Number:17618



Tech Info Library

What's New In Apple HD SC Setup 7.3.5? (6/95)

Revised: 6/28/95
Security: Everyone

What's New In Apple HD SC Setup 7.3.5? (6/95)

Article Created: 19 April 1995
Article Reviewed/Updated: 28 June 1995

TOPIC -----

I just downloaded Apple HD SC Setup 7.3.5 from an online service, but the Read Me document did not explain what is new?

DISCUSSION -----

Apple HD SC Setup was updated to provide support for 4 GB (gigabyte) Apple hard disk drives. Apple HD SC 7.3.5 now handles the initialization and mounting of 4 GB drives. A 4 GB hard drive is available with the Workgroup Server 8150/110 and 9150/120*. Each of those systems (and the Power Macintosh 8100/110) can accommodate volumes up to 4 GB. The HD SC Setup 7.3.5 utility and the hard disk driver that is installed when a user performs an "Update Driver" command with this utility is appropriate for use on all Macintosh computers.

Additionally, Apple HD SC Setup 7.3.5 adds a new supported feature letting users partition their Apple hard drive into additional Macintosh volumes.

By choosing Partition from the opening dialog box in Apple HD SC Setup 7.3.5, the user is given the following options for a partition:

- Maximum Macintosh
- Minimum Macintosh
- 50% Macintosh
- Standard A/UX
- A/UX System, 40MB Macintosh, Free A/UX
- A/UX System, Maximum Macintosh
- Maximum Free A/UX
- 50% Macintosh, 50% A/UX
- 10MB ProDOS, Maximum Macintosh

If the user chooses Custom from within the Partition dialog box and drags in gray area to create a new partition, the user is given the following options for

a custom partition:

- Macintosh Volume
- Scratch
- A/UX Autorecovery
- A/UX Root&Usr slice 0
- A/UX Swap slice 1
- A/UX Root slice 0
- A/UX Usr slice 2
- Free A/UX slice 3
- Free A/UX slice 4
- Free A/UX slice 5
- •Additional Mac Volume•
- Misc A/UX
- ProDOS Volume

* NOTE: Although the Server configurations with 4 GB drives mentioned above do not appear specifically on the Apple Products list, these configurations will be available to customers under Apple's Build-To-Order purchase program. For more information regarding Build-To-Order configurations, customers may call 1-800-GO APPLE.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

28 Jun 1995 - Added information about multiple Macintosh volume support.
27 Apr 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:17621



Tech Info Library

Newton Connection Kit: Disks Different Between Versions (4/95)

Revised: 4/19/95
Security: Everyone

Newton Connection Kit: Disks Different Between Versions (4/95)

=====

Article Created: 19 April 1995

TOPIC -----

I just purchased the Newton Connection Kit for the Macintosh, and I only received one disk. My friend purchased the Newton Connection Kit several months ago and received three disks. I returned the Newton Connection Kit and got another one. It also contained only one disk. Where are the other disks?

DISCUSSION -----

The Newton Connection Kit for the Macintosh version 2.0 came with three disks. Version 2.0.2 of the Newton Connection Kit comes with only one disk. The additional disks are not needed in the new version of the Newton Connection Kit.

Support Information Services

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Tech Info Library Article Number:17622



Tech Info Library

LaserWriter Printers: Toner and Fonts for MICR Printing (4/95)

Revised: 4/19/95
Security: Everyone

LaserWriter Printers: Toner and Fonts for MICR Printing (4/95)

=====

Article Created: 19 April 1995

TOPIC -----

I am trying to determine if any of the Apple LaserWriter printers support MICR printing.

DISCUSSION -----

MICR (magnetic ink character recognition) is commonly used in the banking industry to print information on checks that can be read quickly by both machines and humans. Although the toner used in all of Apple's black and white LaserWriter printers is magnetic, the formulation is not appropriate for MICR use. Special MICR toner cartridges for some Apple LaserWriter printers can be purchased from third-party vendors such as Printerm Datascribe, Inc.

MICR fonts which are machine readable can be ordered from most of the larger font houses such as Adobe Systems.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17623



Tech Info Library

Printerm Datascribe, Inc.

Revised: 4/19/95
Security: Everyone

Printerm Datascribe, Inc.

=====

Article Created: 19 April 1995

Printerm Datascribe, Inc.

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Olympic Towers, Suite 200
300 Pearl Street
Buffalo, N.Y. 14202.

Sales: (716) 842-3099
Fax: (716) 842-6049

Company Profile: Specialized toner cartridges for MICR printing.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17625



Tech Info Library

World Wide Web Consultants (4/95)

Revised: 4/19/95
Security: Everyone

World Wide Web Consultants (4/95)

Article Created: 19 April 1995

TOPIC -----

In light of all the recently released information about World Wide Web (WWW) access to the internet, I was wondering if there is a listing of any consultants out there who can help a small company or individual set up their own Web site?

DISCUSSION -----

You might try the following Universal Resource Locator (URL):

<http://macweb.batnet.com/>

MACWEB.COM contains information helpful to companys and organizations considering the Macintosh as a platform for electronic publishing on the Internet's World Wide Web.

There is a link on this page to a consultants listing:

<http://macweb.batnet.com/macwww/consultants.acgi>

This Web site lists consultants available throughout the world who are experts in electronic publishing on the Internet's World Wide Web using Apple Macintosh and compatible computers.

This article provides information about a non-Apple supported internet site. It is subject to change without notice. Apple Computer, Inc. is not responsible for its content. Please contact the site administrator for additional information.

Support Information Services

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Tech Info Library Article Number:17626



Tech Info Library

Apple Workgroup Server 95: Autologin File (4/95)

Revised: 4/19/95
Security: Everyone

Apple Workgroup Server 95: Autologin File (4/95)

=====

Article Created: 19 April 1995

TOPIC -----

This article will answer these commonly asked Apple Workgroup Server (AWS) 95 questions:

- What is the purpose of the file named "Autologin" in the Login System folder?
- Can I set up my AWS 95 to automatically log in when powered up?
- When I turn on the power of my AWS 95, it automatically logs in as root. Why does it do that?

DISCUSSION -----

When the AWS 95 is first powered on it will immediately launch A/UX through an alias in Startup Items of the Macintosh partition. A/UX 3.x.x will usually go straight to the Finder, logging in as root if (and only if) there is no password on the root account, which is the default installation. If the administrator chooses to add a password to the root account, A/UX 3.x.x will stop at the standard A/UX Login screen and wait for a password. In the default File/Print server configuration there is a text file called "Autologin", in the Preferences Folder of the Login System Folder, which contains the name of the account for the system to automatically login to. By default it is set to root. If this file does not exist, here is how to recreate one.

- 1) Open any text editor in the Mac OS or in the CommandShell.
- 2) Create a new file and name it "Autologin"
- 3) The first line should only contain the word "root"
- 4) Save this file in /mac/sys/Login System Folder/Preferences
- 5) Quit the text editor.

With this file present, the next time the server starts up, it will automatically log in and (if the proper alias is in the default System Folder) launch AppleShare File or Print services. For security reasons, many

administrators may NOT want the file server to automatically log in as root. To prevent this from happening, remove this file from the /mac/sys/Login System Folder/Preferences folder.

NOTE: This file is not usually present in default database configurations.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17627



Tech Info Library

MAE: Show Patches Installed on Solaris 2.3 or 2.4 (4/95)

Revised: 4/19/95
Security: Everyone

MAE: Show Patches Installed on Solaris 2.3 or 2.4 (4/95)

=====

Article Created: 19 April 1995

TOPIC -----

What is the line command to show the patches installed on Sun Solaris 2.3 or 2.4?

DISCUSSION -----

The Sun Solaris command used to display what patches have been installed in the system is:

```
showrev -p
```

For more information on showrev, type "man showrev"

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17628



Tech Info Library

AppleShare 3.0.1 and System Error -35 (4/95)

Revised: 4/19/95
Security: Everyone

AppleShare 3.0.1 and System Error -35 (4/95)

=====

Article Created: 19 April 1995

TOPIC -----

We are using AppleShare 3.0.1 with System 7.0.1 on a Macintosh SE/30 with an 80 MB hard drive. When attempting to view access privileges in AppleShare Admin, I get the following message:

"The Access privileges on this volume have been lost. AppleShare will attempt to recreate them. System error -35."

We tried deleting the AppleShare PDS file but continue to get the same error.

DISCUSSION -----

The Error -35, "no such volume" may come from problems in the volume information block, and could indicate other problems with the directory structure of the hard drive.

Use a disk utility, like Disk First Aid or a third-party utility, to correct the problem. If that fails, reformat the drive.

WARNING: Be sure to backup your data before reformatting the drive. The format process will erase all data from your hard disk.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17629



Revised: 4/20/95
Security: Everyone

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TOPIC -----

Why is this happening?

DISCUSSION -----

There is an article on page 42 in the February 20, 1995 issue of MacWeek that also explains this behavior.

Tech Info Library Article Number:17633



Tech Info Library

Multiple Scan Display: High Pitched Whine at Highest Res. (4/95)

Revised: 4/20/95
Security: Everyone

Multiple Scan Display: High Pitched Whine at Highest Res. (4/95)

=====

Article Created: 20 April 1995

TOPIC -----

I've noticed a high pitched whine emanating from my Multiple Scan 17 display. It seems to get worse when I change to the highest resolution. What can be done to resolve this issue?

DISCUSSION -----

If the screen on the display is operating normally while the noise is occurring, then the problem is most likely related to a sub-harmonic of the horizontal sweep frequency--that is why the noise occurs only in one resolution.

This suggests that the flyback transformer is probably the culprit. Replacement of the main board is the best way to resolve this issue; there are no adjustments to reduce or remove the noise.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17634



Tech Info Library

Using a Modem With a Cellular Phone (4/95)

Revised: 4/21/95
Security: Everyone

Using a Modem With a Cellular Phone (4/95)

=====

Article Created: 21 April 1995

TOPIC -----

What difficulties can I expect when using a modem with a cellular phone?

DISCUSSION -----

Running a data link over a cellular connection can be pretty tricky. Many current modems do not have MNP-10 capability. MNP-10 is an enhanced error correction protocol developed to allow reliable data communications over data link connections that are inherently noisy, such as cellular. Specifically, MNP-10 was developed for use over cellular data links.

Air Communications and ORA Electronics have both developed methods of improving the reliability of cellular data links.

To locate a vendor's address and phone number, use the vendor's name as a search string in the Tech Info Library.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17638



Tech Info Library

Air Communications, Inc. (4/95)

Revised: 4/21/95
Security: Everyone

Air Communications, Inc. (4/95)

=====

Article Created: 21 April 1995

Makers of cellular modem enhancement products.

Air Communications, Inc.
274 San Geronimo Way
Sunnyvale, CA 94086

408-749-9883
800-247-3282
408-749-8089 (fax)

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17639



Tech Info Library

ORA Electronics (4/95)

Revised: 4/21/95
Security: Everyone

ORA Electronics (4/95)

=====

Article Created: 21 April 1995

ORA Electronics provides a number of electronic products including surge protectors, cables, and cellular modem connectivity solutions.

ORA Electronics
9410 Owensmouth Ave.
Chatsworth, CA 91311

818-772-2700

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17640



Tech Info Library

Duo Docks: Multiple Scan Resolution Switching (1/96)

Revised: 1/8/96
Security: Everyone

Duo Docks: Multiple Scan Resolution Switching (1/96)

Article Created: 21 April 1995
Article Reviewed/Updated: 8 January 1996

TOPIC -----

I have a PowerBook Duo 280c with a Duo Dock with 1Mb of VRAM and PowerBook Duo enabler 2.0. I have the Dock connected to a Multiple Scan 17 Display. However, I cannot use any resolutions other than 640x480.

DISCUSSION -----

The release of System Software (7.1.1 or 7.5) makes a significant difference when a Duo is inserted into an original Duo Dock. In comparison, the Duo Dock II offers multiple resolutions, when either version of System Software (7.1.1 and PB Duo Enabler 2.0, or 7.5) is installed.

In an original Duo Dock with System Software 7.1.1, the additional VRAM offers additional colors, but not additional resolutions. In order to access additional resolutions on the Multiple Scan 17 Display, you either need a display adapter (because the Dock does not recognize the sense pins on the monitor cable), or you need the newer version of System Software, version 7.5.

I tested with one such adapter and while it allows for a higher resolution, it does not allow for switching of resolutions "on the fly". Whatever resolution you select on the adapter, is the only resolution available.

Display adapters do not increase the number of resolutions a Duo Dock can handle, but they do give you access to all the resolutions that the Duo Dock can support. The highest resolution supported on the original Duo Dock is the 16-in. monitor resolution of 832 x 624.

Duo Dock with 1MB VRAM
=====

System	Display Adapter	Resolutions Supported
--------	-----------------	-----------------------

-----	-----	-----
7.1.1	NO	640x480
7.1.1	Yes	640x480, 832x624
7.5	NO	640x480, 832x624

Duo Dock II and Duo Dock Plus

=====

System	Display Adapter	Resolutions Supported
-----	-----	-----
7.1.1	NO	640x480, 832x624, 1024x768, 1152x870
7.5	NO	640x480, 832x624, 1024x768, 1152x870

Article Change History:

08 Jan 1996 - Added Duo Dock Plus information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17641



Tech Info Library

TrueType Fonts: No resolution limitations (4/95)

Revised: 4/24/95
Security: Everyone

TrueType Fonts: No resolution limitations (4/95)

=====

Article Created: 24 April 1995

TOPIC -----

Is it true that TrueType fonts have a limit of 600 dots per inch (DPI) ? How does this relate to PostScript fonts? Are the technologies similar?

DISCUSSION -----

There is no maximum resolution, nor any specific scaling rules, that apply for TrueType fonts. TrueType fonts are based on a relative, fundamental coordinate system (called an em square), with mathematical equations to "grid-fit" the characters in that coordinate system. To scale and/or print the font, a transformation is made from relative to absolute values based on the output device's resolution in pixels.

Likewise, PostScript fonts do not have a DPI limitation. They are also based on coordinate systems and mathematical equations (like TrueType) to translate between relative and absolute values, in order to "map" to the resolution of the output device.

In terms of comparing the technologies, PostScript is a full-fledged page description language, whereas TrueType only deals with font technology - fonts are only a subset of more major technologies. It would be more appropriate to compare PostScript to QuickDraw GX as they are both the major technologies.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17643



Tech Info Library

Apple MessagePad: Changing the Default Font (4/95)

Revised: 4/24/95
Security: Everyone

Apple MessagePad: Changing the Default Font (4/95)

=====

Article Created: 24 April 1995

TOPIC -----

I am using an Apple MessagePad 120 and want to change the font from plain 12 to fancy 12. I already made the change in the Styles box, but the new text still appears plain. If I select the text to change, and then change the style, it works. How can I change the style without having to specify the change each time?

DISCUSSION -----

The default font for Notes is set in the Styles area of the Extras drawer when a new Note is created. If your default font style was Simple 12 point plain when you created the Note, you can select the type and change it using Styles, but it will not be the default font for that Note. If you set Styles to Fancy 18 point Bold, then create a new Note, the default font will be Fancy 18 point Bold.

The Names, Dates and ToDo font are preset to specific defaults. The default font in these areas cannot be changed.

Support Information Services

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Tech Info Library Article Number:17644



Tech Info Library

AudioVision: System 7.5 Requires AppleVision SW v1.0.1 (1/96)

Revised: 1/25/96
Security: Everyone

AudioVision: System 7.5 Requires AppleVision SW v1.0.1 (1/96)

=====

Article Created: 24 April 1995
Article Reviewed/Updated: 25 January 1996

TOPIC -----

I just upgraded from System 7.1 to System 7.5, and noticed that my Sound control panel no longer shows the AudioVision option. I have reinstalled the AudioVision software using the Installer disk that originally came with my AudioVision 14 Display, but it did not solve this problem. How can I get the AudioVision option back?

DISCUSSION -----

Neither System 7.5 or System 7.5 Update 1.0 come with the required ~AudioVision extension you need. The supported display software for your monitor on a System 7.5.x computer is AppleVision Display Software 1.0.1. This software is available from online services.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:

25 Jan 1996 - Made title more descriptive.
14 Sep 1995 - Corrected minor typo.
05 Sep 1995 - Added AppleVision Display software information.

Support Information Services

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Tech Info Library Article Number:17645



Tech Info Library

Native Microsoft Applications: Issue w/QuickDraw GX (6/96)

Revised: 6/5/96
Security: Everyone

Native Microsoft Applications: Issue w/QuickDraw GX (6/96)

=====

Article Created: 26 April 1995
Article Reviewed/Updated: 5 June 1996

TOPIC -----

This article documents an issue with native applications from Microsoft, the solution, and a temporary workaround.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Microsoft's address and phone number.

DISCUSSION -----

After an extensive debugging effort put forth by Apple and Microsoft, we have located the cause of the crashes or freezes that many of you see in the native Microsoft Word 6, Word 6.0.1, and Excel 5 when QuickDraw GX is installed on PowerPC computers. These crashes can generate several error messages including "Type 11" and "No FPU Installed".

The problem is believed to be caused by a bug in a piece of PowerPC code used by Microsoft in their native versions of both Microsoft Word and Excel use. The bug is NOT in QuickDraw GX, System 7.5, System 7.5 Update 1.0, or System 7.5 Update 2.0.

The nature of the bug makes it somewhat random whether or not your computer will crash, but the solution or temporary workaround guidelines are listed below. Apple and Microsoft engineers are discussing this problem, and Microsoft's Customer Support staff should have more information in a few days. This problem has been resolved by Microsoft.

Solution
=====

Microsoft has made available a file called MC1164 which can be obtained from their Customer Support or online services.

Workaround

=====

Tips

If you are running the native versions of the Microsoft products along with QuickDraw GX, then you may experience crashes during printing. In fact, this problem could result in crashes even when QuickDraw GX is not installed, although we are not currently aware of any such reports. To fully avoid the problem (especially if you are using QuickDraw GX), run the non-native versions of these Microsoft products.

If you feel the need to use the native versions of these products, along with QuickDraw GX, and you are using a US system, then you can reduce your risk of crashes by doing the following. (Note that non-technical Macintosh users should ask one of their technical friends to help them out.)

Step 1

Copy (option drag) the Fonts folder from your System Folder to your desktop.

Step 2

Make another folder on your desktop called "Disabled fonts".

Step 3

Using ResEdit, open each file in the Fonts folder that's on your desktop. If any file doesn't contain 'sfnt' resources, close the file and move it to the "Disabled fonts" folder using the Finder.

Step 4

Drag the Fonts folder from your system folder to the trash.

Step 5

Drag the Fonts folder that's on your desktop to your system folder.

Step 6

Reboot.

NOTE: If after step 5 you do not have the Chicago, Geneva, and Monaco fonts in your system folder's Fonts folder, then reinstall your fonts using the system 7.5 installer.

If you are running the native versions of these applications, the fonts in the "Disabled fonts" folder must be temporarily removed in order to avoid this bug.

If you cannot bear to part with these fonts, reconsider installing the emulated versions of the applications. Be sure to hold onto the disabled fonts for when a fix is available. There is nothing wrong with these fonts, but having them installed causes a high risk code path to be taken. Without these fonts installed, your risks of crashing drop significantly.

Microsoft customer support should be able to answer your questions about this issue or explain how to get their latest MC1164 software update.

Article Change History:

05 Jun 1996 - Updated for technical accuracy.
21 Nov 1995 - Reviewed for technical accuracy.
17 Aug 1995 - Made format changes.

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Tech Info Library Article Number:17647



Tech Info Library

Multimedia Tuner Extension: Red Check Mark Through Icon (1/96)

Revised: 1/19/96
Security: Everyone

Multimedia Tuner Extension: Red Check Mark Through Icon (1/96)

=====

Article Created: 26 April 1995
Article Reviewed/Updated: 19 January 1996

TOPIC -----

When I start up my Macintosh PowerBook 540c and my extensions appear across the bottom of the display, there is an extension with a red check mark over the icon.

I know that a red "X" over an icon means that the extension did not load for some reason. What does a red check mark mean?

DISCUSSION -----

The Apple Multimedia Tuner 2.0.1 extension starts up with a red check mark over the icon. This is the normal appearance of Multimedia Tuner icon.

The Multimedia Tuner addressed some performance issues which occurred with some multimedia applications when used with versions of QuickTime previous to 2.1. You should update to QuickTime 2.1, available online, which includes the fixes in the Multimedia Tuner.

These articles can help you locate the QuickTime 2.1 software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
19 Jan 1996 - Added QuickTime 2.1 information.

Support Information Services

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Tech Info Library Article Number:17648



Tech Info Library

PwrBook: Seeing Battery Level After System Update Install (4/95)

Revised: 4/26/95
Security: Everyone

PwrBook: Seeing Battery Level After System Update Install (4/95)

=====

Article Created: 26 April 1995

TOPIC -----

After installing System 7.5 Update 1.0 on my PowerBook, the battery indicator in the menu bar disappeared. How do I get the battery indicator back?

DISCUSSION -----

The battery indicator, located in the menu bar to the left of the Balloon Help menu, is an option with System 7.5. Open the "Date & Time" control panel and select "Clock Options...". Check the "Show battery level" to regain the battery level indicator.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17649



Tech Info Library

QuickTake 150: Windows Troubleshooting (4/95)

Revised: 5/24/95
Security: Everyone

QuickTake 150: Windows Troubleshooting (4/95)

Article Created: 26 April 1995

TOPIC -----

This article provides help with problems you might encounter connecting the QuickTake 150 to an IBM-compatible computer running Microsoft Windows.

DISCUSSION -----

PROBLEM: The computer doesn't recognize the camera.

SOLUTION: Different devices and programs may compete with the camera for the use of a serial port on your computer. If there's a problem, a message tells you that the camera is not responding.

- Make sure the serial cable is connected properly, the camera is turned on, and the batteries have enough power.

- If you connect the QuickTake camera to COM3 or COM4 and experience communication problems, you need to check the Windows Ports control panel settings. (The Control Panel group is located in the Main window.)

To Check Windows Ports control panel settings:

Step 1

Open the Windows Ports control panel.

Step 2

Select COM3 or COM 4

Step 3

Click the Settings button

Step 4

In the dialog box that appears, click the Advanced button.

Step 5

In the Advanced Settings dialog box, make sure the settings are:

. - COM1 3F8 IRQ4
. - COM2 2F8 IRQ3
. - COM3 3E8 IRQ4
. - COM4 2E8 IRQ3

Step 6

Click OK

If you changed the settings, you must restart Windows for the new settings to take effect. When you click OK, a message lets you choose to restart now or delay the restart.

If you are using several serial devices with your computer, make sure that the line IRQSharing=ON exists in the [386enh] section of the SYSTEM.INI file.

PROBLEM: Your computer reboots when you try to communicate with the camera.

SOLUTION: The Windows software on some computers cannot receive data at the speed the camera sends it and can cause a reboot. To remedy the problem, you must change the speed.

To change the speed:

Step 1

On your computer, double-click the QuickTake Serial Ports icon to run the application.

Step 2

In the dialog box that appears, change the baud rate to 9600.

Step 3

With the camera connected to your computer and turned on, click Test.

If your computer communicates successfully with the camera at 9600 baud, a message tells you so. If your computer cannot communicate with the camera at 9600 baud, there is one way to fix the problem: Install a low-cost, high-speed serial card equipped with a buffered 16550 UART. (High-speed serial cards with this feature clearly advertise it on the box).

Step 4

Repeat steps 2 and 3, gradually raising the baud rate and testing the result.

For example, change the baud rate from 9600 to 19,200.

Step 5

If a test causes the computer to reboot, run the QuickTake Serial Ports application again and change the baud rate back to the next lower number. For example, if the computer reboots when the baud rate is 38,400, change it back to 19,200.

At slower baud rates, it takes longer to transfer images from the camera to your computer. If this is a problem, see the next item.

PROBLEM: It takes too long to transfer images from the camera to your computer.

SOLUTION: If you think it takes too long to transfer images from your camera to your computer, you can upgrade your hardware to avoid the problem. Install a low-cost, high-speed serial card equipped with a buffered 16550 UART. (Most high-speed serial cards come with this feature clearly advertised on the box.)

Support Information Services

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Tech Info Library Article Number:17650



Tech Info Library

QuickTime for Windows 2.0.2: Changes from version 2.0.1 (4/95)

Revised: 5/24/95
Security: Everyone

QuickTime for Windows 2.0.2: Changes from version 2.0.1 (4/95)

=====

Article Created: 26 April 1995

TOPIC -----

This article provides a list of changes in QuickTime for Windows 2.0.2 from version 2.0.1. A separate article covers changes made between versions 2.0 and 2.0.1.

DISCUSSION -----

Changes

=====

1. Updated enum {hintsScrubMode} to be consistent with Inside Macintosh (does not affect any known applications).
2. Added enum {hintsLoop} to public interfaces.
3. Added new selector to VHDW components to hint the bounds rect for image drawing.
4. Movie controller component update to differentiate between UI and program requests.
5. Movie controller does not preroll from start when looping.
6. Movie controller uses enum {hintslloop} while looping.
7. MCI controller now uses "NULL_BRUSH" instead of "WHITE_BRUSH" to paint background prior to video display. This avoid white flash during preroll of movie.
8. Viewer can be installed multiple times in the same windows session.
9. Added more BMP types to QTCodec.h.

10. Modified PICT decompression to behave more closely to Macintosh toolbox when malformed PICTs are decompressed.

11. Eliminated sound popping of IMA audio on Forte-16 sound cards.

12. Added QTW.INI setting "[sound] channelcontrol={8 or 16} that allows user to force 8-bit audio even when they have a 16-bit audio card. This allows users to avoid hardware DMA conflicts without reconfiguring their hardware.

13. Improved performance of IMA audio compression.

14. Allow same application to use QTW APIs and MCI/QT APIs simultaneously.

15. Changed AlignWindow to move down/right instead of up/left.

16. Initialize EDI instead of DI in WHDW components.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17651



Tech Info Library

AppleShare Workstation 3.5 and 3.6 Changes (4/95)

Revised: 4/26/95
Security: Everyone

AppleShare Workstation 3.5 and 3.6 Changes (4/95)

Article Created: 26 April 1995

TOPIC -----

What are the changes for AppleShare Workstation client 3.5 and 3.6 software with the release of AppleShare 4.1 and Workgroup Servers 6150/66, 8150/110, and 9150/120?

DISCUSSION -----

AppleShare 3.5 Changes

- The allocation block size calculation was changed so server volumes larger than 2 GB will get the correct allocation block size.
- A GetVolParms call was changed to return the correct information.
- The .AFPTranslator driver was changed to a "ROM based" driver (the DCE's RAM-based bit is cleared and the dCtlDriver field changed to a pointer). This change was made to prevent the Device Manager from calling _HLock and _Unlock on the driver during calls to it, which could potentially be done at interrupt time.
- An 'afps' gestalt selector is now defined by the workstation that gives information about the characteristics of the workstation and the current version, independent of the 'vers' version. This was because the 'vers' version could be confusing with changes in the workstation software.
- A new Status call that returns session information when doing your own AFP calls on an existing AppleShare session.
- Some changes to some underlining code, the checkbox drawing code, and the password bullet code to handle 2-byte scripts better and to make it easier to localize, especially for KanjiTalk.

Major changes from AppleShare 3.5 client to AppleShare 3.6 client

- The workstation defines two new gestalt selectors that make the 7.5.1 Finder use larger I/O during copies to or from a remote volume. The 7.5.1 Finder checks the 'afps' selector to see if the workstation version is correct, then gets the value of the 'fndß' and 'fnd†' selectors. If copying to or from a remote volume with a volume grade is less than the value in 'fnd†', it will use a buffer size specified by the 'fndß' selector. This makes Finder Copy performance faster.
- The workstation also now implements a read ahead/write behind cache for sync read/write calls done by the Finder. This also helps increase Finder copy performance.
- The workstation has a small desktop database cache (that is GetAPPL calls and GetIconInfo calls) to help cut down on extraneous network traffic on many Finder operations.

In general, there are some changes made that work only if the Finder is requesting the I/O and that are geared toward improving Finder performance. The 7.5.1 Finder was also changed to take advantage of some of these changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17654



Tech Info Library

Power Macintosh 7100: Audio Connector Pinouts (4/95)

Revised: 4/27/95
Security: Everyone

Power Macintosh 7100: Audio Connector Pinouts (4/95)

=====

Article Created: 27 April 1995

TOPIC -----

I need to build a cable to make a non-Apple CD ROM audio work on the Power Macintosh 7100. I cannot find the pinouts for the audio connector on the logic board anywhere.

DISCUSSION -----

The pinouts for the CD-ROM Audio Connection on the Power Macintosh 7100 is:

Pin	Signal
1	CD in Left
2	CD Common
3	CD Common
4	CD in Right

The connector is J19 on the logic board. This connector is located behind the drive bays.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17655



Tech Info Library

Apple Telecom 2.0 and Express Modem (4/95)

Revised: 4/27/95
Security: Everyone

Apple Telecom 2.0 and Express Modem (4/95)

=====

Article Created: 27 April 1995

TOPIC -----

I've seen that Apple Telecom 2.0 has been released. From looking at the Read Me, I cannot tell for sure what I'm gaining if I have an Express Modem. Can you please describe the features from a PowerBook standpoint, for example, does MegaPhone work with the Express Modem?

DISCUSSION -----

No, MegaPhone does not work with the Express Modem. You do get QuickDraw GX support, and the network shared Fax feature. We recommend the use of the latest software available, so updating to Apple Telecom 2.0 is advisable.

Also QuickDraw GX support requires QuickDraw GX 1.1 or later. This does not come with System 7.5 Update 1.0 or with the Apple Telecom 2.0 software. These articles can help you locate the QuickDraw GX software mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17656



Tech Info Library

Print Server: Net Traffic After Turn Off Capture Printer (4/95)

Revised: 4/27/95
Security: Everyone

Print Server: Net Traffic After Turn Off Capture Printer (4/95)

=====

Article Created: 27 April 1995

TOPIC -----

I have noticed that the network traffic light becomes very active after turning off a printer captured by an AppleShare Print Server. Can you provide any information as to why this happens.

DISCUSSION -----

If a printer is turned off after being captured by an AppleShare Print Server, the server will start sending out AARP (AppleTalk Address Resolution Protocol) packets at a rate of 10 every second. This causes some extra traffic on the network, but by most network standards this extra traffic is not considered excessive.

If this traffic becomes a concern, here are three options to workaroud it:

- Select the printer in the Printer Server, release the printer before powering it off, then re-capture the printer on the Print Server after powering it back on.
- After powering the printer on, send a print job to the spooler. This will reconnect the printer and change the device type back to LaserShare, which will stop the AARP packet broadcasts.
- The problem will only arise if the printer is powered off. The third option is to not power off the printer.

Support Information Services

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Tech Info Library Article Number:17657



Tech Info Library

AWS95 & A/UX: tar To Transfer Files On Different Systems (4/95)

Revised: 4/27/95
Security: Everyone

AWS95 & A/UX: tar To Transfer Files On Different Systems (4/95)

=====

Article Created: 27 April 1995

TOPIC -----

This article describes how to backup a UNIX file system, which is not an Apple Workgroup Server (AWS) 95, with a DAT tape drive, and restore that data onto an AWS 95.

DISCUSSION -----

Transfer Files

The tc driver under A/UX is limited to reading 8K blocks, so in order for tapes created on other UNIX systems to be read under A/UX the tapes must be created with this block factor. For example, if tapes created on a Hewlett Packard (HP) workstation do not specify an 8K block factor, an AWS 95 will not be able to read these tapes.

In the past, we have successfully create tapes on other UNIX systems using the following command:

```
tar -cvf - . | dd of=/dev/rmt/tc2 obs=8kx40      (to create the archive)
```

Used the following command on the AWS 95 to read the tapes:

```
dd if=/dev/rmt/tc2 ibs=8kx40 | tar -xvf -      (to read the archive)
```

Support Information Services

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Tech Info Library Article Number:17658



Tech Info Library

AWS 95 & A/UX: tc Driver and Specify the Tape Size (4/95)

Revised: 4/27/95
Security: Everyone

AWS 95 & A/UX: tc Driver and Specify the Tape Size (4/95)

=====

Article Created: 27 April 1995

TOPIC -----

This article describes how the tc driver works with regard to block sizes and how to specify the exact size of the tape to tc from the command line.

DISCUSSION -----

The following command will create a tape on an Apple Workgroup Server (AWS) 95:

```
tar cvlbBf 16 4500 /dev/rmt/tc2 /MI48585
```

However, this command tells the driver the tape capacity is 2MB not 2GB. This is because the 'B' option argument is the number of 512 byte blocks in the active media. The DAT drive has about 2GB in capacity which is calculated as follows:

$2 * 1024 * 1024 * 1024 = 2147483648$ bytes.

Therefore the number of 512 byte blocks would be 4194304 and the command should be:

```
tar cvlbBf 16 4194304 /dev/rmt/tc2 /MI48585
```

The capacity of the DAT drive returned by the command,
`mt -f /dev/rmt/tc2 status`, is 1992271053 bytes which is 3891154 blocks, so the
tar command should be:

```
tar cvlbBf 16 3891154 /dev/rmt/tc2 /MI48585
```

Support Information Services

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Tech Info Library Article Number:17659



Tech Info Library

MAE 2.0: Loud Startup Sound (4/95)

Revised: 4/27/95
Security: Everyone

MAE 2.0: Loud Startup Sound (4/95)

Article Created: 27 April 1995

TOPIC -----

When MAE starts up under Solaris 2.4, SPARCstation 5, it about blasts me out of my chair with the sound volume. Is there a way to set the startup sound volume?

DISCUSSION -----

In the Sound control panel, there are various sub-panels. Clicking on the Alert Sounds pop-up menu will bring up the choices Alert Sounds, Sound In, Sound Out, and Volumes. The volume control in the Alert Sounds sub-panel controls the volume of alert sounds (error beeps). In the Volumes sub-panel is the system volume control. It defaults to 50% volume which, even so, can be quite loud. If you lower that volume, all sounds will be scaled down in volume, including the startup sound.

Unsupported feature

If you do not want the startup sound at all, but you do want other Macintosh sounds, you can set an environment variable TB_NOSTARTUPSOUND to 1 and no startup sound will occur.

Otherwise, if you want no sound at all, you can set TB_SOUND_OFF to 1 (or add command line option -nosound) and MAE will be silent with the exception of using the standard XBell() for Alert sounds.

Support Information Services

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Tech Info Library Article Number:17660



Tech Info Library

Apl SW Updates: Worldwide Language Codes Defined (1/97)

Revised: 1/8/97
Security: Everyone

Apl SW Updates: Worldwide Language Codes Defined (1/97)

Article Created: 28 April 1995
Article Reviewed/Updated: 07 January 1997

TOPIC -----

All software posted in the Apple SW Updates Worldwide area will be identified using the Language Codes listed below. The Language code is a one or two character prefix applied to each posting. For example "F-7.5 Update 1.0" software is localized software for the French Mac OS.

DISCUSSION -----

Language	Region	Code
Arabic	Arabia	AB
Bulgarian	Bulgaria	BG
Bengali	Bangladesh	BD
Byelorussian	Byelorussia	BY
Catalan	Catalunya, Spain	CA
Croatian	Croatia	CR
Cyprian	Cyprus	CY
Czech	Czechoslovakia	CZ
Danish	Denmark	DK
Dutch	Netherlands	N
English, American	United States	<none>
English, Australian	Australia	X
English, British	United Kingdom	B
Estonian	Estonia	ES
Faeroese	Faeroe Islands	FA
Far East (Generic)		FE
Finnish	Finland	K
Flemish	Belgium/Lux	FN
French	France	F
French, Belgian	Belgium	BF
French, Canadian	Canada	C
French, Swiss	Switzerland	SF

French, Universal		FU
German	Germany	D
German, Austrian	Austria	AU
German, Swiss	Switzerland	SD
Hanzi (Simplified)	PRC	CH
Hanzi (Traditional)	ROC	TA
Greek	Greece	GR
Hangul	Korea	KH
Hebrew	Israel	HB
Hindi (Devanagari)	India	HN
Hungarian	Hungary	MG
Icelandic	Iceland	IS
International	International	Z
	(For any intern'l English system)	
International, Multi-Country		ZM (For any localized system)
Irish	Ireland	ER
Italian	Italy	T
Italian, Swiss	Switzerland	ST
Kanji	Japan	J
Latvian	Latvia	LT
Lithuanian	Lithuania	LH
Luxembourg	Luxembourg	LX
Maltese	Malta	MA
Macedonian	Yugoslavia	MD
Norwegian	Norway	H
Persian	Iran	PS
Polish	Poland	PL
Portuguese	Portugal	PO
Portuguese, Brazilian	Brazil	BR
Romanian	Rumania	RO
Russian (Cyrillic)	Russia	RS
Serbian	Yugoslavia	SR
Slovak	Czechoslovakia	SL
Slovenian	Yugoslavia	SV
Spanish	Spain/Latin America	E
Swedish	Sweden	S
Thai	Thailand	TH
Turkish	Turkey	TU
Ukranian	Ukraine	UA
Urdu	Pakistan	UR
	Yugoslavia	YU

Article Change History:

07 Jan 1996 - Reviewed for accuracy.

21 Aug 1995 - Added French, Universal (FU) definition

Support Information Services

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Tech Info Library Article Number:17662



Tech Info Library

WW Apple SW Updates Available Online (03/97)

Revised: 3/11/97
Security: Everyone

WW Apple SW Updates Available Online (03/97)

=====
Article Created: 19 September 1994
Article Reviewed/Updated: 11 March 1997

TOPIC -----

This document serves as an index to the International Apple Software Updates areas located on CompuServe and the Internet. The first part of this article: Article Change History, lists the most recent changes to the Software Updates. The second part is an alphabetical list of the software updates, along with the current location.

Please search the Apple Tech Info Library using the string "Apple Software Updates" for a current list of online services to which Apple Software Updates are posted. (You can also use the special keyword: kol to search for this information and other on line related information in the Apple Tech Info Library.)

DISCUSSION -----

Article Change History:

10 Mar 1997 - Add Telecom Updater 1.0 Dutch (N), Italian (T), French (F) and German (D)
07 Mar 1997 - Add C-7.5 Update (French-Canadian) 2.0
03 Mar 1997 - Add ZM-LocalTalk and LaserWriter Bridge 2.1f2
20 Feb 1997 - Add localized QuickTime 2.5 Korean (KH) and Norwegian (H)
20 Feb 1997 - Add localized QuickTime MPEG 1.0 Korean (KH) and Norwegian (H)
19 Feb 1997 - Add Localized QuickTime MPEG 1.0 Dutch(N), German(D) Italian (T) Swidish (S)

AIISP - Apple II Supplemental
ARA - Apple Remote Access
CTB - Communications Toolbox
D-P - Display & Peripheral Software
DSW - Display Software

LWS - LaserWriter Software
Mac - Macintosh
N-C - Networking & Communications
ONC - Other N-C Software
OPS - Other Printing Software
OSS - Other System Software
PTG - Printing
QGX - QuickDraw GX
SSW - System Software
TTS - Text to Speech
7.5Up - System 7.5 Update 1.0
Inter - International English

The Alphabetical List of Apple Software Updates:

International English

Apple Spec Database 8-96 - WW/Mac/Utilities
MP20 1.3 465333-Eng.sea/WW/Mac/Newton - Inter
MP465333.EXE/WW/Mac/Newton - Inter

Arabic

AB-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Arabic
AB-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup

British

B-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/British
B-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/British
B-7.5.2 Printing Update 1.1(British) - WW/Mac/PTG/OPS
B-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
B-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
B-Display Software 1.0 (English, British) - WW/Mac/D&P/DSW
B-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/British
B-DOS Compat. Keyboard Fix (British) - WW/Mac/Unsupported
B-GeoPort Updater 1.0.sea/WW/Mac/N-C/Apple Telecom
B-PhotoFlash 2.0 to 2.0.1 (British) - WW/Mac/D&P/DSW/QPM
B-Open Transport 1.0.8 (British) - WW/Mac/N-C/ONC or Open Transport
B-OT 1.1.1 (British) - WW/Mac/N-C/Open Transport - British
B-OT Manual 1.1 (British) - WW/Mac/System 7.5 Update 2.0/British
B-PowerBook 5300 Update (British) - WW/Mac/PB/PB 5300 SW Update
B-PowerCD Setup 1.0 (British) - WW/Mac/D&P/PowerCD Setup
B-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/British
B-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/British
B-QuickDraw GX 1.1.3 (British) - WW/Mac/SSW/QGX/British
B-QuickTake for Power Macintosh - WW/Mac/D&P ->QuickTake Pwr Mac
B-QuickTime 2.5-2.sea disks - WW/Mac/System/QuickTime

Belgian

BF-DOS Compat. Keyboard Fix (Belgian) - WW/Mac/Unsupported

Bulgarian

BG-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup (Bulgarian)

BG-Display Software 1.0 (Bulgarian) - WW/Mac/D&P/DSW

BG-7.5.2 Printing Update 1.1(Bulgarian) - WW/Mac/PTG/OPS

BG-QuickDraw GX 1.1.2 (Bulgarian) - WW/Mac/SSW/QGX/Bulgarian

BG-Sys 7.5 Update 1.0 (Bulgarian) - WW/Mac/SSW/7.5Up/Bulgarian

BG-OT Manual 1.1 (Bulgerian) - WW/Mac/System 7.5 Update 2.0/Bulgerian

BG-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Bulgerian

Brazilian-Portuguese

BR-QuickDraw GX 1.1.3 (Brazilian-Portuguese) -

WW/Mac/SSW/QGX/Brazilian-Portuguese

French Canadian

C-5xxx-6xxx Tester 1.0 (French-Canadian) - WW/Mac/Utilites

C-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up

C-System 7.5 Update 2.0 (14 disks) - WW/Mac/System SW/7.5Up 2.0

C-7.5.2 Printing Update 1.1 (French Canadian) - WW/Mac/PTG/OPS

C-PowerBook 5300 Update (French-Canadian) - WW/Mac/PB/PB 5300 SW Update

C-QuickDraw GX 1.1.3 - WW/Mac/SSW/QGX/French, Canadian

Catalan

CA-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Catalan

CA-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Catalan

CA-QuickDraw GX 1.1.3 (Catalan) - WW/Mac/SSW/QGX/Catalan

CA-PowerBook 2300c Update (Catalan) - WW/Mac/PowerBook/Other PB SW

CA-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Catalan

Chinese(Simplified)

CH-QuickDraw GX 1.1.3 - WW/Mac/SSW/QGX/Chinese(Simplified)

Croatian

CR-6360-64xx-54xx Upd 1.0 - WW/Mac/System/Other System/6360-64xx-54xx Update
1.0/Croatian

CR-PowerBook 2300c Update (Croatian) - WW/Mac/PowerBook/Other PB SW

Czech

CZ-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up/Czech

CZ-7.5.2 Printing Fix 1.0.2 (Czech) - WW/Mac/PTG/OPS

CZ-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup

CZ-Disk Copy 4.2 (Czech) - WW/Mac/Utilities

CZ-Display Software 1.0 (Czech) - WW/Mac/D&P/DSW
CZ-PowerBook 2300c Update (Czech) - WW/Mac/PowerBook/Other PB SWCZ-QuickTake
for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
CZ-QuickDraw GX 1.1.3 (Czech) - WW/Mac/SSW/QGX/Czech

German

D-At Ease Update 1.0 - WW/Mac/System/At Ease/German
D-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/German
D-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/German
D-7.5.2 Printing Fix 1.0.2 (German) - WW/Mac/PTG/OPS
D-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
D-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
D-CIS Mail 2.0 v1.0.2.sea/WW/Newton/German
D_CMAIL.EXE/WW/Newton/GermanD-Disk Copy 4.2 (German) - WW/Mac/Utilities
D-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/German
D-Display Software 1.0 (German) - WW/Mac/D&P/DSW
D-DOS Compat. Keyboard Fix (German) - WW/Mac/Unsupported
D-DOS Compatibility 1.5.3/WW/DOS-Windows/DOS Compatibility
D-MP 120 2.0 536205.sea/WW/Newton/German
D-MP 130 2.0 536205.sea/WW/Newton/German
D-PhotoFlash 2.0 to 2.0.1 (German) - WW/Mac/D&P/DSW/QPM
D-PowerBook 2300c Update (German) - WW/Mac/PB/Other PB SW
D-PowerBook 5300 Update (German) - WW/Mac/PB/PB 5300 SW Update
D-PowerCD Setup 1.0 (German) - WW/Mac/D&P/PowerCD Setup
D-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
D-QuickTime 2.5 - WW/Mac/System/QuickTime/German
D-QuickTime MPEG 1.0 - WW/Mac/SSW/QuickTIme/German
D-QuickDraw GX 1.1.3 (German) - WW/Mac/SSW/QGX/German
D-OT 1.1.1 - WW/Mac/N-C/Open Transport - German
D-OT Manual 1.1 (German) - WW/Mac/System 7.5 Update 2.0/German
D-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/German
D-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/German
D-QuickTime 2.5 - WW/Mac/System/QuickTime/German
D-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/German
N120_205.EXE/WW/Newton/German
N130_205.EXE/WW/Newton/German
D-Telecom Updater 1.0D - WW/Mac/N-C/Apple Telecom

Danish

DK-At Ease Update 1.0 - WW/Mac/System/At Ease/Danish
DK-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Danish
DK-7.5.2 Printing Update 1.1 (Danish) - WW/Mac/PTG/OPS
DK-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
DK-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
DK-Disk Copy 4.2 (Danish) - WW/Mac/Utilities
DK-Display Software 1.0 (Danish) - WW/Mac/D&P/DSW
DK-Open Transport 1.0.8 (Danish) - WW/Mac/N-C/ONC or Open Transport
DK-PowerBook 2300c Update (Danish) - WW/Mac/PB/Other PB SW
DK-PowerBook 5300 Update (Danish) - WW/Mac/PB/PB 5300 SW Update
DK-QuickDraw GX 1.1.3 (Danish) - WW/Mac/SSW/QGX/Danish
DK-OT Manual 1.1 (Danish) - WW/Mac/System 7.5 Update 2.0/Danish

DK-PowerTalk 1.2.3/WW/Mac/System/PowerTalk/Danish
DK-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Danish

Spanish

E-At Ease Update 1.0 - WW/Mac/System/At Ease/Spanish
E-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Spanish
E-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Spanish
E-7.5.2 Printing Fix 1.0.2 (Swedish) - WW/Mac/PTG/OPS
E-AppleShare 3.0.3 Patch - WW/Mac/N-C/AppleShare
E-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
E-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
E-Disk Copy 4.2 (Spanish) - WW/Mac/Utilities
E-Display Software 1.0 (Spanish) - WW/Mac/D&P/DSW
E-DOS Compatibility 1.5.3/WW/DOS-Windows/DOS Compatibility
E-Geoport Updater 1.0.sea/WW/Mac/N-C/Apple Telecom
E-ISO Keyboard 1.0 - WW/Mac/System SW - OSS
E-OT 1.1.1 - WW/Mac/N-C/ONC or Open Transport
E-PowerBook 2300c Update (Spanish) - WW/Mac/PB/Other PB SW
E-PowerBook 5300 Update (Spanish) - WW/Mac/PB/PB 5300 SW Update
E-PowerCD Setup 1.0 (Spanish) - WW/Mac/D&P/PowerCD Setup
E-QuickDraw GX 1.1.3 (Spanish) - WW/Mac/SSW/QGX/Spanish
E-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Spanish
E-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/Spanish
E-QuickTime 2.5-2 - WW/Mac/System/QuickTime/Spanish

French

F-6360-64xx-54xx Upd 1.0 - WW/Mac/System/Other System/6360-64xx-54xx Update 1.0/French
F-At Ease 3.0.3 Updater - WW/Mac/System/At Ease/French
F-At Ease Update 1.0 - WW/Mac/System/At Ease/French
F-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/French
F-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/French
F-AppleShare 3.0.3 Patch - WW/Mac/N-C/AppleShare
F-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
F-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
F-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/French
F-Display Software 1.0 (French) - WW/Mac/D&P/DSW
F-DOS Compatibility 1.5.3/WW/DOS-Windows/DOS Compatibility
F-Drive Setup 1.0.2 (French) - WW/Mac/Utilities
F-OT Manual 1.1 (French) - WW/Mac/System 7.5 Update 2.0/French
F-PhotoFlash 2.0 to 2.0.1 (French) - WW/Mac/D&P/DSW/QPM
F-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/French
F-PowerBook 5300 Update (French) - WW/Mac/PB/PB 5300 SW Update
F-PowerCD Setup 1.0 (French) - WW/Mac/D&P/PowerCD Setup
F-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/French
F-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
F-QuickDraw GX 1.1.3 (French) - WW/Mac/SSW/QGX/French
F-Telecom Updater 1.0D - WW/Mac/N-C/Apple Telecom

French Universal

FU-Disk Copy 4.2 (French - Universal) WW/Mac/Utilities
FU-Open Transport 1.0.8 (French - Universal) - WW/Mac/N-C/Open Transport
FU-OT 1.1.1 (French - Universal) - WW/Mac/N-C/Open Transport
FU-PB 2300c Update (French - Universal) WW/Mac/PB/Other PB SW
FU-QuickTime 2.5 - WW/Mac/System/QuickTime/ French-Universal

Norwegian

H-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Norwegian
H-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Norwegian
H-7.5.2 Printing Fix 1.0.2 (Swedish) - WW/Mac/PTG/OPS
H-7.5.2 Printing Update 1.1(Norwegian)- WW/Mac/PTG/OPS
H-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
H-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
H-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/Norwegian
H-Disk Copy 4.2 (Norwegian) - WW/Mac/Utilities
H-Display Software 1.0 (Norwegian) - WW/Mac/D&P/Display Software
H-QuickDraw GX 1.1.2 (Norwegian) - WW/Mac/SSW/QGX/Norwegian
H-PowerBook 2300c Update (Norwegian) - WW/Mac/PB/Other PB SW
H-OT Manual 1.1 (Norwegian) - WW/Mac/System 7.5 Update 2.0/ Norwegian
H-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Norwegian
H-QuickTime 2.5 - WW/Mac/System/QuickTime/Norwegian
H-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/Norwegian

Kanji

J-AppleShare 3.0.3 Patch - WW/Mac/N-C/AppleShare
J-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
J-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
J-Disk Copy 4.2 - WW/Mac/Utilities/Disk Copy 4.2
J-Display Software 1.1 (Kanji) - WW/Mac/D&P/DSW
J-PhotoFlash 2.0 to 2.0.1(Japanese)- WW/Mac/D&P/DSW/QPM
J-PowerBook 2300c Update (Japanese) - WW/Mac/PB/Other PB SW
J-PowerCD Setup 1.0 (Japanese) - WW/Mac/D&P/PowerCD Setup
J-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
J-QuickDraw GX 1.1.3 (Kanji) - WW/Mac/SSW/QGX/Kanji
J-Sys 7.5.5 Update - WW/Mac/SSW/System 7.5.5 Update/Kanji-Japanese

Finnish

K-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup
K-PowerBook 2300c Update (Finnish) - WW/Mac/PB/Other PB SW
K-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Finnish
K-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Finnish
K-7.5.2 Printing Update 1.1 (Finnish) WW/Mac/PTG/OPS
Keyboard Layouts - WW/Mac/SSW/OSS
K-QuickDraw GX 1.1.3 (Finnish) - WW/Mac/SSW/QGX/Finnish
K-OT 1.1.1 - WW/Mac/N-C/Open Transport - Finnish
K-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Finish

Korean

KH-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
KH-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup
KH-QuickDraw GX 1.1.3 (Korean) - WW/Mac/SSW/QGX/Korean
KH-QuickTime 2.5 - WW/Mac/System/QuickTime/Korean
KH-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/Korean

Hungarian

MG-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup

Dutch

N-At Ease Update 1.0 - WW/Mac/System/At Ease/Dutch
N-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up/Dutch
N-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Dutch
N-7.5.2 Printing Update 1.1 (Dutch) - WW/Mac/PTG/OPS
N-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
N-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
N-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/Dutch
N-Geoport Updater 1.0.sea/WW/Mac/N-C/Apple Telecom
N-OT 1.1.1 - WW/Mac/N-C/Open Transport/Dutch
N-PowerBook 2300c Update (Dutch) - WW/Mac/PB/Other PB SW
N-PowerBook 5300 Update (Dutch) - WW/Mac/PB/PB 5300 SW Update
N-PhotoFlash 2.0 to 2.0.1 (Dutch) - WW/Mac/D&P/DSW/QPM
N-PowerCD Setup 1.0 (Dutch) - WW/Mac/D&P/PowerCD Setup
N-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Dutch
N-OT Manual 1.1 (Dutch) - WW/Mac/System 7.5 Update 2.0/Dutch
N-PT Mail Reader 1.1 - WW/Mac/System 7.5 Update 2.0/Dutch
N-QuickDraw GX 1.1.3 (Dutch) - WW/Mac/SSW/QGX/Dutch
N-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
N-QuickTime 2.5 - WW/Mac/System/QuickTime/Dutch
N-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/Dutch
Personal Modem Fax Update/Macintosh/N-C/ONC/Apple Personal Modem
N-Telecom Updater 1.0D - WW/Mac/N-C/Apple Telecom

Polish

PL-6360-64xx-54xx Upd 1.0 - WW/Mac/System/Other PL-System/6360-64xx-54xx Update 1.0/Polish
PL-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up/Polish
PL-7.5.2 Printing Update 1.1 (Polish) WW/Mac/PTG/OPS
PL-CD-ROM Setup 5.0 - WW/Mac/D&P/CD-ROM Setup
PL-Display Software 1.2 (Polish) - WW/Mac/D&P/Display Software
PL-QuickDraw GX 1.1.3 (Polish) - WW/Mac/SSW/QGX/Polish

Portuguese

PO-Sys 7.5 Update 1.0 (Portuguese) - WW/Mac/SSW/7.5Up/Portuguese

Romanian

RO-Sys 7.5 Update 1.0 (Romanian) - WW/Mac/SSW/7.5Up/Romanian
RO-7.5.2 Printing Fix 1.0.2 (Swedish) - WW/Mac/PTG/OPS

..TIL17664-WW_Apple_SW_Updates_Available_Online_03-97.pdf

RO-QuickTime 2.5 - WW/Mac/System/QuickTime/Romanian

Russian

RS-System 7.0.1 - WW/Mac/SSW/System 7.0.1/Russian

RS-System 7.0.1 Tune up 1.1.1 - WW/Mac/SSW/Syste 7.0.1/Russian

RS-Sys 7.5 Update 1.0 (Russian) - WW/Mac/SSW/7.5Up/Russian

RS-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Russian

RS-7.5.2 Printing Fix 1.0.2 (Swedish) - WW/Mac/PTG/OPS

RS-Disk Copy 4.2 (Russian) - WW/Mac/Utilities

RS-QuickDraw GX 1.1.3 (Russian) - WW/Mac/SSW/QGX/Russian

RS-OT Manual 1.1 (Russian) - WW/Mac/System 7.5 Update 2.0/Russian

RS-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Russian

Swedish

S-At Ease Update 1.0 - WW/Mac/System/At Ease/Swedish

S-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Swedish

S-7.5.2 Printing Update 1.1 (Swedish) - WW/Mac/PTG/OPS

S-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision

S-CD-ROM Setup 5.0.1 - WW/ Macintosh/D&P/CD-ROM Setup

S-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/Swedish

S-Display Software 1.0 (Swedish) - WW/Mac/D&P/Display Software

S-Drive Setup 1.0.2 (Swedish) - WW/Mac/Utilities

S-DOS Compat. Keyboard Fix (Swedish) - WW/Mac/Unsupported

S-Geoport Updater 1.0.sea/WW/Mac/N-C/Apple Telecom

S-Open Transport 1.0.8 (Swedish) - WW/Mac/N-C/Open Transport

S-OT 1.1.1 - WW/Mac/N-C/Open TransportS-PowerBook 2300c Update (Swedish) -
WW/Mac/PB/Other PB SW

S-PowerBook 5300 Update (Swedish) - WW/Mac/PB/PB 5300 SW Update

S-PowerCD Setup 1.0 (Swedish) - WW/Mac/D&P/PowerCD Setup

S-QuickDraw GX 1.1.3 (Swedish) - WW/Mac/SSW/QGX/Swedish

S-QuickTime MPEG 1.0 - WW/Mac/SSW/QuickTIme/Swedish

S-OT Manual 1.1 (Swedish) - WW/Mac/System 7.5 Update 2.0/Swedish

S-PowerTalk 1.2.3/- WW/Mac/System/PowerTalk/Swedish

S-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/Swedish

S-QuickTime 2.5 - WW/Mac/System/QuickTime/Swedish

S-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/Swedish

Swiss-French

SF-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Swiss-French

SF-OT Manual 1.1 (Swiss-French) - WW/Mac/System 7.5 Update 2.0/Swiss-French

Italian

T-6360-64xx-54xx Upd 1.0 - WW/Mac/System/Other System/6360-64xx-54xx Update
1.0/Italian

T-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/Italian

T-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Italian

T-7.5.2 Printing Update 1.1 (Italian) - WW/Mac/PTG/OPS

T-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision

T-At Ease Update 1.0 - WW/Mac/System/At Ease/Italian
T-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
T-Direct Dialup Mail 1.1.2 - WW/Mac/System/PowerTalk/Italian
T-Disk Copy 4.2 (Italian) - WW/Mac/Utilities
T-Display Software 1.0 (Italian) - WW/Mac/D&P/DSW
T-DOS Compatibility 1.5.3/WW/DOS-Windows/DOS Compatibility
T-OT 1.0.8/WW/Mac/N-C/Open Transport/Italian
T-OT PPP 1.0/WW/Mac/N-C/Open Transport/Italian
T-OT 1.1.1/WW/Mac/N-C/Open Transport/Italian
T-PhotoFlash 2.0 to 2.0.1 (Italian) - WW/Mac/D&P/DSW/QPM
T-PowerBook 2300c Update (Italian) - WW/Mac/PB/Other PB SW
T-PowerBook 5300 Update (Italian) - WW/Mac/PB/PB 5300 SW Update
T-PowerCD Setup 1.0 (Italian)- WW/Mac/D&P/PowerCD Setup
T-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac
T-QuickDraw GX 1.1.3 (Italian) - WW/Mac/SSW/QGX/Italian
T-QuickTime MPEG 1.0 - WW/Mac/SSW/QuickTime/Italian
T-OT Manual 1.1 (Italian) - WW/Mac/System 7.5 Update 2.0/Italian
T-PowerTalk 1.2.3 - WW/Mac/System/PowerTalk/Italian
T-PT Mail Reader 1.1 - WW/Mac/System/PowerTalk/Italian
T-QuickTime 2.5 - WW/Mac/System/QuickTime/Italian
T-QuickTime MPEG 1.0 - WW/Mac/System/QuickTime/Italian
T-Telecom Updater 1.0D - WW/Mac/N-C/Apple Telecom

Turkish

TU-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up/Turkish
TU-7.5.2 Printing Fix 1.0.2 - WW/Mac/PTG/OPS
TU-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
TU-CD-ROM Setup 5.0.1 - WW/Mac/D&P/CD-ROM Setup
TU-Display Software 1.0 (Turkish) - WW/Mac/D&P/DSW
TU-QuickDraw GX 1.1.3 (Turkish) - WW/Mac/SSW/QGX/Turkish

Ukranian

UA-7.5 Update 1.0 (4 disks) - WW/Mac/System SW/7.5Up/Ukranian
UA-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/Ukranian
UA-7.5.2 Printing Update 1.1 (Ukranian) - WW/Mac/PTG/OPS
UA-Disk Copy 4.2.sea (Ukranian) - WW/Mac/Utilities
UA-OT Manual 1.1 (Ukranian) - WW/Mac/System 7.5 Update 2.0/Ukranian
UA-PowerTalk 1.2.3 - WW/System/PowerTalk/Ukrenian

International

Z-7.5 Update 1.0 - WW/Mac/System SW/7.5Up/International
Z-7.5 Update 2.0 - WW/Mac/System SW/7.5 Update 2.0/International
Z-AppleVision 1.0.2 - WW/Mac/D&P/AppleVision
Z-Display Software 1.0 (International) - WW/Mac/D&P/DSW
Z-PowerCD Setup 1.0 (Int'l) - WW/Mac/D&P/PowerCD Setup
Z-QuickDraw GX 1.1.3 (International) - WW/Mac/SSW/QGX/International

International Multicountry

ZM-LT and LW Bridge 2.1f2 WW/Mac/Unsupported
ZM System 7.5.5 Update - WW/Mac/System/System 7.5.5
ZM-System 7.5.3 Rev 2.0 - WW/Mac/System/System 7.5.3 Revision 2.0
ZM-Sys 7.5.5 Update- WW/Mac/System/System 7.5.5 Update
International-Multilingual
ZM-AppleShare WS 3.6.5 - WW/Mac/N-C/AppleShare
ZM-Display Software 1.0 (International, Multi-Country) - WW/Mac/D&P/DSW
ZM-Network Software Installer 1.5 - WW/Mac/N-C/NSI
ZM-NSI 1.5.1 - WW/Mac/N-C/Network Software Installer 1.5.1
ZM-PhotoFlash 2.0 to 2.0.1 (International, Multi-Country)
ZM-QuickTake for Power Macintosh - WW/Mac/D&P/QuickTake Pwr Mac

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Tech Info Library Article Number:17664



Tech Info Library

Southland Micro Systems (4/95)

Revised: 4/28/95
Security: Everyone

Southland Micro Systems (4/95)

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Article Created: 28 April 1995

SOUTHLAND MICRO SYSTEMS

11 Musick, Fairbanks Business Park
Irvine, Ca. 92718

Phone: (800) 477-5784

Company Profile:

Specializes in memory products for Macintosh desktop systems, PowerBook computers, and LaserWriter printers.

Support Information Services

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Tech Info Library Article Number:17666



Tech Info Library

HyperCard 2.3: Description and Specifications (4/95)

Revised: 4/28/95
Security: Everyone

HyperCard 2.3: Description and Specifications (4/95)

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Article Created: 28 April 1995

TOPIC -----

The following article gives a brief overview of and lists technical specifications for HyperCard 2.3.

DISCUSSION -----

Description

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HyperCard 2.3, is the latest version in Apple's tool for creating custom software solutions for business, education, and multimedia. The software is intended for commercial developers, consultants, in-house programmers, and end users to display information in any way they need to.

HyperCard organizes information into easy-to-use "stacks" of cards through which users can navigate and search for the information they need. Simply by clicking on a button, they can view related text, see a graphic, hear a sound, watch a QuickTime movie, or listen to text spoken out loud.

HyperCard provides an easy mechanism for distributing the stacks you have created. You can save any stack as a stand-alone, double-clickable Macintosh application that can be distributed without software royalty fees.

Technical Specifications

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Usage Requirements

- Macintosh, Power Macintosh, or PowerBook computer
 - QuickTime tools require 68020 processor or greater
 - Text-to-speech requires 68040 processor or grater
- Hard Drive

- 2MB RAM minimum with systems previous to System 7
- 4MB RAM minimum with System 7
- 5MB RAM recommended when using color tools
- System 6.0.5 or later
 - 6.0.7 required for color tools
 - 7.1 or later required for AppleScript, Button Tasks, Stand-alone application builder.
- QuickTime Tools require QuickTime system extension
- Text-to-Speech requires PlainTalk software (included)
- Multilingual HyperCard Applications may require WorldScript software and/or international versions of AppleScript software.

Support For Scripting Languages

- Add power and versatility to HyperCard applications using HyperTalk (HyperCard's scripting language) or any scripting language compatible with the Open Scripting Architecture (OSA), such as AppleScript.
- Attach AppleScript scripts to HyperCard objects such as buttons to launch and control other applications, exchange data with them, and so on—even over a network.
- Link HyperCard stacks with any of more than 100 scriptable applications, such as Claris FileMaker Pro 2.0 and Microsoft Excel 4.0 (applications must be running under System 7).
- Use localized versions of AppleScript system extensions to script in Japanese, French, or other languages (requires additional software).

Multimedia Features

- Add QuickTime movies to stacks using the QuickTime Tools stack
- Include sound, animation, and graphics in your stacks
- Have HyperCard text read aloud by your computer

Color Drawing And Painting Tools

- Choose from 256 colors to apply to buttons, fields, backgrounds, and cards
- Import 24-bit color or grayscale PICT graphics
- Resize, reposition, and edit graphics on the card
- Create PICT images with 24-bit color painting tools

Automated Button Tasks

- Automatically assign tasks to buttons without writing a single script
- Go to another destination (first card, previous card, home, or others)

- Play a QuickTime movie
- Play a sound
- Have text read aloud (using PlainTalk software)
- Launch another application
- Apply visual effects for transitions between cards

Development Features

=====

- Third-party external commands (XCMDs) let you control a wide variety of systems and equipment, including mainframe computers, networks, videodisc players, and CD-ROM drives.
- Hypertext applications can be created by linking a word or group of words.
- Modeless script editor lets you view several scripts and stacks at once and quickly copy and paste HyperTalk or AppleScript code between them.
- Debugging menu lets you set checkpoints in, and step and trace through, a HyperTalk script while it's running, for fast and easy troubleshooting.
- Background processing lets you continue working in other applications while complex scripts are running or while you compact or sort a stack.
- Variable Watcher shows how variables are used and changed and lets you edit variables while debugging your script.
- Message Watcher lets you view HyperTalk messages as they're sent, so you can see how your program's logic really works.
- "Save as" options let you create stand-alone applications or ones that can run using HyperCard Player (widely available on Macintosh systems).

Flexible Formatting And Reporting

- Design multiple report layouts for each stack—and copy and paste report formats between stacks.
- Control the content, appearance (including font, size, and style), and placement of text elements in report formats
- Create card sizes ranging from 1 by 1 inch to 18 by 18 inches.
- Print individual fields, selected parts of a card, a single card, selected cards (containing a certain word, button, or background), or an entire stack

Support

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HyperCard 2.3 is supported by the Apple Assurance Software Support group at 1-800-SOS-APPL (767-2775).

Support Information Services

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Tech Info Library Article Number:17668



Tech Info Library

HyperCard 2.3: Read Me (4/95)

Revised: 4/28/95
Security: Everyone

HyperCard 2.3: Read Me (4/95)

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Article Created: 28 April 1995

TOPIC -----

The following article is the ReadMe document for HyperCard 2.3.

DISCUSSION -----

Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with HyperCard 2.3. We recommend that you print a copy.

Installing HyperCard
=====

To install HyperCard 2.3 on your hard drive, insert the disk called "HyperCard Installer," double-click the file called "Installer" and then follow the instructions on your screen.

The "Easy Install" option of the HyperCard Installer installs the version of HyperCard 2.3 that's optimized for your Macintosh computer.

If you have a Macintosh computer with a PowerPC upgrade card and the card is enabled, the "Easy Install" option will install the version of HyperCard that's optimized for any Macintosh. If the PowerPC upgrade card is disabled, the Installer will install the version of HyperCard that's optimized for a Macintosh computer with a 680x0 microprocessor.

You can choose which version of HyperCard to install by using the "Custom Install" option of the HyperCard Installer. This option gives you three choices:

- 1) HyperCard optimized for Macintosh computers with PowerPC microprocessors
- 2) HyperCard optimized for Macintosh computers with 680x0 microprocessors.

3) HyperCard optimized for any Macintosh. If you install one of these versions and then change your mind, delete the version that you installed and run the Installer again.

System And Memory Requirements

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Hardware Requirements

- An Apple Macintosh, Power Macintosh, or PowerBook computer; QuickTime Tools require a 68020 or later microprocessor; text-to-speech function requires a 68040 or later microprocessor.
- A hard disk drive.
- At least 2MB of RAM; 4MB of RAM required for system software version 7.0 or later; 5MB of RAM recommended when using Color Tools; 8MB of RAM required for Macintosh Computers with PowerPC microprocessors.
- HyperCard's memory partition should be set to at least 2200K to use the Color Tools (5120K on Macintosh Computers with PowerPC microprocessors with virtual memory off). HyperCard's memory partition should be set to 3072K, or more, to use the Color Painting Tools (5120K on Macintosh Computers with PowerPC microprocessors with virtual memory off).

Software Requirements

HyperCard 2.3 requires system software version 6.0.5 or later. System software 7.0 or later is required for AppleScript and the Color Paint Tools. The HyperCard Button Tasks and the standalone application builder require system software 7.0 together with either the AppleScript or the QuickTime system extension. The Button Tasks will also work with system software 7.1 or later with or without the QuickTime or AppleScript system extensions. On Macintosh computers with PowerPC, the HyperCard Button Tasks and the standalone application builder require the AppleScript system extension, the AppleScriptLib file and the ObjectSupportLib file. These items will automatically be installed in your system extensions folder when you choose easy install or when you choose custom install and install AppleScript.

QuickTime Tools requires the QuickTime system extension.

Text-to-speech requires the Speech Manager system extension (included) or the PlainTalk software package.

Multilingual HyperCard applications may require WorldScript software and/or international versions of AppleScript software.

WorldScript software requires system software 7.1 or later.

Button Task Requirements

On Macintosh computers with PowerPC microprocessors, the Button Tasks require

the AppleScript system extension, the AppleScriptLib file and the ObjectSupportLib file. These items will automatically be installed in your system extensions folder when you choose easy install or when you choose custom install and install AppleScript.

On Macintosh computers with 680x0 microprocessors, the Button Tasks require system software 7.0 together with either the AppleScript or the QuickTime system extension. The Button Tasks will also work on Macintosh computers with 680x0 microprocessors running system software 7.1 or later with or without the QuickTime or AppleScript system extensions.

The Movie Button Task requires the QuickTime system extension. The task will not appear if the QuickTime system extension is not present.

The Speech Button Task requires the Speech Manager system extension (included) or the PlainTalk software package. The task will not appear if the Speech Manager system extension or the PlainTalk software package is not present.

The Sound Task requires sound input hardware in order to record.

Notes On Using HyperCard 2.3 For The First Time After Installation

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The first time you use HyperCard 2.3, it is possible that double-clicking a stack that you already have on your machine will fail to launch HyperCard, or will launch an earlier version of HyperCard. If this happens to you, simply open the HyperCard 2.3 folder. Once you have done this, double-clicking a stack will launch HyperCard 2.3.

It is also possible that you will not see stack icons on the stacks on your system after you install HyperCard 2.3 for the first time. If this happens to you, simply open the HyperCard 2.3 program folder and restart your Macintosh computer. After you have restarted, the stack icons will appear correctly.

New HyperCard Features

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HyperCard 2.3 contains some new and exciting features. For this release of HyperCard we have added:

- Support for Macintoshes with PowerPC microprocessors. This includes the ability to generate standalone applications which are optimized for Macintoshes with PowerPC microprocessors.
- New Button Tasks which allow you to generate HyperTalk scripts without scripting.

We have included tasks for:

- playing movies
- playing and recording sounds
- moving from card to card

- using text-to-speech
- adding visual effects
- opening applications

We expect third-party developers to develop additional button tasks.

- Text-to-Speech capabilities. (only for Macintoshes with 68040 or better microprocessors)
- Enhancements to the Color Tools including a new color painting environment.

Notes On HyperCard

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Users with 9-inch screens may have problems viewing the task window associated with the new Button Tasks. When editing a stack with standard size cards, if you open the task window by choosing the "Tasks..." button in the Button Info dialog, and then bring another window forward, the tasks window will go behind the card window. It will look as though the task window has disappeared even though it is still present. Select "Next Window" to bring the task window forward.

The tilde key "~" no longer takes you back in HyperCard. Command-tilde will still take you back.

HyperCard 2.3 includes the necessary system extension for performing text-to-speech. The Installer will only install this software on Macintoshes with 68040 or better microprocessors. Text-to-speech is restricted to Macintoshes with 68040 or better microprocessors.

In low memory situations, stacks with card sizes larger than 512 by 342 pixels will not open to their full size. Additionally, you will not be able to use HyperCard's Color Paint Tools or the Color Tools, and you will not be able to print cards.

External commands may cause HyperCard to think that it is in a low memory state. If you are using system 7.5 and your stacks are not opening to full size after increasing HyperCard's memory partition, try disabling the Macintosh Easy Open extension.

Notes On Color Tools

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The Color Paint Tools require system software 7.0 or greater.

The Color Paint Tools can require large amounts of memory depending on the size and bit depth of the pictures that you are editing or creating. We recommend against using the Color Paint Tools on a Macintosh computer with less than 5MB of RAM or when HyperCard has a partition smaller than 3072K. Many of the Color Paint operations will not work properly in low memory. If you are seeing frequent messages about low memory while using the Color Paint Tools, exit

HyperCard and increase its memory allocation. We recommend increases of at least 300K. Continue increasing the allocation until you no longer see the out of memory messages or until you have exceeded the available memory on your machine. For instructions on how to increase HyperCard's memory allocation, see "Preparing a Color Standalone Application" in Chapter 3 of the "Getting Started" guide.

The Color Tools Demo in the Color Tools Stack does not work when the stack has been locked with the Finder.

The Color Tools stack requires a monitor with at least 256 colors or shades of gray.

We recommend against coloring your Home stack. If not scripted correctly, a colored Home stack will cause HyperCard to run slower than it would with a non-colored Home stack.

When using the Color Paint Tools, operations that cause the picture to extend beyond the bounds of the window may cause parts of the image to be lost. This happens when rotating and scaling. You can prevent this problem by expanding the size of the window before performing the operation. Note that expanding the window will increase the memory needed to display the picture.

After editing a picture that has been placed on a card, the picture may be displayed in a different scale. If you want the picture to be displayed at a 1-1 scale, double-click the picture and select "Original Size."

With the "Rotate by degree" feature of the Color Paint Tools, rotations are measured from the orientation of a graphic at the time it was selected. If you rotate a selection and then rotate it again, the rotations do not accumulate. If you want cumulative rotations, deselect the graphic after rotating it the first time, re-select it and rotate it again.

If you place pictures onto cards and subsequently delete the picture resource from the stack, you must ensure that each instance of the picture in the stack is also deleted. Otherwise you will see the following message at the location of each instance of the deleted picture in the stack: "Cannot display this image. There may not be enough memory or the image could not be found."

The AddColor XCMD has an undocumented selector, "Depth," which returns the current bit depth of the color buffers in the result.

When a stack colored with Color Tools 1.0 is opened for the first time with Color Tools 2.0, the color will disappear momentarily. The disappearance occurs during the conversion of your stack from AddColor 1.0 to AddColor 2.0. Thereafter the color will be displayed normally.

Building Standalone Applications With Color =====

When color is first applied to a HyperCard stack using Color Tools, a set of resources are copied into the stack. The copying of resources is not actually

complete until the stack is closed. If a standalone application is built from the colored stack before the resources have been copied, the standalone application will not work correctly. To avoid this problem, be sure that you have closed and reopened your colored stack at least once before turning it into a standalone application. You should also be certain that the default partition of your standalone application is set to at least 2048K in order for it to display color properly.

Changes To The Getting Started Guide

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On page 54 the manual states that images you create or edit in the PICT editor are automatically saved as resources in the current stack. This is true unless you are editing a PICT file which has been placed on a card. Changes made to PICT files which have been placed on a card will be reflected in the file itself and will not be saved as resources in the stack.

On page 57 the manual states that double-clicking the current color indicator in the Color Paint Tools palette will launch the color picker. Actually, it will allow you to edit patterns or gradients.

On page 67 the manual refers to the Paint menu. There is no Paint menu, the specified items are in the Options menu.

On page 71 the picture of the palette is slightly different from the one you will see in the software. The functionality is the same. Additionally, the manual states that you can import MacPaint images with the PICT editor. This is not true. Only PICT files can be imported into the PICT editor. If you wish to use and color a MacPaint file, you can Cut/Paste it into an edit window and then color it.

On page 76 the instructions for quitting the Color Paint Tools are incorrect. To exit the Color Paint Tools, close all paint windows, or choose "Close Paint Tools" from the "File" menu. Closing the Color Paint Tools will return you to the color editor environment.

Support Information Services

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Tech Info Library Article Number:17669



Tech Info Library

AWS 95 & A/UX: New Version of 'tc' For DAT-2 Drives (4/95)

Revised: 4/28/95
Security: Everyone

AWS 95 & A/UX: New Version of 'tc' For DAT-2 Drives (4/95)

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Article Created: 28 April 1995

TOPIC -----

A new version of the UNIX tape driver, 'tc', for the AWS 95 is available.

DISCUSSION -----

The principal reason for this release is the support of the Hewlett Packard (HP) DAT-2 tape drive. This version of 'tc' also corrects two other problems identified since the release of A/UX 3.1.1 or the AWS 95 Tune-Up 2.0.

- AWS 95 DAT drive does not support multiple "files"
- Tapes can not be reformatted with mt(1) or Retrospect

This module must be installed as root in /etc/boot.d and then the kernel must be reconfigured and the system restarted.

The checksum of the uncompressed module as reported by the sum(1) command is: 24950.

Retrospect accesses the tape using another mechanism (/dev/scsi) and, therefore, already supports the HP DAT-2. This patch is only necessary if the user is using the UNIX tape archival command 'tar(1)', receives a DAT-2 drive, or needs one of the two fixes mentioned above.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17670



Tech Info Library

PowerShare: Error Code -1660, and Troubleshooting (4/95)

Revised: 4/28/95
Security: Everyone

PowerShare: Error Code -1660, and Troubleshooting (4/95)

=====

Article Created: 28 April 1995

TOPIC -----

I received the following PowerShare error message, "Problem: The server was unable to open folder ID #xx(Error code: -1660)", from the Log window. I also found that the error-catalog-folder does not have a Reliable Trans Log file.

What's causing this to happen? Does the error-catalog-folder need a "Reliable Trans log" file? Do you know any troubleshooting tips?

DISCUSSION -----

The error code -1660 is an internal error (kOCECorruptItemFound) which indicates a corruption was found in the either the Items file or the index to the Items file (ItemsBT). If the problem is in the ItemsBT file, this file can be deleted from the HFS folder, and the server will rebuild it upon restart. If the problem is in the Items file, there is nothing you can do to recover it. You will have to delete the folder from that server and re-replicate (if it was replicated). Otherwise, restore the folder from a backup.

The server only uses the reliabletrans log while the server is running. This file is deleted when the server is shutdown. It is therefore expected there is no Reliable Trans Log in the HFS folder for the catalog folder that is having the problem as you reported.

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Tech Info Library Article Number:17672



Tech Info Library

Color STW 2400: Driver Supports Serial & LocalTalk (4/96)

Revised: 4/10/96
Security: Everyone

Color STW 2400: Driver Supports Serial & LocalTalk (4/96)

Article Created: 1 May 1995
Article Reviewed/Updated: 10 April 1996

TOPIC -----

I added the LocalTalk module to my Color StyleWriter 2400 printer, and there was no additional software with the LocalTalk module. Do I need a new printer driver for the LocalTalk option?

DISCUSSION -----

Because the Color StyleWriter 2400 printer software supports both serial and LocalTalk, no additional printer driver is required.

When you select Color SW 2400 icon in the chooser, the chooser displays available serial ports (printer, modem, or printer/modem) and all networked Color Stylewriter 2400 class printers. This includes the Color StyleWriter 2400 with the localtalk module installed, or GrayShare Color StyleWriter 2200, which are using GrayShare.

All versions of the Color StyleWriter 2400 driver work with all types of networked StyleWriter printers mentioned previously. However, Apple recommends upgrading to version 2.1 or greater of the Color StyleWriter 2400 printer driver. Use the latest version of the Color StyleWriter 2400 printer driver. The article titled "Apple Printers: Printer Drivers & Cables" lists the latest driver versions.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

10 Apr 1996 - Added latest printer driver version reference.

06 Dec 1995 - Clarified discussion area.

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Tech Info Library Article Number:17673



Tech Info Library

LaserWriter 16/600 PS: Correct Way To Use lpr in UNIX (5/95)

Revised: 5/1/95
Security: Everyone

LaserWriter 16/600 PS: Correct Way To Use lpr in UNIX (5/95)

=====

Article Created: 1 May 1995

TOPIC -----

This article contains a correction to the LaserWriter 16/600 PS Setting Up, Connecting, and Using Your Printer manual.

DISCUSSION -----

In Chapter 4 "Setting Up the Printer for UNIX Users", on page 129 the manual states:

12) Test printing with the following command:
. lp -d printer_IP_name filename

This is incorrect. In order to print properly, you need to use the following:

lp -d print_queue_name filename

In other sections of the manual, it states to use lpr -P printer_IP_name. This is also incorrect, you need to use lpr -P print_queue_name.

For "lpr", the "print_queue_name" is the entry name in the "printcap" file.

For "lp", the "print_queue_name" is generated by the underlying UNIX printer spooler facility.

Support Information Services

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Tech Info Library Article Number:17674



Tech Info Library

Macintosh: No Standard RGB Colors (5/95)

Revised: 5/1/95
Security: Everyone

Macintosh: No Standard RGB Colors (5/95)

=====

Article Created: 1 May 1995

TOPIC -----

I am trying to determine what the RGB values used when the Macintosh monitor is set to 256 colors? I want to use these values for a project, and need to know if there is a table of these values available.

DISCUSSION -----

There really are no 'standard colors' used when you set the control panel to 256 colors. Colors are loaded by each individual application when launched on the Macintosh or when an individual file is opened by an application.

The circuitry that controls the colors that are displayed on the screen has a color look-up table (CLUT) and digital to analog converter (DAC). Computer software provides information to the CLUT, which provides color values to the DAC, which provides the correct signals to the display.

The DAC converts the digital number representation of a color pixel into the proper (analog) signal that is used by the display. The digital number is a 24 bit value. The output of the DAC provides the analog Red, Green, and Blue voltage levels that the monitor uses to display the proper colors for each pixel.

The CLUT, when the monitor control panel is set to 256 colors, will display up to 256 different colors that are 24 bits each. In other words, out of an approximate 16 million colors, you can select and display up to 256. The 256 (24 bit) colors that are selected and used are stored and 'looked up' for each pixel that you see on the screen. So what you really have instead of having to choose from only 256 colors is a choice of millions - but you can only select and use 256 colors at a time from the millions that are available.

A DIFFERENT WAY TO LOOK AT IT

It is kind of like having millions of different colored crayons in a storage room to choose from, but for each individual picture you draw, you have a box that only holds 256 crayons. You can only select 256 crayons or colors to use because the box won't hold any more. If you want to draw another picture, you can go back, return the original crayons, and select a completely different group of 256 crayons or colors. The storage room is like the computer and the crayon box that limits the number of crayons you can use for a single picture is the VRAM (if you have more VRAM, you can get more colors).

Support Information Services

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Tech Info Library Article Number:17675



Tech Info Library

QuickTime: Where to Get QuickTime Tools (5/95)

Revised: 5/1/95
Security: Everyone

QuickTime: Where to Get QuickTime Tools (5/95)

=====

Article Created: 1 May 1995

TOPIC -----

I just installed QuickTime 2.0 which came on my system software CD. However, I found out that QuickTime 2.0 did not have QT Convert as did QuickTime 1.0. So I tried to install the QT Convert which came with QuickTime 1.0. However, that didn't work. My question is how can I perform the function of QT Convert with QuickTime 2.0?

DISCUSSION -----

I am not sure what you mean by QT Convert. I cannot find QT Convert on any CD-ROMs that Apple has distributed. Did you mean Convert to Movie 1.0 or Movie Converter 1.0?

If so, the latest version of these tools is ConvertToMovie and it is available in a book and CD-ROM bundle called "QuickTime - The Official Guide for Macintosh Users" by Judith Stern & Robert Lettieri from Hayden Books. This CD-ROM also has several other good QuickTime tools such as MovieShop and MovieAnalyzer.

There are additional developer QuickTime tools available from APDA and online from from ftp sites Apple Computer operates and the Worldwide Web Site:

<http://quicktime.apple.com>

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Support Information Services

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Tech Info Library Article Number:17676



Tech Info Library

Apple Telecom: Using Fax, Voice and Data Call Detection (7/95)

Revised: 7/11/95
Security: Everyone

Apple Telecom: Using Fax, Voice and Data Call Detection (7/95)

=====

Article Created: 1 May 1995
Article Reviewed/Updated: 11 July 1995

TOPIC -----

I'm trying to get PowerTalk using the GeoPort Telecom Adapter and the Apple Telecom 2.0 Software to work together. It's about 80% working but I've run into the following snags.

When dialing in over Apple Remote Access (ARA), MegaPhone answers but fails to recognize that the call is from ARA, or data, and continues with a voice announcement, then it hangs up after about 9 seconds. Outgoing ARA works OK.

I switched the Advanced Settings to Data Application and the GeoPort did answer the call, but when a voice call comes, it was answered with the MegaPhone message and then the modem squeal.

How do I get this to work?

DISCUSSION -----

This problem is documented in the GeoPort, Telecom Adapter 2.0 Read Me. The Apple Telecom software requires data calling tones in order to automatically detect that an incoming call is a data modem call. The best solution is:

- Set the ARA or data application from which the call originates to send calling tones.

With ARA, if you are using an Express Modem or GeoPort Telecom Adapter with Apple Telecom software, use the 'GeoPort Telecom ARA 2.x/CNG' CCL file. Drag the file from the Telecom Documents folder to your Extensions folder and select this CCL file in the pull down menu of your Remote Access Setup control panel.

With a data application like a BBS or terminal emulation software, if you are using an Express Modem or GeoPort Telecom Adapter with Apple Telecom software, add an 'ATS113=1' to the modem initialization string.

For non-Apple modems, the modem may support the data calling tones necessary for Apple Telecom to perform data call detection. Most 14.4 and 28.8 modems now support the calling tones. The Hayes standard is to add a '^' to the dialing string. For example, with the Hayes 28.8 and Global Village Gold IIv modems, use the command 'ATDT^ 555-1212' to activate the calling tones. Check with your modem manufacturer for support of calling tones or just try a '^' in the phone number.

Two other workarounds are:

- Quit the voice application when you expect a data call.
- Temporarily select Data as the default call type in the advanced options panel of the Express Modem control panel.

Article Change History:

11 Jul 1995 - Update information on ARA detection.

Support Information Services

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Tech Info Library Article Number:17677



Tech Info Library

PowerTalk/PowerShare, Digital Signatures, & IP Gateways (5/95)

Revised: 5/1/95
Security: Everyone

PowerTalk/PowerShare, Digital Signatures, & IP Gateways (5/95)

=====

Article Created: 1 May 1995

TOPIC -----

An AppleMail message can be signed using the RSA digital signature and sent to other users through PowerTalk or PowerShare with no problem. However, the same message sent through an IP Gateway and back into PowerTalk from the Internet loses its signature.

DISCUSSION -----

The digital signature information is included in the header of a file. This header information cannot be properly handled by external mail systems and is stripped when forwarded through a gateway.

A workaround is to send signed files as AppleMail enclosures.

Support Information Services

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Tech Info Library Article Number:17678



Tech Info Library

PowerShare Mail Delivery Fails with Restricted Privileges (5/95)

Revised: 5/1/95
Security: Everyone

PowerShare Mail Delivery Fails with Restricted Privileges (5/95)

=====

Article Created: 1 May 1995

TOPIC -----

We have a PowerShare system which is not delivering AppleMail. The Catalog browser seems to be working okay since users can see one another and select recipients for messages. However, mail messages remain in the Out Tray. The warning triangle appears in the window indicating the need to resolve a PowerShare error, and clicking on it indicates that the PowerShare server cannot be reached and the error seems unresolvable. PowerShare Admin indicates the Mail Server is running fine.

DISCUSSION -----

Privileges within the PowerShare Catalog can easily be modified in such a way that Mail services will cease. In this case the aoce mailslots, aoce MessageQs, aoce prefMessageQ, and aoce pref mailslot had access privileges set so only the Administrator could see these attributes.

The default settings for these attributes allow Catalog Members to see the records. While in some cases there may be a need to change access privileges for user records, but for most installations the defaults suit their needs.

Support Information Services

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Tech Info Library Article Number:17679



Tech Info Library

Earth Explorer Issue With CE Toolbox (5/95)

Revised: 5/8/95
Security: Everyone

Earth Explorer Issue With CE Toolbox (5/95)

Article Created: 1 May 1995
Article Reviewed/Updated: 8 May 1995

TOPIC -----

I found a problem with Earth Explorer. I have a clean system (7.5), with only QuicKeys 3.0.1 installed. My machine is a Power Macintosh 6100/60 with 8 MB of RAM.

The problem is that after I launch Earth Explorer, and choose a sub-topic from one of the topics on the main menu (such as "Explore" or "Hot Topics"), as soon as it is supposed to "link to Explore/Topics", the computer bongs 3 times and the application quits, completely and immediately.

DISCUSSION -----

I have reproduced the problem on a Power Macintosh 8100/100, with 16 MB of RAM, and noticed that both the CE Toolbox and the QuicKeys Toolbox inits were "greyed out" during the init display at startup.

System 7.5 Update 1.0

Installation of the System 7.5 Update 1.0 will resolve this issue. You do not need a new version of QuicKeys.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

System 7.5 Only

..TIL17680-Earth_Explorer_Issue_With_CE_Toolbox_5-95_(TA33675).pdf

If you do not yet have the System 7.5 Update 1.0, but you need to use Earth Explorer right away, try this workaround:

I used the Extensions Manager to turn off the following items, which allowed me to use Earth Explorer successfully after restart:

CEToolbox -- extension
QuicKeys Toolbox -- extension
QuicKeys -- control panel

This article provides some information about a non-Apple product. Apple Computer, Inc. is not responsible for any content referring to this non-Apple product. Please contact the vendor, CE Software, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17680



Tech Info Library

ColorSync 2.0: Compatible Version of LaserWriter Driver (7/95)

Revised: 7/7/95
Security: Everyone

ColorSync 2.0: Compatible Version of LaserWriter Driver (7/95)

=====

Article Created: 2 May 1995
Article Reviewed/Updated: 7 July 1995

TOPIC -----

What LaserWriter driver should I be using to be compatible with the ColorSync 2.0 format? I have a non-Apple PostScript color printer that was ColorSync 1.0 compatible.

DISCUSSION -----

The LaserWriter driver version 8.3 has ColorSync 2.0 support. Unless you already have it, you will also need to acquire a ColorSync 2.0 profile from the manufacturer of their printer.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:
07 July 1995 - Updated with current information.

Support Information Services

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Tech Info Library Article Number:17681



Tech Info Library

DOS Compatibility Card: Use VLM.EXE With NetWare (9/96)

Revised: 9/20/96
Security: Everyone

DOS Compatibility Card: Use VLM.EXE With NetWare (9/96)

Article Created: 2 May 1995
Article Reviewed/Updated: 20 September 1996

TOPIC -----

I am trying to connect to a Novell NetWare 3.12 server using a DOS Compatibility Card. However, when I use NETX 3.32 with ETHERNET_802.3 from MS-DOS, I get the error message "Can't connect to a server", and then the application quits.

DISCUSSION -----

Apple has tested NETX.EXE and it seems to function properly, however both Apple and Novell recommend upgrading the workstations to VLM.EXE because of its versatility and smaller memory footprint. Also Novell no longer supports NETX.EXE, so you should use VLM.EXE.

Following is a list of version numbers of the various components Apple Computer tested:

Begin_Table

MACODI.COM	v0.23
LSL.COM	v2.01 and v2.14
IPXODI.COM	v2.11 and v3.01
NETX.EXE	v3.32
VLM.EXE	v1.20
NETX.VLM	v4.20

End_Table

NETX.EXE or NETX.VLM is the DOS requester shell. A configuration error is the likely cause of the error. Typically, "Can't find a server" error messages are almost always related to frame type settings in the link driver section of the NET.CFG file. Here is an sample NET.CFG file to compare with what you are using.

Begin_Table

Note:

In the NET.CFG tabs are important.

SAMPLE NET.CFG

Link Driver MACODI

Protocol IPX 0 ETHERNET_802.3

FRAME ETHERNET_802.3

Netware DOS Requester

FIRST NETWORK DRIVE = F

Link Support

Buffers 8 1500

MemPool 4096

End_Table

Notice that tabs were used to indent.

Connecting a DOS/Windows computer into the same drop and having them operate correctly only indicates that the hardware is functioning correctly. The link driver section has to explicitly name the driver -- in this case MACODI. If you copied a NET.CFG file from another computer, it will not work. Novell Netware 3.x servers default to Ethernet 802.3, while 4.x servers default to 802.2.

Article Change History:

20 Sep 1996 - Updated title.

19 Sep 1995 - Clarified discussion.

10 Aug 1995 - Article revised by author.

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Tech Info Library Article Number:17682



Tech Info Library

AppleShare 4.1: How To Optimize Speed (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare 4.1: How To Optimize Speed (7/95)

=====

Article Created: 3 May 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes how to get the best performance from AppleShare 4.1 on a PowerPC-based computer.

DISCUSSION -----

To get the best performance from AppleShare 4.1 and a PowerPC-based computer, use the following guidelines.

Server

- PowerPC-based Workgroup Server or Power Macintosh
- AppleShare 4.1
- System 7.5 with System 7.5 Update 1.0
- Network Software Installer (NSI) 1.4.5 or later
- Do not have multiple applications running on the server.
For example run AppleShare 4.1 alone, not in conjunction with the Apple Internet Router, Apple Remote Access (ARA), or other server applications.

NOTE: This does not mean you cannot run multiple applications with AppleShare 4.1, this item is specific to those users who want the best possible performance.

- The server should have no less than 5 MB of RAM dedicated to cache, and a starting point toward optimizing cache allocation as follows:
 - 1/4 File buffer cache

- 1/2 Folder cache
- 1/4 Icons

AppleShare 4.1 handles and queues up to three requests from each client. AppleShare's maximum File cache is now 1 MB per user, up from 128 KB. The caching algorithms are also more efficient, and the Icon cache now holds all of the server's desktop files in RAM, rather than just the icons.

Client

- AppleShare Workstation 3.6 client which comes with AppleShare 4.1
- System 7.5 with System 7.5 Update 1.0
- NSI 1.4.5 or later
- On Power Macintosh clients use NSI 1.5, or Built-In Ethernet MACE patch
- SCSI Manager 4.3 or later, and the latest HD drivers

NOTE: Running a remote client on ARA to the network server negates any performance increases, because of the modem connection.

AppleShare Workstation 3.6 uses up to 128 KB of RAM for both read and write caches. Also, the Finder in System 7.5 Update 1.0 copies files in varied portions up to 128 KB instead of 4 KB in earlier versions of the Finder.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 15

Article Change History:

19 Jul 1995 - Added Info Alley information.
14 Jun 1995 - Added information for clarification.
08 May 1995 - Added more information.

Support Information Services

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Tech Info Library Article Number:17686



Tech Info Library

ColorSync: Setting Up & Using ColorSync (11/95)

Revised: 11/29/95
Security: Everyone

ColorSync: Setting Up & Using ColorSync (11/95)

Article Created: 3 May 1995
Article Reviewed/Updated: 28 November 1995

TOPIC -----

This article describes what you need to install and use ColorSync and the various components of ColorSync.

DISCUSSION -----

Overview of ColorSync
=====

ColorSync is an extension to QuickDraw. It facilitates color conversion from the color space (method of mathematically describing a color) of one device to the color space of another device. It does this while maintaining consistent visual representation. In simple terms, ColorSync displays and prints the same image that it scanned.

A detailed overview of ColorSync is available in the Tech Info Library article titled "ColorSync Software: Overview".

Installing ColorSync
=====

ColorSync is automatically installed when you install the software from System 7.5, Apple Multiple Scan Displays, Color StyleWriter printers, and QuickTake cameras. It is also available from non-Apple sources that have licensed the ColorSync from Apple.

Installing ColorSync Manually

ColorSync consists of three main components:

- ColorSync extension
- ColorSync System Profile control panel
- ColorSync Profile

You can install ColorSync manually by:

- dragging the ColorSync extension into the Extensions folder.
- dragging the System Profile control panel into the Control Panels folder.
- dragging the ColorSync Profiles folder, with the ColorSync Profiles inside, into the Preferences folder.

Once the components are installed, you need to restart to activate ColorSync.

Note:

If you have a non-Apple ColorSync profile, you need to drag it into the ColorSync Profiles folder located in the Preferences folder.

Setting Up ColorSync

=====

Once you ColorSync is installed, you need to open the ColorSync System Profile control panel and select the correct profile for your output device (monitor, printer, camera, or other device).

If you have a non-Apple output device, you need to contact the product vendor to obtain the proper ColorSync profile.

Article Change History:

28 Nov 1995 - Updated reference to other TIL article.

Support Information Services

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Tech Info Library Article Number:17688



Tech Info Library

System 7.5.1: Printing Problems with DeskWriter 560c (5/95)

Revised: 5/3/95
Security: Everyone

System 7.5.1: Printing Problems with DeskWriter 560c (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

I have a Hewlett-Packard DeskWriter 560c and I cannot get it to print from Microsoft Word 6.0. I am using System 7.5 with the System 7.5 1.0 Update (7.5.1), and I do not have this problem with other applications.

DISCUSSION -----

When combining the large memory size of Word 6.0 and Mac OS version 7.5.1, it seems to cause problems with the HP driver. You need to either turn on virtual memory from the Memory Control panel, or raise the amount of memory in the Word 6.0 Get Info window. You will need to change both the preferred and minimum size areas.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17689



Tech Info Library

Macintosh 630: No Sound in Left Channel (7/95)

Revised: 7/10/95
Security: Everyone

Macintosh 630: No Sound in Left Channel (7/95)

Article Created: 3 May 1995
Article Reviewed/Updated: 10 July 1995

TOPIC -----

After installing the Apple Video Input Module card in my Macintosh 630 family computer, I get sound only from the right channel (red) on the Video Input Module card.

DISCUSSION -----

Grounding the left sound channel on the Video Input Module card is one possible cause of this symptom. The Video Input Module card has an EMI shield around the S-video port that can touching the left sound channel (white) port. This sends the signal to the electrical ground, instead of the speaker.

To correct this, pull the card out of the computer, bend back the EMI shield prongs, so they are no longer touching the left sound channel port, then reinstall the card.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Article Change History:
10 Jul 1995 - Reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17690



Tech Info Library

Power Macintosh: Can't Determine If L2 Cache Is Installed (7/95)

Revised: 7/20/95
Security: Everyone

Power Macintosh: Can't Determine If L2 Cache Is Installed (7/95)

=====

Article Created: 3 May 1995
Article Reviewed/Updated: 20 July 1995

TOPIC -----

Is there anyway to determine if the L2 Cache is installed in a Power Macintosh computer? I have tried several software tools such as, Norton Utilities, Apple Personal Diagnostics, and NOW Profiler, but none of them told me if the L2 Cache was installed. Is this a hardware or software limitation?

DISCUSSION -----

This is not a hardware or software limitation. It is just that implementing a method for checking whether cache memory is available is not a trivial task.

Doing this would involve coding down to the memory controller level, or creating a cache-intensive application which could determine the speed differences when the cache was installed or not.

Note:

Some "shareware" software which performs this test is available, but not from Apple Computer, Inc. Use of and results reported by such software is not supported or endorsed by Apple Computer, Inc. You may be able to find this type of shareware on local electronic bulletin boards or online services.

Basically, there is not an ideal answer to your request for this information. Besides having the customer open their computer to check for the physical presence of the cache, the best a technical support person or technician can do is to check the technical specifications for the Power Macintosh computer in question.

Article Change History:
20 Jul 1995 - Reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17691



Tech Info Library

QuickDraw GX 1.1.2: Read Me (5/95)

Revised: 5/3/95
Security: Everyone

QuickDraw GX 1.1.2: Read Me (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

This article contains the ReadMe file for QuickDraw GX 1.1.2.

DISCUSSION -----

What Changed in QuickDraw GX 1.1.2
=====

QuickDraw GX 1.1.2 fixes several problems found since the release of the previous version.

Installation Over Previous Versions
=====

There is no longer a need to delete the Finder Preferences file when installing over a previous version of QuickDraw GX.

Finder Out of Memory Alerts
=====

Some users were encountering multiple Finder out of memory alerts while printing with QuickDraw GX 1.1.1. This problem is fixed in QuickDraw GX 1.1.2.

Crash When Canceling Printing From Power Macintoshes to Networked PostScript Printers
=====

Some users were encountering problems when canceling a print job to a networked PostScript printer. This problem is fixed in QuickDraw GX 1.1.2.

Unable to Print to Tektronix and Hewlett-Packard PostScript Printers
=====

Some users were unable to print to Tektronix and Hewlett-Packard PostScript printers with QuickDraw GX 1.1.1. This problem is fixed in QuickDraw GX 1.1.2.

What Changed in QuickDraw GX 1.1.1

=====

QuickDraw GX 1.1.1 provided performance improvements, a user interface change, and new features.

Performance Improvements

- no "lock out" when downloading fonts to PostScript printers
- font downloading progress shows in the desktop printer window
- prints large character sets, such as Japanese, on printers that do not have these fonts built in
- prints large character sets faster than GX 1.0.2 or the non-GX LaserWriter 8.2 printer driver
- printing dialogs for non-QuickDraw GX applications display more quickly

User Interface Change

When a desktop printer queue is empty (such as after the last job has printed) the page icon goes away rather than turning into the dog-eared page icon.

New Features

=====

Manual Feed Alerts

To turn off the alerts for manual feed printing on PostScript printers, open the Printing menu and choose Disable Manual Feed Alerts.

LaserWriter GX Features

In the PostScript printing dialog box for non-QuickDraw GX applications, two new menus allow you to choose paper types. Use the "First Page On" menu to choose a paper type for the first page. Use the "Remaining Pages On" menu to choose a paper type for the rest of the document.

N-Up Printing Options

The N-Up Printing extension (in your Extensions folder) lets you print up to 16 pages on a single sheet of paper. You can also put an optional border around each page drawn on a sheet.

- To set pages-per-sheet and border defaults for a desktop printer, click the printer icon to select it then choose N-Up Printing Options from the Printing

menu.

- To select pages-per-sheet and border options when you print a document created in a QuickDraw GX-aware application, click the N-Up printing extension icon in the Print dialog box.

- To select pages-per-sheet and border options for a document created in an application that does not support QuickDraw GX, choose Page Setup in the File menu.

PostScript File Options

EPSExtension (in your Extensions folder) lets you configure the PostScript file that is created whenever you print using the LaserWriter GX printer driver.

- You can use the saved file as Encapsulated PostScript for importing graphics into applications that do not support QuickDraw GX, such as Aldus PageMaker, QuarkXPress, and Adobe Illustrator.

- To set EPS options, choose PostScript File Options from the Printing menu.

- EPSExtension is not installed by Easy Install. To get it, you must open the QuickDraw GX Installer and choose Custom Install from pop-up menu. Click the arrow next to QuickDraw GX Utilities to see the list of utilities, and click the checkbox next to EPSExtension to select it. Then click the Install button.

Paper Types

QuickDraw GX 1.1.1 include 3 new paper types for use in configuring the paper tray selections for desktop printers: Letterhead, Stationery, and 3-Hole Punch.

- The new paper types are installed by Easy Install For more information on editing the new papers types or creating your own paper type, you must install the PaperType Editor.

- The PaperType Editor is not installed by Easy Install. To install it, open the QuickDraw GX Installer and choose Custom Install from pop-up menu. Click the arrow next to QuickDraw GX Utilities to see the list of utilities, and click the checkbox next to PaperType Editor to select it. Then click the Install button.

Tips

====

Envelope Paper Types and the LaserWriter GX Driver

The LaserWriter GX printer driver handles three types of No. 10 envelopes. However, each of the three types is designed for a different type of LaserWriter printer. Your choice of envelope should be based on how your printer feeds envelopes from the paper input tray:

- "Envelope - Center Fed" is for printers that feed the envelope in the center of the paper input tray.

- "Envelope - Edge Fed" is for printers that feed the envelope on the left edge of the paper input tray.
- "No. 10 Envelope" is for certain new printers (e.g., the LaserWriter 16/1600PS) that use a different method of determining paper size.

Restoring Type 1 Fonts to Their Original State

If you remove QuickDraw GX from your system, you need to restore your Type 1 fonts. To restore Type 1 fonts, follow these steps:

1. Open the System Folder.
2. Open the Fonts folder.
3. Drag any suitcases that have been enabled to the Trash.
4. Open the •Archived Type 1 Fonts• folder.
5. Move the contents of the •Archived Type 1 Fonts• folder to the Fonts folder.
6. Drag the •Archived Type 1 Fonts• folder to the Trash.

Tekton Plus RegularSC Prints as Courier From Some Applications

In application programs which do not take advantage of QuickDraw GX, Tekton Plus appears as two fonts: Tekton Plus Regular and Tekton Plus RegularSC. Applications such as Adobe Illustrator, QuarkXPress, and Aldus PageMaker print characters from Tekton Plus RegularSC as Courier on PostScript printers.

Troubleshooting

=====

QuickDraw GX and Memory

On a Macintosh with 8 MB of available memory with Macintosh system software version 7.5, QuickDraw GX, and PowerTalk, you can enable only a limited number of printing extensions and desktop printers. More than 7 of each at the same time may cause a low-memory alert to appear. If you want to have more than 7 desktop printers, removing a printing extension will help alleviate memory difficulties and vice-versa. If a low-memory alert does appear, try deactivating printing extensions or removing desktop printers. For more information about desktop printers and printing extensions, see the Macintosh System 7.5 Upgrade Guide.

QuickDraw GX and Application Programs

If possible, do not use the QuickDraw GX Helper (to turn off desktop printing) with WordPerfect versions 3.0 and earlier. In WordPerfect, when you turn desktop printing off, the third item on the Apple Menu (which corresponds to the first alphabetic item in the Apple Items folder) opens. WordPerfect versions 3.1 and later are compatible with QuickDraw GX.

- In PageMaker version 5.0, documents containing PICTs will print without the PICTs and an extra blank page may be printed at the end of some documents. To print correctly, hold down the Option key when you choose Print from the File

menu.

- To print on a PostScript printer using Insignia Solutions' SoftPC and SoftWindows versions earlier than 1.0.2a, you must turn off desktop printing or use the Epson LQ-2500 output option. To turn off desktop printing, use the QuickDraw GX Helper (one of the QuickDraw GX Utilities). To install the QuickDraw GX Utilities, see the instructions in Chapter 3 ("Installing QuickDraw GX") of the Macintosh System 7.5 Upgrade Guide. SoftWindows versions 1.0.2a and later are compatible with QuickDraw GX.

- Adobe Acrobat Reader versions earlier than 2.0.1 and all versions of Adobe Acrobat Exchange are incompatible with QuickDraw GX 1.1.2. Please contact Adobe Systems for upgrade information.

- The substitution fonts included with Adobe Illustrator 5.5 and SuperATM are not compatible with QuickDraw GX 1.1.2. If you install QuickDraw GX 1.1.2 on a Macintosh where these substitution fonts have already been installed, you will see a dialog box which says "The substitution fonts necessary for Acrobat and SuperATM are missing. Please re-install either software package." QuickDraw GX-compatible versions of these fonts are available as part of the Adobe Acrobat Reader 2.0.1 package. Please contact Adobe Systems for more information.

- You should print documents that use the Al-Nashir Al-Sahafi font (Arabic Design Studio) on raster (non-PostScript) printers. If you try to print an Al-Nashir Al-Sahafi document on a PostScript printers, no document will print.

Installing QuickDraw GX with the Power Macintosh Upgrade Card

When you install QuickDraw GX on a Macintosh with the Power Macintosh Upgrade Card, make sure that the upgrade card is enabled before installing QuickDraw GX.

Manual Feed and the LaserWriter IISC GX driver

When you print a manual feed job to a printer using the LaserWriter IISC GX driver, wait for the manual feed alert to appear before inserting the next page. If you insert the page before the alert appears, your printer will print the first page twice and then stop printing. Opening and closing the cover on your printer will clear it.

QuickDraw GX with the Vector Imaging System on the Power Macintosh

There is a problem with the Vector Imaging System and Power Macintosh. If you have problems plotting, turn off Modern Memory in the Memory control panel.

Support Information Services

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Tech Info Library Article Number:17692



Tech Info Library

AWS 95: Problems Pinging nameserver (5/95)

Revised: 5/3/95
Security: Everyone

AWS 95: Problems Pinging nameserver (5/95)

Article Created: 3 May 1995

TOPIC -----

I'm setting up a WAIS server on an Apple Workgroup Server (AWS) 95, and I'm having problems pinging nameserver, but not the gateway router.

I can usually ping nameserver right after bringing up the AWS 95, but this capability disappears shortly thereafter. Characteristically when I fire up AppleSearch, the outside Ping and nameserver Ping capability go away.

I have checked the rc and resolv.conf files, and these appear to properly define both the nameserver and the gateway router address.

DISCUSSION -----

The AWS 95 is sending packets to the default route as assigned in the /etc/rc file, but it gets confused when your Telebit NetBlazer router sends out its routing tables every 30 seconds.

The in.routed is the routing software for UNIX, and the AWS 95 comes configured with in.routed set to wait in its /etc/inittab file. When in.routed gets an update from the NetBlazer, in.routed is changing its internal routing tables which means it can no longer reach anything outside of its local subnet.

The solution is to go into /etc/inittab and turn the in.routed to off.

Change the line:

```
net4:2:wait:/etc/in.routed    # set to "wait" for routing
```

to

```
net4:2:off:/etc/in.routed      # set to "wait" for routing
```

Now the AWS 95 will ignore all outside routing information.

Support Information Services

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Tech Info Library Article Number:17693



Tech Info Library

Power Macintosh DOS Compatibility and Personal Netware (5/95)

Revised: 5/3/95
Security: Everyone

Power Macintosh DOS Compatibility and Personal Netware (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

We have a Power Macintosh 6100/66 DOS Compatible computer, and we've installed Personal Netware on their DOS machine. We have experienced numerous freezing problems since, and we believe this is associated with Personal Netware. The README.NET that comes with the 6100/66 DOS Compatible computer says "Personal Netware is not supported at this time."

Are there any details on Personal Netware with the Power Macintosh DOS Compatibility Card? Is it unsupported, untested, and/or incompatible? If it is incompatible, can you describe specific behavior?

DISCUSSION -----

As of May 1995, Personal Netware is unsupported and untested on the Power Macintosh DOS Compatibility Card, so we have no specific behaviors to report. Also there are no plans for testing this software.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17694



Tech Info Library

Apple Remote Access: I Cannot Print To My StyleWriter (5/95)

Revised: 5/3/95
Security: Everyone

Apple Remote Access: I Cannot Print To My StyleWriter (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

I'm using Apple Remote Access (ARA) on my remote Macintosh, and I have a StyleWriter II attached to the printer port. When I want to print, I get an error message saying that the port is in use by another program. When I go to the Chooser to make sure the StyleWriter II is set to the printer port, it tells me I cannot do this while AppleTalk is active. I need AppleTalk to be active when I use ARA. How can I print from my StyleWriter (or any serial printer) from ARA?

DISCUSSION -----

You need to change the AppleTalk connection in the Network control panel. Be sure you are not connect via ARA when you start.

- 1) Go to the Network control panel and click Remote Only. It will give you a message saying that network services will be disconnected. Click OK.
- 2) Go to Chooser, select your printer, and highlight the port to which you have connected the printer.
- 3) Make sure AppleTalk is active in the Chooser window.

You should now be able to print to your local serial printer while either connected, or not connected to ARA.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17695



Tech Info Library

AppleTalk On AWS 95: Cannot Upgraded With NSI 1.5 (5/95)

Revised: 5/3/95
Security: Everyone

AppleTalk On AWS 95: Cannot Upgraded With NSI 1.5 (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

We recently looked at a client's Apple Workgroup Server (AWS) 95 and found it is running AppleTalk version 56, while the other servers and computers at the site had AppleTalk version 58. Is there any reason not to upgrade the AWS 95 to AppleTalk 58?

Is the process of upgrading the AWS 95 to AppleTalk version 58 any different than on a standard Macintosh?

DISCUSSION -----

Do NOT try to install the latest Mac OS version of AppleTalk from the Network Software Installer (NSI) 1.5 as it is not compatible with A/UX. The AWS 95 uses a special version of AppleTalk, which is designed to run on A/UX. The version will report version 56 when polled, however it is compatible with the latest AppleTalk version 58.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17696



Tech Info Library

Disable Auto Log On To Nonexistent AppleShare Volume (5/95)

Revised: 5/3/95
Security: Everyone

Disable Auto Log On To Nonexistent AppleShare Volume (5/95)

=====

Article Created: 3 May 1995

TOPIC -----

When my Macintosh boots, an AppleShare log on dialog appears for server volumes which no longer exist on the network. How can I get rid of these attempts to log on to nonexistent server volumes?

DISCUSSION -----

Automatic log on can be disabled by throwing the AppleShare Prep file (System Folder: Preferences: AppleShare Prep) in the trash. Removing this file will eliminate automatic log on for all server volumes. Restoring automatic connection to specific server volumes at startup can be accomplished in the usual fashion.

NOTE: Some third-party software, like Suitcase, will also attempt to mount remote volumes at startup. Vendors should be contacted for instructions on disabling automatic log on their own software.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17697



Tech Info Library

Resetting The PRAM Causes Loss Of RAM Disk Contents (6/95)

Revised: 6/13/95
Security: Everyone

Resetting The PRAM Causes Loss Of RAM Disk Contents (6/95)

Article Created: 4 May 1995
Article Change History: 13 June 1995

TOPIC -----

During a recent troubleshooting session a friend of mine advised me to reset (or zap) my Parameter RAM (PRAM) as a way to "clear" my serial port. However, neither I nor my friend knew that this procedure would delete my RAM disk and its contents. Why did this happen?

DISCUSSION -----

If you are using a RAM disk, and you reset Parameter Ram (PRAM) (by simultaneously holding down the Command-Option-P-R keys at the initial startup chime) the settings in the Memory control panel revert to their factory defaults.

The default setting for a RAM disk in the Memory control panel is "off". As a result, any contents on a previously active RAM disk are lost when the PRAM is reset.

This happens regardless of whether or not the RAM disk is the startup disk. The presence of the Assistant Toolbox extension (on a Powerbook computer) does not prevent this data loss. Therefore, Apple recommends backing up all important items from a RAM disk to another disk before resetting the PRAM.

NOTE: Simply restarting the machine does not purge the contents of the RAM disk. However, selecting Shut Down from the Special menu or powering the machine off from the power switch erases the contents of the RAM disk (unless the Assistant Toolbox extension [for PowerBook computers] or similar utility [for other Macintosh computers] is installed). If the machine is shut down in this manner the contents of the RAM disk cannot be retrieved even if it is immediately restarted.

This article was published in the "Information Alley":

Volume II, Issue 4, Page 5

Article Change History:

13 Jun 1995 - Added kalley keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17699



Tech Info Library

A/UX: ftp Autologin (5/95)

Revised: 5/4/95
Security: Everyone

A/UX: ftp Autologin (5/95)

=====

Article Created: 4 May 1995

TOPIC -----

The A/UX man pages provide instructions for setting up the ftp Autologin process by creating a .netrc file. However, I can't seem to get this file to work.

DISCUSSION -----

The documentation provides a description for entries in the .netrc file, but fails to note the order of execution. For the file to work, the machine name of the remote system needs to be the first entry. This would be followed by login, password, and then any macdef entries for ftp macros.

Support Information Services

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Tech Info Library Article Number:17700



Tech Info Library

LaserWriter 16/600 PS: NetWare 4.1 Printing Issues (1/96)

Revised: 1/24/96
Security: Everyone

LaserWriter 16/600 PS: NetWare 4.1 Printing Issues (1/96)

Article Created: 4 May 1995
Article Reviewed/Updated: 24 January 1996

TOPIC -----

I cannot set up our LaserWriter 16/600 PS printer to work on a NetWare 4.1 Server. Everything worked fine under Netware 3.1x.

DISCUSSION -----

You can configure the printer in PSERVER mode by using PCONSOLE. The steps are outlined below.

Note:

You can only print with the banner page turned "off", and you must verify that the Netware Ethernet port is set to "AutoSelect" using the Apple Printer Utility.

You also have the option to print to the LaserWriter 16/600 by installing and configuring Netware for the Macintosh. You should contact Novell for instructions on how to do that.

NetWare v4.10 QuickStart
=====

Setting up PSERVER operating mode

Background:

The change from NetWare v3.xx to NetWare v4.xx introduced the concept of a hierarchical tree database, called NetWare Directory Services (NDS). This object-oriented database is significantly different than the flat file style of database used in NetWare v3.xx (called the Bindery). In order for NDS to be backward compatible with the old Bindery, and code that may rely on the Bindery (such as printer ROM code), NetWare has a command called SET BINDERY CONTEXT, that allows a single level of the NDS directory tree to be specified as a

virtual Bindery location. A NetWare v4.xx server's bindery context can be found by typing SET BINDERY CONTEXT at the console prompt.

The super user account name has changed with NetWare v4.xx to Admin from NetWare v3.xx's name of Supervisor. The Supervisor account still exists in NetWare v4.xx for backwards compatibility, but it can't actually be seen in the NDS directory tree. The Admin account gives you full access to the entire NetWare Directory Services tree, the Supervisor account will only let you see objects that are in its Bindery context location in the tree. To follow the steps listed below, you should use the Admin NDS account.

Summary:

- Create a print server.
- Create a printer from within the print server configuration menu options.
- Create a print queue from within the printer configuration menu options.
- Turn printer off and then back on to have changes take effect.

QuickStart:

Step 1

Use the Apple Printer Utility to print a configuration page.

Note:

There are occasions when the printer name on the startup page differs from the printer name on the configuration page. If this happens, the name on the configuration page is the correct name of the printer.

Step 2

Type SET BINDERY CONTEXT at the server's console prompt, to ensure that the context has been set. Write the context down, as it will be needed later.

Step 3

Login to a file server from a DOS client using the Admin account.

Step 4

At the DOS prompt, type PCONSOLE, and press Enter.

Step 5

Use the arrow keys to highlight Change Context in the menu, and press Enter.

Step 6

Change the PCONSOLE utility's context to match the context set on the server

(what you wrote down earlier), by pressing the Insert key, and selecting the correct context.

Step 7

Use the arrow keys to highlight Print Servers in the menu, and press Enter.

Step 8

Press the Insert key, then type the NetWare Printer Name (provided on the printer's startup page), and press Enter.

Note:

Even though the startup page calls this name the NetWare Printer Name, it really will be used as the NetWare Print Server name.

Step 9

Select the name of the print server you specified in the previous procedure and press Enter.

Step 10

Use the arrow keys to highlight Printers in the Print Server Information menu, and press Enter (this will let you configure the new print server).

Step 11

Press the Insert key to display printers in your current context in the NetWare Directory Services tree. For this example, we will create a new printer.

Step 12

Press the Insert key to create a new printer in the NetWare Directory Services tree (the context listed at the top of the screen should still list the server's bindery context that was set earlier, if not, change to the correct context *before* creating the printer!).

Step 13

At the prompt, type the new printer name and press Enter. This name will be used for reference, so use a name that will be meaningful to the NetWare administrator, or other users who may wish to check on the printer's status. This step will create the printer object in the NDS tree.

Step 14

Select the name of the printer you specified in the previous procedure and press Enter (this will add the printer to the Serviced Printer list of the print server).

Step 15

From the Serviced Printers menu list, select the name of the printer you specified in the previous procedure, and press Enter. This will bring up a Printer Configuration menu.

Step 16

From the Printer Configuration menu, use the arrow keys to highlight Printer type, and press Enter.

Step 17

From the Printer Type menu, use the arrow keys to highlight Other/Unknown, and press Enter. This will make your selection active, and bring you back to the Printer Configuration menu.

Step 18

If most of the printing to this printer will be Postscript, and not PCL, then from the Printer Configuration menu, use the arrow keys to highlight Banner type, and change the banner type from Text to Postscript. This will limit the number of times the printer will have to switch modes between PCL and PostScript.

Step 19

From the Printer Configuration menu, use the arrow keys to highlight Print queues assigned, and press Enter. This will bring up the Print Queue menu list.

Step 20

Press the Insert key to display print queues in your current context in the NetWare Directory Services tree. For this example, we will create a new queue.

Step 21

Press the Insert key to create a new print queue in the NetWare Directory Services tree (the context listed at the top of the screen should still list the server's bindery context that was set earlier, if not, change to the correct context **before** creating the print queue!).

Step 22

At the prompt, type the new queue name and press Enter. You will then be asked for the NetWare volume to store your NetWare print queue jobs on. With NetWare v4.xx, the NetWare queue does not have to exist on the SYS volume -- you can place the queue on any volume you want. Use the insert key to select the volume from the directory tree (you may need to navigate to a different context to select the volume desired).

Step 23

Select the name of the queue you specified in the previous procedure and press Enter (this will add the queue to the Print Queue list of the printer).

Step 24

Press the Escape key until you are prompted to save your changes.

Step 25

Turn the printer off, and then back on again, to initialize the printer, and have it connect to its printer definition within NetWare.

Step 26

Submit a print job to the printer to ensure it is working. If printing from a PC, it is highly recommended that you use the FONTLIST.PS file in SYS:SYSTEM\NW-MAC\PSUTILS, since it is a known good file, and you will not add additional variables like misconfigured applications or drivers. Once you know that printing is working through the queue, you can use more complex print setups to ensure your environment is configured correctly.

Note:

These series of steps is only one of many ways that can be used to create the same configuration. For example, rather than creating all the printers and print queues from within the print server main menu option, many administrators may choose to create the queues and printers from the main menu options first, then connect the queues and the printers to the print server afterward. The same result will be reached in each case, as long as the information in each entry is entered the same way in whatever approach is taken.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

24 Jan 1996 - Changed title to better reflect article contents.
19 Jul 1995 - Reworded for clarity and technical accuracy
15 May 1995 - Updated for clarity.

Support Information Services

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Tech Info Library Article Number:17703



Tech Info Library

AWS95 & A/UX Compatible: LaserWriter & LocalTalk Bridge (6/95)

Revised: 6/2/95
Security: Everyone

AWS95 & A/UX Compatible: LaserWriter & LocalTalk Bridge (6/95)

=====

Article Created: 4 May 1995
Article Reviewed/Updated: 2 June 1995

TOPIC -----

Can I use the Apple LocalTalk Bridge 2.0, Apple LaserWriter Bridge 2.0, or LaserWriter Bridge 1.0 on an Apple Workgroup Server (AWS) 95 or A/UX system?

DISCUSSION -----

The LaserWriter or LocalTalk Bridge software is not compatible with A/UX, therefore this bridge software cannot be run on A/UX or AWS 95 systems. This Bridge software needs AppleTalk version 57 or higher to operate, while the AppleTalk implementation in A/UX is based on AppleTalk version 56. If you install the software, you will receive a message like the following:

A/UX machines can be setup to router TCP/IP packets. However, the UNIX features do not include AppleTalk routing. A/UX does not support the Apple Internet Router either.

However, an A/UX system can print to a printer connected to a LocalTalk network via the LaserWriter or LocalTalk Bridge.

Article Change History:
02 Jun 1995 - Article updated with more information.

Support Information Services

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Tech Info Library Article Number:17705



Tech Info Library

NSI 1.5 and Third-Party Ethernet Cards (5/95)

Revised: 5/4/95
Security: Everyone

NSI 1.5 and Third-Party Ethernet Cards (5/95)

Article Created: 4 May 1995

TOPIC -----

We have several different types of third-party Ethernet Cards. Does the Network Software Installer (NSI) 1.5 support any third-party Ethernet Card? If yes, please tell us which company's one would be supported ?

DISCUSSION -----

Below is an excerpt from the NSI 1.5 Read Me:

"If you are using 3rd party ethernet cards: The drivers contained in the new driver files do not support 3rd party ethernet cards. A 3rd party card that has duplicated an Apple ethernet board will use the appropriate ethernet driver from the system file instead of the Apple driver in the extensions folder file. A system with a 3rd party ethernet card will continue to operate using the previously-installed driver after installing this version of the Network Software Installer. Such systems will get the benefit of all of the other updates installed by this Network Software Installer, including the ability to install and use the LaserWriter Bridge."

This means NSI 1.5 does not support any third-party Ethernet cards. However, installation of NSI 1.5 will not disable a third-party card that has previously been working with older Apple Ethernet drivers.

With NSI 1.5, Ethernet drivers are now individual files located in the Extensions folder. These files are loaded at startup by a new network software loading mechanism. Previously, Ethernet drivers were resources located in the System file that were loaded at startup.

This new mechanism only works with Apple Ethernet cards or Built In Ethernet. The mechanism will only load the new Ethernet driver files if an Apple Ethernet card/Built In is detected. If a non-Apple Ethernet card is detected, the mechanism will not load the new Ethernet driver files for the card. Instead, it will check for the presence of a suitable driver within the system file. If one

is found, it will be loaded for the card. Otherwise, no driver will load for the card and the card will not function.

Support Information Services

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Tech Info Library Article Number:17706



Tech Info Library

LaserWriter Bridge v2.0: Using With Non-Apple Printers (5/95)

Revised: 5/16/95
Security: Everyone

LaserWriter Bridge v2.0: Using With Non-Apple Printers (5/95)

=====

Article Created: 5 May 1995

TOPIC -----

I'm having a problem with the LaserWriter Bridge software v2.0 included with the Network Software Installer (NSI) 1.5 seeing a Hewlett Packard (HP) LaserJet 4ml printer on a Power Macintosh 6100/60. When I switch to LocalTalk the printer works properly. I have also tried an Apple LaserWriter connected to the Power Macintosh and that worked properly through the LaserWriter Bridge software. I'm using the LaserWriter 8 driver.

Are there any known compatibility problems with third-party printers and the LaserWriter Bridge v2.0 software?

DISCUSSION -----

There are no known issues involving third-party printers and the LaserWriter Bridge 2.0. A printing device that responds to an NPB lookup as type "LaserWriter" should work.

Try using the LaserWriter 8.2.2 driver to see if that makes any difference, this version of the LaserWriter driver addresses an issue when clients and printers are located in different zones with the same network number. Since you did not provide any details of your network, this may or may not help.

Article Change History:

16 May 1995 - Changed title to reflect version of LaserWriter Bridge software.

Support Information Services

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Tech Info Library Article Number:17707



Tech Info Library

AppleShare 4.1 and Power Macintosh Upgrade Card (5/95)

Revised: 5/5/95
Security: Everyone

AppleShare 4.1 and Power Macintosh Upgrade Card (5/95)

=====

Article Created: 5 May 1995

TOPIC -----

Is the new AppleShare 4.1 compatible with Power Macintosh Upgrade Card?

DISCUSSION -----

No version of AppleShare File Server or Print Server is supported on computers equipped with either the Power Macintosh Upgrade Card or the Macintosh Processor Upgrade. Although the software may run without crashing, it is untested and therefore, unsupported.

There is little to be gained by running a server on a system with an upgrade card since all the upgrade card does is increase the processor's power. The server is heavily dependent on the I/O subsystems, which are unchanged, and therefore the performance increase is not significant.

Support Information Services

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Tech Info Library Article Number:17708



Tech Info Library

Power Macintosh 7100 CD Audio Connect Pinouts (5/95)

Revised: 5/5/95
Security: Everyone

Power Macintosh 7100 CD Audio Connect Pinouts (5/95)

=====

Article Created: 5 May 1995

TOPIC -----

I need to build an audio cable for a non-Apple CD-ROM on the Power Macintosh 7100/66. What are the logic board connector pinouts?

DISCUSSION -----

Here are the pinouts for the CD-ROM Audio Connection on the Power Macintosh 7100.

Pin	Signal
---	-----
1	CD in Left
2	CD Common
3	CD Common
4	CD in Right

The logic board connector is a J19, this connector is located behind the drive bays.

Support Information Services

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Tech Info Library Article Number:17709



Tech Info Library

Macintosh: Models Containing 68LC040 Processor (5/95)

Revised: 5/5/95
Security: Everyone

Macintosh: Models Containing 68LC040 Processor (5/95)

=====

Article Created: 5 May 1995

TOPIC -----

Is there a list of Macintosh computers using the Motorola 68LC040 microprocessor?

DISCUSSION -----

The following Macintosh computers contain the Motorola 68LC040 processor:

Macintosh LC 475
Macintosh LC 575
Macintosh LC 580
Macintosh LC 630
Macintosh LC 630 DOS Compatible

Macintosh Centris 610
Macintosh Centris 650

Macintosh Quadra 605

Macintosh Performa 475
Macintosh Performa 476
Macintosh Performa 570
Macintosh Performa 630
Macintosh Performa 635
Macintosh Performa 636
Macintosh Performa 637
Macintosh Performa 638
Macintosh Performa 575
Macintosh Performa 577
Macintosh Performa 578
Macintosh Performa 580

Macintosh Powerbook Duo 280

Macintosh Powerbook Duo 280C
Macintosh Powerbook 520
Macintosh Powerbook 520C
Macintosh Powerbook 540
Macintosh Powerbook 540C

Support Information Services

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Tech Info Library Article Number:17710



Tech Info Library

Total Recall (5/95)

Revised: 9/23/96
Security: Everyone

Total Recall (5/95)

=====

Article Created: 5 May 1995

Total Recall

2462 Waynoka Rd.
Colorado Springs, CO 80915

800-743-0594

719-380-1616

719-380-7022 FAX

Internet (Worldwide Web): <http://USA.NET/totrecal>

Company Profile:

Makers of "Data Recovery Toolkit for the Macintosh" software. Using the software in the Toolkit you can: un-initialize accidentally erased volumes, use five different recovery routines, scan your volume and recover your data based on the type of damage, search for types of data files, recover items accidentally thrown away. Standard features include SCSI formatting/copy utilities, floppy copy, emergency disk, system extensions and drivers.

Support Information Services

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Tech Info Library Article Number:17712



Tech Info Library

Finder Search Path For Applications (5/95)

Revised: 5/31/95
Security: Everyone

Finder Search Path For Applications (5/95)

=====

Article Created: 8 May 1995
Article Reviewed/Updated: 31 May 1995

TOPIC -----

When I open a document and have multiple versions of the application that created it on my hard drive, how does the Finder determine which version of the application to open?

DISCUSSION -----

The Finder searches for the correct application based on the "creator type" of the document. The search path the Finder uses is as follows:

Step 1

The Finder first checks to see if an application with the same creator is already running.

Step 2

The Finder searches the volume containing the document being opened.

Step 3

The Finder searches the startup volume.

Step 4

The Finder searches the rest of mounted volumes.

In the event of multiple versions of the same application on one volume, the Finder launches the application whose record in the desktop database was updated last. This is usually the last version installed.

The Finder stops searching at the first version of the application it finds. Here is a simple test to demonstrate this behavior.

Step 1

Make a copy of the SimpleText application.

Step 2

Put the new copy in the Trash, but do not Empty the Trash.

Step 3

Double-click a SimpleText document on the same volume as the original SimpleText application to open SimpleText.

Step 4

The Finder displays a message stating the application cannot be used because it is in the Trash, even though there is another copy that is not in the Trash.

This article was published in the "Information Alley":
Volume II, Issue 3, Page 4

Article Change History:

31 May 1995 - Added Info Alley information; made minor updates.

Support Information Services

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Tech Info Library Article Number:17713



Tech Info Library

MAE: HP700 & Moving /users To New Disk (5/95)

Revised: 5/8/95
Security: Everyone

MAE: HP700 & Moving /users To New Disk (5/95)

=====

Article Created: 8 May 1995

TOPIC -----

What is the best way to move the /users to a new disk on a Hewlett Packard (HP) Series 700 Workstation? As MAE creates System Folders in each user's directory, there is a need to increase storage. What concerns are there with MAE in respect to a new file system?

DISCUSSION -----

While Apple does not support this task, it is important to be sure that the new a File System supports more than 14 characters. When using the utility called SAM (System Administration Manager) to create a new File System, it will default to supporting file names up to 14 characters. Be sure that when adding a File System within SAM, that the option for Long File Names is selected.

Here are the steps for moving /users to a new disk and creating a new file system with SAM:

Step 1

Create a temporary directory and move the contents of /users to /users.temp:

```
#mkdir /users.temp
#cd /users
#find . | cpio -pdumv /users.temp
#cd /
#rm -rf /users/*
```

Step 2

Start SAM to create a new File System:

```
#sam &
-Select "Disks & File Systems" -> "CD-ROM, Floppy and Hard Disks"
```

- Select the new SCSI Drive, highlight 'Action' and select 'Add a Hard Disk'
- Select 'Modify Defaults' and select "Use Long File Names"
- Select OK and mount the new File system to /users
- exit SAM

Step 3

Move contents from /users.temp to /users and remove the temp directory:

```
#cd /users.temp
#find . | cpio -pdumv /users
#cd /
#rm -rf /users.temp
```

The /users is now located on the new file system that supports long file names, allowing MAE to properly create long file names on that file system.

Support Information Services

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Tech Info Library Article Number:17715



Tech Info Library

MAE: File Names Are Truncated To 14 Characters (5/95)

Revised: 5/8/95
Security: Everyone

MAE: File Names Are Truncated To 14 Characters (5/95)

=====

Article Created: 8 May 1995

TOPIC -----

Running HP-UX, we mounted /users on a separate physical file system. I am able to create a new System Folder within my home directory, however, some of the file names are shortened to 14 characters. This is apparent in the System Folder, where the Apple Menu Items folder has been reduced to "Apple Menu Ite". After renaming the file, and restarting MAE the same problem remains. What is happening?

DISCUSSION -----

Using the SAM (System Administration Manager) utility in HP-UX, creation of File Systems will default to a limit of 14 characters (referred to as 'compatible' in SAM).

SAM lets you convert the File System to the Long File Names without having to reformat the drive. Follow these steps:

Step 1

Start SAM as root

#sam

Step 2

Select "Disks and File Systems" -> "Local File Systems", highlight the SCSI disk that contains the /users directory.

Step 3

Highlight 'Actions' and choose 'Convert to Long File Names'

SAM will convert the file system to accept file names longer than 14

characters.

Support Information Services

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Tech Info Library Article Number:17716



Tech Info Library

PowerBook 500 & 150 Series:How To Backup System 7.5 Disks (8/95)

Revised: 8/31/95
Security: Everyone

PowerBook 500 & 150 Series:How To Backup System 7.5 Disks (8/95)

=====

Article Created: 8 May 1995
Article Reviewed/Updated: 31 August 1995

TOPIC -----

This article describes how to create backup System 7.5 installation disks from the pre-loaded system installation folders on a PowerBook 500 series hard disk.

DISCUSSION -----

Macintosh PowerBook 500 series computers that are configured with less than 12 MB of RAM ship with a System 7.5 Installation folder pre-loaded on the hard drive. In the accessory kit which comes with these computers you will find a set of System 7.1.1 floppy disks.

System 7.1.1 is the version of the system software installed on Macintosh PowerBook computers with less than 12 MB of RAM. To make 7.5 installation disks from the System 7.5 Installation folder on the hard drive follow these steps:

Step 1

Locate the Install Disk 1 folder. Copy the contents of that folder to a disk with the same name as the folder.

Step 2

Rename Installer on Disk 1 to "Finder". This will allow the disk to be a startup disk.

Step 3

Repeat Step 1 for each of the following

Install Disk 1
Extensions (folder)

- Finder (previously named Installer)
- Preferences (folder)
 - System
 - System 7.5 Installation

- Install Disk 2
 - Installation Tome 2
 - System Morsels

- Install Disk 3
 - Installation Tome 3

- Install Disk 4
 - Installation Tome 4

- Install Disk 5
 - Installation Tome 5

- Install Disk 6
 - Installation Tome 6

- Install Disk 7
 - Installation Tome 7

Creating a Disk Tools Disk
=====

Step 1

Unlock and initialize a floppy disk. Name it Disk Tools.

Step 2

Make a folder on the Disk Tools called "System Folder" and put the system and finder in it. (Otherwise you get 7 other items created beside the HD SC Setup and Disk First Aid)

Step 3

Drag the system file from the Install Disk 1 folder to the newly initialized Disk Tools disk. The pathway on the PowerBook hard drive is: System 7.5>Installation>System Install>Install Disk 1.

Step 4

Drag Apple HD SC Setup and Disk First Aid to the Disk Tools disk. The pathway on the PowerBook hard drive is: System 7.5>Installation/Disk Tools.

Step 5

Drag the Finder from the System Folder to the disk (Finder is version 7.1.3).

Step 6

Drag the Disk Tools disk to the Trash to eject it.

Step 7

Restart from the Special menu and immediately insert the Disk Tools disk. The PowerBook will start up from the disk.

Step 8

You should get a message asking if you want to rebuild the desktop. Click yes.

Step 9

Shutdown from the Special menu. The Disk Tools disk will eject.

Step 10

Lock the disk.

Note: An alternate way to make a System 7.5 Disk Tools disk is to use a disk duplication application, such as Apple Disk Copy 4.2, to make a duplicate of the 7.1.1 Disk Tools. Then on the copied Disk Tools disk throw away the Disk First Aid and HD SC Setup applications and replace them with the ones in the Disk Tools folder on the PowerBook hard drive.

Article Change History:

31 Aug 1995 - Added information about how to create a Disk Tools disk.

Support Information Services

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Tech Info Library Article Number:17717



Tech Info Library

Color StyleWriter 2400: Vertical Lines in printouts (2/96)

Revised: 2/27/96
Security: Everyone

Color StyleWriter 2400: Vertical Lines in printouts (2/96)

Article Created: 9 May 1995
Article Reviewed/Updated: 27 February 1996

TOPIC -----

I am having problems with my Color StyleWriter 2400 printer. When I print certain documents, I have vertical lines running through the images in the document. The lines appear to be thin strips of the image picked up and moved a little to the right. These artifact lines are most easily seen in Black & White mode, however the lines also occurs with color images.

DISCUSSION -----

Vertical lines in your printouts occur only if ALL the following are true:

- Documents have bitmapped (PICTs or TIFFs) images in them.
- Page Setup orientation is set to Landscape.
- Best Mode is used.
- A Power Macintosh computer is Used.

Any other combinations of print settings do NOT reproduce vertical lines.

To prevent the vertical lines, use the Color StyleWriter 2400 v2.1 or greater printer software.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 15

Article Change History:
27 Feb 1996 - Updated the discussion, changed title.
27 Sep 1995 - Added Info Alley information; updated article.

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Tech Info Library Article Number:17720



Tech Info Library

DOS Compatibility Card: Windows For Workgroups Q&A (5/95)

Revised: 9/29/95
Security: Everyone

DOS Compatibility Card: Windows For Workgroups Q&A (5/95)

=====

Article Created: 9 May 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

This article contains Q & A pairs about using Windows for Workgroups on a Power Macintosh DOS Compatibility Card.

DISCUSSION -----

Question: Which network drivers and frame types need to be used Windows for Workgroups in order to communicate with a Windows NT server? Can I just load Ethernet_II and Ethernet_802.3 frame types, or must I load all four frame types?

Answer: Windows for Workgroups 3.11 adds all 4 frame types to both the NET.CFG and the PROTOCOL.INI file. This seems to indicate all 4 frame types are required. In addition, Chapter 8 of the "Microsoft Windows for Workgroups Resource Kit - Addendum for Operating System Version 3.11" indicates all 4 frame types are needed. The specific driver needed in the Network Setup for Windows NT connectivity is "IPX/SXP Compatible Transport With NetBIOS". A complete discussion of your questions are in Chapter 8 of the "Microsoft Windows for Workgroups Resource Kit - Addendum for Operating System Version 3.11".

Question: I was told that it is important to load the various frame types in the same sequence in both the NET.CFG and the PROTOCOL.INI files. Is this true?

Answer: We have not seen behavior that would indicate this is the case, but it is considered good form to have them listed in both files in the same order. Again, see Chapter 8 of the "Microsoft Windows for Workgroups Resource Kit - Addendum for Operating System Version 3.11"

Question: Are there any issues we need to be aware of concerning the various files that are listed after "network", "netmisc", and "transport" in the

[386Enh] section of SYSTEM.INI? Some documentation I have seen from Novell suggests that some of these files perhaps should be replaced with others of different names.

Answer: Chapter 8 of the "Microsoft Windows for Workgroups Resource Kit - Addendum for Operating System Version 3.11" contains all the information you need on this topic.

Question: I understand that the latest Netware Client from Novell includes many of "patches" and replacement drivers for both its products and for Microsoft's Windows and Windows for Workgroups. I also know that both Microsoft and Novell make "patches" and replacement drivers available to users. Is it generally a good idea to use the most recent versions of the "patches" and replacement drivers, or should we use specific versions only?

Answer: Unless Apple finds problems with new drivers and the DOS Compatibility Card, it is always good to use the latest versions of software from the original vendors. If there are problems with drivers, they will be published in the Tech Info Library.

See Chapter 8 of the "Microsoft Windows for Workgroups Resource Kit - Addendum for Operating System Version 3.11" for a listing of version number requirements for Windows for Workgroups 3.11 and Novell Netware connectivity.

Support Information Services

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Tech Info Library Article Number:17721



Tech Info Library

HyperCard: Popup Buttons And Shared Hilite (7/95)

Revised: 7/19/95
Security: Everyone

HyperCard: Popup Buttons And Shared Hilite (7/95)

Article Created: 9 May 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

In HyperCard versions 2.2 and 2.3, the "shared hilite" feature of the popup buttons does not seem to be working as expected. We expect that when this option is off, that each card can have its own value selected from the popup list, and it will stay that way for that card. But we see is that when one changes the value on one card, all the other cards change as well.

Is this a bug in Hypercard, or am I misunderstanding what this feature is supposed to do?

DISCUSSION -----

Shared Hilite Overview

Shared Hilite is primarily intended for use with check boxes and radio buttons. Using Shared Hilite only affects the behavior of the boolean "hilite" property. Popup menus do not use the hilite property for selecting their values, but instead use the selectedLine, selectedLoc, and selectedText properties. Since Shared Hilite only affects the value of the hilite property, you need to write a script to change the selected value of your popup menus from one card to the next.

How It Works

The sharedHilite property controls whether background buttons use a common value for the highlight state on each card of a background (determined by the hilite property), or that value is unique for each card in the background. The key part in this explanation is that sharedHilite only controls the behavior of the hilite property. The hilite property is boolean -- it is either true or false.

- If a button's hilite property is set to "true", then the button appears highlighted (unless it is a popup menu).

- If a button's hilite property is set to "false", then the button appears normally (not highlighted).

Popup buttons do not have a highlighted state, so they look the same, regardless of hilite's value. Although their appearance does not change, HyperCard remembers the settings of the hilite property for popup buttons. (Note that clicking on a popup menu or selecting an item from a popup does not affect the value of the hilite property.)

Every version of HyperCard since version 2.2 can treat buttons as containers, which lets them store values, just like fields. This is the basis for popup buttons. When you click on a popup button, it displays the contents of the button in the popup menu. When you select a value from the popup, it selects that value and records the appropriate information into selectedLine, selectedLoc, and selectedText.

HyperCard does not have the ability to automatically change a popup menu's selection as a user switches cards. You need to write your own scripts to change the button's value.

If a stack had a popup menu called "theButton", the user could create a field called buttonValue and use the following background script:

```
on closeCard
  put the selectedLine of bg btn theButton into fld buttonValue
end closeCard

on openCard
  get word 2 of fld buttonValue
  select line it of bg btn theButton
end openCard
```

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Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17722



Tech Info Library

MAE: Forcing AppleDouble File Format (5/95)

Revised: 5/10/95
Security: Everyone

MAE: Forcing AppleDouble File Format (5/95)

=====

Article Created: 10 May 1995

TOPIC -----

I'm copying a TIFF file from a Macintosh CD-ROM into MAE and then trying to view it, but my viewer application will not work. What can I do?

DISCUSSION -----

This sounds to us like an AppleSingle, AppleDouble file format problem. MAE is converting the file from HFS format from the Macintosh CD-ROM to a format compatible with the UNIX file system. The Macintosh file system has a resource fork and data fork which the UNIX file system does not have or understand.

We think you are trying to view the TIFF file with a UNIX TIFF viewer, if you had an Macintosh-based TIFF viewer, the file would open properly because MAE stores most files and can read AppleSingle file format. Text documents and an exception, which are stored AppleDouble file format.

You can force MAE to save files in AppleDouble format by using one of the following:

- Launch MAE with the -filedouble option.

mae -filedouble

- You can force MAE to write in AppleDouble format by setting environment variable TBFILEFORMAT to 1.

NOTE: This feature is NOT supported.

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Tech Info Library Article Number:17723



Tech Info Library

MAE: Umlauts and Other UNIX Compose Key Characters (5/95)

Revised: 5/10/95
Security: Everyone

MAE: Umlauts and Other UNIX Compose Key Characters (5/95)

=====

Article Created: 10 May 1995

TOPIC -----

I'm using MAE 1.0 on a Sparc20 with Solaris 2.4. My keyboard has a US layout, so I selected sun.type5.US in the MAE Keyboard control panel.

How do you type umlauts with a US keyboard? I have already tested all combinations of ctrl-, cmd- and shift-keys.

DISCUSSION -----

You can use Key Caps from the Apple menu. Key Caps shows you the keys settings when holding down the shift, option, or shift and option together. For example if you hold down the Option key, you can see how the mapping changes.

The umlaut is a "dead key" and is properly mapped by the Mac OS. That is, when you press the key combination to get an umlaut, you don't see the character until you press the letter that the umlaut is to appear over. For example, the keystrokes Option-u, followed by "u" will produce an umlaut over the letter "u".

Make sure you know where the Option and Command keys are mapped in MAE. For convenience, you may want too map them to the same physical location on the workstation keyboard as they are on a Macintosh keyboard, but this is not necessary. You can use the MAE Keyboard control panel to check their location and remap them if desired.

Several third-party Macintosh developers provide Apple menu item and control panel device utilities that also provide this functionality.

You can also try to map the same key combination you normally use in X Windows, for example map the dead key or compose key that X Windows use in MAE. Search for Tech Info Library article titled "MAE: Keypad Mapping On Solaris & Some Mac Applications" for more information

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Tech Info Library Article Number:17724



Tech Info Library

MAE: Keypad Mapping On Solaris & Some Mac Applications (5/95)

Revised: 5/10/95
Security: Everyone

MAE: Keypad Mapping On Solaris & Some Mac Applications (5/95)

Article Created: 10 May 1995

TOPIC -----

When I run certain applications with keypad shortcuts in MAE on a Solaris workstations, the mapping is not correct. For example, some of Microsoft Word's keyboard shortcuts require the keypad, but the Solaris workstation maps the keypad to arrow keys and dead keys. I have tried several MAE Keyboard control panel settings to remap the keypad without luck. What can I do to change the keypad mapping?

DISCUSSION -----

To change the settings in MAE you need to change the keyboard mappings for the entire Open Windows environment. Follow the steps below to configure the keyboard map to let the keypad function in MAE

NOTE: Doing this may effect applications that have dependencies on those default settings.

Step 1

Create a file in the home directory titled ".Xmodmap" with this command:

```
xmodmap -pke > $HOME/.Xmodmap
```

Step 2

Edit the file you just created, by locating each keycode that references the keypad, listed as KP_x, where x is either the numeric or function key. Remove entries to the right of the "=" sign, with the exception of the value you wish to keep. Here are some examples from a \$HOME .Xmodmap file:

```
keycode 53 = KP_Divide  
keycode 54 = KP_Multiply  
keycode 97 = KP_Enter
```

```
keycode  98 = KP_4
keycode  99 = KP_5
```

NOTE: If you do not intend to use applications that require the keypad, or need the default map for other applications, you will not need to edit the .Xmodmap file.

Step 3

Add the follow entries to /usr/openwin/lib/Xinitrc.

- Add these lines after the reference to "xrdp" which is the first section of the Xinitrc file. This dumps the default mapping to a holding file, and loads your modified mapping:

```
xmodmap -pke > $HOME/.Xmodmap.default
xmodmap $HOME/.Xmodmap
```

- Add this line after the reference to "wait \$wmpid", this removes the configured mappings and returns to the default:

```
xmodmap $HOME/.Xmodmap.default
```

You should open Key Caps in the Apple menu after the next log in to MAE, to make sure the keys selected on the keypad are properly mapped by seeing the same key highlighted in Key Caps.

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Tech Info Library Article Number:17725



Tech Info Library

DOS Compatibility Card: Lantastic Not Supported (5/95)

Revised: 5/10/95
Security: Everyone

DOS Compatibility Card: Lantastic Not Supported (5/95)

=====

Article Created: 10 May 1995

TOPIC -----

I am trying to get Lantastic to work on the DOS Compatibility Card for the Power Macintosh. However, when I try to get it to connect on the network, it cannot see any other MS-DOS computers. I connected the DOS Compatibility Card to a Novell network, and everything worked properly. How can I get the DOS Compatibility Card to work with Lantastic?

DISCUSSION -----

Lantastic has not been tested, nor is it supported on the Power Macintosh 6100 DOS Compatible or DOS Compatibility Card. While it may be possible to get it to work, Apple does not have any information on how to do so. You should contact Artisoft and work with them on finding a solution. Since Lantastic is an unsupported software package on the DOS Compatibility Card, Apple cannot provide you with any additional support.

Support Information Services

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Tech Info Library Article Number:17726



Tech Info Library

LaserWriter Fax: Reducing VMerrors Sending to Lrg Groups (5/95)

Revised: 5/10/95
Security: Everyone

LaserWriter Fax: Reducing VMerrors Sending to Lrg Groups (5/95)

=====

Article Created: 10 May 1995

TOPIC -----

Occasionally I get a VMerror when sending a fax to large groups (a group fax of about 240 people). I have to turn the printer off and on for the next job to continue, but then after another 10 jobs I get the VMerror again.

Is this something that should work? Any reason why we get these VMerrors on the printer?

DISCUSSION -----

There is no limitation set by the driver to the number of addresses you can send at one time. It does, however, depend on how the printer handles the addresses and sends the information.

You should try using the Broadcast option next time you have to fax to a large group. This might help you alleviate the problem. After selecting "Fax" as the destination in the Print dialog, the next dialog that appears (Fax Destinations) has the "Broadcast using" popup field at the bottom where you can select "Computer" or "Printer". If "Computer" is selected, a separate fax job is created in PrintMonitor for each person in the group. If "Printer" is selected, then only one print job (for the entire group) is sent in PrintMonitor, and the printer handles sending the faxes to the individuals in the group.

Overall, this appears to be a VM (printer's Virtual Memory) constraint. Adding more VM in the printer, by adding more RAM, should increase the number of addresses per job.

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Tech Info Library Article Number:17727



Tech Info Library

MAE: Disk Copy and DART Image Files (5/95)

Revised: 5/10/95
Security: Everyone

MAE: Disk Copy and DART Image Files (5/95)

=====

Article Created: 10 May 1995

TOPIC -----

I have Disk Copy and DART disk image files to load software, but I cannot get them open. I have tried using Mount'em without success either. Is there any software available so these image files can be used?

DISCUSSION -----

We have used ShrinkWrap to mount Disk Copy and DART image files in MAE 1.0a. ShrinkWrap is freeware written by Chad Magendanz. To mount an image you drag the image file onto the ShrinkWrap icon. Also be sure to set the preferences by clicking to select store in memory.

You can find ShrinkWrap at most Macintosh ftp sites including:

<ftp://mirror.aol.com/pub/mac/util/diskfile/shrinkwrap1.21.sit.hqx>

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Tech Info Library Article Number:17729



Tech Info Library

GeoPort 1.x: System 7.1.x and System Update 3.0 Install (5/95)

Revised: 5/11/95
Security: Everyone

GeoPort 1.x: System 7.1.x and System Update 3.0 Install (5/95)

=====

Article Created: 11 May 1995

TOPIC -----

This article details the install order for GeoPort software on System 7.1.x with the System Update 3.0.

DISCUSSION -----

There is a conflict between the GeoPort 1.x installer for Power Macintosh and Quadra AV computers with System Update 3.0.

The GeoPort software installer will hang or freeze, usually after clicking the OK button, at the "Welcome to the GeoPort Installer" window. You may get further in the install process and receive an error indicating the installation could not continue, then hang or freeze after clicking the OK button in the error window.

The workaround is to follow the install order below:

- 1) Install System 7.1.x
- 2) Install GeoPort 1.x
- 3) Install the System Update 3.0

The key is to install System Update 3.0 last. If you have a problem installing the GeoPort software, start by doing a clean system software installation, then follow the order shown above.

Support Information Services

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Tech Info Library Article Number:17730



Tech Info Library

PCI Expansion Bus Architecture Description (9/95)

Revised: 3/20/96
Security: Everyone

PCI Expansion Bus Architecture Description (9/95)

=====

Article Created: 11 May 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

This article contains basic information about Peripheral Component Interconnect (PCI), why Apple is incorporating PCI into its new machines, a comparison of PCI with NuBus, and answers to some commonly asked questions.

DISCUSSION -----

What is PCI?

PCI (Peripheral Component Interconnect) is a high-performance expansion bus architecture that was originally developed by Intel to replace the traditional Industry Standard Architecture (ISA) and Enhanced Industry Standard Architecture (EISA) buses found in many 80x86-based PCs.

To promote its widespread acceptance, Intel turned the specification over to a broad-based committee of industry leaders whose function is to define and market PCI. This committee consists of 12 voting members, 11 of whom are elected on an annual basis, with Intel retaining a permanent voting position. Apple is currently a voting member.

Turning the PCI specification over to a committee opened it up for free licensing and use by any vendor. Vendors have responded with enthusiasm. Currently, more than 200 vendors are producing PCI cards, and more than 500 cards are available for this bus architecture.

Why is Apple moving to PCI?

PCI is a computer industry standard. By moving to PCI, Apple continues to demonstrate its commitment to "fitting in" in the industry. The majority of personal computers based on 80486 or Pentium processors already incorporate the PCI architecture. Apple's adoption of PCI for its new Power Macintosh computers and Workgroup Servers will support and strengthen the specification's status as

a standard in the industry. And, in the future, PowerPC processor-based computers from IBM and Motorola will also use this bus architecture. Apple's full implementation of the PCI 2.0 specification lets any existing PCI 2.0 compliant card work in an Apple computer when combined with a software driver specific to the Mac OS.

Going with an industry standard provides a number of benefits. Because Apple fully implemented the PCI 2.0 specification, in conjunction with a software driver specific to the Mac OS, any existing PCI 2.0-compliant card will work in an Apple computer with PCI. This compatibility gives users of Power Macintosh and Workgroup Server systems with PCI slots access to the many PCI cards available today. It also enlarges the potential market for PCI cards, which should both encourage their future proliferation and drive their cost down further.

In addition, the PCI bus will allow Apple to use more industry-standard components in the future, which will make Power Macintosh computers and Workgroup Servers even more affordable.

PCI provides high performance. PCI offers significantly higher performance than NuBus, the bus architecture used in previous Macintosh models. More specifically, a PCI card can provide performance up to three times faster than that of a similar card on even the fastest computers with NuBus slots.

PCI is a very scalable technology and will offer further performance gains in the future. Plans for extending the bus include support for 64-bit extensions and a higher clock speed across the bus.

PCI on a Power Macintosh or Workgroup Server will provide outstanding performance, made possible because these computers are designed with performance in mind. More specifically, the fact that these systems contain only PCI slots allows Apple to take full advantage of the power of the RISC (Reduced Instruction Set Computing) architecture, enabling all PCI cards to run at the maximum speed of 33 megahertz. In contrast, many 80x86-based PCs offer mixed slots, which run at a range of speeds.

PCI promotes new solutions. PCI will also attract new solutions to the Power Macintosh platform. Developers of specialized cards who found the NuBus market too small or the technical side of developing for NuBus too complex will find it easy to adapt their products for Power Macintosh computers with PCI. Instead of a massive hardware and software effort to move to Macintosh, these developers will be able to take their existing PCI hardware and simply add a Mac OS specific software driver.

PCI and NuBus: A comparison

The following chart/table provides a feature-by-feature comparison between the PCI and NuBus specifications:

Begin_Table

	PCI	NuBus
Bus Speed	33 MHz	10 MHz

Theoretical Maximum Throughput	132 MB per second	40 MB per second
Maximum Number of Slots	4 per bridge; 256 bridges	6 per bridge; 14 bridges
Real Throughput	90 MB per second writes; 45 MB per second reads	32 MB per second writes; 20 MB per second reads
Software	Name Registry, Open Firmware	Slot Manager
Form Factor	12.283 in. and 6.875 in.	12 in. and 7 in.

End_Table

One point that is especially significant is the change in software that the move to PCI represents. All Apple computers with PCI will have built-in Open Firmware software, which is a standard (IEEE 1275) for booting PCI cards in an OS-independent environment. Using Open Firmware gives Apple flexibility in its choice of future operating systems.

Finally, the runtime environment for PCI cards is also being rewritten to allow for growth in the future. The new expansion manager will allow PowerPC and 80x86 drivers to coexist in the PCI cards' ROM. This ability to accommodate multiple drivers permits the performance of I/O activities conducted via cards to improve significantly in the future.

Questions and Answers

Question: Can NuBus cards be used in an Apple computer with PCI slots?

Answer: Yes. To preserve customer investments in NuBus technology, a NuBus expansion chassis for PCI will be available from a third-party. This chassis will enable users to continue to use their existing NuBus cards in Power Macintosh computers and Workgroup Servers with PCI, if they so choose.

However, because PCI offers both higher performance and more solutions, we anticipate that users will embrace the new bus technology. In addition, the built-in graphics acceleration capabilities of the new Power Macintosh computers should allow these systems to meet the needs of many customers without the addition of an acceleration card.

Question: Can any PCI card be used in a Power Macintosh computer or Workgroup Server with PCI?

Answer: Yes. However, a Mac OS-, NetWare-, or AIX-specific software driver is required for each card. Many manufacturers of existing PCI cards have already committed to producing these drivers.

Question: What kind of industry support exists for PCI on the Power Macintosh?

Answer: A number of companies in both the United States and Europe have committed to producing PCI cards for the Power Macintosh. These companies include Apple, Adaptec, Asanté, ATI, ATTO, Data Translations, Diamond Multimedia, DPT, Farallon, FWB, Hermstedt GmbH, Interphase, Matrox, MicroNet, miro, National Instruments, Neutral, Orange Micro, Precision Digital Images, Q-Logic, Rockwell, Second Wave, Spectra Systems, and Yarc.

Question: What PCI cards will Apple provide?

Answer: Apple will provide several PCI networking cards, including the Apple PCI Ethernet 100BaseTX Card, Apple PCI Token Ring Card, Apple PCI Ethernet Twisted-Pair Card, and Apple PCI Ethernet Thin Coax Card.

Question: Will Apple's move to PCI be reflected across its product lines?

Answer: Yes. Apple will offer PCI not only in desktop systems and Workgroup Servers, but also in PowerBook notebook computers.

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29 Sep 1995 - Added Info Alley information; updated article.
04 Aug 1995 - Added table formatting information for Web viewing.
05 Jul 1995 - Corrected form factor information in table.

Support Information Services

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Tech Info Library Article Number:17732



Tech Info Library

Power Macintosh: Erase ROM Message (5/95)

Revised: 5/12/95
Security: Everyone

Power Macintosh: Erase ROM Message (5/95)

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Article Created: 12 May 19950

TOPIC -----

I have a file called Erase ROMs in the Apple Extras folder. When I double-click it, a dialog box appears with a message, "You are about to initiate a process that will permanently erase your ROMs. Do you want to continue?", and "Go for It" and "Never Mind" buttons with the second button dimmed.

Where is this message coming from?

DISCUSSION -----

Apple shipped a Connectix utility called Connectix Destop Utilities (CDU) with Power Macintosh computers starting in the Fall of 1994. This utility was in the Apple Extras folder. It's purpose was to provide customers with a more robust Energy Star solution. This dialog box is being generated from one of the desktop pattern documents included with CDU.

In order to see this dialog you must:

- 1) Open the CDU folder within Apple Extras folder.
- 2) Open the Sample Desktop Pictures folder.
- 3) Extract the CDU Sample Pictures.sea file.
- 4) Locate the CDU Sample Pictures folder and open it.
- 5) Open the B/W folder.
- 6) Double-click the Erase ROM document.

This "dialog box" is not really a dialog box, but a document on your hard drive which CANNOT erase the ROMs on your computer. Macintosh ROMs cannot be erased by software running on the computer.

Support Information Services

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Tech Info Library Article Number:17733



Tech Info Library

At Ease for Workgroups 3.0 Read Me (11/95)

Revised: 11/7/95
Security: Everyone

At Ease for Workgroups 3.0 Read Me (11/95)

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Article Created: 11 May 1995
Article Reviewed/Updated: 7 November 1995

TOPIC -----

The following article is the ReadMe file for At Ease for Workgroups 3.0.

... PLEASE NOTE THE INFORMATION ENCLOSED IN BULLETS "•" IS NOT PART OF THE ORIGINAL READ ME FILE BUT HAS BEEN ADDED HERE TO CLARIFY SOME OF THE PROCEDURES DESCRIBED IN THE ORIGINAL READ ME FILE. ...

DISCUSSION -----

This document reflects the latest information on At Ease for Workgroups 3.0. Please read this document carefully. The software may have changed slightly since the manual was printed.

Installing At Ease

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You should use the Installer program to install At Ease for Workgroups. Do not attempt to install At Ease by dragging files onto your hard disk. The Installer places the files in the correct locations on the disk.

Before using the At Ease Installer program, make sure you have quit all other application programs. If you have trouble installing, temporarily turn off all extensions by holding down the Shift key while you restart your computer. Then try installing again.

If you install At Ease for Workgroups 3.0 on a computer running system software version 7.0 or 7.1 and you later install version 7.5 on your computer, use the Custom Install option of the At Ease Installer to install the At Ease Guide.

Installing Mouse Practice

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Install Mouse Practice immediately after installing At Ease for Workgroups.

Removing At Ease

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If you decide to remove At Ease for Workgroups, use the At Ease Installer program. Never attempt to remove At Ease from your System Folder while At Ease is turned on. See the manual for more information on removing At Ease.

Getting Help in At Ease

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In addition to the manual and this Read Me file, there are two ways of obtaining online help in At Ease for Workgroups.

Apple Guide (System 7.5 Users)

If you are using system software version 7.5 or later, you can use Apple Guide to get instructions for using At Ease. At Ease Guide, the Apple Guide for the At Ease panels, is available from the Guide menu whenever At Ease is the active application program.

Balloon Help

Balloon Help is available for almost every function of At Ease. To activate Balloon Help, choose Show Balloons from the Guide menu (system software version 7.5) or the Help menu (system software version 7.0 or 7.1). When you are finished using Balloon Help, choose Hide Balloons from the Guide menu or Help menu.

Some Changes From At Ease 2.0

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You can now register a maximum of 4000 users in up to 200 setups. (The maximum number of users allowed in a single setup is 1000.) For best performance, however, Apple recommends a limit of 1000 users total and 300 users per setup. For networked setups, performance depends on the speed of your network, the server, and each computer using At Ease.

In previous versions of At Ease for Workgroups, the log sometimes showed successful attempts to open the At Ease Setup program even when no one had tried to open it. This bug has been fixed in version 3.0.

Upgrading From Earlier Versions of At Ease

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For most upgrades, your administrator password (if you had one) will remain the same in the At Ease Setup program in At Ease for Workgroups 3.0. When the At Ease Setup program asks for an administrator name, type "At Ease Administrator,"

which is the default administrator name.

Upgrading From Version 1.x

If you are upgrading from At Ease version 1.x to At Ease for Workgroups 3.0, you must first remove the old version by using the At Ease Installer program that came with the old version. When the Installer screen is displayed, hold down the Option key to change the Install button to Remove. Then click Remove to remove the old version.

... The information above is incomplete. The correct procedure to remove At Ease 1.0 is:

Step 1

Double-click the At Ease 1.0 Installer.

Step 2

Click OK to pass the "Welcome to the At Ease Installer".

Step 3

Click on the Customize button.

Step 4

Select At Ease in the window on the left.

Step 5

Hold down the option key to change the Install button to a Remove button. ...

Any items you created in version 1.x are automatically assigned to a setup or user named At Ease 1.0.

Upgrading From Version 2.x

Upgrading from version 2.x to version 3.0 occurs automatically when you first run the At Ease Setup program of version 3.0. At Ease turns itself off at the end of the installation process, so you must run the At Ease Setup program to turn At Ease back on.

If you upgrade from any version of At Ease for Workgroups 2.0, you must run At Ease Setup on each computer to update the preferences files and databases before you can add the computer to the list of updated computers. (If a computer is already in the list, this step is unnecessary.)

... The information above is incomplete. It should state that:

To update At Ease 2.x machines to At Ease 3.0, you must first follow the normal installation process. You should first startup your computer with extensions off by holding down the shift key while starting your Macintosh until it says

"Welcome to Macintosh, Extensions Off". Run the installer program from the installer disk.

After upgrading the first computer to At Ease 3.0, you should be careful not to start any of the 2.x workstations that use the same At Ease server. If this is done, the 2.x workstation will get caught in a loop, displaying an error message that states that the machine should be restarted with an 'OK' button; after clicking on the button, the message re-appears and the only way out of the loop is to physically turn off the computer; force quit does not work.

When updating your workstations, be sure that no one is currently using At Ease from the server. ...

Upgrading From Non-Workgroup (2.x or 3.0) to At Ease for Workgroups 3.0

At Ease creates setups in the new version for each user in the old version; the new setups have the same names as the old users. For example, if you had two users named Billy and Sally in the non-workgroup version, the At Ease Setup program of At Ease for Workgroups will now show two setups (Billy and Sally) and two users (also Billy and Sally). You can rename users and setups.

Installing Other Programs While Running At Ease

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You should not install programs onto your hard disk while running At Ease for Workgroups. Before you install programs, turn At Ease off in the At Ease Setup program and restart your computer. When you finish installing programs, turn At Ease back on and restart the computer again. Programs you install onto your hard disk are not automatically added to At Ease setups or users; you must use the At Ease Setup program to provide access to the new programs.

If some program buttons are not displayed properly in At Ease after you install new software, you should rebuild your desktop. To do so, turn At Ease off and restart your computer. While the computer is restarting, hold down the Command and Option keys until you see a message asking whether you want to rebuild the desktop file. Click OK. When the computer has finished starting up, turn At Ease back on in the At Ease Setup program and restart the computer again.

Disk Security

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At Ease for Workgroups 3.0 includes an option for locking the startup disk. If you turn on this feature in the At Ease Setup program, do not attempt to update your disk driver, repair the startup disk, or install any other security software onto the startup disk. Doing so may cause you to lose all information on your startup disk. If you need to alter the startup disk in any of these ways, you must first turn off the Lock Startup Volume setting in the At Ease Setup program.

The startup disk security feature in At Ease does not work with some computers

because of disk driver incompatibilities. If the feature is unavailable on your computer, the Lock Startup Volume checkbox is usually dimmed in the At Ease Setup program.

Shared Folder

At Ease for Workgroups 3.0 includes a setting for preventing users of a setup from saving files in the shared folder. However, a user who is allowed to open and save documents anywhere will be able to save to the shared folder even if this setting is selected. To prevent users of a setup from saving to the shared folder, you must also limit their location for opening and saving.

Restricted Finder Users

There are several things you should know about the restricted Finder environment.

Security in the Restricted Finder

In trying to maintain compatibility with other programs, the restricted Finder environment can sometimes allow programs to bypass some of the security features you selected in the At Ease Setup program. If programs you use seem to pose security problems, you may want to remove them from your hard disk.

Security is maintained for restricted Finder users by creating a list of "approved" application programs, desk accessories, and control panels that can be opened by the user. This list includes

- all items in the current setup folder
- items in the Apple Menu Items folder (if you have given access to them)
- the Chooser (if you have given access to it)
- the Print Monitor
- items in the Startup Items folder (only if the setup will open them)
- items in the Shutdown Items folder
- items in the Control Panels folder (if you have given access to them)
- the At Ease Setup program (administrator password required)
- approved sub-launched programs (for more information, see "Sub-Launching Programs" later in this Read Me file)

If a document exists in any of these places, the application that created the document can also be opened.

The At Ease Setup program can always be opened because the administrator password restricts access.

The list of approved programs does not include programs in the user's own documents folder. (If it did, a user could copy a program from a floppy disk to his or her documents folder and attempt to open it without permission.)

Macintosh Guide and the Restricted Finder

Because of changes in the Finder made for restricted Finder users, instructions in Macintosh Guide (available from the Guide menu in system software version 7.5

or later) may not always be accurate. For example, when users who do not have access to control panels use Macintosh Guide to request instructions on adjusting the sound volume, they will not be able to complete the required steps.

Desktop Items and the Restricted Finder

When a user connects to (mounts) a disk other than the startup disk, items on the desktop of the disk are placed in a folder called "Items for Desktop," located at the top level of that disk. When the user disconnects from (unmounts) the disk, the items are not replaced on the desktop.

Copying in the Restricted Finder

If a user drags a folder for which he or she doesn't have access (such as another user's folder) into his or her own folder, the computer will not copy any files from the dragged folder, but it will add an empty folder of the same name to the hierarchy for the user's folder.

File Sharing and the Restricted Finder

File sharing does not work with the restricted Finder. When a restricted Finder user logs in, At Ease turns off file sharing. The next regular Finder user who logs in and wants to use file sharing must return to the Sharing Setup control panel and turn file sharing on again.

Do not use file sharing on computers that will be updated via the Update Computers command in At Ease Setup.

RAM Disks and the Restricted Finder

Do not use RAM disks if any user works in the restricted Finder; doing so may cause your computer to crash.

Sub-Launching Programs

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Sub-launching is the process by which one program opens another program (called a subprogram) without the user having directly opened the subprogram. The security features of At Ease can sometimes interfere with a program's ability to sub-launch necessary subprograms. When a program attempts to sub-launch a subprogram to which a user has not been given access, the computer will usually display a -5000 error code.

There are two ways to allow programs to sub-launch the subprograms they need. In either case, the subprogram bypasses the security that At Ease provides.

- In the At Ease Setup program, open the Settings menu and choose Application Preferences. Add the necessary subprograms to the list, and then select each subprogram and click the checkbox labeled "Can be launched by other applications." This setting applies to all users and setups, so you need to follow this procedure only once. You should be aware that this setting allows

all users—including restricted Finder users—to open the subprogram.

- In the At Ease Setup program, give access to all the necessary subprograms. This procedure allows you to specify which users or setups have access to the subprograms. The disadvantage of this procedure, however, is that users see a button for each subprogram even though they normally won't need to open the subprograms directly.

At Ease for Workgroups 3.0 and Kid Pix Studio

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Kid Pix Studio sub-launches each subprogram a child uses. But because of a software incompatibility, At Ease does not view these subprograms as application programs. To allow Kid Pix Studio to sub-launch its subprograms successfully, choose Application Preferences from the Settings menu of At Ease Setup and click the Custom button in the screen that appears. In the Custom Add screen, add each of the following subprograms:

Name	File Creator
-----	-----
KPS 0	Kîd0
KPS 1	Kîd1
KPS 2	Kîd2
KPS 3	Kîd3
KPS 4	Kîd4
KPS 5	... Kîd4

This information is incorrect the original Read Me states to type Kîd4 again for the KPS 5 name, it should read Kîd5 ...

To type the î character in the file creator names, hold down the Option key while you type the letter i, then release the Option key and immediately type the letter i again.

For more information on using the Custom Add screen, see "Application Preferences" later in this Read Me file.

At Ease for Workgroups 3.0 and Control Panels

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Users who start out in the At Ease panels and switch to the Finder may experience problems when opening control panels. If they choose Control Panels from the Apple menu of the Finder, the Control Panels folder appears as expected. If they choose a particular control panel from the Control Panels submenu, however, they are returned to the At Ease panels. In most cases, the selected control panel appears in front of the At Ease panels. But for certain control panels, such as the Extensions Manager in system software version 7.5, a message appears saying that the selected control panel can't be opened in At Ease.

To avoid these problems, At Ease users who switch to the Finder should not use the Control Panels submenu. Instead, they should choose Control Panels from the Apple menu of the Finder and then double-click the control panel they want in the Control Panels window that appears.

At Ease for Workgroups 3.0 and File Servers

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Do not install At Ease for Workgroups 3.0 on an AppleShare server or a computer with file sharing turned on if you plan to use that computer as the At Ease server for your workgroup. If At Ease is installed on that computer, you can't use that computer as a member of the workgroup.

The At Ease Items folder contains important information about your At Ease setups. On most computers, this folder is located inside the System Folder. If you are using an AppleShare server to store your At Ease information, however, the folder is located at the top level of the selected server volume. Do not move or remove the At Ease Items folder; At Ease will not operate correctly if it is missing from the proper location.

You should use the Update At Ease Computers command any time you have changed the primary administrator's password. (Other computers on the network may not recognize the new password unless you update them.) If you use an At Ease server, the new password will be required the next time any user returns to the login screen.

When a user whose documents folder is on a server uses the Command-Shift-3 keystroke sequence to make a screen capture (a "snapshot" of what appears on the screen), the computer may take a minute or longer to save the screen capture in the user's documents folder. During that time, the screen will be frozen and the computer may seem to have crashed.

At Ease for Workgroups 3.0 and CD-ROM Discs

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At Ease for Workgroups 3.0 includes a security feature for preventing users from ejecting CD-ROM discs without first entering the administrator password. However, it is possible on many CD-ROM drives to physically eject a CD-ROM disc by pressing an eject button on the drive itself. At Ease cannot prevent users from ejecting CD-ROM discs in this way.

At Ease can display only one CD-ROM panel at a time. If a user inserts another CD-ROM disc to which he or she has access, a message appears indicating that the disc can be accessed using buttons. If the user ejects the first CD-ROM disc, the second CD-ROM disc appears as a panel.

The CD-ROM Preferences feature does not work properly with audio CDs.

At Ease for Workgroups 3.0 and the Find File Feature in System 7.5

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While At Ease is running, Find File finds only those items in locations to which the user has complete access, including the user's documents folder and the Trash folder. Most other locations (including server volumes and the user's setup folder) do not return any information when Find File is used.

At Ease for Workgroups 3.0 and the Startup Items Folder in System 7.5

Any item in the Startup Items folder will be opened at startup, even if you didn't give the user access to the item or to the program used to create it. If you don't want all users to have access to an item, don't place the item in the Startup Items folder.

Application Preferences

The Custom button in the Application Preferences screen should be used only when At Ease security settings are interfering with a program's ability to sub-launch other programs that it needs and the "Can be launched by other applications" setting doesn't solve the problem. It is very unlikely that you will need to use the Custom button.

When you click the Custom button, the Custom Add screen appears. You provide a name (which can be anything you like, since it's needed only for display in the list of applications) and the file creator for each subprogram you are having difficulty sub-launching. You must type the file creator exactly, including any spaces and special characters. (You can usually get the name of the file creator from the developer of the software.)

The Custom button also allows you to remove programs from the Application Preferences list—even programs that you added to the list using the Add Other button. To do so, click a program's name in the list and click the Custom button. If the Custom Add screen does not already include a name and file creator for the program, type the program's name (exactly as it appears in the list) and its file creator. Then click Remove.

Importing Users

If your user list is in a format that cannot be read by At Ease, save it as a standard 'TEXT' file. At Ease will then be able to read in the information.

Database Consistency Checking

At Ease for Workgroups 3.0 uses a sophisticated database for handling user information. If a problem is detected, the At Ease Setup program alerts the administrator and asks whether it should verify the database files. When the

verification is complete, a file called Consistency Check Report appears on the startup disk.

The administrator can also manually start the verification process by holding down the Command key while starting the At Ease Setup program.

Article Change History:

07 Nov 1995 - Added correct file creator type in the Kid Pix section.

14 Aug 1995 - Added keyword.

05 Jul 1995 - Corrected procedure errors from original Read Me file.

Support Information Services

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Tech Info Library Article Number:17734



Tech Info Library

WS 8150: Getting Started Manual Error (5/95)

Revised: 5/12/95
Security: Everyone

WS 8150: "Getting Started" Manual Error (5/95)

Article Created: 12 May 1995

TOPIC -----

In the Workgroup Server (WS) 8150 "Getting Started" manual on page 15 it states, "it is recommended that you lock the power switch on by turning it to the horizontal position. In the case of power failure, the server will start up automatically. ... When the power switch is locked on, you cannot turn the computer off by choosing Shut Down."

Our WS 8150 does not start up automatically when choosing the Shut Down command from the Special menu with the power switch is locked. Is there something we are doing incorrectly, or is our Workgroup Server's power switch feature, as described in the manual, not really functional?

DISCUSSION -----

Engineering reports that the Power Macintosh 8100 and WS 8150 computers are behaving correctly. The documentation is not correct. If you choose the Shut Down command the computer will shut down, no matter if the power switch is locked on or not. We will inform the documentation department about this error, but we do not know when changes will be made.

Support Information Services

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Tech Info Library Article Number:17735



Tech Info Library

At Ease 3.0 For Workgroups: Description & Overview (5/95)

Revised: 8/14/95
Security: Everyone

At Ease 3.0 For Workgroups: Description & Overview (5/95)

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Article Created: 12 May 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

This article contains a list of usage requirements, descriptions of new features, and service and support information for At Ease 3.0 For Workgroups.

DISCUSSION -----

Overview
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At Ease for Workgroups 3.0 is a network security and access management software. At Ease for Workgroups 3.0 is intended to control access to files and applications on shared Macintosh systems in classrooms, university computer labs, and other networked educational environments.

Usage Requirements
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At Ease for Workgroups 3.0 requires:

- Macintosh, PowerBook, or Power Macintosh computer
 - 4 MB RAM minimum
 - System 7.0 or later
 - Hard disk
 - Apple SuperDrive 1.4 MB floppy disk drive
- (The At Ease for Workgroups 3.0 installer is available only on High Density disks.)

Workgroups, non-server based At Ease 3.0 requires:

-
- AppleTalk network
 - Sufficient disk space for storage of user's documents

Workgroups, server-based At Ease 3.0 requires:

- AppleShare version 3.0 or later
- AppleTalk network
- Sufficient space for storage of user's documents

New Features

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Finder Security

Users can use the standard Finder with its familiar interface without bypassing security limitations set by the administrator.

Middle Level Administration

The main administrator (Superuser) can designate users to be Middle Level Administrators (MLAs). The superuser assigns a limited subset of administrator privileges according to need. For example, the school network administrator can set up a teacher with the ability to change access privileges for their class only.

Better CD-ROM Support

Administrators can more simply allow users access to CD ROMs so that users inserting a CD-ROM will see the CD appear in the At Ease panel or in the At Ease limited Finder. Administrators can also restrict CD access to only designated CD-ROMs.

User Documents Location

Instead of requiring user's documents to be stored on the local hard drive, floppy, or the At Ease server drive, At Ease for Workgroups 3.0 allows the administrator to designate any AppleShare volume in addition to those listed above. For example, an administrator can assign a different document server for each classroom.

Drop Boxes

Each setup can have a drop box designated to it for electronic submission of assignments or other collaborative style efforts.

Shared Folders

Each setup can be assigned a shared folder where administrators can download information for access by all users of groups with access to the shared folder. For example, instead of making several copies of an assignment for each user, the administrator can place an electronic assignment in the shared folder for students to access complete and turn in (possibly in the drop box).

Service and Support
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General User

The Apple Assurance Software Support group will support general use customers with questions concerning At Ease for Workgroups 3.0.

Schools

The Apple Assurance K12 support group will support schools with questions concerning At Ease for Workgroups 3.0.

How to Get Support

For more information about how to get support for At Ease for Workgroups 3.0, please reference the Technical Information Library article titled, "Obtaining Apple Product Support in the USA." This article lists 800 numbers and online services available for software updates and Apple support information.

Article Change History:
14 Aug 1995 - Added keyword.

Support Information Services

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Tech Info Library Article Number:17736



Tech Info Library

At Ease For Workgroups 3.0: Definitions of Basic Terms (8/95)

Revised: 8/14/95
Security: Everyone

At Ease For Workgroups 3.0: Definitions of Basic Terms (8/95)

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Article Created: 12 May 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

This article lists the definitions of some basic At Ease For Workgroups 3.0 terminology.

DISCUSSION -----

Workgroups

Takes the basic version and adds network capability to allow schools and other lab-based customers to more easily manage a number of At Ease 3.0 machines. The workgroups version is also more customizable, and allows for many more users and setups.

Setups

In At Ease 3.0 for Workgroups, a setup is a group of users, their files, and other setup specific options. The fundamental grouping of preferences in At Ease is done at the setup level.

Users

This is a person that "logs into" At Ease 3.0 for Workgroups. Usually this means a specific individual, but can also be a group of people who all share the same access to documents. Users can belong to multiple setups. (Note that the basic product redefines setups to users. Thus, a User in the basic product is implemented as a paired combination of a Setup and a User.)

Finder Security

Also known as desktop security, or restricted Finder security, this feature allows for some limited security imposed by At Ease while running the Finder.

Panels

For At Ease 2.0, this was the two large folder-like windows that contained the buttons. In At Ease 3.0 for Workgroups, additional panels are being added for CD-ROM and floppy support.

Panes

Not to be confused with panels, a pane is used in the At Ease Setup for Workgroups application to represent the various palette window states when editing a setup.

Superuser

The primary administrator of At Ease 3.0 for Workgroups. This individual has all rights, including the ability to add Middle Level Administrators.

Middle Level Administrator (MLA)

An individual, assigned to a particular setup, that can handle some routine administration. The actual rights are assigned by the superuser.

Article Change History:

14 Aug 1995 - Added keyword.

Support Information Services

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Tech Info Library Article Number:17737



Tech Info Library

AudioVision 14-in. Display: Requires Omni Microphone (10/96)

Revised: 10/11/96
Security: Everyone

AudioVision 14-in. Display: Requires Omni Microphone (10/96)

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Article Created: 12 May 1995
Article Reviewed/Updated: 10 October 1996

TOPIC -----

I am trying to get a PlainTalk microphone to work on the AudioVision 14-in. Display. When I connect the PlainTalk microphone to my Power Macintosh 8100, everything works properly. However, when I connect the microphone to the microphone plug on the AudioVision display, the microphone is not recognized. Why?

DISCUSSION -----

There are two different microphones shipping with Macintosh computers: Omni and PlainTalk. They are both require a power or voltage source to operate properly. The power source for these microphones is provided through the microphone connector when you plug the microphone into the connector on the rear panel of the computer.

The PlainTalk microphone that ships with Macintosh AV computers will not work with the AudioVision display because the display connector does not provide the power the microphone needs.

The proper microphone for the AudioVision Display is the Omni microphone. If you want to use a PlainTalk microphone, you must connect to a computer that supports it.

Article Change History:
10 Oct 1996 - Clarified discussion.

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Tech Info Library Article Number:17739



Tech Info Library

Network Software Installer: System 6.0.x Support (5/95)

Revised: 5/15/95
Security: Everyone

Network Software Installer: System 6.0.x Support (5/95)

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Article Created: 15 May 1995

TOPIC -----

What is(are) the proper version(s) of Network Software Installer that I should use to upgrade the networking software on all of my Macintosh computers?

DISCUSSION -----

All Macintosh computers running System 6.0.x should be upgraded with Network Software Installer (NSI) 1.4.5. The most recent release of NSI, Network Software Installer ZM-1.5, is not supported for System 6. This installer works on only System 7 or later Macintosh computers.

All Macintosh computers running System 7.x should be upgraded with NSI ZM-1.5. This is the most recent version of NSI which can only be installed on Macintosh computers running System 7.

Support Information Services

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Tech Info Library Article Number:17745



Tech Info Library

PrintMonitor: Incorrectly Named Spoiled Documents (5/95)

Revised: 5/16/95
Security: Everyone

PrintMonitor: Incorrectly Named Spoiled Documents (5/95)

=====

Article Created: 15 May 1995

TOPIC -----

When I view documents I have queued in the PrintMonitor, all the documents are named Button Bar. Why?

DISCUSSION -----

This is the name of some of the floating windows in WordPerfect. When you print or fax from WordPerfect this name is passed to the PrintMonitor application as the document name.

Support Information Services

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Tech Info Library Article Number:17746



Tech Info Library

System 7.5: Corrupt Fonts Cause Installation problems (5/95)

Revised: 5/15/95
Security: Everyone

System 7.5: Corrupt Fonts Cause Installation problems (5/95)

=====

Article Created: 15 May 1995

TOPIC -----

When installing new printer software on my Macintosh with System 7.5 installed, I get one of the following error messages:

"there is a problem with the disk you are trying to install onto"
"An error occurred while installing onto the active startup disk..."

Why am I getting these messages?

DISCUSSION -----

These error messages can occur if there is an extension conflict, or a corrupt font suitcase. To install your printer software follow these steps:

Step 1

Restart your Macintosh and hold down the shift key. This turns off all your extensions

Step 2

Run the installation program.

Step 3

If you still get the error message, quit the installation, then repeat Step 1, and skip Step 2.

Open your System folder and drag the Fonts folder to your desktop, then repeat Steps 1 and 2. If you still have problems after following these steps, you should call (800) SOS-APPL for additional assistance.

After the installation of the printer software, open the Fonts folder on your desktop and move the suitcases and any PostScript printer fonts you may have installed into the new Font folder inside your System folder.

Support Information Services

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Tech Info Library Article Number:17747



Tech Info Library

Macintosh: Erratic Sound & QuickTime movies From CD-ROM (6/95)

Revised: 6/13/95
Security: Everyone

Macintosh: Erratic Sound & QuickTime movies From CD-ROM (6/95)

=====

Article Created: 15 May 1995
Article Reviewed/Updated: 13 June 1995

TOPIC -----

Music CD-ROM discs played from my PowerBook 540 computer sound choppy. The same thing happens if I try to play QuickTime movies from a CD-ROM. When I place these CD-ROMs in another computer, they play fine. Why?

DISCUSSION -----

If playback of QuickTime movies and Audio CDs are choppy, slow, skip, or jump around, check the following:

Step 1

If you have a PowerBook, turn off Processor Cycling (in the PowerBook Control Panel).

Step 2

On all Macintosh and PowerBook computers, turn off Virtual Memory (in the Memory Control Panel).

Step 3

Turn off or quit applications running in the background before you try to play the music or the movie.

This article was published in the "Information Alley":
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Article Change History:

13 Jun 1995 - Added Info Alley information; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17748



Tech Info Library

How To Remove Global Village Software (5/95)

Revised: 5/15/95
Security: Everyone

How To Remove Global Village Software (5/95)

Article Created: 15 May 1995

TOPIC -----

I recently bought a third-party Fax modem for my Performa. I constantly get the error message, "the serial port is in use," or I can only use my new modem off my printer port. What should I do?

DISCUSSION -----

Your new Fax software is probably conflicting with the original TelePort Bronze or TelePort Gold II software that shipped with your computer. You may want to remove the old TelePort software completely from the computer.

Global Village TelePort Bronze

The software to remove is stored in the following locations:

System Folder: Apple Menu Items: Fax Center
System Folder: Extensions: GlobalFax
System Folder: Control Panels: TelePort/Bronze (may be called Fax Modem)
System Folder: GlobalFax Files
System Folder: GlobalFax Personal

Global Village TelePort Gold II

The software to remove is stored in the following locations:

System Folder: Apple Menu Items: Fax Center
System Folder: Control Panels: TelePort Serial
System Folder: Extensions: Global Village Toolbox
System Folder: Extensions: GlobalFax
System Folder: GlobalFax Files
System Folder: GlobalFax Personal

NOTE: The GlobalFax Files folder contains any Faxes you have sent, you may want

to retain it and the Fax Center folder to later review any messages.

You can move the above files to single folder on your hard disk, and they will be deactivated after you restart your computer. You do not need to throw them away, unless you want to reclaim the disk space. If you do throw them away, be sure you make a backup of the software.

Support Information Services

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Tech Info Library Article Number:17749



Tech Info Library

Views Settings Not Remembered Between Restarts (5/95)

Revised: 5/15/95
Security: Everyone

Views Settings Not Remembered Between Restarts (5/95)

=====

Article Created: 15 May 1995

TOPIC -----

My views of folders in windows and the type of information displayed are not retaining their settings between shutdowns (font, snap to grid, size of icons, and so on). I used the Views control panel to change the different views, but my computer does not remember the settings when I restart. What can I do to resolve this?

DISCUSSION -----

Under System 7 and above, these settings are stored in the Finder Preferences file. It is located in the Preferences folder inside the System Folder.

If this file has become damaged or corrupted, you should move it to the Trash so that another one can be created. Once the file has been moved to the Trash, restart your Macintosh computer. A new Finder Preferences file will automatically be created. Empty the Trash after you restart. This should allow your system to remember the settings.

For a complete list of what is stored in the Finder Preferences file, see the Technical Information Library (TIL) article named "System 7: System Preferences and Finder Preferences".

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17750



Tech Info Library

Disabled QuickDraw GX: Generic Fax Sender GX Icon (5/95)

Revised: 5/15/95
Security: Everyone

Disabled QuickDraw GX: Generic Fax Sender GX Icon (5/95)

=====

Article Created: 15 May 1995

TOPIC -----

After disabling QuickDraw GX with Extensions Manager and restarting, the desktop printer icons change to printer icons with an X through them but the Fax Sender GX icon changes to a generic document icon.

If I use ResEdit, I can see that an icon for Fax Sender GX with an X through it does exist, but is not being accessed. Rebuilding the Desktop and trashing Finder Preferences does not fix the generic icon problem.

DISCUSSION -----

The issue you mention was reproduced on a Power Macintosh computer in our lab. At the time of testing this Power Macintosh computer was running System 7.5.1 (System 7.5 plus the System 7.5 Update 1.0) and QuickDraw GX 1.1.1.

This situation has been reported to engineering. It will be fixed in a future version of the Apple Telecom software.

QuickDraw GX users who are using Apple Telecom software 2.0, can avoid this cosmetic bug by doing either of the following:

- 1) Avoid disabling QuickDraw GX while using the Fax Sender GX desktop printer.
- 2) Do not install QuickDraw GX at all. This allows the user to use the non-QuickDraw GX Fax Sender driver.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17751



Tech Info Library

LaserWriter 16/600 PS: Problem w/ Novell Services on WANs (5/95)

Revised: 5/16/95
Security: Everyone

LaserWriter 16/600 PS: Problem w/ Novell Services on WANs (5/95)

Article Created: 16 May 1995

TOPIC -----

I ran into some problems with the Apple LaserWriter 16/600 PS, corrected by turning off the Novell option in the printer. Here is the problem I had with the LaserWriter 16/600 PS on my Novell WAN (Wide Area Network).

The Novell traffic generated by two LaserWriter 16/600 printers may have been generating as much as 40% or more of our traffic back to our backbone, and our T1 has been "bumping" 100% utilization on occasion, which is unusual for our network. We noticed a dramatic drop in traffic after to turning off the Netware support on these printers.

The captures with a network sniffer show the printers attempting to configure themselves as queue servers for Netware. To do this they attach to each Novell Netware server advertising print services and see if any queues match those on the print server. If they do not succeed they in one pass of all servers they try each again, and again, and again. It looks like the printers poll continually.

Is there a way to change this behavior?

DISCUSSION -----

The IPX implementation on the LaserWriter 16/600 PS has a potential problem on some networks. The problem is a potential degradation of network performance, especially across WAN links, when the Netware mode on the Apple LaserWriter 16/600 PS is enabled (the default) and the Novell server(s) have PSERVER queues.

When the LaserWriter 16/600 PS first starts up and periodically thereafter, it tries to attach to each Novell Netware server that is advertising print services to see if any queues on the server should be serviced by the printer. On a large, multiple server or multiple printer network, these informational packets can consume a large amount of bandwidth. The impact can be greater if the

network is also on a WAN, because the informational packets stretching across slower speed WAN links may have greater impact on those links.

The solution is to use LWPMAN to configure the printer for specific servers that are local to the printer, to prevent unnecessary traffic from being sent everywhere. As a temporary fix, or a secondary fix, you can adjust the queues scan time defaults from within LWPMAN as well (if the queue is scanned less often, less packets are transmitted, but the job remains in the queue, unserved for a longer stretch of time).

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17752



Tech Info Library

TouchWindow: Supported with Early Childhood Connections? (5/95)

Revised: 5/16/95
Security: Everyone

TouchWindow: Supported with Early Childhood Connections? (5/95)

=====

Article Created: 16 May 1995

TOPIC -----

Edmark TouchWindow, which ships with Apple Early Language Connections, locks up when used on a Macintosh LC575 with Early Childhood Connections. Why?

DISCUSSION -----

Using TouchWindow with Early Childhood Connections is not a configuration supported by Apple. There are currently several issues with this configuration:

- Early Childhood Connections ALWAYS locks/hangs when the TouchWindow hardware is connected.
- Early Language Connections (System 7.1) works with the software that ships with the CPU (version 2.1 of TouchWindow) but NOT with the software that might ship with the hardware (TouchWindow 2.00).
- Early Language Connections (System 7.5) works with the hardware connected and the software that comes in the bundle.

Early Childhood Connections does NOT ship with either the software or hardware for TouchWindow.

You can contact Edmark Corporation for additional information about TouchWindow. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17753



Tech Info Library

HyperCard 2.3: Manual Error Wrong Instructions On Pg 137 (5/95)

Revised: 5/16/95
Security: Everyone

HyperCard 2.3: Manual Error Wrong Instructions On Pg 137 (5/95)

=====

Article Created: 16 May 1995

TOPIC -----

This article describes an error in the new "Getting Started" manual for HyperCard 2.3.

DISCUSSION -----

On page 137 of the Getting Started manual for HyperCard 2.3 it says the following:

"You need to change the stack's openStack handler. Replace the line
addColor install with addColor install, 24 or
addColor install with addColor install, 24,
depending on the bit depth you want."

This instruction is telling you to do the same replacement twice.

In reference to the note on page 56, it is obvious that the note on page 137 should say addColor install, 16 or addColor install, 24.

This error in the HyperCard "Getting Started" manual has been forwarded to the HyperCard team for review and revision in future releases.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17755



Tech Info Library

Easy Install: When This Option Installs Everything (6/95)

Revised: 6/14/95
Security: Everyone

Easy Install: When This Option Installs Everything (6/95)

=====

Article Created: 16 May 1995
Article Reviewed/Updated 14 June 1995

TOPIC -----

Sometimes the Easy Install option in the system software installer installs only those items needed on a particular Macintosh as it is supposed to do. Other times, it does a generic install.

The generic install places items that do not belong or work with the particular Macintosh, such as Powerbook control panels on a desktop CPU. Doing a custom install also does not help. It may do this on one unit, but not on an identical unit, even when using the same installation disks. What is happening?

DISCUSSION -----

When the installer builds a System suitcase it places within it an invisible copy of the installer script. Each successive installer uses the script in the System suitcase. After once doing an install using the "software for any Macintosh" option each successive installer uses that first script as well. This process maintains consistency across numerous installs.

To prevent repeating the generic install, boot from the Disk Tools Disk and remove the System suitcase from the System Folder on the hard drive before running the installer again.

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Article Change History:
14 Jun 1995 - Added Info Alley information; made minor technical updates.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17756



Tech Info Library

HyperCard 2.3: Installs AppleScript 1.1 not 1.1.1 (5/95)

Revised: 5/16/95
Security: Everyone

HyperCard 2.3: Installs AppleScript 1.1 not 1.1.1 (5/95)

=====

Article Created: 16 May 1995

TOPIC -----

The installer for HyperCard 2.3 says that it will install AppleScript 1.1.1. However, the AppleScript installed on my Macintosh PowerBook Duo 280c by the HyperCard 2.3 installer is version 1.1. Why?

DISCUSSION -----

Apple is aware of this issue. The installer is incorrect in reporting that it will install AppleScript 1.1.1. This has nothing to do with which computer you have or how you ran the HyperCard 2.3 installer. AppleScript 1.1 is the correct version.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17757



Tech Info Library

Telecom Adapter 2.0 & Calling In To Get Messages (5/95)

Revised: 5/16/95
Security: Everyone

Telecom Adapter 2.0 & Calling In To Get Messages (5/95)

=====

Article Created: 16 May 1995

TOPIC -----

When using the Telecom Adaptor 2.0 and not forwarding to the PowerTalk Mailbox, I had a problem with calling in to get messages. What do I need to do?

DISCUSSION -----

There was an omission in the enclosed documentation. While the greeting message is playing press "*" (asterisk) on the phone and you will be asked to enter the password, then press "#" (pound) to continue.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17758



Tech Info Library

AppleShare Client For Windows 1.0 Read Me (4/97)

Revised: 4/28/97
Security: Everyone

AppleShare Client For Windows 1.0 Read Me (4/97)

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Article Created: 16 May 1995
Article Review/Updated: 9 April 1997

TOPIC -----

This article is the AppleShare Client For Windows 1.0 Read Me file.

DISCUSSION -----

This document provides late-breaking news about AppleShare Client for Windows.
It contains the following sections:

- For More Information
- IMPORTANT PRE-INSTALLATION INFORMATION
 - Windows for Workgroups 3.11 and unsupported network adapters
 - Windows 3.1 and 3.11 and unsupported network adapters
- Changing the location of print spool files
 - Viewing Mac OS-formatted files from Windows and DOS applications
- Text-file differences between Mac OS and Windows
- Saving the battery charge on your portable computer
- Supported printer drivers
- Obtaining updated LaserWriter printer drivers
- Useful network utilities
 - Obtaining information about Apple products for DOS and Windows
- Removing the Farallon PhoneNET PC product

For More Information
=====

Refer to the following documentation for more information:

"Getting Started With AppleShare Client for Windows"-This printed manual describes how to install the AppleShare Client application.

AppleShare Client Installer Help - This file describes installing, remove, and

re-installing the AppleShare Client application. AppleShare Client Installer Help is available through the AppleShare Client Installer.

AppleShare Client Help - This file describes the features of the AppleShare Client application and how you use it to share network resources. AppleShare Client Help is available through the AppleShare Client application.

PROBLEMS.WRI - This file describes potential problems you might encounter while installing and using the AppleShare Client application, describes possible causes for those problems and provides suggested solutions to those problems. PROBLEMS.WRI is stored on the AppleShare Client for Windows Disk 1. During installation, it is copied into the C:\APPLE\A_SHARE directory by default.

USERINST.WRI - This file, located on the AppleShare Client for Windows Disk 2, describes how to install the AppleShare Client application. This file is provided to allow the system administrator to modify the installation instructions for site-specific purposes and distribute them to users. During installation, it is copied into the C:\APPLE\A_SHARE directory by default.

IMPORTANT PRE-INSTALLATION INFORMATION

=====

Before installing AppleShare Client for Windows, you should determine whether you are using supported Ethernet network adapter hardware. If your network adapter is not in the following list, you may still be able to use AppleShare Client for Windows. For more information, see the section "Windows for Workgroups 3.11 and Unsupported Network Adapters" or "Windows 3.1 and 3.11 and Unsupported Network Adapters," as appropriate for your version of Windows.

AppleShare Client for Windows supports the following network adapters:

AE2MC	Artisoft AE-2 MCA Ethernet
ANR	Artisoft Noderunner 2000 (NE2000)
ARTAE3	Artisoft LANTastic Ethernet AE-3 (NE2000)
ARTAE2	Artisoft LANTastic Ethernet AE-2 (NE2000)
ASANTENW	Asante NWMLID Ethernet
ASANTEM	Asante 2100 series MCA Ethernet (NE2100)
ASANTE	Asante 2000 series Ethernet (NE2000)
EII	3Com EtherLink II Adapter (3C503)
EII16	3Com EtherLink II/16 Adapter (3C503)
EIII	3Com EtherLink III Adapter (3C5x9, 3C509)
EIIIEISA	3Com EtherLink III (3C5x9, 3C579 EISA)
ELIIIIMC	3Com EtherLink III (3C529 MicroChannel)
EL1616	3Com EtherLink 16 (3C507 in 16 bit slot)
EL168	3Com EtherLink 16 (3C507 in 8 bit slot)
ELMC	3Com EtherLink/MC (3C523 MicroChannel)
EXP16	Intel EtherExpress 16 Ethernet
NE2000	Novell NE2000 or compatible Ethernet
SMC8003	SMC EtherCard PLUS Elite (8Bit)
SMC8013	SMC EtherCard PLUS Elitel6C,& 8216
XIRCOM	Xircom Pocket Ethernet
XIRCOM2	Xircom Pocket Ethernet II

XIRCOM3 Xircom Pocket Ethernet III
XIRCOMC Xircom Creditcard Ethernet

Windows for Workgroups 3.11 and Unsupported Network Adapters

If you are using Windows for Workgroups 3.11, use your Windows for Workgroups installation disks to install your network adapter. Once the network adapter is working in Windows, you can install the AppleShare Client for Windows software using the normal installation procedures.

Windows 3.1 and 3.11 and Unsupported Network Adapters

If you are using Windows 3.11 or Windows 3.1 without Windows networking software, and you have an a vendor-supplied ODI driver for your unsupported network adapter, you may be able to use the procedures in this section to install AppleShare Client for Windows.

WARNING: Installing your system for networking requires that you manually install the network adapter driver and edit your driver configuration file and your DOS startup batch files. Performing these procedures incorrectly can cause your computer to fail.

Before performing the following procedures, you should locate the software and documentation that came with your network adapter. As you perform the procedures, you will need information from the documentation.

- 1) If your network adapter is not already installed, install and test it, following the instructions in your network adapter documentation.
- 2) Restart your computer and run Windows.
- 3) Run the INSTALL.EXE program on the AppleShare Client for Windows Disk 1.
- 4) In the Installation Options dialog box, choose the Standard Installation option and click Continue. The Select Adapter dialog box appears.
- 5) Select the line at the end of the adapter list that reads "[Other] Unlisted Adapter Option," and click OK. The Network Adapter Settings dialog box appears.
- 6) Enter the configuration settings for your network adapter. If possible, select values that match the adapter configuration settings you used in completing step 1 above. If no matching settings are displayed, simply continue with step 7. If you are already running ODI-based networking software, AppleShare Client for Windows Installer will use your existing network adapter configuration settings.
- 7) Complete the AppleShare Client for Windows installation.
- 8) Exit Windows and restart your computer as instructed by the Installer. If your computer was not already running ODI-based networking software, continue with step 11.
- 9) If your computer was already running ODI-based networking software using your

network adapter card, edit the file ATDRIVER.BAT (in the C:\APPLE\A_SHARE directory by default). Remove the word "REM" from the beginning of the last line so that it reads "C:\APPLE\A_SHARE\ODI.EXE".

10) Restart your computer. AppleShare Client for Windows is completely installed and should run when you start Windows. Skip the rest of this procedure.

11) Use DOS to copy the ODI driver and any supporting files for your network adapter to your AppleShare Client for Windows directory. The default directory path is C:\APPLE\A_SHARE.

12) Edit the NET.CFG file in the C:\APPLE\A_SHARE directory. First, replace all strings of four consecutive X characters (that is, XXXX) with the file name of your driver, excluding the .COM extension for the file. Next, change any parameters that do not match your adapter configuration settings. Check the values for the following parameters:

- the interrupt request level, a one- or two-digit number preceded by INT #1
- the I/O port number, a 3-digit value such as 300, preceded by PORT #1
- the direct memory access channel, a value of 1 or 2 preceded by DMA
- the memory access address, a data address value such as D8000, preceded by MEM You should consult your network adapter card documentation to determine if other parameters are required for your system. Finally, save the NET.CFG file.

13) Edit the file ATDRIVER.BAT (in the C:\APPLE\A_SHARE directory by default). First, remove the word "REM" from the beginning of every line. Next, replace the string "XXXX" in the second line of the file with the filename of your network adapter driver. Be sure to include the filename extension.

14) Save the ATDRIVER.BAT file.

15) Restart your computer by turning it off and then on. AppleShare Client for Windows is completely installed and should run when you start Windows. If you experience any problems after completing these instructions, see the file C:\APPLE\A_SHARE\PROBLEMS.WRI.

Changing The Location Of Print Spool Files

=====

You may want to change the location of the spool files used by the AppleShare Client to store PostScript print jobs until they can be sent to the networked LaserWriter printer. For example, you may want to store these files in their own directory or on a disk with more free space. Do not change the spool file location to a floppy disk or to a CD-ROM disc. It is recommended that you do not change the spool file location to a removable cartridge drive or a network drive unless you are certain that it will be available at all times.

To change the location of the spool files, you must edit the [ports] section of the WIN.INI file. There are three spool files, each on its own line, in the form C:\LWx.PRN=. Edit each line to change the pathname of the file. Do not change the filename itself (LWx.PRN). Also be sure to retain the equal sign (=) at the

end of the line. Do not add a colon before the equal sign; it is a special identifier only for ports such as LPT1: and COM1:.

Viewing Mac OS-Formatted Files From Windows and DOS Applications

AppleShare Client for Windows hides Macintosh files that contain resource forks to prevent their being damaged by an incompatible application or operating system. See the section "Macintosh File Formats" in AppleShare Client Help for additional information.

AppleShare Client for Windows can be prevented from marking these files as hidden, thereby allowing access to the portions of these files that Windows applications might be able to use. To prevent hiding these files, add the following lines to the ASHARE.INI file (C:\WINDOWS\ASHARE.INI):

```
[FileRedir]
HIDERESFILES=FALSE
```

WARNING: Changing this value does not change the format of Macintosh files; you should use these files only with great care.

Text File Differences Between Mac OS and Windows

=====

A Mac OS-formatted text file contains a single character to indicate the end of a line of text. Windows text files contain two characters for this purpose. Some Windows-based text-viewing programs like NOTEPAD and WRITE require text files to contain the DOS/Windows two-character ASCII combination (line feed and carriage return) to indicate the end of a line. Consequently, an entire text file created on the Macintosh may appear as a single line of text to such applications.

If a text file that you create under Windows is opened and then saved (even as a text file) by a Mac OS-based application, the file will be formatted for the Mac OS. Many word processing applications can process multiple file formats. Other low-cost file- and text-translation utilities are readily available for converting text files and other types of documents.

Saving The Battery Charge On Your Portable Computer

=====

Most portable computers minimize battery drain by running the hard disk only when necessary. To provide timely printing of your files, the AppleShare Client print spooler checks the disk every five seconds for pending print jobs. This level of disk activity can significantly shorten the battery charge time. If your computer is not printing to a network printer, you may want to disable the print spooling temporarily.

One easy way to disable the print spooler is to disconnect all assigned network printers. To disconnect printers, click the print services button in the main AppleShare Client window, select each printer, and click Disconnect.

Supported Printer Drivers

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- Provided with Windows installation disks

Apple LaserWriter

Apple LaserWriter Plus

Apple LaserWriter IINT

Apple LaserWriter IINTX

- Provided with AppleShare Client for Windows

Adobe Default Printer

Apple LaserWriter 16/600 PS

Apple LaserWriter Pro 600

Apple LaserWriter Pro 630

Apple LaserWriter Select 320

Obtaining Updated LaserWriter Printer Drivers

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- Windows LaserWriter drivers available

LaserWriter Pro 810

LaserWriter Select 360

LaserWriter Select 310

Personal LaserWriter NTR

LaserWriter Pro 600/630

- CompuServe

(go aplsup) Apple Support Forum:

Browse Libraries: DOS/Windows SW

- Apple FTP

Apple Support ([ftp.support.apple.com](ftp://ftp.support.apple.com))

PUB:APPLE SW UPDATES:US:DOS & WINDOWS

Useful Network Utilities

=====

The PC Exchange utility from Apple computer allows you to use your Macintosh computer to format floppy disks for PC computers and to store PC-formatted files on your floppy disks and SCSI hard drives. PC Exchange can be purchased at Apple dealers, and it is included for free in the Mac OS System 7.5.

The PC Net Exchange utility associates a PC icon with PC files stored on a Macintosh server. If you have PC Exchange installed, adding PC Net Exchange allows you to specify document-to-application and document-to-icon mapping based on the filename extension. PC Net Exchange can be downloaded for free from the following sources:

- America Online
keyword: applecomputer
- CompuServe
(go aplsup)
- Apple on the Internet
Worldwide Web: <<http://www.info.apple.com/swupdates>>
ftp: <<ftp://ftp.info.apple.com>>

Obtaining Information About Apple Products For DOS & Windows

- CompuServe:
(go aptil) Apple Tech Info Library
- The Apple Support and Information Web Server, www.info.apple.com
Web URL <<http://www.info.apple.com>>
Web IP address 204.96.16.2
- The Apple Support FTP site
Apple Software Updates <<ftp://ftp.info.apple.com>>
IP address 204.96.16.4

Removing The Farallon PhoneNet PC Product

=====

Farallon PhoneNET PC cannot be used on the same computer with AppleShare Client for Windows. To avoid disabling your existing network services, the AppleShare Client for Windows Installer currently will not run if PhoneNET PC is already installed. If you want to replace PhoneNET PC with AppleShare Client for Windows, you must first remove PhoneNET PC from the system. At the time this Read Me file was written, no commonly available utility is known to successfully remove the entire PhoneNET PC. This section details how to remove the product so that you can install AppleShare Client for Windows. (You must perform steps 2 and 5 at a minimum to install AppleShare Client for Windows successfully.)

IMPORTANT: Before you remove any network software, you should ensure that no important application depend on that software.

The files that you will change or delete are located in four directories:

C:\
C:\PHONENET
C:\WINDOWS
C:\WINDOWS\SYSTEM

To remove the PhoneNET PC product, perform these steps:

1) Back up all PhoneNET PC files and all system files that contain references to them:

- In the directory C:\

CONFIG.SYS
AUTOEXEC.BAT

- In the directory C:\PHONENET

All files. Especially important are the NET.CFG file and the network adapter driver file. You can recognize the driver by the .COM extension of its filename. When you install AppleShare Client for Windows, you will re-install the driver, and you may need to enter the settings for your network adapter card that are contained in the NET.CFG file.

- In the directory C:\WINDOWS

SYSTEM.INI
WIN.INI
PROGMAN.INI
DOSAPP.INI
PHONENET.INI
PHONENET.GRP
TIMBUKTU.BMP
TIMBUKTU.HLP

- In the directory C:\WINDOWS\SYSTEM

ADSP.DLL
PNTPROTO.DLL
PNTDATA.DLL
FPRINT.386
PNTALK.DRV

2) Delete or "remark out" any command lines in the AUTOEXEC.BAT file that reference or call PhoneNET PC batch files. For example, if your system is configured to start PhoneNET PC when your system boots, your AUTOEXEC.BAT probably contains the following command line, which must be deleted:

```
CALL C:\PHONENET.BAT
```

You should delete or remark any command lines calling the following batch files and executables:

AARP.COM
ABOTH.BAT
AFILES.BAT
APRINT.COM
APRNT.BAT
ASHARE.COM
ASP_WS.COM
ATALK.COM
EXTEND.BAT
PNTVDD.EXE

3) Edit the C:\CONFIG.SYS file.

In the command line beginning "LASTDRIVE=" set the drive letter to P.

4) Delete the C:\PHONENET directory and all the files in it. These files are as follows:

3C509.COM
AARP.COM
ABOTH.BAT
AFILES.BAT
ANET.EXE
APRINT.COM
APRNT.BAT
ASHARE.COM
ASP_WS.COM
ATALK.COM
ATNET.DLL
CHOOSER.EXE
CHOOSER.HLP
COMPAT.COM
DA.DTA
DA.EXE
DA.HLP
DESPool.EXE
EXTEND.BAT
LSL.COM
MAKECFG.EXE
MINSES.EXE
NET.CFG
PAP_WS.COM
PHONENET.BAT
PHONENET.WRI
PNSN
PNTVDD.EXE
QIAO.DLL
README.DOC
REDIR.EXE
ROUTE.COM
SETUP.LOG
SPOOL (a subdirectory)
TB2.EXE
TB2RECPB.DLL
TB2TOOLS.DLL
TIMBUKTU.WRI

5) Edit the C:\WINDOWS\SYSTEM.INI file.

In the [boot] section, change "network.drv=pntalk.drv" to "network.drv="

In the [boot.description] section, change "network.drv=PhoneNET PC" to
"network.drv=No Network Installed"

In the [386Enh] section, remove the following lines:

"device=fprint.386"

"PhoneNETMemoryPool=n" (where n is any number)

Remove the entire [fprint] section.

6) Edit the C:\WINDOWS\WIN.INI file.

In the [windows] section, delete the following line:
"load=PNNOTIFY.EXE"

Delete the entire [MacintoshToPC] section
Delete the entire [PCToMacintosh] section

7) Edit the C:\WINDOWS\PROGMAN.INI file.

In the [Groups] section, find the following line:

"Group(n)=C:\WINDOWS\PHONENET.GRP"
Make a note of the group number (n).

In the [Settings] section, edit the line beginning "Order=" to delete the group number (n) that you noted.

In the [Groups] section, delete the Group line:
"Group(n)=C:\WINDOWS\PHONENET.GRP"

8) Edit the C:\WINDOWS\DOSAPP.INI file.

In the [DOS Applications] section, delete all lines that refer to the C:\PHONENET directory. These include the following:

C:\PHONENET\ANET.EXE=1
C:\PHONENET\ASHARE.COM=1 C:\PHONENET\APRINT.COM=1

9) From the C:\WINDOWS directory, delete the following files:

PHONENET.INI
PHONENET.GRP
TIMBUKTU.BMP
TIMBUKTU.HLP

10) From the C:\WINDOWS\SYSTEM directory, delete the following files:

ADSP.DLL
PNTPROTO.DLL
PNTDATA.DLL
FPRINT.386
PNTALK.DRV

Article Change History:

09 Apr 1997 - Removed out dated on line references.
17 Jan 1997 - Updated Internet & online sw updates locations.
05 Dec 1995 - Added version number.

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Tech Info Library Article Number:17760



Tech Info Library

AppleShare Client For Windows Install Troubleshooting (5/95)

Revised: 5/16/95
Security: Everyone

AppleShare Client For Windows Install Troubleshooting (5/95)

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Article Created: 16 May 1995

TOPIC -----

This article describes potential problems you might encounter while installing and using AppleShare on your Windows computer. It tells you possible causes of each problem, and suggests steps you can take to resolve the problem.

DISCUSSION -----

Problems Installing AppleShare Client For Windows

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The Installer doesn't automatically detect the network adapter card type and settings.

Microsoft Windows versions 3.1 and 3.11, and Windows for Workgroups versions 3.1 and 3.11, do not support self-configuring network adapter cards that provide this information. You must configure your card by installing jumpers or by using a software utility, and you must provide the card settings to applications that require them. Ask your network administrator for this information or see the documentation that came with your network adapter card.

During the installation process one of the following messages appears:

- Your system is configured with an incompatible AppleTalk network driver. You must remove the driver from your system before installing AppleShare. Please check the README.TXT file for information about removing incompatible drivers.

AppleTalk is the set of network protocols or communications rules that AppleShare clients and servers use to communicate with each other. By default, the AppleShare Client for Windows Installer tries to install the version of AppleTalk included in the product. Only one version of AppleTalk can run on a single network adapter card. If the previously installed AppleTalk software is incompatible with AppleShare Client for

Windows, you should cancel the installation process, remove the incompatible version of AppleTalk, and re-install AppleShare Client for Windows. For instructions on how to remove the Farallon PhoneNET version of AppleTalk, see the README.TXT file. The README.TXT file is located in the same directory in which you installed AppleShare Client for Windows (C:\WINDOWS\A_SHARE, by default).

- This product requires Windows to be running in Enhanced Mode.

AppleShare Client for Windows requires Windows 3.1 running on a 386 or greater Intel-compatible computer. Windows on 286 computers runs in standard mode. Enhanced mode is a feature of 386 and greater Intel-compatible computers and is the default mode for Windows, however a WIN /S or WIN /2 command may be forcing your Windows system into standard mode. Check your WIN launch command in your AUTOEXEC.BAT file. If the WIN launch command appears as WIN /S or WIN /2, then the /S or /2 parameter should be removed or the command should be changed to WIN /3 to install and run AppleShare Client for Windows. For information about the WIN /S, WIN /2, and WIN /3 commands, see your Microsoft Windows documentation.

- The Installer cannot be run while virtual DOS boxes are open. Please close all open DOS boxes prior to running the Installer.

If you are running a DOS application or have started a DOS session from within Windows, then the DOS program or session must be closed before installing.

- A message appears, similar to the following:

<a driver name or batch file name>

The preceding reference to an incompatible driver was found in file:

C:\AUTOEXEC.BAT

This message appears if you have PhoneNET Talk installed on your computer. (PhoneNET Talk is version of AppleTalk manufactured by Farallon Computing, Inc., which is incompatible with AppleShare.) The driver or batch file name identified by the error message must be removed from the AUTOEXEC.BAT file before you can install AppleShare Client for Windows.

WARNING: Removal of this drive or batch file name will disable PhoneNET Talk. You should make this modification to the AUTOEXEC.BAT file only if you are sure you (or applications on your computer) no longer need to use PhoneNET Talk.

Problems Starting DOS After You Install AppleShare Client For Windows =====

An error message appears after the following text is displayed:

NetWare Link Support Layer v2.14

<identity of your card driver>

ODI LAP TSR for AppleTalk, Version 1.0, Copyright (c) 1995 Miramar Systems Inc.,
Santa Barbara, CA.

An error message concerning the AppleShare Client software then appears. You have probably installed AppleShare Client for Windows for a network adapter card that is not supported by AppleShare Client for Windows, or the incorrect configuration information for your network adapter card was specified during installation. Make sure your network adapter card is supported by AppleShare. For information about the supported cards, see the Getting Started With AppleShare Client for Windows guide and the README.TXT file. The README.TXT file is located in the same directory in which you installed AppleShare Client for Windows (C:\WINDOWS\A_SHARE, by default). Check your NET.CFG file to ensure that you specified the correct network adapter card type, interrupt request level (IRQ), and memory address. To check your NET.CFG file you can use the DOS EDIT.COM program or the Windows NOTEPAD.EXE program. You may need to consult your network adapter card documentation or your network administrator to obtain the correct information for your card. Make the appropriate changes to the NET.CFG file and restart your computer.

The following error message appears while DOS is starting on your computer:

LSL out of resources.

This message occurs while the NetWare Link Support Layer (LSL) module is loading. If you had ODI-based networking software installed on your computer before you installed AppleShare Client for Windows, it is probable that one of the networks will not load properly when you start your computer. More memory is required by the LSL module. Add the following line to the LINK SUPPORT section of the NET.CFG file:

MAX STACKS 6

If the MAX STACKS statement already exists and its value is 6 or greater, then increase the number by two.

Problems Using Windows After You Install AppleShare Client For Windows

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You experience problems using Windows or Windows crashes when you try to start it.

One or more of the following problems may exist:

- The wrong network adapter card was selected during installation. Check which network adapter card you have in your computer, then re-install AppleShare.
- The network adapter card is set for a different interrupt, I/O port, or memory address setting than was selected during the installation process.

Check the proper settings for your network adapter card, then re-install AppleShare.

- Your network cables are damaged or improperly installed. Check for loose connections, damaged connectors, improper cable termination, and damaged cables and fix any of the problems that exist.
- A startup batch file is loading the network adapter card driver twice or with conflicting settings. See your system administrator.
- The NET.CFG or the ATDRIVER.BAT files were improperly modified. For AppleShare Client for Windows to run properly, certain files must be in the right places and entries in batch files must be correct. Use the information provided in the README.TXT file and the installation log (ATINSTAL.LOG). The README.TXT file is located in the same directory in which you installed AppleShare Client for Window (by default, C:\APPLE\A_SHARE) and the installation log file is copied to the top level of your C: drive.
- An incompatible version of AppleTalk is already installed on your computer. AppleShare Client for Windows allows only one version of AppleTalk software to be running on a single network adapter card. The Installer will not install AppleShare Client for Windows if it detects another version of AppleTalk already installed. Problems can occur, however, if an incompatible product is installed after AppleShare Client for Windows is installed. Examples of incompatible products include Farallon's PhoneNET Talk and network software based on PhoneNET Talk such as FileMaker Pro for Windows from Claris. Either remove the incompatible software or AppleShare for Windows.

NOTE: Your incompatible product may have been updated to work with the AppleShare Client for Windows; contact the manufacturer. MacLan Connect users should contact Miramar Systems, Inc. in Santa Barbara for a version of their software that is compatible with AppleShare Client for Windows.

- You have performed a custom installation on a computer with a Token Ring or LocalTalk network adapter card. Token Ring and LocalTalk network adapter cards are not supported by AppleShare for Windows. Use the Installer to remove AppleShare for Windows from your computer. Obtain a network adapter card that is supported, then re-install AppleShare. See Getting Started With AppleShare Client for Windows and the README.TXT file for information about supported network adapter cards. The README.TXT file is located in the same directory in which you installed AppleShare Client for Windows (by default, C:\APPLE\A_SHARE).

Support Information Services

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Tech Info Library Article Number:17761



Tech Info Library

AppleShare Client for Windows Troubleshooting (11/96)

Revised: 2/17/97
Security: Everyone

AppleShare Client for Windows Troubleshooting (11/96)

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Article Created: 16 May 1995
Article Review/Updated: 5 November 1996

TOPIC -----

This article describes potential problems you might encounter while using AppleShare on your Windows computer. It tells you possible causes of each problem, and suggests steps you can take to resolve the problem.

DISCUSSION -----

Problems With Other Network Software
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NETX.EXE, the NetWare connection utility, does not work with AppleShare Client for Windows.

NETX, and similar network connection utilities, are written for other networks and are specific to their respective networks. These utilities cannot be used for connecting to a server of another type, such as an AppleShare server.

After installing AppleShare Client for Windows on a Windows system with existing networks, access to AppleShare Client for Windows is not available from the File Manager or other Windows network interfaces.

Unfortunately, Windows limits the number of network interfaces that can be integrated into the Windows environment to one for Windows 3.1. In Windows for Workgroups 3.11 you are limited to the Microsoft Network and one other network. If the Microsoft Network is not installed as the default network, then once again you are limited to a single network that may be integrated into Windows. If you are considering using multiple networks within Windows you should consider the lack of support for multiple network interfaces within Windows before installing a new network. When installing AppleShare Client for Windows using a custom install you may retain your current network interfaces while still using AppleShare Client for Windows. However, you will not be able to connect to and disconnect from servers or administer and view file and folder

information from within the Windows File Manager or Network Control Panel. A connection utility has been provided for the AppleShare Client for Windows to allow you to connect to network services if AppleShare Client for Windows is not accessible from the File Manager. The connection utility can be accessed from the Apple Network Services Program group as the AppleShare Client for Windows program item. An example configuration would be Windows 3.1 with NetWare installed as the default network and AppleShare Client for Windows.

An existing network (such as NetWare) is no longer available from the File Manager.

-
- Windows 3.1 allows access through the File Manager and the Network control panel to only one network. Installing AppleShare Client for Windows has assigned that access to the AppleTalk network. When installing AppleShare Client for Windows and you wish to keep your existing network, select keep current network configuration when asked whether to replace the existing network.
 - Windows for Workgroups 3.11 allows access through the File Manager and the network control panel to only one network other than the Microsoft network. Installing AppleShare Client for Windows has assigned that access to the AppleTalk network. When installing AppleShare Client for Windows and you do not wish to remove your existing network select keep current network configuration when asked whether to replace the existing network.

Problems Running AppleShare Client For Windows

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The following message appears:

The AppleTalk driver was not loaded. Please reinstall AppleShare.

As this message indicates, the AppleTalk driver is not being loaded properly while Windows is starting up. Without the AppleTalk software, AppleShare Client for Windows will not function properly. One or more of the following situations may be the cause of the problem:

- Your network adapter card is not supported by AppleShare Client for Windows. Determine which card is installed and ensure that it is in the list of supported cards in the Getting Started With AppleShare Client for Windows guide and the README.TXT file. The README.TXT file is located in the same directory in which you installed AppleShare Client for Windows (C:\WINDOWS\A_SHARE, by default).
- Your network adapter card was not configured properly during installation on a Windows 3.1 ODI-based network. Check your NET.CFG file to ensure that you specified the correct network adapter card type, interrupt request level (IRQ), and memory address. To check your NET.CFG file you can use the DOS EDIT.COM program or the Windows NOTEPAD.EXE program. You may need to consult your network adapter card documentation or your network administrator to obtain the correct information for your card.

Re-install AppleShare Client for Windows using the correct configuration information.

- Your network adapter card is damaged or improperly installed. The network adapter card must be properly installed in a slot on the main logic board and connected to the network with the proper cabling and connectors. Consult the documentation that came with your network adapter card for installation instructions. Ensure that the card is seated correctly in its slot, that any required jumpers are set correctly, and that the software configuration is complete and correct. Run any diagnostic provided for the card.
- Your network cables are damaged or improperly installed. Check for loose connections, damaged connectors, improper cable termination, and damaged cables and fix any problems that exist.
- Your computer was not restarted after the AppleShare Client for Windows software was installed. If you are running Windows 3.1, most of the AppleShare Client for Windows software runs within DOS; simply restarting Windows does not restart the underlying DOS operating system. For AppleShare Client for Windows to run, you must restart (reboot) DOS by turning your computer off and back on.
- You have just removed all of the AppleShare Client for Windows software and reinstalled AppleShare Client for Windows on a Windows 3.1 system and you did not restart your computer. Uninstall AppleShare, then restart your computer, then install AppleShare again.
- When Windows 3.1 is starting up, the startup sequence in your AUTOEXEC.BAT file or other startup batch files may be interfering with the loading or configuration of the AppleShare Client for Windows. This can happen with systems using a DOS menu or special execution sequence for different DOS and Windows environments. You can identify whether this is true if during the DOS startup process, the following message does not appear on your computer screen:

NetWare Link Support Layer v2.14

<identity of your network adapter card driver>

ODI LAP TSR for AppleTalk, Version 1.0, Copyright (c) 1995 Miramar Systems Inc., Santa Barbara, CA.

The NetWare Link Support Layer (LSL) module and network adapter card driver are executed from the ATDRIVER.BAT file by the following statement in the AUTOEXEC.BAT file:

```
CALL C:\APPLE\A_SHARE\ATDRIVER.BAT
```

See your system or network administrator, or your DOS documentation, for information on how to modify your AUTOEXEC.BAT file to properly place the ATDRIVER.BAT execution command before your command to launch Windows.

Problems Connecting To A Server

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The following message appears:

The AppleTalk stack cannot connect to an ODI or NDIS network driver. Please reinstall AppleShare.

See the section titled "Problems Running AppleShare Client for Windows," earlier in this document.

No zones appear in the AppleShare Client application window.

- Your computer is on a network that is not divided into zones. Ensure that you know the correct location of the server to which you wish to connect.
- Network hardware (such as cables, transceivers, and routers) is malfunctioning. Check with your network administrator.

Only some of the network's zones appear in the AppleShare Client application window.

Network hardware (such as cables, transceivers, and routers) is malfunctioning. See your network administrator.

No servers, or only some servers, appear in the AppleShare Client application window.

- There are no servers available in the currently selected zone. Ask your network administrator where the server you are interested in is located and select that zone in the AppleShare Client application window.
- The servers are shut down. See the network administrators who manage the servers.
- Network hardware (such as cables, transceivers, and routers) is malfunctioning. See your network administrator.

Names of zones and servers appear corrupted.

Mac OS and Windows use different schemes to display extended text characters (characters beyond the standard keyboard characters). Therefore, names of zones and servers may appear corrupted, but this is just how the names are interpreted by Windows. When viewed from a Mac OS client, the names appear normal. If you can't find the servers you need by using the browsing capabilities of AppleShare Client for Windows, ask your network administrator for help. (To avoid this problem, network administrators should use only standard keyboard characters for zone, server, volume, directory (folder), and file names whenever possible.)

Your user name or password is not accepted.

- You have entered your user name or password incorrectly. Check your

typing carefully, especially for your password, which may include uppercase characters or spaces.

- You have entered the wrong user name for that server. You may have different user name/password combinations for different servers.
- You are not a registered user for that server. The server administrator must register your user name and password on each server you want to use.
- Your password has expired. The server administrator can require that you change your password periodically to maintain the security of the server.
- You have been locked out for repeatedly entering the wrong password. This condition can occur if, for example, the caps lock key is pressed on your keyboard.

Problems Using Files And Directories

=====

You receive the following warning:

Warning! You have opened one or more Mac OS-formatted files that are not compatible with your Windows system. See the information about Macintosh file formats in the AppleShare help system.

You have moved, copied, accessed properties, or opened a file that is formatted for use only on the Mac OS. Such files are usually not usable on Windows systems and are hidden by default. See the AppleShare Client for Windows online help topic "Guidelines for Sharing Network Resources" for further details.

A file or several files on the server appear to have a file size of 0, but when viewed on a Macintosh, the file size is larger.

You are viewing a Macintosh specific program or data file. The data and the size of the data are not available to the Windows File Manager. These files are marked as hidden and do not normally appear. The files are visible if you have selected the "View by file type" menu selection and have turned on the hidden/system files preference within the Windows File Manager. To see the actual file size from Windows use the properties item in the File Manager's File menu.

A file or directory on the server does not appear in the File Manager directory window.

- You do not have sufficient access privileges to gain access to that file or directory. See the server administrator.
- You have connected to the server using the wrong user name and password. You can have two or more user name/password combinations with different access privileges. Try your other name/password combinations.
- The file is a Macintosh program or document that may be incompatible with

the Windows File Manager and is hidden by default to prevent accidental damage. See the AppleShare Client for Windows online help topic "Guidelines for Sharing Network Resources" for further details.

- Names of files on the AppleShare server begin with an exclamation point (!). These filenames have been processed to allow them to be displayed by Windows. This condition is normal. See the AppleShare Client Help topic "Guidelines for Sharing Network Resources" for further details.

Your coworkers using Macintosh computers complain that the names and icons of a document has changed.

You have moved or saved a Macintosh file on the server from your Windows computer. The Windows File Manager does not preserve Mac OS file attributes during file operations. Copy the file to your computer, work on it there, and save it to the server under a new name. See the AppleShare Client for Windows online help topic "Guidelines for Sharing Network Resources" for further details.

Macintosh users can't tell what type of application they should use to open one of your files.

AppleShare servers and Macintosh desktop systems running System 7.5 or systems with the PC Exchange control panel installed will map all Windows and DOS files to a generic PC icon for the Macintosh desktop. If the system extension called PC Net Exchange is also installed, then your files will be mapped by their extension to the application icon specified in the PC Exchange control panel. Macintosh users will be able to double-click your mapped documents to automatically open the file with an appropriate application. AppleShare servers and Macintosh desktop systems without PC Exchange or PC Net Exchange will see a blank file icon for all PC files created by an AppleShare Client for Windows. See the AppleShare Client for Windows online help topic "Guidelines for Sharing Network Resources" for further details.

A file's size changes after you copy or move it.

Some Macintosh specific files have data that is not accessible by the Windows File Manager. Using the Windows File Manager or DOS commands to manipulate such files can remove data from the file, making the file smaller.

You can't find a file using the Windows universal naming convention notation (\\Server\directory\file).

This notation is not supported by the AppleShare Client for Windows. You should use the drive letter followed by the path to specify a file using a path name.

You can't find a file using the full path name.

A Windows-compatible filename has not yet been created for the file or one of its enclosing directories. Windows does not support Mac OS file-naming conventions. When you use a server file from your Windows client computer, AppleShare creates and saves a Windows-compatible name for that file. Until that name is created, the File Manager may not be able to find the file. To ensure

that all server files accessible to you have Windows-compatible names, choose Search from the File Manager's File menu, enter *.* in the Search For box, enter the drive letter of the connected server, check the Search All Subdirectories checkbox, and click OK.

Problems Using Print Services

=====

After connecting to a printer, the printer type is always "unavailable."

- If you are printing to an AppleShare print server, the printer type being spooled is not reported by the server. There is no mechanism in AppleShare Client for Windows version 1.0 for identifying the AppleShare print server.
- Printers actively printing a document, missing a paper tray or in a service state (as when opened to replace a toner cartridge) will display a printer status of "busy" and type "unavailable" after the printer has been selected in the AppleShare Client for Windows connection dialog. Before reassigning a printer port, you should check if all previously spooled files have finished printing. The simplest method is to check your printer but you can also check to see if your print files have finished printing by examining your print directory for files named LWx.PRN or LWnn.~0x where x is the number of the port (that is, LW1.PRN and LW08.~01). If some print files have not finished printing, then reassigning a printer will delete the active print file and reassign any additional spooled print files to the new network printer connection. The active print file for port LW1 will be the file LWxx.~01 where xx is the lowest number of all the files following the same naming convention (for example, among the files LW01.~01, LW02.~01, LW03.~01, the file LW01.~01 will be the active file). These files can be deleted manually if necessary or renamed to another printer port by changing the number in the file extension. An example is to rename a spool file LW01.~01 to LW01.~02 to cause the spooled print document to be printed to the printer connected on port LW2.

A document did not print successfully, but the Print Manager or the application print command indicates that it did.

- AppleShare Client for Windows has spooled the document (stored it to disk) while the printer is printing other documents. Storing the document causes the Print Manager to indicate that has finished printing before the AppleShare Client for Windows has completed the printing operation. Wait until printing stops. If the document has still not been printed, try printing it again, then see you network administrator.
- The file to which a document was spooled has been damaged. See your system administrator.
- A supported printer driver has not been installed. Install the driver by following the instructions in the AppleShare Client for Windows online help.

- A supported printer driver has not been associated with an AppleShare spool file. Associate the driver with the spool file by following the instructions in the AppleShare Client for Windows online help.
- No network printer is connected to the LW port to which you are printing. Connect to a network printer by following the instructions in the AppleShare Client for Windows online help. Check your application print setup and examine your C:\ directory. If you are printing to port C:\LW1.PRN and you see a file titled LW1.PRN stored in the C:\ directory and is not renamed after 5 seconds, then it is likely that the port has not been assigned to a network printer.
- Your application is printing to the wrong port. The AppleShare Client for Windows allows applications to print to only the printer ports LW1.PRN, LW2.PRN, and LW3.PRN. These ports represent AppleShare spool files.
- The network printer is busy or turned off. Check from within the connection dialog of AppleShare Client for Windows whether your printer is available on the network. You may have to wait until the printer has finished printing the current document before your document will be printed.
- The Printers control panel "Send Header with Each Job" check box is not selected. The location of this check box depends on the PostScript printer driver you are using. If you are using the Apple LaserWriter IINTX printer driver that comes with Windows, for example, the "Send Header with Each Job" checkbox is located in the Options dialog box. To display the Options dialog box for this printer driver:

- 1) Open the Printers control panel.
- 2) Click the Setup button.
- 3) In the dialog box that appears, click the Options button.

Select the "Send Header with Each Job" checkbox and then print.

- Fonts are not being downloaded to the printer. Selecting the Printers control panel "Print To: Encapsulated Postscript File" option. The file specified must contain the same drive, directory path, and filename as specified for the port (for example, Port C:\LW1.PRN Encapsulated PostScript file C:\LW1.PRN). The location of this check box depends on the PostScript printer driver you are using. If you are using the Apple LaserWriter IINTX printer driver that comes with Windows, for example, the "Print To: Encapsulated Postscript File" checkbox is located in the Options dialog box. To display the Options dialog box for this printer driver:
- 1) Open the Printers control panel.
 - 2) Click the Setup button.

3) In the dialog box that appears, click the Options button.

Select the "Print To: Encapsulated Postscript File" checkbox and then print.

- The DOS print screen command and redirected commands, such as `TYPE file > LPT1`, do not work with printers to which you connected using AppleShare Client for Windows. DOS does not support printing to PostScript printers.
- DOS programs without PostScript drivers cannot print to printers to which you connected using AppleShare Client for Windows. DOS programs running under Windows can print documents to an AppleShare Client for Windows printer by printing to one of the network connected spool files (for example, `C:\LW1.PRN`) with an Apple LaserWriter or compatible PostScript printer driver. The user must be aware that a DOS program cannot print at the same time as a Windows application.
- AppleShare Client for Windows checks the disk at a minimum of once every 5 seconds for new spooled print files. Once detected, spooled files are renamed to unique file names. If a document is printed before a previous spool file could be detected and renamed, then the previous file will be replaced. AppleShare Client for Windows can be made to check every second to help avoid accidental loss of the waiting print file. One second is the smallest allowable interval. To change the interval time, edit the `ASHARE.INI` file in the Windows directory.

Add the following text:

```
[PrintRedir]
```

```
NewJobFileInterval=1
```

This will cause the spool file directory to be checked at least every second for new print jobs.

- The disk does not have enough space to store spool files. See the following troubleshooting item.

When printing a document, you receive the following message:

Insufficient Disk Space

- The disk does not have enough space to store spool files. AppleShare Client for Windows stores a PostScript version of the document in a file (known as a spool file) while the document is being printed. The amount of disk space usually required is roughly equal to the size of the document being printed, but for complex documents or very small documents the overhead for fonts and PostScript information can be as much as 10 times or more the original document size. Verify that enough space is available on the current disk or specify a different disk on which to save spool files. To specify a different disk or directory, open the `WIN.INI` file in the Windows directory using a program like `NOTEPAD`. Search for `LW1.PRN` in the file. You can change the path of the file to

another disk (for example, from C:\LW1.PRN to D:\PRINT\LW1.PRN). Reassign the printer port in the Printers control panel. You must quit and restart Windows for the change to take affect. You cannot spool files to floppy disks and CD-ROM discs. You can spool to removable media and network drives, but the user must take care not to disconnect or remove the disks from the system while printing or prior to printing.

Note: Windows 3.1 has a problem clearing memory when a print job fails while it is spooling to disk. If you are using Windows 3.1 and you have run out of disk space you should exit Windows as soon as possible and delete the print file, as it is probably a partial print file. Then restart Windows and try printing again.

- The Print Manager is being used. There is little advantage to using the Print Manager with AppleShare Client for Windows. The Print Manager stores an additional copy of each document on the disk before passing the file to AppleShare Client for Windows.

Article Change History:

05 Nov 1996 - Made correction for technical accuracy.

27 Nov 1995 - Added keyword.

22 Aug 1995 - Made minor corrections.

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Tech Info Library Article Number:17762



Tech Info Library

System 6: File Names Starting w/Period Can Confuse System (5/95)

Revised: 5/16/95
Security: Everyone

System 6: File Names Starting w/Period Can Confuse System (5/95)

=====

Article Created: 16 May 1995

TOPIC -----

In my classroom my students are creating folders called ".Sony" (without quotes) on the hard drives of our school's Macintosh computers. According to the book "MacWorld Secrets," doing this will trash the hard drive. Is this true? If so, how can the damage be repaired?

DISCUSSION -----

The ".Sony" folder name only causes a minor problem on systems running System 6 or earlier. It is definitely not a problem with systems running System 7 or higher. Under any circumstance, naming a folder in this way will not "trash" or otherwise corrupt the data on the hard drive.

The cause of the problem is the way the System 6.0.x and earlier file systems dealt with files and drivers. Opening files and opening drivers used the same toolbox routine. The system would look at the name of the "file" and if it began with a period, would send the open call to the Device Manager. If the file name did not begin with a period, the call was passed to the File Manager. Unfortunately, ".Sony" is the name of the floppy driver so trying to open a file with this name will confuse the system.

Naming a folder ".Sony" should not cause a problem on any Macintosh computer, no matter which system software is running, since only the Finder itself "opens" directories and that is not done with the an "Open" call. The Finder simply searches the catalog file for the names of files and folders whose parent ID is equal to the ID of the folder. No files are actually opened.

In my testing with System 6, I created a new file in TeachText and tried to save it with ".Sony" as the file name. The file would be created but TeachText said it could not open the file to save the data. I tried double-clicking the file and TeachText would launch but I still received the error dialog stating the file could not be opened. I could not trash my hard drive as stated in the MacWorld Secrets book. I could not duplicate this problem under System 7 at

all.

Support Information Services

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Tech Info Library Article Number:17763



Tech Info Library

At Ease: What To Do After Deleting At Ease Items Folder (8/95)

Revised: 8/14/95
Security: Everyone

At Ease: What To Do After Deleting At Ease Items Folder (8/95)

Article Created: 16 May 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

I have a Macintosh Performa computer running At Ease 2.0. I have been instructed to resolve an At Ease problem by either throwing away the At Ease Items folder or by throwing away At Ease Preferences, At Ease Setups, and At Ease Users. I have done this. How should I proceed?

DISCUSSION -----

This assumes you have already followed the instructions given to you. The result at this point is that you have a "fresh" At Ease, with no users. You now need to re-create those users.

Before doing so, you need to recover information (files) belonging to the previous users.

User Application Access Information

At Ease stores information in a variety of places. In the System Folder, the At Ease Items folder contains a folder called At Ease Setups. This contains the "application" side of your users' set-ups. For example, if one of your users is "John", and John has access to ClarisWorks and Quicken, aliases for these two applications are in a folder named "John" within At Ease Setups. Aliases are just pointers to the original items and are completely disposable. In other words, if you throw the aliases away, you will not be throwing away or in any way damaging the actual applications.

User Personal File Storage Folder

The files that John has created are in a different folder, which is also called "John". This folder is elsewhere on your system. If you have a Macintosh Performa computer, this folder is in the Documents folder. The files John created could include things such as homework assignments, correspondence,

Quicken ledgers, and so on.

Recreating At Ease User Information

You need to be careful as to what you do with this data, both to ensure that the data is not lost, and that when you reconfigure At Ease, the user has access to the data again. The "John" folder containing all the original data is intact, which is exactly what we want.

When you open the At Ease Setup application to recreate "John", you will see an error message, because the "John" folder is still in your Documents folder. It will not let you re-use that name until something is changed about the "John" folder. Something must be done about that "John" folder, but you do not want to throw it away, since it contains original data.

Rename The User's Data Folder

The solution is to rename the "John" folder to something else, such as "John-Backup".

Step 1

Locate the folder, which, again, is in the Documents folder.

Step 2

Click once on the name. The name should highlight (white rectangle around it). If it does not, try pressing the Return key once. Just tap it. This should highlight it. Once highlighted, whatever you type replaces what is there. Type "John-Backup".

Step 3

Next, go back to At Ease Setup, and re-create "John". Add all necessary applications and otherwise configure it according to your tastes.

Step 4

When finished, quit At Ease Setup.

Step 5

Restart the computer. A new folder called "John" is created; there is nothing in it.

Step 6

If you are not already in the Finder (a way to tell if you are in the Finder is that the Trash can is visible), select "Go to Finder" from the Special menu.

Step 7

If you look inside your Documents folder, you will notice there is a new "John" folder.

Step 8

Open the "John-Backup" folder. Move the files that are inside the "John-Backup" folder to the "John" folder.

Step 9

Throw away the "John-Backup" folder.

Step 10

Restart your computer.

Step 11

Open the "John" folder in the Documents folder. You should now see all of John's original documents.

This article was published in the "Information Alley":

Volume II, Issue 5, page 18

Article Change History:

14 Aug 1995 - Added keyword.

19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17764



Tech Info Library

Apple Menu Options 1.0.2: What It Fixes & How To Install (8/95)

Revised: 8/1/95
Security: Everyone

Apple Menu Options 1.0.2: What It Fixes & How To Install (8/95)

Article Created: 16 May 1995
Article Reviewed/Updated: 01 August 1995

TOPIC -----

I just downloaded the Apple Menu Options (AMO) control panel version 1.0.2. Can I get more details on what this fixes? Also, how do I install this new version?

DISCUSSION -----

Problems That Have Been Fixed

There are three problems that were fixed in AMO 1.0.2:

Throwing Away Locked Aliases

If you locked aliases inside the "recent" folders, AMO could hang when trying to delete locked aliases. Now it ignores them if they are locked.

Throwing Away AMO Prefs File

If you dragged the "Apple Menu Options Prefs" file to the trash, AMO could hang. The prefs file can now be safely trashed.

Disappearing Menus

When installed with System 7.5 or System 7.5 with the System 7.5 Update 1.0 (7.5.1), this update to Apple Menu Options (1.0.2) provides enhancements for menu problems encountered by some Macintosh computer users.

System 7.5 or System 7.5.1 must be installed on your Macintosh computer before Apple Menu Options 1.0.2 can be installed.

The problem reported in earlier versions involved left-most application menus disappearing. The menus could disappear under two scenarios:

- The first is by clicking in the menu bar before the application has finished loading.
- The second is by clicking in a part of the menu bar that does not have any menus. This problem has been corrected in Apple Menu Options 1.0.2.

Installation Steps:

=====

Step 1

Drag the Apple Menu Options (1.0.2) control panel onto your closed System Folder.

Step 2

Your Macintosh will ask in a dialog box if it can place the control panel into the Control Panels folder. Select the OK button.

Step 3

If you have an earlier version of Apple Menu Options, you will be asked if you want to replace it. Select the OK button.

Step 4

Restart your Macintosh computer. Once the control panel has been copied to your System Folder, you must restart for changes (fixes) to take effect.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:

01 Aug 1995 - Added additional information on fixed issues.

Support Information Services

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Tech Info Library Article Number:17765



Tech Info Library

System 7.x: Black Tab on Folder Icons (5/95)

Revised: 5/31/95
Security: Everyone

System 7.x: Black Tab on Folder Icons (5/95)

=====

Article Created: 16 May 1995
Article Reviewed/Updated: 31 May 1995

TOPIC -----

Why is there a black tab on some folder icons under System 7 and later?

DISCUSSION -----

The black tab on a normal folder icon indicates that file sharing is enabled for that folder. If you turn off file sharing on the folder, the tab color returns to normal.

Note that you cannot see the black tab on the shared folders when you are in the View by Smallest Icon Finder mode. Change to View by Icon to see the black tabs.

Article Change History:
31 May 1995 - Added information about viewing icons.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17766



Tech Info Library

Native, Conventional, & Fat Applications: Description (6/95)

Revised: 6/14/95
Security: Everyone

Native, Conventional, & Fat Applications: Description (6/95)

=====

Article Created: 16 May 1995
Article Reviewed/Updated: 14 June 1995

TOPIC -----

This article clarifies the terminology used in referring to Power Macintosh-compatible applications.

DISCUSSION -----

The Power Macintosh can run two kinds of compatible software:

- Native
- Conventional

Native Applications

Native software is software written for specifically the PowerPC chip; it only runs on a computer that has a PowerPC chip on its logic board.

Conventional Applications

On Power Macintosh computers, conventional software is software written for Macintosh computers that have a 68000, 68020, 68030, or 68040 chip on their logic boards. Conventional software is sometimes referred to as "68K" software. It runs on Macintosh computers that have either a 680xx chip or a PowerPC chip.

Emulation Mode

Conventional software runs in an "emulation" mode, which is functionally similar to the 68020 processor. The main differences between the 68020 processor and later processors (68030 and 68040) are:

- It does not have a PMMU (Paged Memory Management Unit)

This point is necessary because the PowerPC has a newer, better,

memory management model.

- It does not support the SWAP16 instruction

This point is addressed by improvements in the PowerPC chip.

- It does not support a floating point unit

This point requires different steps to work around; such as software emulation of an FPU, or, more commonly, software floating-point routines.

Even though the speed of emulation mode is compared to the speed of a Macintosh with a 68020 processor, conventional software generally runs faster in emulation mode than a Macintosh with a 68020 chip. The performance depends on how many references the software can make to native routines in the computer's software "toolbox". The more native routines that are performed; the faster the software runs.

"Fat" Applications

As new software is written, you will find references to "fat" applications. These are programs that can be run on either a 68K or Power Macintosh computers without modification. The operating system automatically determines which part to use.

Since "Fat" applications are really two programs in one, many installers offer either a "Power Macintosh" or "Conventional" installation. If you have installed a software application that claims to be "Accelerated for Power Macintosh", and it does not recognize features that definitely exist (such as an FPU), make sure you have installed the correct version.

Both versions run on the Power Macintosh, but only the "native" version benefits from all the special features of the Power Macintosh.

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Article Change History:

14 Jun 1995 - Added Info Alley information; made several technical updates.

Support Information Services

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Tech Info Library Article Number:17767



Tech Info Library

System SW Clean Restore:Macintosh Performa Computers w/CD (7/96)

Revised: 12/20/96
Security: Everyone

System SW Clean Restore:Macintosh Performa Computers w/CD (7/96)

Article Created: 16 May 1995
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article describes the procedure for a Clean Restore (Install) for CD-ROM based Macintosh Performa computers including the: Macintosh Performa 500, 630, 5200, 6100, or 6200 series.

DISCUSSION -----

You may wish to perform a "clean install" when normal extensions troubleshooting fails or when the troubleshooting process becomes too complex.

The process essentially allows you to "start over" with a new System Folder. You will not lose any data, but any software or fonts or configuration information which was stored in the old System Folder will become inactive.

This clean install procedure provides you with a stable foundation from which you can proceed to troubleshoot an abnormal situation.

A regular system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving most files in place, and forces the restoration software to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Restart From the Apple Performa CD

Step 1

Start your computer and insert the Macintosh Performa CD. Once the system has finished starting up, "shut down" or turn off the computer. If the computer

does not start completely, do not worry. We mainly wish to make sure the CD is in place.

Step 2

Next, make sure your Caps Lock key is in the UP position, so that the Caps Lock function is turned off. If you have an AppleDesign Keyboard, the position of this key does not matter.

Start the computer, then immediately hold down the Option, Apple (Command), Shift, and Delete keys. Hold them down until you see "Welcome to Macintosh."

The desktop pattern will change. This is normal, and is a consequence of having started the system with a different startup volume. In this case, we are starting from the Macintosh Performa CD.

When the system finishes starting up, you will see a different Launcher at the bottom of the screen.

If you do not see your hard disk icon (normally called "Hard Disk"), try the above procedure again, this time releasing the Option, Apple, Shift and Delete keys sooner than you did before. If you still do not see the hard disk, try the above, but this time holding down the "c" key (lower-case "C") instead of Option, Apple, Shift, and Delete.

If you cannot start with the CD-ROM (that is, you do not see your Performa CD icon on the top right hand side of the screen, above the hard disk; and you do not a different Launcher window at the bottom of the screen), do not proceed. Call 800-SOS-APPL for further assistance.

Run Disk First Aid

Disk First Aid can detect and repair problems with a hard disk's directory structure. Before proceeding with further troubleshooting, it is important to verify that the underlying directory structure is functioning satisfactorily.

Step 1

Click once on the Disk First Aid icon in the Launcher.

Step 2

When Disk First Aid opens, click on the hard disk icon within the Disk First Aid window. Click on the Verify button.

Step 3

If the system finds a problem, click on the Repair button.

If you receive a note stating that Disk First Aid cannot repair the hard disk, you should back up any irreplaceable data or application software on the hard disk and re-initialize it using the appropriate formatting utility for that drive. For Apple drives, use Apple HD SC Setup, which is also in the Launcher. If you have a Performa 580 or a Performa 630 or 5200 series computer, use Internal Drive Format.

Step 4

Select "Quit" from the File menu.

Update Hard Disk Driver

You should update the drivers with the version of Apple HD SC Setup that is on the Performa CD, following these steps:

Note:

If you have a Performa 580 or a Performa 630, 5200, or 6200 series computer, ignore this step. Because you have an IDE drive instead of a SCSI drive, you do not have any drivers to update.

Step 1

Click on the HD SC Setup icon in the Launcher.

Step 2

Click on the Update button. If the Update button is not hilited, or you see a message that "Drive Selection Failed," you should verify whether your hard disk has been reformatted with a third-party driver or uses driver-level compression or security software.

Step 3

When you are finished, click Quit to return to the desktop.

Step 4

Select "Restart" from your Special menu. If the CD fails to eject, right after you hear the startup chime, press the Eject button to remove the CD.

Check Available Hard Disk Space

Be sure you have at least 25MB available on the hard disk where you plan to install the system software. If there's less than 25MB available, you'll need to identify and delete some unnecessary files by moving them to the Trash.

Make sure you do not delete anything you do not have a back-up for. If necessary, copy the files onto individual diskettes or other media before moving them to the Trash.

You can identify the amount of hard disk space available by double-clicking on your hard disk icon on the right hand side of the screen. At the top of the hard disk window, you should see a legend which indicates how much space is available. If you do not, select "by Icon" from your View menu.

Once you identify and remove redundant items, choose Empty Trash from the Special menu, and you'll have more disk space available.

Disable the System Folder

You disable the System Folder by moving the Finder and renaming the System Folder to something else.

Step 1

Open your hard disk's icon and locate the System Folder.

Step 2

Open the System Folder and locate the Finder.

Step 3

Move the Finder to the Trash. (If you get an error message saying that items cannot be moved to the desktop because it is locked, try again: you probably missed the Trash. This time be sure that the cursor (arrow) is on top of the Trashcan and that the Trashcan turns black before you release the mouse button. The Trash should get fat.)

Step 4

Move your System suitcase (the icon with a small suitcase) to the Preferences folder. We keep the System suitcase in case there are sounds inside it you may wish to recover later on.

Step 5

Close the System Folder's window and rename the System Folder to "Storage." Do this by first clicking on the closed System Folder icon, then pressing the Return key. This should hilite the words "System Folder," surrounding them with a white rectangle. Whatever you type will replace what is there. You can also hilite "System Folder" by clicking ONCE in the middle of those words, then waiting for the words to hilite.

Step 6

Close any open windows on your desktop.

Restart Your Computer

Choose Restart from the Special menu. Right after you hear the startup chime, if the CD has not automatically ejected, press the eject button, if you have one. After a few seconds you should see a picture of a disk with a flashing question mark.

If your Macintosh starts up from the hard drive, you have an extra System Folder on the hard disk. You need to locate it (use the "Find" option from the File menu in the Finder) and delete it or disable it as described in the previous section, then restart.

When you get the disk with the flashing question mark on your screen, you can continue.

Restoring The System

Step 1

When you see the disk with a flashing question mark, insert the Performa CD. The computer should start up with the system software on the CD. If the system doesn't start up, turn off the computer, then use the Option-Apple-Shift-Delete method, described above.

Step 2

Locate the "Restore System Software" and "Restore All Software" icons in the

Launcher.

"Restore System Software" restores ONLY the Apple software which was bundled with the computer. This will build a new System Folder, but it will not have any third-party software in it, nor will it have any third-party Launcher aliases.

"Restore All Software" restores ALL software. It will not delete anything: but it will end up creating a brand new System Folder, which will include all bundled Launcher aliases and bundled third-party software. This is ordinarily the option you wish to select.

Step 3

Click on the appropriate "Restore" icon.

Step 4

Click the Continue button, or press the Return key on your keyboard.

Step 5

Respond to any messages you see on the screen.

Step 6

When the system is finished, click the Restart button or press the Return key on your keyboard. You will have then successfully restored your files.

If the CD-ROM does not automatically eject, you will need to press the eject button on the CD-ROM drive right after you hear the startup chime.

Step 7

Select Empty Trash. The old Finder will be in there.

Verify Problem Resolution

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of the clean restore procedure. You may wish to use your computer for a few days before re-introducing any other extensions or fonts.

Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Storage") such as fonts, screen savers, device drivers, and so on. If at all possible, we strongly recommend that you reinstall these items from their original disks, just in case one of the items had become corrupted and contributed to the problem.

If the original disks aren't available, you may move the non-standard items from the Storage folder to the equivalent place in the new System Folder. Be careful not to replace anything that's already in the new System Folder. Only move items that aren't already in the new System Folder.

Step 1

Open each corresponding folder within the System Folder and the Storage folder

and then compare the contents.

Step 2

Move an item that isn't already in the new System Folder and its subfolders from the Storage folder and its subfolders.

Step 3

Restart your Macintosh.

It is recommended you proceed slowly when doing this. This is part of the troubleshooting process, so you do not want to move everything back at once: instead, move a few at a time, restart, and test to make sure the original problem has gone away.

If you move the items back and the problem should recur, you probably have an extensions conflict. Done properly, you will know which set of extensions cause the problem, but sometimes intermittent extensions conflicts will require more troubleshooting.

Final Steps

Verify that your applications are performing normally. If not, refer to the application manual or contact the vendor.

We normally recommend you keep the Storage folder around for a couple of months, or until you're **completely** certain that you do not need any files from it.

When the Macintosh behaves as expected, move the Storage folder to the Trash, and choose Empty Trash from the Special menu.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

21 Jul 1995 - Updated for clarity.

Support Information Services

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Tech Info Library Article Number:17768



Tech Info Library

A/UX 2.0.1 Hard Disk: Making A Copy (5/95)

Revised: 5/16/95
Security: Everyone

A/UX 2.0.1 Hard Disk: Making A Copy (5/95)

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Article Created: 16 May 1995

TOPIC -----

I purchased A/UX 2.0.1 a long time ago, on hard disk only. Now I need to transfer A/UX from one hard drive directly to another. I'm also using third party formatting software on the new disk, and my vendor believes the software should work with A/UX 2.0.

Mounting a new disk and copying the files sounds relatively straight forward, but creating the device drivers is something I don't understand. I have some experiences that leads me to believe that I can't simply copy the /dev directory, although most of the rest of A/UX is easily movable.

How do I do this?

DISCUSSION -----

A/UX 2.0 is basically the same as A/UX 3.x. The main change is the version of the Macintosh System Software used in the Mac environment.

The following sequence of commands will create a duplicate of the directory structure of the source drive onto the target drive.

While logged in as root, follow these steps:

Step 1

Mount the drive you want to copy to (target) on /mnt

mount /dev/dsk/c5d0s0 /mnt (Replace SCSI ID and partition as appropriate)

Step 2

Go to the "/" directory, perform the copy, create the mnt directory in /mnt

```
cd /  
find . -print | grep -v /mnt | | grep -v /lost+found | cpio -pdlmuv /mnt  
mkdir /mnt/mnt  
chmod 777 /mnt
```

Step 3

When the copy is finished, unmount the target disk and perform an fsck

```
umount /mnt  
fsck /dev/dsk/c5d0s0
```

Now you have a copy of the source drive, complete with the /dev directory.

Support Information Services

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Tech Info Library Article Number:17769



Tech Info Library

File Sharing: Cannot Share Drive With A Shared Folder (6/95)

Revised: 6/13/95
Security: Everyone

File Sharing: Cannot Share Drive With A Shared Folder (6/95)

Article Created: 16 May 1995
Article Reviewed/Updated: 13 June 1995

TOPIC -----

I am trying to start file sharing, but when I select the drive to share an error message, "Cannot share selected drive because there is a shared folder contained within it." appears

How can I find the shared folder without physically checking each folder, is there a sort shortcut?

DISCUSSION -----

You must first turn off file sharing for all shared folders before you can turn file sharing on for an entire drive.

Try these steps to identify which folders have been shared on your hard drive:

Step 1
Select Control Panels from the Apple menu.

Step 2
Double-click the File Sharing Monitor control panel. In a box on the left side of this window is a names list of all shared items.

Step 3
Select the Find command from the File menu. Type in the name of one of the shared items and click the Find button.

- System Software 7.0 to 7.1.2 finds and highlights an item with that name.
- For System Software 7.5 or later, the Find File application presents a hit list of items found. Click the item with the name you are looking for.

Step 4
Select the Sharing... command from the File menu. The Sharing window for that

item appears on the screen.

Step 5

If this item is shared, the Share this item and its contents check box is selected. Click on this check box to deselect it.

Step 6

If the Share this item... check box is not selected, close the Sharing window and select the Find Again command from the File menu in System 7.0 to 7.1.2, or click another item in the hit list in System 7.5. Repeat steps 4, 5, and 6 until you identify the shared item and it is no longer being shared.

Step 7

Repeat steps 2 through 6 until all shared items are no longer being shared. When no items are being shared, the Shared Items list in the File Sharing Monitor should be empty.

You may now share your hard drive. You may still assign different file sharing permissions (for different users or groups) to folders on the shared drive.

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Article Change History:

13 Jun 1995 - Added kalley keyword; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:17770



Tech Info Library

Macintosh Apple Desktop Bus Device ID Numbers (5/95)

Revised: 5/17/95
Security: Everyone

Macintosh Apple Desktop Bus Device ID Numbers (5/95)

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Article Created:17 May 1995

TOPIC -----

I just got a new keyboard and trackball for my Macintosh computer. These devices came with installation software. I am supposed to enter the Apple Desktop Bus (ADB) device ID number for my keyboard and mouse, but I cannot find this information anywhere in the User's Guide that came with my Macintosh computer. What are the ADB ID numbers?

DISCUSSION -----

Some third party vendors of ADB devices use software that ask the user for the ADB ID numbers of the keyboard and mouse.

Keyboard

On all Macintosh computers the primary keyboard (including built in keyboards for PowerBooks) is ADB device 2.

Pointing Device

The primary pointing device (whether it is a mouse, a trackball, or a trackpad) is ADB device 3.

Support Information Services

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Tech Info Library Article Number:17771



Tech Info Library

Apple Telecom 2.0 and Fax/Data Modem Compatibility (8/96)

Revised: 8/2/96
Security: Everyone

Apple Telecom 2.0 and Fax/Data Modem Compatibility (8/96)

=====

Article Created: 17 May 1995
Article Reviewed/Updated: 2 August 1996

TOPIC -----

Is Apple Telecom 2.0 software compatible with an Apple Fax/Data Modem?

DISCUSSION -----

Apple Telecom 2.x is not supported on the Apple Fax/Data Modem, shipped with early PowerBook computers like the PowerBook 170. The most recent software that is supported on the Fax/Data Modem is the Express Modem 1.5.5 release.

Article Change History:
02 Aug 1996 - Updated after review for technical accuracy.

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Tech Info Library Article Number:17773



Tech Info Library

AWS95 & A/UX: Disk/Disk or Directory/Directory Copy (9/95)

Revised: 9/26/95
Security: Everyone

AWS95 & A/UX: Disk/Disk or Directory/Directory Copy (9/95)

Article Created: 17 May 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

I want to copy all the files in the root (/) partition from one disk to another because I'm running out of disk space. Is there a way to accomplish this without loosing access privileges and without having to recreate the /dev directory.

DISCUSSION -----

The following sequence of commands will create a duplicate of the directory structure of the source drive onto the target drive. The same basic command sequence can be used to copy a directory tree from one directory to another.

To Copy The Complete Contents Of A Partition

While logged in as root

Step 1

Mount the partition you want to copy to (target) on /mnt:

mount /dev/dsk/c5d0s0 /mnt (Replace SCSI ID and partition as appropriate)

Step 2

Go to the / directory:

cd /

Step 3

Perform the copy preventing the copy from becoming recursive and without

overwriting the lost+found directory in the target partition:

```
find . -print | grep -v /mnt | grep -v /lost+found | cpio -pdlmuv /mnt
```

Step 4

Create the mnt directory in /mnt:

```
mkdir /mnt/mnt
chmod 777 /mnt
```

Step 5

Unmount the target disk and perform an fsck:

```
umount /mnt
fsck /dev/dsk/c5d0s0
```

Now you have a copy of the source drive, complete with the /dev directory.

To Create A Duplicate Copy Of A Directory Structure

=====

Step 1

Go to the directory containing the source directory to be copied:

```
cd /a_directory
```

Step 2

Perform the copy of the source_dir to the directory where you want the source_dir structure to be move to:

```
find source_dir -print | cpio -pdlmuv /target_dir
```

This results in a directory called source_dir inside of target_dir.

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Article Change History:

26 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:17775



Tech Info Library

MacX Clipboard and Interleaf Clipboard (7/95)

Revised: 7/20/95
Security: Everyone

MacX Clipboard and Interleaf Clipboard (7/95)

Article Created: 17 May 1995
Article Reviewed/Updated: 20 July 1995

TOPIC -----

I'm having a problem with operations that involve the Interleaf clipboard, which also then involves the MacX clipboard. As a result, I'm losing all but the plain text from the Interleaf clipboard. I have a Power Macintosh, System 7.5, MacX 1.2, and 24 MB of RAM, along with Interleaf 6.0.3 (DTP program) client running on a SPARCstation server 1000 with Solaris 2.3.

Have you heard of this type of problem before? Is there a way to disable the Mac/X clipboard?

DISCUSSION -----

One obvious symptom here is that only text and not graphics is being copied to the clipboard. This has to do with how the X client implements the cut/copy/paste mechanism. The problem is most likely due to a conflict between the X11R4 xclipboard (used by the X client) and the Macintosh Clipboard (used by MacX). This conflict was reported in the MacX 1.1.7 Release Notes:

"Conflicts between xclipboard and the Macintosh Clipboard:

MacX uses the built-in Macintosh Clipboard when you cut and paste text. If you run the xclipboard client application with MacX, it conflicts with the Macintosh Clipboard. To avoid this problem, do not use xclipboard while running MacX. (In other words, do not open the xclipboard client application)."

If this is the case, we suggest that the X client modify their client's xclipboard code to support Macintosh clipboard for copy and paste.

Also regarding the MacX cut/copy/paste Mechanism:

"MacX uses the CLIPBOARD selection. Whenever someone gets ownership of the CLIPBOARD selection, MacX asks that it be converted to STRING and puts the

result into the Macintosh scrap (clipboard). If your application does select things with this selection, it will work.

MacX supports both the old fashioned and modern style of clipboard selection. However, for X clients to work with MacX, they need to use the 'CLIPBOARD Selection' instead of selecting XA_PRIMARY."

Article Change History:

20 Jul 1995 - Made corrections for clarity.

Support Information Services

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Tech Info Library Article Number:17776



Tech Info Library

Apple Macintosh CD v2.0: QuickDraw GX Disk Image Issue (5/95)

Revised: 5/17/95
Security: Everyone

Apple Macintosh CD v2.0: QuickDraw GX Disk Image Issue (5/95)

=====

Article Created: 17 May 1995

TOPIC -----

I want to make disk images of the QuickDraw GX installer from the Apple Macintosh CD v2.0 that came with my Power Macintosh 7100/80AV, but these disk images seem to be missing.

DISCUSSION -----

There is a problem with the QuickDraw GX disk images on the Apple Macintosh CD v2.0. This has been reported and will be resolved in the future.

In the interim, you can install QuickDraw GX or PowerTalk from the CD by using the System Software Install (look in the System Software Install folder) or Apple Extras (look in the Apple Extras folder) included with the Power Macintosh 7100/80. However, from the disk images on the CD, only PowerTalk will be usable for installation.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17777



Tech Info Library

System 7.5: Defaults for Labels Control Panel Colors (7/95)

Revised: 7/19/95
Security: Everyone

System 7.5: Defaults for Labels Control Panel Colors (7/95)

Article Created: 17 May 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I am using system 7.5. How can I reset the colors of my Labels settings to the original defaults?

DISCUSSION -----

To reset the colors, you have to either remove the existing System file and reinstall System 7.5, or you can manually reset the color values. To manually reset the color values, follow these steps:

Step 1

Open the Labels control panel. Each label has a color box on the left and the name on the right.

Step 2

Click on the color box to open the "color picker."

The Color Picker is slightly different from the one used in System 7. The newer version uses Hue Angle, Saturation, and Lightness settings in the default position. Selecting "more Choices" lets you select Apple HSL or Apple RGB Color Monitor options. Either one can be used to reset the colors.

NOTE: System 7.1 used Hue, Saturation, and Brightness which had different values. See related article, "System 7: Defaults for Labels Control Panel Colors" for more information.

Color for "Essential"

Hue Angle: 23
Saturation: 100.00%
Lightness: 50.50%
Red:100%

Green:39%
Blue:1%

Color for "Hot"
Hue Angle: 1
Saturation: 94.18%
Lightness: 44.54%
Red:86%
Green: 3%
Blue: 3%

Color for "In Progress"
Hue Angle: 328
Saturation: 93.36%
Lightness: 49.06%
Red: 95%
Green: 3%
Blue: 52%

Color for "Cool"
Hue Angle: 196
Saturation: 97.85%
Lightness: 46.40%
Red: 1%
Green: 67%
Blue: 92%

Color for "Personal"
Hue Angle: 240
Saturation: 100
Lightness: 41.41
Red: 0%
Green: 0%
Blue: 83%

Color for "Project 1"
Hue Angle: 131
Saturation: 100.00%
Lightness: 19.66%
Red: 0%
Green: 39%
Blue: 7%

Color for "Project 2"
Hue Angle: 29
Saturation: 88.85%
Lightness: 18.00%
Red: 34%
Green: 17%
Blue: 2%

This article was published in the "Information Alley":

Volume II, Issue 5, Page 13

Article Change History:

19 Jul 1995 - Update from Info Alley.

18 May 1995 - Correct color values.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17779



Tech Info Library

Slow Start Up: LocalTalk with Printing Errors (7/95)

Revised: 7/20/95
Security: Everyone

Slow Start Up: LocalTalk with Printing Errors (7/95)

=====

Article Created: 18 May 1995
Article Reviewed/Updated: 20 July 1995

TOPIC -----

I have a Macintosh that takes a long time to start up (3 to 5 minutes), and I sometimes get printer communication errors, or the printer is not available after seeing it in the Chooser. What can I do to fix this?

DISCUSSION -----

Removing the LocalTalk connector may help identify a "slow boot" issue. A replacement LocalTalk connector may re-establish proper network operations.

Part of a Macintosh computer's start up sequence is to connect to the network. The steps vary, depending on which type of networking is being done (LocalTalk, EtherTalk, or TokenTalk). If there is a problem with a LocalTalk connector or Ethernet Transceiver, the start up process may appear slower than normal.

When EtherTalk is selected in the Network control panel and a network problem arises, an error message is issued about not being able to connect to Ethernet, and LocalTalk is used. This lets the user know they have an Ethernet problem of some kind. However, if LocalTalk is selected in the Network control panel and a problem exists, there is no equivalent error message. The Macintosh appears to do nothing for about two minutes while it attempts to establish a network connection, then give up assuming the network is not functioning.

When troubleshooting start up problems, or doing clean System Software installs, it is a good idea to remove all of the cables from your Macintosh, EXCEPT the monitor, keyboard, and mouse cables. Doing this can help identify potential problems associated with external connections.

NOTE: Slow start up times may also happen when you have a serial printer, which is turned off and not plugged into power, connected to either the modem or printer port.

Article Change History:

20 Jul 1995 - Made corrections for clarity.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17780



Tech Info Library

MegaPhone: -93 Error Bomb (5/95)

Revised: 5/18/95
Security: Everyone

MegaPhone: -93 Error Bomb (5/95)

=====

Article Created: 18 May 1995

TOPIC -----

This article describes the MegaPhone -93 error bomb.

DISCUSSION -----

We spoke with Cypress and they are aware of this bug planning a fix for around the end of June 1995. This only occurs when MegaPhone tries to forward a call to PowerTalk on a network with no Zones (the '*' zone) in the Chooser. You can put a router on the network.

If you need demonstrate MegaPhone and PowerTalk, try this: Do not use the Universal Mailbox to get mail on networks with no zones, and pre-load the mailbox with voice messages prior to running the demo on a zone-less network.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17782



Tech Info Library

MAE: Setting Up An Application For Multiple Users (8/95)

Revised: 8/31/95
Security: Everyone

MAE: Setting Up An Application For Multiple Users (8/95)

=====

Article Created: 18 May 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

We are trying to get MS Office to run under MAE. We want all the accounts to run the same copy of the application, to minimize set up and configuration time. We couldn't find any advice in the manuals.

Has anyone set up an environment where a single copy of an application which generates preferences is used by multiple accounts simultaneously?

Has anyone been able to create a standard build that can be propagated to multiple MAE users?

DISCUSSION -----

Setting up an application this way lets you reduce the amount of server RAM and disk space required for the application. It also lets you minimize set up and configuration time.

Here are the steps to set up an application for multiple users:

Step 1

As "root", create a directory called Applications in the /usr/apple directory. Place all the applications that users will have access to in this directory.

Be sure to instruct users NOT to copy these applications to their home directory, since this would use more disk space and defeat the purpose for doing this.

Step 2

After adding applications to the Application directory in the apple Directory, it is best to rebuild the desktop letting MAE add the applications to the

desktop files. To do so, start with the -rebuild option.

Step 3

Add the following line to the /usr/apple/lib/AliasList file:

```
persistent|desk|/usr/apple/Applications
```

This ensures that an alias of the Applications directory is on the user's MAE desktop.

This article was published in the "Information Alley":
Volume II, Issue 7, Page 7

Article Change History:

28 Aug 1995 - Made corrections for technical accuracy.
27 Jul 1995 - Updated from Information Alley

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17784



Tech Info Library

PowerTalk Aware Applications in Startup Items Folder (5/95)

Revised: 5/19/95
Security: Everyone

PowerTalk Aware Applications in Startup Items Folder (5/95)

=====

Article Created: 19 May 1995

TOPIC -----

My PowerTalk aware applications do not recognize PowerTalk when they launch from the Startup Items folder at start up. Usually, the mail option is disabled or an error message appears saying PowerTalk is not available. Quitting the application and launching it again resolves this, but why don't the applications work with PowerTalk when launched at start up?

DISCUSSION -----

Applications launched from the Startup Items folder may not find PowerTalk available because at start up, the Finder launches PowerTalk after the items in the Startup Items folder start. When the applications look for PowerTalk while starting up, PowerTalk is not available. You can either quit and then launch the applications again, or launch the applications after the computer has finished its start up process.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17786



Tech Info Library

MAE: Files In MAE Not Same Size As Reported In UNIX (5/95)

Revised: 5/19/95
Security: Everyone

MAE: Files In MAE Not Same Size As Reported In UNIX (5/95)

=====

Article Created: 19 May 1995

TOPIC -----

I have noticed that when I copy files from a CD, the file size on the UNIX File system is larger. What is happening?

DISCUSSION -----

This is due to MAE's default way of storing files in AppleSingle format. Mac OS files have both a resource and data fork, and MAE must handle these files differently on a UNIX File system. To accomplish this, AppleSingle is used where the resource fork information is pre-appended to the data fork and creates one file. This combining of files creates the larger file you see in UNIX.

You can change this default, from AppleSingle to AppleDouble, by launching MAE with the "-filedouble" option. This keeps Mac OS files as separate data and resource forks. From within MAE, AppleDouble files will appear as one file, however within UNIX, you will see a file name "name" (the data fork) and "%name" (the resource fork). Then the file "name" will then report the same size in UNIX as in the Finder.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17787



Tech Info Library

Starting MAE From X Client As User Other Than Login User (5/95)

Revised: 5/19/95
Security: Everyone

Starting MAE From X Client As User Other Than Login User (5/95)

=====

Article Created: 19 May 1995

TOPIC -----

When I log into our X Client as "USER1", and then 'su -l' to "MAEUSER" to start MAE from the X Client, I am unsuccessful. Our current setup has a particular user named "MAEUSER" which is setup to start MAE, we also want to keep this setup. What is wrong?

DISCUSSION -----

When you 'su -l' to a different user, some environment variables do not transfer to the new user, one of them being DISPLAY. For this to function, follow the steps below:

Step 1

After 'su -l' to the user that has access to MAE, set the DISPLAY variable in this manner:

```
#ksh
#DISPLAY=IP address of X Server:0.0  <- You may also use the X Server name
.                                     rather than IP Address.
#export DISPLAY
```

Step 2

Start MAE with extensions off with this command:

```
#./apple/bin/mae -noextensions
```

Step 3

When trying to use MAE in this environment, CloseView will cause MAE to hang during launch. After starting MAE with extensions off, remove the CloseView control panel (or use the Extension Manager). If you have several users with

this setup, it would be advisable to remove the CloseView control panel from
./apple/sys/Control Panels/CloseView so that any system folder created will not
have this control panel.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17788



Tech Info Library

Connecting Mac OS to Windows For Workgroups (5/95)

Revised: 5/19/95
Security: Everyone

Connecting Mac OS to Windows For Workgroups (5/95)

=====

Article Created: 19 May 1995

TOPIC -----

I have a network with DOS/Windows computers running Windows for Workgroups. I want to hook up my Macintosh to share the resources available on the network, how do I do it?

DISCUSSION -----

Windows for Workgroups uses the NetBEUI protocol. There currently is no software available for a Macintosh to utilize the NetBEUI protocol.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17789



Tech Info Library

Power Macintosh: Virtual Memory Status Issue (8/95)

Revised: 8/31/95
Security: Everyone

Power Macintosh: Virtual Memory Status Issue (8/95)

Article Created: 19 May 1995
Article Review/Updated: 31 August 1995

TOPIC -----

I notice in the Memory Control Panel of my Power Macintosh 8100/110 that virtual memory (VM) is shown as being active, yet some native applications are occupying significant portions of memory. I thought that virtual memory alleviated this problem?

DISCUSSION -----

There has been some confusion, regarding the actual status of the virtual memory setting, on Power Macintosh 8100/110, 8100/100 and 7100/80 computers with 16MB of RAM, when the system software was installed at the factory.

The problem is that the Memory control panel shows that VM is "on" when it is actually "off". The About This Macintosh window correctly shows that virtual memory is not turned on.

This problem only occurs on these specific computers as they come with system software factory-installed. Subsequent installations from the CD will not exhibit this confusion with the Memory control panel, as VM defaults to "off" when installed from the CD.

To obtain the best memory usage with native applications, go into the Memory control panel, turn VM off, turn VM back on, set the VM size to the desired amount of memory, and then restart the Power Macintosh.

Article Change History:
31 Aug 1995 - Made minor changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17790



Tech Info Library

Netware and 999 MB Size on Volumes Larger Than 4 GB (7/95)

Revised: 7/19/95
Security: Everyone

Netware and 999 MB Size on Volumes Larger Than 4 GB (7/95)

Article Created: 22 May 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I have a Macintosh with System 7.5, and when I connect to our Novell file server the reported volume size is 999 MB. I talked to our Novell administrator and was informed that the volume is a 9 GB partition. I also checked another Macintosh with System 7.1 and the same Novell file server volume reports 999 MB. Doesn't System 7.5 see 4 GB volumes and System 7.1 and earlier see 2 GB volumes?

DISCUSSION -----

A Novell server does not use HFS (Hierarchical File System) as its file system; it has the ability to emulate HFS. Novell implemented a workaround to the HFS 2 GB (pre-System 7.5) and 4 GB (System 7.5) limit in the Netware 3.12 and 4 versions of their network operating system.

The workaround essentially interprets the AFP (AppleTalk Filing Protocol) calls and returns a volume size of 999 MB. This is NOT a bug, but a Novell adjustment to the HFS volume size limit. File transfer and other server functions should operate correctly for the whole volume. What happens is Netware shows 999 MB of the multi-GB volume at a time. It is like a scrolling window within the volume window.

To illustrate, if you double click the volume icon you are presented a window showing you the files and folders on the volume (just like any other volume). The difference is you are seeing only a 999 MB portion of the volume. If you scroll down to the bottom of the window, or the end of this first 999 MB portion, Netware then presents to you the next 999 MB portion of the multi-GB volume. This process continues, 999 MB portion by 999 MB portion, making the entire multi-GB volume visible and usable.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 11

Article Change History:

19 Jul 1995 - Updated with Info Alley information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17791



Tech Info Library

AWS 95 and/or A/UX 3.x: Desktop Rebuilds Every Time (5/95)

Revised: 5/22/95
Security: Everyone

AWS 95 and/or A/UX 3.x: Desktop Rebuilds Every Time (5/95)

=====

Article Created: 22 May 1995

TOPIC -----

Every time I restart my Apple Workgroup Server (AWS) 95 or start Mac32, my desktop file rebuilds. I've run fsck, deleted the desktop files, and created a new system folder, all to no avail.

DISCUSSION -----

To keep the Desktop from rebuilding, look for a file or folder called /Desktop. In some cases, the file will be visible in the finder, if its not visible, go to the command shell and type:

```
ls -l /
```

The output should include a line similar to:

```
-rw-r--r--  1 root      root           5 May 16 19:24 Desktop
```

NOTE: If the first character is a "d" instead of a "-", the Desktop file is a directory.

We believe that Mac32 is seeing the Desktop file or folder as a System 6 desktop file, and is trying to convert the desktop file for use in System 7.

Normal Mac OS behavior would rebuild the desktop once. However, A/UX does not handle this correctly and rebuilds the desktop file every time Mac32 is started. The solution is to remove the file or folder. If the file or folder is visible, throw "Desktop" in the trash. Otherwise, go to command shell:

- If /Desktop is a file, remove the file with:

```
rm /Desktop
```

- If /Desktop is a directory, remove the directory with:

```
rm -r /Desktop
```

WARNING: We recommend checking the contents of the directory before using the remove command. Once the directory is deleted, the files will be lost forever.

Support Information Services

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Tech Info Library Article Number:17792



Tech Info Library

Virgin Games (5/95)

Revised: 5/22/95
Security: Everyone

Virgin Games (5/95)

=====

Article Created: 22 May 1995

Virgin Games

18061 Fitch Ave.
Irvine, CA 92714

800-874-4607 (Order Line)

714-833-1999 (Customer Service and Technical Support)

714-833-2001 FAX

714-833-3305 (Electronic Bulletin Board Service - BBS)

Company Profile:

Make games for Macintosh including The 7th Guest, Monopoly, and World Tour Golf.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17793



Tech Info Library

Telecom 2.0: Different Features Depending on Computer (7/95)

Revised: 8/7/95
Security: Everyone

Telecom 2.0: Different Features Depending on Computer (7/95)

=====

Article Created: 22 May 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

This article explains the general feature set of the Telecom 2.0 software.

DISCUSSION -----

The latest GeoPort and Express Modem software releases prior to the Telecom 2.0 software were:

- GeoPort for 68000-based Macintosh AV computers 1.2.2
- GeoPort for Power Macintosh computers 1.0.2
- Express Modem 1.5.5

General Description

=====

Although the software for GeoPort Telecom Adapter and Express Modem hardware share the same code base and have common installer disks, the feature set depends on the hardware you are using.

Common Features For PowerBook, 68000 Macintosh AV,
and Power Macintosh Computers

- Single installer for Apple Fax/Data Modem, Express Modem, Express
 . Modem card, GeoPort for Quadra AV, GeoPort for Power Macintosh
- QuickDraw GX fax driver
- Fax Terminal with System 7.5 freeze bug fixed
- Fax MSAM for PowerTalk

- OCR
- Fast Fax Printing
- Improved fax compatibility

Common 68000-based Macintosh AV and Power Macintosh Features

- Telephone Manager 2.0
- Telephone Tool for CTB support
- Sound Drivers for telephone line and telephone Speakerphone
- Bundled Screen Based Telephone and Voice Message Machine
- Simplified interface for port selection
- Bundled Terminal Emulator (SitComm SE) <- only in kit and via
. UCA upgrade

Power Macintosh Only Features

- Native V.42/V.42bis (error correction/compression) for higher data
. throughput and lower CPU overhead
- Optimized LocalTalk performance when using GeoPort Telecom Adapter

Power Macintosh and PowerBook features

- V.17 Fax giving 14.4 Kbps send/receive (currently fax is 9600 and
. data is already 14.4 Kbps)

This article was published in the "Information Alley":
Volume II, Issue 7, Page 15

Article Change History:
27 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17796



Tech Info Library

GeoPort Adapter: Conflict with DOS Compatibility Card (3/97)

Revised: 3/12/97
Security: Everyone

GeoPort Adapter: Conflict with DOS Compatibility Card (3/97)

=====

Article Created: 22 May 1995
Article Reviewed/Updated: 12 March 1997

TOPIC -----

When I try connecting to the GeoPort Telecom Adapter from my Power Macintosh DOS Compatibility Card, the DOS Compatibility Card hangs. If I use my Macintosh communication applications or temporarily use an external modem with the DOS Compatibility Card, everything works properly.

DISCUSSION -----

The GeoPort has not been tested with any version of Apple Computer's DOS Compatibility products, and it is not supported in this environment.

Affected Products

- DOS Compatibility Card for Power Macintosh 6100 or Performa 6100 Series.
- 7-in. and 12-in. PC Compatibility Cards for Power Macintosh Computers.
- GeoPort Telecom Adapter (includes ALL versions internal and external).

This article appeared in the Information Alley on 26 September 1996.

Article Change History:

12 Mar 1997 - Updated to reflect internal adapters also affected.
25 Sep 1996 - Changed distribution status.
22 May 1996 - Added PC Compatibility Card info.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:17797



Tech Info Library

LW Pro 810: Set Up In RPRINTER Mode For Netware 4.1 (5/95)

Revised: 5/25/95
Security: Everyone

LW Pro 810: Set Up In RPRINTER Mode For Netware 4.1 (5/95)

Article Created: 25 May 1995

TOPIC -----

How do I set up a LaserWriter Pro 810 in RPRINTER mode on a Netware 4.1 server?

DISCUSSION -----

Here is the NetWare v4.10 LaserWriter Pro 810 QuickStart

Summary
=====

- Create a print server.
- Create a printer from within the print server configuration menu options.
- Create a print queue from within the printer configuration menu options.
- Turn printer off and then back on to have changes take effect.

QuickStart
=====

Step 1

Turn printer off, then on, and retrieve the printer's startup page.

Step 2

Type SET BINDERY CONTEXT at the server's console prompt, to ensure that the context has been set. Write the context down, as it will be needed later.

Step 3

Login to a file server from a DOS client using the Admin account.

Step 4

At the DOS prompt, type PCONSOLE, and press Enter.

Step 5

Use the arrow keys to highlight Change Context in the menu, and press Enter.

Step 6

Change the PCONSOLE utility's context to match the context set on the server (what you wrote down earlier), by pressing the Insert key, and selecting the correct context.

Step 7

Use the arrow keys to highlight Print Servers in the menu, and press Enter.

Step 8

Press the Insert key, then type a descriptive name for your print server. This can be any name but in general you should be able to glance at the object and know what it's purpose is. IE: "810_Server".

Step 9

Select the name of the print server you specified in the previous procedure and press Enter.

Step 10

Use the arrow keys to highlight Printers in the Print Server Information menu, and press Enter (this will let you configure the new print server).

Step 11

Press the Insert key to display printers in your current context in the NetWare Directory Services tree.

Step 12

Press the Insert key to create a new printer in the NetWare Directory Services tree (the context listed at the top of the screen should still list the server's bindery context that was set earlier, if not, change to the correct context *before* creating the printer!).

Step 13

At the prompt, type the new printer name and press Enter. The printer name "must" be the virtual printer name that is displayed under virtual printers when

you print the startup page. The name beginning PSL20N.... is the postscript Virtual Printer. The name beginning LJL20N.... is the PCL4 Virtual Printer.

Step 14

Select the name of the printer you specified in the previous procedure and press Enter (this will add the printer to the Serviced Printer list of the print server).

Step 15

From the Serviced Printers menu list, select the name of the printer you specified in the previous procedure, and press Enter. This will bring up a Printer Configuration menu.

Step 16

From the Printer Configuration menu, use the arrow keys to highlight Printer type, and press Enter.

Step 17

From the Printer Type menu, use the arrow keys to highlight Other/Unknown, and press Enter. This will make your selection active, and bring you back to the Printer Configuration menu.

Step 18

If most of the printing to this printer will be Postscript, and not PCL, then from the Printer Configuration menu, use the arrow keys to highlight Banner type, and change the banner type from Text to Postscript. This will limit the number of times the printer will have to switch modes between PCL and PostScript.

Step 19

From the Printer Configuration menu, use the arrow keys to highlight Print queues assigned, and press Enter. This will bring up the Print Queue menu list.

Step 20

Press the Insert key to display print queues in your current context in the NetWare Directory Services tree. For this example, we will create a new queue.

Step 21

Press the Insert key to create a new print queue in the NetWare Directory Services tree (the context listed at the top of the screen should still list the server's bindery context that was set earlier, if not, change to the correct context *before* creating the print queue!).

Step 22

At the prompt, type the new queue name and press Enter. You will then be asked for the NetWare volume to store your NetWare print queue jobs on. With NetWare v4.xx, the NetWare queue does not have to exist on the SYS volume -- you can place the queue on any volume you want. Use the insert key to select the volume from the directory tree (you may need to navigate to a different context to select the volume desired).

Step 23

Select the name of the queue you specified in the previous procedure and press Enter (this will add the queue to the Print Queue list of the printer).

Step 24

Press the Escape key until you are prompted to save your changes.

Step 25

Start PSERVER on your 4.1 File Server by typing "LOAD PSERVER <Print Server Name>"

Step 26

Turn the printer off, and then back on again, to initialize the printer, and have it connect to its printer definition within NetWare.

Step 27

Submit a print job to the printer to ensure it is working. If printing from a PC, it is highly recommended that you use the FONTLIST.PS file in SYS:SYSTEM\NW-MAC\PSUTILS, since it is a known good file, and you will not add additional variables like misconfigured applications or drivers. Once you know that printing is working through the queue, you can use more complex print setups to ensure your environment is configured correctly.

Note:

These series of steps is only one of many ways that can be used to create the same configuration. For example, rather than creating all the printers and print queues from within the print server main menu option, many administrators may choose to create the queues and printers from the main menu options first, then connect the queues and the printers to the print server afterward. The same result will be reached in each case, as long as the information in each entry is entered the same way in whatever approach is taken.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17799



Tech Info Library

Does Apple Support Enhanced IDE (7/95)

Revised: 7/17/95
Security: Everyone

Does Apple Support Enhanced IDE (7/95)

Article Created: 23 May 1995
Article Reviewed/Updated: 17 July 1995

TOPIC -----

Is computer IDE Interface used in some Macintosh computers, such as the Macintosh 5200 series, Performa 6200 series, Macintosh 630 family, and the Macintosh LC and Performa 580, the same as the Enhanced IDE interface? If not what are the differences?

DISCUSSION -----

IDE's basic design is limited to magnetic media and does not work for tape, optical, or CD-ROM devices. PC vendors have addressed IDE's problems with an Enhanced IDE specification, which supports more drive units, greater throughput, and higher-capacity mechanisms. It also permits easier attachment of CD-ROM drives. The Enhanced IDE Interface is also known as the ATA (AT attachment) Interface.

Apple's implementation of the ATA interface is a subset of the ATA interface specification, ANSI proposal X3T9.2/90-143. Revision 3.1. Current IDE capable Macintosh systems support IDE drives that include a feature called Logical Block Addressing (LBA). LBA is the method that drive manufacturers have adopted in order to go beyond the 520 MB DOS-BIOS limit.

In summary, the Apple IDE Interface supports IDE and Enhanced IDE drives. However, any IDE drive that is going to be used on Macintosh computers must support Logical Block Addressing (LBA).

Article Change History:
17 Jul 1995 - Clarified technical information

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17800



Tech Info Library

Apple Internet Mailing Lists: How to Subscribe (1/97)

Revised: 1/27/97
Security: Everyone

Apple Internet Mailing Lists: How to Subscribe (1/97)

Article Created: 23 May 1995
Article Reviewed/Updated: 27 January 1997

TOPIC -----

Apple Computer, Inc. provides a number of mailing lists that can keep you informed of the latest information in the following areas. Any customer with an Internet email address or a commercial online service account with Internet email access can subscribe and unsubscribe to any of the following mailing lists.

DISCUSSION -----

- 1) Apple Press Releases - receive copies of all press releases created by Apple.
- 2) Apple Information Alley - receive the now daily Information Alley, containing the latest tips and information on using and supporting Apple products.
- 3) You can obtain the latest information on where to find Apple Software Updates via automated email. Below are the documents we currently have available, where to send the email message to and what to type so you can obtain the latest information related to Apple SW Updates.
- 4) Apple Developer Directions Express - Summarizes the latest Developer News from Apple - what's happening at Apple, how we're doing, what we're thinking about, and where we're headed. What we send you will be the latest, most interesting, and--we hope--most useful information Apple has to offer. We'll try not to bug you too much--three or four times each month is what we currently plan, but both the content and the frequency of this mailing list may change, depending on reader feedback.

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1) Apple Press Releases

To subscribe:

- Send an email message to: `pressrel@thing2.info.apple.com`
- In the message SUBJECT field, type: `subscribe`

You'll receive an automated reply letting you know you've been added to the list.

To unsubscribe:

- Send an email message to: `pressrel@thing2.info.apple.com`
- In the message SUBJECT field, type: `unsubscribe`

You'll receive an automated reply letting you know you've been removed from the list.

2) Apple Information Alley

To subscribe:

- Send message to: `listproc@whoville.austin.apple.com`
- Message: `subscribe infoalley <Your Real Name>`

You'll receive an automated reply letting you know you've been added to the list.

To unsubscribe:

- Send message to: `listproc@whoville.austin.apple.com`
- Message: `unsubscribe infoalley`

You'll receive an automated reply letting you know you've been removed from the list.

3) Apple Software Updates

* Where to find Apple Software Updates

-> Send email to `info@thing1.info.apple.com` with the subject: `swwhere`

* US Apple Software Updates Available Online - Current Apple SW Updates Available online.

-> Send email to `info@thing1.info.apple.com` with the subject: `swupdates`

* Worldwide Apple Software Updates Available Online - Current Worldwide Apple SW Updates Available Online.

-> Send email to `info@thing1.info.apple.com` with the subject: `wwswupdates`

* Current list of all Apple Mailing Lists

-> Send email to `info@thing1.info.apple.com` with the subject: `listinfo`

The information you requested will be sent by reply mail as soon as possible.

To subscribe:

- Send an email message to: `swupdates@thing1.info.apple.com`
- In the message SUBJECT field, type: `subscribe`

You'll receive an automated reply letting you know you've been added to the list.

To unsubscribe:

- Send an email message to: swupdates@thing1.info.apple.com
- In the message SUBJECT field, type: unsubscribe

You'll receive an automated reply letting you know you've been removed from the list.

4) Apple Developer Directions Express

To subscribe:

- Send an email message to: adirections@thing1.info.apple.com
- In the SUBJECT field, type: subscribe yourrealname

(example: Subscribe Royce Walthrop)

You'll receive an automated reply letting you know you've been added to the list.

To unsubscribe:

- Send an email message to: adirections@thing1.info.apple.com
- In the SUBJECT field, type: unsubscribe yourrealname

(example: unsubscribe Royce Walthrop)

You'll receive an automated reply letting you know you've been removed from the list.

mae-users@solutions.apple.com - Macintosh Application Environment

mae-announce@solutions.apple.com

apple-internet-users@solutions.apple.com

apple-internet-providers@solutions.apple.com

apple-internet-authoring@solutions.apple.com

apple-internet-announce@solutions.apple.com

quicktime-dev@solutions.apple.com

applesearch-users@solutions.apple.com

applescript-users@solutions.apple.com

applescript-implementors@solutions.apple.com

applescript-language@solutions.apple.com

apple-internet-jobs@solutions.apple.com - Internet related job postings

mac-communications@solutions.apple.com

apple-workgroup-servers@solutions.apple.com

semper.fi@solutions.apple.com - Guy's Kawaski's open discussion with Macintosh Developers

macway@solutions.apple.com - Occasional news and tidbits from Guy Kawaski

scsi-wizzards@solutions.apple.com

mpw-dev@solutions.apple.com - Open discussions about developing in MPW

opendoc-news@solutions.apple.com - News from Apple about Open Doc

opendoc-chat@solutions.apple.com - Open discussions about Open Doc

A previous version of this article was published in the "Information Alley":
Volume II, Issue 6, Page 16

Article Change History:

24 Jan 1997 - Removed Apple Dev. Web Pages, What's new

11 Nov 1996 - Removed Newton Mailing list Info and Added Apple Product List

..TIL17801-Apple_Internet_Mailing_Lists-How_to_Subscribe_1-97_(TA33787).pdf

30 Oct 1996 - Changed Information About Apple SW Updates

25 Jul 1996 - Corrected Daily Info Alley information.

Copyright 1995-97 Apple Computer, Inc.

Tech Info Library Article Number:17801



Tech Info Library

StyleWriter II/StyleWriter 1200: Levels of Gray (5/95)

Revised: 5/24/95
Security: Everyone

StyleWriter II/StyleWriter 1200: Levels of Gray (5/95)

=====

Article Created: 22 May 1995

TOPIC -----

How many levels of gray can one expect to get when printing from the StyleWriter 1200? Is it different from the StyleWriter II?

DISCUSSION -----

The StyleWriter 1200 is identical to the StyleWriter II as far as its gray level printing capability. Both the printers are capable of printing 138 levels (shades) of gray at 360x360dpi resolution.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17802



Tech Info Library

CD-ROM: Standards Used (8/96)

Revised: 8/19/96
Security: Everyone

CD-ROM: Standards Used (8/96)

=====

Article Created: 24 May 1995
Article Reviewed/Updated: 19 August 1996

TOPIC -----

This article contains a list of CD-ROM Standards, or formats, and their definition.

DISCUSSION -----

You may hear or see several terms used to define CD-ROM discs and drives. These include Red Book, Yellow Book, White Book, and Green Book. Some of these standards, such as the White Book, are derived from previous standards, but with added features.

Red Book

The Red Book specification is for digital audio CDs. All audio CDs use this specification to assure that any audio CD-ROM in the world works with any audio CD-player. The Red Book specification was developed by Phillips and Sony.

Yellow Book

The Yellow Book specification is used for computer-based CD-ROMs. The Yellow Book specification only defines the physical arrangement of the data on the disc. Other standards are used in conjunction with the Yellow Book to define directory and file structures. These include ISO-9660, HFS, and Hybrid HFS-ISO. Sector formats are defined as Mode 1, Mode 2, and CD-ROM/XA.

ISO-9660

This file system standard is a "lowest common denominator" format. It only allows for an 8.3 filenames (EIGHT__8.TXT). There is an extended ISO-9660 file system, called the Rock Ridge extension, used primarily for UNIX CD-ROMS that allows for longer UNIX file names and directory structures.

HFS

This file system is designed to support Macintosh features not supported under the ISO-9660 standard. This includes longer file names (up to 31 characters), custom icons, and other Finder features such as comments and labels.

Hybrid HFS-ISO

This file system is a combination of ISO-9660 and HFS. This format is used by CD-ROM developers on products designed for both the Macintosh and MS-Windows or UNIX platforms.

Mode 1

Mode 1 CD-ROMs contain only computer data, and have 2048 byte sectors.

Mode 2

Mode 2 CD-ROMs contain compressed audio data and video/picture data, and have 2324 byte sectors. Mode 2 sectors also contain end-of-record markers, interrupt triggers, and data type specifications.

CD-ROM/XA

CD-ROM/XA (CD-ROM Extended Architecture) is an extension of the Mode 2 format. Like Mode 2 it contains compressed audio and video/picture data. The CD-ROM/XA format however offers the ability to interleave the Mode 2 compressed audio and Mode 2 data sectors.

White Book

This specification covers the Video CD format.

Green Book

This specification builds on the Red Book and the Yellow Book, and is designed for CD-I discs (Compact Disc-Interactive).

Orange Book

This specification covers writable CDs, including CD Recordable (CD-R), magneto-optical cartridge systems and single and multisession recordings.

CD+ (CD Plus)

This specification is still being worked on by both the computer and music industry. It is a derivative of the CD+MM format, which combines computer multimedia elements with a standard audio CD-ROM. With the current CD+MM format, Track 1 contains the computer data, and when placed into an audio CD-player, Track 1 must be skipped. The goal is to have a CD-ROM that will contain both audio and computer data on one disc, and when placed into an audio CD-player plays only the audio tracks. All computer data is ignored without any manual assistance.

This article was published in the "Information Alley":
Volume II, Issue 7, Page 12

Article Change History:

19 Aug 1996 - Corrected misspelling.

27 Jul 1995 - Updated from Info Alley.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17805



Tech Info Library

AWS 95: Opening Files Above the Finder Limit (5/95)

Revised: 5/24/95
Security: Everyone

AWS 95: Opening Files Above the Finder Limit (5/95)

=====

Article Created: 24 May 1995

TOPIC -----

I have seen that an Apple Workgroup Server (AWS) 95 can open a maximum of 5000 files. Is this only under certain conditions, or is the finder required to open these files or does an application open them?

DISCUSSION -----

AppleShare and the Finder cannot use the maximum number of open files available by an AWS 95 running A/UX. However ORACLE, INFORMIX, and other applications along with A/UX shell scripts can use the higher open file limit. For example, a 5000 open file limit may let the server concurrently serve ftp, NFS, and AppleShare (this configuration is not officially supported).

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17806



Tech Info Library

ATI Technologies, Inc. (7/95)

Revised: 7/6/95
Security: Everyone

ATI Technologies, Inc. (7/95)

=====

Article Created: 24 May 1995
Article Reviewed/Updated: 6 July 1995

ATI Technologies, Inc.

33 Commerce Valley Drive East
Thornhill, Ontario, Canada L3T 7N6

905-882-2600, press "1"
or
905-882-2626

905-882-2620 FAX

Company Profile:
Manufacturers of PCI (Peripheral Component Interconnect) cards including the
mach64 family of graphics accelerators.

Article Change History:
06 Jul 1995 - Updated information.
14 Jun 1995 - Added new phone number information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17807



Tech Info Library

Wired, Inc.

Revised: 4/7/97
Security: Everyone

Wired, Inc.

=====

Article Created: 24 May 1995

Wired, Inc.

1040-155 Grant Road
Building 155
Mountain View, CA 94040

415-969-9300

Internet: wiredinc@aol.com

Company Profile:

Manufacturers of PCI (Peripheral Component Interconnect) cards including the Butane MPEG Compression Card.

Support Information Services

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:17808



Tech Info Library

Diamond Multimedia Systems, Inc. (1/97)

Revised: 1/9/97
Security: Everyone

Diamond Multimedia Systems, Inc. (1/97)

=====

Article Created: 24 May 1995
Article Reviewed/Updated: 9 January 1997

Diamond Multimedia Systems, Inc.

2880 Junction Avenue
San Jose, CA 95134-1922

General Information: 408-325-7000
Fax: 408-325-7070

Technical Support (Not Modems): 408-325-7100
Technical Support (Modems ONLY): 800-727-8772

Company Profile:
Manufacturer of PCI (Peripheral Component Interconnect) cards, including the
Graphic Stealth 64 Pro. Also manufactures modems including the Super modem
product line.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:17809



Tech Info Library

Precision Digital Images (5/95)

Revised: 5/24/95
Security: Everyone

Precision Digital Images (5/95)

=====

Article Created: 24 May 1995

Precision Digital Images

6742 185th Avenue NE
Suite 100
Redmond, WA 98052

1-800-678-6505

(206) 882-0218

(206) 867-9177 FAX

Company Profile:

Manufacturer of PCI (Peripheral Component Interconnect) cards, including the IMAXX family of PCI cards. The IMAXX family provide a high-performance image-capture solution for demanding medical, scientific, and industrial applications. The IMAXX family includes analog, digital, and color capture cards that offer impressive speed and accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17810



Tech Info Library

miro Computer Products

Revised: 4/7/97
Security: Everyone

miro Computer Products

=====

Article Created: 24 May 1995
Article Reviewed/Updated: 7 April 1997

miro Computer Products

Owe Bunger
Carl-Miele-Strasse 4
Braunschweig, Germany

49-531-21130

Company Profile:
Manufacturer of PCI (Peripheral Component Interconnect) cards, including the
miro Products Display Cards. miro Products offers a range of display solutions.

Support Information Services

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:17811



Tech Info Library

CloseView: Does Not Magnify Video Monitor Window (5/95)

Revised: 5/26/95
Security: Everyone

CloseView: Does Not Magnify Video Monitor Window (5/95)

=====

Article Created: 26 May 1995

TOPIC -----

I am visually impaired and want to use CloseView to magnify the Video Monitor window. I have a Power Macintosh (8011/80 AV) running System 7.5. How do I do this?

DISCUSSION -----

CloseView works on a Power Macintosh running System 7.5, but it does not magnify the Video Monitor window. Apple is aware of the problem and has it under investigation.

Workaround

You can view magnified video input using Apple Video Player and CloseView. This workaround does not work in thousands of colors, but it does work in 256 and 16 colors.

Please note that Apple Video Player has not been tested on a Power Macintosh and this configuration is not supported by Apple at this time.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17813



Tech Info Library

QuickTake 150 For Windows: Read Me (5/95)

Revised: 5/26/95
Security: Everyone

QuickTake 150 For Windows: Read Me (5/95)

Article Created: 26 May 1995

TOPIC -----

This article contains the QuickTake 150 for Windows README.TXT file.

DISCUSSION -----

This Read Me contains information about:

- special settings for serial ports COM3 and COM4
- PICT QuickTake file format
- sharing QuickTake images with a Macintosh computer
- printing slide tables

SETUP FOR COM3 AND COM4

=====
If you connect the QuickTake camera to COM3 or COM4 and experience communication problems, you need to check the Windows Ports control panel settings. (The Control Panel group is located in the Main window.)

1. Open the Windows Ports control panel.
2. Select COM3 or COM4. (Repeat this process for both COM ports.)
3. Click the Settings button.
4. In the dialog box that appears, click the Advanced button.
5. In the Advanced Settings dialog box, make sure the settings are:
 - . - COM1 3F8 IRQ4
 - . - COM2 2F8 IRQ3
 - . - COM3 3E8 IRQ4
 - . - COM4 2E8 IRQ3
6. Click OK.

If you changed the settings, you must restart Windows for the new settings to take effect. When you click OK, a message lets you choose to restart now or delay the restart.

If you are using several serial devices with your computer, make sure that the line IRQSharing=ON exists in the [386enh] section of the SYSTEM.INI file.

Consult the manual that comes with your computer (or card) if the above settings do not work.

PICT QUICKTAKE(.QTK) FILE FORMAT =====

The PICT QuickTake(.QTK) is not the Macintosh standard PICT(.PIC) file format. You will not be able to open QuickTake(.QTK) images with PICT(.PIC) supported applications. Our recommendation is to save it in JPEG or TIFF format to transfer images to other applications.

SHARING QUICKTAKE IMAGES WITH A MACINTOSH COMPUTER =====

To transfer QuickTake images from a Macintosh to a Windows computer:

1. Make sure PC Exchange (or a similar program) has been installed on the Macintosh.
2. Insert a DOS formatted disk into a floppy disk drive on the Macintosh.
3. Copy the Macintosh QuickTake files to the disk, and move them to your computer.

NOTE:

You can only transfer images that are in PICT QuickTake or TIFF format.

To transfer QuickTake images from a Windows computer to a Macintosh:

-
1. Make sure PC Exchange (or a similar program) has been installed on the Macintosh.
 2. Insert a DOS formatted disk into a floppy drive on the Windows computer.
 3. Copy the QuickTake files to the disk, and move them to the Macintosh.

NOTE:

You can transfer PICT QuickTake images (with the QTK extension). Next, so you can open the images on the Macintosh, you need to assign the file type:

4. Open the PC Exchange control panel on the Macintosh.
5. In the dialog box that appears, click Add.
6. In the "DOS Suffix" box, type .QTK.
7. In the scrollable list, find TeachText, SimpleText, or your favorite image editing application and select it.
8. Choose PICT from the "Document Type" pop-up menu.
9. Click OK. The first PC Exchange dialog box reappears, and the QTK file type has been assigned to the selected application as a PICT file type. Now you can open and view the files in any Macintosh

- . application that reads PICT. In addition, if you open an image in
- . the QuickTake application, you can save it in the other file formats
- . available on the Macintosh (PICT, JPEG, and TIFF).

NOTE:

If you are transferring Macintosh files to a Windows computer on a network, only transfer images that are in PICT QuickTake or TIFF format. If you are transferring Windows files to a Macintosh on a network, only transfer images with the QTK extension.

PRINTING SLIDE TABLES

=====

Before you print a slide table, be sure to use the highest resolution available for your printer. When you choose the Print command, the dialog box that appears shows the current setting for print resolution.

To print full-size images you can use any resolution.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17814



Tech Info Library

CloseView: Can it Do Screen Inversion Only? (6/95)

Revised: 6/1/95
Security: Everyone

CloseView: Can it Do Screen Inversion Only? (6/95)

Article Created: 26 May 1995
Article Reviewed/Updated: 1 June 1995

TOPIC -----

I have vision impairment and prefer the video to be inversed in CloseView. I do not need the zoom effects. How can I do this? Is there a ResEdit or third party solution?

DISCUSSION -----

There is no ResEdit solution available to do this. However there is a solution available from Berkeley Access called inLarge. inLarge lets you enable just "screen inverse" functionality. You can download a version of the software via the Internet at:

<http://access.berksys.com/>

or from AppleLink at:

- . Community Connection
- . Disability Solutions
- . Empower BB
- . Access Software Library (Share & Freeware)
- . Vision
- . inLarge 2.0a Demo

Please note that version 2.0a of inLarge is not compatible with Power Macintosh systems. Contact Berkeley Systems directly for information about the availability of a compatible version.

This article provides information about a non-Apple product. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you

search for a particular vendor's address and phone number.

Article Change History:

1 Jun 1995 - Corrected name of third party company.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17815



Tech Info Library

Power Macintosh 5200/75 LC: 8-bit or 16-bit Sound? (10/95)

Revised: 10/23/95
Security: Everyone

Power Macintosh 5200/75 LC: 8-bit or 16-bit Sound? (10/95)

=====

Article Created: 26 May 1995
Article Reviewed/Updated: 23 October 1995

TOPIC -----

Does the Power Macintosh 5200/75 LC use 8-bit or 16-bit sound?

DISCUSSION -----

The original Power Macintosh 5200/75 LC supported 8-bit mono sound input and 8-bit stereo sound output at 11.127 or 22.254 kHz sample rates. When playing audio CDs, the Power Macintosh 5200/75 LC plays the audio using 16-Bit stereo at 44 kHz, retaining the CD quality sound.

In July 1995, the Macintosh 5200/75 LC and Performa 5200 series computers began shipping with 16-bit sound input as well. You can tell which input options your computer has by following this procedure:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is grayed out, you only have 8-bit input.

If 16-bit is not grayed out, make sure there is a dot in the radio button next to it.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

Article Change History:

23 Oct 1995 - Added test to check sound input option.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17817



Tech Info Library

Apple Floppy Drives: How Many Heads? (5/95)

Revised: 5/26/95
Security: Everyone

Apple Floppy Drives: How Many Heads? (5/95)

=====

Article Created: 26 May 1995

TOPIC -----

I just bought a disk head cleaning kit. It asks if I have a single or dual head drive. How many heads do Apple floppy drives have?

DISCUSSION -----

All Apple floppy drives since the Apple SuperDrive (FDHD) have two heads -- one on the top and one on the bottom. Floppy drives before the Apple SuperDrive usually had one head.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17819



Tech Info Library

AppleShare 4.2: How to Update (6/96)

Revised: 6/3/96
Security: Everyone

AppleShare 4.2: How to Update (6/96)

=====

Article Created: 1 June 1995
Article Reviewed/Updated: 3 June 1996

TOPIC -----

This article describes how to update to AppleShare 4.2.

DISCUSSION -----

AppleShare 4.2 will not be available as a stand-alone product, it will only be sold with Workgroup Server bundles and upgrades from AppleShare 4.x. AppleShare 4.2 is supported only on NuBus equipped PowerPC-based Power Macintosh and Workgroup Server computers.

How to Order the AppleShare 4.2 Update

- Upgrades from 4.0, 4.0.1, 4.0.2 or 4.1 versions of AppleShare are available from the Apple Order Center.
- Customers who purchased AppleShare 4.x BEFORE September 1, 1995 can receive the Upgrade for \$199 plus tax and \$6.95 shipping/handling.
- Customer who purchased AppleShare 4.x September 1, 1995 or later receive the upgrade for only a \$6.95 shipping/handling fee.
- Upgrades are expected to be available in November 1995.
- All orders must be received by January 15, 1996.
- Proof of AppleShare 4.x purchase is required.

NOTE: Customers must use their existing AppleShare 4.x serial number to activate the server.

Outside the U.S., customers should contact their local Apple reseller or representative for information on upgrading to AppleShare 4.2 in their local

language.

AppleShare 4.0.2 and 3.0.1 Continued Availability

Customers wanting to repurpose an existing Quadra (or other 68040-based Macintosh) as an AppleShare server can do so by purchasing AppleShare 4.0.2 from their Apple Reseller. AppleShare 4.0.2 is designed for 68040-based Macintosh computers only and will not install or run on PowerPC-based systems. AppleShare 3.0.1 continues to be available for Macintosh computers with a 68030 or earlier processor.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

03 Jun 1996 - Updated for technical accuracy.

04 Jan 1996 - Updated for AppleShare 4.2.

26 Sep 1995 - Added Info Alley information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17822



Tech Info Library

AudioVision 14 Display: Monitor requires ADB connection (5/95)

Revised: 5/30/95
Security: Everyone

AudioVision 14 Display: Monitor requires ADB connection (5/95)

=====

Article Created: 30 May 1995

TOPIC -----

I have an AudioVision 14 Display that I am using with the AudioVision adapter on my Power Macintosh computer. However when I power on the computer, I get a X through the ~AudioVision extension. Why?

DISCUSSION -----

When using the AudioVision adapter, you must also have the ADB cable connected to the ADB port on the AudioVision 14 Display. The ~AudioVision extension polls the ADB port on the computer to see if the display is connected. If the extension does not sense the AudioVision 14 Display, an X appears over the extension at startup.

If you are using the AudioVision 14 Display connected to the HDI-45 video connector on a Power Macintosh, then there will be an ADB connection built in to the HDI-45.

However, if you are using the AudioVision adaptor (a cable with multiple cables and connectors on it), make sure the ADB part of the adaptor is connected to the computer. Otherwise, if there is no ADB cable going from the computer to display, the extension will not detect the monitor. Once you connect an ADB cable from your computer to the AudioVision 14 Display, you can connect your keyboard to one of the other ADB ports on the display.

In cases where the ADB cable is connected, and you still get the AudioVision extension loading with an 'X', you may need to reset the AudioVision 14 Monitor using the procedure described in the Tech Info Library article titled "AudioVision 14" Display: How to Reset the Monitor." Another Tech Info Library article titled "AudioVision Display: "X" Displayed Through the Video INIT" describes other conditions under which the extension loads with an 'X' through it.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17823



Tech Info Library

LaserWriter 8.x: Compatible with Level 1 PS (5/95)

Revised: 5/30/95
Security: Everyone

LaserWriter 8.x: Compatible with Level 1 PS (5/95)

Article Created: 30 May 1995

TOPIC -----

We have a Quadra 800 running system 7.5.1 with LaserWriter driver 8.2.2. When we print to an original LaserWriter, we get frequent PostScript errors. Prints fine from LaserWriter Driver 7.2

A related article "LW Driver 8.1.1: PostScript Errors with Bitmapped Fonts" says that there are problems printing from the LaserWriter 8 driver to the original LaserWriter due to shortage of RAM. It seems to indicate that this problem is specific to the original LaserWriter. I've heard that Apple does not recommend using the LaserWriter 8 driver with any PostScript Level 1 printer because they are not fully supported, and the customers with level 1 printers should use the 7.2 driver. Is this true? It seems to me that LaserWriter 8 should work as long as the printer has sufficient RAM (such as a LaserWriter IINTX or Personal LaserWriter NT with 4+ MB of RAM).

DISCUSSION -----

You are correct that using LaserWriter 8.x with PostScript Level 1 printers should work just fine. This is because LaserWriter 8 queries the printer at the beginning of the print job to determine if it is a PostScript Level 1 or Level 2 printer. LaserWriter 8.x is able to generate PostScript Level 1 code if it finds it is speaking to a PostScript Level 1 printer.

We are not aware of any performance tests that compare printing to a Level 1 printer from LaserWriter 7.2 and LaserWriter 8.x. Our suggestion would be to use the print driver that is more compatible with version of system software running (for example, LaserWriter 8 with systems 7.5). If you run into trouble with this, then you can try using LaserWriter 7.2 to see if it helps.

In using LaserWriter 8.x with the original LaserWriter printers, here are some suggestions that might help in printing:

- Try using ONLY the fonts available in the LaserWriter's ROM; not TrueType or

Type 1.

- Enable "Unlimited Downloadable Fonts" in the options dialog of Page Setup.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17825



Tech Info Library

LaserWriter: Registration Can Vary (5/95)

Revised: 5/31/95
Security: Everyone

LaserWriter: Registration Can Vary (5/95)

Article Created: 31 May 1995

TOPIC -----

I have a LaserWriter Select 300 and when I print five identical pages, no two pages align perfectly. These pages vary up to 1/16th of an inch. Why?

DISCUSSION -----

It is very common for LaserWriter registration to vary from page to page. Some print engines may have a larger degree of variation than others depending upon the design of the engine. Several variables have affect the registration and the difference between pages; paper alignment in the paper cassette, mechanical components of the printer itself, and imperfections in the paper. Also realize that it is next to impossible to align the pages exactly as they were when they went through the printer.

Also keep in mind that the LaserWriter Select family of printers were not designed for camera-ready artwork. The engine was designed for small business and home use. The transfer roller, for example, has a spring on each side to regulate the tension of the roller against the paper and the toner drum. As the printer operates, there could be a degree of variation from page to page. Also realize that small imperfections in the roller materials which can affect paper travel, as well as the paper alignment in the cassette. The paper, as it lies in the cassette, can be registered differently from one page to the next.

The 1/16-in. degree of registration difference is well within Apple's specifications for this print engine.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17826



Tech Info Library

QuickDraw GX: No Cover Sheet with Remote Only Install (5/95)

Revised: 6/1/95
Security: Everyone

QuickDraw GX: No Cover Sheet with Remote Only Install (5/95)

=====

Article Created: 31 May 1995

TOPIC -----

I have two Macintosh computers using QuickDraw GX that are connected using EtherTalk. I am trying to use the Fax Sender GX, from the remote computer. I have the full Telecom software installed on one of the computers, the other one I installed the Remote Only option. From the host I can send faxes and cover pages without any problems. But on the remote computer I cannot get the cover page option to display.

DISCUSSION -----

The Telecom User's Guide states that "sending a fax as a network client is no different from sending a fax from your local computer." But what the User's Guide fails to mention is that you must use a complete installation of the Telecom software, not just the Remote Only installation for full functionality. So, you must reinstall the complete telecom software on the remote computer if you want to send cover sheets and faxes from the remote computer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17828



Tech Info Library

Fax Terminal: Character Limitation In Notes Field (5/95)

Revised: 5/31/95
Security: Everyone

Fax Terminal: Character Limitation In Notes Field (5/95)

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Article Created: 31 May 1995

TOPIC -----

I am using the Express Modem and the Fax Terminal software v7.5 and I am having problems using the notes field. The notes field allows me to enter text into the notes field for a while (about a quarter of the way down), then I get a system beep and characters are no longer entered into the notes field. Why?

DISCUSSION -----

You are running into a limitation of the notes field on the cover page. This field can hold up to 255 characters, which is typically about 5 lines of text.

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Tech Info Library Article Number:17829



Tech Info Library

LaserWriter Bridge: Use 802.2 Frames With SoftWindows (5/95)

Revised: 5/31/95
Security: Everyone

LaserWriter Bridge: Use 802.2 Frames With SoftWindows (5/95)

Article Created: 31 May 1995

TOPIC -----

Is it possible to use SoftWindows and IPX on the Windows side parallel with the LaserWriter Bridge? I cannot access my Novell server when LaserWriter Bridge is on, if I turn it off, I can access the server.

DISCUSSION -----

There is a known issue with LaserWriter Bridge 1.0/2.0.1 and SoftWindows, specifically with trying to access Novell servers while within SoftWindows. It is currently unclear where the problem lies though basically it appears that both products have listener sockets for the 802.3 frame type, and only one is possible. Since LaserWriter Bridge is the first to obtain the socket, SoftWindows is unable to get a socket and the error occurs. The workaround to this situation is to configure the Novell server to utilize 802.2 frame types in addition to 802.3. This way, communications between the Novell server and clients can operate using 802.2.

Here is how to configure the Novell server for 802.2 use:

This goes in the AUTOEXEC.NCF file in addition to the commands already there.

AUTOEXEC.NCF Example:

```
-----  
IPX Internal Net 34BE3556A  
Load NE2000 INT=3 PORT=300 DMA=5 Frame=Ethernet_802.3 Name=Fred  
Load NE2000 INT=3 PORT=300 DMA=5 Frame=Ethernet_802.2 Name=Bob  
Bind IPX to Fred NET=100  
Bind IPX to Bob NET=105
```

All you are doing is adding the 3rd and 5th line to the AUTOEXEC.NCF file. Pretend the other lines (1st, 2nd, and 4th) already exist; they will probably vary with how you have your server configured.

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Tech Info Library Article Number:17830



Tech Info Library

System 7.5: Maximum Number of Items in the Launcher (9/95)

Revised: 9/18/95
Security: Everyone

System 7.5: Maximum Number of Items in the Launcher (9/95)

=====

Article Created: 31 May 1995
Article Reviewed/Updated: 18 September 1995

TOPIC -----

What is the maximum number of items that I can put in the Launcher window under System 7.5?

DISCUSSION -----

The Launcher (v. 2.7) supports a total of eight buttons. If there are aliases in the root level of the Launcher Items folder, then only seven new buttons can be created by naming folders with a bullet (Option-8) as the first character. The Application button is created by default for the 'loose' aliases. However, if there are only folders whose names start with a bullet, then eight custom buttons can be created.

There is a 40 item limit under each of the eight buttons. Additional items do not display, even if they are placed inside the Launcher Items folder in the System Folder.

Article Change History:
18 Sep 1995 - Corrected typo in title.
11 Jul 1995 - Added information about button limit and Launcher version

Support Information Services

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Tech Info Library Article Number:17831



Tech Info Library

PowerBook 500: Does Not Come with CloseView Control Panel (5/95)

Revised: 5/31/95
Security: Everyone

PowerBook 500: Does Not Come with CloseView Control Panel (5/95)

=====

Article Created: 31 May 1995

TOPIC -----

Do the PowerBook 500 series computers that ship with System 7.1.1 come with the CloseView control panel?

DISCUSSION -----

No. The CloseView control panel does not come with these systems. It is not on the hard drive or the backup disks.

The CloseView control panel does work on these systems, however.

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Tech Info Library Article Number:17832



Tech Info Library

LaserWriter IINTX: Poor Image Quality with Manual Feed (6/95)

Revised: 6/2/95
Security: Everyone

LaserWriter IINTX: Poor Image Quality with Manual Feed (6/95)

=====

Article Created: 2 June 1995

TOPIC -----

I have IINTX printers with Postscript interpreter version 47 and the LaserWriter driver 8.2.2.

When I use manual feed, I encounter poor image quality (it looks like dot matrix) from a variety of CPUs and OS versions. Output from the cassette feed on these printers is okay. What is wrong and why is it only happening with manual feed?

DISCUSSION -----

We were able to duplicate the problem printing to a Laserwriter IINTX with Rev. 1.0 ROMs. The problem has to do with how the version of PostScript in the printer handles graphics. Apple LaserWriter printers with PostScript versions prior to 51.8, such as the LaserWriter IINTX with revision 1 ROMs (PostScript 47) and the LaserWriter IINT (PostScript 47), have been known to experience problems when printing complex graphics.

We tested LaserWriter drivers 7.1.2, 8.2, 8.2.2, and 8.3. All LaserWriter 8 drivers exhibited the same anomaly when printing manual feed documents. The output from Rev. 8.x manual feed documents is noticeably distorted. The Postscript information being sent to the printer is adversely affected by the driver when manual feed is chosen as the paper source.

Workarounds

There are a couple of ways to resolve your issue:

- Switch to the LW 7.1.2 driver.
- Upgrade the Laserwriter to the 3.0 ROMs.

Since the Postscript version contained in your ROMs has been known to exhibit

problems printing graphics, it would be best to upgrade to the current ROM revision and eliminate conflict between the Postscript revision and the Laserwriter driver.

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Tech Info Library Article Number:17833



Tech Info Library

DOS Compatibility Card: All NT Servers Don't Appear (8/95)

Revised: 8/16/95
Security: Everyone

DOS Compatibility Card: All NT Servers Don't Appear (8/95)

=====

Article Created: 1 June 1995
Article Reviewed/Updated: 16 August 1995

TOPIC -----

I am having a problem running Windows for Workgroups (Windows 3.11) on a Power Macintosh with a DOS Compatibility Card installed. The problem is, only 11 of the 30 Windows NT servers show up in the Windows File Manager. I can log into any of the 11 servers listed as network drives, but there are 19 other file servers that are not listed.

I have restarted Windows for Workgroups several times, and on two occasions had four other file servers listed, for a total of fifteen. But I was never able to get all of the servers listed; it was always the same 11, OR the 11 plus the four additional drives. All of the Gateway 2000 computers on the network that run Windows for Workgroups can list all 30 servers.

DISCUSSION -----

Here are possible solutions to the problems you are experiencing. It is important that ALL of the solutions be implemented, as they are all directly related to the proper functioning of the Browser in Windows for Workgroups 3.11. It is important to note that all of this information comes from Microsoft's TechNet CD, so if you will be doing further work with Windows for Workgroups 3.11 and Window NT, you should get a subscription to this resource. Contact Microsoft for subscription information.

Step 1

Make sure the following files have the same or later creation dates. These are the versions you should be using:

Begin_Table

Name	Size	Date

NDIS.386	27,846 Bytes	9/4/94
NET.EXE	450,262 Bytes	9/4/94
NETAPI.DLL	109,120 Bytes	9/4/94
NWNBLINK.386	37,964 Bytes	9/4/94
VNETSUP.386	14,647 Bytes	9/4/94
VREDIR.386	85,746 Bytes	9/4/94

End_Table

NET.EXE should be in the Windows directory, and the rest should be in the WINDOWS\SYSTEM directory. If the files you have are older, contact Microsoft to get the updated files.

Step 2

Make sure you have enough conventional memory -- the Windows for Workgroups 3.11 Browser requires a minimum of 540K of free conventional memory. See the Microsoft DOS documentation for memory optimization techniques.

You need to determine what you will not be using, as far as DOS-Macintosh functionality, and remove those pieces from memory, which is at a premium in the DOS Compatibility Card environment. To increase the amount of conventional memory, you need to remove terminate and stay resident (TSR) application programs. For example, if you are not going to be using the clipboard function, you can remove DOSClip. You may be able to remove other TSRs from your DOS startup.

Step 3

The (Link Driver MACODI) section that should look like this:

```
(Link Driver MACODI)
data=Frame Ethernet_802.3
data=Frame Ethernet_II
data=Frame Ethernet_SNAP
data=Frame Ethernet_802.2
data=Link Driver MACODI
```

Step 4

Remove the (NetBeui) section from the PROTOCOL.INI file. It is not a required protocol for Windows networking and may cause some problems since it cannot be routed.

Step 5

Comment out or remove the following line:

```
TimerCriticalSection=10000
```

in the system.ini file

Step 6

Make sure all NT servers are either version 3.5, or if they are 3.1, that they have the latest service pack from Microsoft installed. Contact Microsoft for additional information on both the upgrade and Service Pack.

Step 7

Comment out the following lines if they appear in your SYSTEM.INI file:

```
InDosPolling=True
TimerCriticalSection=<any value>
V86ModeLanas=<any value>
```

Step 8

If all of the above steps do not work, then add the following line to the (network) section of the SYSTEM.INI file on at least one Windows for Workgroups 3.11 machine in each workgroup:

```
MaintainServerList=yes
```

This will slow the machine down somewhat, but should correct the problem.

Article Change History:

16 Aug 1995 - Combined articles for a more comprehensive article.

29 Jun 1995 - Updated article for technical accuracy.

Support Information Services

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Tech Info Library Article Number:17834



Tech Info Library

Power Macintosh: Bad Disk 3 Image on Install Me First CD (6/95)

Revised: 6/1/95
Security: Everyone

Power Macintosh: Bad Disk 3 Image on Install Me First CD (6/95)

=====

Article Created: 1 June 1995

TOPIC -----

I am using the Apple Macintosh CD SSW version 7.5, CD version 2.0. I have made a set of disks from the disk images on the CD-ROM. However, I cannot successfully get these disks to install System 7.5 on my Macintosh. Every time it reaches the Install 3 disk, the installation fails. If I run the installation from the CD-ROM, it works properly. How do I make a set of functional disks?

DISCUSSION -----

Thank you for your questions about the System 7.5 disk images on version 2.0 of the Power Macintosh CD-ROM. A minor problem was identified with one of the "Disk 3" images on the Power Macintosh CD-ROM. This disk image should be fixed in the next release of this CD-ROM.

Fortunately, there is another Disk 3 image on that CD, which you can use to make a working "Install Disk 3".

Step 1

Insert the Power Macintosh CD, and open the "Disk Images" folder.

Step 2

Open the "System Software" folder. Scroll the window to the bottom.

Step 3

Two new folders appear, called "Disk Set 1", and "Disk Set 2". The corrupt "Install Disk 3.image" file is in the Disk Set 2 folder.

Step 4

Open the "Disk Set 1" folder.

Step 5

Make a new floppy disk from the "Install Disk 3.image" file in this folder.

As an alternative, you can also run the system software installation directly from the CD-ROM. This installation can be found in the "System Software Install" folder.

Support Information Services

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Tech Info Library Article Number:17835



Tech Info Library

Macintosh 500 Family: No Nubus Cards Available (6/95)

Revised: 6/1/95
Security: Everyone

Macintosh 500 Family: No Nubus Cards Available (6/95)

=====

Article Created: 1 June 1995

TOPIC -----

Can I install a Nubus card in a Macintosh Performa 550 computer?

DISCUSSION -----

The Macintosh 500 family has a processor direct slot (PDS) for expansion. While Apple does make a Nubus adapter card to allow a Nubus card to be used with the PDS, the design of the Macintosh 500 series does not allow enough room to insert the adapter card.

Macintosh computers the 500 family include:

Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh LC 580

Macintosh Performa 550
Macintosh Performa 560
Macintosh Performa 575
Macintosh Performa 577
Macintosh Performa 578
Macintosh Performa 580

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Tech Info Library Article Number:17836



Tech Info Library

Mac LC 580 & Pwr Mac 5200/75 LC: Optional Video-Out Card (10/95)

Revised: 10/2/95
Security: Everyone

Mac LC 580 & Pwr Mac 5200/75 LC: Optional Video-Out Card (10/95)

Article Created: 1 June 1995
Article Reviewed/Updated: 2 October 1995

TOPIC -----

I want to connect an external monitor to my Macintosh LC 580 or Power Macintosh 5200/75 LC, how do I do this?

DISCUSSION -----

Both the Macintosh LC 580 and Power Macintosh 5200/75 LC can use the optional Apple External Video Connector (M4099LL/A) to provide a video-out source. The Apple External Video Connector plugs into the main logic board, and allows you to connect to a second Macintosh compatible 14-inch display. The external video source mirrors the built-in display. If you need to project the image to a TV or LCD panel, then you need the Apple Presentation System.

The Apple External Video Connector does not use the communications or PDS slot, leaving these slots open for other expansion.

Article Change History:
02 Oct 1995 - Added part number for video card.
28 Jun 1995 - Added Power Macintosh 5200/75 LC.

Support Information Services

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Tech Info Library Article Number:17838



Tech Info Library

Information Alley: Volume 2 Issues Index (1/97)

Revised: 1/9/97
Security: Everyone

Information Alley: Volume 2 Issues Index (1/97)

Article Created: 01 May 1995
Article Reviewed/Updated: 9 January 1997

(PLEASE NOTE: As of July 1996, the Information Alley is published each weekday - sent directly to a mailing list and posted on the Internet. See the following web page: <<http://www.info.apple.com/info.alley/info.alley.html>>)

The following is a complete index of the topics covered in previous issues of Volume II of the Information Alley, Apple's online technical newsmagazine. This article lists topics by Volume/Issue; the number to the right of each topic indicates the page number in the appropriate issue. (This document is formatted as an setext for ease of use with EasyView.)

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09 Jan 1997 - Added info about Daily Info Alley.
10 Jun 1996 - Removed keyword.
09 Apr 1996 - Added keyword.

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15 Mar 1996 - Added indexes for issues 19 through 21.

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Tech Info Library Article Number:17839



Tech Info Library

AppleShare Client for Windows: Truncated File Name (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare Client for Windows: Truncated File Name (7/95)

=====

Article Created: 2 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes the truncating of Macintosh file names by AppleShare Client for Windows users.

DISCUSSION -----

The Macintosh Hierarchical File System (HFS) file system uses 31 characters in file names. Also all DOS special characters (except the colon) are valid HFS file name characters.

The AppleShare Client for Windows sees the truncated name, based on the DOS 8.3 file system naming convention. The Windows client implements a file name truncating algorithm, however the real file name is still the long Macintosh file name. This can be viewed in the File Manager's Properties dialog box.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 13

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17840



Tech Info Library

AppleShare Client for Windows: File Size Differences (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare Client for Windows: File Size Differences (7/95)

=====

Article Created: 2 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes how to find the actual size of a file on both Macintosh and Windows platforms.

DISCUSSION -----

To view the true file size from a Macintosh highlight the file, and choose the Get Info command in the File menu. In the Get Info window, the actual file size is listed in parentheses with bytes used.

To view the amount of AppleShare File Server disk space used for a given file from a Windows client, highlight the desired file, select the Properties item from File Manager, and click on the AppleShare... option. The disk statistic appears in the Size field of this dialog.

The Windows File Manager shows the actual number of bytes of the file. A Macintosh Finder window reports the number of bytes allocated on the disk to store the file.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 13

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17841



Tech Info Library

AppleShare Client for Windows: Losing Resource Forks (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare Client for Windows: Losing Resource Forks (7/95)

=====

Article Created: 2 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes how Macintosh resource forks can be damaged when making them visible on Windows clients.

DISCUSSION -----

Macintosh files with resource forks are hidden from a Windows client user to protect them from damage. To view hidden files, select the Views/By File Type menu item in the File Manager and select the Show Hidden/System Files item.

WARNING: Hidden files can be made visible, if these hidden files are modified, they can be permanently destroyed.

Macintosh files copied or moved on the server by a Windows client can lose their icon information, and Macintosh long names because the Windows File Manager does not support these file attributes. The workaround is to open the file within the Macintosh application while icon information can either be replaced by using ResEdit, or pasting the appropriate icon into the Get Info box for the desired file.

Macintosh files where all data is contained in the data fork can be modified, and no data is lost. However like before the Icon appears as a generic icon, and the file name is shortened.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 13

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17842



Tech Info Library

AppleShare Windows Client: Best Routing & Lost Packets (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare Windows Client: Best Routing & Lost Packets (7/95)

=====

Article Created: 2 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes a problem with NSI 1.5 installed on AppleShare File Servers when AppleShare Client for Windows PCs transfer large amounts of data.

DISCUSSION -----

The AppleShare Client does not use Best Routing completely. Without Best Routing, a problem may occur which causes the router to pass the returning packet to another router, rather than to the PC workstation. The Network Software Installer (NSI) 1.5.1 installed on the AppleShare server fixes this. Be sure NSI 1.5.1 is installed on the server.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 13

Article Change History:
19 Jul 1995 - Updated from Info Alley.
12 Jun 1995 - Corrected NSI 1.5 to 1.5.1.

Support Information Services

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Tech Info Library Article Number:17843



Tech Info Library

AppleShare Client for Windows: Questions & Answers (7/95)

Revised: 7/19/95
Security: Everyone

AppleShare Client for Windows: Questions & Answers (7/95)

=====

Article Created: 2 June 1995

TOPIC -----

This article provides a brief list of common AppleShare Client for Windows questions and answers.

DISCUSSION -----

Question: What does the error message "Your System is configured with an incompatible network driver" mean?

Answer: Only one AppleTalk stack can be loaded on a workstation. See PROBLEMS.WRI located on installer Disk 1 for step-by-step instructions for removing Farallon's PhoneNet PC.

Question: What does the error message "AppleTalk Driver was not loaded. Please reinstall AppleShare" mean when Windows is starting up?

Answer: This error message is indicative of the following:

- Incorrect NET.CFG parameters
- Conflicting NET.CFG files
- Unsupported NIC
- Computer was not restarted after installation
- The call to ATDRIVER.BAT is located after Windows is executed in the AUTOEXEC.BAT.

Question: Why does the File Manager's Properties button not always show the type and creator?

Answer: The AppleShare Client looks to see if the application used to create the document is on the same volume.

Question: Why do certain applications sometimes crash when saving?

Answer: This occurs when saving documents with applications that have been configured with a different AppleTalk stack like Claris's FileMaker Pro.

Question: Can I Mount a volume on Drive B?

Answer: Yes, AppleShare Client lets you do this, however File Manager does not see any files on this drive. "DIR" from a virtual DOS computer sees the files.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 13

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17844



Tech Info Library

MacTCP and Different Connection Configurations (6/95)

Revised: 6/2/95
Security: Everyone

MacTCP and Different Connection Configurations (6/95)

=====

Article Created: 2 June 1995

TOPIC -----

I have a PowerBook 540c 12/320, with System 7.5, and MacTCP 2.04. I use an Ethernet connection at work and a PPP connection at home. When I was at work the other day, I clicked on the Ethernet icon in the MacTCP control panel to change the addressing configurations, clicked OK, and then checked the PPP configuration.

When I clicked on the PPP icon, the configuration had changed to the EXACT SAME THING as the Ethernet configuration. It's as though the Ethernet configuration just swallows up the PPP configuration. Do you know what is going on?

DISCUSSION -----

MacTCP writes its configuration information to a file in the preferences folder called MacTCP Prep. When you make any kind of change in the MacTCP control panel, it will write that change to the MacTCP Prep file. This can be a problem if you are working with a couple of different configurations.

One work around it to save copies of your MacTCP Prep file and copy in the one you want to use. There is also a program called MacTCP Netswitch written by David Walton of the University of Notre Dame that automates this process. To find MacTCP Netswitch the URL is:

<http://www.nd.edu/~dwalton1/netswitch.html>

Support Information Services

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Tech Info Library Article Number:17845



Tech Info Library

Macintosh LC 630 DOS Compatible: Specifications (6/95)

Revised: 6/2/95
Security: Everyone

Macintosh LC 630 DOS Compatible: Specifications (6/95)

=====

Article Created: 2 June 1995

TOPIC -----

This article provides the specifications of the Macintosh LC 630 DOS Compatible computer letting you run Macintosh, DOS, and Windows software.

DISCUSSION -----

Common Features

Seamless Integration Between Mac OS, DOS & Windows

=====

Integration

- Run Mac OS and DOS or Windows software simultaneously
 - applications, games and CD-ROM titles
- Toggle between operating systems with a keystroke
 - single monitor supports both
- Copy & paste between OS environments
- Easily share files and folders
- Use Mac compatible printer and peripherals with both operating systems
- Supports Apple monitors (High Resolution RGB up to Multiple Scan 15) or VGA and SVGA monitors

Storage

- 1.4 MB Apple SuperDrive floppy
 - Read and write Mac OS, MS-DOS, OS/2 and ProDOS disks
- 500 MB IDE hard drive, 1/3 height
 - PC files reside in virtual drive container
- Double-speed CD-ROM drive

Power, Size and Other

- Front headphone jack

- Front controls for volume
- Infrared remote control
- 110 - 240v, 50 - 60 Hz
- Power on/off from keyboard
- 12.6"x16.5"x4.3" (320mm x 419mm x 109mm)
- 19 pounds (8.6 kg)

Options

Work with Mac OS, DOS and Windows

- CommSlot Ethernet card
 - 10 BASE-T, thin, thick, AAUI
- Modem
- Apple Presentation System

Macintosh Features Advanced Multimedia

=====

Processor & RAM

- 68LC040 running at 66/33 MHz
- 8 MB RAM standard
 - 4 MB on logic board, 4 MB in SIMM
 - Expandable up to 52 MB (32 MB in one SIMM, 16 MB in other)
 - Two 72-pin SIMM sockets
 - Expand single SIMM at a time
 - 80 ns or faster
- 1 MB ROM

Expansion & Ports

- Video-in slot (Optional)
- TV tuner slot (Optional)
- Communications slot
- SCSI, two serial, ADB, sound-in, sound-out

Video

- 1 MB DRAM video frame buffer
- 16-bit color at 640x480, 8-bit color at 800x600, 832x624
- Supports video in a window with optional card

Sound

- 16-bit CD audio, 8-bit sound

Software

- Mac OS System 7.5 with Apple Guide, AppleScript and PC Exchange included

DOS/Windows Features

Hardware-based Compatibility

=====

Processor & RAM

- 486 DX/2 running at 66 MHz
- 4 MB RAM standard on SIMM
 - Expand up to 32 MB
 - One 72-pin SIMM socket
 - 80 ns or faster

Networking

- Included ODI driver supports Novell NetWare IPX and TCP/IP protocols

Sound

- SoundBlaster 16 compatible audio out

Ports

- Joystick (DB-15)
- Serial ports emulate PC serial interface (COM1, COM2)
- Printer port emulates parallel port (LPT1) supporting PostScript, Epson and HP PCL-style printer drivers

Video

- 512K DRAM video frame buffer
- 8-bit color at 640x480
 - 4-bit color at 800x600
- Supports VGA, SVGA, EGA, CGA standards

Software

- DOS 6.22 and Windows 3.1 included

Support Information Services

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Tech Info Library Article Number:17846



Tech Info Library

Color StyleWriter 2200: Description (6/95)

Revised: 6/16/95
Security: Everyone

Color StyleWriter 2200: Description (6/95)

Article Created: 5 June 1995

TOPIC -----

This article contains the product description for the Apple Color StyleWriter 2200 printer.

DISCUSSION -----

The Apple Color StyleWriter 2200 is the perfect PowerBook companion for professionals on the go. This innovative ink-jet printer combines outstanding performance for both color and black-and-white printing with true portability—so being on the road doesn't have to mean accepting a compromise in print quality.

Even if your travel is only from one desktop Mac OS system to another, the very portable Color StyleWriter 2200 is the perfect way to add color printing capability to all of your work sites at once. Weighing in at only 3 pounds and featuring a compact design that lets it fit into a standard briefcase, the Color StyleWriter 2200 is anything but small when it comes to features. It offers impressive 360 by 360 dot-per-inch resolution for color printing—and even higher resolution for printing in black and white. The speed of the Apple Color StyleWriter 2200 is also impressive: It prints up to 5 pages per minute in black and white and up to 0.33 page per minute in color.

Speaking of color, through its integrated ColorSync 2.0 software, the Color StyleWriter 2200 provides superior color matching from screen to printed output. In addition, its water-resistant ink means that you can walk away and work on something else—confident that your vital report, proposal, or presentation won't run or smear. It even features convenient, flexible paper handling, offering a built-in 30-sheet feeder that can handle not only standard paper, but also printed envelopes, transparencies, and more.

So, if you're looking for desktop-level performance and quality in a truly portable printer, the Apple Color StyleWriter 2200 is the printer for you.

Features

=====

Outstanding Print Quality

- Prints extremely high resolution documents by smoothing the edges of text and line art using 720- by 360-dpi resolution for crisp black-and-white pages; prints pages containing color or gray-scale images at 360-by 360-dpi resolution
- Uses its four-color printing capability to allow millions of colors, plus true black, on the same page
- Takes advantage of ColorSync 2.0 color-matching technology to ensure accurate color matching from screen to printer
- Offers a choice of 64 scalable TrueType fonts for printing in any size and in a wide range of styles High performance
- Prints up to 5 pages per minute for black and white and a full-color page in less than 3 minutes
- Takes advantage of the high performance of PowerPC processor-based computers to speed the processing and printing of complex documents

Convenience

- Is designed to be truly portable—weighs just over 3 pounds and fits into a standard briefcase
- Features an extremely compact, attractive design that complements the design of PowerBook computers
- Includes everything needed to print: interface cable, color ink cartridge, ink tanks, and cartridge storage case
- Prints on a wide range of media, including plain paper and envelopes for economical output and a variety of specialty media, including transparencies, coated paper, and back-print film
- Complies with the EPA's Energy Star guidelines for energy-efficient operation
- Provides "desktop printing"; lets you print files by simply dragging them onto a desktop printer icon
- Allows you to place watermarks in the background of your documents quickly and easily
- Lets you print two or four reduced-size pages on a single sheet of paper for fast and easy document review

Support Information Services

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Tech Info Library Article Number:17847



Tech Info Library

Color StyleWriter 2200: Technical Specifications (6/95)

Revised: 7/6/95
Security: Everyone

Color StyleWriter 2200: Technical Specifications (6/95)

Article Created: 5 June 1995
Article Reviewed/Updated: 06 July 1995

TOPIC -----

This article contains the technical specifications for the Apple Color StyleWriter 2200 printer.

DISCUSSION -----

Technical Specifications
=====

Print Method

Thermal ink jet

Print Quality

- 360 by 360 dpi for color or gray-scale documents
- 720 by 360 dpi for edge smoothing on black-and-white documents

Interface

High-speed serial (885 Kbps)

Speed

- Up to 5 pages per minute for black and white
- Up to 0.33 page per minute for color
- Actual speed depends on the documents printed and the Macintosh used

Fonts

- TrueType font support (see below for the 64 TrueType fonts available)
- Adobe PostScript font support when used with Adobe Type Manager software

Fonts Available

- | | | |
|------------------------|--------------------------|---------------------|
| - ITC Avant Garde | - Zeal | - New York |
| - ITC Bookman | - Chicago | - Onyx |
| - Courier | - Delphian | - Palatino |
| - ITC Garamond Narrow | - Geneva | - Swing |
| - Helvetica | - Helvetica Black | - Symbol |
| - Helvetica Compressed | - Helvetica Narrow | - Times |
| - ITC Lubalin Graph | - Lucida Bright | - ITC Zapf Chancery |
| - ITC Machine | - Monaco | - ITC Zapf Dingbats |
| - Nadianne | - New Century Schoolbook | - Old English Text |

Ink Cartridges and Tanks

- Color Ink Cartridge (includes print head, color ink tank [cyan, magenta, and yellow], and black ink tank). Print head prints approx. 2,000 pages.
- Ink tanks print approx. 40 pages @ 30% ink cover-age (7.5% ink coverage for each of the four colors).
- High-Performance Black Ink Cartridge (includes print head and black ink tank). Print head prints approx. 3,000 pages. Ink tank prints approx. 150 pages @ 5% ink coverage.
- Actual page print capacity per ink tank depends on the documents printed and type of print material used.

Print Materials

- 16- to 24-lb. (60 to 90 g/m²) bond or copier paper

Paper

U.S. letter, U.S. legal, A4, executive, and envelopes (#10 business and #6)

- Most letterhead and colored stock, labels, and envelopes
- For superior graphics and imaging results, Apple recommends Apple glossy and premium paper and Apple back-print film
- For fast dry time and vibrant colors on overhead transparencies, Apple recommends Apple color ink-jet transparencies

Paper Capacity

- Built-in automatic paper feeder tray holds up to 30 sheets of plain paper, 8 sheets of specialty media, or 5 envelopes

Printable surface

- Maximum printable line: 8.1 in. (20.6 cm)
- Minimum margins: 0.2 in. (0.5 cm) left and right;

. 0.1 in. (0.3 cm) top; 0.3 in. (0.8 cm) bottom

Size and Weight

- Height: 2.2 in. (5.7 cm)
- Width: 11.8 in. (30.0 cm)
- Depth: 6.2 in. (15.8 cm)
- Weight: 3.1 lb. (1.4 kg)

Power

- AC power adapter or optional NiMH (nickel-metal hydride) rechargeable battery (prints approximately 200 pages per charge)

Operating Environment

- Temperature: 59° to 86° F (15° to 30° C)
- Humidity: 10% to 80% noncondensing

System requirements

- Any Apple Macintosh or PowerBook computer with at least a 68020 processor, or any Power Macintosh
- 4MB RAM or more
- System software version 7.1 or later
- Supports QuickDraw GX
- Supports ColorSync 2.0

Ordering Information

=====

Apple Color StyleWriter 2200

Order No. M3474LL/A

- Apple Color StyleWriter 2200 printer
- User's guide
- Apple Peripheral-8 Cable
- Color StyleWriter 2200 Color Ink Cartridge (includes print head, color ink tank [cyan, magenta, and yellow], and black ink tank)
- Color StyleWriter 2200 Black Ink Cartridge (includes black ink tank)
- Ink Cartridge Storage Case
- AC power adapter
- Driver software disks
- Limited warranty

Ink cartridges

- Color Ink Cartridge: M3908G/A
- High-Performance Black Ink Cartridge: M3909G/A

Replacement Ink Tanks

- Color Ink Tank: M3911G/A
- Black Ink Tank (for Color Ink Cartridge): M3912G/A
- Black Ink Tank (for High-Performance Black Ink Catridge): M3910G/A

Media

Letter-size transparency: M2658G/A
Letter-size premium paper: M2952G/A
Letter-size glossy paper: M3655G/A
Letter-size back-print film: M2953G/A
A4-size transparency: M1959G/A
A4-size premium paper: M2951G/A
A4-size glossy paper: M3656G/A
A4-size back-print film: M2954G/A

Options and accessories

Battery Attachment: M3618ZM/A
Universal Power Adapter: M4133G/A

Article Change History:

06 Jul 1995 - Clarified battery information

Support Information Services

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Tech Info Library Article Number:17848



Tech Info Library

AppleCD: Designed For Horizontal Operation (6/95)

Revised: 6/5/95
Security: Everyone

AppleCD: Designed For Horizontal Operation (6/95)

=====

Article Created: 5 June 1995

TOPIC -----

Will the AppleCD 300 or AppleCD 600 drives operate on their sides? I am not able to get it to work on its side.

DISCUSSION -----

Although you may have been successful in getting the AppleCD 300 and 600 to operate on its side, these mechanisms were not designed, tested, nor intended to be operated in the vertical orientation and therefore operating the drives in this position is not supported by Apple.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17849



Tech Info Library

Drive Setup 1.0.x: Frequently Asked Questions (12/95)

Revised: 12/20/96
Security: Everyone

Drive Setup 1.0.x: Frequently Asked Questions (12/95)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 11 December 1995

TOPIC -----

This article contains Frequently Asked Questions (FAQ) regarding the Drive Setup 1.0.x utility that ships with Power Macintosh models that use System 7.5.2 and is also available online.

Questions answered in this FAQ:
=====

- 1) With large volume support features, what is the maximum number of Macintosh HFS partitions that can be created on a single device?
- 2) The documentation for Drive Setup says that third-party hard drives are not supported. However, Drive Setup does support some third-party removable cartridge drives. Does this mean that if you have a third-party hard drive installed in your system, that Drive Setup will not see it? If it does see it, will all of the functions work? What about 3rd-party flavors of some of the drive mechanisms that we support?
- 3) Can you have a System Folder on each partition of a hard drive that has been formatted with Drive Setup? Can you boot from each of these partitions? Is this a 'supported' configuration?
- 4) How do each of the various options I can choose affect the way the hard drive is formatted? What are each of the features actually doing?
- 5) What's the difference between Drive Setup shipped with 7.5.2 and HDSC shipped with 7.5?

DISCUSSION -----

- 1) Question: With large volume support features, what is the maximum number of Macintosh HFS partitions that can be created on a single device?

Answer: The maximum number of partitions is always eight (8). It does not depend on the capacity of the device.

2) Question: The documentation for Drive Setup says that third-party hard drives are not supported. However, Drive Setup does support some third-party removable cartridge drives. Does this mean that if you have a third-party hard drive installed in your system, that Drive Setup will not see it? If it does see it, will all of the functions work? What about 3rd-party flavors of some of the drive mechanisms that we support?

Answer: Drive Setup only supports qualified Apple hard drives and some removable devices as listed in the Drive Setup Guide file. Unsupported hard drives will show up in the device list by name, however, if you select an unsupported hard drive you will get the message, "Cannot modify a disk in an unsupported drive."

When using this utility, it is possible to receive the message, "Unrecognized driver." This message means that the selected device is an Apple hard drive, but that it is currently using a third-party driver.

3) Question: Can you have a System Folder on each partition of a hard drive that has been formatted with Drive Setup? Can you boot from each of these partitions? Is this a 'supported' configuration?

Answer: Yes, this is a supported configuration. After using Drive Setup to partition your hard drive, you can put a System Folder on any (or all) of the hard drive's partitions. After putting a System Folder on a partition, use the "Startup Disk" control panel to select that partition as the startup volume.

4) Question: How do each of the various options I can choose affect the way the hard drive is formatted? What are each of the features actually doing?

Answer: There are four types of initialization with Apple's Drive Setup utility. They are:

i. Regular Initialization

A regular initialization erases the data on the disk and makes all the space on the disk available for use. Regular initialization is recommended for most disks. It is not necessary to initialize a new hard disk, since hard disks are factory-initialized.

ii. Low-level Format

A Low-level format erases all data from the disk plus any information about the disk's file structure and other structures. Since hard disks are factory-formatted, it is not necessary or recommended to do a low-level format for a hard disk. Users may choose to perform a low-level format on some hard disks older than five years since these hard disks may not have been formatted since the release of System 7.

iii. Initialization with the "zero all data" option

..TIL17850-Drive_Setup_1-0-x-Frequently_Asked_Questions_12-95.pdf

A regular initialization erases all data, but under certain conditions the data can be retrieved. If, for security purposes, you wish to be certain that the data can never be retrieved, this option replaces the data with a series of zeros so the data is overwritten and truly removed from the hard drive.

iv. Initializing using both the low-level and the "zero all data" options
This combines options 2 and 3 mentioned above. Both of these options will increase the time it will take to initialize a disk.

5) Question:: What's the difference between Drive Setup shipped with 7.5.2 and HDSC shipped with 7.5?

Answer: Drive Setup 1.0.x allows you to initialize, partition and test both SCSI and IDE hard disks. Apple HD SC Setup 7.3.5 allows user to initialize, partition and test SCSI hard drives only. Drive Setup 1.0.x allows users to set different initialization options for both SCSI and IDE hard disks, while Apple HD SC Setup 7.3.5 gives only one initialization option for SCSI hard disks.

These articles can help you locate the software update, Drive Setup 1.0.3, mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

11 Dec 1995 - Updated to latest version of Drive Setup.
15 Nov 1995 - Reviewed for technical accuracy.
02 Oct 1995 - Added information on the formatting options available.

Support Information Services

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Tech Info Library Article Number:17850



Tech Info Library

Multiple Scan 15 Display: Display Adapter Required for PC (9/96)

Revised: 9/11/96
Security: Everyone

Multiple Scan 15 Display: Display Adapter Required for PC (9/96)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 11 September 1996

TOPIC -----

I want to use the Multiple Scan 15 Display on a PC compatible computer. The Multiple Scan 17 Display ships with a PC adapter, but not the Multiple Scan 15 Display. Is the Multiple Scan 17 Display adapter compatible with the Multiple Scan 15 Display?

DISCUSSION -----

Yes, the PC Adapter from the Multiple Scan 17 Display is compatible.

You need purchase the PC Adapter as a service part from an Apple reseller. The PC adapter is service part number 922-0736.

The Tech Info Library article "Multiple Scan 15 Display: Technical Specifications" contains additional information on video resolutions supported by the Multiple Scan 15 Display.

Article Change History:
11 Sep 1996 - Clarified the discussion, changed distribution.

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Tech Info Library Article Number:17851



Tech Info Library

LaserWriter PostScript Fax: Needs QuickDraw GX Helper (6/95)

Revised: 6/5/95
Security: Everyone

LaserWriter PostScript Fax: Needs QuickDraw GX Helper (6/95)

=====

Article Created: 5 June 1995

TOPIC -----

I am using QuickDraw GX 1.1.2 but have had to turn it off in order to use the PostScript fax card option in my printer. Is there any other way around this?

DISCUSSION -----

If you custom install QuickDraw GX Helper you can use the LaserWriter 8f driver by turning OFF Desktop Printing (ONLY works with non GX-saavy applications). Here is a quick procedure for setting it up:

Step 1

Before installing QuickDraw GX Helper, make sure that the only LaserWriter extension in the Extensions folder is LaserWriter 8f. If others are installed, then GX Helper defaults to those first.

Step 2

Select LaserWriter 8f in the Chooser and click "Setup" on the desired printer; this selects the correct PPD.

Step 3

Install GX Helper by doing a custom install for GX, and then restart your Macintosh computer.

Step 4

Once the system is up, launch the desired non-QuickDraw GX aware application and select "Turn off desktop printing" from the Apple menu. A dialog appears

stating that LaserWriter 8f will be used instead.

Support Information Services

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Tech Info Library Article Number:17852



Tech Info Library

Apple Internal HD Format: Version History (9/95)

Revised: 9/21/95
Security: Everyone

Apple Internal HD Format: Version History (9/95)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 21 September 1995

TOPIC -----

Could you please detail the difference between each of the versions of Internal HD Format that Apple has released, including which machine each has shipped with?

Does the version 1.3 of Internal HD Format have any additional benefits for Macintosh 630 family computers?

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

DISCUSSION -----

Internal HD Format History
=====

The Internal HD Format utility ships with Macintosh computers that have an internal IDE drive. The first Macintosh computers to include an internal IDE drive were the PowerBook 150 and the LC/Quadra/Performa systems.

The version history is as follows:

- 1.0 - Initial release for the PowerBook 150
- 1.1 - Released with the LC/Quadra/Performa 630
 - Updated version string information to reflect System Software 7.1.2 and File Version 1.1
- 1.2 - Never officially released
 - Never released because the version string information was changed incorrectly.

1.3 - Released with the Performa 5200/Power Macintosh 5200/75 LC
. • Updated version string information to reflect System Software
. 7.5.1 and File Version 1.3

NOTE: Later versions of the Performa and Power Macintosh 5200/6200 computers had a new formatting scheme that Internal HD format was unable to read or initialize. Drive Setup 1.0.2 is the supported formatting software for these IDE hard drive equipped computers. Use the search string 'hd format and drive setup' to locate the TIL article "Internal HD Format: Cannot See IDE Drives" for additional information.

Functionally, the Internal HD Format utility versions 1.0 through 1.3 are the same. There is no benefit to using 1.3 over 1.1 or 1.0. Macintosh Users with internal Apple IDE hard drives may use any of the above versions.

Article Change History:

21 Sep 1995 - Added information on using Drive Setup for later Performas.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17853



Tech Info Library

At Ease 2.0.3 for WG: Searching for At Ease Server (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 2.0.3 for WG: Searching for At Ease Server (8/95)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

I have At Ease for WorkGroups, and this morning all the workstations have the following message on the screen, "Searching for the At Ease Server volume". I can see the server in the Chooser on the workstations when they're in the Finder, but At Ease doesn't see it. How do I fix this?

DISCUSSION -----

You should follow the steps below to resolve your problem:

- 1) Set the At Ease Disk to be the startup volume
- 2) Restart
- 3) Reset the At Ease Disk to be the server
- 4) Restart and verified that the computer is using the server
- 5) Updated all the other computers on the network
- 6) Ran At Ease Setup on each computer to use the new preferences file

Article Change History:
14 Aug 1995 - Added keyword.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17854



Tech Info Library

At Ease 2.0.3 for WG: Lock Hard Disk & Driver Software (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 2.0.3 for WG: Lock Hard Disk & Driver Software (8/95)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

To lock a hard drive within At Ease for Workgroups v2.03 the hard drive must be formatted with formatting software compatible with At Ease. The manual does not list which format software is compatible. Which format software can be used?

DISCUSSION -----

The formatting software known to be compatible is Apple HD SC Setup and Drive7. Many others do work but engineering does not have a list of compatible formatters.

At Ease will provide immediate feedback on whether a specific drive is compatible or not. If At Ease detects an incompatible hard disk, the Lock Startup Volume checkbox is dimmed. You will need to contact the publisher of the driver software to see if a compatible version is available.

Here is some information from the At Ease 2.0.3 Read Me:

Locking the startup disk

When you choose this option, At Ease locks your startup disk by installing security software on it. This security software cannot be installed on hard disks that have been initialized by driver software that is not compatible with At Ease 2.0.3 for Workgroups.

If At Ease detects an incompatible hard disk, the Lock Startup Volume checkbox is dimmed. Contact the publisher of the driver software to see if a compatible version is available. The At Ease security software cannot be installed on any hard disk partitioned with A/UX.

- Updating disk drivers
- If you need to update the driver software for a locked disk, first choose

Security from the Options menu in the Setup program and click the Lock Startup Volume checkbox to remove the X.

- Changing the startup disk

If you lock the startup volume, do not change the startup disk selected in the Startup Disk control panel. If you change the startup disk, your At Ease startup volume will not appear on the desktop when you restart the computer, and you will not be able to reselect it from within the Startup Disk control panel.

Article Change History:

14 Aug 1995 - Added keyword, reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17855



Tech Info Library

Macintosh Scrapbook File: Maximum Size (7/95)

Revised: 7/27/95
Security: Everyone

Macintosh Scrapbook File: Maximum Size (7/95)

=====

Article Created: 5 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

What is the maximum size of the Macintosh Scrapbook file?

DISCUSSION -----

The Scrapbook, located in the Apple Menu, has a maximum limit of 255 items. The Scrapbook stores items as resources in the resource fork. All Macintosh resource files have a maximum limit of 2727 resources, however the Scrapbook was designed to hold a maximum of 255 resources.

In addition to only being able to store 255 resources, there is a maximum size limit of the combined resources. The total combined resources of the Scrapbook cannot exceed 16 MB. This limit of 16 MB on the resource fork of a file is a Macintosh Hierarchical File System standard, so it applies to all files, not just the Scrapbook.

This article was published in the "Information Alley":
Volume II, Issue 7, Page 7

Article Change History:
27 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17857



Tech Info Library

Power Macintosh 6100 DOS Compatible & Attachmate GW (6/95)

Revised: 6/5/95
Security: Everyone

Power Macintosh 6100 DOS Compatible & Attachmate GW (6/95)

=====

Article Created: 5 June 1995

TOPIC -----

I need to know if there are any issues between a Power Macintosh 6100 DOS Compatible computer and an Attachmate Gateway. I'm involved in a joint project which requires access to a Gupta server through an Attachmate gateway. We are using Windows 3.1 with IBM's LAN Support Program v1.38.

An NDIS driver is required. Everything appears to load OK, with no visual errors - LSL, MACODI, ODINSUP, NETBIND, and so on.

We have reviewed relative files (CONFIG.SYS, AUTOEXEC.BAT, NET.CFG) and verified there are no obvious flaws. (4 frame types active (802.3, 802.2, SNAP & II), Buffers 8, 1600, Mempool 4096.)

When running an Attachmate terminal session or the Gupta workstation software an error occurs indicating the gateway cannot be found (errors 510 & 598 during the terminal session). It almost appears that the ODINSUP shim is not working as a true NDIS driver.

Do you have any idea on what is wrong, and what can be done to make this work?

DISCUSSION -----

Attachmate has determined there is a timing related issue with LSL and MACODI when working with their gateway products. It is important to note that this issue is not specific to the MACODI driver, as Attachmate has reported problems with 3Com, Asanté, and Shiva products to name a few. The actual problem is that MACODI is calling an API synchronously, and when it receives no answer, it stays hung. This is a very simplified version of the problem. Suffice it to say a change is needed to solve the problem, we have no time line for any changes. In the meantime, it has been determined that Novell's SAA Gateway product works fine, so that may be an option.

Here is the technical summary of the problem:

The problem occurs when the synchronous call, `Get_local_target`, is issued by `IPXODI`. This call generates a RIP request packet on the network. The call is issued in response to a `SPX_Establish` connection being sent from the gateway. Since the call is entered synchronously, meaning no other interrupts should be processed until the call completes, the session appears to hang since the call does not complete. The reason the call does not complete seems to be an issue with how the `MACODI.COM` driver handles reentrancy. An ESR, Event Service Routine, is normally entered with interrupts disabled, however once an `IPXSendPacket` is sent down to the LSL the LSL will re-enable interrupts allowing reentrancy into any ESR that called `IPXSendPacket`. The two main ways to protect an ESR from this is to provide a stack for the exclusive use of the ESR or to provide a reentrancy queue.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17858



Tech Info Library

WiggleWorks: Reading Style and Documentation Error (6/95)

Revised: 6/5/95
Security: Everyone

WiggleWorks: Reading Style and Documentation Error (6/95)

=====

Article Created: 5 June 1995

TOPIC -----

There is a feature in WiggleWorks for changing the pace of the Reading Style. In the manual where changes to settings made through the parent menu are described, it refers to this as the read-aloud pace. It should state it as the READ pace. The setting only affects the Read pace for the READ Button.

DISCUSSION -----

Within WiggleWorks when a book is selected, the user is presented with two read buttons. One is labeled READ-ALOUD, where the program reads the text aloud and highlights text as it does so. The other is labeled READ, where the children can read the text on their own or have it read to them.

The READ-ALOUD option is pre-programmed with reading style and voice. Changes to the Reading style do not affect the READ-ALOUD option. The changes to the reading style ONLY affect the Read Button. A change to reading style can be made by the user during the current run of the program. If a parent or teacher wants the change to the reading style to be permanent they must go through the Parent menu.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17860



Tech Info Library

Token Ring NB/c and 4/16 NB Cards: Description and Specs (6/95)

Revised: 6/6/95
Security: Everyone

Token Ring NB/c and 4/16 NB Cards: Description and Specs (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

This article provides the description and specifications for the Apple Token Ring NB/c Card and Apple Token Ring 4/16 NB Card.

DISCUSSION -----

The Apple Token Ring NB Cards (Apple Token Ring NB/c and Apple Token Ring 4/16 NB Card) provide Macintosh, Apple Workgroup Server, and Power Macintosh models equipped with a NuBus slot with the ideal Token Ring connectivity solution for all of your networking needs. They support a wide range of protocols including AppleTalk, TCP/IP, and IPX.

The Apple Token Ring NB/c Card is a compact (7-inch) network-interface card that provides exceptional performance at a highly affordable price. This card offers a cost-effective, flexible Token Ring solution for connecting Macintosh computers to Apple Workgroup Servers and mainframes, providing access to a variety of network services such as mainframe connections, electronic mail, data bases, and file and print services.

Benefiting from the same high performance network software, the Apple Token Ring 4/16 NB Card is a full size (12-inch) bus-master network interface card designed for any Macintosh computer with a NuBus slot. It includes its own microprocessor and operating system, allowing it to operate independently of the main Macintosh processor. This mode of operation is designed to support "gateway-style" SNA solutions such as SNA•ps 3270 and SNA•ps 5250, as well as a variety of third-party APPC products.

Both cards use the IBM Token Ring chip set, ensuring compatibility and interoperability with all IBM Token Ring networks. Combining the flexibility of a Power Macintosh with any one of these Token Ring cards and Insignia Solutions SoftWindows DOS/Windows emulation software, users get a seamlessly integrated cross-platform solution to all their application and network needs.

Features

=====

Ease of Use

- Install quickly and easily in a single step
- Ships with multilingual software, which makes it ready for use with different language version of the system software

Compatibility

- Works with all Macintosh models with a NuBus slot, including all Macintosh II, Macintosh Centris, Macintosh Quadra, and Workgroup Server models (except the Workgroup Server 95), as well as with the Power Macintosh line
- Complies with IEEE 802.5 and 802.2 standards
- Uses the IBM Token Ring chip set, which provides complete compatibility with IBM environments
- Supports a variety of popular networking protocols and software, including AppleTalk, TCP/IP, IPX, Apple Internet Router, Insignia Solution's SoftWindows, and SNA•ps 3270 and SNA•ps 5250 client software; the Apple Token Ring 4/16 NB Card also supports APPC and SNA environments through the SNA•ps 3270 and 5250 Gateway.
- Easily integrates into multi-vendor environments
- Adapts to any standard Token Ring cabling environment

High Performance

- Allows concurrent execution of multiple networking protocols to optimize network performance
- Ships with new, re-engineered, high performance network software
- Can be used in configurations ranging from an individual card in a single system to multiple-card, server based configurations

Convenience

- Makes it easy to create, expand, administer, and troubleshoot your network

Apple Token Ring NB/c Card Technical Specifications

=====

Connector

- DB-9 connector for attaching to IBM Type 1 cabling

Transmit/receive data rate

- 4- or 16-megabit per second maximum data rate

Token Ring controller

- IBM Token Ring 9314

Power dissipation

- Maximum 5 W, average 3.5 W

Environmental requirements

- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- Humidity: 20% to 95% noncondensing

System requirements

- One available NuBus slot or 7-inch expansion slot (requires NuBus adapter)
- IBM Type 1 cabling (shielded twisted pair) or IBM Type 3 cabling (unshielded twisted pair) with use of an external adapter
- Industry standard Token Ring Multistation Access Unit (MAU)

Apple Token Ring 4/16 NB Card Technical Specifications

=====

Connector

- DB-9 connector for attaching to IBM Type 1 cabling

Transmit/receive data rate

- 4- or 16-megabit per second maximum data rate

Processor

- Motorola 68000 operating at 10MHz

Memory

- 512K of RAM, expandable to 2.5 MB

Token Ring controller

- IBM Token Ring 9314

Power dissipation

- Maximum 6 W, average 4 W

Environmental requirements

- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- Humidity: 20% to 95% noncondensing

System requirements

- One available NuBus slot
- IBM Type 1 cabling (shielded twisted pair) or IBM Type 3 cabling (unshielded twisted pair) with use of an external adapter
- Industry standard Token Ring Multistation Access Unit (MAU)

Ordering Information

=====

Apple Token Ring NB/c Card

Order No. M1769Z/A

- Apple Token Ring NB/c Card
- Network Software Installer Disk
- User's guide
- Limited warranty

Apple Token Ring 4/16 NB Card

Order No. M0415LL/B

- Apple Token Ring 4/16 NB Card
- Network Software Installer Disk
- User's guide
- Limited warranty

Macintosh Coprocessor Platform Memory Expansion Kit

Order No. M0145LL/A

To expand the memory of the Apple Token Ring 4/16 NB Card to 1 MB

To expand the memory of the Apple Token Ring 4/16 Card to 2.5 MB, you need the following parts:

- Toshiba Part No. TC514400z-10
- Texas Instruments Part No. TMS44400-12SD

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17861



Tech Info Library

DOS Compatibility Card: List of Available Expansion Slots (6/95)

Revised: 6/6/95
Security: Everyone

DOS Compatibility Card: List of Available Expansion Slots (6/95)

Article Created: 6 June 1995

TOPIC -----

This article contains a list of available expansion slots on Macintosh computers with a DOS Compatibility Card installed.

DISCUSSION -----

Slots Available

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Computer	Slots available
-----	-----
Quadra 610 DOS Compatible	RAM SIMM Slots (2)
Power Macintosh 6100 DOS Compatible	RAM SIMM Slots (2)
.	Cache Card Slot
Macintosh LC 630 DOS Compatible	RAM SIMM Slots (2)
.	Communication Slot
.	Video (AV/TV) Slot

Slots Unavailable

=====

Computer	Slots Unavailable
-----	-----
Macintosh Quadra 610 DOS Compatible	Processor Direct Slot (PDS)
Power Macintosh 6100 DOS Compatible	Processor Direct Slot (PDS)
Macintosh LC 630 DOS Compatible	Processor Direct Slot (PDS)

Follow upgrades and expansion cards are not available as a result:

- Apple Macintosh LC Ethernet Card
- Apple Macintosh LC Thin Coax Card
- Apple Macintosh LC Twisted Pair Card
- Apple Power Macintosh Upgrade Card
- Apple AV Card for Power Macintosh
- Apple IIe Card
- Nubus Adaptors for Quadra/Centris 610, and Power Macintosh or Macintosh Performa 6100 series computer.
- Any Nubus card that would require using a PDS NuBus adapter.

The following computers are in the Macintosh Performa 6100 series: Performa 6110, Performa 6112, Performa 6115, Performa 6117, and Performa 6118.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17863



Tech Info Library

Interphase Corporation (6/95)

Revised: 6/6/95
Security: Everyone

Interphase Corporation (6/95)

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Article Created: 6 June 1995

Interphase Corporation

13800 Senlac
Dallas, TX 75234

1-800-FASTNET (327-8638)

(214) 919-9000 (Main Telephone Number)

Company Profile:

Hardware, specializing in PCI (Peripheral Component Interconnect) cards, including the Interphase 5515 PCI ATM Adapter.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17865



Tech Info Library

Hermstedt GmbH (6/95)

Revised: 6/6/95
Security: Everyone

Hermstedt GmbH (6/95)

=====

Article Created: 6 June 1995

Hermstedt GmbH

Carl-Reuther-Strasse 3
68305 Mannheim, Germany

49-621-33816-0 (Main Telephone Number)

49-621-33816-12 (FAX)

Company Profile:

Hardware, specializing in PCI (Peripheral Component Interconnect) cards,
including the Leonardo XL.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17866



Tech Info Library

Neutral Ltd.

Revised: 4/7/97
Security: Everyone

Neutral Ltd.

=====

Article Created: 6 June 1995
Article Reviewed/Updated: 7 April 1997

Neutral Ltd.

633 High Road
Seven Kings, Ilford, Essex IG3 8RA UK

44-181-599-9902 (Main Telephone Number)

44-181-590-6365 (FAX)

Company Profile:
Hardware, specializing in PCI (Peripheral Component Interconnect) cards,
including the Neutral ATM 155 card.

Support Information Services

Copyright 1995/97, Apple Computer, Inc.

Tech Info Library Article Number:17867



Tech Info Library

Spectra Systems (6/95)

Revised: 6/6/95
Security: Everyone

Spectra Systems (6/95)

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Article Created: 6 June 1995

Spectra Systems

2001 Westside Parkway
Suite 125
Alpharetta, GA 30201

404-410-7803 (Local Telephone Number)

404-410-7815 (FAX)

Company Profile:

Hardware, including PCI (Peripheral Component Interconnect) cards, such as their PowerLink PCI card.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17868



Tech Info Library

Rockwell Network Systems (6/95)

Revised: 6/6/95
Security: Everyone

Rockwell Network Systems (6/95)

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Article Created: 6 June 1995

Rockwell Network Systems

7402 Hollister Avenue
Santa Barbara, CA 93117-2590

800-262-8023 (Sales and Information)

805-968-4262 (Local/Main Telephone Number)

805-968-6478 (FAX)

800-RNS-FAX2 (Fax Back System)

Internet: WWW server: <http://www.rns.rockwell.com>

Company Profile:

Hardware, including PCI (Peripheral Component Interconnect) cards, such as their Rockwell FDDI and Fast Ethernet Adapters.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17869



Tech Info Library

QLogic Corporation (6/95)

Revised: 6/6/95
Security: Everyone

QLogic Corporation (6/95)

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Article Created: 6 June 1995

QLogic Corporation

3545 Harbor Blvd.
Costa Mesa, CA 92626

800-TOP-SCSI (Sales and Information)

714-438-2200 (Local/Main Telephone Number)

714-668-5039 (FAX)

Company Profile:

Hardware, including PCI (Peripheral Component Interconnect) cards, such as their Fast!SCSI MAC PCI Adapter Cards.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17870



Tech Info Library

DPT (6/95)

Revised: 6/6/95
Security: Everyone

DPT (6/95)

=====

Article Created: 6 June 1995

DPT

140 Candace Drive
Maitland, FL 32751

407-830-5522 (Local/Main Telephone Number)

407-260-6690 (FAX)

Company Profile:

Hardware, including PCI (Peripheral Component Interconnect) cards, such as their PCI SmartCache SCSI Host Adapters and PCI SmartRAID Controller.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17871



Tech Info Library

Color LaserWriter 12/600 PS: Preventing Toner on Paper (7/95)

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: Preventing Toner on Paper (7/95)

=====

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I have an Apple Color LaserWriter 12/600 PS, and I am getting small amounts of toner on the printed page. What can I do to prevent it?

DISCUSSION -----

Cleaning the excess toner from the following areas should eliminate the problem:

- Clean density sensor and separation discharge wire with the brush provided. This procedure is described on page 223 of the user's guide.
- Clean the paper pickup area as described on page 226 of the user's guide.
- Printing 10 blank pages will help clean toner off rollers.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
19 Jul 1995 - Added Info Alley information; updated.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17873



Tech Info Library

Color LaserWriter 12/600 PS: What the BEST Mode Does (7/95)

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: What the BEST Mode Does (7/95)

=====

Article Created: 6 June 1995

TOPIC -----

I have an Apple Color LaserWriter 12/600 PS, and want to know what the BEST print quality selection does for the printer?

DISCUSSION -----

Selection of the BEST mode changes the initial paper path from four rotations to five rotations of the transfer drum. This additional rotation allows the paper to fully adhere to the transfer drum before any transfer of the image to the paper takes place. This corrects small registration problems that occur during the imaging of the first color (magenta).

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
19 Jul 1995 - Added Info Alley information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17874



Tech Info Library

Color LaserWriter 12/600 PS: Cause of Banding (10/96)

Revised: 10/23/96
Security: Everyone

Color LaserWriter 12/600 PS: Cause of Banding (10/96)

Article Created: 6 June 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

When I print from Color LaserWriter 12/600 PS, I can see banding. What causes banding?

DISCUSSION -----

Banding is very difficult to measure with instruments, but the human eye is very good at discerning it. With the Color LaserWriter 12/600 PS or the Color LaserWriter 12/660 PS printer it can arise from a number of areas. These include software, image development area, high voltage power, and basic mechanical factors.

Software
=====

One cause of banding is when applications generate colors that do not exist in the printer colorspace*. When this happens, substitute colors are placed next to colors the printer does not have. Some software applications can read the output devices' colorspace, so they will warn you if you are selecting a color outside the colorspace of the device. Unfortunately at time, only a limited number of applications can do this, most will not warn you if you chose a color outside the colorspace of the device.

* Colorspace: The term for the range of colors a device can produce. In general, a monitor has a larger colorspace than a printer.

You will see the banding effect with artwork where blends are used since the colors are adjacent to each other. Images that use a lot of shading, such as photographs, also make this effect more apparent.

A "stepping" effect, which can be confused as banding, can be caused by blends where not enough steps are sent to the printer. If the artwork is created with

large gaps between color gradations, blends will develop. Some programs automatically generate the number of steps that should exist between the two colors. Changing this value is not recommended, even if it decreases the file size. As a general rule, 256 steps should minimize the effect when blending between two solid primary colors.

The best way to test for banding problems, is to use the test print function on the Color LaserWriter 16/600 PS control panel on the back of the printer.

How To Create A Test Page On The Color LaserWriter

=====

Test Page Pattern Selection

This feature allows you to select one of six test page patterns based upon which pattern would best confirm a print quality issue. Test pattern selection is non-persistent, and after restarting, the test page reverts to the vertical line pattern.

Step 1

Hold down the COLOR SELECT button and press the ENTER button eight times. The four toner lights flash to indicate that you are in the test pattern selection mode.

Step 2

Using the plus or minus buttons, advance the density gauge to illuminate the LED corresponding to the desired pattern. The density gauge flashes when the selected setting differs from the previously entered setting.

NOTE:

Only LEDs 4 through 9 on the density gauge correspond to available patterns.

Step 3

Press the TEST PAGE button to choose the desired test pattern.

Note:

You can press the TEST PAGE button before or after pressing the ENTER button.

Step 4

Press the ENTER button to engage the setting. If you make no further adjustments, the panel exits from the test pattern selection mode in 30 seconds.

Usage Tips

Once the printer has entered the Energy Saving Mode, a test page is no longer produced, and you must restart the printer in order to print additional test pages. You can either use the printer utility, or cycle the power switch to

restart the printer.

Hardware

=====

The engine manufacturer and Apple have worked very hard to minimize the banding. No band that repeats on the page should be greater than 2mm in width. To evaluate the banding print out large vertical solid areas of each color (CMYK) at about 60% coverage, from an application. Look at each and determine if one color is banding worse than the other colors.

NOTE:

The human eye does not detect banding in yellow, so do not expect to see it there.

You should expect to see small bands of variations because of mechanical factors. If there are predominate bands about 50mm apart in any one color it is likely the developer roller in the toner cartridge is causing the banding. If the predominate bands are spaced 38mm or 129mm the cause is likely the Photoconductor cartridge. For additional details on photoconductor banding see the Tech Info Library article titled "Color LW 12/600 PS: Image Defects at Regular Intervals".

Portions of this article were published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS.
12 Oct 1995 - Added entire software section of article.
19 Jul 1995 - Updated from Info Alley.

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Tech Info Library Article Number:17875



Tech Info Library

Color LaserWriter 12/600 PS: Description (7/95)

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: Description (7/95)

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article contains a description of the Apple Color LaserWriter 12/600 PS printer.

DISCUSSION -----

Features
=====

Breakthrough Print Quality -----

- Offers True 600-dpi resolution for sharp text and graphics
- Provides superior color print quality, as well as high-quality black-and-white printing
- Includes Color PhotoGrade technology standard for near photographic-quality color
- Takes advantage of ColorSync 2.0 for outstanding color matching
- Includes 39 PostScript and 64 TrueType fonts

Ease of Use

- Offers easy, single-button installation of printing software and fonts
- Includes everything needed to print impressive color output; requires only six printer supplies (four toners, photo-conductor, and oil), and comes with complete starter set
- Includes a 250-sheet cassette and 100-sheet multipurpose tray; offers optional 250-sheet tray that supports letter, legal, A4, and B5

Compatibility

- Works with Windows 3.1 software-based systems, as well as with the full line of Macintosh and Power Macintosh computers

- Supports "plug and print" connection to both Apple systems and Windows 3.1 software-based computers
- Offers a range of plug and print networking: Standard LocalTalk, IEEE 1284 bi-directional parallel and Ethernet supporting AppleTalk, TCP/IP and Novell NetWare protocols

Enhanced Productivity

- Prints 12 pages per minute for black and white, 3 pages per minute for color, and 1 page per minute for transparencies
- Provides superior-quality and impressive performance through its powerful RISC processor—the 30-MHz AMD 29030—and Apple-designed color-matching and compression ASICs
- Includes a SCSI interface for hard disk drive font storage

Description

=====

The Color LaserWriter 12/600 PS is a high-quality PostScript laser printer that provides outstanding results for both color and black-and-white printing. It is ideal for anyone who requires convenient, superior-quality color printing capabilities at an affordable price.

Today, everyone from senior executives to sales professionals to schoolteachers is looking to improve the impact of printed documents by incorporating color. Color charts can highlight financial data, color logos can make product presentations more appealing, color graphics can grab—and hold—student interest, and on and on. Unfortunately, until now, high-quality color printing involved expensive specialized equipment that put it out of range for most of those who could benefit from it.

The Color LaserWriter 12/600 PS provides superior print quality and easy-set-up and use. With its 600-dot-per-inch and Color Photograde resolution, it provides the outstanding print quality you need—fast. In fact, the printer's speed is 12 pages per minute for monochrome and 3 pages per minute for color.

Yet for all its high performance, the Color LaserWriter 12/600 PS is incredibly easy to set up and use. It connects simply, and its printing software and fonts install in a single step. And it comes with everything you need to get started printing impressive color documents right away. In fact, it requires only six supplies, which contributes not only to its convenience, but also to its affordability—as does its easy and flexible networking capability, which lets you share the cost of the printer across an entire workgroup.

So if you want convenient, affordable color printing—without a compromise in quality—the Apple Color LaserWriter 12/600 PS is the printer for you.

Portions of this article were published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:

19 Jul 1995 - Added Info Alley information

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17876



Tech Info Library

Color LaserWriter 12/600 PS: DeskTop Printing Reqs 7.1.1 (7/95)

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: DeskTop Printing Reqs 7.1.1 (7/95)

=====

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

The DeskTop Printing Software was not installed with my Apple Color LaserWriter 12/600 PS installation. How can I get the Desktop Printing option?

DISCUSSION -----

If you have System 7.1 then Print Monitor 7.1.2 has been installed. DeskTop Printing software requires System 7.1.1 or higher. Specifically the Finder needs to be 7.1.3 or higher. After installing System 7.1.1 or greater, reinstall the Color LaserWriter 12/600 PS software and DeskTop Printing will be installed.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
19 Jul 1995 - Added Info Alley information; updated.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17877



Tech Info Library

Color LaserWriter 12/600 PS: Halo in Bitmapped Text (10/96)

Revised: 10/23/96
Security: Everyone

Color LaserWriter 12/600 PS: Halo in Bitmapped Text (10/96)

=====

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I have an Apple Color LaserWriter 12/600 PS, and text, created with TrueType or PostScript fonts, prints fine, but equivalent bitmapped text sometimes prints blurry and exhibits a fuzzy halo effect. What is the problem?

DISCUSSION -----

When an object gets a full saturation of two colors, the haloing effect, which is normal to all laser imaging, is compounded. To offset this, the I/O controller checks incoming fonts and decrease their saturations slightly in cases where unacceptable haloing would otherwise occur. For example, a green font (pure cyan with pure yellow) might be adjusted to 80% cyan and 80% yellow. This adjustment does not visually alter the color. Since font ID drives this process, bit-mapped text is ignored and will be imaged as a normal graphic. To offset haloing in graphics, you must make adjustments by hand in the source application.

This information is also applicable to the Color LaserWriter 12/660 PS printer.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS information.
19 Jul 1995 - Added Info Alley information; updated.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17878



Tech Info Library

Color LaserWriter 12/600 PS: Matching Color w/ Two Printers 7/95

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: Matching Color w/ Two Printers 7/95

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I have two Apple Color LaserWriter 12/600 PS printers, and I get slightly different colors from them. Is there any way to adjust the printers?

DISCUSSION -----

The printer is adjusted at the factory to produce the best possible image quality. All Color LaserWriter 12/600 PS printers come with these default settings in effect. To change the color balance refer to page 254 of the user's guide. This should only be used to make subtle changes to match multiple printers.

NOTE:

One correction to that page of the User's Guide is in the Read Me. On returning to factory default (Step #7), the manual says to first select a color and hold the + and - buttons together. Instead, just hold down the + and - buttons for about 5 seconds and all colors return to the factory default settings.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
19 Jul 1995 - Added Info Alley information; updated.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17879



Tech Info Library

Color LaserWriter 12/600 PS: Reducing Oil on Paper (7/95)

Revised: 7/19/95
Security: Everyone

Color LaserWriter 12/600 PS: Reducing Oil on Paper (7/95)

Article Created: 6 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

I have an Apple Color LaserWriter 12/600 PS, and I am getting oils spots on the paper. What can I do to prevent this?

DISCUSSION -----

The silicon oil is there to prevent the layers of toner from sticking to the fuser rollers. From time to time an oil spot may appear. Things that may cause it to happen with greater frequency are:

- Not having removed the orange spacers from inside the fuser access door.
- Turning the printer On and Off a number of times in a short period of time. For example, five times in an hour.
- After leaving the printer in idle mode for a long period of time, you may get a few spots of oil on the first couple of pages printed.
- Using recycled paper can plug the fuser's oil filter and cause long oil streaks on the back of the paper. Apple recommends that you use a good quality, non-fibrous paper. You will have to replace the fuser if you continue to use fibrous paper.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
19 Jul 1995 - Added Info Alley information; updated.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17880



Tech Info Library

Color LaserWriter 12/600 PS: Technical Specifications (4/97)

Revised: 4/30/97
Security: Everyone

Color LaserWriter 12/600 PS: Technical Specifications (4/97)

Article Created: 6 June 1995
Article Reviewed/Updated: 30 April 1997

TOPIC -----

This article contains the technical specifications for the Apple Color LaserWriter 12/600 PS printer.

DISCUSSION -----

Technical Specifications
=====

Print Engine and Controller

- 30-MHz AMD 29030 RISC processor
- Engine life 300,000 pages monochrome, 150,000 pages color
- No monthly maximum duty cycle

Print Quality

- True 600-dpi resolution
- Color PhotoGrade, Apple's technology standard enhanced 600-dpi imaging, 200-lines per inch, nearly 2 times standard 600 DPI color laser printers

Memory

- 12MB of RAM standard; supports Color PhotoGrade. Apple contone compression technology enables 130MB of data to be printed with only a 12MB printer
- For best print quality when printing legal size,16MB recommended
- Expandable to 40MB with optional upgrades (1MB, 4MB, or 16MB 72-pin, 60ns SIMMs)

Interfaces

- Ethernet port (supports EtherTalk, TCP/IP, and Novell NetWare protocols)
- LocalTalk port
- All ports active simultaneously
- Bidirectional IEEE 1284 parallel port (special cable required)
- SCSI port for external or optional internal hard disk drive for font storage

Print Speed

- 12 pages per minute for monochrome
- 3 pages per minute for color
- 1 page per minute for transparencies
- Actual print speed is dependent upon file complexity, network traffic, application, and computer used.

Language Supported

- Adobe PostScript Level 2

Fonts

- 39 PostScript (Type 1) fonts in ROM, plus screen fonts for Macintosh and Windows from the following families:

ITC Avant Garde Gothic	ITC Bookman	Courier
Helvetica	Helvetica Narrow	Helvetica Condensed
New Century Schoolbook	Palatino	Symbol
Times	ITC Zapf Chancery	ITC Zapf Dingbats

- 64 TrueType fonts on Macintosh disks from the following families:

Chicago	Delphian	ITC Garamond Narrow
Geneva	Helvetica Black	Helvetica Compressed
Lubalin Graph	Lucida Bright	Machine
Monaco	Nadianne	New York
Old English Text	Onyx	Oxford
Swing	Zeal	

- Prints any PostScript (Type 1) or TrueType fonts

Storage

- Optional internal 240MB hard disk drive

Paper Capacities

- Standard 250-sheet feeder, 100-sheet multipurpose tray
- Optional 250-sheet universal feeder

Print Materials

- 16- to 24-lb. (60 to 90 g/m²) bond from the 250 sheet cassette
- 16- to 28-lb. (60 to 105 g/m²) bond from the multi-purpose tray
- Paper: U.S. letter, legal, A4, and B5
- Most letterhead and colored stock
- Use only Apple Color LaserWriter 12/600 PS transparencies

Printer Supplies

- Cyan, magenta, yellow, and black toner cartridges
 - Print 4,000 pages each at 5% coverage
- Photoconductor replacement kit
 - Prints 40,000 pages in black and white or 10,000 pages in color, continuous printing.
 - Prints 13,000 pages in black and white or 6,500 pages in color, intermittent printing. (Printing single-page documents only)
 - Includes two toner waste disposal containers
- Fuser oil
 - Prints 10,000 pages
- Fuser replacement kit
 - air filter, ozone filter, fuser unit transfer drum cleaning unit-replace at 60,000 pages

Power Requirements

- U.S./Japan: 100 to 120 V, 50 to 60 Hz or
- Europe/Australia: 220 to 240 V, 50 Hz
- Voltage tolerance +/- 10%

*Note: The Color LaserWriter 12/600PS does not contain a universal power supply

Power Consumption

- Operating mode: 100/120 V, 535 W; 220/240 V, 524 W
- Standby mode: 110/120 V, 215 W; 220/240 V, 238 W
- Energy-saving mode: 42 W (complies with EPA Energy Star)

Environmental Requirements

- Temperature: 50 to 86 deg. F (10 to 30 deg. C)
- Humidity: 20% to 80% noncondensing
- Toner cartridge transit environment: -4 to 104 deg. F (-20 to 40 deg. C)

Size and Weight

- Height: 18.0 in. (45.7 cm)
- Width: 21.0 in. (53.3 cm)
- Depth: 23.0 in. (58.4 cm)
- Weight: 110.0 lb. (49.5 kg)

System Requirements

-
- Works with an Apple Macintosh or compatible computer with at least 4MB of RAM and Macintosh system software version 7.1 or later.
 - Works with an IBM or compatible computer with at least 4MB of RAM and Microsoft Windows 3.1 or later.

Ordering Information

Apple Color LaserWriter 12/600 PS: Order No. B2392LL/A

- Color LaserWriter 12/600 PS
- Color LaserWriter 12/600 PS Setup Kit (contains cyan, magenta, yellow, and black toner cartridges, photoconductor replacement kit, fuser oil, user's guide, and limited warranty)

Options and Accessories

Color LaserWriter Cyan Toner Cartridge: M3757G/A
Color LaserWriter Magenta Toner Cartridge: M3760G/A
Color LaserWriter Yellow Toner Cartridge: M3758G/A
Color LaserWriter Black Toner Cartridge: M3756G/A
Color LaserWriter Photoconductor Replacement Kit: M3761G/A
Color LaserWriter Fuser Oil: M3755G/A
Color LaserWriter Transparencies Letter: M3876G/A (Qty: 50 per package)
Color LaserWriter Transparencies A4: M3877G/A (Qty: 50 per package)
Color LaserWriter 12/600 PS 250-Sheet Feeder: M3762G/A
Color LaserWriter 12/600 PS Universal Cassette: M3874G/A
Color LaserWriter 12/600 PS Internal Hard Disk Drive: M3875G/A
Apple Ethernet Thin Coax Transceiver: M0329Z/B
Apple Ethernet Twisted-Pair Transceiver: M0437Z/B
Apple Ethernet AUI Adapter: M043LL/A
Apple 1284 Parallel I/O Cable: M4235ZM/A

Article Change History:

03 Jun 1996 - Added information to OPC replacement kit description.
13 Feb 1996 - Added additional power information.
16 Oct 1995 - Removed keyword.
30 Apr 1997 - Corrected error in Print Materials section.

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Tech Info Library Article Number:17881



Tech Info Library

LaserWriter 4/600 PS: Description (11/95)

Revised: 11/6/95
Security: Everyone

LaserWriter 4/600 PS: Description (11/95)

=====
Article Created: 6 June 1995
Article Reviewed/Updated: 6 November 1995

TOPIC -----

This article contains a description of the Apple LaserWriter 4/600 PS printer.

DISCUSSION -----

Features
=====

Outstanding Print Quality

- Offers 600-dpi resolution
- Supports Adobe PostScript Level 2
- Comes with 64 PostScript and TrueType fonts

Ease of Ownership

- Connects simply via the Macintosh computer's built-in LocalTalk port
- Complies with the EPA's Energy Star guidelines for energy-efficient operation
- Prints extremely quietly, and makes no noise at all when not in use
- Features a compact, attractive design
- Desktop printing software allows drag-and-drop printing

Affordability and Expandability

- Provides advanced functionality at an affordable price
- Offers memory expansion
- Includes LaserBridge software 2.0 for EtherTalk network connection

Description
=====

The Apple LaserWriter 4/600 PS is an affordable PostScript laser printer that offers a number of advanced print capabilities. It's ideal for individual home, education, and small-business users who require outstanding print quality, PostScript capability and who desire future RAM expansion options.

As easy to own as it is to buy, the LaserWriter 4/600 PS connects simply, via the Macintosh computer's built-in LocalTalk port, and features an attractive, compact design. It also provides state-of-the-art energy efficiency. There's no on/off switch; instead, the printer "wakes up" when needed, operating the remainder of the time in an electricity-saving-and completely silent-standby mode.

Yet for all of its simplicity of set up and operation, the LaserWriter 4/600 PS offers a host of advanced capabilities. It features outstanding print quality, using Adobe PostScript Level 2. And the LaserWriter 4/600 PS comes with 64 PostScript and TrueType fonts.

As your printing needs become more sophisticated, the LaserWriter 4/600 PS is designed to grow to meet them. It supports a 4MB RAM Upgrade, which expands both the printer's memory cache and its ability to print documents that contain large numbers of downloadable fonts. Simply put, the LaserWriter 4/600 PS offers the PostScript printing capabilities you need-now and in the future.

Support Information Services

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Tech Info Library Article Number:17882



Tech Info Library

LaserWriter 4/600 PS: Technical Specifications (12/95)

Revised: 12/14/95
Security: Everyone

LaserWriter 4/600 PS: Technical Specifications (12/95)

Article Created: 6 June 1995
Article Reviewed/Updated: 14 December 1995

TOPIC -----

This article provides the technical specifications for the Apple LaserWriter 4/600 PS printer.

DISCUSSION -----

Technical Specifications
=====

Print Engine and Controller

- True laser engine
- AMD 29200 RISC processor

Print Quality

- 600-dpi resolution
- 106-line screen
- 122 shades of gray

Memory

- 2MB of RAM standard with Adobe memory booster compression technology which allows printing of complex pages with less memory
- Expandable to 6MB with optional upgrade

Interface

- Connects using the LocalTalk port
- EtherTalk and TokenTalk connectivity through LaserWriter Bridge 2.0 software

Print Speed

- Four pages per minute maximum (actual speed varies depending on images printed and computer used)

System Requirements

- Macintosh computer with a 68020 or higher central processing unit (CPU). Any Macintosh except a Macintosh Plus, SE, Classic, Portable, or PowerBook 100 will work with the LaserWriter 4/600 PS.
- System software version 7.1.1 or later
- 4MB of RAM or more recommended

Software

- 64 scalable TrueType and 35 PostScript fonts included
- LaserWriter driver utility and new desktop printing with new print monitor

Fonts

- Apple Font Library (64 fonts total)

Begin_Table

- 35 fonts in ROM from the following font families:

Avant Garde	Bookman	Courier
Helvetica	Helvetica Narrow	New Century Schoolbook
Palatino	Symbol	Times
Zapf Chancery	Zapf Dingbats	

- 29 fonts on Macintosh disk from the following font families:

Chicago	Delphian	Garamond Narrow
Geneva	Helvetica Black	Helvetica Compressed
Lubalin Graph	Lucida Bright	Machine
Monaco	Nadianne	New York
Old English Text	Onyx	Oxford
Swing	Zeal	

End_Table

- Compatible with any TrueType or PostScript font

Paper Capacities

- Standard
 - Manual feed tray
 - 100-sheet universal cassette

Print Materials

- 16- to 28-lb. (60 to 80 g/m2) bond
- Paper: U.S. letter, U.S. legal, A4, executive

- Most letterhead and colored stock, labels, and envelopes
- Medium-weight photocopier transparencies

Power Requirements

- U.S./Japan: 100 to 115 V, 50 to 60 Hz
- Europe/Australia: 220 to 240 V, 50 Hz

Power Consumption

- Operating mode: 120 W average
- Standby mode: <10 W

Environmental Requirements

- Temperature: 50 to 90 deg. F (10 to 32 deg. C)
- Humidity: 20% to 80% noncondensing
- Toner cartridge transit environment: -4 to 104 deg. F (-20 to 40 deg. C)

Size and Weight

- Height: 6.3 in. (16.1 cm)
- Width: 15.2 in. (38.5 cm)
- Depth: 14.9 in. (37.9 cm)
- Weight: 15.4 lb. (7 kg) not including cartridge

Maximum Printable Area

The maximum margins for Letter and Legal paper on the LaserWriter 4/600 are:

Begin_Table

	Letter	Legal/US Legal
Left	.10	.10
Right	.19	.19
Top	.17	.15
Bottom	.13	.13

Maximum

Imageable Area 8.21 x 10.7 8.21 x 13.72

End_Table

The results are posted in fractions of an inch.

Ordering Information

Apple LaserWriter 4/600 PS: M3898

- Apple LaserWriter 4/600 PS

- User's guide
- Limited warranty card and toner

Apple 4MB RAM Upgrade*: M4166G/A
Toner Cartridge: M2045G/B
100-Sheet Universal Cassette: M2079G/B

*NOTE:
Requires dealer installation.

Article Change History:
14 Dec 1995 - Corrected memory upgrade part number.
21 Sep 1995 - Added maximum printable area.
28 Jul 1995 - Updated system compatibility information.

Support Information Services

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Tech Info Library Article Number:17883



Tech Info Library

Third-Party NuBus DOS and Windows Options (6/95)

Revised: 6/6/95
Security: Everyone

Third-Party NuBus DOS and Windows Options (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

I have a Power Macintosh and some earlier Macintosh Quadra computers, is there a hardware option for running DOS and Windows applications on them?

DISCUSSION -----

Yes, below are a few options you might consider. Apple does not recommend any third-party product over another.

OrangePC from Orange Micro

This is a NuBus card powered by a user selection of Intel 486 processors up to the DX 4/100. Additional features include up to 32 MB of onboard RAM, Super VGA graphics, file sharing, printing to the network printer and cut and paste between the Macintosh and PC environments. Optional features include serial and parallel ports and a PCMCIA slot for PC network connections.

DOS on MAC from Reply Corporation

This is a PDS Card powered by a user selection of Intel 486 processor up to DX 4/100 or Intel Overdrive DX/4. This card is currently available for Power Macintosh 7100/66, Centris 610, 650, Quadra 610, 650, 700, 800, 900 and 950 Macintosh systems. Additional features include up to 64MB of onboard RAM, second level cache, VGA and SVGA graphics, support for second monitor, printing to network printer and cut and past between Mac and PC environments. Optional features include serial and parallel ports, Network support including Novell Netware, TCP/IP, Windows for Workgroups for Ethernet and Token Ring and Creative Labs Sound Blaster 16 support.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17884



Tech Info Library

Macintosh 630 Series Computers and SCSI Manager 4.3.1 (6/95)

Revised: 6/6/95
Security: Everyone

Macintosh 630 Series Computers and SCSI Manager 4.3.1 (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

Customers who have a Macintosh LC 630, Quadra 630, Performa 630 series computers and are performing large transfers of data to an external SCSI drive will need to install the "630 SCSI Update" extension in order to alleviate a potential system error from occurring. The 630 SCSI Update is available from online services, and the Internet. Do I still need this update after installing System 7.5 Update 1.0?

DISCUSSION -----

The 630 SCSI Update was rolled into SCSI Manager 4.3.1 which is installed as part of System 7.5 Update 1.0. The installer for System 7.5 Update 1.0 will remove the 630 SCSI Update extension but will fail to install the SCSI Manager 4.3.1 extension unless a custom install is performed. A user must perform this custom installation by:

- 1) Double Clicking on Install System 7.5 Update document.
- 2) Click the Continue... button at the information screen.
- 3) Select the Custom Install command from the pop-up menu in the upper left portion of the Install window.
- 4) Scroll down to Extensions in the list of features to install and click on the triangle to the left, a sub listing will appear underneath.
- 5) Locate SCSI Manager in this list and click the checkbox to the left to select it.
- 6) Click the Install button and follow the instructions.

This will install the SCSI Manager 4.3.1 extension into the extensions folder located in the System folder.

Support Information Services

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Tech Info Library Article Number:17885



Tech Info Library

Power Macintosh Upgrade Card and SCSI Manager 4.3.1 (6/95)

Revised: 6/6/95
Security: Everyone

Power Macintosh Upgrade Card and SCSI Manager 4.3.1 (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

I have a Quadra 950 with a Power Macintosh Upgrade card installed and I'm using System software 7.1.2 which came with the card. I also have an 540 MB external hard drive attached. Do I need to be concerned with the formatting software I use for the external hard drive and whether it's SCSI Manager 4.3 complaint?

DISCUSSION -----

Yes, the Power Macintosh Upgrade Card has SCSI Manager 4.3 built into the ROM's therefore when you are in the Power Macintosh mode your system will be using SCSI Manager 4.3 so you should make sure the formatting software you use for your external drive is SCSI Manager 4.3 compliant.

Also, there has been an update to SCSI Manager 4.3 via System 7.5 Update 1.0 that takes SCSI Manager 4.3 to 4.3.1. Apple recommends users upgrade to the latest version of the system software if at all possible to take advantage the enhancements provide in the new system software.

These articles can help you locate the System 7.5 Update 1.0 software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17886



Tech Info Library

MAE 2.0 and Volumes Larger Than 2 GB Problem (6/95)

Revised: 6/6/95
Security: Everyone

MAE 2.0 and Volumes Larger Than 2 GB Problem (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

MAE 2.0 on Solaris 2.4 shows negative file sizes on volumes larger than 2 GB. Some of my application's installers will not install because there is not enough disk space. My home directory is a volume larger than 2 GB.

DISCUSSION -----

This is a known issue and has been reported to engineering for investigation. As of June 1995 there is no time table for resolution.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17887



Tech Info Library

Apple Displays: Gamma Numbers Associated w/ Gamma Tables (6/95)

Revised: 6/6/95
Security: Everyone

Apple Displays: Gamma Numbers Associated w/ Gamma Tables (6/95)

=====

Article Created: 6 June 1995

TOPIC -----

I am looking for the specific gamma numbers associated with the gamma tables; standard, uncorrected, and page white.

DISCUSSION -----

I assume you are referring to the gamma option settings in the Monitor control panel. Below is a little background for gamma correction and the Monitor control panel choices.

Background
=====

All CRTs have a non-linear relationship between light output and the video (cable) voltage input. The Monitor control panel gamma settings are used to correct non-linear light output for CRT type displays.

The gamma values that the Monitor control panel uses were originally derived for the first Macintosh RGB display from Apple. These values have been used since then, but may vary depending on the DAC/CLUT used in different Macintosh video circuitry. Also, many displays of the same model of any RGB monitor may show variances in gamma response due to the nature of CRTs and analog circuitry. Any mass produced display (Apple or non Apple) will have these variances.

The only method of obtaining accurate gamma response with any color display will be to use specialized light measurement devices with individual displays. The corrected gamma values that are given below are approximate values and can only be considered to be best estimates.

Uncorrected Gamma
=====

Uncorrected gamma provides a linear output for each of the red, green and blue video lines for stepped gray bars. This uncorrected gamma refers to the video signaling provided by the CPU and not the gamma value for the display. Uncorrected or linear gamma always has a value of 1.0.

Corrected Gammas =====

Macintosh Standard Gamma -----

The gamma value of the Macintosh Standard gamma refers to the video signaling provided by the computer and not the gamma value for the display. Macintosh Standard Gamma provided a video output that would help to correct for the Apple Color RGB Displays non-linear gamma. The Macintosh Standard Gamma had a value of 0.7 when using an original Mac video card. This corrected for the displays gamma of 1.4.

Page-white Gamma -----

Page White Gamma provides a non-linear gamma video output to correct for display non-linearity similar to Macintosh standard gamma. The original Page White Gamma had a value of 0.7. This corrects for a display gamma of 1.4. Additionally, Page-White Gamma provides a shift in color balance attempting to maintain a 6500 degree white point and colorless gray shades with the Apple Color RGB Display. This color balance shift was designed to correct for the displays original white point of 9300 degrees.

When reading the above, it is important to differentiate between the gamma value of the video signal and the gamma value of the display. The corrected gamma in the video signal is designed to counteract the non-linear gamma response of a particular display. If someone needs values for a color correction application, any monitor gamma parameter value between 1.4 and 1.8 should be sufficient. If a specific value is desired, a safe choice would be 1.4 or 1.6.

I would recommend not to get concerned about specific and exact numbers because display variances are probably larger than the fractional differences between these numbers. Screen measurement and calibration products are much better if you need exact corrections.

Support Information Services

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Tech Info Library Article Number:17888



Tech Info Library

QuickTime: QuickTimeLib Not Available Message (8/96)

Revised: 8/2/96
Security: Everyone

QuickTime: QuickTimeLib Not Available Message (8/96)

=====

Article Created: 6 June 1995
Article Reviewed/Updated: 2 August 1996

TOPIC -----

When I launch a program on my Power Macintosh, it tells me that it cannot find QuickTimeLib. I have searched my hard drive but cannot find it. What is it and how do I get it?

DISCUSSION -----

QuickTimeLib is a code fragment that is part of the QuickTime PowerPlug extension. If QuickTime PowerPlug is disabled, damaged, or deleted you may get this message. The QuickTime PowerPlug extension can be reinstalled by performing a custom installation of QuickTime in the System 7.5 installer. For additional information on Power Macintosh code fragments, refer to the Tech Info Library article "Power Macintosh: Run Time Environment".

QuickTime 2.5

With the release of QuickTime 2.5 the QuickTimeLib not available message may be occurring because the Extensions Manager control panel is not recognizing the QuickTime PowerPlug (as well as QuickTime Musical Instruments) as part of the "System 7.5.x Only" set. If a user restarts with the "System 7.5.x Only" set, the Extensions Manager will not recognize these two extension and they will not load. Users need to make sure these extensions are active.

The reason for this is because, with QuickTime 2.5, the creator types for QuickTime PowerPlug and QuickTime Musical Instruments changed so these extensions could have their own individual icons. Since the creator types are different, and the Extensions Manager uses the creator type to recognize system extensions as part of the "System 7.5.x Only" set, the new creator type is not recognized as part of the "System 7.5.x Only" set.

Article Change History:

02 Aug 1996 - Updated with QuickTime 2.5 information.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17889



Tech Info Library

7.5 Update 1.0 CD: Does Not Include MegaPhone or SITComm (5/96)

Revised: 5/24/96
Security: Everyone

7.5 Update 1.0 CD: Does Not Include MegaPhone or SITComm (5/96)

Article Created: 6 June 1995
Article Reviewed/Updated: 24 May 1996

TOPIC -----

I recently received the System 7.5 Update 1.0 CD from the Apple Order Center which has Apple Telecom 2.0 software, however the CD does not include MegaPhone or SITComm. How do I get them?

DISCUSSION -----

MegaPhone is available from the online services Apple posts software updates. To get both MegaPhone and SITComm plus documentation, by purchase the GeoPort Telecom Upgrade bundle from the Apple Order Center.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
24 May 1996 - Updated for technical accuracy.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:17890



Tech Info Library

Apple Certified Server Engineer (ACSE) Program (7/95)

Revised: 7/27/95
Security: Everyone

Apple Certified Server Engineer (ACSE) Program (7/95)

=====

Article Created: 7 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

This article describes the Apple Certified Server Engineer (ACSE) Program.

DISCUSSION -----

The Apple Certified Server Engineer (ACSE) Program institutes an industry certification in Workgroup Server and networking technologies. It provides a reliable indicator of the technical capability of certified individuals.

This document outlines the Apple Certified Server Engineer program, its purpose, operational characteristics, and details on pursuing a certification.

Overview

This certification has been created to identify individuals that have demonstrated their capability to install and support Apple Workgroup Servers and design or manage AppleTalk based networks. Candidates who successfully complete this certification are demonstrating their ability to provide knowledgeable support and troubleshooting of server installations, AppleTalk based network design, and AppleShare based server tuning and implementations.

The overall purpose of this program is to:

- Identify individuals with proven Workgroup Server support skill.
- Encourage further development of support skills by providing a skill development path
- Encourage an employer's investment in Apple support skills by providing a method of measurement and recognition of these skills.

This certification program is a cornerstone of the new Apple Premium Server Reseller Program. This program was created to identify Apple authorized resellers that are committed to the business of selling servers and workgroup solutions. This program requires the reseller have an ACSE on staff.

Definition of Certification

This certification is earned by the successful completion of three tests. It is important to note that the certification does not require any class attendance. These tests will be administered by Drake Prometric through their worldwide organization of testing centers. Any and every person is eligible for this certification. It is Apple's hope that people outside of the Apple authorized reseller community will become certified as well. It is anticipated that professional support people in customer locations and internal Apple personnel will attempt certification. This certification offers them a way to demonstrate their level of product knowledge as defined by Apple Computer.

When a candidate successfully passes these three tests and signs an agreement with Apple the candidate becomes an Apple Certified Server Engineer. This certification automatically expires after two years unless the certification holder retests successfully. These recertification tests give employers of certification holders the confidence that their knowledge is timely. This gives Apple the opportunity to keep these certified individuals technically current on Apple's view of important technology and products.

The current version of the certification covers technology associated with Mac OS - AppleShare based servers only. This initial certification does not have parts or levels. Later versions of the certification might have different components that reflect different product expertise.

Completion of this certification earns the individual the right to use a certification icon for business cards, and other relevant materials.

Test Preparation

Apple has taken steps to ensure candidates are provided with two different methods of test preparation. Since this certification is based on successful completion of tests there is no requirement for specific training classes.

- Self-Study

One method of test preparation is to acquire the classroom material to use as self-study guides. Four guides are available from Network Frontiers today to cover the material taught in the classes. The cost of the guides range from \$40 to \$65 and are available directly from Network Frontiers. In the future, textbooks will be available from commercial book sellers.

- Classes

Apple has arranged for classes to be available for those that choose to prepare for the tests with training. Apple has a contractual arrangement with Network Frontiers to provide classes tailored to these tests. These classes are available today nationwide, and the schedule will grow as class demands grow. To register for a class, call Network Frontiers at 800-NET-TRN1 or 415-896-2939 for

the schedule and dates. They can be reached by AppleLink at NETFRONTIERS. Network Frontiers is an Apple Preferred Provider of this training.

Test Details

Initially there are three tests for Mac OS based certification:

- The first test covers installation, tuning, management, and support of AppleShare based servers. This includes AppleShare version comparisons, Server Manager software overview, backup strategies, AppleShare install and configuration, and installation design.
- The second test is the design of AppleTalk based networks, which includes design, media choices, planning and sizing network installations, multiprotocol issues, and services tuning.
- The third test is AppleTalk network management. This includes more network design issues, software license management, network station and traffic management techniques/tools.

Drake's testing service provides a specific type of testing capability. Their testing centers provide a consistent environment to take computer given and graded tests. Each test is one hour in length. Each test topic has several tests that are randomly chosen for each testing instance. Thus, an individual who is repeating a test will not necessarily take the same test.

A \$95 administrative fee for each test is payable at the time of testing to Drake. To sign up for a test, contact Drake directly. Drake is unable to answer program questions and is not able to schedule tests until they are available, which is currently scheduled for mid August 1995. Please do not call Drake's registration line until then. Call the program information line at 408-862-3385 for details on test availability. Until October 1, priority attendance will be given for technical employees of resellers attempting to achieve authorization in the Apple Premium Server Reseller Program.

For more information

Call the Certification Program information line at 408-862-3385 from 8 AM to 4 PM Pacific Time. For training registration or study guide orders, contact Network Frontiers directly at 800-638-8761.

As candidates work through the certification process they can call Apple to check their status, change their address, verify the credentials of an individual, and get general program information. The number is 408-862-3385 (8 AM to 4 PM Pacific Time).

This article was published in the "Information Alley":
Volume II, Issue 7, Page 4

Article Change History:

27 Jul 1995 - Updated from Information Alley

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17891



Tech Info Library

PlainTalk 1.3: Speech Macro Editor Missing Documentation (6/95)

Revised: 6/7/95
Security: Everyone

PlainTalk 1.3: Speech Macro Editor Missing Documentation (6/95)

=====

Article Created: 7 June 1995

TOPIC -----

The Introduction to Speech Guide with PlainTalk 1.3 refers users to the Appendix in the PlainTalk manual that comes with the computer. However, no PlainTalk 1.3 information comes with this manual.

DISCUSSION -----

This is a documentation error. All necessary PlainTalk 1.3 information is included in Balloon help.

For more scripting information, refer to the QuicKeys Guide for QuicKeys if you have QuicKeys, or an AppleScript scripting help book available in book or computer stores.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17892



Tech Info Library

Performa 5200:Global Village TelePort & Busy Serial Port (7/95)

Revised: 7/11/95
Security: Everyone

Performa 5200:Global Village TelePort & Busy Serial Port (7/95)

Article Created: 7 June 1995
Article Reviewed/Updated: 11 July 1995

TOPIC -----

Every time I start up my Macintosh Performa 5200 computer I get a message stating that the modem cannot be found. When I try to reset the modem from the TelePort control panel the computer tells me the serial port is busy.

It is important to note that this happened even before I installed or removed any software from my computer, in other words, this is how it has been behaving right "out of the box". What is wrong?

DISCUSSION -----

Symptoms

The following issue has been reported on Macintosh Performa 5200, 580, 640, and Power Macintosh 6100 series computers.

On startup, when the Global Village Registration software launches, it puts up a stop alert stating:

"Can't find or can't access a modem to use for registration. Make sure you have Global Village software installed correctly, reboot your computer, and try again. If you want to use a specific modem for registration, select it from Chooser."

If you try to reset the modem in the TelePort control panel, you get a warning alert stating:

"The current port is busy and cannot be opened. Quit any open communication application, or turn off AppleTalk in the Chooser (if the modem is connected to the Printer port), and then reopen the TelePort control panel."

Macintosh Performa 5200

Extensive testing on a Macintosh Performa 5200 computer running System 7.5.1 with GlobalFax 2.5P indicates that the problem can be reproduced simply by restarting the computer while the network is set to anything besides AppleTalk active in the Chooser and LocalTalk as the network in the Network control panel. In other words, restarting with AppleTalk set to Inactive or Ethernet selected in the Network control panel results in the messages documented above.

Other Macintosh Computers

We have seen the same problem, as noted on the Macintosh Performa 5200, on some other Macintosh computers: the Macintosh Performa 580, 640, and Power Macintosh 6100 series of computers (including the Workgroup Server 6150). The problem does not occur as readily on these computers but, if you switch between LocalTalk and Ethernet, or between AppleTalk active and inactive enough times, the problem will occur.

Solution

The "Busy Serial Port" issue is a software problem. Not a hardware problem. Global Village has provided Apple with an update, GlobalFax 2.5.2P Update, which will correct the problem.

Install the update following these steps:

Step 1

Restart the computer with Extensions Off by holding down the Shift key at startup.

Step 2

Double-click on the Performa GlobalFax 2.5.2 Update icon.

Step 3

Click on the Update button and watch for an update confirmation window.

Step 4

Restart the computer.

While these steps will update the Global Village software currently on their computers, users should be advised to keep a backup copy of the Update program in case they reinstall the software from their backup CD. At that time, they would need to run the Update program again.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
 - . Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
 - . Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:

11 Jul 1995 - Updated article with resolution information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17893



Tech Info Library

Apple Media Tool: Styled Text Requires Additional Filters (7/95)

Revised: 7/19/95
Security: Everyone

Apple Media Tool: Styled Text Requires Additional Filters (7/95)

=====

Article Created: 7 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

Does the Apple Media Tool support more than one text style in a text media element? If so, how can I import formatted (styled) text from word processors like MacWrite Pro, Microsoft Word, or others?

DISCUSSION -----

The Apple Media Tool is very limited in the text it supports. You cannot import formatted text from MacWrite Pro, Microsoft Word, or other word processors. This is because of the cross-platform requirements of the Apple Media Tool. Art of Memory Ltd. (+44 (0) 1386 841496 or AppleLink UK0304) has an Apple Media Tool Programming Environment package called TextPak, which allows much greater text handling capability when using the Apple Media Tool Programming Environment.

Because all text used within TextPak is held as plain ASCII, with embedded style commands, the texts used in your project can be easily maintained separately from your program code, in the same way that the Apple Media Tool separates media items from code.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 19

Article Change History:
19 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17894



Tech Info Library

Art of Memory Ltd.

Revised: 4/8/97
Security: Everyone

Art of Memory Ltd.

=====

Article Created: 7 June 1995
Article Reviewed/Updated: 8 April 1997

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Company Profile: Makers of TextPak, an application that allows users of the Apple Media Tool Programming Environment to implement high quality text handling on both Macintosh and Windows platforms.

Support Information Services

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:17895



Tech Info Library

DOS Compatible Products: Frequently Asked Questions (4/97)

Revised: 4/3/97
Security: Everyone

DOS Compatible Products: Frequently Asked Questions (4/97)

Article Created: 7 June 1995
Article Reviewed/Updated: 03 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple's cross-platform (DOS compatible) products.

Questions In this FAQ:
=====

- I have an AppleCD 300e Plus CD-ROM drive and want to use it on a PC-compatible computer. Where can I get the drivers for it?
- I have a DOS Compatibility Card and am getting an error message at startup: "PC Network Extension: AgentOpen () returned -1." How can I stop this?
- I have a DOS Compatibility Card and when I try to switch to the PC side, I get an this error, "Diskette error-correct problem and press any key to retry." Why?
- What operating systems does the DOS Compatibility Card support?
- What kind of memory does the DOS Compatibility Card use?
- How do I install the DOS mouse driver on my DOS compatible?
- Can I use a third-party CD-ROM drive with my DOS Compatibility Card?

DISCUSSION -----

Question: I have an AppleCD 300e Plus CD-ROM drive and want to use it on a PC-compatible computer. Where can I get the drivers for it?

Answer: Apple does not write MS-DOS software drivers for any AppleCD player.

MS-DOS drivers are written by other developers for Apple. The Apple Multimedia Kit for Windows includes a third-party SCSI adapter card with the appropriate CD-ROM driver software. The software can only be distributed with the Apple Multimedia Kit. You may want to look in the Redgate Macintosh Product Registry to locate a possible third-party solution. Corel and Trantor are two possible suppliers of CD-ROM driver software.

Question: I have a DOS Compatibility Card and am getting an error message at startup: "PC Network Extension: AgentOpen () returned -1." How can I stop this?

Answer: The PC Network Extension lets the DOS Compatibility Card access built-in Ethernet. The error message results when the PC Network Extension is looking for a network that is not present. Usually this is because AppleTalk is off. To eliminate the error at startup, you have three options.

(1) Upgrade to version 1.0.7 of the PC Setup software.*

(2) Use the Chooser to turn AppleTalk on.

(3) Drag the PC Networking Extension from the Extensions folder to the Trash (provided that you are not using a PC network).

The PC Network Extension is not required unless you plan on using network services on the DOS Compatibility Card. If you are using the DOS Compatibility Card's networking capabilities, make sure AppleTalk is active.

***NOTE:**

PC Setup software v1.0.7 is not compatible with the DOS Compatibility Card for the Macintosh Quadra 610 or Centris 610.

Question: I have a DOS Compatibility Card and when I try to switch to the PC side, I get an this error, "Diskette error-correct problem and press any key to retry." Why?

Answer: You are getting the disk error because there is no drive container selected. Open the PC Setup control panel and make sure that the C:\> option does not say None. If it does, pull down that C:\> menu and select another drive file. Look for a file named PC Drive File. That is the factory installed drive container. If you can not find it, you need to create a new drive container. Consult your DOS Compatibility Card User's Manual for complete instructions.

Question: What operating systems does the DOS Compatibility Card support?

Answer: Apple supports only the following operating systems on the DOS Compatibility Card:

DOS 6.22

Windows 3.1

Windows 95*

Any operating system that accesses hardware directly fails on the DOS Compatibility Card. Windows NT, Windows for Workgroups**, and OS/2 fall into this category, so they do not work.

*NOTE: Although Windows 95 is compatible with Apple's DOS Compatibility Card, it is supported by Microsoft, not by Apple.

**NOTE: Windows for Workgroups works in a limited fashion on the DOS Compatibility Card, however Apple does not support this operating system on the DOS Compatibility Card.

Question: What kind of memory does the DOS Compatibility Card use?

Answer: The DOS Compatibility Card has a slot for one SIMM. It can be filled with a 72-pin, 80 nanosecond, non-Composite SIMM. The DOS Compatibility Card can accommodate up to 32 MB of RAM.

Question: How do I install the DOS mouse driver on my DOS compatible?

Answer: The following information has not been fully tested by Apple, so this method is not supported by Apple Computer.

You can install a DOS mouse driver by inserting Windows disk #4 into the floppy drive and typing the following at the c:\> prompt:

```
EXPAND A:MOUSEHP.CO_ C:\WINDOWS\MOUSEHP.COM <RETURN>
```

Then add the following line to the end of your AUTOEXEC.BAT file:

```
MOUSEHP
```

Question: Can I use a third-party CD-ROM drive with my DOS Compatibility Card?

Answer: Some third-party drives work and others do not, depending on the software provided by the vendor. You should call the vendor of any peripheral you plan on purchasing to verify compatibility with your other products.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 18

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Apr 1997 - Removed reference to a specific line service.

..TIL17897-DOS_Compatible_Products-Frequently_Asked_Questions_4-97_(TA33858).pdf

02 Jul 1996 - Added Fax Doc word

01 Apr 1996 - Added information about compatibility with Windows 95.

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Tech Info Library Article Number:17897



Tech Info Library

MacTest Pro 1.2 and Power Macintosh Upgrade (6/95)

Revised: 6/8/95
Security: Everyone

MacTest Pro 1.2 and Power Macintosh Upgrade (6/95)

=====

Article Created: 8 June 1995

TOPIC -----

This article describes using MacTest Pro 1.2 with both the Power Macintosh Upgrade Card and the Macintosh Processor Upgrade Card.

DISCUSSION -----

When testing the Power Macintosh Upgrade Card (PDS upgrade M2843LL/A) with MacTest Pro, the Card must be turned off.

When testing the Macintosh Processor Upgrade Card (M3397LL/A) with MacTest Pro, the proper enabler must be installed and the card must be on.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17899



Tech Info Library

MAE & Solaris 2.4 and Later: Mounting Mac CD-ROM Discs (1/97)

Revised: 1/8/97
Security: Everyone

MAE & Solaris 2.4 and Later: Mounting Mac CD-ROM Discs (1/97)

Article Created: 8 June 1995
Article Reviewed/Updated: 8 January 1997

TOPIC -----

When running Solaris 2.3, I was able to edit my macdisk.solaris preference file and mount my Macintosh formatted CD-ROM discs and floppies without difficulty. However, since upgrading to Solaris 2.4, I am not able to mount my Macintosh formatted CD-ROM discs and floppies, even though my macdisk.solaris file is set the same way. What is the problem?

DISCUSSION -----

To have CD-ROM discs mount in MAE while running Solaris 2.4 and later (this occurs with Solaris 2.5 also), follow these steps:

Step 1 - (For Solaris 2.4 Only)

Verify that Volume Manager patch 101907-05 has been loaded. Sun recommends this patch when using the Volume Manager. The following UNIX command lists all installed patches:

```
/etc/showrev -p
```

Step 2

Under Solaris 2.4 and later, modify the macdisk.solaris file in this manner (scsi6 should be replaced with the correct SCSI ID# of the CD Drive):

```
scsi6:removable:ro:/vol/dev/aliases/cdrom0
```

NOTE: After inserting a CD-ROM disc, wait 10 seconds before attempting to mount it in MAE. The Volume Manager must first create an entry in aliases for cdrom0 before MAE can read the alias directory.

NOTE: MAE will only mount MachFS CD-ROM discs. If it is a UNIX or ISO formatted

CD-ROM, you will need to navigate to the /cdrom directory to see the CD-ROM.

This article was published in the "Information Alley":
Volume II, Issue 11, Page 19

Step 3

Relaunch MAE and you will be able to access CD-ROM discs.

Article Change History:

08 Jan 1997 - Made correction for technical accuracy.

30 Jul 1996 - Added step 3.

28 May 1996 - Edited article for clarity.

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Tech Info Library Article Number:17900



Tech Info Library

LW Bridge 2.0: LocalTalk Printing For Ethernet Users Only-6/95

Revised: 6/8/95
Security: Everyone

LW Bridge 2.0: LocalTalk Printing For Ethernet Users Only-6/95

=====

Article Created: 8 June 1995

TOPIC -----

I've loaded the LaserWriter Bridge 2.0 software on a computer connecting the LocalTalk to Ethernet segments of my network. Users on the LocalTalk segment can see the printers on LocalTalk in the Chooser, but they cannot see printers on Ethernet in the Chooser. All of the Ethernet users can access the LocalTalk printers.

Shouldn't the LaserWriter Bridge 2.0 software let my LocalTalk users print to LaserWriters on the Ethernet segment of the network?

DISCUSSION -----

The LaserWriter Bridge 2.0 software is designed to let Ethernet users print to LocalTalk connected printers only.

If you are interested in having LocalTalk access to network services on an Ethernet segment, use the LocalTalk Bridge 2.0 product. This product provides full connectivity in both directions.

Support Information Services

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Tech Info Library Article Number:17901



Tech Info Library

Power Macintosh 9500 120 & 132: Technical Specifications (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh 9500 120 & 132: Technical Specifications (9/96)

=====

Article Created: 8 June 1995
Article Change History: 19 September 1996

TOPIC -----

This article gives the technical specifications for the Power Macintosh 9500 Series of computers.

DISCUSSION -----

Upgradable Microprocessor

- PowerPC 604 RISC microprocessor running at 132 MHz*
(*Only available on the Power Macintosh 9500/132.)
- PowerPC 604 RISC microprocessor running at 120 MHz*
(*Only available on the Power Macintosh 9500/120.)
- Processor upgradable to 250 MHz
- Integrated floating-point unit and 32K cache
- 40 MHz system bus for 120 MHz configurations
- 44 MHz system bus for 132 MHz configurations

Memory

- 16 MB of RAM standard, expandable to 768 MB of RAM
(Note: There is no RAM soldered to the logic board. There are a total of 12 DIMM slots; consisting of six A slots and six B slots. Configuration of memory installed at the factory will vary by market.)
- Uses 168-pin, 64-bit, 70ns DRAM DIMMs
- 4 MB of read-only memory (ROM)
- 8 K of nonvolatile parameter memory
- 512K Level 2 cache (soldered to the logic board, not upgradeable)

Disk Drives

- Includes one built-in Apple SuperDrive 1.4 MB floppy disk drive that uses high-density floppy disks and reads, writes, and formats Macintosh,

Windows, MS-DOS, OS/2, and ProDOS disks

- Includes one internal SCSI hard disk (1 GB and 2 GB options available)
- Includes one AppleCD 600i quadruple-speed

Optional Display Support (using accelerated graphics card)

-
- All Apple displays, except the Macintosh 12-in. RGB display***
 - Third-party displays including VGA and SVGA monitors
(Only available on the Power Macintosh 9500/120.*)

Video Support (using accelerated graphics card)

-
- 2MB of VRAM, expandable to 4MB
(Only available on the Power Macintosh 9500/120.*)

Begin_Table

Color depth support for the Power Macintosh 9500/120

	Power Macintosh 9500/120* with 2 MB VRAM -----	Power Macintosh 9500/120** with 4 MB VRAM -----
Display Resolution -----		
640x480	16.7 million colors	16.7 million colors
832x624	16.7 million colors	16.7 million colors
1,024x768	32,768 colors	16.7 million colors
1,152x870	32,768 colors	16.7 million colors
1,280x1,024	256 colors	32,768 colors

End_Table

*With Apple Accelerated Graphics Card

**With Apple Accelerated Graphics Card and 2 MB VRAM upgrade card

***The Macintosh 12-inch RGB display cannot be used with the Power Macintosh 9500 series. NOTE: This monitor is incorrectly listed as compatible in the booklet included with each unit titled "Technical Information: Specifications for Power Macintosh 9500 series computers."

Interfaces

-
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other ADB device; supports up to 3 ADB input devices daisy-chained through a low-speed, synchronous serial bus
 - One 10Base-T Ethernet connector (NOTE: If both 10BASE-T and AAUI connectors are plugged in, the computer uses the 10BASE-T connector)

by default.)

- One AAUI-15 Ethernet connector
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables, 230.4 Kbits per second maximum (up to 2.048 Mbits per second if clocked externally).
- One Dual-channel asynchronous SCSI interface: external channel supports up to seven SCSI devices (5 MB/sec); internal channel supports a hard disk array (10 MB/sec). There are three internal bays for SCSI devices (and one for the floppy drive).
- One sound output port for stereo compact disc audio and stereo computer-generated sound.
- One 3.5mm, line-level sound input port for 16 bit stereo sound input. The sound input port supports the Apple PlainTalk microphone. The sound input port also supports a standard stereo (miniplug-to-RCA) cable adapter for connecting stereo equipment to your computer. It does not support the omnidirectional microphone (the round microphone shipped with some earlier models of Macintosh computers) or the attenuated RCA adapter provided with some other Macintosh computers.
- One DB-15 video port for display on optional accelerated graphics card* (*This option is available on the Power Macintosh 9500/120 only.)
- Six high-performance PCI expansion slots compatible with all PCI 2.0 specification-compliant cards* (*These slots are not NuBus-compatible)

Audio System

-
- Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC) -- capable of driving stereo miniplug headphones or audio equipment -- and stereo sampling hardware (analog-to digital converter, or ADC) for recording stereo sound
 - 16-bit stereo input and output
 - Sample rates of 44.1 and 22.05 kilohertz (kHz)
 - Input line level: 2.8 volts peak-to-peak nominal, into 6.5-kohm impedance
 - Output line level: 3.0 Vpp (volts peak-to-peak nominal), into 1-kohm impedance
 - Input SNR (signal-to-noise ratio): less than 74 decibels (dB)
 - non-weighted with no audible discrete tones
 - Output SNR: less than 82 dB non-weighted with no audible discrete tones
 - Bandwidth/Frequency Response: 20 Hz-17 kHz (+/- 0.8 dB) at 44.100 kHz sample rate; 20 Hz-19 kHz (+/- 2.0 dB) at 44.100 kHz sample rate
 - THD+N (Total harmonic distortion plus noise): Less than 0.05 percent; measured 20 Hz-20kHz with a 2.5 Vpp sine wave input

Networking

-
- Built-in Ethernet (10Base-T or AAUI-15)
 - Two serial ports for LocalTalk, external modem, or other devices

Keyboard and Mouse

-
- Supports all Apple ADB keyboards, including those with numeric keypads
 - Includes ADB Mouse II

Clock/Calendar

- CMOS custom integrated circuit with long-life lithium battery

Electrical Requirements

- AC Line Input
 - Line voltage: 100 to 240 volts (V) alternating current (AC), RMS single phase, automatically configured
 - Frequency: 50 to 60 Hz
 - Power: 340 watts (W) maximum continuous (not including display); 520 W peak input
- AC Line Output
 - Output receptacle: 100-120 V, 3 A AC, 220-240 V, 1.5 A AC RMS (determined by actual input voltage); 3 A maximum at 100 V
- DC Power
 - Continuous output: 225 W
 - Peak output (for 12 seconds at startup): 328 W

Begin_Table

Current Type	Total*
+5 V	35 A**
+12 V	5 A
+3.3 V	20 A**
-12 V	0.75 A

End_Table

*Overall system power consumption cannot exceed 225 watts.

**Total for +3.3 and +5 V current cannot exceed 35 A.

Power Requirements For Devices Which Can Be Connected

- Apple Desktop Bus (ADB)
 - Mouse draws 10 milliamperes (mA)
 - Keyboard draws 25 to 80 mA (varies with keyboard model used)
 - Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is supported)
- Audio and Telecommunications Devices

Begin_Table

- Power allowances for external devices connected to ports:

Device	Voltage	Current	Power
Microphone	+5V	20 mA	100 mW
Serial ports/Geoport			

telecom adapter	+5V	500 mA	2.5 W
-----------------	-----	--------	-------

- Expansion Cards and Devices:

Device	Voltage	Current	Power
-----	-----	-----	-----
Expansion Card (15 W)*	+5 V	3 A	15 W
	+12 V	0.500 A	6 W
	-12 V	0.100 A	1.2 W
	+3.3 V	2 A	6.6 W
Expansion Card (25 W)*	+5 V	5 A	25 W
	+12 V	0.500 A	6 W
	-12 V	0.100 A	1.2 W
	+3.3 V	2 A	6.6 W
Storage Device (such as CD-ROM drive)	+5 V	9 A	45 W
	+12 V	3 A	36 W
	+12 V	7.5 A peak***	

End_Table

*15-watt expansion cards should not consume more than 15 W of power total.

**25-watt expansion cards shouldn't consume more than 25 W of power total.

***Peak power is for startup only and must not occur in normal operation.

Size and weight

- Main Unit
 - Height: 16.90 inches (430 mm)
 - Width: 7.75 inches (196 mm)
 - Depth: 15.75 inches (400 mm)
 - Weight: 28 lb. (12.7 kg) (varies based on internal devices installed)
- Mouse
 - Height: 1.3 inches (33 mm)
 - Width: 2.4 inches (61 mm)
 - Depth: 4.2 inches (107 mm)
 - Weight: 4 ounces (0.11 kg)

Operating environment

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116.6 degrees F
(-40 degrees to 47 degrees C)
- Relative humidity: 5 percent to 95 percent noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

System Software Requirements

Requires System 7.5.2 for Power Macintosh or later and the accompanying System Enabler.

(Optional) 600i CD-ROM Drive Specifications

NOTE:

The Technical Specifications Booklet that comes with the Power Macintosh 9500 series computers lists the CD-ROM Drive as optional. However, every Power Macintosh 9500 Series computer does come with an internal CD-ROM drive. In other words, it is not optional.

- Supports a 3.5-inch half-height removable media device and two 3.5-inch half-height hard disk drives

- Disc diameter: 5.25 inches (120 mm) and 80 mm

- Scanning velocity: 1.2-1.4 meters per second

- Rotation speed (average): Varies over radius

Normal speed: 530 to 230 revolutions per minute (rpm)

Double speed: 1060 to 460 rpm

Quadruple speed: 2120 to 920 rpm

- Latency (average): Varies over radius

Normal speed: 55 to 130 milliseconds (ms)

Double speed: 27.5 to 65 ms

Quadruple speed: 13.75 to 32.5 ms

- Blocks per rotation (average): 8.4 to 19.5 variable

- Average access time (typical):

Normal speed: 380 ms

Double speed: 270 ms

Quadruple speed: 200 ms

- Data

- Data capacity: 656 MB, Mode 1; 748 MB Mode 2

- Number of blocks per disc: 336,150

- Data per block: 2048 bytes, Mode 1; 2336 bytes, Mode 2

- Address description: Minutes, seconds, blocks

- Audio capacity

- Playing time: 74 minutes, 42 seconds

- Modes Supported

- Audio CD:

- CD-ROM: Modes 1 and 2

- CD-ROM XA: Mode 2, Forms 1 and 2

- Photo CD

- Video CD

- Data Streaming and Transfer Rates

- Blocks per second

Normal speed: 75

Double speed: 150

Quadruple speed: 300

- User kilobytes (K) per second

Normal speed: 150K, Mode 1; 171.1K, Mode 2

Double speed: 300K, Mode 1; 342.2K, Mode 2

Quadruple speed: 600K, Mode 1; 684.4K, Mode 2

- SCSI bus burst rate (typical)

- Asynchronous: 5.0 MB per second

- Synchronous: 5.0 MB per second

- Laser

- Type: Semiconductor GaAlAs laser

- Wavelength: 790 +/- 25 nanometers

- Output power: 0.2 to 0.6 milliwatts
- Beam divergence: 55 degrees

Article Change History:

19 Sep 1996 - Revised speed of processor card support.

25 Jul 1996 - Modified title.

16 Oct 1995 - Removed keyword.

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Tech Info Library Article Number:17902



Tech Info Library

Power Macintosh 9500 120 & 132: Description (4/97)

Revised: 4/29/97
Security: Everyone

Power Macintosh 9500 120 & 132: Description (4/97)

Article Created: 8 June 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article contains a description of the Power Macintosh 9500 series of computers.

DISCUSSION -----

Overview

The Apple Power Macintosh 9500 computers set new Macintosh speed, performance, expandability, and upgradability standards, which is tremendous news for publishers, engineers, and multimedia professionals.

Choose from the Power Macintosh 9500/120 or the Power Macintosh 9500/132, the fastest Macintosh computer ever. With six slots each that support the industry-standard high-performance PCI architecture, they are the most customizable, expandable Macintosh computers in history. And PCI technology promises low-cost cards for such uses as videoconferencing, video production, and high-speed networking.

Built with the ultra-high-speed, high-efficiency PowerPC 604 processor chips, which run at 120 or 132 megahertz, they will be able to perform faster than ever. That is because they are upgradable, so as faster processors become available, you will have the opportunity to easily upgrade your computer.

The Power Macintosh 9500 series of computers run virtually all Macintosh applications, as well as applications accelerated for Power Macintosh computers. They can also run MS-DOS and Windows applications using SoftWindows software, available from Insignia Systems.

With its accelerated graphics card, the Power Macintosh 9500/120 computer supports all Apple and most third-party displays, including monochrome, color, VGA, and SVGA displays. It supports up to 16.7 million colors on Apple color

displays of up to 17 inches. With the addition of 2 megabytes of VRAM (for a total of 4 megabytes), the 9500/120 supports 16.7 million colors on displays of up to 21 inches.*

The Power Macintosh 9500 computers are designed to meet the most demanding power, speed, and expandability requirements of publishing, engineering, and multimedia customers.

*IMPORTANT NOTE: The Power Macintosh 9500/132 requires a third-party (non-Apple) graphics accelerator for display support.

Power and speed

- 120-MHz or 132-MHz PowerPC 604 microprocessor, including floating-point processor and 32K cache
- 512K Level 2 cache
- Processor upgradability to 250 MHz

Memory

- 16 MB of RAM, expandable to 768MB

Display support

- Graphics accelerator card includes 2MB of VRAM, expandable to 4MB (for the Power Macintosh 9500/120 only)
- Supports up to 1,280- by 1,024-pixel resolution

Expansion

- Six PCI slots for expansion cards
- Eight built-in ports to support a wide range of peripherals
- Dual-channel SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- Two open internal expansion bays for additional hard disk drives or other SCSI devices
- On-board Ethernet (10Base-T and AAUI)
- Internal quadruple-speed CD-ROM drive and microphone included

System Software 7.5

- Makes working with applications consistent, so they are easier to learn and use
- Allows easy customization of your Macintosh to fit the way you work
- Provides active assistance in learning new features with Apple Guide
- Lets you open and use MS-DOS and Windows documents

Communications/Networking

- Two serial ports compatible with GeoPort and LocalTalk cables
- 16-bit stereo audio input and output ports

- Built-in Ethernet networking
- Background file sharing

Compatibility

- Runs 68K Macintosh applications and applications accelerated for Power Macintosh computers
- Runs MS-DOS and Windows applications via SoftWindows
- Reads Macintosh, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats

What Is In The Box:

Each Power Macintosh 9500 series unit includes a power cord, keyboard cable, Apple Desktop Bus Mouse II, PlainTalk microphone, and an Apple Macintosh CD.

The Apple Macintosh CD includes the following:

- Install System Software
 - System Software 7.5.2, including PowerTalk and QuickDraw GX
- Apple Extras
 - Universal Access: CloseView and Easy Access control panels
 - Expansion Card Info
 - AppleScript
 - HyperCard Player 2.2
 - QuickTime Extras
 - PowerTalk Extras
 - Text-to-Speech
 - QuickDraw GX Extras
 - Eric's Solitaire Sampler
 - Acrobat Reader 2.0.1
- Utilities:
 - Drive setup 1.0
 - Disk First Aid 7.2.1
 - Disk Copy 4.2
 - SimpleText 1.2
- Install Macintosh Tutorial
- Disk Images
 - Disk Copy 4.2
 - System Software
 - PowerTalk
 - QuickDraw GX

Documentation included with the Power Macintosh 9500 series of computers:

- Power Macintosh User's Guide manual
- Technical Information booklet
- Graphics Card Upgrade, PCI Products brochures
- Apple Resource Guide
- Product Registration Card
- Warranty Card

Configurations and Ordering Information

- Power Macintosh 9500/132*

- 16MB of RAM
 - Built-in 1.4 MB Apple SuperDrive floppy disk drive
 - Internal 2GB hard disk drive
 - Internal quadruple-speed CD-ROM drive
 - Order No. M4423LL/A
- Power Macintosh 9500/120*
 - 16MB of RAM
 - 2MB of VRAM on the Apple Accelerated Graphics Card
 - Built-in 1.4MB Apple SuperDrive floppy disk drive
 - Internal quadruple-speed CD-ROM drive
 - Internal 1GB hard disk drive
 - Order No. M3093LL/A
- Power Macintosh GeoPort
 - Order No. M3127LL/A
- Macintosh Memory Expansion Kits
 - (Must be installed by an authorized service provider.)
 - 8MB (1-8MB DRAM DIMM)
Order No. M3788LL/A
 - 16MB (1-16MB DRAM DIMM)
Order No. M3789LL/A

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 4

Article Change History:

28 Apr 1997 - Removed out dated on line references.
19 Sep 1996 - Revised processor card support.
25 Jul 1996 - Modified title.

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Tech Info Library Article Number:17903



Tech Info Library

LocalTalk Bridge 2.0: Apple MessagePad Connectivity (6/95)

Revised: 6/8/95
Security: Everyone

LocalTalk Bridge 2.0: Apple MessagePad Connectivity (6/95)

=====

Article Created: 8 June 1995

TOPIC -----

I've got an Apple MessagePad which has built in LocalTalk, and an Ethernet network in my office. How can I get my Apple MessagePad to work with Ethernet devices?

DISCUSSION -----

Apple MessagePad users often want to print to Ethernet printers or access the Connection kit on Macintosh computers on Ethernet.

The LocalTalk Bridge 2.0 should work in your situation. This software will allow devices on LocalTalk (including the Apple MessagePad) to see Ethernet devices (like LaserWriter printers or Macintosh computers running the Newton Connection kit).

Remember to set you Newton Connection Kit preferences to "allow connection via network" and do not configure "allow connection via serial port to use the printer port".

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17904



Tech Info Library

LaserWriter Bridge 1.0 Functions as a LocalTalk Bridge (6/95)

Revised: 6/8/95
Security: Everyone

LaserWriter Bridge 1.0 Functions as a LocalTalk Bridge (6/95)

=====

Article Created: 8 June 1995

TOPIC -----

Does the LaserWriter Bridge 1.0 do more than just bridge one LaserWriter? Customers sometimes say they are using it to bridge PowerBook computers, Apple MessagePads, and so on.

DISCUSSION -----

Testing indicates that the LaserWriter Bridge 1.0 functions as a full LocalTalk bridge, however bridging occurs for only the first device the bridge recognizes. Use of the LaserWriter Bridge 1.0 for anything other than a LocalTalk network with one LaserWriter Select 360 is not supported.

Testing indicates that MicroPrint hardware functions as a full LocalTalk bridge as well. Again, Apple supports the MicroPrint for use with only the LaserWriter Select 360, although Sonic's documentation indicates that it works with all printers.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

Support Information Services

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Tech Info Library Article Number:17905



Tech Info Library

Macintosh Easy Open: MS Word Not Showing In List (7/95)

Revised: 7/27/95
Security: Everyone

Macintosh Easy Open: MS Word Not Showing In List (7/95)

Article Created: 8 June 1995
Article Reviewed/Updated 27 July 1995

TOPIC -----

I am having problems opening MS-DOS document files on a Novell Server using AppleShare and Macintosh Easy Open. All of the files I am trying to open are text files, and when I double-click on the documents, the Macintosh Easy Open dialog appears. However, the list in the dialog box does not include Microsoft Word. Microsoft Excel is listed, and I can open the documents with Microsoft Excel through the Macintosh Easy Open dialog, or by dragging and dropping the files on Microsoft Word. Why is Microsoft Word not a choice in the Macintosh Easy Open dialog?

DISCUSSION -----

In testing this problem, I installed Microsoft Word on a PowerBook 520c and a Performa 636. Microsoft Word would show up in the Macintosh Easy Open list when trying to open 'TEXT' files. However, when I rebuilt the desktop, Word was no longer in the list of applications. I deleted Word, rebuilt the desktop and reinstalled Word. Word appeared in the list of applications again. The installer for Word adds the information it wants to the desktop database which is why Word appears in the application list. However, when the desktop is rebuilt, Macintosh Easy Open adds additional information and Word no longer appears in the list.

The reason Translation Manager (Macintosh Easy Open) behaves like this is because it only uses the 'FREF' resources if the application does not have an 'open' resource. Macintosh Easy Open uses two new resources. These are the 'open' and 'kind' resources.

The 'open' resource is supposed to contain a list of file types that the application can open without any external help, like MacLinkPlus. Another purpose of the 'open' resource is to allow an application to have custom icons for files that it does not want the user to open and prevents the Finder from launching the application when the user tries to open one of these documents.

For example, an application can have a settings file with a custom icon by putting the type of the settings file in the 'FREF' and 'BNDL' resources but by not putting the type in the 'open' resource, the Finder does not launch the application if the user tries to open the settings file.

The 'kind' resource contains kind strings the Finder displays. For example, the kind string for a read only SimpleText document is "SimpleText read-only document."

Some applications have a 'FREF' resource for files of type '*****'. This is wildcard file type and means any file can be dropped on the application. However, in the 'open' resource, Macintosh Easy Open treats this as a file type and not a wild card type. Microsoft Word's 'open' resource only contains the '*****' file type. For example, when attempting to open a file with a creator type of '*****', Word shows up in the Macintosh Easy Open application list. However, when attempting to open a file with a creator type of 'ZZZZ', Microsoft Word was not in the list of applications.

According to the Macintosh Easy Open engineer, having only '*****' in the 'open' resource is a mistake. However, the Translation Manager documentation does not indicate if '*****' is a valid file type; there is no mention of wild card file types. Wild card file types are described in the Finder Interface documentation.

It appears Microsoft thought that by putting the wild card file type in the 'open' resource, Word would show up in the list no matter what file the user was trying to open. However, Macintosh Easy Open does not support wild card file types. Other applications have the '*****' type in the 'open' resource but they also have other types as well. Microsoft Word seems to be the only application that has only the '*****' type in the 'open' resource. Please contact Microsoft at (206) 454-2030 for additional help with this problem.

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Volume II, Issue 7, Page 14

Article Change History:
27 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17906



Tech Info Library

Global Village Modems: Frequently Asked Questions (4/97)

Revised: 4/3/97
Security: Everyone

Global Village Modems: Frequently Asked Questions (4/97)

=====

Article Created: 8 June 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Global Village modems, which are bundled with Macintosh Performa computers.

Questions In This FAQ:
=====

- 1) Did my Macintosh Performa computer come with software that lets me connect to a local bulletin board system (BBS)?
- 2) I have a TelePort Bronze modem, and it does not appear to receive faxes. What should I do?
- 3) Can I upgrade my TelePort Bronze to a faster modem?
- 4) Where can I obtain the Global Village 2.5 upgrade, and what does it do?
- 5) I am having trouble connecting to my internet service provider with my PPP and SLIP utilities. How can I correct this?
- 6) I bought a new fax modem, and I get an error message stating the serial port is in use whenever I try to use America Online or try to fax. What should I do?
- 7) I would like to receive faxes, but do not want to leave the computer on. Can I do this?
- 8) Question: I want to use my Global Village modem with SoftWindows. Can I do this?

DISCUSSION -----

- 1) Question: Did my Macintosh Performa computer come with software that lets me

connect to a local bulletin board system (BBS)?

Answer: All Performa computers come with a "Works" style package, such as ClarisWorks, Microsoft Works, Symantec Greatworks, or WordPerfect Works. These applications include a terminal emulator, usually under the heading of "communications". They let you use your Macintosh computer as a terminal. See your "Works" documentation for more information. There are also many software packages available commercially and as shareware on online services, such as CompuServe and America Online as well as Internet Web sites such as <<http://shareware.com/>>

2) Question: I have a TelePort Bronze modem, and it does not appear to receive faxes. What should I do?

Answer: Your modem is capable of receiving faxes, but your computer must be equipped with software that can support this capability. Your computer currently comes with a "send only" capability. The "receive" fax capability is sold and supported directly by Global Village. Please contact their sales department at 800-736-4821 for sales and additional information on this product.

NOTE: All Macintosh Performa 6100 series computers, the Performa 637, and the Performa 560 come with a "receive" capability as part of the software bundle. The following computers are in the Macintosh Performa 6100 series: Performa 6110, Performa 6112, Performa 6115, Performa 6117, and Performa 6118.

3) Question: Can I upgrade my TelePort Bronze to a faster modem?

Answer: Global Village offers an upgrade program for Performa customers. For more details, call their sales number at 800-736-4821.

4) Question: Where can I obtain the Global Village 2.5 upgrade, and what does it do?

Answer: Global Village sells this upgrade directly to their customers for a nominal fee. You need to call their sales number at 800-736-4821 for pricing and specifications.

5) Question: I am having trouble connecting to my internet service provider with my PPP and SLIP utilities. How can I correct this?

Answer: If the modem works in other respects, such as connecting to online services, BBSs, or as a fax modem, then the difficulty is likely caused by the configuration of the Internet software. You should contact your internet service provider for support in configuring the software.

6) Question: I bought a new fax modem, and I get an error message stating the serial port is in use whenever I try to use America Online or try to fax. What should I do?

Answer: The modem port can only be in use by one application at a time, so you need to make sure that no other program (such as America Online) is currently running. If the problem persists, the old fax software may be conflicting with your new software. To correct this, you should remove the old fax software and restart.

- If you have a Global Village TelePort Bronze, the old software is stored here:

- System Folder: Apple Menu Items: Fax Center
- System Folder: Extensions: GlobalFax
- System Folder: Control Panels: TelePort/Bronze (called "Fax Modem" on some computers)
- System Folder: GlobalFax Files
- System Folder: GlobalFax Personal

- If you have a Global Village TelePort Gold II, the software is stored here:

- System Folder: Apple Menu Items: Fax Center
- System Folder: Control Panels: TelePort Serial
- System Folder: Extensions: Global Village Toolbox
- System Folder: Extensions: GlobalFax
- System Folder: GlobalFax Files
- System Folder: GlobalFax Personal

NOTE: "GlobalFax Files" contains any faxes you may have sent with the Global Village modem. You may wish to retain that folder, and Fax Center, so you can review any messages you may have sent if necessary.

If you move all of the above files to a single folder, they are "de-activated" by the system software after you restart. There is no need to throw them away, unless you want to reclaim the hard disk space. If you throw them away, make sure you have made a backup of the software or your System Folder. If this does not solve the problem, it could be a configuration issue with your third-party software, and you should contact the manufacturer for support.

7) Question: I would like to receive faxes, but do not want to leave the computer on. Can I do this?

Answer: No. The computer must be on and the fax software must be loaded in order to receive faxes.

8) Question: I want to use my Global Village modem with SoftWindows. Can I do this?

Answer: The modem itself works with SoftWindows or the DOS Compatibility Card. In fact, the hardware works on any type of computer you can physically connect the modem to. However, the Global Village software does not work under MS-DOS/Windows. If you want to use the modem on some other type of modem other than a Macintosh computer, you need to use different software.

This article was published in the "Information Alley":

Volume II, Issue 7, Page 17

Article Change History:

02 Apr 1997 - Removed specific online references.

05 Aug 1996 - Added keyword.

27 Jun 1996 - Added question number nine.

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Tech Info Library Article Number:17907



Tech Info Library

Apple MessagePad: Different Types of Reset (7/95)

Revised: 7/19/95
Security: Everyone

Apple MessagePad: Different Types of Reset (7/95)

Article Created: 8 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

What are the different types of reset on the Apple MessagePad?

DISCUSSION -----

There are four types of reset on the Apple MessagePad; Soft Reset, Power Reset, Hard Reset, and Cold Boot. Instructions for performing all four types of resets are included below.

Soft Reset
=====

A Soft Reset resets the Newton OS. It does NOT erase any data or handwriting training on the Apple MessagePad. However, you should check the Time in the Date and Time Prefs preferences file. The clock in the Apple MessagePad may lose some time when you press the Reset button.

Step 1
Press and release the Reset button in the battery compartment for two seconds.

Step 2
If the Apple MessagePad is on, it restarts itself. If the MessagePad is off, it turns itself on.

Power Reset
=====

A Power Reset resets the Newton OS and the Power Manager. No user data, Preferences, or handwriting training is erased.

Step 1

Press and hold down the Reset button in the battery compartment.

Step 2

Continue holding the Reset button and pull down on the power switch. Continue holding the Reset button down for 2 more seconds.

Step 3

Release the Reset button, and continue holding the power switch down until a dialog box appears asking: "Do you want to erase data completely?"

Step 4

Tap on the "No" button.

Hard Reset

=====

A Hard Reset erases all data in the internal memory. Pen alignment is required the next time you use your Apple MessagePad. In addition to pen alignment, the Time Zone, Date, Time, and Prefs need to be set up. Any System Update installed is NOT erased.

WARNING: You should backup your data prior to a Hard Reset.

Step 1

Remove any PCMCIA storage card that may be in the MessagePad.

Step 2

Press and hold down the Reset button in the battery compartment.

Step 3

Continue holding the Reset button and pull down on the power switch. Continue holding the Reset button down for 2 seconds.

Step 4

Release the Reset button, and continue holding the power switch down until a dialog box appears asking: "Do you want to erase data completely?"

Step 5

Tap on the "Yes" button when it asks to erase data. This erases all user data in the internal memory and sets the Newton OS back to factory defaults.

Cold Boot

=====

A Cold Boot erases all data, any System Update installed, and sets the Newton OS back to factory defaults. There are two methods to do this.

WARNING: You should backup your data prior to a Cold Boot.

Method 1

Step 1

Disconnect any AC power.

Step 2

Remove the main batteries.

Step 3

Remove the round Lithium backup battery.

Step 4

Hold the power switch down for 5 seconds.

Step 5

Release the power switch.

Step 6

Repeat steps 4 and 5 four more times.

Method 2

Step 1

Disconnect any AC power.

Step 2

Remove the main batteries.

Step 3

Remove the round Lithium backup battery.

Step 4

Let the Apple MessagePad sit this way for 15 minutes.

NOTES:

- On a MessagePad 120: No data is erased since data is stored in the internal non-volatile Flash RAM.
- On the MessagePad 120, a Cold Boot resets the Power Manager. Pen alignment is required on the next use.
- The Time Zone, Date, Time, and Prefs need to be set up.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 8

Article Change History:

19 Jul 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17908



Tech Info Library

Power Macintosh 9500 Series Video Card:Max. Color Depths (11/96)

Revised: 11/22/96
Security: Everyone

Power Macintosh 9500 Series Video Card:Max. Color Depths (11/96)

=====

Article Created: 8 June 1995
Article Reviewed/Updated: 22 November 1996

TOPIC -----

Some Power Macintosh 9500 series computers include an accelerated display card based on the mach64 graphics accelerator from ATI Technologies, Inc. Higher color depths can be obtained in high resolution modes by upgrading from 2 MB to 4 MB with a 2 MB VRAM upgrade module.

DISCUSSION -----

The following table defines the maximum color depths available for a given resolution and memory size.

Begin_Table

	Resolution	Max Colors 2 MB VRAM*	Max Colors 4 MB VRAM*
	-----	-----	-----
12-in. Monochrome	640x480	256	256
12-in. RGB**	--	--	--
13-in. Color	640x480	Millions	Millions
15" Portrait monochrome	640x870	256	256
16-in. Color	832x624	Millions	Millions
Multiple Scan 15	640x480	Millions	Millions
	832x624	Millions	Millions
Multiple Scan 17	640x480	Millions	Millions
	832x624	Millions	Millions

	1024x768	Thousands	Millions
19-in. RGB	1024x768	Thousands	Millions
Two-Page Monochrome Monitor (21-in.Mono)	1152x870	256 grays	256 grays
21-in. Color	1152x870	Thousands	Millions
Multiple Scan 20	640x480	Millions	Millions
	832x624	Millions	Millions
	1024x768	Thousands	Millions
	1152x870	Thousands	Millions
	1280x1024	256	Thousands
VGA	640x480	Millions	Millions
SVGA	800x600	Millions	Millions
VESA Standard Modes	800x600	Millions	Millions
	1024x768 60Hz	Thousands	Millions
	1024x768 70Hz	Thousands	Millions
	1280x1024 60Hz	256	Thousands
	1280x1024 75Hz	256	Thousands

End_Table

*256 = image depth of 8 bits, thousands = image depth of 16 bits,
millions = image depth of 32 bits.

**The Macintosh 12-in. RGB display cannot be used with the Power Macintosh 9500 series.

NOTE:

The "Technical Information: Specifications for Power Macintosh 9500 Series Computers" booklet that ships with the Power Macintosh 9500 contains some minor inaccuracies:

- The Macintosh 12-in. RGB display is incorrectly listed as compatible.
- The maximum color depth at 1280x1024 with 2 MB of VRAM is 256 colors.
- The maximum color depth at 1024x768 with 2 MB of VRAM is "Thousands."

IMPORTANT NOTE:

To order a VRAM memory module upgrade please call ATI Technologies, Inc. This upgrade is not available from Apple Computer, Inc. It is not supported or serviced by Apple Computer, Inc. At the time of this writing the 2 MB VRAM upgrade was ATI part number 100-31602-00. This information is subject to change. Please call the vendor for changes and details.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

22 Nov 1996 - Updated title

12 Dec 1995 - Added information on Two-Page Monochrome Monitor.

01 Sep 1995 - Corrected information about 1080x1024 resolution. Added section on booklet inaccuracies.

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Tech Info Library Article Number:17909



Tech Info Library

Turn Virtual Memory Off Message and RAM Doubler (6/95)

Revised: 6/28/95
Security: Everyone

Turn Virtual Memory Off Message and RAM Doubler (6/95)

=====

Article Created: 8 June 1995
Article Reviewed/Updated: 28 June 1995

TOPIC -----

When I launch some of my programs (The 7th Guest, and Myst for example) I'm shown a dialog box requesting me to turn virtual memory off. When I checked the Memory control panel, virtual memory is already off. What could be causing this?

DISCUSSION -----

Check to see if you are using RAM Doubler by Connectix. Many of the functions of RAM Doubler are similar to the way virtual memory operates. A temporary workaround is to remove RAM Doubler from your Extensions folder and restart. You should contact Connectix for further information about RAM Doubler.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
28 Jun 1995 - Made minor grammatical changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17910



Tech Info Library

Explicit and Inherit Access Privileges Defined (7/95)

Revised: 7/27/95
Security: Everyone

Explicit and Inherit Access Privileges Defined (7/95)

=====

Article Created: 9 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

I've seen explicit and inherit access privileges with AppleShare File Servers, what do these mean.

DISCUSSION -----

The terms explicit and inherit are commonly used when referring to access privileges with AppleShare File Servers. Here are definitions for explicit and inherit access privileges:

Explicit

Retain access privileges regardless of the enclosing folder.

Inherit

Always change to reflect access privileges of enclosing folder.

Defaults

The default on an AppleShare File Server is explicit access privileges. The default on Personal File Sharing is explicit access privileges.

This article was published in the "Information Alley":
Volume II, Issue 7, Page 6

Article Change History:
27 Jul 1995 - Updatd from Information Alley

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17911



Tech Info Library

Eidetic Newton Utilities: Brief Description (6/95)

Revised: 6/9/95
Security: Everyone

Eidetic Newton Utilities: Brief Description (6/95)

=====

Article Created: 9 June 1995

TOPIC -----

The following is a brief description of Eidetic Newton Utilities which is available on both Macintosh and Windows diskettes.

DISCUSSION -----

Eidetic Newton Utilities helps the user move information directly from the internal RAM to storage cards and back with the Software Manager. The user may also boost memory instantly with Memory Manager. It also provides users with Shortcuts.

Eidetic Newton Utilities is a StarCore product. Support for this software used with an Apple MessagePad is provided by the Apple Assurance Newton Support Group at 1-800-SOS-APPL (767-2775).

Support Information Services

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Tech Info Library Article Number:17912



Tech Info Library

Fodor's Europe: Brief Description (6/95)

Revised: 6/9/95
Security: Everyone

Fodor's Europe: Brief Description (6/95)

=====

Article Created: 9 June 1995

TOPIC -----

The following is a brief description of Fodor's Europe which is available on both Macintosh and Windows diskettes.

DISCUSSION -----

This software provides information on Top European Cities such as: viewing locations, restaurant and business information, and it also helps in planning routing while traveling.

Fodor's Europe is a product of GeoSystems, a Unit of R.R. Donnelley & Sons Company. Support for this software, when it is used with an Apple MessagePad, is provided by the Apple Assurance Newton Support Group at 1-800-SOS-APPL (767-2775).

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Tech Info Library Article Number:17913



Tech Info Library

Motile: Brief Description (6/95)

Revised: 6/12/95
Security: Everyone

Motile: Brief Description (6/95)

=====

Article Created: 9 June 1995
Article Reviewed/Updated: 12 June 1995

TOPIC -----

The following is a brief description of Motile software. This software is available on PCMCIA media, not on Macintosh or Windows diskettes.

DISCUSSION -----

Motile challenges you to manipulate an animated player through labyrinths in which you must scrub out and construct walls and avoid traps to direct the animated player to the end goal. It features 120 levels to keep you busy.

PCMCIA media Motile is a StarCore product. Support for this software when used with an Apple MessagePad is provided by the Apple Assurance Newton Support Group at 1-800-SOS-APPL (767-2775).

Article Change History:
12 Jun 1995 - Corrected name of product.

Support Information Services

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Tech Info Library Article Number:17914



Tech Info Library

Great Meetings: Brief Description (6/95)

Revised: 6/9/95
Security: Everyone

Great Meetings: Brief Description (6/95)

=====

Article Created: 9 June 1995

TOPIC -----

The following is a brief description of Great Meetings which is available on both Macintosh and Windows diskettes.

DISCUSSION -----

Great Meetings provides mobile executives with the tools to effectively improve the productivity of any meeting, including preparing agendas, setting time goals, recording notes, scheduling follow-up, preparing minutes and tracking action items using their Newton.

Great Meetings is a StarCore product. Support for this software, when it is used with an Apple MessagePad, is provided by the Apple Assurance Newton Support Group at 1-800-SOS-APPL (767-2775).

Support Information Services

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Tech Info Library Article Number:17915



Tech Info Library

Color LaserWriter 12/600 PS: New Windows Parallel Cable (12/95)

Revised: 12/14/95
Security: Everyone

Color LaserWriter 12/600 PS: New Windows Parallel Cable (12/95)

=====

Article Created: 9 June 1995
Article Reviewed/Updated: 14 December 1995

TOPIC -----

The Color LaserWriter 12/600 PS specification sheet lists a 1284 Parallel I/O cable (M4235M/A). Do I need this cable, or can I use a "standard" parallel cable? Also, how what is the length of this cable?

DISCUSSION -----

You cannot use the old style parallel cable. The parallel interface on the Color LaserWriter 12/600 PS controller side is new. The physical connector is different from the old style parallel port. The Color LaserWriter 12/600 PS uses a IEEE-1284 cable, this cable is not interchangeable with the older style parallel cables.

The old style parallel cables used a 1284-A style plug, which use a 1284-B connector. The Color LaserWriter 12/600 PS controller uses the newer 1284-C style connector. This new connector fully supports the 1284 ECP transfer mode (Fast mode), which is why Apple uses it.

There may be some third-party adapters that will allow you to convert the older 1284-B to the newer 1284-C connector. However, Apple will not support such a configuration.

The 1284 Parallel I/O cable (M4235M/A) is 10-feet in length, if you need longer length cables, you will need to find a third-party vendor who sells IEEE-1284 compliant cables.

This article was publised in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
14 Dec 1995 - Added length information.

19 Jul 1995 - Added Info Alley information; updated.

Support Information Services

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Tech Info Library Article Number:17916



Tech Info Library

Power Macintosh 9500 Series: Drive Setup Information (6/95)

Revised: 6/21/95
Security: Everyone

Power Macintosh 9500 Series: Drive Setup Information (6/95)

=====

Article Created: 9 June 1995
Article Reviewed/Updated: 21 June 1995

TOPIC -----

This article contains information on how Logical Unit Numbers (LUNs) are used in the Drive Setup software included on Power Macintosh 9500 series computers.

DISCUSSION -----

There are a number of columns on the setup window listing drive SCSI, BUS number, and one listing LUN .

LUN (Logical Unit Number)
=====

This column identifies the Logical Unit Number of the device on the bus. For SCSI this could range from 0 - 16. This column is undefined for IDE since IDE does not implement LUNs.

In SCSI each target ID may have 8 logical units which are LUNs. The range of SCSI target ids is 0-7 for all SCSI busses implemented in Macintosh hardware today. If a user has a third-party SCSI card installed which implements 'Wide SCSI' then the target ID range can be from 0 to 16.

Article Change History:
21 Jun 1995 - Reworded for clarification
20 Jun 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:17917



Tech Info Library

MacTCP: Not Installed or Disabled Error (6/95)

Revised: 6/9/95
Security: Everyone

MacTCP: Not Installed or Disabled Error (6/95)

=====

Article Created: 9 June 1995

TOPIC -----

Why does my application indicate MacTCP is not installed or disabled?

DISCUSSION -----

Many applications will report that MacTCP is not installed or that it has been disabled if the connection attempt via MacTCP fails. This could be due to a variety of reasons.

First verify that the network you are connected to supports MacTCP. Next, the configuration information for the MacTCP control panel should be verified with your TCP/IP network administrator or internet service provider. If PPP or SLIP is being used, you would also need to verify that those components are in working order. If all this has been verified and the error still occurs, you may want to try making a connection with another application like MacTCP Ping.

Support Information Services

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Tech Info Library Article Number:17920



Tech Info Library

MacX and Display Postscript (6/95)

Revised: 6/9/95
Security: Everyone

MacX and Display Postscript (6/95)

=====

Article Created: 9 June 1995

TOPIC -----

I'd like to use MacX on my Macintosh to do work on our various UNIX machines. Most systems seem to work, but I can't get certain programs from the Suns to work.

DISCUSSION -----

Solaris 2.3 has support for display postscript, and applications that use display postscript write directly to the screen bypassing the X windows interface in OpenLook. Because X windows is not used, the screens can not be drawn over the network onto a MacX window server. This is not a limitation of MacX, but of all X terminals, including Suns SPARCclassic X terminals which have the same behavior.

The manual, "Desktop SPARC: Using a SPARCclassic X Terminal", provides some examples of this restriction. They are the pageview application; the viewing of Postscript files from within File Manager and Mail Tool; and the usage of Solaris AnswerBook documentation and Help Viewer.

Support Information Services

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Tech Info Library Article Number:17922



Tech Info Library

Japanese Language Kit 1.2: Description and Specifications (6/95)

Revised: 6/16/95
Security: Everyone

Japanese Language Kit 1.2: Description and Specifications (6/95)

=====

Article Created: 12 June 1995

TOPIC -----

The Japanese Language Kit (JLK) 1.2 is the latest version of Apple software that allows users to display, input, edit and print Japanese documents on their Mac OS computer. The software is intended for Japanese language educators and students, multinational businesses, and bilingual home users.

The following article contains a description of JLK 1.2 and lists its hardware and software requirement specifications.

DISCUSSION -----

Overview

=====

The Apple Japanese Language Kit contains everything you need to easily add Japanese to your documents. The kit can be used with your Apple Macintosh computer to run Japanese applications and include Japanese text in letters, presentations, and reports. You can even work with files created using KanjiTalk, Apple's Japanese version of the Macintosh operating system.

Whether you are a desktop publisher or business professional, you can use the Language Kit to create materials such as brochures, posters, business cards, presentations, and restaurant menus in Japanese. Students and teachers can use it to run interactive Japanese-language programs and produce compelling term papers in Japanese. Although the Japanese Language Kit does not translate text, it does let you easily input, edit, and print in Japanese.

The Japanese Language Kit works as an extension to Mac OS software version 7.1 or later. It also allows you to run Japanese applications. Because the Language Kit uses the operating system you already have, there is no need to store an additional system on your hard disk. The Japanese Language Kit also contains Kotoeri, the same easy-to-use input method that is included with KanjiTalk.

Almost every major software program has a version that has been localized for Japanese. All you need to run them is the Japanese Language Kit and System 7.1 or later. You can even use nonlocalized programs that take advantage of WorldScript, such as Nisus Writer, WordPerfect, and WorldWrite. WorldScript simplifies the way in which a single operating system can support multiple languages.

The Japanese Language Kit comes with three Kanji TrueType fonts, that produce high-quality output from any Macintosh compatible printer. Documentation is provided in both Japanese and English, and you can type using either the roman or the kana keyboard layout. These features make the Language Kit easy to use whether you're a native speaker or just learning Japanese.

Technical Specifications

=====

Usage Requirements

- Apple Macintosh computer with at least 5MB of RAM
. (8MB recommended for multiple applications)
- Hard disk with approximately 30MB of disk space available
- Apple SuperDrive (1.4 MB) floppy disk drive or CD-ROM drive
- Apple Macintosh System 7.1 or later
- An application that is localized for Japanese or that uses WorldScript software technology

Printer Support

- Recommended: QuickDraw printers, including the Apple StyleWriter line, the Apple Personal LaserWriter line, and the ImageWriter line
- PostScript-compatible printers, including Personal LaserWriter printers (although PostScript printers can produce Japanese, performance may vary)

System Software Requirements

- The Japanese Language Kit can be used with many nonlocalized programs that employ Apple WorldScript software technology. These programs include, but are not limited to:
 - AllPage
 - AllScript
 - Logo Vista E to J
 - Nisus Writer
 - WinText
 - WorldWrite
 - WordPerfect

NOTE:

Apple has tested a limited number of applications; these lists are not intended to be comprehensive. Many nonlocalized applications that do not employ WorldScript software technology may provide limited functionality and allow input of Japanese characters.

Compatible applications

- The Japanese Language Kit can be used with a variety of applications localized for Japanese. They include:

- Acta 7 J
- Canvas J
- ClarisImpact J
- ClarisWorks J
- Director J
- Eg Word J
- FileMaker Pro J
- FreeHand J
- GreatWorks J
- HyperCard J
- Illustrator J
- Lotus 1-2-3 J
- MacDraw Pro J
- MacWord J
- MacWrite II J
- PageMaker J
- Persuasion J
- Photoshop J
- Premiere J
- QuarkXPress J
- SoundEdit J
- SuperPaint J
- WordPerfect J

Features

=====

Capabilities

- Create documents and presentations in both Japanese and English, or Japanese and other languages supported by your system
- Produce promotional materials, foreign-language textbooks, bilingual educational materials, and more
- Insert Japanese text into letters, presentations, spreadsheets, and other documents
- Boost language learning by using inter-active practice drills and other learning tools

Ease of use

- Installs quickly and easily
- Easily create, edit, and print Japanese
- Comes with an input guide that includes instructions in Japanese and English

Compatibility

- Runs applications that have been localized for Japanese, including

WordPerfect, Aldus Persuasion, FileMaker Pro, and Lotus 1-2-3

- Recommended for all QuickDraw printers; also works with PostScript-compatible printers
- Runs on all Macintosh compatibles; 68020, 68030, and 68040 processor-based computers; and Power Macintosh computers

Flexibility

- Comes with three Kanji TrueType fonts: HonMincho, MaruGothic, and Osaka
- Lets you display, edit, and print files created using KanjiTalk, the Japanese version of the Macintosh operating system

Ordering Information

=====

Japanese Language Kit (Order No. M1648Z/C)

- Japanese Language Kit on thirteen 1.4 MB floppy disks and CD
- WorldScript II system extension
- Japanese Language Kit Installation and User's Guide
- Macintosh Japanese Input Method Guide

Support Information Services

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Tech Info Library Article Number:17923



Tech Info Library

At Ease 3.0: Read Me (11/95)

Revised: 11/7/95
Security: Everyone

At Ease 3.0: Read Me (11/95)

=====

Article Created: 12 June 1995
Article Reviewed/Updated: 7 November 1995

TOPIC -----

The following article is the ReadMe file for At Ease 3.0.

... PLEASE NOTE THE INFORMATION ENCLOSED IN BULLETS "..." IS NOT PART OF THE ORIGINAL READ ME FILE BUT HAS BEEN ADDED HERE TO CLARIFY SOME OF THE PROCEDURES DESCRIBED IN THE ORIGINAL READ ME FILE. ...

DISCUSSION -----

This document reflects the latest information on At Ease version 3.0. Please read this document carefully. The software may have changed slightly since the manual was printed.

Installing At Ease
=====

You should use the Installer program to install At Ease. Do not attempt to install At Ease by dragging files onto your hard disk. The Installer places the files in the correct locations on the disk.

Before using the At Ease Installer program, make sure you have quit all other application programs. If you have trouble installing, temporarily turn off all extensions by holding down the Shift key while you restart your computer. Then try installing again.

If you install At Ease 3.0 on a computer running system software version 7.0 or 7.1 and you later install version 7.5 on your computer, use the Custom Install option of the At Ease Installer to install the At Ease Guides.

Installing Mouse Practice
=====

If your version of At Ease came with Mouse Practice, install it immediately after installing At Ease.

Removing At Ease =====

If you decide to remove At Ease, use the At Ease Installer program. Never attempt to remove At Ease from your System Folder while At Ease is turned on. See the manual for more information on removing At Ease.

Getting Help in At Ease =====

In addition to the manual and this Read Me file, there are several ways of obtaining online help in At Ease.

Apple Guide (System 7.5 Users) -----

If you are using system software version 7.5 or later, you can use Apple Guide to get instructions for using At Ease. At Ease Guide, the Apple Guide for the At Ease panels, is available from the Guide menu whenever At Ease is the active application program. At Ease Setup Guide, the Apple Guide for the At Ease Setup program, is available from the Guide menu whenever At Ease Setup is the active program.

At Ease Setup Help (System 7.0 or 7.1 Users) -----

If you are using system software version 7.0 or 7.1, At Ease includes online help for the At Ease Setup program. To use At Ease Setup Help, click the question mark button that appears on each page of the At Ease Setup program.

Balloon Help -----

Balloon Help is available for almost every function of At Ease. To activate Balloon Help, choose Show Balloons from the Guide menu (system software version 7.5) or the Help menu (system software version 7.0 or 7.1). When you are finished using Balloon Help, choose Hide Balloons from the Guide menu or Help menu.

Upgrading From Earlier Versions of At Ease =====

For most upgrades, your administrator password (if you had one) will remain the same in the At Ease Setup program in version 3.0. When the At Ease Setup program asks for an administrator name, type "At Ease Administrator," which is the default administrator name.

Upgrading From Version 1.x -----

If you are upgrading from At Ease version 1.x to version 3.0, you must first remove the old version by using the At Ease Installer program that came with the old version. When the Installer screen is displayed, hold down the Option key to change the Install button to Remove. Then click Remove to remove the old version.

... The information above is incomplete. The correct procedure to remove At Ease 1.0 is:

Step 1

Double-click the At Ease 1.0 Installer.

Step 2

Click OK to pass the "Welcome to the At Ease Installer".

Step 3

Click on the Customize button.

Step 4

Select At Ease in the window on the left.

Step 5

Hold down the option key to change the Install button to a Remove button. ...

Any items you created in version 1.x are automatically assigned to a setup or user named At Ease 1.0.

Upgrading From Version 2.x

Upgrading from version 2.x to version 3.0 occurs automatically when you first run the At Ease Setup program of version 3.0. At Ease turns itself off at the end of the installation process, so you must run the At Ease Setup program to turn At Ease back on.

... The information above is incomplete. It should state that:

To update At Ease 2.x machines to At Ease 3.0, you must first follow the normal installation process. You should first startup your computer with extensions off by holding down the shift key while starting your Macintosh until it says "Welcome to Macintosh, Extensions Off". Run the installer program from the installer disk. ...

Installing Other Programs While Running At Ease

=====

You should not install programs onto your hard disk while running At Ease. Before you install programs, turn At Ease off in the At Ease Setup program and

restart your computer. When you finish installing programs, turn At Ease back on and restart the computer again. Programs you install onto your hard disk are not automatically added to At Ease setups or users; you must use the At Ease Setup program to provide access to the new programs.

If some program buttons are not displayed properly in At Ease after you install new software, you should rebuild your desktop. To do so, turn At Ease off and restart your computer. While the computer is restarting, hold down the Command and Option keys until you see a message asking whether you want to rebuild the desktop file. Click OK. When the computer has finished starting up, turn At Ease back on in the At Ease Setup program and restart the computer again.

Restricted Finder Users =====

There are several things you should know about the restricted Finder environment.

Security in the Restricted Finder -----

In trying to maintain compatibility with other programs, the restricted Finder environment can sometimes allow programs to bypass some of the security features you selected in the At Ease Setup program. If programs you use seem to pose security problems, you may want to remove them from your hard disk.

Security is maintained for restricted Finder users by creating a list of "approved" application programs, desk accessories, and control panels that can be opened by the user. This list includes

- all items in the current setup folder
- items in the Apple Menu Items folder (if you have given access to them)
- the Chooser (if you have given access to it)
- the Print Monitor
- items in the Startup Items folder (only if the setup will open them)
- items in the Shutdown Items folder
- items in the Control Panels folder (if you have given access to them)
- the At Ease Setup program (administrator password required)
- approved sub-launched programs (for more information, see "Sub-Launching Programs" later in this Read Me file)

If a document exists in any of these places, the application that created the document can also be opened.

The At Ease Setup program can always be opened because the administrator password restricts access.

The list of approved programs does not include programs in the user's own documents folder. (If it did, a user could copy a program from a floppy disk to his or her documents folder and attempt to open it without permission.)

Macintosh Guide and the Restricted Finder -----

Because of changes in the Finder made for restricted Finder users, instructions in Macintosh Guide (available from the Guide menu in system software version 7.5 or later) may not always be accurate. For example, when users who do not have access to control panels use Macintosh Guide to request instructions on adjusting the sound volume, they will not be able to complete the required steps.

Desktop Items and the Restricted Finder

When a user connects to (mounts) a disk other than the startup disk, items on the desktop of the disk are placed in a folder called "Items for Desktop," located at the top level of that disk. When the user disconnects from (unmounts) the disk, the items are not replaced on the desktop.

Copying in the Restricted Finder

If a user drags a folder for which he or she doesn't have access (such as another user's folder) into his or her own folder, the computer will not copy any files from the dragged folder, but it will add an empty folder of the same name to the hierarchy for the user's folder.

File Sharing and the Restricted Finder

File sharing does not work with the restricted Finder. When a restricted Finder user logs in, At Ease turns off file sharing. The next regular Finder user who logs in and wants to use file sharing must return to the Sharing Setup control panel and turn file sharing on again.

Do not use file sharing on computers that will be updated via the Update Computers command in At Ease Setup.

RAM Disks and the Restricted Finder

Do not use RAM disks if any user works in the restricted Finder; doing so may cause your computer to crash.

Sub-Launching Programs

=====

Sub-launching is the process by which one program opens another program (called a subprogram) without the user having directly opened the subprogram. The security features of At Ease can sometimes interfere with a program's ability to sub-launch necessary subprograms. When a program attempts to sub-launch a subprogram to which a user has not been given access, the computer will usually display a -5000 error code.

There are two ways to allow programs to sub-launch the subprograms they need. In either case, the subprogram bypasses the security that At Ease provides.

- In the At Ease Setup program, open the Settings menu and choose Application Preferences. Add the necessary subprograms to the list, and then select each subprogram and click the checkbox labeled "Can be launched by other

applications." This setting applies to all users and setups, so you need to follow this procedure only once. You should be aware that this setting allows all users—including restricted Finder users—to open the subprogram.

- In the At Ease Setup program, give access to all the necessary subprograms. This procedure allows you to specify which users or setups have access to the subprograms. The disadvantage of this procedure, however, is that users see a button for each subprogram even though they normally won't need to open the subprograms directly.

At Ease 3.0 and Kid Pix Studio

Kid Pix Studio sub-launches each subprogram a child uses. But because of a software incompatibility, At Ease does not view these subprograms as application programs. To allow Kid Pix Studio to sub-launch its subprograms successfully, choose Application Preferences from the Settings menu of At Ease Setup and click the Custom button in the screen that appears. In the Custom Add screen, add each of the following subprograms:

Begin_Table

Name	File Creator
-----	-----
KPS 0	Kîd0
KPS 1	Kîd1
KPS 2	Kîd2
KPS 3	Kîd3
KPS 4	Kîd4
KPS 5	... Kîd4

This information is incorrect the original Read Me states to type Kîd4 again for the KPS 5 name, it should read Kîd5 ...

End_Table

To type the î character in the file creator names, hold down the Option key while you type the letter i, then release the Option key and immediately type the letter i again.

For more information on using the Custom Add screen, see "Application Preferences" later in this Read Me file.

At Ease 3.0 and Control Panels

=====

Users who start out in the At Ease panels and switch to the Finder may experience problems when opening control panels. If they choose Control Panels from the Apple menu of the Finder, the Control Panels folder appears as expected. If they choose a particular control panel from the Control Panels submenu, however, they are returned to the At Ease panels. In most cases, the selected control panel appears in front of the At Ease panels. But for certain

control panels, such as the Extensions Manager in system software version 7.5, a message appears saying that the selected control panel can't be opened in At Ease.

To avoid these problems, At Ease users who switch to the Finder should not use the Control Panels submenu. Instead, they should choose Control Panels from the Apple menu of the Finder and then double-click the control panel they want in the Control Panels window that appears.

At Ease 3.0 and CD-ROM Discs =====

At Ease can display only one CD-ROM panel at a time. If a user inserts another CD-ROM disc to which he or she has access, a message appears indicating that the disc can be accessed using buttons. If the user ejects the first CD-ROM disc, the second CD-ROM disc appears as a panel.

The CD-ROM Preferences feature does not work properly with audio CDs.

At Ease 3.0 and the Find File Feature in System 7.5 =====

While At Ease is running, Find File finds only those items in locations to which the user has complete access, including the user's documents folder and the Trash folder. Most other locations (including server volumes and the user's setup folder) do not return any information when Find File is used.

At Ease 3.0 and the Startup Items Folder in System 7.5 =====

Any item in the Startup Items folder will be opened at startup, even if you didn't give the user access to the item or to the program used to create it. If you don't want all users to have access to an item, don't place the item in the Startup Items folder.

Application Preferences =====

The Custom button in the Application Preferences screen should be used only when At Ease security settings are interfering with a program's ability to sub-launch other programs that it needs and the "Can be launched by other applications" setting doesn't solve the problem. It is very unlikely that you will need to use the Custom button.

When you click the Custom button, the Custom Add screen appears. You provide a name (which can be anything you like, since it's needed only for display in the list of applications) and the file creator for each subprogram you are having difficulty sub-launching. You must type the file creator exactly, including any spaces and special characters. (You can usually get the name of the file creator

from the developer of the software.)

The Custom button also allows you to remove programs from the Application Preferences list—even programs that you added to the list using the Add Other button. To do so, click a program's name in the list and click the Custom button. If the Custom Add screen does not already include a name and file creator for the program, type the program's name (exactly as it appears in the list) and its file creator. Then click Remove.

Database Consistency Checking

=====

At Ease 3.0 uses a sophisticated database for handling user information. If a problem is detected, the At Ease Setup program alerts the administrator and asks whether it should verify the database files. When the verification is complete, a file called Consistency Check Report appears on the startup disk.

The administrator can also manually start the verification process by holding down the Command key while starting the At Ease Setup program.

Article Change History:

07 Nov 1995 - Corrected a file creator type error in Kid Pix section.

14 Aug 1995 - Added keyword, reviewed for technical accuracy.

05 Jul 1995 - Clarified some misleading procedures from the Read Me file.

Support Information Services

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Tech Info Library Article Number:17924



Tech Info Library

At Ease 3.0: Description and Specifications (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 3.0: Description and Specifications (8/95)

=====

Article Created: 12 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

The following article contains a description and list of technical specifications for At Ease 3.0.

DISCUSSION -----

Overview
=====

Now there is a simple, effective, and inexpensive way to share your family Macintosh—while protecting important applications and documents.

Only At Ease 3.0 software from Apple Computer offers this security with a choice of interfaces for every age and experience level. For younger learners and computer novices there is the friendly At Ease desktop. It features large buttons, that can speak, for accessing files and applications, and large folders for keeping everything organized. It lets children work and play independently with-out your worrying about accidental damage to your files.

Older children can use the standard Macintosh Finder interface, but still under At Ease management to prevent access to unauthorized applications and documents. Finally, you and anyone else you authorize can bypass At Ease and gain access to all of the computer's files and capabilities. At Ease keeps pace with every member of your family.

Each At Ease user has one folder containing approved applications, files, and other items; and one folder for the user's own documents. In version 3.0, each CD or floppy disk also conveniently appears in its own folder. Easy-to-use setup menus let you quickly designate which desktop each person will use and which applications and documents they can open. Adding an item to a user's folder is quick and easy. You can also control permissions for deleting, copying, and renaming specific files, and you can create a list of allowable CDs to ensure

that users access only permitted materials.

Because At Ease software comes from Apple Computer, you are assured that it is designed to work smoothly with your Macintosh. At Ease can be used not only at home, but also on shared, non-networked Macintosh systems in classrooms, small businesses, libraries, and museums. With At Ease 3.0, you can feel good about sharing your family Macintosh.

Technical Specifications

=====

Usage requirements

- Apple Macintosh, PowerBook, or Power Macintosh computer
- 4 MB of RAM
- Macintosh system software version 7.0 or later
- Hard disk
- Apple SuperDrive 1.4 MB floppy disk drive

Access levels

- At Ease desktop
- Restricted Finder
- Normal Finder

File and media access

- Manage access to:
 - Applications
 - Documents
 - Hard disk
 - Apple Menu items (desk accessories, Chooser, and control panels)
 - CDs
 - Floppy disks
- Assign separate permissions for opening, copying, deleting, and renaming files

CD access

- Contents of each disc appear in a separate At Ease folder
- List of allowable CDs can be created
- Within the At Ease desktop, specific portions of a disc can be locked out

Floppy disk access

- Contents of each floppy disk appear in a separate At Ease folder
- Application-launching from floppy disks can be disabled

File-saving options

- Users can save documents to a floppy disk and to a private folder on the local hard disk

- Document-saving can be disabled

Easy setup and maintenance

- Setup application provides easy-to-use configuration screens for designating users, items, menus, file locations, and other options
- Apple Guide support gives Macintosh System 7.5 users step-by-step context-sensitive help for using the At Ease desktop and the setup application

Features

=====

Flexibility

- Simplified At Ease desktop for young or inexperienced users
- Restricted Finder interface for experienced users
- Normal Finder interface for authorized full-access users
- Separate At Ease folder for each CD or floppy disk
- Support for up to 40 different users

Security

- Designate access to specific applications and documents
- Specify privileges for opening, copying, deleting, and renaming particular files
- Assign individual user passwords
- Authorize the use of individual CDs and their contents
- Block access to the hard disk
- Prevent applications from being launched from floppy disks
- Protect system settings, control panels, and the Chooser

Ease of use

- Large one-click buttons to access files and applications from the At Ease desktop
- Fast, simple installation and setup
- Talking buttons for non-readers or those just learning to read
- Single folder for organizing personal documents

Ordering Information

=====

At Ease 3.0 (Order No. M1859Z/D)

- At Ease software
- Owner's manual

Apple also offers At Ease for Workgroups software for networked systems; contact your Apple sales representative or reseller for more information.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and

configurations.

Article Change History:

14 Aug 1995 - Added keyword.

Support Information Services

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Tech Info Library Article Number:17925



Tech Info Library

CD-ROM: This disk is unreadable Message (9/95)

Revised: 9/1/95
Security: Everyone

CD-ROM: "This disk is unreadable" Message (9/95)

Article Created: 12 June 1995
Article Reviewed/Updated: 01 September 1995

TOPIC -----

When I put a CD into my CD-ROM drive I get the message "This disk is unreadable by this Macintosh. Do you want to initialize the disk?" What does this message mean?

DISCUSSION -----

When the CD-ROM drive will not recognize a particular type of CD, this usually indicates the CD-ROM software is not properly installed or is missing certain files. In some cases, the one or several of the CD-ROM "Access" files may be damaged or a third-party extension or control panel may be conflicting with the CD-ROM software. Try the following suggestions to resolve this issue:

- Make sure you have not started your Macintosh with the Shift key held down to turn off extensions, or you are not using any extension manager software that prevents the CD-ROM extensions from loading.
- Make sure that these files are in the Extensions folder of your System Folder:
 - Apple CD-ROM
 - Apple Photo Access (if you plan to use Kodak Photo CDs)
 - Foreign File Access
 - High Sierra File Access
 - ISO 9660 File Access
 - Audio CD Access

If any or all of these files are missing, search your hard disk to see if they have been moved to a different location, then move the files back into the Extensions folder. You will need to restart the computer after moving the files to the Extensions folder for the files to work properly.

- If these files have been deleted, reinstall your system software from your

Macintosh CD or system disk. You need to startup from the CD in order to reinstall the resources properly.

- If these files are damaged, throw the CD-ROM files mentioned above into the Trash, empty the Trash, restart while holding down the Shift key until the message "Welcome to Macintosh, Extensions off" appears. Reinstall the CD-ROM software from your Macintosh CD or system disks. Restart and test to see if the CD mounts on the desktop.
- If the preceding steps fail to resolve your issue, then an extension may be conflicting with the CD-ROM software. If you are running System 7.5 (see Note), open the Extensions Manager control panel and select "System 7.5 Only" from the Sets pull-down menu. When you restart your Macintosh, only the extensions installed with System 7.5 load. Test your CD-ROM disks to see if they work, then add extensions and control panels back one at a time, restarting after adding each one to isolate which extension is causing the conflict.

NOTE: If you are using an earlier version of System 7, you have to manually drag extensions and control panels out of the System Folder and restart each time to isolate the offending file.

Once you isolate the conflicting extension, contact the software manufacturer or vendor for compatibility information, or disable the extension to resolve the symptom.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 5

Article Change History:

01 Sep 1995 - Reviewed for technical accuracy.
01 Aug 1995 - Corrected typo.
19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17927



Tech Info Library

PC Exchange: How To Turn Off (7/95)

Revised: 7/27/95
Security: Everyone

PC Exchange: How To Turn Off (7/95)

=====

Article Created: 12 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

If you click the "off" button in PC Exchange and restart, the PC Exchange control panel turns back on. Is there a way to make the on/off button "sticky" through reboots?

DISCUSSION -----

The off button in the PC Exchange control panel is intended for temporarily disabling PC Exchange. If you turn off PC Exchange this way, on restart PC Exchange turns back on.

To disable PC Exchange each time the Macintosh is restarted, Apple recommends using Extensions Manager in System 7.5 to prevent the PC Exchange control panel from loading.

If you are using System 7.1, drag the PC Exchange control panel out of the System Folder before restarting.

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Volume II, Issue 7, Page 8

Article Change History:
27 Jul 1995 - Updated from Info Alley.
28 Jun 1995 - Made minor grammatical changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:17928



Tech Info Library

System 7.5: What The External CD Sound Extension Does (8/95)

Revised: 8/23/95
Security: Everyone

System 7.5: What The External CD Sound Extension Does (8/95)

Article Created: 12 June 1995
Article Reviewed/Updated: 23 August 1995

TOPIC -----

On the Macintosh 630 family, Power Macintosh 5200/75 LC, Performa 5200, and Performa 6200 series of computers there is an extension called "External CD Sound" in the Apple Extras folder. I have not been able to find anything in my manuals which tells me what it does.

What is this extension used for?

DISCUSSION -----

The External CD Sound extension lets users connect an external CD-ROM drive to these computers and play audio CDs through their internal speakers (see Note).

Without the External CD Sound extension, you are able to select the external CD-ROM drive using the AppleCD Audio Player, but you do not hear the audio. The External CD Sound extension solves this problem.

The following is the text that should be included in the About Apple Extras SimpleText document on these computers.

"External CD Sound: You may need to use this extension if you connect an external CD-ROM drive to your Performa and wish to play audio CD-ROMs using AppleCD Audio Player. To use the External CD Sound extension, drag it from the Apple Extras folder to the Extensions folder."

NOTE: If you want to hear the audio from the external CD-ROM through the internal speakers of the Power Macintosh 5200, you need to use a Y-Adapter cable (not included with the Power Macintosh/Performa) to connect from the external CD drive's RCA audio jacks to the Sound In (Microphone) jack on the back of the Power Macintosh or Performa 5200 computer.

This article was published in the "Information Alley":
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Article Change History:

23 Aug 1995 - Updated to include other computers that ship with the extension.
27 Jul 1995 - Updated from Info Alley.
05 Jul 1995 - Made minor grammatical changes.

Support Information Services

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Tech Info Library Article Number:17929



Tech Info Library

Power Macintosh DOS Card: Video Sync For LCD Panels (6/95)

Revised: 6/13/95
Security: Everyone

Power Macintosh DOS Card: Video Sync For LCD Panels (6/95)

=====

Article Created: 12 June 1995

TOPIC -----

I'm unable to synchronize the Power Macintosh 6100/66 DOS Compatible in DOS mode when using a variety of LCD panels.

For example, when connected to an nView MediaPro LCD panel in Apple 640x480 mode, both Macintosh and Windows screens display fine, but the panel won't display DOS text at all. When connected in VGA mode, DOS text displays OK, but Macintosh and Windows screens "tear" at the top of the display.

DISCUSSION -----

We took measurements using a digital scope with automated time and frequency calculation. The Power Macintosh DOS Compatibility Card produces timing signals which drive Apple monitors, and includes flexibility to work with non-Apple multiple scan monitors. In some of the Power Macintosh DOS Compatibility Card video modes there are slight timing differences between Macintosh and Windows. This is usually not a problem because most monitors can work within specific timing variances. In other words, if the frequencies are off by a small amount, monitors can still synchronize and provide a stable image.

It was reported that the InFocus LCD would not work with the Power Macintosh DOS Compatibility Card, but after testing with different Macintosh/DOS video modes, we did find a combination that worked (see detail section below). Other reports confirm that the nView and Proxima Ovation panels also work. From what we can tell, some LCD panels on the market are intolerant to small variances in video timing or work within only a specific frequency.

General Suggestions and Background

If possible, test the LCD panel at various video scan rates. When using an LCD panel with the Power Macintosh 6100/66 DOS Compatible computer, test the panel with both the manufacturer provided adapter and no adapter (direct). Using an Enhance video adapter with a multiple scan display lets you test more

configurations and frequencies. You may have to adjust the LCD controls (horizontal and vertical position, sync polarity, and so on) to center the image, remove tearing, or properly synchronize the LCD image. Using an Apple 14-inch display or setting the Enhance video adaptor to "J" is the recommended video timing for Macintosh, DOS, or Windows when connecting to an LCD display.

The following describes the video signaling for different display connections:

- Apple 14-inch display (640x480)

Video modes for Macintosh, DOS, and Windows will be similar but not exactly the same (horizontal = 35 kHz, vertical = 67 Hz).

- Apple 16-inch display (832x624)

Video modes for Macintosh, DOS, and Windows will be similar but not exactly the same (horizontal = 49.75 kHz, vertical = 74.5 Hz).

- VGA (using Enhance video adapter "G")

Video modes for Macintosh and Windows will be similar, but not exactly the same (horizontal = 31.45 kHz, vertical = 60 Hz). DOS will operate at its normal video rate (horizontal = 31.75 kHz, vertical = 71 Hz).

Detail In Using a Power Macintosh DOS Compatibility Card with a Proxima LCD
=====

There are several issues when using a Proxima LCD display panel to project the screen through an overhead projection unit on a Power Macintosh 6100/66 DOS Compatible computer. Below are details as to how the video circuitry on the DOS Compatibility Card works which is necessary to understand what is happening.

There are three monitor settings in the PC Setup control panel, they are 14-inch, 16-inch, and VGA. You can only choose different settings if a multiple scan monitor is being used. If an Apple 14-inch or 16-inch monitor is used, PC Setup automatically picks the corresponding setting and cannot be changed.

If the setting is either 14-inch or 16-inch, the DOS Compatibility Card will generate the same video signals the Macintosh normally uses for those monitors. In other words, if 14-inch is selected, the DOS Compatibility Card will generate video for 640x480 at 67 Hz. This is not VGA video even though the driver selected in Windows is VGA.

Even though the DOS Compatibility Card is generating Macintosh video signals, they are not exactly the same. We looked at the video signals with an oscilloscope and discovered that the timing is the same but the sync pulses change in width. Apparently, this slight variation is not a problem for Apple monitors but it does distort the display on some LCD panels.

If VGA is chosen in the PC Setup control panel, the DOS Compatibility Card will generate true VGA video signals. In this case, switching between the Macintosh and DOS sides causes a major change in the video signals. This VGA setting only works with devices that can switch resolutions while in operation.

Our testing has shown that the best setup with an LCD panel is to use a 14-inch

Apple monitor if the system has a monitor connected along with the LCD panel. If a monitor is not being used, then a video adapter can be used to force the Macintosh into using 640x480 Macintosh video.

The video adapter is hardware that is placed in line between the Macintosh and video cable changing the sense pins the Macintosh sees. The most popular use of these adapters is to use non-Apple monitors with Macintosh systems.

On the DOS Compatible system the adapter should be placed between the cable connected to the monitor and the 4-connector cable that ships with the DOS Compatible system. It needs to be placed in this location because the DOS Compatibility Card actually senses which monitor is connected.

LCD panels behave differently. We have tested the InFocus panel and were able to make it work using a video adapter described above. This panel has a separate box that is used to connect an Apple monitor in line, however we had trouble with it. We could only make the panel work by connecting it directly to the Macintosh.

Success in using the nView panel with a video adapter has also been reported to us, and we have used a Proxima Ovation panel without an adapter and monitor connected, just the panel.

In conclusion, using LCD panels with the DOS Compatibility Card is a little delicate. It can be done with a little patience and experimentation. The setup needed differs depending on the panel being used.

The adapter used by some is available from Sony. The information is listed below. This adapter has a dial and dip switches for configuration. The dip switches should be set 1-6 OFF and 7-9 ON. The dial should be set to position "M", but we also made it work on position "J". We suggest experimenting with the setup well in advance of it's actually being needed because it could take a while to get it all working.

Sony MacView Cable Adapter (Universal Macintosh to PC Monitor)
Part # T-9985-647-1
Sony Service Parts for Order: 1-800-488-7669

There is also a Macintosh to Macintosh model in case the projection pad you are using has a Macintosh video connector instead of a VGA connector.

Support Information Services

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Tech Info Library Article Number:17930



Tech Info Library

Modem AT Command Set: Description Part 1/2 (6/95)

Revised: 6/14/95
Security: Everyone

Modem AT Command Set: Description Part 1/2 (6/95)

=====

Article Created: 14 June 1995

TOPIC -----

This is part one of a two part article that includes a description of modem states as well as the AT command set.

DISCUSSION -----

MODEM STATES

=====

Moving between command and online states

=====

The modem always goes to command state when turned on or after reset. It automatically enters online state after successfully making a connection with a remote modem, either when answering or originating a call.

While the modem is in online state, you can issue a command that takes it back to command state. When you control the modem in this fashion, it is in local command state. While in local command state you can send commands to the modem from your keyboard. During a connection you can switch between online and command state as needed.

In order to issue AT commands to the modem, you will need to determine the setting within your communications program that allows you to control a modem directly using AT commands. Consult the user's guide that came with your software to find out how to enter AT commands from your keyboard.

The most important AT commands are listed below. The rest of this appendix gives complete descriptions of all commands supported by the Express Modem software.

- To enter command state while connected, type the escape sequence +++.
- To go back to online state, type ATO<CR>.
- To hang up, type ATH<CR>.

The <CR> is a notational convention for carriage return. Most commands are not actually sent to the modem until you type the carriage return.

AT COMMAND SET =====

AT refers to the command prefix (attention sequence) that precedes each command to the modem. With the exception of A/, all commands must be preceded by AT and end with a carriage return <CR>. In this appendix, the modem's default value and description are shown in boldface type.

Special Commands =====

A/ Repeat last command -----

The A/ command instructs the modem to repeat the last command line. A command line termination character <CR> is not required for the execution of this command: that is, the command is executed as soon as the slash is typed.

+++ Return to command state (escape sequence) -----

The escape sequence is used to force the modem back to local command state from online state. Do not type any other commands or make entries before or after the escape sequence for a period equal to the guard time set in register S12 (default is one second).

The modem sends an OK result code to the terminal and switches to command state.

The actual escape character is specified by register S2, expressed as the ASCII value of the escape character (default is 43, '+').

Standard AT commands =====

AT The attention command prefix -----

The prefix AT must precede every command. The remainder of the command line contains commands for the modem. The command line must end with a carriage return. If AT is sent alone (that is, it is followed by a <CR>), then no command is executed but an OK result code is returned.

A Answer -----

The A command forces the modem to go off-hook in answer mode. The modem then starts sending the answer tone (CCITT answer tone independent from the B setting), unless the modem is set for leased line (&L command) state. If no carrier signal is received from the telephone line within the number of seconds

specified by register S7, the modem goes on-hook.

This command must be the last on a command line. Sending any character to the modem during call establishment will abort the command and generate a NO CARRIER result code.

Bn Communication protocol category preference

This command determines which communication standard will be used for the next connection.

- 0 CCITT mode
- 1 Bell 103 and Bell 212A, instead of V.21 and V.22, in case of fallback
- 2 CCITT V.23 only

D Dial

This command signals the modem that the numbers, letters, and commas that follow are all part of the telephone number it should dial.

You may include other dial command characters in combination with the D command:

T, P, comma (,), W, colon (:), "at" sign (@), exclamation point (!), R, semicolon (;), and S=n. Each of these optional modifiers is described in the following sections. For clarity's sake, you may also use other characters or symbols (for example, parentheses, hyphens, or spaces) without affecting the number.

In addition to the digits 0 through 9, your modem can also dial the six special characters (*, #, A, B, C, D) found on some Touch-Tone dial telephones.

T Touch-Tone dialing

All subsequent numbers are Touch-Tone dialed until the P command (for pulse dialing) is selected.

P Pulse dialing

Selects pulse dialing, with the dialing speed fixed at 10 pulses per second.

You can mix Touch-Tone and pulse dialing within the same telephone number. The digits immediately following a P command will be pulse dialed; those following a T command will be Touch-Tone dialed.

, Pause

The comma modifier introduces a delay time before dialing the next dial character or executing the next character in the dial string. The pause time is the value of the S8 register (default=2 seconds).

W Dial tone detect

The W modifier is used to make the modem detect a dial tone before sending the next digit. If the tone has been detected by the modem before the S7 register

time delay, the modem continues dialing the rest of the characters in the dial string. If no tone is detected, the modem goes on-hook, returns the NO DIAL TONE result code to the host, and enters the command state. This modifier can be embedded anywhere in the dial string. Example: ATDT9W5551234.

: Calling Card tone detect

Same as W. The colon can detect most calling card tones. Place the colon in the dial string when you want to detect a wider range of frequencies.

@ Wait for quiet answer before dialing

For the time specified in the S7 register (default=50 seconds), the modem attempts to detect 5 seconds of silence. This period of silence confirms that the call has been answered. Once 5 seconds of silence have been detected, the modem dials the remaining numbers in the command line. The remaining numbers may be a security code, another telephone number, or an extension. If no quiet time is detected, the modem hangs up and returns NO ANSWER. The following is an example using the @ modifier:

atdt312555-1432@4622

! Flash

This modifier causes the modem to go on-hook then back off-hook, as if the hook button on the telephone set had been pressed momentarily. This modifier can be placed anywhere in the dial string.

R Reverse mode

The R modifier changes the modem from originate mode to answer mode once the dialing process has been completed. This command is used only at the end of the dial string. This modifier is used for compatibility with old originate-only modems.

; Return to local command state after dialing

The semicolon (;) modifier may be put at the end of the dialing command. It forces the modem back to the local command state after dialing a number. The modem does not attempt a connection. This allows you to use the modem as a dialer (you must pick up the telephone handset at the end of the dial command) or to dial numbers in two or more steps. You may also force the modem to ignore the dial tone (blind dialing) by starting the dial string with ";D". This modifier may also be used in Fax Sender, AppleLink, and other communications applications.

S=n Dial telephone number stored at location n

Dials telephone number stored in location n, where n is 0, 1, or 2. You must have previously saved the value with the AT&Z command.

L Dial last telephone number Redials the last number dialed when placed after the D command.

En Echo off/on

When the echo is turned on, the characters sent to the modem in command state are echoed back by the modem to the host computer. The E command is functional only when the modem is in command state.

- 0 Turns off echo.
- 1 Turns on echo. This allows you to verify that characters you have sent to the modem have been received and sent back.

Hn Hook (hang up)

When the modem is online, you must first enter the +++ escape sequence to take the modem back to command state before issuing the hang up command ATH.

- 0 Forces the modem on-hook. Hangs up the modem's connection to the telephone line.
- 1 Forces the modem off-hook.

In Information

- 0 Returns the modem's product ID code.
- 1 Returns a modem code.
- 2 Returns OK.
- 3 Returns the modem's country code.
- 4 Returns a list of modem features.
- 9 Returns Apple product code and firmware version of the modem.

Ln Speaker volume

This command has no effect, as the speaker is a component of the Macintosh and set in the Sound control panel. The command is included for compatibility purposes.

Mn Speaker on/off/auto

This command sets the usage of the speaker during connections.

- 0 Disables speaker.
- 1 Turns on the speaker until carrier is established.
- 2 Leaves the speaker on throughout the entire connection.
- 3 Turns the speaker on until a carrier is detected, except during dialing.

Nn Communication protocol preference

This command determines the desired connection speed, in conjunction with register S37.

- 0 Use S37 for speed selection. If S37=0, connect at highest possible speed. Otherwise, connect at speed specified in S37.
- 1 Connect at highest possible speed according to value of S37. Fall back if necessary.

2 Same as N1 for compatibility reasons.

Note: For N1 or S37=0, the setting of ATB is ignored. The modem automatically determines Bell or CCITT mode.

On Return to online state

Returns modem to online state from command state.

- 0 Is used to return to the online state after having entered the command state using the escape sequence.
- 1 Same as above and will retrain the carrier (possibly at a lower speed) before reentering online state.

P Enable pulse dialing

Sets the default dialing mode to pulse mode.

This command can also be used as a subcommand of the D command.

Qn Quiet (refer to command Vn)

- 0 Allows result codes to be sent to your screen.
- 1 Turns off the result code messages.
- 2 Returns result codes when originating a call but not when answering.

Sn Select an S register

The S registers refer to memory locations used for configuration.

Most of the S registers deal with some aspect of timing. The S commands are used to assign values to various registers in the modem's memory.

n? The Sn? command (n=register number) is used for checking the contents of a register. The result is always expressed as a three-digit number, where the leading digits or all digits may be 0.

Sn=r is used to change an S register value (where n is the number of the register and r is the assigned value).

NOTE: Refer to the TIL article titled "Modem AT Command Set: S Registers" for a complete list of the S registers.

T Enable tone (DTMF) dialing

Sets the default dialing mode to

Touch-Tone mode. Can be used in dial string (default).

Support Information Services

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Tech Info Library Article Number:17931



Tech Info Library

System 7.5: Changing and Restoring Jigsaw Puzzle PICT (7/95)

Revised: 7/19/95
Security: Everyone

System 7.5: Changing and Restoring Jigsaw Puzzle PICT (7/95)

Article Created: 13 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes how to change and then restore the PICT that System 7.5 uses for the Jigsaw Puzzle.

DISCUSSION -----

Changing the Jigsaw Puzzle

You can easily paste a different picture into your System 7.5 Jigsaw Puzzle. Simply copy any PICT graphic and paste it into the open Jigsaw Puzzle application. You may receive a message telling you to increase the puzzle application's memory. The message includes a minimum recommended size.

Restoring the Jigsaw Puzzle

The changed picture is stored in the Preferences Folder in a file called "Jigsaw Picture". Dragging this file to the Trash and relaunching the Jigsaw Puzzle application returns it to the picture stored in the resource fork of the application.

This should be a map of the world unless the PICT resource has been modified using a resource editing utility like ResEdit. If this is the case, you need to remove and reinstall the "Jigsaw" application and remove the "Jigsaw Picture" preferences to return the picture to the world map.

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19 Jul 1995 - Added Info Alley information; added how to change puzzle.

Support Information Services

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Tech Info Library Article Number:17932



Tech Info Library

Macintosh: How Often Should I Defragment My Hard Drive? (7/95)

Revised: 7/19/95
Security: Everyone

Macintosh: How Often Should I Defragment My Hard Drive? (7/95)

Article Created: 13 June 1995
Article Reviewed/Updated 19 July 1995

TOPIC -----

I have read that my hard drive can become fragmented over time causing the performance of my computer to degrade. Should I frequently defragment my hard disk?

DISCUSSION -----

The file system model used on Macintosh computers is designed to work with a certain degree of fragmentation. This is normal and does not significantly affect performance for the majority of users.

Fragmentation occurs when you delete and create files. For example, suppose you create three files, then delete the second one. If you introduce a fourth file, which is larger than the size of the second file, the Macintosh file system may put a portion of the fourth file in the space occupied by the second file, and put the remainder after the third file. To access the entire file, therefore, the file system has to look in two places.

Defragmentation software attempts to put everything in tidy blocks, so it would move the files around until they are all contiguous, thus the file system only has to look in one place.

In reality, however, the nature of the files, the nature of the work you are doing, the nature of random-access disk mechanisms and the exact order in which the files are segmented can all have a bearing on the resulting performance. In general, there is not significant degradation of performance from normal use of your computer.

If you create and delete a huge number of files, your hard drive may become fragmented to the point that you may see a slight slow-down of file system performance. At this point, you can either use a defragmenting utility, or back up your hard disk and use Apple HD SC Setup to reinitialize it.

WARNING: Reinitializing erases all the files on your hard drive. Make sure you have a complete backup because you will need to restore all your files once initialization is complete.

It should not normally be necessary to defragment your hard disk frequently.

Another thing to consider is that the defragmenting process generally results in a huge amount of disk activity, due to the amount of data being incrementally transferred. Some disk defragmenting software packages also cannot completely recover, if a critical portion of data on the hard disk should be in "transit" when the software fails, you may run the risk of losing that specific file, or all data on your hard drive.

Apple recommends keeping a current backup of your hard drive. You should be especially careful to fully backup your hard drive before running any defragmentation software.

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19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:17933



Tech Info Library

System 7.5: How Apple Menu Options Affects Performance (9/95)

Revised: 9/29/95
Security: Everyone

System 7.5: How Apple Menu Options Affects Performance (9/95)

Article Created: 13 June 1995
Article Reviewed/Created: 29 September 1995

TOPIC -----

My system seems to have a delay or pause of a few seconds doing many simple things. For example, when an open file/save as dialog box appears on the screen it is often a few seconds before you can click OK, or Save or whatever. Creating, deleting or moving files and folders also seems to have a delay associated with the operation.

This problem arose after I placed an alias to the hard drive in the Apple Menu Items folder. Simply removing the alias from the Apple Menu Items folder brings back instant response.

DISCUSSION -----

Apple Menu Options (AMO) can slow your system operations when an alias to a hard drive is placed in the Apple Menu Items folder. Placing an alias to a top level folder (with many subfolders and files) in the Apple Menu Items folder can produce a similar slowdown, but more limited impact. Placing many folder aliases or actual folders in the Apple Menu Items folder can also lead to a slowdown, depending on their depth and contents.

There are different methods used in creating a hierarchical Apple Menu.

One method is to acquire the folder information and build the hierarchical menu when you select the folder through the Apple Menu. This makes the menus less responsive, particularly if the path leads off to a mounted server volume. You will see the AppleTalk arrows flash in the upper left corner of your screen as you navigate the hierarchical Apple Menu for a server volume. This is the approach used by NOW menus, MenuExtend from AlSoft, and the shareware extension BeHierarchic, and others.

The approach used by AMO is to pre-build all the hierarchical menus through five folder layers for every folder and folder aliases in the Apple Menu Items

folder. If an alias to a hard drive or server volume is in the Apple Menu Items folder, the top five layers of folders are acquired and cached. This is what is done by AMO as the Finder launches and it causes a delay making the Finder Desktop available. The Apple Menu Options then has to continually "watch" for a folder being modified with a file or folder being created or removed and rebuild the cached menu. This approach makes the Apple menu very responsive, because the menus are all cached. It has the long term effect of imparting a system slowdown during such things as emptying the trash, moving folders, and so on.

AMO has a side effect which exacerbates the issue. Since it creates the Recent Servers folder with aliases to mounted volumes, these volumes are also searched and menus cached. The Apple Menu Options Prefs file grows in size as multiple server volumes are mounted and their folder structure cached in this file. This file can grow to 300-400Kb in size.

The workaround for this problem is not to use an alias to your hard disk in the Apple Menu. The slowdown affect can be lessened by limited use of aliases to certain folders that you wish to navigate hierarchically. Another option is to use one of the alternative products with the other method of creating a hierarchical menu.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

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29 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:17934



Tech Info Library

MacX and Power Macintosh DOS Compatibility Card (6/95)

Revised: 6/13/95
Security: Everyone

MacX and Power Macintosh DOS Compatibility Card (6/95)

=====

Article Created: 13 June 1995

TOPIC -----

My Power Macintosh DOS Compatible computer is successfully networked to my Netware server using IPX, and I am using TCP/IP software on my Macintosh successfully. However, whenever I run MacX, I see a variety of connection tool errors and freezing when I switch to DOS.

DISCUSSION -----

This is a known issue with the Power Macintosh DOS Compatibility Card and MacX. This issue is different from, only one protocol stack between two CPU's limitation in Tech Info Library article, "DOS Compatibility Card: Using Two IP Stacks (2/95)."

Any DOS networking activated by having VLM.EXE connect to the PC Networking Extension will result in MacX failures and/or DOS card freezing.

Suggested workarounds

- Turn off DOS networking by removing the PC Network Extension from the Extensions folder in the System Folder, or do not load DOS networking software of any kind.
- Use another X windows package that does not use the MacTCP tool. We have not tested any other packages, but we believe the MacTCP tool is the source of the problem.
- Use an X windows servers on the DOS card.

Note that MacX works fine with a Power Macintosh DOS Compatible computer, only DOS networking is incompatible.

Support Information Services

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Tech Info Library Article Number:17935



Tech Info Library

MAE 2.0: Freeze at Welcome to Macintosh on Solaris (5/96)

Revised: 5/11/96
Security: Everyone

MAE 2.0: Freeze at "Welcome to Macintosh" on Solaris (5/96)

=====

Article Created: 13 June 1995
Article Reviewed/Updated: 11 May 1996

TOPIC -----

I just loaded MAE 2.0 on a SPARCstation that is not connected to a network. MAE starts fine, but after the "Welcome to Macintosh" screen, MAE will hang. I am unable to quit out of MAE by way of the Window Manager, and must kill the MAE process in a shell. I have tried -nosound and -noextensions, with no effect. If the same machine is added to a network, MAE starts up fine.

DISCUSSION -----

First, to be sure of the specific issue, do the following:

- 1) Start MAE and wait for it to hang
- 2) Open a shell and remove /tmp/at
- 3) MAE should continue to startup

If this corrects this issue, below is the solution to the issue depending on the version of Solaris you are using:

- Solaris 2.4: Install patch 101945-37 on your workstation. This patch is found at sunsite.unc.edu
- Solaris 2.5: Update MAE to 2.0.2 (Patch 2) from www.mae.apple.com or ftp.support.apple.com.

There are no reports of this issue with Solaris 2.3.

Article Change History:

- 11 May 1996 - Complete update of article.
- 30 Jan 1996 - Updated patch version to 101945-36.

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Tech Info Library

MAE: Multiple Ethernet Connects, Can't Select AppleTalk (1/96)

Revised: 1/30/96
Security: Everyone

MAE: Multiple Ethernet Connects, Can't Select AppleTalk (1/96)

=====

Article Created: 14 June 1995
Article Reviewed/Updated: 30 January 1996

TOPIC -----

When opening the Network control panel, I get an alert box with the message "The AppleTalk Interface is not supported, please switch to LocalTalk." After saying OK, I see no interfaces in the Network control panel. How can I have MAE recognize a network interface card for use with AppleTalk?

DISCUSSION -----

The system currently has a network interface card other than le0 set as the default network. Therefore, MAE is unable to properly view the network interfaces available to the system.

To correct this, obtain Patch 2 from one of Apple Computer's internet sites:

- <ftp.support.apple.com> (130.43.6.3)
- www.mae.apple.com (17.255.216.51)

MAE 2.0.2 will support all network interfaces that support the dlpi framework.

Article Change History:
30 Jan 1996 - Updated article with MAE 2.0.2 from Patch 2.

Support Information Services

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Tech Info Library Article Number:17937



Tech Info Library

QuickTake 150 Close-Up Lens Works With QuickTake 100 (6/95)

Revised: 6/13/95
Security: Everyone

QuickTake 150 Close-Up Lens Works With QuickTake 100 (6/95)

=====

Article Created: 13 June 1995

TOPIC -----

Can I use the close-up lens that comes with the QuickTake 150 with the QuickTake 100?

DISCUSSION -----

The QuickTake 150 for Macintosh (M3790LL/A) and the QuickTake 150 for Windows (M3791LL/A) come with a close-up lens attachment that provides:

- Accurate image capture from 10-inches to 14-inches
- Parallax error correction
- Flash diffusion
- Built-in rangefinder

The close-up lens attachment will work with the QuickTake 100, as well. However, the close-up lens attachment is available ONLY as a service part (922-1371).

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Support Information Services

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Tech Info Library Article Number:17939



Tech Info Library

8•24 GC Software Must Have Correct Name To Load (6/95)

Revised: 6/13/95
Security: Everyone

8•24 GC Software Must Have Correct Name To Load (6/95)

=====

Article Created: 13 June 1995

TOPIC -----

I installed the 8•24 GC software for my Macintosh IIIfx running System 7.0.1, but at startup, the icon has a red circle and slash through it. How do I get the software to load?

DISCUSSION -----

This may be due to the control panel not being named correctly. Make sure the control panel has this exact name, "8•24 GC" (without the quotes).

Support Information Services

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Tech Info Library Article Number:17940



Tech Info Library

Dark Side of the Mac 4.2: Not Supported By Apple (6/95)

Revised: 6/13/95
Security: Everyone

Dark Side of the Mac 4.2: Not Supported By Apple (6/95)

=====

Article Created: 13 June 1995

TOPIC -----

I'm using the Dark Side of the Mac version 4.2 screen saver, is this a supported product.

DISCUSSION -----

Dark Side of the Mac is not produced or supported by Apple Computer. This product is, however, supported by the author, and you should contact the author for more information. The author provides contact information in the Read Me file that comes with Dark Side of the Mac 4.2.

Although Apple does not support the product, a copy of Dark Side of the Mac version 4.2 is posted on "ftp.apple.com". It can be found via the following path:

/dts/mac/hacks/darkside-of-the-mac-4-2.hqx

Support Information Services

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Tech Info Library Article Number:17941



Tech Info Library

LaserWriter Memory Management (6/95)

Revised: 6/13/95
Security: Everyone

LaserWriter Memory Management (6/95)

Article Created: 13 June 1995

TOPIC -----

This article provides information on LaserWriter memory management.

DISCUSSION -----

Memory allocation on PostScript LaserWriters varies greatly depending on many factors such as allowable paper sizes, standard amount of RAM, PhotoGrade/Fineprint capability, DPI, and so on. There are a few articles in the Tech Info Library that go into some discussion about how memory is handled for some printers. Here's a list of the ones we found:

"LaserWriter Pro 630: How Memory is Allocated"
"LaserWriter Pro 810: How Memory is Allocated"
"LaserWriter IINTX: Calculating Font Caching RAM"
"LaserWriter IINT and IINTX: How Its 2MB RAM Is Allocated"
"PostScript LaserWriter and Font RAM Availability"
"LaserWriter IINTX: RAM Allocation"

You could use these articles as "guidelines" in determining how RAM is allocated. Here are some excerpts from the articles, including some general information on how memory is handled in our Postscript LaserWriters:

- The MAJORITY of RAM in a PostScript LaserWriter is allocated for the page buffer (the area where the actual page is rendered before being printed).
- Page sizes and dpi values supported by the printer greatly determine the page buffer size. For example, to print a tabloid sized page at 800 dpi on a LaserWriter Pro 810 requires 14.1 MB of RAM for the page buffer alone. Thus, a LaserWriter Pro 810 with 16MB of RAM will only have approximately 1.9MB left for the PostScript interpreter, dictionaries, fonts, font caching, and so on.
- You can determine the amount of available VM by downloading the following PostScript code:

```
/Helvetica findfont 12 scalefont setfont
72 720 moveto
(Available VM: ) show
vmstatus exch sub 10 string cvs show
showpage
```

CAUTION:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

Support Information Services

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Tech Info Library Article Number:17942



Tech Info Library

NSI 1.5.1: Read Me File (5/96)

Revised: 5/15/96
Security: Everyone

NSI 1.5.1: Read Me File (5/96)

=====
Article Created: 14 June 1995
Article Reviewed/Updated: 15 May 1996

TOPIC -----

This article is the Network Software Installer (NSI) 1.5.1 ReadMe file.

DISCUSSION -----

Contents
=====

Interactions with other products

- If you are using System 6.0.8 or earlier
- If you are using MacIPX
- If you are using SoftWindows
- If you are using the Apple Internet Router
- If you are using the SNA•ps Gateway
- If you are using third-party Ethernet cards
- If you are using a system with a 68040 microprocessor

What the Network Software Installer disk includes

- Release notes
 - Network Software Installer 1.5.1
 - LaserWriter Bridge version 2.0.1
- Release notes from NSI 1.5
 - AppleTalk version 58.1.5
 - Apple Built-In Ethernet driver file version 1.0.1
 - Apple Ethernet NB driver file version 1.0.1
 - Apple Ethernet LC driver file version 1.0.1
 - Apple Ethernet CS driver file version 1.0.1
 - Apple Token Ring NB driver file version 1.0.2

Interactions With Other Products

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- If you are using System 6.0.8 or earlier: This installer works on only System 7 or later Macintosh computers. The last version of the Network Software Installer to support System 6 was version 1.4.5.

NOTE: This note is not part of the original Read Me file. NSI 1.5.1 should not be installed after installing System 7.5 Update 2.0, or computers with System 7.5.3.

- If you are using MacIPX: The new Token Ring driver is not compatible with MacIPX versions 1.1 and older. Contact Novell Technical Support to obtain an update to newer MacIPX software which will work with this Token Ring driver.
- If you are using SoftWindows: SoftWindows versions 1.0 and 1.0.1 using SMB (NetBEUI) protocols over Token Ring are not 100% compatible with the AppleTalk version included on this disk. Contact Insignia Solutions regarding availability of an update to the SoftWindows software which will work with this driver.
- If you are using the Apple Internet Router: If this release of the Network Software Installer is being used in conjunction with an Apple Internet Router v. 3.0 Installer, Apple Internet Router 3.0 must be installed first. This will ensure that the Router installation does not overwrite the newer AppleTalk software contained on NSI 1.5.1.

The LaserWriter Bridge cannot be used on a Macintosh that has any version of the Apple Internet Router software installed.

- If you are using the SNA•ps Gateway: To use this release of the Network Software Installer with a SNA•ps Gateway, a special custom install option is provided that installs a compatible Token Ring driver for the Token Ring 4/16 NB card. SNA•ps Gateway is not currently supported on the TokenTalk NB or Token Ring NB/c cards. A future version of the SNA•ps Gateway will not require the custom-installed driver.
- If you are using third-party Ethernet cards: The drivers contained in the new driver files do not support third-party Ethernet cards. A third-party card that has duplicated an Apple Ethernet board will use the appropriate Ethernet driver from the system file instead of the Apple driver in the extensions folder file. A system with a third-party Ethernet card will continue to operate using the previously-installed driver after installing this version of the Network Software Installer. Such systems will get the benefit of all of the other updates installed by this Network Software Installer, including the ability to install and use the LaserWriter Bridge.
- If you are using a system with a 68040 microprocessor: Some programs may quit unexpectedly or cause the computer to freeze when you attempt to open them over the network. This problem, as well as others, is fixed by installing the System Update 3.0 available from AppleLink or the Internet (<ftp.apple.com>). This fix has been incorporated into System 7.5.

What the Network Software Installer disk includes

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You can use this Network Software Installer to install the following networking products:

- LaserWriter Bridge version 2.0.1
- AppleTalk version 58.1.5
- Network Control Panel version 3.0.2
- EtherTalk version 2.5.7
- Apple Ethernet NB file version 1.0.1, containing drivers for all Apple NuBus Ethernet cards
- Apple Ethernet LC file version 1.0.1, containing drivers for all Apple LC Ethernet cards
- Apple Ethernet CS file version 1.0.1, containing drivers for all Apple Communications Slot Ethernet cards
- Apple Built-In Ethernet version 1.0.1, containing drivers for all built-in Ethernets
- TokenTalk version 2.5.7
- Token Ring Control Panel version 1.0.1
- Token Ring driver version 2.5.2 for the TokenTalk NB Card
- Token Ring driver version 1.0.2 for the Token Ring 4/16 NB and Token Ring NB/c Card
- A/ROSE 1.2.1, for use in some Token Ring configurations

Release Notes

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The following section provides some more technical information on the updates provided by this installer. Many readers will not be interested in these details.

Network Software Installer 1.5.1

This release corrects several installer problems that were present in version 1.5. Specifically,

- Localization is included for Swiss-German and Swiss-French systems

- The Finder attribute bits on the system file are no longer cleared. This could have caused the loss of the system, Finder and clipboard file icons. A desktop rebuild may be required to restore the icons after installing NSI 1.5.1 if the icons had been previously lost due to installing NSI 1.5.
- Crashes no longer occur on Power Macintoshes when Ethernet fails to initialize during startup, such as when the Ethernet is disconnected.

Apple Token Ring NB driver file version 1.0.2

There is a known problem with the new Token Ring driver introduced in NSI 1.4.5. The Token Ring control panel, which can be used to select the ring speed of the 4/16 NB card, is unable to set a locally-administered address. At this time, the free, unsupported "Apple LAN Utility" can be used to set a locally-administered address for all current Apple Ethernet and Token Ring interfaces. "Apple LAN Utility" can be downloaded from various Apple support areas. The Token Ring control panel does work properly in conjunction with the old driver used with SNA•ps gateways.

LaserWriter Bridge version 2.0.1

This control panel provides for activating the LocalTalk port while Ethernet or Token Ring is in use. AppleTalk traffic can be passed from the Ethernet or Token Ring to a LaserWriter connected to the LocalTalk port. The LaserWriter Bridge can only be used in conjunction with this version of the Network Software Installer and is not supported on System 6 or systems using Open Transport. The LaserWriter Bridge can only be installed from the custom installation area of the Network Software Installer. Please see the "LaserWriter Bridge User's Guide" document for more information on this program.

Release notes from NSI 1.5

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AppleTalk version 58.1.5

An address-mapping problem that could cause slowdowns in EtherTalk or TokenTalk networks was fixed.

The LAP Manager was fixed to avoid sending corrupted TEST and XID response packets in certain heavy traffic situations.

A bug that passed a corrupted length indication to multi-node clients was fixed.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

A LocalTalk problem on Power Macintosh computers was fixed that prevented LaserWriter Bridge from working properly.

An additional LocalTalk problem on Power Macintosh computers was fixed that caused slow performance when both LocalTalk and GeoPort were in use.

Apple Built-In Ethernet driver file version 1.0.1

This driver file contains drivers for all Apple built-in Ethernet implementations and is installed in the extensions folder.

The Macintosh Quadra 840AV and 660AV, Power Macintosh 6100, 7100 and 8100 and Workgroup Server 6150, 8150 and 9150 Ethernet drivers were updated to eliminate slowdowns, hangs, lost connections and data corruptions that were possible on some Ethernets.

The DuoDock II driver was updated to properly support locally-administered addresses, which are often used in DECnet environments.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

The driver configuration now properly supports machines with Macintosh Processor Upgrade with PowerPC 601 Processor cards.

Changed DMA parameters for the Macintosh Quadra 610, 650, 700, 800, 900 and 950 and Macintosh Centris 610 and 650 and Workgroup Server 60 and 80 to avoid packet loss when sharing the bus with other DMA masters such as SCSI cards and codec cards.

Apple Ethernet NB driver file version 1.0.1

This driver file contains drivers for all Apple NuBus Ethernet cards and is installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Ethernet LC driver file version 1.0.1

This driver file contains drivers for all Apple LC PDS Ethernet cards and is installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Ethernet CS driver file version 1.0.1

This driver file contains drivers for all Apple Communications-Slot Ethernet cards and is installed in the extensions folder.

A VM problem that could cause hangs was fixed (this could also have occurred when Ram Doubler was active).

Apple Token Ring NB driver file version 1.0.2

This Token Ring driver file handles all Apple Token Ring cards for the NuBus - the TokenTalk NB, Token Ring 4/16 NB and Token Ring NB/c. The file is installed

into the extensions folder. The new driver for the Token Ring 4/16 NB and Token Ring NB/c cards has significantly better performance and fewer problems in large source-routed environments than earlier drivers.

Version 1.0 had a problem when used with Token Ring 4/16 NB cards in 24-bit memory mode - attempting to create a resource file on a network volume would fail. Version 1.0.2 fixes this problem.

Version 1.0 uncovered a problem with the LLC implementation on NetWare servers using certain Token Ring cards. Version 1.0.2 provides a work-around for the problem.

This version fixes a hanging problem that could occur when a Token Ring cable was disconnected while the Macintosh was active on the Token Ring. This could have happened when either the Token Ring 4/16 NB card or the Token Ring NB/c card was in use.

This version now attempts to work-around a problem that occurs when a NetWare server using a version of APPLETLK.NLM prior to version 4.50C without a functioning ATTOKLLC.NLM installed. Lack of ATTOKLLC.NLM in such a NetWare server prevents the normal source route discovery process from working (as documented in the IBM Token Ring Architecture Reference). NetWare servers using APPLETLK.NLM version 4.50C or later require the LLC8022.NLM for proper operation.

Article Change History:

15 May 1996 - Added note on System 7.5.3 and System 7.5 Update 2.0.

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Tech Info Library Article Number:17943



Tech Info Library

Macintosh 630 Family: Processor Upgrade & Video/TV System (6/95)

Revised: 6/14/95
Security: Everyone

Macintosh 630 Family: Processor Upgrade & Video/TV System (6/95)

=====

Article Created: 14 June 1995

TOPIC -----

Can I use both the Apple Video/TV System and the PowerPC upgrade (Macintosh Processor Upgrade) in my Macintosh 630 series computer?

DISCUSSION -----

Yes, all of the Macintosh 630 family of computers will accept both the Apple TV/Video System and the Macintosh Processor Upgrade. However, the Macintosh LC 630 DOS Compatible computer will accept the Apple Video/TV System, but not the Macintosh Processor Upgrade.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Support Information Services

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Tech Info Library Article Number:17944



Tech Info Library

Modem AT Command Set: Description Part 2/2 (6/95)

Revised: 6/14/95
Security: Everyone

Modem AT Command Set: Description Part 2/2 (6/95)

Article Created: 14 June 1995

TOPIC -----

This is part two of a two part article that includes a description of modem states as well as the AT command set.

DISCUSSION -----

Vn Verbalize

The V command allows you to choose whether result codes are displayed as code numbers or English words. Unless these messages are being read by a program that does not easily recognize strings of characters, the default setting (V1) is recommended.

- 0 Displays result messages as code numbers (non-verbal).
- 1 Displays result messages as English words (verbal).

Verbalize result codes

- 0 OK Command is correct and has been completed
- 1 CONNECT Connection established
- 2 RING Incoming ring detected
- 3 NO CARRIER No connection or lost the carrier
- 4 ERROR Bad command
- 5 CONNECT 1200 Connection established at 1200 bps
- 6 NO DIALTONE Dial tone not detected in S7 seconds
- 7 BUSY Busy tone detected
- 8 NO ANSWER See ATD...@...
- 10 CONNECT 2400 Connection established at 2400 bps
- 11 CONNECT 4800 Connection established at 4800 bps
- 12 CONNECT 9600 Connection established at 9600 bps
- 15 CONNECT 7200 Connection established at 7200 bps
- 24 CONNECT 300/REL Connection with MNP 300 bps
- 25 CONNECT 1200/REL Connection with MNP 1200 bps

```
26 CONNECT 2400/REL Connection with MNP 2400 bps
27 CONNECT 4800/REL Connection with MNP 4800 bps
28 CONNECT 9600/REL Connection with MNP 9600 bps
29 CONNECT 7200/REL Connection with MNP 7200 bps
30 CONNECT 12000/REL Connection with MNP 12000 bps
31 CONNECT 14400/REL Connection with MNP 14400 bps
```

Protocol negotiation progress codes that work with ATW1 and S95.

```
40 CARRIER 300 Carrier detected at 300 bps
46 CARRIER 1200 Carrier detected at 1200 bps
47 CARRIER 2400 Carrier detected at 2400 bps
48 CARRIER 4800 Carrier detected at 4800 bps
49 CARRIER 7200 Carrier detected at 7200 bps
50 CARRIER 9600 Carrier detected at 9600 bps
51 CARRIER 12000 Carrier detected at 12000 bps
52 CARRIER 14400 Carrier detected at 14400 bps
66 COMPRESSION: CLASS 5 MNP class 5
67 COMPRESSION: V.42BIS V.42 bis compression
69 COMPRESSION:NONE No compression
70 PROTOCOL:NONE Asynchronous mode
77 PROTOCOL:LAP-M Error control mode with LAP-M protocol
80 PROTOCOL:ALT Error control mode with MNP protocol
128 MODEM IN USE Modem already in use for this or another application
```

Wn Progress result codes

The ATW setting determines whether progress result codes are displayed in addition to the ATX setting. Register S95 determines which progress result codes will be displayed.

- 0 Progress codes 40 through 80 disabled.
- 1 Progress codes 40 through 80 enabled.
- 2 Progress codes enabled; identical to W1.

When writing a CCL script, pay attention to result codes for scripts that require a specific response. If progress codes are enabled, the following strings appear on the screen during a connection (in this example, V.22 bis connection with no error control):

- CARRIER 2400
- PROTOCOL:NONE
- CONNECT 2400

Xn Active result code

The result codes listed in Vn are divided into subsets that can be selected by the X command. Dial tone detection is enabled by X2 or X4. Busy tone detection is enabled by X3 or X4. The commands X0, X1, and X3 are appropriate for blind dialing. Blind dialing means the modem dials out even though a dial tone is not detected.

- 0 Selects result codes 0 through 4 and 8.

- 1 Selects result codes 0 through 5, 8, and 10 through 28.
- 2 Selects result codes 0 through 6, 8, and 10 through 28.
- 3 Selects result codes 0 through 5, 7, 8, and 10 through 28.
- 4 Selects all result codes.

Yn Remote break handling

This command sets modem behavior for responding to a long break signal received from a remote modem:

- Greater than 1.6 seconds for an asynchronous connection.
 - An attention frame for MNP or V.42.
- 0 The modem ignores any long breaks received from the remote modem.
 - 1 On receiving a long break from the remote modem, the modem goes on-hook (hangs up) and returns to command state.
 - 2 On receiving a long break from the remote modem, the modem returns to command state but remains connected to the remote modem (does not hang up).

Zn Reset

The Z command tells the modem to perform a software reset.

- 0 Loads Profile 0 into the active profile.
- 1 Loads Profile 1 into the active profile.

&Cn DCD options

Since bus modems have no DTE-DCE serial interface, this command has no effect and remains for scripting compatibility.

0-2 Return OK.

&Dn DTR options

Bus modems do not have a DTR line. For bus modems, an on-to-off DTR transition occurs when you close the connection tool or the application currently using the modem. In this case, the modem goes on-hook.

This command has no effect and remains for scripting compatibility.

0-3 Return OK. Default value is 3.

&F Recall default profile

The current active profile is replaced by the default factory configuration.

&Gn Guard tones

This command specifies whether guard tones should be transmitted. Guard tones are used in some telephone systems to allow proper data transfer over the network. They are not used in the United States.

- 0 Disables guard tone.
- 1 Same as 2.
- 2 Sends 1800 Hz guard tone.

&Kn Local flow control

This command specifies which kind of local flow control is used. Since bus modems have built-in flow control mechanisms between the DTE and the DCE, this command has no effect. Flow control characters generated by the application software are always passed to the line.

This command has no effect and remains for scripting compatibility.

0-5 Respond OK, no action taken.

&Ln Switched/Leased line

This command affects the modem's behavior during the call setup and carrier handshake phases at the beginning of a connection.

0 Selects switched (dial-up) line.

1 Selects conditioned leased line.

&Pn Pulse mode make/break ratio

0 Sets the dial pulse make/break ratio at 39%/61%.

1 Sets the dial pulse make/break ratio at 33%/67%.

&Qn Connection mode

This command allows you to enable and disable error control mode. The &Q command setting has precedence over \N command setting and registers S36 and S48.

0 Asynchronous mode (no error control, disables V.42 and MNP).

5 Error control mode Instructs the modem to make a connection using V.42/MNP and fallback as necessary (see S36 and S48 registers).

6 Same as 0.

&Rn CTS/RTS

Since integrated modems have no DTE-DCE serial interface, this command has no effect and remains for scripting compatibility.

0-1 Return OK.

&Sn DSR

Since integrated modems have no DTE-DCE serial interface, this command has no effect and remains for scripting compatibility.

0-2 Return OK.

&Tn Self-tests

The following diagnostic tests are provided. These tests are available only when no error protocol is engaged. The duration of each test is controlled by register S18.

0 Terminate the test Used to terminate (escape from) a test in progress and return to command state, if S18=0.

- 1 Local analog loopback Initiates a local analog loopback test.
The escape sequence must be entered to terminate this test. This mode tests the local modem and data terminal equipment.
- 3 Local digital loopback Initiates a local digital loopback test.
The modem echoes characters back to the remote modem exactly as received.
- 4 Enable the remote digital loopback Enables the modem to respond to a remote modem attempting to place it in digital loopback test. If a remote modem places the local modem in remote digital loopback mode, the local modem echoes characters back to the remote modem exactly as received from the remote modem.
- 5 Disable the remote digital loopback Prevents the modem from responding to a remote modem attempting to place it in the digital loopback mode.
- 6 Remote digital loopback test In this mode, characters sent to the remote modem are echoed back to the local modem exactly as they were received by the remote modem. This mode tests both local and remote modems and telephone circuits.
- 7 Remote digital loopback with self-test Initiates a Remote Digital Loopback (like &T6) with self-test data pattern generation and error checking.
- 8 Local analog loopback with self-test Initiates a Local Analog Loopback (like &T1) with self-test data pattern generation and error checking.

The tests terminate when an AT&T0 command is issued or when register S18 expires. In the self-test mode, an error counter counts the number of errors and sends the final result to the host at the end of the test. The maximum number of errors that can be counted is 255.

Note: &T1 takes an optional parameter (a single character, A or O) to indicate whether the analog loopback must be done in originate (default) or answer mode.

&Un Trellis coding

Enables/disables Trellis code modulation in V.32.

- 0 Enable Trellis coding.
- 1 Disable Trellis coding.

&Vn Display profiles

Displays the following information

- Active profile
- Stored profile 0
- Stored profile 1
- Stored telephone numbers (see AT&Z).

&Wn Profile saving

This command saves the current active profile.

- 0 Saves the active profile into profile 0.

1 Saves the active profile into profile 1.

&Xn Synchronous clock source

Ignored. Always returns OK. The modem does not support synchronous modes.

&Yn Specify start-up profile

Allows choosing between two different configurations at start-up.

0 Specifies saved profile 0 as start-up configuration.

1 Specifies saved profile 1 as start-up configuration.

&Zn=s Store phone number

Stores the dial string s(64 characters maximum) in location n. The value of n can be equal to 0, 1, or 2. Note that the dial string s is constructed in the same fashion as the ATD command. It therefore must be the last command on the command line and no other characters should follow it in the dial string.

MNP-specific AT commands

\Bn Send break

Sends a break on the line for n times 100 milliseconds (n ranges from 1 to 9).

%Cn Compression enable

Enables/disables MNP Class 5 data compression during MNP reliable connections.

0 Disables MNP 5data compression.

1 Enables MNP 5 data compression.

\Gn DCE flow control

Enables/disables modem-to-modem flow control. Coupled with \X, it determines whether flow control characters are passed through or filtered.

0 Disables modem-to-modem flow control.

1 Enables modem-to-modem flow control.

\Nn MNP feature selection

Determines whether MNP error control is used in connections. The \N command setting also updates register S36.
The &Q command setting has precedence over \N command setting and registers.

0-1 Normal mode MNP disabled.

2 Reliable mode The modem will interrogate the remote modem for MNP capabilities. If the remote modem does not support MNP, the local modem hangs up.

3 Auto-reliable mode The modem interrogates the remote modem for MNP capabilities. If the remote modem supports MNP, a reliable

connection is established. If the remote modem does not support MNP, a normal connection is established.

\O MNP link negotiation

Treated as AT00 command. Modem returns to online state. MNP Link is not negotiated.

\Tn Inactivity timer

Where n is a decimal integer between 0 and 90 specifying minutes. Sets the number of minutes the modem waits before automatically hanging up when data is not sent or received. The default option n=0 disables the timer.

\U MNP link negotiation

Treated as AT00 command. Modem returns to online state. MNP link is not terminated.

\Vn MNP result codes

-
- 0 Disables modified MNP result codes.
 - 1 Enables modified standard MNP result codes 24 to 28.
 - 2 Returns OK. No effect.

\Xn Flow control processing

-
- 0 No pass-through flow control If modem-to-modem flow control is enabled, AT\G1, XON/XOFF characters received from the line are filtered out of the data stream; they are not passed to the DTE.
 - 1 Pass-through flow control If modem-to-modem flow control is enabled, AT\G1, XON/XOFF flow control characters received from the line are passed through to the DTE.

\Y MNP link signaling

Treated as AT00 command. Modem returns to online state. MNP link is not negotiated.

\Z MNP termination

Treated as AT00 command. Modem returns to online state. MNP link is not negotiated.

Support Information Services

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Tech Info Library Article Number:17945



Tech Info Library

Modem AT Command Set: S Registers

Revised: 6/14/95
Security: Everyone

Modem AT Command Set: S Registers

=====

Article Created: 14 June 1995

TOPIC -----

This article describes the S registers set and retrieved by the modem AT commands.

NOTE: Refer to the TIL articles titled "Modem AT Command Set: Description Part 1/2" and "Modem AT Command Set: Description Part 2/2" for a complete list of the AT commands.

DISCUSSION -----

The S register descriptions are formatted in the following manner:

S register	Function
------------	----------

Default	Range	Units
---------	-------	-------

Description

S0	Auto answer
----	-------------

0	0:255	Number of rings
---	-------	-----------------

The S0 register sets auto-answer. If the parameter value is non-zero, auto-answer is enabled at the program level. If the number of rings is zero, auto-answer is disabled at the program level. Auto-answer at the system level is controlled in the Express Modem control panel. The number of rings is also set in the Express Modem control panel. For the S0 setting, values from 1 to 255 are equivalent.

S1	Ring counter
----	--------------

0	0:255	Number of rings
---	-------	-----------------

The S1 register is cleared if no rings are detected throughout an 8-second interval. S1 is automatically set by the modem.

S2 Escape Character

43 <+> 0:127 ASCII Decimal

The S2 register determines the ASCII character to be used as the escape character. The escape sequence is used to force the modem from the online state to the local command state.

S3 Line-termination character

13 <CR> 0:127 ASCII Decimal

The S3 register determines the ASCII character to be used as the line-termination character. No matter what value S3 is set to, ASCII 13 is always recognized.

S4 Line-feed character

10 <LF> 0:127 ASCII Decimal

The modem returns the ASCII character programmed in the S4 register as the line-feed character when the modem sends response codes to the computer.

S5 Backspace character

8 <BS> 0:127 ASCII Decimal

The S5 register determines the ASCII character to be used as the backspace character.

S6 Initial blind dialing wait

2 2:255 Seconds

The S6 register determines the number of seconds your modem waits between the time it takes the telephone off-hook and when it actually begins dialing. If the modem is not blind dialing, this register is ignored.

S7 Carrier wait

50 1:255 Seconds

The S7 register determines how many seconds the modem waits for a carrier signal from a remote modem after the dial command line is executed, or when answering an incoming call. If your modem does not receive a carrier tone from the remote modem in the specified amount of time, it hangs up and sends the NO CARRIER message.

S8 Pause time

2 0:255 Seconds

The S8 register determines the delay time for each comma (,) encountered in the dial command line during the execution of the D (dial) command.

S9 Carrier detect response time

6 1:255 1/10 second

The S9 register determines how long the carrier must be present before it is recognized by the modem.

S10 Disconnect timing

14 1:255 1/10 second

The S10 register allows you to specify how long an interruption is necessary before the modem interprets the disruption as a loss of carrier and hangs up. If you enter 255, the modem ignores carrier detect status.

S11 Duration and spacing for DTMF dialing

95 50:255 Milliseconds

Register S11 is preset and should remain unchanged to ensure correct dialing.

S12 Escape code guard time

50 20:255 1/50 second

This value determines the length of time to wait for typing commands before and after issuing the escape sequence, as well as between the escape characters.

S18 Self-test duration

0 0:255 Seconds

The S18 register determines the duration of the AT&T diagnostic self-tests. If a non-zero value is chosen, the modem automatically halts the test after the time period specified and returns to command state. You must then issue an AT&T0 to actually exit the test. If S18 is zero, the self-test continues until it is ended by issuing the escape sequence to return to command mode followed by AT&T0.

S36 Negotiation failure treatment

5 0/3/4/5 Settings

Specifies action that should be taken when an attempt to connect in error-control mode fails.

0 Attempts V.42 connection. Hangs up if remote modem does not support V.42.

3 Makes asynchronous connection. No error control. Same as AT&Q0.

4 Attempts V.42 connection. If this fails, attempts MNP 2-4 connection. If this fails, hangs up.

5 Attempts V.42 connection. If this fails, attempts MNP 2-4 connection. If this fails, attempts asynchronous connection.

S37 Desired DCE connection speed

0 0/3/5:11 Settings

This value is used in conjunction with the ATN and ATB values to determine which modulations are attempted when connecting.

0 Auto-mode Attempts to connect at the highest possible speed.

3 Attempts to connect at 300 bps.

5 Attempts to connect at 1200 bps.

6 Attempts to connect at 2400 bps.

7 Attempts to connect at 4800 bps.

8 Attempts to connect at 7200 bps.

9 Attempts to connect at 9600 bps.
10 Attempts to connect at 12000 bps.
11 Attempts to connect at 14400 bps.

S38 Delay before hang up

0 0:254 Seconds

Specifies the delay before hanging up when the user issues the ATH command. When S38 is set to 255, the modem delivers all the data in its buffers before hanging up.

S46 V.42 bis data compression selection

138 136/138 Settings
136 V.42 only
138 V.42 with V.42 bis compression

S48 Feature negotiation action

7 0/3/7/128 Settings

Selects which error control features are allowed when making connections.

0 Negotiation disabled: try only V.42.
3 Negotiation enabled without detection phase.
7 Negotiation enabled with detection phase.
128 Negotiation disabled: try MNP only. V.42 disabled.

S95 Error control negotiation message option

32 4/8/32 Bits

A bit map to enable different result codes. Linked to ATW when ATW=1.

Bit	Value	Meaning
0-1	1	Not used.
2	4	Enables CARRIER messages only.
3	8	Enables CARRIER+PROTOCOL messages only.
4	16	Not used.
5	32	Enables CARRIER+PROTOCOL+ COMPRESSION messages.

S113 Data calling tone

0 No data calling tone
1 Enables data calling tone.

Support Information Services

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Tech Info Library Article Number:17946



Tech Info Library

AppleCD600e: Installer Needs to Overwrite QuickTime Dialog 6/95

Revised: 6/14/95
Security: Everyone

AppleCD600e: Installer Needs to Overwrite QuickTime Dialog 6/95

=====

Article Created: 14 June 1995

TOPIC -----

When I try to install the Apple 600e CD-ROM software, a dialog box comes up requesting to replace the QuickTime software, but that it would overwrite a newer version. I can either click Cancel or Continue. If I click Cancel then the CD software install fails.

DISCUSSION -----

The installer script for the CD-ROM software is attempting to install QuickTime 2.0 into your System Folder regardless of whether it is there or not. When the installer encounters the QuickTime resources in your System Folder with the same name as the ones it is trying to install, it compares the current date with the dates the floppy disks were created and therefore considers the QuickTime on your hard drive to be a "newer" version. If you click Cancel the installation will stop, if you click Continue, it will replace your QuickTime 2.0 software and all QuickTime resources will function normally.

Support Information Services

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Tech Info Library Article Number:17948



Tech Info Library

AppleCD 600e: Mounting Hard Drive When Starting From CD (6/95)

Revised: 6/30/95
Security: Everyone

AppleCD 600e: Mounting Hard Drive When Starting From CD (6/95)

Article Created: 14 June 1995
Article Reviewed/Updated: 30 June 1995

TOPIC -----

When I follow the instructions in my AppleCD 600 manual and startup my computer from the CD-ROM Setup disc by holding down Command-Option-Shift-Delete, the CD-ROM mounts on the desktop, but the internal hard drive does not. When I try to run the installer, the disc is the default drive and switch disk is grayed out.

I get the same results when I change the startup disk to the CD-ROM drive using the Startup Disk control panel.

DISCUSSION -----

If the internal hard drive, or whatever drive you want to install onto does not show on the Desktop, then it will not be available to the Installer either.

Here are two alternate ways to bootstrap the CD drive into operation. While the machine is booted up from the CD-ROM Setup CD:

Method 1 - Use HDSC Setup to mount the hard drive.
=====

Step 1

Insert a Disk Tools floppy disk and double click on Apple HD SC Setup.

Step 2

The internal hard drive should be seen by this utility. Click the internal hard drive to highlight it. Click Update.

When the update operation is complete, the internal hard drive will be mounted on the desktop. After quitting from HD SC Setup, resume by running the CD-ROM

installer from the CD-ROM Setup Disk.

A floppy disk with a third party mounting utility, such as SCSIProbe, may also be used to mount the internal drive on the Desktop, in order to use the installer.

Method 2 - Drag copying the minimum CD-ROM drive resources file.

=====

Step 1

Open the folder called "CD-ROM Software" from the CD-ROM Setup disk.

Step 2

Drag copy the file called "Apple CD-ROM" to a floppy disk.

Step 3

Choose Restart from the Special menu and let the Macintosh start up from the normal startup drive.

Step 4

Insert the floppy disk holding the "Apple CD-ROM" file copied from the CD-ROM Setup disk and drag it onto the closed System Folder on the hard drive. Click "OK" to the dialog indicating it will be placed in the extensions folder.

Step 5

Select Restart from the Special menu again.

Step 6

The CD-ROM Setup CD can be inserted after starting up from the hard drive and the CD volume will mount on the Desktop.

Step 7

Run the Installer from the CD-ROM Setup volume to finish installing all files from the CD-ROM Setup volume.

When the Installer is done, it will present an "Installation Complete" dialog with a Restart button. After restarting, your cpu will have full support for the AppleCD 600e.

Article Change History:

30 Jun 1995 - Clarified the steps to complete the workaround

Support Information Services

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Tech Info Library Article Number:17949



Tech Info Library

AppleCD Audio Player: Where Are CD-ROM Names Stored (6/95)

Revised: 6/14/95
Security: Everyone

AppleCD Audio Player: Where Are CD-ROM Names Stored (6/95)

=====

Article Created: 14 June 1995

TOPIC -----

I entered the names of all my audio CDs into the AppleCD Audio Player. When I loaded a CD that I had previously entered the track information, it was gone! When I check the others, they too were gone. What happened? Is there a file where this information is stored?

DISCUSSION -----

The AppleCD Audio Player will remember the names of Audio CDs and tracks between shutdowns. The names of CDs and tracks are stored in a file called CD Remote Programs in the Preferences Folder of your System Folder. If this file has been removed, the AppleCD Audio Player creates a new blank one. Your CDs will appear as Audio CD 1, Track 1, Track 2 and so on. In this case, you will need to replace the original file with a backup or re-type the information.

If you locate the original CD Remote Programs file which holds your CD titles, your titles will reappear when you drag it back into the Preferences Folder.

Support Information Services

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Tech Info Library Article Number:17950



Tech Info Library

GeoPort: Virtual Memory Compatible With Megaphone Program? 6/95

Revised: 6/14/95
Security: Everyone

GeoPort: Virtual Memory Compatible With Megaphone Program? 6/95

=====

Article Created: 14 June 1995

TOPIC -----

Will Megaphone Voice Messaging software work with virtual memory turned on?

DISCUSSION -----

Cypress Research's Megaphone software will work with Virtual Memory turned on, but if you are experiencing choppy or intermittent sound then try turning off virtual memory.

The extra hard drive access traffic that results from Virtual Memory operations can throw off the critical timing requirements of telephony applications.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:17951



Tech Info Library

MoviePlayer: Availability (5/96)

Revised: 5/23/96
Security: Everyone

MoviePlayer: Availability (5/96)

=====

Article Created: 14 June 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

Is MoviePlayer 2.x considered to be public domain software and can it be distributed freely, or is there a purchasing option for this software component?

DISCUSSION -----

A beta version of MoviePlayer 2.0 was first made available on the QuickTime 2.0 Software Developer's Kit which is available from the Apple Programmers & Developers Association (APDA). The first public release of the new MoviePlayer software was on the Power Macintosh 7500 and 8500 computers.

You can get MoviePlayer 2.0 by purchasing one of the new Power Macintosh 7500 or 8500 computers, or the QuickTime Developer Kit from APDA. MoviePlayer 2.1 is available as a software update from online services Apple publishes software updates on.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

..TIL17952-MoviePlayer-Availability_5-96_(TA33908).pdf

23 May 1996 - Updated for technical accuracy.

22 Sep 1995 - Added information on obtaining MoviePlayer 2.1.

15 Aug 1995 - Added information on MoviePlayer 2.0 availability.

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Tech Info Library Article Number:17952



Tech Info Library

System 7.5: Not Enough Access Privileges Message (6/95)

Revised: 6/14/95
Security: Everyone

System 7.5: "Not Enough Access Privileges" Message (6/95)

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Article Created: 14 June 1995

TOPIC -----

I get a message saying I do not have enough access privileges when I try to move anything from either the System Folder or from my Applications Folder. What is causing this?

DISCUSSION -----

This message is caused by a folder protection feature of System 7.5. This feature is designed to prevent users from inadvertently deleting essential system software files or installed programs from your hard drive. You can use the General Controls control panel to disable either folder's protection. To do this:

- . Open the General Controls control panel.
- . Locate the section named "Folder Protection" in the lower left corner.
- . Click the box to the left of either or both sections to remove the "X".

NOTE:

If the words "Protect System Folder" and "Protect Applications Folder" are grayed or dimmed, then you will need to turn File Sharing off in the Sharing Setup control panel before you can change the folder protection features.

You can now remove items from the folders you have changed.

Updating to System 7.5.1 with System 7.5 Update 1.0 changes the text of the message to be clearer and indicates how to turn off the protection feature.

Support Information Services

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Tech Info Library Article Number:17953



Tech Info Library

Macintosh 5200,5300,6200,6300: No GeoPort (12/95)

Revised: 12/4/95
Security: Everyone

Macintosh 5200,5300,6200,6300: No GeoPort (12/95)

=====

Article Created: 15 June 1995
Article Reviewed/Updated: 04 December 1995

TOPIC -----

Are any of the following computers compatible with the Apple GeoPort Telecom Adapter?

- Power Macintosh 5200/75 LC
- Power Macintosh 5300/100 LC
- Macintosh Performa 5200 series
- Macintosh Performa 5300 series
- Macintosh Performa 6200 series
- Macintosh Performa 6300 series

I've heard these computer do not support GeoPort, but they have a ninth pin on the connector in back which indicates it would work.

DISCUSSION -----

Although the modem ports* on these computers do have nine pins, the ninth pin is not functional; the port is not a GeoPort. The GeoPort Telecom Adapter is the interface to the phone system and requires a GeoPort connection on the computer. Because these computers do not have a GeoPort, you cannot use the either the GeoPort Telecom Adapter or the Apple Telecom 2.0 software.

*Note: Some of the Macintosh Performa computers mentioned here may include an internal modem. When an internal modem is installed on these computers, the modem port is covered.

Article Change History:
04 Dec 1995 - Updated title.
29 Nov 1995 - Added additional computers.

Support Information Services

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Tech Info Library Article Number:17954



Tech Info Library

Plaintalk 1.4: Using Speech Recognition ReadMe (8/95)

Revised: 8/4/95
Security: Everyone

Plaintalk 1.4: Using Speech Recognition ReadMe (8/95)

=====

Article Created: 15 June 1995
Article Reviewed/Updated: 04 August 1995

TOPIC -----

The following article is the Read Me document for Plaintalk 1.4 Speech Recognition.

DISCUSSION -----

Using Speech Recognition

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The software that enables your Macintosh to recognize speech is called Speakable Items.

This document explains how to set up and use speech recognition and the Speakable Items software.

What is Speakable Items?

Speakable Items is a software package that lets you speak commands to your computer. It enables the computer to understand commands that do such things as tell you what time it is, close windows on the screen, or tell you a joke. Speakable Items comes with a set of commands ("speakable items") the computer already understands. You can also create your own speakable items.

The Speakable Items software has three parts you'll often interact with: the Speakable Items control panel, the feedback window, and the Speakable Items folder.

- With the Speakable Items control panel, you turn speech recognition on and off and specify when the computer listens and how it gives you feedback.

- With the feedback window (which is open whenever speech recognition is turned on), you check whether the computer is listening and how it has responded to your command. (The command you gave is displayed in italics and followed by the computer's response.)
- The Speakable Items folder contains all the items whose names the computer can recognize. When you say the name of an item in this folder, the computer acts as if you double-clicked its icon. You can adjust the computer's vocabulary by adding and deleting items to this folder or by changing the names of the items. The folder is in the Apple Menu Items folder, which is in the System Folder. You can open it quickly by choosing the Speakable Items command from the Apple menu.

What you need to use Speakable Items

To use Speakable Items speech recognition, you need these pieces of hardware and software:

- a Power Macintosh computer
- system software version 7.5 or later
- a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audio-visual monitors
- the Speakable Items software, which is included on this hard disk

Preparing the microphone

If you don't have an audio-visual monitor with a built-in microphone, you must plug in an Apple PlainTalk Microphone or similar microphone into the microphone jack on your computer. Position the microphone as follows:

- Center the microphone on top of your monitor (if possible), with the microphone's Apple icon facing you.
- Make sure that the microphone is between 1 and 3 feet directly in front of you when you're giving spoken commands.
- Adjust the microphone cord so it is not looped around itself or any other cord.

Preparing the sound software

To make sure the microphone is turned on and set up correctly, you must use the Sound control panel or the Sound & Displays controls panel—whichever you have—to select your microphone as the sound input source:

1. Open the Control Panels window by pulling down the Apple menu and choosing Control Panels.

2. Open the Sound (or Sound & Displays) control panel by double-clicking its icon in the Control Panels window.

3. Use the control panel to select your sound input source:

- If you have the Sound control panel, click the Options button. In the Options dialog box that opens, click Microphone; or, if you are using the microphone built into an AudioVision 14 Display, click AV Connector instead.
- If you have the Sound & Displays control panel, click an item in the Sound In list to indicate which source you're using.

Note: If you get an error message while you're using the Sound (or Sound & Displays) control panel, you may need to turn off the speech recognition software (if you've already installed it). To do so, open the Speech control panel and choose Speakable Items from the Options pop-up menu, then click Off. When you're finished setting the sound options, you can turn speech recognition back on.

4. Close the Sound (or Sound & Displays) control panel.

Installing the Speakable Items software

You install the Speakable Items software by using the Installer programs, as described in these steps:

1. Print these instructions before you start. You won't be able to view them on screen during the procedure.

2. Quit any programs you are running.

3. While holding down the Shift key on the keyboard, choose Restart from the Special menu. Don't release the Shift key until you see the "Extensions Off" message on your screen.

4. To start the Installer program, double-click its icon. You can find the Installer icon in the same place you found these instructions.

5. In the initial screen that appears, click Continue.

6. In the next screen, click Install. The installation takes a while.

7. When you see a message that installation was successful, click Restart.

8. After the computer restarts, you will notice that speech recognition is on. Shortly after you restart, you will see two windows on the screen at once: the feedback window and an Apple Guide window containing the first panel of a brief introduction to speech recognition. (Note: You may also see a message telling you the standard microphone is not selected. If so, you need to check your sound input settings, as described in "Preparing the Sound Software," above.)

9. To go through the introduction, follow the instructions in the Apple Guide window.

At installation, speech recognition is turned on. You can turn it off in the Speech control panel, within the Speakable Items option.

Speaking commands

To make the computer respond to your spoken commands, follow these steps:

- Make sure the computer is listening and that you have said the computer's name if that's required. When you first install the software, it's set up so the computer is listening all the time for commands that start with the computer's name. (Note: This listening method is convenient, but it can be confusing if background sounds are mistaken for commands. You may want to change to the most reliable method, as described in "Determining How the Computer Listens," below.)
- Speak clearly. Wait for a moment of silence, then speak in a normal tone of voice at a normal rate of speed. For more information, see "Tips on Speaking to Your Computer," below.
- Use a spoken command that the computer understands. The computer can understand the name of any item in the Speakable Items folder.

Determining how the computer listens

The computer recognizes spoken commands only when it is listening for them. You use the Speech control panel to determine which of these listening methods it will use:

- The computer listens all the time, but it only recognizes commands after it hears its name. (This is the default method, the method that is standard if you don't change it in the Speech control panel. The default name is "Computer.")
- The computer listens all the time for commands. (This is the most convenient but least reliable method.)
- The computer listens only while you are holding down the listening key. (This method is recommended because it is the most reliable method.)

When the Speakable Items software is first installed, it is set up so the computer will listen all the time. If you want to change it to the most reliable method, follow these steps:

1. Open the Control Panels window by pulling down the Apple menu and choosing Control Panels.
2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu and choose Listening.

4. Within the Listening option, choose a listening key by pressing a key. You may combine the key you choose with any combination of the Shift, Option, or Control keys. Do not choose a key or key combination that you use in any of your application programs. If accepted, the listening key you choose appears in the Key(s) box.

5. Click the button labeled "Listen only while key(s) are pressed." The control panel will look like this:

Now that you've selected these options, you just press and hold your listening key whenever you speak a command and then release the key when you finish speaking the command. If you forget which listening key you chose, look below the character in the feedback window.

Note: You can also choose another method from the Listening area of the Speech control panel. For more information, see "How do I tell the computer when to listen?" in the Speech topic area of Macintosh Guide, available in the Guide menu on some Macintosh systems.

Tips on speaking to your computer

When you talk to your computer, keep the following tips in mind:

- Speak at a normal volume. Don't shout or speak loudly.
- Speak naturally. Don't exaggerate the pronunciation of words.
- Pause before giving a command. Don't give one command immediately after another. (If there are no sound waves drawn next to the feedback character, the computer is ready to hear the command.)
- Speak the name of items in the Speakable Items folder exactly. Don't add extra words or sounds.

Finding out more about Speakable Items

You can find out more information about how to use speech recognition by opening Macintosh Guide from the Guide (Question Mark) menu or by clicking the Question Mark button in the Speech control panel.

Within Macintosh Guide, check for the topic "Speech." If it's available, explore the information in that topic area. (The Speech topic is not available on some Macintosh systems.)

If you see a message that there isn't enough memory available

If you see a message that the Speech Recognizer is having trouble due to lack of memory, save all your open documents and quit the application programs you have open.

To avoid running out of memory while using speech recognition

- Quit the application programs you have open.
- Use the Speech control panel to choose a voice that requires less memory, or turn off voice feedback altogether. (The voices named "Agnes," "Bruce," and "Victoria" take up the most memory.)
- Use the Memory control panel to turn on virtual memory. (With virtual memory on, voices may be slightly distorted and, with some programs, speech performance may decrease.)
- Add more memory to your computer. (If you are running System 7.5 or later on a Power Macintosh with PowerTalk, QuickDraw GX, and English speech recognition installed, then it is recommended that your computer have at least 16 megabytes of RAM.)

Note on using the speech recognition software with application programs

Certain programs may interfere with speech recognition. For example, the speech recognition software sometimes cannot recognize spoken commands for 10-15 seconds after you have been typing in Microsoft Word.

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Article Change History:

04 Aug 1995 - Lowered security for product introduction.

03 Aug 1995 - Raising security level.

Support Information Services

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Tech Info Library Article Number:17956



Tech Info Library

Plaintalk 1.4: Using English Text-to-Speech ReadMe (8/95)

Revised: 8/7/95
Security: Everyone

Plaintalk 1.4: Using English Text-to-Speech ReadMe (8/95)

=====

Article Created: 15 June 1995
Article Reviewed/Updated: 07 August 1995

TOPIC -----

This is the Read Me file for using Text-to-Speech in Plaintalk software version 1.4.

DISCUSSION -----

About the English Text-to-Speech Software.

This document contains two parts:

- "Installation Notes for This Computer," which discusses which pieces of the text-to-speech software are already installed on this computer and explains how to install the optional additional software
- "Using English Text-to-Speech," which is a verbatim copy of the Read Me document that comes with the English text-to-speech software (and which will be installed on your hard disk if use the Installer in this folder)

Installation Notes for This Computer.

The folder in which you found this document contains the complete set of files needed to install English text-to-speech software. Most of the software, including MacinTalk 3, is already installed in your System Folder. MacinTalk 3 provides 19 high-quality voices. However, MacinTalk Pro, which comes with three even higher-quality voices, is not yet installed.

The Read Me document copied below, "Using English Text-to-Speech Software," explains more about the English text-to-speech software. You may want to read the following sections of "Using English Text-to-Speech Software":

- To learn how to use the software, go straight to the section "Trying Out the Text-to-Speech Software." Because all the software you need is already installed, you don't need the instructions in the section "Installing the Software."
- If you decide you want to install the MacinTalk Pro software to add the three higher quality voices to the 19 voices you already have, follow the instructions in "Installing the Software." Remember that MacinTalk Pro voices require more random-access memory (RAM) than MacinTalk 3 voices.

Using the English Text-to-Speech Software.

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. One of the programs that can read to you is the SimpleText program, which comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

The instructions in this document tell you:

- what you need to use this software;
- how to install the software;
- how to try out the software using SimpleText;
- how to choose a standard (default) voice;
- some technical details;
- how to solve common problems.

What you need to use the English text-to-speech software.

To use the software, you need the following software and hardware.

- a Macintosh or Power Macintosh computer;
- version 6.0.7 or later of system software;
- at least 300 kilobytes of RAM in addition to what the rest of your system software takes;
- at least 5 megabytes of space available on your hard disk.

Installing the software.

To install the English text-to-speech software, follow these steps.

1. Print these instructions before you start. You will not be able to view them on screen during the installation.
2. If you have been using an earlier version of text-to-speech software, see the note for you at the end of this section.

3. Quit any programs you have been using.
4. While holding down the Shift key on the keyboard, choose Restart from the Special menu. Don't release the Shift key until you see the "Extensions Off" message on your screen.
5. To start the Installer program, double-click its icon. You can find the Installer program in the same place you found these instructions.
6. In the introductory screen that appears, click Continue.
7. In the next screen, click Install. The installation takes a few minutes.
8. When you see a message reporting that the installation was successful, click Restart.

After the computer restarts, you can start using the text-to-speech software. You can try it out using the instructions in the next section.

Note for users of PlainTalk 1.0: The improved version of MacinTalk Pro included with this text-to-speech software is intended to replace the old PlainTalk text-to-speech software. However it may not work with some computers that have a 68030 processor. If you have such a computer and want to keep using the old PlainTalk text-to-speech software, you should not use the standard Install procedure described in these steps. Instead, after step 6, choose Custom Install from the pop-up menu, select MacinTalk 2 or MacinTalk 3, then proceed with steps 7 and 8.

Trying out the text-to-speech software.

You can try out the text-to-speech software in the SimpleText program by following these steps.

1. Open any SimpleText document. Or, since this document is already open, you can do the remaining steps with it.
2. Click anywhere in the text to make sure nothing is selected.
3. Choose Speak All from the Sound menu. (If you cannot hear anything, you may have the sound turned all the way off. Check in the Sound—or Sound & Displays—control panel.)
4. If you want the computer to stop reading, choose Stop Speaking from the Sound menu.

You can also try the following:

— To read a portion of the file, select the words you want to read then choose Speak Selection from the Sound menu.

— To have the computer speak in a different voice, select a voice from the Voices sub-menu in the Sound menu, then choose the Speak All or Speak Selection

command from the Sound menu.

– To use the text-to-speech features of other programs, see the instructions that came with those programs.

Choosing a standard (default) voice.

If you have system software version 7.0 or later, you can use the Speech control panel to choose your favorite voice to be the default voice for all your programs. To set the default voice, follow these steps.

1. Open the Control Panels window by pulling down the Apple menu and choosing Control Panels.
2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu at the top of the Speech control panel and choose Voice.
4. To change the default voice, choose the voice you want from the Voice pop-up menu. To hear what the voice you chose sounds like, click the speaker button. If you're concerned about RAM usage, Agnes, Bruce, and Victoria take about 1,500 kilobytes of RAM; the rest take 300 kilobytes or less.
5. To change the rate at which the default voice speaks, move the slider.
6. Close the control panel.

Technical details.

The software that enables your computer to speak has these components:

- Speech Manager, a system extension;
- one or more of these English speech synthesizers, depending on your hardware and software:
 - MacinTalk 2 for standard-quality speech,
 - MacinTalk 3 for high-quality speech,
 - MacinTalk Pro for highest-quality speech.
- several voice files, each identified with one particular synthesizer;
- the Speech control panel (unless you have system software version 6.0.7 or 6.0.8).

The Installer installs the files that are appropriate for your system.

- If you have version 6.0.7 or 6.0.8 of system software on any Macintosh, these files are installed.
 - Speech Manager, in the System Folder;

- MacinTalk 2, in the System Folder;
 - 9 voices, in the Voices folder, which is in the System Folder.
- If you have version 7.0 or later of system software on a Power Macintosh or on a Macintosh with a 68040 processor, the following files are installed.
- Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
 - MacinTalk 3 and MacinTalk Pro, in the Extensions folder;
 - 19 MacinTalk 3 voices, in the Voices folder, which is in the Extensions folder;
 - 3 MacinTalk Pro voices (Agnes, Bruce, and Victoria), also in the Voices folder.
- If you have version 7.0 or later of system software on a Macintosh with a 33 MHz or faster 68030 processor, the following files are installed.
- Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
 - MacinTalk 3, in the Extensions folder;
 - 19 voices, in the Voices folder, which is in the Extensions folder.
- If you have version 7.0 or later of system software on any other computer, the following files are installed.
- Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
 - MacinTalk 2, in the Extensions folder;
 - 9 voices, in the Voices folder, which is in the Extensions folder.

Troubleshooting (problems and solutions).

- My Macintosh won't speak.
 - Turn up the speaker volume in the Sound control panel.
 - Choose a voice that requires less random-access memory. The voices Agnes, Bruce, and Victoria take the most memory.
- The Installer program says there's a problem with the hard disk.
 - Re-install your system software, then try installing the English text-to-speech software again.
- The Installer program displays other error messages.
 - Make sure you restart the computer with extensions off, as described in "Installing the Software," above.
- I had an older version of text-to-speech software, then did a custom installation of the new software, but some of my older voices disappeared.
 - The custom installation you chose erased the older version of the software that can use those voices. You can install newer versions of the voices by doing another custom installation of the new software to install MacinTalk 2 or MacinTalk 3 – whichever you used to have. (If you're not sure which you had, you can install both.)

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Article Change History:

07 Aug 1995 - Updated with latest Read Me file.

04 Aug 1995 - Lowered security for product introduction.

26 Jun 1995 - Revised security.

Support Information Services

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Tech Info Library Article Number:17957



Tech Info Library

Plaintalk 1.4: Spanish Text-to-Speech Software ReadMe (8/95)

Revised: 8/7/95
Security: Everyone

Plaintalk 1.4: Spanish Text-to-Speech Software ReadMe (8/95)

Article Created: 15 June 1995
Article Reviewed/Updated: 07 August 1995

TOPIC -----

The following article is the Read Me document for Plaintalk 1.4 Mexican Spanish Text-to-Speech Software.

DISCUSSION -----

Using the Mexican Spanish Text-to-Speech Software.

With the Mexican Spanish text-to-speech software installed, many Macintosh programs can read Spanish text out loud. One of the programs that can read to you is the SimpleText program, which comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

The instructions in this document tell you the following:

- what you need to use this software;
- how to install the software;
- how to try out the software using SimpleText;
- how to choose a standard (default) voice;
- some technical details;
- how to solve common problems.

What you need to use the Mexican Spanish text-to-speech software.

To use the software, you need the following hardware and software:

- a Power Macintosh computer or a Macintosh computer with a 68020, 68030, or 68040 processor;
- version 7.0 or later of system software;

- at least 1.3 megabytes of RAM in addition to what the rest of your system software requires;
- at least 2 megabytes of space available on your hard disk.

Installing the software.

To install the Mexican Spanish text-to-speech software, follow these steps.

1. Print these instructions before you start. You will not be able to view them on screen while you're installing the software.

2. Quit any programs you have been using.

3. While holding down the Shift key on the keyboard, choose Restart from the Special menu. Don't release the Shift key until you see an "Extensions Off" message on your screen.

4. To start the Installer program, double-click its icon. You can find the Installer program icon in the same place you found these instructions.

5. In the introductory screen that appears, click Continue.

6. In the next screen, click Install. The installation may take a while.

7. When you see a message reporting that the installation was successful, click Restart.

After the computer restarts, you can start using the text-to-speech software. You can try it out using the instructions in the next section.

Note for users of older English text-to-speech software. Installing Mexican Spanish text-to-speech software may remove some or all of your older English text-to-speech voices. You can restore those voices by installing the new version of the English text-to-speech software.

Trying out the text-to-speech software.

You can try out the text-to-speech software in the SimpleText program by following these steps.

1. Use the SimpleText program to open any document that contains Spanish text. This document contains some appropriate text (after step 3 in this section).

2. Choose one of the two Spanish voices—named Carlos and Catalina—from the Voices sub-menu of the Sound menu.

3. Select some Spanish text, like the text below.

Las tecnologías de computo y telecomunicaciones tienen el potencial para permitir que muchas personas, que actualmente tienen poco o nulo acceso a informacion valiosa, tengan acceso a los tipos de informacion que pueden tener

una diferencia positiva en sus vidas. Puede ser la informacion que necesitan para ser granjeros mas productivos para que se puedan alimentar a si mismos en vez de depender de ayuda exterior para su supervivencia. O pueden ser las herramientas e informacion que necesitan para alcanzar su pleno potencial humano como participantes auto-suficientes y creativos en el sistema educativo y en sus sociedades.

4. Choose Speak Selection from the Sound menu. (If you cannot hear anything, you may have the sound turned all the way off. Check in the Sound or "Sound & Displays" control panel.)

5. If you want the computer to stop reading, choose Stop Speaking from the Sound menu.

Note: To use the text-to-speech features of other programs, see the instructions that came with those programs.

Choosing a standard (default) voice.

You can use the Speech control panel to choose your favorite voice to hear in all your programs. To set this default voice, follow these steps.

1. Open the Control Panels window by pulling down the Apple menu and choosing Control Panels.

2. Open the Speech control panel by double-clicking its icon in the Control Panels window.

3. Open the Options pop-up menu at the top of the Speech control panel and choose Voice.

4. To change the default voice, choose the voice you want from the Voice pop-up menu. The two Mexican Spanish voices are Carlos and Catalina. To hear what the voice you chose sounds like, click the speaker button.

5. To change the rate at which the default voice speaks, move the slider.

6. Close the control panel.

Technical details.

The software that enables your computer to speak has the following components.

- Speech Manager, a system extension;
- MacinTalk Espanol Mexicano, a system extension that creates Mexican Spanish speech;
- two Mexican Spanish voice files, in the Voices folder, which is in the Extensions folder;
- the Speech control panel.

Troubleshooting (problems and solutions).

- My Macintosh won't speak.
 - . - Turn up the speaker volume in the Sound control panel.
- The Installer program says there's a problem with the hard disk.
 - . - Re-install your system software, then try installing the Mexican Spanish text-to-speech software again.
- The Installer program displays other error messages.
 - . - Make sure you restart the computer with extensions off, as described in "Installing the Software," above.
- After I installed the Mexican Spanish text-to-speech software, my old English voices disappeared.
 - . - You can restore the voices by installing the new English text-to-speech software.

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Article Change History:

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26 Jun 1995 - Revised Security level.

Support Information Services

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Tech Info Library Article Number:17958



Tech Info Library

Plaintalk 1.4: Questions and Answers (8/95)

Revised: 8/4/95
Security: Everyone

Plaintalk 1.4: Questions and Answers (8/95)

Article Created: 15 June 1995
Article Reviewed/Updated: 04 August 1995

TOPIC -----

This article describes the new features and improvements of Plaintalk 1.4.

DISCUSSION -----

PlainTalk is a collection of software that enables your Macintosh to speak written text and respond to spoken commands. PlainTalk 1.4 includes three components, each with its own installer: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

This document describes each of these three software packages, and discusses the differences between PlainTalk 1.3 and PlainTalk 1.4.

English Text-to-Speech

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. To install the English Text-to-Speech software, you need the following software and hardware:

- any Macintosh or Power Macintosh computer
- version 6.0.7 or later of system software
- at least 300 kilobytes (K) of RAM in addition to what the rest of your system software requires
- at least 5 megabytes (MB) of space available on your hard disk

For more information about the English Text-to-Speech software, see the Using English Text-to-Speech document or the About English Text-to-Speech document in the English Text-to-Speech folder.

Mexican Spanish Text-to-Speech

With the Mexican Spanish text-to-speech software installed, many Macintosh programs can read Spanish text out loud. To install the Mexican Spanish text-to-speech software, you need the following hardware and software:

- a Power Macintosh computer or a Macintosh computer with a 68020, 68030, or 68040 processor
- version 7.0 or later of system software
- at least 1.3 MB of RAM in addition to what the rest of your system software requires
- at least 2 MB of space available on your hard disk

For more information about the Mexican Spanish Text-to-Speech software, see the Using Mexican Spanish TTS document in the Mexican Spanish Text-to-Speech folder.

English Speech Recognition

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The English Speech Recognition package includes the Speech Recognition system extension, the Speech control panel, and a utility called Speakable Items. With Speakable Items, whenever you say the name of an item inside the Speakable Items folder (which is inside the Apple Menu Items folder), the computer acts as if you double-clicked the item.

You can turn Speakable Items on and off using the Speech control panel. You can also use the Speech control panel to set several preferences for how Macintosh Speech Recognition programs listen and respond. For example, you can set the Listening options in the Speech control panel so that the recognizer only listens while you hold down a key of your choice. When you use this option recognition accuracy is improved and misfires (when the computer thinks you spoke a command but you didn't) are eliminated.

To install and use the English Speech Recognition software, including the Speakable Items software, you need the following hardware and software:

- a Power Macintosh computer
- system software version 7.5 or later
- a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audiovisual displays (Note: this version of PlainTalk does not work very well with the microphone built into some AudioVision 14 displays.)

For more information about the English Speech Recognition software and the Speakable Items utility, see the Using Speech Recognition document in the English Speech Recognition folder.

Differences between PlainTalk 1.4 and PlainTalk 1.3

Earlier versions of the PlainTalk software had a single installer program that installed both text-to-speech and speech recognition. This version (1.4)

contains three different installers to make it easier to install just the parts that are appropriate for your needs: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition. It doesn't matter what order you install them in, and you don't have to install them all. However, if you install version 1.4 of English Speech Recognition or Mexican Spanish Text-to-Speech then you should also install version 1.4 of English Text-to-Speech instead of using an older version of English Text-to-Speech.

Deciding whether to upgrade to version 1.4

In general, version 1.4 offers a more robust and flexible set of features than earlier versions. However, some people in special circumstances may do better with version 1.3.

- If you have a Macintosh AV computer that has a 68040 processor and you use PlainTalk 1.3's speech recognition capabilities, Apple recommends that you continue using version 1.3 of the PlainTalk software. Though the new text-to-speech software works with these computers, the new speech recognition software does not (because it runs on Power Macintosh computers only). It is not recommended that you mix versions, using the old recognition software with the new text-to-speech software. (Note: all the new software works with Power Macintosh AV computers.)

- If you have an Apple AudioVision 14 display, Apple recommends that you keep using version 1.3, unless you have an Apple PlainTalk microphone. Version 1.4 of the speech recognition software does not work well with the microphone built into some AudioVision 14 displays.

- If you make extensive use of PlainTalk 1.3's Speech Macros, the Speech Macro Editor, or the ability to speak menu commands, then you might want to continue using version 1.3. As part of the effort to make the software more robust, version 1.4 of English Speech Recognition supports Apple's standard AppleScript ScriptEditor instead of the Speech Macro Editor, and it does not support the ability to speak menu items. This is discussed more below.

What's new in English Text-to-Speech

English text-to-speech software version 1.4 is very similar to earlier versions. The main differences are:

- English Text-to-Speech 1.4 has its own installer.
- English Text-to-Speech 1.4 includes a Speech control panel that lets you select a system-wide default voice and rate, which is used by many text-to-speech programs, including SimpleText and the Speakable Items utility.

What's new in Mexican Spanish Text-to-Speech

PlainTalk 1.4 is the first version of PlainTalk to include support for Mexican Spanish text-to-speech.

What's new in English Speech Recognition

English Speech Recognition version 1.4 has some significant differences from the speech recognition software in earlier versions of PlainTalk. Some features have been eliminated to simplify speech recognition and make it more robust and usable. Other options have been added to increase accuracy and eliminate misfires.

- Version 1.4 offers a new listening option in the Speech control panel, "Listen only while key(s) are pressed," that lets you leave Speakable Items on all the time without worrying about misfires. It also improves the accuracy of recognition.
- Version 1.4 works in a wider range of environments thanks to its greatly improved adaptation to room acoustics.
- Version 1.4 does not include or support Speech Macros, the Speech Macro Editor, or Speech Rules. It still supports speaking dialog buttons and the Speakable Items folder. Any item you place inside the folder becomes speakable—saying the name of the item launches or opens the item. You can use the AppleScript ScriptEditor to create scripts that are launched by speaking a command: just save the scripts inside the Speakable Items folder. To see examples, look inside the Speakable Items folder.
- Version 1.4 runs on Power Macintosh computers only, and does not support Macintosh AV computers with 68040 processors. You can continue to use PlainTalk 1.3 on 68040 Macintosh AV computers.
- Version 1.4 does not include automatic support for recognizing the spoken names of menu commands. You can still manipulate scriptable programs, such as the Finder, using AppleScript commands. To see examples, look inside the Speakable Items folder.

Known bugs and workarounds in PlainTalk 1.4

This section describes a few bugs found at the last minute in PlainTalk 1.4, along with workarounds where possible. More troubleshooting information can be found in the documents in the three installer folders.

Apple AudioVision 14 displays. Version 1.4 of English Speech Recognition does not work well with the microphones built into some Apple AudioVision 14 displays. If you have problems using speech recognition with the microphone built into this display, you can use the Apple PlainTalk Microphone (part # M9060Z/A) or you can go back to using PlainTalk 1.3. To go back to version 1.3, use the 1.4 installers to deinstall the new version, then use your old 1.3 installers to reinstall version 1.3.

Mixing Text-to-Speech 1.4 with Speech Recognition 1.3. Apple does not recommend using version 1.4 of text-to-speech with version 1.3 of speech recognition. The PlainTalk 1.4 speech recognition options are visible in the Speech control panel but do not work with the PlainTalk 1.3 speech recognition software. If you do mix them, remember to use the correct control panel for your task: to configure speech recognition version 1.3, use the Speech Setup control panel; to configure text-to-speech version 1.4, use the Voice option of the Speech control

panel. You should ignore all the other options of the Speech control panel.

Wrong name in the Using English Speech Recognition document file. In the Using English Speech Recognition document, the phrase "Speakable Items control panel" is sometimes used where what is meant is "Speech control panel."

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Support Information Services

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Tech Info Library

Open Transport: Availability and Distribution (8/95)

Revised: 8/22/95
Security: Everyone

Open Transport: Availability and Distribution (8/95)

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Article Created: 15 June 1995
Article Reviewed/Updated: 22 August 1995

TOPIC -----

How will Open Transport be made available to customers?

DISCUSSION -----

Open Transport v1.0 ships as a component of the Mac OS on the Power Macintosh 9500. Later, as Open Transport v1.1 is released to support other Mac OS systems it will be made available through a wide range of channels and distribution options including:

- A no-charge upgrade to customers with MacTCP software maintenance agreements.
- A no-charge upgrade to customers with System Software maintenance agreements.
- Single-user and 20-user shrink-wrap retail products.
- A volume license agreement through the Apple Volume Licensing program.

In addition, Open Transport will be made available to developers who have adopted the technology and wish to ship it as a part of their products.

Article Change History:
22 Aug 1995 - Changed title.

Support Information Services

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Tech Info Library

Open Transport: Benefit of Open Transport (9/95)

Revised: 9/26/95
Security: Everyone

Open Transport: Benefit of Open Transport (9/95)

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Article Created: 15 June 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

How will Open Transport benefit users, network managers and organizations, and developers?

DISCUSSION -----

Open Transport provides individual computer users with many benefits. Two of the most visible and important benefits relate to making networking more accessible:

Ease of Switching Network Configurations

Open Transport makes it easy to switch from one network configuration to another. A computer user "on the go" might want to connect to the Internet in various locations, each requiring a different network configuration. With Open Transport, settings for each network location can be stored for easy access and use. Changed settings are available immediately -- no restart of the computer is required to use the new configuration.

Integrated Online Help

Open Transport integrates online help, based on Apple Guide technology, to make it easier for an individual to connect to a network, with fewer demands on network manager and support resources.

Open Transport provides significant new flexibility in setting up network configurations. A network manager can recommend or require configuration settings for users on the network, or allow users to determine their own settings.

Open Transport also improves support for centralized configuration management. For example, Open Transport/TCP supports the Dynamic Host Configuration Protocol

(DHCP), letting network managers administer addressing and other TCP/IP configuration information from a central server.

Open Transport makes it easier and more cost-effective to develop Macintosh-based applications for a wide variety of customers. With Open Transport, the Mac OS has built-in networking and communications based on cross-platform industry standards, including the POSIX compliant X/Open Transport Interface (XTI), Unix STREAMs and Data Link Provider Interface (DLPI). Applications written to support Open Transport can directly support a wide range of networking environments (serial, dial-up network, LAN, and WAN), and multiple protocols (AppleTalk, TCP/IP, serial, and others) from a common code base.

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Support Information Services

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Tech Info Library Article Number:17961



Tech Info Library

Open Transport: Compatibility Q & A (3/96)

Revised: 5/21/96
Security: Everyone

Open Transport: Compatibility Q & A (3/96)

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Article Created: 15 June 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on compatibility for Apple Open Transport.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Is Open Transport interoperable with installed AppleTalk or TCP/IP networks?

Answer: Open Transport is compatible with existing AppleTalk and TCP/IP network and network applications at the "packets on the wire" level. Organizations can introduce one, a few, or hundreds of new Macintoshes running Open Transport into their environment without worrying about interoperability with existing networking services.

Question: Will Open Transport require organizations to make changes in network administration, planning, or design?

Answer: The first Open Transport protocols -- AppleTalk and TCP/IP -- offer new features that give a network manager more flexibility and control. Some of these features, when implemented in a network environment will require additional thought and planning by a network manager.

In particular, Open Transport/AppleTalk adds support for the use of static (manually assigned) AppleTalk node addresses. If implemented, a network manager may prefer to assign addresses based on a pre-designed protocol address

management plan.

Open Transport/TCP adds support for the Dynamic Host Configuration Protocol (DHCP). DHCP allows network managers to allocate TCP/IP addresses and other configuration information from a DHCP server. Optimum deployment of DHCP services within an enterprise does require planning.

Question: Which DHCP servers are supported by Open Transport/TCP?

Answer: DHCP is an Internet Engineering Task Force (IETF) standards-track protocol. Apple's implementation conforms to the current versions of the applicable RFCs. To date, Open Transport/TCP has been tested successfully against the following DHCP server implementations:

- Competitive Automation (CA)
- FTP Software
- Hewlett Packard HP-UX
- Microsoft Windows NT Advanced Server
- Silicon Graphics (SGI)
- Sun Solaris
- Sun SunOS
- TGV

Question: What about compatibility with existing applications and network extensions?

Answer: Open Transport provides "backward compatibility" services in five areas:

- To support existing AppleTalk applications
- To support existing MacTCP applications
- To support existing Chooser devices
- To support existing applications dependent on the Mac OS LAP Manager
- To support existing applications dependent on the Mac OS classic network driver architecture.

Open Transport also provides compatibility software to ease the transition from classic NuBus NIC drivers to the new DLPI drivers and PCI bus cards.

Apple is working with developers to compile and publish a detailed compatibility and solutions guide for Open Transport. This is expected to be available later this calendar year.

Question: How is backward compatibility for AppleTalk implemented?

Answer: AppleTalk applications backwards compatibility is accomplished by intercepting all AppleTalk networking calls at the ".ddp" driver API. Above this protocol layer, applications written to the classic AppleTalk APIs continue to rely on the classic (680x0 based) implementation of AppleTalk. Calls to the ".ddp" driver are translated to the corresponding Open Transport XTI calls and are then passed to the new native implementation of DDP for processing. The process is reversed for incoming packets.

Using this approach, backwards compatibility is very robust - the classic implementations of ADSP, ASP, ATP, NBP, ZIP, and PAP are actually present (vs. simply mimicked). This also decreases the total memory footprint of backwards compatibility as compared to an implementation based on individual adaptation layers for each of the AppleTalk protocols. The primary disadvantage of this approach is that applications relying on backwards compatibility do not gain any meaningful performance increases on Power Macintosh; only native DDP is actually in use in these cases.

Open Transport/AppleTalk also includes broad support for existing applications and devices that rely on the existing Chooser or the Network Control Panel software for selection and configuration, known as "cdevs" and "adevs" respectively.

Question: How is backward compatibility for MacTCP implemented?

Answer: TCP/IP (MacTCP) applications backwards compatibility is accomplished by intercepting all MacTCP networking calls at the ".ipp" driver level. Calls to the ".ipp" driver are translated to corresponding Open Transport XTI calls and then passed to the native TCP/IP stack for processing. The process is reversed for incoming packets.

This approach allows all TCP/IP applications to benefit from the native implementation of the TCP/IP protocols on Power Macintosh, at least to some degree. While the backwards compatibility layer itself must run as 680x0 code, most of the handling of the packet happens in the new native Open Transport/TCP implementation. The drawback of this implementation is that "warts and all" backward compatibility is potentially less robust; applications depending on idiosyncrasies of MacTCP are more likely to need an update.

TCP/IP backward compatibility also includes targeted support for existing software products that rely on the MacTCP (or AdminTCP) Control Panel software for configuration. Support for these software modules, known as "mdevs", is more limited than that provided for "adevs", for certain technical considerations. A listing of supported "mdevs" is included with the Open Transport release documentation.

Question: Are there other known limitations to backward compatibility?

Answer: Yes, a few. Applications that rely on undocumented APIs or examine private memory data structures in the current AppleTalk or MacTCP implementations will not be fully compatible with Open Transport. Examples of this include the MacSNMP AppleTalk Agent and the shareware utility MacTCP Watcher. Updated versions of such software will be required.

For dial-up TCP/IP access, current implementations of SLIP and PPP (known as "mdevs") will not be able to auto-dial (automatically connect to the service provider when launching a TCP/IP application). Connections can, however, be made manually. New versions of SLIP and PPP will be able to support auto-dial.

Certain networking extensions - such as MacIPX from Novell, or PATHWORKS from Digital Equipment Corp. - as well as a few applications such as Insignia Solutions SoftWindows bypass AppleTalk and MacTCP networking APIs, and talk directly to the Macintosh OS Ethernet driver software. With the introduction of Open Transport and PCI bus to the Macintosh, this driver architecture and software has changed.

Open Transport backward compatibility allows these existing networking extensions and applications to communicate with the new DLPI based Ethernet driver as if it were a "classic" Ethernet device. This aspect of backward compatibility is limited to the built-in Ethernet adapter of Power Macintosh systems with PCI bus. Thus, current versions of such network extensions and applications (those that write directly to the Ethernet driver) cannot access PCI based network interface cards.

Apple is working directly with developers to identify and address all problems as quickly as possible.

Question: What about MacSNMP? When will it be revised to work with Open Transport?

Answer: MacSNMP v1.5 is under development and is planned to ship early in 1996. This release will include support for MIB II statistics from the Open Transport/TCP stack, transport of SNMP data over Open Transport/TCP, and support in the Macintosh System MIB for PCI interface cases.

Question: Is the Power Macintosh 9500 with Open Transport recommended as an AppleShare or PowerShare server platform?

Answer: Not at this time. As is discussed elsewhere in this document, to meet customer expectations in regards to anticipated increases in flexibility and performance, the AppleShare and PowerShare server applications need to be accelerated for Power Macintosh and adopt the new Open Transport APIs. Also, Apple must complete development and ship Open Transport version 1.1. Work on these projects is under way; additional details available will be available at a later date.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.
27 Nov 1995 - Added keyword and reference to OT 1.0.8 compatibility article.
22 Aug 1995 - Changed title.

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Tech Info Library Article Number:17962



Tech Info Library

Open Transport 1.0.8: Component Technologies Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: Component Technologies Q & A (3/96)

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Article Created: 15 June 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on the component technologies in Apple Open Transport.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What technology components comprise Open Transport?

Answer: Open Transport supports LANs and WANs and will integrate serial communications, modems, and remote (dial-up) networking in a consistent model for end-users, network managers, and developers. The Open Transport architecture consists of:

- standards-based programming interfaces for applications developers and for network interface controller developers,
- a new cross-platform development model for integration of networking with the underlying operating system,
- new implementations of Mac OS protocol stacks,
- new human interface applications and control panels, and
- a set of backward-compatibility support modules.

Question: What standards are implemented in the Open Transport architecture?

Answer: Open Transport brings standards-based networking into the Mac OS with support for:

- the X/Open Transport Interface (XTI), the POSIX compliant API for support

of networking applications,

- a port of a UNIX System V release 4.2 compatible STREAMs environment for network protocol developers, and
- the Datalink Provider Interface (DLPI), for development of network interface controller (NIC) drivers.

Question: Did Apple develop the STREAMs environment for Open Transport?

Answer: To maximize the stability, performance, and robustness of Open Transport, Apple selected Mentat Inc. -- the leading supplier of high performance kernel-level network software -- to supply both the STREAMs environment and the code base for Open Transport/TCP.

Mentat Portable STREAMs (MPS) is an independent fast, full-featured, multiprocessor safe version of the UNIX System V Release 4 STREAMs environment. Its inclusion in Open Transport provides a reliable platform for Open Transport protocols, including Apple's own implementation of a STREAMs-based AppleTalk stack. MPS also allows easy porting from other platforms of third party protocols. MPS is the same implementation of STREAMs found inside many UNIX operating systems including those from IBM and OSF, as well as other platforms such as Novell NetWare.

Mentat TCP (MTCP) is a robust implementation of TCP/IP that conforms with all industry standards, and makes a significant contribution to the performance and functionality of Open Transport/TCP.

Question: Is there more information available about Mentat Inc. and its products?

Answer: Mentat maintains a presence on the world wide web at:
<http://www.mentat.com>

Question: Which protocols are supported by Open Transport?

Answer: Open Transport version 1.0.x includes new, native implementations of AppleTalk, and TCP/IP, and new consistent API access to serial communications.

Apple and third parties are working to add support to Open Transport for Point to Point Protocol (PPP), NetWare (NCP/IPX), Windows 95 (SMB/TCP/NetBIOS), DECnet, LAT, and X.25. Some of these additional capabilities may be incorporated or bundled with future releases of Apple Open Transport (see Future Directions).

Question: What current Mac OS technologies, components, and products will Open Transport replace?

Answer: When installed Open Transport replaces the current Mac OS implementations of AppleTalk and TCP/IP (including the protocols and the "Network", "MacTCP", and "Admin TCP" control panels). Open Transport is also

designed to replace the Connection Manager and the Communications Resource Manager of the current Communications Toolbox architecture.

Sometime after Open Transport ships as a shrink-wrap software package for the installed base of Macintosh systems, it is planned to replace the "AppleTalk Connection for Macintosh" and "TCP/IP Connection for Macintosh" products.

Question: Is Apple migrating serial communications away from the Communications Toolbox (CTB)?

Answer: Partially, but not entirely. The CTB File Transfer and Terminal Managers continue to be supported and will be preserved in the Copland OS release -- although on new Open Transport/Serial underpinnings.

Over time, plans call for the CTB Connection Manager and its tools to be phased out in favor of Open Transport. In particular, while the Copland release of the Mac OS is expected to provide support for the Connection Manager APIs, at this time Apple has no plans to port the existing Connection Tools to Copland. Thus, Apple recommends that developers plan their update to Open Transport/Serial (and away from CTB Connection Manager) to coincide with (or precede) the availability of the Copland OS release.

Question: What key files are present when Open Transport has been installed on a Mac OS system?

Answer: When installed, Open Transport adds the following Extensions to the Mac OS System Folder:

- Open Transport Library
Open Transport code resource for 680x0-based Macintosh systems.
- Open Tpt AppleTalk Library
Code resource for AppleTalk communication protocol for 680x0-based Macintosh systems.
- Open Tpt Internet Library
Code resource for TCP/IP communication protocol for 680x0-based Macintosh systems.
- OpenTransportLib
Open Transport code resource for PowerPC-based Macintosh systems.
- OpenTptAppleTalkLib
Code resource for AppleTalk communication protocol for PowerPC-based Macintosh systems.
- OpenTptInternetLib
Code resource for TCP/IP communication protocol for PowerPC-based Macintosh systems.
- Ethernet (Built-In)
Code resource to allow access to built-in Ethernet port.
- Serial (Built-In)
Code resource to allow access to built-in serial port.

Question: Are there any changes in AppleTalk or TCP/IP with Open Transport?

Answer: Yes. The new Open Transport/AppleTalk and Open Transport/TCP protocol stacks both have been implemented as Open Transport STREAMs modules and as native code on Power Macintosh computers. They support the new XTI APIs, and their shared libraries can be dynamically loaded and unloaded as needed.

Both protocols also support dynamic reconfiguration (changed settings without requiring reboot), and feature new configuration applications offering Basic, Advanced, and Administrator tools. The new configuration applications -- AppleTalk and TCP/IP -- replace the older control panel implementations -- Network, MacTCP, and AdminTCP. For backward compatibility purposes, the new applications continue to be stored in the Control Panels folder in the System Folder.

Each protocol stack also offers addition protocol-specific feature enhancements.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.
27 Oct 1995 - Updated to OT 1.0.8.
28 Sep 1995 - Added Info Alley information; updated article.

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Tech Info Library Article Number:17963



Tech Info Library

Open Transport: General Information Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport: General Information Q & A (3/96)

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Article Created: 15 June 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a general information questions and answers for Apple Open Transport.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What is Open Transport?

Answer: Open Transport is the new modern networking and communications subsystem for the Mac OS. Open Transport is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Macintosh customers, while preserving and enhancing the Mac OS, built-in support for easy-to-use networking.

Question: What long-range Apple goals are advanced through Open Transport?

Answer: Apple believes that communications and collaboration technologies are integral and fundamental to personal and workgroup computing. With Open Transport, our goal is to make the Mac OS the best desktop OS for multiprotocol networking, anywhere.

Question: What needs must be addressed to be "the best"?

Answer: Networking and communications technologies are mission critical, so reliability is a base-level requirement. Organizations require interoperability in heterogeneous environments; full compliance with standards is necessary. High

performance is also key. Increasing file sizes -- often related to the rich media types found in graphics and publishing, multimedia, video production, and technical markets -- create a demand for effective use of higher bandwidth communications technologies such as ISDN, FDDI, fast Ethernet and ATM.

Beyond these base-level requirements, network managers, end-users, and developers each have additional needs.

Network managers need networked systems to support a flexible model of administration that accommodates both centralized and decentralized management models.

Users are typically more interested in using communications as a basis for productivity applications. As such, they are interested in networking that is easy to set up and easy to use. This becomes even more important when users are mobile, needing access to networking services from wherever they may be -- without requiring complex reconfiguration for each connection type.

Developers need to address the broadest possible markets with minimum incremental investment. In short, they need standards-based, cross-platform APIs and development tools.

Question: What were some of the key goals driving the development of Open Transport?

Answer: Apple began with two key assumptions: that networking is inherently a multi-platform, multi-protocol proposition; and that customers cannot start over to achieve networking interoperability. This lead us to adopt five key design goals:

- Open Transport must protect customer and developer investments in existing network infrastructure and applications.
- Open Transport must be based on existing cross-platform industry standards.
- Open Transport must provide users with an easy to set-up, easy to use abstraction of the underlying complexity of multi-protocol networking.
- Open Transport must also provide a complementary abstraction of networking and communications services for applications developers.
- Open Transport must offer a flexible run time model -- one that lets a specific protocol be configured and selected at run time, rather than statically linked at compile time.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

27 Nov 1995 - Added keyword and reference to OT 1.0.8 information.

22 Aug 1995 - Changed title.

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Tech Info Library Article Number:17964



Tech Info Library

Open Transport 1.0.8: Performance Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: Performance Q & A (3/96)

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Article Created: 15 June 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on performance for Apple Open Transport.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Is Open Transport native on Power Macintosh? Does this make networking faster?

Answer: Open Transport is written to take advantage of the PowerPC processor -- it is native code. This provides the necessary foundation for increased networking performance in the Mac OS. To realize performance gains, however, it is equally important that networking applications also be accelerated for Power Macintosh, and that applications adopt the new Open Transport XTI-based programming interfaces.

The built-in "backward compatibility" support for existing AppleTalk and TCP/IP applications must continue to run as 680x0 code in emulation on Power Macintosh. This protects a customer's investment in networking applications, but also obscures underlying performance increases from the native protocol implementations.

Question: Will existing networking applications see performance improvements with Open Transport on Power Macintosh?

Answer: In general, current Mac OS networking applications are written for the 680x0 processor, and use the "classic" (680x0-based) networking programming

interfaces. These are not likely to see performance boosts with Open Transport, as most of the performance potential is based on the move to native code for the PowerPC processor. Even for Power Macintosh native applications, a continued use of the Open Transport backward compatibility libraries offsets most of the performance gains in the low level protocol handling.

Users that select Power Macintosh native applications that are Open Transport-ready will realize the greatest performance gains. Performance of specific network applications may also be significantly influenced by the underlying processor speed of the system. Customers with demanding, network I/O intensive applications should give strong consideration to the higher performance PowerPC-based Macintosh systems.

However, even with 680x0 emulated applications using backward compatibility, TCP/IP users are more likely to see some performance improvements with Open Transport. This is because of the differences in the way compatibility is provided for MacTCP vs. AppleTalk, and differences in the two protocol architectures.

Question: Does the native code include Ethernet drivers for Macintosh onboard Ethernet adapters?

Answer: PCI-bus Power Macintosh systems ship with a PowerPC native DLPI Ethernet driver for built-in Ethernet. Power Macintosh 6100, 7100, and 8100 models currently have 680x0-based drivers.

Question: When will new or updated applications that support the native Open Transport APIs become available?

Answer: New applications and updated versions of existing applications that are native and use Open Transport are available now. Users are urged to contact the specific third party vendor of interest for more details on their specific product release plans.

Question: How much faster will native Open Transport applications be?

Answer: Networking performance is influenced by many factors. As noted above, customers will see the highest performance networking when using Power Macintosh native applications that fully support Open Transport APIs. Performance will be greater with protocols that use larger datagram sizes, such as TCP/IP, than with AppleTalk (which has a fixed and limited datagram size). On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor. Comparative shopping for NICs -- based on price, service, reliability, and performance -- will be in order.

Open Transport -- running on the built-in Ethernet of the Power Macintosh 9500 -- has been clocked at 9.3 Mbps throughput using low-level TCP/IP benchmarks. A pre-release version of a third party Open Transport-native implementation of 'NFS' protocols was benchmarked at 8.4 Mbps. Both figures approach theoretical

maximum performance for 10 Mbps Ethernet. AppleTalk performance is somewhat lower, with low-level benchmarking coming in at a bit over 7.5 Mbps throughput.

Question: What about high-speed networking connections like fast Ethernet, ATM, and FDDI?

Answer: The Open Transport engineering team is continuing to work with NIC developers to realize high-performance DLPI drivers for high-speed datalinks. This is a cooperative effort, with work being done on both driver code and on Open Transport. We expect that high-speed datalink NIC drivers based on Open Transport v1.1 can be fully competitive with other PCI networking products. Of course, performance tuning will be an ongoing priority, as Apple intends to always offer a platform capable of industry leading network performance.

Benchmarking on these types of datalinks, with pre-release Open Transport v1.1 is in progress. Preliminary testing results are very promising:

- 48 Mbps with a Rockwell fast Ethernet card and driver
- 75 Mbps with a Rockwell FDDI card and driver
- 93 Mbps with an Interphase ATM-155 card and driver

These tests are based on Open Transport/TCP running on a Power Macintosh 950/132, and reflect memory to memory, point to point transfers on a dedicated test bed. Additional upside is anticipated as performance tuning continues in preparation for the final release of Open Transport 1.1.

AppleTalk performance is expected to be lower than TCP/IP performance due to various technical issues, including DDP packet size, and the ATP retry-acknowledgment algorithm. Current testing on fast Ethernet is turning in figures around 35-40 Mbps with a PowerPC native AFP server running against a group of still emulated AFP clients. This is a significant performance improvement over current AppleTalk solutions, and further progress should be realized as client code is revised to take advantage of Open Transport and PowerPC.

Question: Will developers ship NICs for fast datalinks based on Open Transport v1.0.x, or wait for tuning planned for v1.1?

Answer: Each developer will make an independent decision to bring their product to market at such time as they are satisfied with the combined performance and reliability of their product with Open Transport. Several vendors are currently shipping PCI solutions for 100BaseTX, ATM, and FDDI. Contact the developer of interest for current availability information (see Developer Adoption).

Article Change History:

- 26 Mar 1996 - Added statement on Open Transport 1.1 release.
- 15 Nov 1995 - Updated several answers.
- 27 Oct 1995 - Updated for OT 1.0.8.

Tech Info Library Article Number:17965



Tech Info Library

Open Transport 1.0.8: System Requirements Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: System Requirements Q & A (3/96)

Article Created: 15 June 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on system requirements for Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Which Mac OS systems will be able to take advantage of Open Transport?

Answer: Open Transport is designed to work on any Apple Macintosh or Mac OS compatible computer with a Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603, or 604 microprocessor. Systems supporting Open Transport must be running System 7.5.x. For 680x0 Macs, 8 MB of total memory is recommended. For Power Macintosh computers, 12 MB of total memory is recommended.

Open Transport is compatible with the use of Virtual Memory, and takes full advantage of the Power Macintosh Code Fragment Manager to offer a much lower system RAM footprint when VM is turned on.

Question: Is Open Transport available for all these systems now?

Answer: Open Transport v1.0 was initially released to support only the Power Macintosh 9500. Beginning with v1.0.6, Open Transport is designed to support all PCI-bus Power Macintosh models, including the Power Macintosh 7200, 7500, 8500, and 9500 systems.

Support for 680x0 and NuBus-based Power Macintosh systems is planned for release

later in 1995.

Question: Will Open Transport v1.0.x run on other Macintosh systems?

Answer: The installer for Open Transport v1.0.x is designed for use specifically on the PCI-bus Power Macintosh systems. While it would be possible to move such an installation of Open Transport to another Macintosh system (for example, on an external hard drive), it is not supported by Apple and is not recommended.

Question: Why was Open Transport made available on PCI-bus Power Macintosh CPUs first?

Answer: Starting with the introduction of the Power Mac 9500, Apple moved to adopt industry standards for both network driver software -- Open Transport DLPI -- and network hardware -- PCI bus. This strengthened the business case for new and existing third party developers who could, as a result, include Power Macintosh in their plans for cross-platform network connectivity products. The Power Macintosh 9500 was the first system to incorporate both of these standards, and has since been followed by additional systems and configurations.

In particular, Apple made the business decision to move to standards for networking on the hardware and software fronts in tandem, i.e., PCI and DLPI. This created a dependency that required customers deploy Open Transport with their PCI-based Power Macintosh systems. It also minimized the work by third parties needed to create drivers for new PCI-bus networking cards. As a result, customers are able to find a broad selection of third party networking options for Macintosh with PCI bus.

Question: Can PCI-bus Power Macintosh systems run "classic" AppleTalk or MacTCP instead of Open Transport?

Answer: Open Transport is required to support PCI-bus networking. Beginning with the Power Macintosh 9500, classic networking applications are supported through Open Transport backward compatibility.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.
27 Oct 1995 - Revised article for OT 1.0.8.
22 Aug 1995 - Changed title.

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Tech Info Library Article Number:17966



Tech Info Library

Open Transport: Transport Independence (8/95)

Revised: 8/22/95
Security: Everyone

Open Transport: Transport Independence (8/95)

Article Created: 15 June 1995
Article Reviewed/Updated: 22 August 1995

TOPIC -----

What is transport independence and how does Open Transport enable it?

DISCUSSION -----

Different people judge networking in different ways. End-users focus on what they can do using the network, and tend to select applications based on functionality and ease of use. Network managers are interested in delivering reliable network services in a cost efficient manner. Developers want to create compelling functionality for users, but are strongly influenced by the availability of networking infrastructure.

Unfortunately, with current networking tools and systems, developers are forced to tie their applications to specific network infrastructure requirements -- driven by their API choices. This creates a potential conflict between individual and organizational needs. If network managers dictate protocols to control support costs, users may not have access to the applications they need. If user dictate specific applications, they may increase support costs for the network manager by "dragging along" specific network infrastructure requirements. Developer are stuck in the middle, making decisions for both users and network managers by selection of an API at compile time.

Transport independence is a concept that breaks this undesirable linkage. When implemented, it allows developers to write to a uniform set of APIs, users to focus on selecting the best applications, and network managers to make independent decisions about network infrastructure, all on an ongoing basis.

Open Transport brings together three technologies to support the development and deployment of transport independent applications on the Mac OS:

- A unified set of cross-platform, standards-based APIs for all networking and communications protocols. For example, applications can send and receive data

over an AppleTalk LAN or the TCP/IP-based Internet using the same programming interfaces.

- A dynamic link-and-load architecture and set of protocols. Protocols are loaded and unloaded on demand, conserving system resources, and making it possible to substitute say, TCP for ADSP at the application launch time.
- An addressing and naming support toolbox. For example, applications can open a communications end-point by name (such as, "seeding.apple.com" or "printer16:LaserWriter@sales". Open Transport will automatically provide the appropriate name-to-address mapping services (DNR, NBP, and so on). Together these support the creation of transport independent applications on the Mac OS.

However, not all Open Transport applications are transport independent. While Open Transport provides the necessary foundation, there are certain guidelines and programming practices required for developers to create transport independent applications. For example, most protocols have many features in common -- but also some features that are protocol-specific. If an application depends on a protocol-specific feature, then it will depend upon that protocol as well.

In some cases it may be appropriate to develop a transport-specific application. For example, an MBone client is currently only useful when configured for communication using TCP/IP.

Article Change History:

22 Aug 1995 - Changed title.

Support Information Services

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Tech Info Library Article Number:17967



Tech Info Library

Color LW 12/600 PS: Consumables That Stop Printer (6/95)

Revised: 6/16/95
Security: Everyone

Color LW 12/600 PS: Consumables That Stop Printer (6/95)

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Article Created: 16 June 1995

TOPIC -----

When consumables reach end-of-life, does the printer stop?

DISCUSSION -----

Printer operation stops only for three consumables whose ends-of-life might otherwise cause damage to the printer. They are the toner disposal box, fuser oil (printer stops 50 pages after warning light first appears), and the fuser assembly (printer stops 500 pages after warning light first appears).

Ends-of-life for toner and photoconductor cartridges do not stop the printer although image quality will begin to degrade. For example, toner end-of-life is evident by uneven or incomplete toner coverage. Photoconductor end-of-life is evident when you begin to see thin vertical black lines starting about 8 mm from the top and running to the bottom of the page.

Support Information Services

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Tech Info Library Article Number:17968



Tech Info Library

Color LaserWriter 12/600 PS: Fuser Oil Pump Error (10/96)

Revised: 10/23/96
Security: Everyone

Color LaserWriter 12/600 PS: Fuser Oil Pump Error (10/96)

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Article Created: 16 June 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

I just moved my Color LaserWriter 12/600 PS to a new location and now the status panel is showing an error that the Read Me file identifies as a fuser oil pump error (the paper-jam and paper-out lights flash, the yellow toner light illuminates, and one maintenance light is on). What happened?

DISCUSSION -----

The oil may not have been properly extracted from the fuser before you moved the printer. If oil is present in a printer that is being moved and tilted, the oil overflow sensor can become contaminated, which will cause the oil pump error you describe. When the fuser oil pump error occurs, servicing is required.

Before moving your Color LaserWriter 12/600 PS follow the extraction procedures found in Appendix E of the user's guide, and in the Fuser Oil Extraction topic in Service Source.

This information is also applicable to the Color LaserWriter 12/660 PS printer.

This article was published in the "Information Alley":
Volume II, Issue 5, Page 8

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS.
19 Jul 1995 - Added Info Alley information; updated.

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Tech Info Library Article Number:17969



Tech Info Library

Power Macintosh 5200: Level 2 Processor Cache (12/95)

Revised: 12/19/95
Security: Everyone

Power Macintosh 5200: Level 2 Processor Cache (12/95)

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Article Created: 16 June 1995
Article Reviewed/Updated: 19 December 1995

TOPIC -----

I have a Power Macintosh 5200 series computer. I realize that the computer comes with 256K Level 2 processor cache, but is it possible to upgrade the cache?

DISCUSSION -----

Since the cache card on this computer also contains the computer's read-only memory (ROM), it would be necessary to purchase a cache card which would include the ROM.

Because of this requirement, Level 2 cache cards used on other Power Macintosh computers will not work with this computer.

Apple Computer, Inc. does not manufacture a higher-capacity cache card for this computer.

Article Change History:
19 Dec 1995 - Added clarification.

Support Information Services

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Tech Info Library Article Number:17970



Tech Info Library

At Ease 3.0 Workgroups: Upgrading From Earlier At Ease(9/95)

Revised: 9/26/95
Security: Everyone

At Ease 3.0 Workgroups: Upgrading From Earlier At Ease(9/95)

=====

Article Created: 16 June 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

I am about to install At Ease 3.0 for Workgroups on my systems that already have At Ease users and set-ups installed. Will I lose all my users and set-ups?

DISCUSSION -----

For most At Ease upgrades, your administrator password (if you have one) remains the same in the At Ease Setup program in At Ease for Workgroups 3.0. When the At Ease Setup program asks for an administrator name, type At Ease Administrator, which is the default administrator name.

Upgrading From Version 1.x

If you are upgrading from At Ease version 1.x to At Ease for Workgroups 3.0, you must first remove the old version by using the At Ease Installer program that came with the old version. When the Installer screen is displayed, hold down the Option key to change the Install button to Remove. Then click Remove to remove the old version.

Any items you created in version 1.x are automatically assigned to a setup or user named At Ease 1.0.

Upgrading From Version 2.x

Upgrading from version 2.x to version 3.0 occurs automatically when you first run the At Ease Setup program of version 3.0. At Ease turns itself off at the end of the installation process, so you must run the At Ease Setup program to turn At Ease back on.

If you upgrade from any version of At Ease for Workgroups 2.0, you must run At Ease Setup on each computer to update the preferences files and databases before you can add the computer to the list of updated computers. (If a computer is

already in the list, this step is unnecessary.)

Upgrading From Non-Workgroup Version 2.x or 3.0 to At Ease for Workgroups 3.0

At Ease creates setups in the new version for each user in the old version; the new setups have the same names as the old users. For example, if you had two users named Billy and Sally in the non-workgroup version, the At Ease Setup program of At Ease for Workgroups will now show two setups (Billy and Sally) and two users (also Billy and Sally). You can rename users and setups.

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Volume II, Issue 9, Page 9

Article Change History:

26 Sep 1995 - Added Info Alley information; updated article.
14 Aug 1995 - Added keyword.

Support Information Services

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Tech Info Library Article Number:17971



Tech Info Library

HyperCard 2.2: Creating a Home Button Script (6/95)

Revised: 6/19/95
Security: Everyone

HyperCard 2.2: Creating a Home Button Script (6/95)

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Article Created: 19 June 1995

TOPIC -----

This article describes why a script from the HyperCard 2.2 Reference manual does not work and the fix.

DISCUSSION -----

In the HyperCard 2.2 Reference Manual there is an exercise to write a script for a button that goes to the Home stack. If you enter the script verbatim from the manual, every time you try to use the button, you will get a "Where is "Home".?" message.

Step 3 of the script appears on page 3-8 of the manual as follows:

. 3. Type go to stack "Home".

If you type in the script exactly as you see it, including the period, then the script will fail. You must delete the period from the script in order for it to run properly.

Support Information Services

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Tech Info Library Article Number:17973



Tech Info Library

Macintosh 630 LC: Sound From Comm Slot Express Modem (6/95)

Revised: 6/19/95
Security: Everyone

Macintosh 630 LC: Sound From Comm Slot Express Modem (6/95)

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Article Created: 19 June 1995

TOPIC -----

I have a Macintosh 630 LC with a Communications Slot Express Modem Card. How can I hear the modem during dialing or during the handshaking process?

DISCUSSION -----

There was a bug in the original Macintosh 630 LC that prevented the Communications Slot Express Modem's sound from playing through the speaker. This bug was fixed by the EM Sound Update 1.0 extension which has been incorporated into System Software 7.5 Update 1.0. If you install System 7.5 and System 7.5 Update 1.0 there is no longer a need for the EM Sound Update.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:17976



Tech Info Library

SimpleText and CAP Incompatible (6/95)

Revised: 6/19/95
Security: Everyone

SimpleText and CAP Incompatible (6/95)

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Article Created: 19 June 1995

TOPIC -----

We have several Macintosh computers with System 7.5, and a Hewlett Packard (HP) 9000 with HP-UX 9.04 running the Columbia AppleTalk Program (CAP) 6.0 pl 192, and UAR (Unix AppleTalk Router) 1.0 as a file server. With SimpleText open if I save a file to a CAP volume (a volume on the Unix file server) the save appears OK (no error reported), but the file does not get saved. It's not visible from either a Macintosh on the network or from within UNIX.

We have tried a variety of versions of SimpleText -- those that come with Mac OS 7.1, 7.5 (SimpleText 1.1.1), and 7.5.1 (SimpleText 1.2). They all exhibit the same problem.

The only application that seems to have this problem is SimpleText. ClarisWorks saves on CAP volumes, and if we save a file from SimpleText onto the local hard drive, then use the Finder to copy it to the CAP volume, that works too. Is there an incompatibility problem between SimpleText and CAP?

DISCUSSION -----

According to the symptoms you describe, it appears a compatibility problem exists between CAP and SimpleText. We have reported this to engineering for evaluation. We have no known date for a solution, or if a solution will be implemented.

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Tech Info Library Article Number:17977



Tech Info Library

Extended Keyboard II & AppleDesign Keyboard Differences (6/95)

Revised: 6/19/95
Security: Everyone

Extended Keyboard II & AppleDesign Keyboard Differences (6/95)

=====

Article Created: 19 June 1995

TOPIC -----

Are there any differences between the Apple Extended Keyboard II and the Apple Design Keyboard?

DISCUSSION -----

The US versions of the AppleDesign Keyboard and the Extended Keyboard II have the same key layout. However, there are some subtle differences in the overall design of the keyboard.

- The Extended Keyboard II has two ADB connections, one on the right side, and one on the left side. The AppleDesign Keyboard has one ADB connection on the underside of the keyboard for a mouse or other pointing device. There is a 6-foot long cable permanently attached at the front of the keyboard for connecting it to the Macintosh.
- The Extended Keyboard II has a multi-position switch at the front of the keyboard for adjusting the keyboard angle to several positions. The AppleDesign Keyboard has two feet on the underside for raising the keyboard angle (that is two keyboard angles).
- The AppleDesign Keyboard is slightly smaller and lighter. For further information, please see the following Tech Info Library articles, "AppleDesign Keyboard: Technical Specifications (8/94)", and "Apple Extended Keyboard II: Specifications (10/94)."

Support Information Services

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Tech Info Library Article Number:17978



Tech Info Library

About the PCMCIA Update 1.0.1 (5/96)

Revised: 5/24/96
Security: Everyone

About the PCMCIA Update 1.0.1 (5/96)

Article Created: 19 June 1995
Article Reviewed/Updated: 24 May 1996

TOPIC -----

This article is the About the PCMCIA Update file.

DISCUSSION -----

You should install the PCMCIA Update on your PowerBook 500 series computer if you use a PC Card (PCMCIA) modem, the PowerBook PCMCIA Expansion Module (Model No. M2864 V1), and are experiencing performance problems. The PCMCIA Update can substantially increase modem driver performance when operating at speeds greater than 9600 bps. It also provides necessary compatibility and performance improvements when you use some 28.8 kbps modem cards.

The PCMCIA Update revises the modem driver software that is permanently stored inside the PowerBook PCMCIA Expansion Module. The software you received on the PowerBook PCMCIA Software disk provided with the module has not changed, so you do not need to reinstall it.

Installing the PCMCIA Update
=====

To install the PCMCIA Update, you use the Updater program. Follow these steps:

Step 1

Make sure your PCMCIA Expansion Module is installed in your PowerBook.

Step 2

Remove all PC Cards from the PC Card slots.

Step 3

Double-click the PCMCIA Updater icon.

Step 4

Click Update when you are ready to update the module. Follow the instructions on the screen.

Step 5

Click Quit when the update is complete to quit the Updater program.

Step 6

Choose Shut Down from the Special menu.

Step 7

Restart your computer.

NOTE: It is important that you shut down your computer first, and then restart (rather than choosing Restart from the Special Menu) for the PCMCIA Update to work properly.

You may want to make a note that you updated your module, since there is no way to tell if a module has been updated or not. (However, updating your module more than once should not damage it.)

Using DOS-formatted PC Cards

=====

NOTE: This section explains how to use DOS-formatted PC Cards in a PowerBook 500 series computer with PC Exchange installed. This information is not necessary for using the PCMCIA Update.

Most storage PC Cards are preformatted in a DOS format. PowerBook 500 series computers have the ability to use DOS-formatted cards because of the Macintosh PC Exchange software that ships with every PowerBook.

You need to use Macintosh PC Exchange version 2.0.2 or greater when using DOS-formatted PC Cards. (This version is included with System 7.5 or can be acquired by contacting the Apple Order Center.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

Installing a newer version of Macintosh PC Exchange

To install a newer version of Macintosh PC Exchange, follow these steps:

Step 1

Drag the PC Exchange icon into the Control Panels folder of your System Folder.

Step 2

Click OK to replace the older version of PC Exchange.

Step 3

Restart your Macintosh.

Reformatting a DOS-formatted PC Card

Macintosh PC Exchange cannot be used to change the format of a PC Card from DOS to Mac OS, or from Mac OS to DOS. If you wish to change a DOS-formatted card to a Mac OS-formatted card, follow these steps:

Step 1

Eject the card you want to reformat.

Step 2

Turn PC Exchange off (open the PC Exchange control panel and select the Off option).

Step 3

Reinsert the PC card.

You are prompted to reformat the PC card as a Macintosh volume. Once the PC Card is reformatted, you can turn PC Exchange back on from the control panel. You cannot reformat a Mac OS-formatted PC card as a DOS-formatted PC Card with PC Exchange. To do so you need to use a DOS/Windows computer.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 10

Article Change History:

24 May 1996 - Updated technical for accuracy.

27 Sep 1995 - Added Info Alley information; updated article.

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Tech Info Library Article Number:17979



Tech Info Library

System 6: Default System Preferences (6/95)

Revised: 6/19/95
Security: Everyone

System 6: Default System Preferences (6/95)

Article Created: 19 June 1995

TOPIC -----

You can customize your Macintosh in a variety of ways to suit your own personal style. For example, you can change ways in which information is displayed, the sounds your system makes, and how it handles file management.

DISCUSSION -----

In System 6, you use the Control Panel under the Apple Menu to adjust functions like mouse-tracking speed. These settings are stored in a chip on the logic board of your computer in a dedicated place called Parameter RAM (PRAM).

You can reset your computer's PRAM in System 6 by holding down the Shift-Option-Command(Apple) keys simultaneously while selecting Control Panels under the Apple Menu. The computer will present you with a dialog box informing you that you are about to reset the Parameter RAM. The Date and Time settings are actually read out of PRAM before it is zapped, then written back in afterwards. The next time you restart your computer the Control Panel will be set as follows:

PREFERENCE	LOCATION	DEFAULT
Disk cache size	General Control Panel	32K
Cursor blink rate	General Control Panel	Middle setting
Menu blink count	General Control Panel	1 times
Date, time, and displayed format	General Control Panel and Alarm DA	None
Keyboard repeat rate and repeat delay	Keyboard Control Panel	For repeat: One away from Fast For delay: One away

from Long

Monitor settings and location of extra monitors	Monitors Control Panel	Primary monitor only; set to Black & White
Mouse tracking and double-click speeds	Mouse Control Panel	For tracking: Fast For double-click: Middle setting
Beep sound	Sound Control Panel	Simple beep, though it is not highlighted
Startup disk choice	Startup Disk Control Panel	None set, uses standard volume search method
Map	Map Control Panel	Empty
Volume	Sound Control Panel	5

Support Information Services

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Tech Info Library Article Number:17980



Tech Info Library

System 7.5: Default System Preferences (6/95)

Revised: 6/19/95
Security: Everyone

System 7.5: Default System Preferences (6/95)

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Article Created: 19 June 1995

TOPIC -----

You can customize your Macintosh in a variety of ways to suit your own personal style. For example, you can change ways in which information is displayed, the sounds your system makes, and how it handles file management. Your Macintosh uses a variety of Preferences files to maintain your custom settings.

There are several preference settings under System 7.5. System-wide preferences, such as mouse-tracking speed, are set via Control Panels, but are stored in Parameter RAM (PRAM). Preferences specific to the Finder are also set via Control Panels, but are stored in a file called Finder Preferences located in the Preferences folder, in the System Folder.

Here is some information on where each preference is stored, along with instructions for resetting both system-wide and Finder preferences.

DISCUSSION -----

System Preferences

=====

This table lists system-wide preferences that may affect all applications:

NOTE: The PowerBook control panel in System 7.5 is version 7.3.1 and has its own default button.

NOTE: Items marked with a bullet (•) apply to Power Macintosh computers.

PREFERENCE	LOCATION	DEFAULT
-----	-----	-----
32-bit addressing	Memory Control Panel	24-bit addressing
Disk Always on	Memory Control Panel	32K

Modern Memory Manager•	Memory Control Panel	On
Virtual Memory	Memory Control Panel	Off
RAM Disk	Memory Control Panel	Off
Highlight color	Color Control Panel	Black
Cursor blink rate	General Controls Panel	Middle setting
Folder Protection	General Controls Panel	Both unselected
Documents	General Controls Panel	Last folder used with application
Desktop	General Controls Panel	Show Desktop selected Launcher unselected
Menu blink count	General Controls Panel	3 times
Date, time, and displayed format	General Controls Panel and Alarm DA	None
Keyboard repeat rate and repeat delay	Keyboard Control Panel	For repeat: One away from Fast For delay: One away from Long Layout: U.S.
Monitor settings and location of extra monitors	Monitors Control Panel	Primary monitor only; set to Black & White
Mouse tracking and double-click speeds	Mouse Control Panel	For tracking: Very Slow For double-click: Middle setting
Beep sound	Sound Control Panel	Simple beep, though it is not highlighted
Startup disk choice	Startup Disk Control Panel	None set, uses standard volume search method
Cache settings (68040 Macintosh)	Cache Switch Control Panel	Faster (Caches Enabled)
SCSI Disk Mode*	PowerBook Setup Control	2
Wake on ring*	PowerBook Setup Control	Unselected

Except for Date and Time and the default application font all system-wide preferences may be reset by zapping PRAM.

- To zap PRAM under System 7.5, hold down the Command-Option-p-r keys during start up (Make sure the Caps Lock key is up!). The Macintosh restarts shortly after displaying the "Welcome to Macintosh" screen, which indicates that PRAM has been reset.

Finder Preferences

=====

PREFERENCE	LOCATION	DEFAULT
-----	-----	-----
Font used for Finder view	Views Control Panel	Geneva 9
Icon alignment settings for Finder	Views Control Panel	Straight grid - "Always snap to grid" deselected
Icon list view settings for Finder	Views Control Panel	Smallest icon; display sizes, kinds, labels, and dates; deselect "Calculate Folder Sizes" and "Show Disk Info in Header"
Trash Can warning dialog	Setting in Get Info for the Trash Can	Warn before emptying

With the exception of virtual memory, these parameters may be reset by deleting the Finder Preferences file, which is located in the Preferences folder inside the System Folder. Since System 7.5 does not let this file be modified if it is on the start-up disk, you need to disable it instead. To do this, drag the Finder Preferences file out of the Preferences folder and restart the Macintosh. System 7 creates a new Finder Preferences with default values automatically. You may then delete the old Finder Preferences file.

NOTE: The Virtual Memory, File Sharing, and Window Color settings are stored with their respective Control Panel files and cannot be reset using these methods. Virtual Memory and File Sharing can be temporarily disabled, however, by pressing the Shift Key while starting the Macintosh. Hold the key down until "Extensions Off" appears in the "Welcome to Macintosh" screen.

Support Information Services

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Tech Info Library Article Number:17981



Tech Info Library

Internet Server For WWW: BBEdit HTML Extension Issue (7/95)

Revised: 7/12/95
Security: Everyone

Internet Server For WWW: BBEdit HTML Extension Issue (7/95)

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Article Created: 20 June 1995
Article Reviewed/Updated: 12 July 1995

TOPIC -----

A issue has been identified with the BBEdit 3.1.1/AWS HTML Extension v1.3 which ships with the Apple Internet Server Solution for the World Wide Web.

The problem occurs when using any HTML extension which allows you to select a file as a source (using the "file" button in the dialog). When you select a file the first character of the pathname is missing.

Example:
Getting: /owerbook/images/my.gif
Instead of: /Powerbook/images/my.gif

This will render the HTML useless unless the user manually corrects the problem by adding the first character back.

DISCUSSION -----

The following solution to this problem has been suggested by Lindsay Davies, the author of the BBEdit HTML extensions.

Set the Utilities HTML extension preferences to Root directory. The problem will no longer manifest itself.

Additionally, Lindsay suggests the following:
"One suggestion though to make the most of these two tools. Set up the prefs (Root folder, server address, and path), and create a document using a BASE HREF. This will allow you to use all the addressing methods (full, root, and relative). Relative addressing will default to the root address if no BASE HREF is present."

Article Change History:

12 Jul 1995 - Changed title for consistency.

Support Information Services

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Tech Info Library Article Number:17983



Tech Info Library

System 7: Frequently Asked Questions (5/96)

Revised: 12/20/96
Security: Everyone

System 7: Frequently Asked Questions (5/96)

Article Created: 20 June 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

This article contains a list of frequently asked questions (FAQ) about System 7. It is not necessarily applicable to System 7.5.

Questions in this FAQ:
=====

- How do I create a net install for System 7.x?
- Where can I get a copy of MacTCP?
- How do PC Exchange and Macintosh Easy Open (MEO) work together?
- How can I get System 7.0.1 on 800K disks?
- Where can I download a copy of System 7.1?
- Where is Apple File Exchange located? I thought it came with my system.
- What steps should I follow to perform a reinstallation of System 7.1? What about System 6.0.x? Can you "clean install" System 6?
- Who needs to install the System 7 Tune-Up?
- There seems to be a corrupt font in my fonts folder. When I double-click the font suitcase, I get a -39 error. I can't seem to get rid of this font suitcase! What can I do?
- I recently upgraded to System 7, and am confused about fonts. What's the difference between TrueType and PostScript fonts?

- I occasionally encounter system errors on my Macintosh. There is usually a message that says an error of type 1 or 3 occurred. Where can I find an explanation of what these error numbers mean?

DISCUSSION -----

Question:

How do I create a net install for System 7.x?

Answer:

Follow these steps:

Step 1:

Create a folder called Net Install on a shared volume.

Step 2:

Drag all disk images needed for the installation (all disks except the Disk Tools disk) to the Net Install folder. A folder will be created inside the Net Install folder that corresponds to each diskette.

Step 3:

Drag the Installer and the Install script from the Install Me First or Install 1 diskette to the top level of the Net Install folder.

Step 4:

The Net Install folder is now prepared for remote users to use for performing system software installations. Once they log into the remote volume, they double click the Installer icon and the installation process will run.

Typically, this setup will allow you to install other software packages using the Apple Installer over a network. For more information, review the article "Software Installation Over a Network", in the online Apple Technical Information Library. Use the search string "net install setup" to locate this article.

Question:

Where can I get a copy of MacTCP?

Answer:

You can obtain MacTCP by purchasing the Macintosh TCP Connection Kit or by upgrading to System 7.5. Only the update applications for MacTCP are posted to online services.

Your local dealer can help you obtain these software packages. You can locate a local dealer by calling the Apple Referral Center at 1-800-538-9696.

Question:

How do PC Exchange and Macintosh Easy Open (MEO) work together?

Answer:

When you set up DOS extension mapping in the PC Exchange control panel, they work regardless of where the file is located. A file can be on a DOS floppy disk, or on the Macintosh hard drive and they work the same.

If Macintosh Easy Open is installed, it works with PC Exchange and tries to map files to the proper applications based on the PC Exchange mappings. If the file is not mapped to an application, Macintosh Easy Open attempts to translate the file.

The above information states how it should be working. If it is not working this way then try the following procedures:

- 1) Use your extensions manager control panel to turn off all extensions and control panels except for PC Exchange and MEO. Restart and see if you have same problems. If not then you have an extension conflict.
- 2) While every control panel is off except for MEO and PC Exchange, restart the computer and hold down the Command and Option keys to rebuild the desktop.
- 3) Delete and custom reinstall the PC Exchange and MEO control panels.

NOTE: MEO is for use when you don't know what application you want to open a document. If you already know this, as in the Word example above, open the application first and then locate the document via File Menu Open (Command-O).

In the online Apple Technical Info Library, use the search string "Macintosh Easy Open and sys75" to locate the article "System 7.5: PC Exchange Works with Easy Open"

Question:

How can I get System 7.0.1 on 800K disks?

Answer:

System software version 7.0.1 is not available on 800K disks.

Question:

Where can I download a copy of System 7.1?

Answer:

System 7.1 is commercial software. System 7.1 can be purchased through the Apple Order Center.

Question:

Where is Apple File Exchange located? I thought it came with my system.

Answer:

Apple File Exchange ships with System 7.0, 7.0.1, and 7.1. It is on the system disks, but not installed on the hard drive. To install Apple File Exchange, insert the Tidbits disk from your system software.

In System 7.0 and 7.0.1 Tidbits disk, you will see an Apple File Exchange folder. Copy this folder to your hard drive. In the System 7.1 Tidbits disk, you will see an Apple Utilities folder. This folder contains the Apple File Exchange folder. Open Apple Utilities, and copy the Apple File Exchange folder to your hard drive.

Question:

What steps should I follow to perform a reinstallation of System 7.1? What about System 6.0.x? Can you "clean install" System 6?

Answer:

Instructions for reinstalling System 6.0.x and System 7.x are available in the online Technical Information Library.

Use the search string "clean install and instructions" to locate the articles "System 7.1: Clean Installation from 1.44Mb Disks" as well as "System 6.0.x Installation".

Question:

Who needs to install the System 7 Tune-Up?

Answer:

System 7 Tune-Up 1.1.1 should be installed on any Macintosh using System 7.0 or 7.0.1. The tune-up's changes are incorporated into System 7.1 and later systems.

Question:

There seems to be a corrupt font in my Fonts folder. When I double-click the font suitcase, I get a -39 error. I can't seem to get rid of this font suitcase! What can I do?

Answer:

Corrupt fonts can account for a number of system crashes. Here is how to remove a damaged font suitcase from your Fonts folder:

Step 1:

Move the Fonts folder to the desktop.

Step 2:

Create a new Fonts folder in the System Folder.

Step 3:

Drag the known good Fonts from the desktop Fonts folder to the newly created Fonts folder.

Step 4:

Restart your Macintosh.

Step 5:

..TIL17984-System_7-Frequently_Asked_Questions_5-96_(TA33936).pdf

Drag the Fonts folder on the desktop, with the corrupted font suitcase, to the Trash.

Step 6:

Drag a "good" copy of the corrupted font suitcase from a backup copy or from the original font disk to the closed System Folder.

For more information, review the article "System 7.1: Damaged Font Suitcase Message" in the online Technical Information Library. Use the search string "font and damaged" to locate this article.

Question:

I recently upgraded to System 7, and am confused about fonts. What's the difference between TrueType and PostScript fonts?

Answer:

For an overview of fonts and your Macintosh, check out the article "Bitmap, PostScript, and TrueType Fonts Compared", available in the online Apple Technical Information Library." Use a search string of "truetype and postscript and compare".

Question:

I occasionally encounter system errors on my Macintosh. There is usually a message that says an error of type 1 or 3 occurred. Where can I find an explanation of what these error numbers mean?

Answer:

System error codes are intended to be an aid to programmer's debugging software. They aren't always very helpful when trying to determine the cause of a system crash.

For an overview of the error types and their meaning, review the article "Macintosh System Error Codes Explained", available in the online Apple Technical Information Library. A search string of "system errors and explanation" will find this article.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:17984



Tech Info Library

QuickDraw GX: Frequently Asked Questions (5/96)

Revised: 3/19/97
Security: Everyone

QuickDraw GX: Frequently Asked Questions (5/96)

Article Created: 20 June 1995
Article Reviewed/Updated: 10 May 1996

TOPIC -----

This article contains a list of frequently asked questions (FAQ) about QuickDraw GX.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Questions in this FAQ:
=====

- I noticed after installing GX Helper that I don't have the option to disable Desktop Printing in some applications. Why is this?
- How do I select specific LaserWriter Options?
- How do I Select Multi-purpose Input Trays?
- I have a number of non-QuickDraw GX print and fax drivers in my extensions folder yet they do not appear in the Chooser. How can I access them?
- How do I print to an output device that does not have a QuickDraw GX compatible print driver?
- I installed QuickDraw GX, but I do not have a GX driver for my printer. How can I remove QuickDraw GX?
- I noticed my desktop printer icon has an X through it when viewed through the Save or Open dialog box. Is this normal? It looks fine on the Desktop.

- How do I disable the Manual Printing Alert?

DISCUSSION -----

Question:

I noticed after installing GX Helper that I don't have the option to disable Desktop Printing in some applications. Why is this?

Answer:

The option to turn off Desktop printing in the newest versions of Excel (5.0) and Word (6.0) or other recent applications may not appear. These applications are "GX-friendly" and can utilize the QuickDraw GX printer drivers. Because of this, GX Helper does not allow you to disable Desktop Printing.

Question:

How do I Select Specific LaserWriter Options?

Answer:

- a) Create a desktop printer using the LaserWriter GX driver in the Chooser
- b) Print a one page document or the desktop to the printer
- c) Choose Page Setup from a QuickDraw GX savvy application.
- d) Select the specific LaserWriter under the "Format For:" pop-up menu. Do NOT choose LaserWriter GX but the specific name of the LaserWriter.
- e) Click on the "LaserWriter Options" icon on the left side of the window.

You should see all the options available for the LaserWriter you have chosen such as 300/600 DPI or PhotoGrade. The options available here are dependent on the printer model. Consult your printer's documentation for a complete description of features.

Question:

How do I Select Multi-purpose Input Trays?

Answer:

- a) Create a desktop printer using the LaserWriter GX driver in the Chooser
- b) Print a one page document or the desktop to the printer
- c) Select the printer on the desktop and choose "Input Trays" from the Printing Menu.
- d) Make the appropriate selections.

You will know if QuickDraw GX has queried the specific Desktop Printer properly if the dialog window that comes up for paper trays specifically mentions the printer model (example:LaserWriter Pro).

Question:

I have a number of non-QuickDraw GX print and fax drivers in my extensions folder yet they do not appear in the Chooser. How can I access them?

Answer:

QuickDraw GX drivers show up in the Chooser when QuickDraw GX is active. When QuickDraw GX is disabled, the non-QuickDraw GX drivers appear in the Chooser. They are hidden when QuickDraw GX is active because they are incompatible with QuickDraw GX technology.

Question:

How do I print to an output device that does not have a QuickDraw GX compatible print driver?

Answer:

If you have a non-GX driver you can disable QuickDraw GX via the Extensions Manager control panel and restart. This will let you print using the original driver. The only other alternative is to check with the vendor of the output device to see if they are planning a QuickDraw GX compatible driver.

If you have a PostScript output device, you can print your output to a PostScript file using the application EPSExtension. Refer to the QuickDraw GX ReadMe file for more details on the EPSExtension. Most PostScript devices come with utilities that allow you to download a PostScript file to that device. Two examples of such utilities are Adobe's SendPS or the Apple Printer Utility (for printers that use the Apple LaserWriter driver).

ON Page by COMPUTER:applications, Inc. will parse a PostScript printer description (PDD) for a PostScript or PCL device and make a compatible QuickDraw GX driver.

PowerPrint/GX by GDT Softworks adds the advantages of QuickDraw GX to their collection of printer drivers allowing you to print to over a thousand different PC based printers from the Macintosh desktop.

DOS/Windows-Compatible Printers

MacJET GX (Universal PCL/ HP compatible laser printers) is a universal QuickDraw GX driver for PCL and HP-compatible laser printers.

UNIX print servers

Pathway Print Redirector by The Wollongong Group, Inc. takes advantage of the QuickDraw GX printing capabilities to provide TCP/IP network printing capabilities.

Question:

I installed QuickDraw GX, but I do not have a GX driver for my printer. Where do I get QuickDraw GX drivers?

Answer:

You can contact your printer manufacturer or fax software vendor to see if they have a QuickDraw GX compatible driver available. If there is no QuickDraw GX driver available you can remove QuickDraw GX until a driver is available.

The QuickDraw GX Installer has an easy to use remove feature that will remove the components of QuickDraw GX. After removing GX, it may be necessary to restore some fonts that QuickDraw GX converted. Follow these steps for the removal procedure:

- Quit any open applications or desk accessories
- Locate the QuickDraw GX Installer on the QuickDraw GX Install Diskette or System 7.5 CD. It is located on the Install disk or in the QuickDraw GX Install folder on the CD.
- Launch the Installer.
- When you see the Installer's Welcome screen, click continue.
- Open the pop-up menu (which says Easy Install) and choose Custom Remove.
- Click on the check boxes for the components you wish to remove.
- Click on remove.

The installer will remove the selected components. However, any PostScript fonts that were present in the System folder before the QuickDraw GX installation will not work properly because QuickDraw GX placed them in suitcases that standard System Software will not recognize.

Copies of the old fonts were placed in a folder called •Archived Type 1 Fonts• in the System Folder. Open this folder and copy all the fonts to the Fonts folder within the System Folder. If prompted to replace any existing fonts, go ahead and replace them.

If you converted any Postscript fonts using the Type 1 Enabler application, you will need to reinstall the fonts from original diskettes as that application does not place copies in the archive folder.

Finally, if you used Adobe Type Manager, you should also reinstall that application as it may have been removed when QuickDraw GX was installed.

Question:

I noticed my desktop printer icon has an X through it when viewed through the Save or Open dialog box. Is this normal? It looks fine on the Desktop.

Answer:

The desktop printer icon is a container, similar to a folder, but it cannot be saved to. QuickDraw GX and the Finder work together to place an X through the icon in the Save or Open dialog box so that the user cannot open it or save anything to it.

Question:

How do I disable the Manual Printing Alert?

Answer:

You need to be using QuickDraw GX 1.1.1 or later. Click on the Desktop Printer icon and a Printing menu will appear. Go to the Printing menu and select "Disable Manual Feed Alerts".

Article Change History:

10 May 1996 - Updated with third party PostScript applications.

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Tech Info Library Article Number:17985



Tech Info Library

At Ease 3.0: Unlock Utility on Disk 2 (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 3.0: Unlock Utility on Disk 2 (8/95)

=====

Article Created: 20 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

This article describes an error in the At Ease for Workgroups 3.0 Administrator's Guide.

DISCUSSION -----

The At Ease for Work Groups 3.0 manual indicates on page 110 that the Unlock program is on "At Ease WG Install 1" disk. The Unlock utility is actually found on "At Ease WG Install 2" disk.

This article was published in the "Information Alley":
Volume II, Issue 6, page 12

Article Change History:
14 Aug 1995 - Reviewed for technical accuracy.
19 Jul 1995 - Added Info Alley information.

Support Information Services

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Tech Info Library Article Number:17987



Tech Info Library

QuickTime 2.x: Converting MIDI & Karaoke Files (8/96)

Revised: 8/28/96
Security: Everyone

QuickTime 2.x: Converting MIDI & Karaoke Files (8/96)

Article Created: 20 June 1995
Article Reviewed/Updated: 28 August 1996

TOPIC -----

This article describes how to convert a Standard MIDI file (SMF) or karaoke file to QuickTime format.

DISCUSSION -----

If you want to convert Standard MIDI files to QuickTime format, you need to have QuickTime 2.0 or greater installed on your Macintosh computer. If you want to convert karaoke files, you need to have QuickTime 2.5 or greater installed. You should also have the QuickTime Musical Instruments extension installed. You cannot convert MIDI files to QuickTime movies using QuickTime for Windows at this time.

Conversion Procedure For MIDI Files
=====

SimpleText version 1.1.1 or later

- 1) Launch SimpleText
- 2) Select Open from the File menu
- 3) Choose a Standard MIDI file -- The Open button changes to Convert

An additional dialog box appears for the placement of the QuickTime file, which features an "Options" button providing you the ability to change MIDI instrument settings during the transition from the Standard MIDI format to the QuickTime format.

If the file is not a Macintosh Standard MIDI file, when you try to open the MIDI file, SimpleText reads it as a text file. Also, the Open button will not change to Convert.

To force SimpleText to convert the file to a QuickTime MIDI file, you need to change the file Type. The TYPE must be: Midi (the Creator should be either ttxt or Moov)

In order to change the Type of any Macintosh file, you must use a utility application, such as ResEdit that allows you to change the Type and Creator of files.

MoviePlayer 2.x

- 1) Launch MoviePlayer
- 2) Select either Open or Import
- 3) Choose a Standard MIDI File
- 4) Click on Convert. A dialog appears asking the name of the converted file.
- 5) Name the file
- 6) Click Save

The file is converted to a QuickTime movie.

IMPORTANT NOTE FOR QUICKTIME 2.0:

If the MIDI file has a (.) in the filename, it triggers QuickTime to open the file as a Text Track instead of a MIDI Track. To correct this problem, rename the file so it doesn't contain a (.) in the filename. QuickTime 2.5 can convert MIDI files without renaming them.

Converting Karaoke Files

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One of the new features in QuickTime 2.5 is the ability to convert and use karaoke file. These files usually have a .kar file extension. You follow the same procedure for converting MIDI files, however there is an additional option for changing the way the text is displayed on the screen. The default screen option is to display the text on a black background with white letters in 12 point Geneva. The text is not anti-aliased.

Changing Text Options

Step 1

After selecting the karaoke file you want to convert, select options in the open dialog.

A new dialog appears with a section for changing the text options in karaoke files.

Step 2

Click the Text Options button.

A new dialog appears with a list of fonts installed on your Macintosh computer. Options for making the text anti-aliased, and changing the background and text colors.

NOTE:

Opening the Text Options can take up to several seconds if you have a lot of fonts installed on your computer.

Step 3

Make any changes to the text you want and Click OK.

The standard Open File dialog appears requesting the name of the file you are saving.

Article Change History:

28 Aug 1996 - Added information on karaoke formatted files.

27 Jun 1995 - Added additional information on converting MIDI files.

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Tech Info Library Article Number:17988



Tech Info Library

Open Transport and Compatibility Mode (9/95)

Revised: 1/4/96
Security: Everyone

Open Transport and Compatibility Mode (9/95)

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Article Created: 20 June 1995
Article Reviewed/Updated: 19 September 1995

TOPIC -----

This article describes how the new Open Transport (OT) networking architecture maintains compatibility with older networking schemes.

DISCUSSION -----

In addition to its standards-based APIs (XTI, TPI, and DLPI), Open Transport includes support for many of the existing ("classic") networking and communications APIs to provide backwards-compatibility for existing AppleTalk and MacTCP applications, and for select other networking software.

AppleTalk backwards compatibility

AppleTalk backwards compatibility is accomplished by trapping all networking calls at the ".ddp" driver level. Above the DDP protocol, applications written to the classic AppleTalk APIs are actually running the classic implementations of AppleTalk. When the packets reach the DDP protocol layer, calls to the .ddp driver are intercepted, translated to the corresponding XTI calls, and are passed to Open Transport for processing. The process is reversed for incoming packets (OT receives the packet, native DDP handles the packet, the data is repackaged into an AppleTalk parameter block API, and control is passed back to the upper layer as if it had come from the .ddp driver).

The primary advantage of this approach is that backwards compatibility is very robust. Since the classic implementations of ADSP, ASP, ATP, NBP, ZIP, and so on are all used, we didn't have to attempt a "warts and all" emulation layer. It also turns out that this decreases our overall footprint, as compared to an implementation strategy where we would have tried to trap all packets at the top of the protocol and remap to their OT native counterparts -- that is, there is only the one DDP emulation shim, rather than an ADSP shim, an ASP shim, an ATP

shim, a ZIP shim, an NBP shim, a PAP shim, and so on.

The primary disadvantage of this approach is that backwards compatibility, especially on the Power Macintosh, does not gain any meaningful performance increase for applications running in backward compatibility. Afterall, most of the stack is still running in emulation - only DDP is actually native. And add on top of that the increased cost of the mixed mode context switch from 680x0 to native (or native to 680x0) for each packet handled.

TCP/IP backwards compatibility

TCP/IP backwards compatibility is accomplished by trapping all networking calls at the ".ipp" driver level. Since MacTCP was implemented essentially as a single monolithic driver, this means that there was only one place where networking calls could be intercepted and emulated. Calls to .ipp are trapped, mapped to appropriate XTI calls, and the OT/TCP stack handles the rest. The process is reversed on incoming packets.

The primary advantage of this approach (not that there really was any technical alternative) is performance. The entire handling of the packet happens in the new OT implementation. Especially on Power Macintosh, that means networking goes native as soon as the application makes the call to the driver (well, technically as soon as the emulation shim maps the driver call to the XTI call. The emulation shim still runs as 680x0 code).

The primary disadvantage of this approach is that backward compatibility is potentially less robust. It is a completely new code base for TCP and developers may be depending on idiosyncrasies of MacTCP -- if so, they will probably break.

Other networking compatibility

- DLPI to .enet conversion. Current NuBus Macintosh computers (680x0 and DLPI) have ethernet implementations that rely on the '.enet' driver architecture and API specification. Open Transport, however, expects to communicate only with DLPI drivers. To allow OT to run on NuBus Macintosh computers without requiring the creation of new drivers (that is, to allow existing cards and drivers to be used with OT), we've created an adapter that accepts DLPI calls (from the 'top) and converts them to .enet calls (out the bottom). This is believed to be quite robust (or will be when the next version of OT ships).

- .enet to DLPI conversion. Certain other networking products, including protocols like MacIPX and PATHWORKS DECnet, and certain applications software products, such as Insignia SoftWindows, have been written to bypass AppleTalk and MacTCP, and talk directly to the .enet driver. This is a problem, because early PCI-based Power Macintosh computers will have ONLY DLPI drivers for networking -- no .enet will exist on the Power Macintosh 9500 with the first release of Open Transport.

Later versions of Open Transport will allow these protocols and applications to run on early PCI-based Power Macintosh computers, a special adapter has been created that accepts .enet calls (from the 'top') and converts them to DLPI calls (out the bottom). This software is designed as a stop-gap compatibility measure until new versions of such software can be created for early PCI-based Power Macintosh computers. Because of this, it has two key limitations: it only supports the built-in ethernet adapter (which means that you can't run the current versions of SoftWindows or MacIPX or PATHWORKS on a PCI based networking card); and it does not support promiscuous mode (which means that you can't use an early PCI-based Power Macintosh with the current version of NetMinder or EtherPeek).

There are no other API changes or backward compatibility issues in OT v1.0.

Article Change History:

19 Sep 1995 - Changed access privileges to Everyone.
07 Sep 1995 - Made editing corrections.
14 Jul 1995 - Clarified version numbers mentioned.

Support Information Services

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Tech Info Library Article Number:17989



Tech Info Library

At Ease 3.0: Labels and Views Control Panels Issue (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 3.0: Labels and Views Control Panels Issue (8/95)

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Article Created: 20 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

This article describes an issue with At Ease 3.0 and how the Labels or Views control panels can affect later users.

DISCUSSION -----

At Ease users in the Restricted Finder environment cannot open most control panels, however they can open the Labels and Views control panels.

Below are possible side affects to this access:

- Users may change the name and/or color in the Labels control panel. This control panel changes the items in the Labels menu so the next user may select the Label menu and see unacceptable words that fit into the Label text field.
- Users may change the Font for views in the Views control panel to Symbol, so the file and folder names become unreadable to the next user.
- Users may select Calculate Folder Sizes in the List Views section of the Views control panel, which will cause the computer to calculate the size of each folder in an open window. This selection could slow the computers operations, depending upon how many folders are present and the amount of files/folders in each folder.

Article Change History:
14 Aug 1995 - Reviewed for technical accuracy.
29 Jun 1995 - Corrected typo.

Support Information Services

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Tech Info Library

New bnet Patch For The AWS 95 (6/95)

Revised: 6/20/95
Security: Everyone

New bnet Patch For The AWS 95 (6/95)

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Article Created: 20 June 1995

TOPIC -----

This article describes the new bnet patch for the Apple Workgroup Server (AWS) 95.

DISCUSSION -----

The AWS 95 bnet patch has been released to the internet. It is in the following folder:

<ftp://abs.apple.com/pub/abs/aws95/patches/bnet>

Read Me

=====

BNET Networking module patch May 13, 1995

This module replaces the existing bnet networking module for A/UX releases 3.1 and 3.1.1. It should not be used with previous releases.

This module has the following functionality changes

1) Fixes a problem in the TCP/IP code that could cause crashes under high load conditions when a remote machine times out a connection.

2) Adds support for traceroute.

To install

1) Copy the existing file "/etc/boot.d/bnet" file to a safe place

2) Put 'bnet' into /etc/boot.d

3) Run 'newconfig' (with no arguments) as root

4) Reboot the system

Support Information Services

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Tech Info Library Article Number:17991



Tech Info Library

Color StyleWriter Pro: New Black Ink Tank (8/95)

Revised: 8/28/95
Security: Everyone

Color StyleWriter Pro: New Black Ink Tank (8/95)

Article Created: 20 June 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

I tried to order a replacement Color StyleWriter Pro Black Ink Cartridge (M1952G/A) using the information provided in my user's guide, but according to my local dealer it was discontinued by Apple. The cyan, magenta, and yellow cartridges are still available. How do I obtain a replacement black ink cartridge?

DISCUSSION -----

The original Black Ink Cartridge (as specified in the printer's user's guide) was discontinued by Apple so that an improved version with an extended life could be introduced. The new ink cartridge is called the Color StyleWriter Pro Black High Capacity Ink Tank, and it can be ordered using finished goods model number M3822G/A.

The Black High Capacity Ink Tank is slightly larger in size, which nearly doubles the ink carrying capacity for the black ink. The new ink tank design uses extra space next to the black ink tank to allow for the larger ink tank.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 4

Article Change History:
28 Aug 1995 - Added Info Alley information.

Support Information Services

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Tech Info Library Article Number:17992



Tech Info Library

LaserWriter 8.3: Desktop Printing & PostScript Fax (6/95)

Revised: 6/22/95
Security: Everyone

LaserWriter 8.3: Desktop Printing & PostScript Fax (6/95)

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Article Created: 22 June 1995

TOPIC -----

Is there going to be a LaserWriter 8.3f fax driver for LaserWriter 8.3? I realize that LaserWriter 8.3 mainly provides support for ColorSync 2.0, but I don't want to have to switch between two printer drivers (8.2.2f and 8.3) in the Chooser. I would also like to take advantage of the new "Desktop Printer" capability of LaserWriter 8.3 when faxing from my fax-capable PostScript printers (LaserWriter Select 360, LaserWriter Pro 810, LaserWriter 16/600 PS).

DISCUSSION -----

As of June, 1995 there are no plans to produce a LaserWriter 8.3f fax driver. The latest version of the LaserWriter "f" driver is LaserWriter 8.2.2f which is available in Software Sampler.

Having two different LaserWriter drivers installed and switching between them is in some ways easier. By having both drivers (for example the LaserWriter 8.2.2f and LaserWriter 8.3), if one is set for a specific fax printer and the other for the Color LaserWriter 12/600, then you can select the desired print driver in the Chooser. When the driver is selected, your specific printer is automatically highlighted (if previously selected for that printer driver) so there is no need to "re-choose" or "Setup" the printers when selecting the different drivers.

With regard to desktop printing, the Desktop PrintMonitor software IS compatible with previous versions of the LaserWriter driver (including the fax versions). Thus, LaserWriter 7.x, 8.x, and all QuickDraw print drivers (LaserWriter Select 300, StyleWriter I/II, and so on) that use PrintMonitor are compatible. We tried running a simple PostScript Fax job using LaserWriter 8.2.2f and the Desktop PrintMonitor software; it faxed without problem via a desktop printer we created for our LaserWriter 16/600 PS.

Support Information Services

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Tech Info Library Article Number:17993



Tech Info Library

LaserWriter FAX Printer & Rings Before Answering Setting (6/95)

Revised: 6/20/95
Security: Everyone

LaserWriter FAX Printer & Rings Before Answering Setting (6/95)

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Article Created: 20 June 1995

TOPIC -----

We are not able to change the number of "Rings Before Answering" using the LaserWriter Fax Utility to any number above 10. We have a LaserWriter 16/600 PS w/fax card, and when we select "Incoming Fax Settings" and type in any number above 10, the LaserWriter Fax Utility states that value has been changed. Selecting "incoming Fax Settings" again shows that the number has defaulted back to the previous number between 1 and 10. The manual states that you can type in a value from 1 to 30.

DISCUSSION -----

You are correct, the only settings possible are between 1 and 10 inclusive. We have reported this problem to engineering for verification.

Our own testing via PostScript code interrogation of the printer indicates that the only fax card values accepted for "Rings Before Answering" are only from 1 to 10 inclusive.

These limits will apply to all Apple Postscript Fax capable printers including the LaserWriter Select 360, LaserWriter Pro 810, and LaserWriter 16/600 PS.

Support Information Services

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Tech Info Library Article Number:17994



Tech Info Library

AppleShare For Windows: TCP/IP and Winsock (6/96)

Revised: 6/5/96
Security: Everyone

AppleShare For Windows: TCP/IP and Winsock (6/96)

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Article Created: 20 June 1995
Article Reviewed/Updated: 04 June 1996

TOPIC -----

I'm having a problem with AppleShare Client for Windows not working with TCP/IP on a Windows computer. AppleShare runs fine, but an earlier installation of TCP/IP and Winsock no longer function when the AppleShare Client is loaded by the system during startup. The manual that comes with the AppleShare For Windows Client does not address this issue. Have you heard anything about this and a solution to it?

DISCUSSION -----

The solution is to add the following in the Link Support section to the net.cfg file:

```
max stacks 8
```

When you load a packet driver IP stack, the default value of 4 stacks the link support layer (lsl.com) can handle is not enough. Increasing the number of stacks serviced from 4 to 6 or 8 will insure proper operation.

Note: You cannot run AppleShare Client for Windows over TCP/IP, but you can run both TCP/IP and AppleShare Client for Windows off of the same Ethernet card with Windows 3.1 or Windows for Workgroups. AppleShare Client for Windows is not supported for use with Windows 95.

Article Review History:
04 June 1996 - Added note about AppleShare Client for Windows over TCP/IP.

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Tech Info Library Article Number:17995



Tech Info Library

AppleCD 600e CD-ROM Software Read Me (6/95)

Revised: 6/20/95
Security: Everyone

AppleCD 600e CD-ROM Software Read Me (6/95)

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Article Created: 20 June 1995

TOPIC -----

This article is the AppleCD 600e CD-ROM Software ReadMe.

DISCUSSION -----

Installing the AppleCD 600e CD-ROM software

If you follow the instructions in the manual for installing the CD-ROM software, but installation is not successful, use the instructions here. Before you begin, make sure there are no CD-ROM discs in any other CD-ROM players connected to your computer. Then follow these steps:

Step 1

Turn on the CD-ROM player by pressing the on/off switch on the back panel of the player.

Step 2

Press the Open/Close button of the CD-ROM player to open the tray.

Step 3

Place the CD-ROM Setup disc in the tray, with the disc label facing up.

Step 4

Push the tray in or press the Open/Close button to close the tray.

Step 5

Start up or restart your Macintosh computer.

Step 6

When the disc icon appears on your screen, double-click the icon to open it.

Step 7

Double-click the Installer icon to open it. The Install dialog box appears. Make

sure the destination disk named is your startup disk. If it's not, click Switch Disk until the correct disk is named.

Step 8

Click Install.

Step 9

When you see a message reporting that installation was successful, click Restart.

That's it. You've installed the CD-ROM software. Make sure to remove the CD-ROM Setup disc after installing the CD-ROM software.

Problems installing with System 7.1 and an AppleCD 300i player

If you are having problems installing the CD-ROM software with System 7.1 and an internal AppleCD 300i player, follow these steps:

Step 1

Restart your Macintosh computer.

Step 2

Hold down the Command, Option, P, and R keys. As soon as you hear the computer restart again, let go of the keys.

Step 3

Go back and repeat the installation procedure above.

Support Information Services

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Tech Info Library Article Number:17996



Tech Info Library

Apple Scanner: Frequently Asked Questions (6/95)

Revised: 6/28/95
Security: Everyone

Apple Scanner: Frequently Asked Questions (6/95)

Article Created: 21 June 1995
Article Reviewed/Updated: 28 June 1995

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) about Apple scanners.

Questions in this FAQ:
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- What are the current versions of the scanning software?
- Where can I get updates to the current versions of Apple scanner software?
- Are Apple scanners TWAIN compliant? Is there a way to scan directly into Adobe Photoshop?
- How can I scan in text documents for use in a word processor?

DISCUSSION -----

Question: What are the current versions of the scanning software?

Answer: The most current configurations are as follows:

Color OneScanner:
 Ofoto 2.0.2
 Scanner 3.0
 HyperScan 2.0.1

Apple OneScanner:
 Ofoto 2.0.2
 Scanner 2.0

HyperScan 2.0.1

Apple Scanner:

AppleScan 1.0.2

Scanner 2.0

HyperScan 2.0.1

Question: Where can I get updates to the current versions of Apple scanner software?

Answer: You can find the current list of Apple Software Updates in the Apple Technical Info Library (go shortcut "TIL") - use the search string "kol and alphabetical" to locate the article "Apple Software Updates Online: Alphabetical List." This article lists all the updates and their paths.

Question: Are Apple scanners TWAIN compliant? Is there a way to scan directly into Adobe Photoshop?

Answer: Apple scanners are not TWAIN compliant. There are third-party plug-ins available for this purpose, such as Second Glance's Scantastic PS. For more information, contact Second Glance at (714) 855-2331. Also, Look in the Redgate Macintosh Product Registry (shortcut "redgate") for other third-party solutions.

Question: How can I scan in text documents for use in a word processor?

Answer: The process you are referring to is optical character recognition (OCR). Apple does not write any OCR software. However, there are many third-party vendors of OCR software. Check the Redgate Macintosh Product Library (shortcut "redgate") for a list of third-party vendors.

Article Change History:

28 Jun 1995 - Corrected Source/Author information

Support Information Services

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Tech Info Library Article Number:17997



Tech Info Library

Multimedia: Frequently Asked Questions (8/96)

Revised: 8/23/96
Security: Everyone

Multimedia: Frequently Asked Questions (8/96)

Article Created: 21 June 1995
Article Reviewed/Updated: 23 August 1996

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) concerning issues with Apple Multimedia products.

Questions in this FAQ:
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- 1) Will the closeup lens included with the QuickTake 150 be sold separately for use with the QuickTake 100?
- 2) Since the QuickTake 100 and the QuickTake 150 share the same housing, will there be an upgrade path available?
- 3) What is the difference between the AppleDesign Powered Speakers (M4575LL/A) and the AppleDesign Powered Speakers (M4475LL/B)?
- 4) What is the difference between the AppleDesign Powered Speakers and AppleDesign Powered Speakers II?
- 5) What is the difference between running applications directly from a CD-ROM drive and copying them to the hard disk and running them from there?
- 6) When playing normal audio CDs, sound cuts off regularly even when my computer is not running any other software. AppleDesign Powered Speakers are being used. What is causing this?
- 7) Which AC Adapter can I use with the QuickTake 150 digital camera?
- 8) I have an AppleCD 300e Plus CD-ROM drive and want to use it on a DOS-based PC. Where can I get the drivers for it?

DISCUSSION -----

1) Question: Will the closeup lens included with the QuickTake 150 be sold separately for use with the QuickTake 100?

Answer: The close-up lens attachment is available as a service part from Apple (922-1371). The attachment works with both the QuickTake 100 and QuickTake 150. There are also a number of companies that manufacture close-up lenses for the QuickTake 100. You can search the Redgate Macintosh Product Registry (shortcut "redgate") for possible solutions from third-party companies.

2) Question: Since the QuickTake 100 & QuickTake 150 share the same housing, will there be an upgrade path available?

Answer: There was a QuickTake 100 Upgrade Program in effect from August 2 to November 30, 1995. However, this program is no longer available.

3) Question: What is the difference between the AppleDesign Powered Speakers (M4575LL/A) and the AppleDesign Powered Speakers (M4475LL/B)?

Answer: The difference between these products is the /B speaker includes an output jack for a sub-woofer, which is a low frequency speaker designed to enhance the bass response of small speakers. The /A speaker does not include this jack.

4) Question: What is the difference between the AppleDesign Powered Speakers and AppleDesign Powered Speakers II.

Answer: The AppleDesign Powered Speakers II are slightly smaller than the original AppleDesign Powered Speakers. The AppleDesign Powered Speakers II are designed to stay on all the time and do not have a power switch. There is little difference in sound quality between the AppleDesign Powered Speakers and AppleDesign Powered Speakers II.

5) Question: What is the difference between running applications directly from a CD-ROM drive and copying them to the hard drive and running them from there?

Answer: The main difference is that CD-ROM drive access is much slower than hard drive access. If the application you are running requires frequent access, it will run much more slowly from the CD-ROM drive than from the hard drive.

The CD-ROM disc should contain documentation as to which files you need to copy to your hard drive and which you can run directly from the CD-ROM disc.

6) Question: When playing normal audio CDs, sound cuts off regularly even when my computer is not running any other software. AppleDesign Powered Speakers are being used. What is causing this?

Answer: This is probably due to the noise gate circuitry of the AppleDesign Powered Speakers. The noise gate reduces the amount of noise heard through the speakers while the speakers are just amplifying the sounds from the CPU, such as alert beeps. This noise gate turns off the sound to the speakers when the input level (at the CPU input jack, located on the AppleDesign Powered Speakers) falls below a set voltage level. This circuitry is only connected to the 1/8" stereo jack (CPU Input Jack) and not to the dual phono plugs (CD Stereo Cable Jacks) on the speakers.

You can avoid this through one of the following methods:

Turn Up the Volume

The best way to handle this situation without having to buy any new cables is to turn up the volume in the Sound control panel and use the volume knob on the speakers to control the speakers volume. If you do this, most sound drop outs will be eliminated. During some soft passages, like those found in classical music, the noise gate may still drop the audio.

Use a Different Cable

Using a Y adapter cable from the computer's sound out port to the CD Stereo Cable/RCA Jacks on the speakers will eliminate the sound drop outs, but you will lose the benefits of the noise gate.

You can get a Y adapter cable at electronics stores.

7) Question: Which AC Adapter can I use with the QuickTake 150 digital camera?

Answer: You can use the QuickTake AC Adapter (M2851LL/A) and the Macintosh PowerBook AC Adapter (M4662LL/A) with the camera. Use of other AC adapters could result in damage to the camera.

8) Question: I have an AppleCD 300e Plus CD-ROM drive and want to use it on a DOS-based PC. Where can I get the drivers for it?

Answer: Apple does not write the software drivers for the AppleCD 300e Plus for use on a DOS-based PC. They are written by other developers. When Apple ships a Multimedia Kit for Windows, we include a third-party adapter card. The CD-ROM software comes with that card. The software is only licensed to be distributed with the kit. You may want to look in the Redgate Macintosh Product Registry (shortcut "redgate") to locate possible third-party solution. Corel and Trantor are two possible suppliers of such software.

Article Change History:

23 Aug 1996 - Updated QuickTake information.
22 Nov 1995 - Updated format.
14 Nov 1995 - Revised format and added keyword.

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Tech Info Library Article Number:17998



Tech Info Library

Japanese Language Kit: Common Troubleshooting Steps (9/95)

Revised: 9/6/95
Security: Everyone

Japanese Language Kit: Common Troubleshooting Steps (9/95)

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Article Created: 21 June 1995
Article Reviewed/Updated: 6 September 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about the Japanese Language Kit (JLK).

Questions in this FAQ:
=====

- Why doesn't the Installer ask for disk Font 12?
- If I install the Japanese Language Kit (with 24-bit addressing ON) the Installer crashes while merging the TrueType fonts. Why?
- I get unreadable Japanese text on the screen. What's wrong?
- In the Keyboard menu (Diamond Menu) and/or the Pencil menu, the Japanese text is displayed as garbage.
- I double click on a Japanese TeachText file and the data appears as garbage.
- I enter text in Hiragana, but it does not convert to Kanji. Why not?
- Some of my keyboard shortcuts don't work since I installed JLK. What's wrong?
- I use the JLK and when I rename a folder in the Finder, the keyboard menu changes from U.S. System 7 (a blue diamond) to Kotoeri (a red sun with an apple) automatically. If I select U.S. System 7 in the keyboard menu, I can enter the name in English. Why does the keyboard layout switch occur?
- I have a Performa computer and the JLK. Windows such as help and the input window do not show up when I try to enter Japanese text. What's wrong?

DISCUSSION -----

Question: Why doesn't the Installer ask for disk Font 12?

Answer: The SaiMincho and ChuGothic fonts found on Font Disk 12 are available only through a customized installation. These fonts are PostScript compatible bitmaps for use with the LaserWriter NTX-J

Question: If I install the Japanese Language Kit (with 32-bit addressing OFF) the Installer crashes while merging the TrueType fonts. Why?

Answer: This ONLY happens when installing on Macintosh computers (Macintosh II, IIfx, SE/30, IIfx) that also have the 32-bit System Enabler installed. Turn ON 32-bit addressing in the Memory Control Panel while installing the Japanese Language Kit with these types of Macintosh computers (Macintosh II, IIfx, SE/30, IIfx).

Question: I get unreadable Japanese text on the screen. What's wrong?

Answer: If you see unreadable Japanese text, check the following basic points to make sure the Japanese fonts system is complete:

- a) The fbit/fdef Kanji bit-map fonts (the one with the Kanji character "kan" and the circle behind its icon) are located at the System Folder root level (not Fonts folder). At minimum, the Osaka font must be installed
- b) The InputBackSupport extension is present in the Extensions folder.

Question: In the Keyboard menu (Diamond Menu) and the Pencil menu the Japanese text is displayed as garbage.

Answer: This is normally caused by NOW Menus or some other menu management program. The menu program overrides the system menu font and forces the menu into a specific font. The menu font needs to be changed to the Osaka font in this menu program.

Question: I double click on a Japanese TeachText file and the data appears as garbage.

Answer: The English version of TeachText opened the document instead of the Japanese version. The only work around is to open the Japanese version of TeachText, then open the file from within TeachText. Alternatively, you can use SimpleText, which is WorldScript savvy.

Question: I enter text in Hiragana, but it does not convert to Kanji. Why not?

Answer: The Main dictionary needs to be opened in the JLK preferences.

Question: Some of my keyboard shortcuts don't work since I installed JLK. What's wrong?

Answer: System 7.1 or later uses the sequence Command-Option-Spacebar to switch keyboard layouts. Other applications or utilities like QuickKeys may also attempt to use this key combination. The System Software takes precedence in all cases so you have to find an alternative for the conflicting program.

Question: I use the JLK and when I rename a folder in the Finder, the keyboard menu changes from U.S. System 7 (a blue diamond) to Kotoeri (a red sun with an apple) automatically. If I select U.S. System 7 in the keyboard menu, I can enter the name in English. Why does the keyboard layout switch occur?

Answer: Apple Language Kits provide Finder support for English and the language each installs. When you modify a file or folder name, the language kit defaults to its primary keyboard layout. Japanese defaults to Kotoeri. This is how that default is selected: The JLK displays keyboard layouts based on the "Font for views" selected in the Views Control Panel. When Osaka is selected, the keyboard menu displays "U.S. System 7" and Kotoeri, because Osaka supports both Japanese and Roman character sets. Selecting a Roman-only font like Palatino or Helvetica only displays "U.S. System 7" in the keyboard menu.

Question: I have a Performa computer and the JLK. Windows such as help and the input window do not show up when I try to enter Japanese text. What's wrong?

Answer: If you have System 7.1P4 or later, open the Performa Control Panel and turn off Finder Hiding. Then restart your computer to enter Japanese through the input window. If you have System 7.1P3 or earlier, remove the Launcher from the Control Panels folder, and place it in the Startup Items folder. Restart your computer; Finder Hiding is deactivated.

Article Change History:

06 Sep 1995 - Changed title to more accurately reflect content.

28 Jun 1995 - Corrected Source/Author information

Support Information Services

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Tech Info Library Article Number:17999



Tech Info Library

The Information Alley: Description (9/96)

Revised: 9/17/96
Security: Everyone

The Information Alley: Description (9/96)

=====
Article Created: 21 June 1995
Article Reviewed/Updated: 16 September 1996

TOPIC -----

This article provides a brief description of the "Information Alley" technical news magazine.

DISCUSSION -----

What is the Info Alley?
=====

The "Information Alley" is a publication of Apple Computer, Inc., Service and Support Engineering. It is available to all Apple customers and Apple computer users through electronic mail (e-mail).

The goal of the "Information Alley" is to help Apple computer users get full use of their Apple computers, peripherals, and software. You are welcome to distribute the "Information Alley" to anyone.

Subscribing and unsubscribing
to/from the Information Alley mailing list
=====

To subscribe:

Send message to: listproc@whoville.austin.apple.com
Message: subscribe infoalley (Your Real Name)

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message: unsubscribe infoalley

You'll receive an automated reply letting you know you've been removed from the list.

Information Alley Contents

=====

The contents of Information Alley come from Apple's Technical Information Library (TIL). This library consists of over 12,000 articles related to Apple products and technologies. The TIL is available through various online sources including: America Online, CompuServe, AppleLink, the Internet: (gopher) or World Wide Web.

Where to Find the Information Alley

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The Information Alley is available free to anyone through a variety of online services and Internet list server capability. Below is a current list of the online services where the Information Alley is posted.

For a complete list of where to find the Information Alley, search the TIL with "information alley" or "kol" as the search string. Select article title "Information Alley: Where to Find Online".

Article Change History:

16 Sep 1996 - Updated information.

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Tech Info Library Article Number:18000



Tech Info Library

Power Macintosh 9500 Series: Read Me (5/96)

Revised: 5/27/96
Security: Everyone

Power Macintosh 9500 Series: Read Me (5/96)

=====
Article Created: 12 June 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

The following article is the ReadMe file for the Power Macintosh 9500 series computers.

DISCUSSION -----

Important Information About Your Power Macintosh 9500

CONTENTS
=====

Tips

- Apple Printers
- How to Reconnect to a Lost Server
- GeoPort Software

Troubleshooting

- Open Transport and MacTCP
- Incorrect "Guide" File Balloons
- QuarkXPress
- The Assistant Toolbox and Non-Networked Printers
- Help With the Japanese or Chinese Language Kit
- AppleShare Server Software Version 4.1**
- Printing with Apple PhotoFlash
- Using PowerTalk and PowerTalk Direct Dialup Mail

Important Information About Macintosh PC Exchange

- Apple File Exchange and Macintosh PC Exchange
- AutoDoubler
- Compressed PC Disks and Files
- Working with PC-Format Disks Containing Multiple Partitions

- Working with DOS-Format SCSI Removable Media Devices
- Working with DOS-Format SCSI Hard Disk Drives
- Tips and Problems

Important Information About Virtual Memory

Tips

====

Apple Printers

The Apple LaserWriter 300 and Apple Personal LaserWriter LS printers are not yet compatible with the Power Macintosh 9500. An upgrade will be available soon on Apple Online Services.

How to Reconnect to a Lost Server

If you unexpectedly lose a connection to a server on which you have items in use, the server's icon appears dimmed on the screen. If you double-click the dimmed icon or choose the server from the Recent Servers item in the Apple menu, you get a message saying that the disk could not be opened because you do not have enough access privileges. Before you can reconnect to the server, you must close any open files, and then drag the server's dimmed icon to the Trash. If you need to save your work on an open file, use Save As to save it on a different disk.

GeoPort Software

The GeoPort software 2.0 and earlier is not compatible with your Power Macintosh 9500. Users should upgrade to Apple Telecom 2.1 or later software. This version will be compatible with all the current GeoPort pods on the market and is available via online services including AppleLink, online services, and the internet.

Troubleshooting

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Open Transport and MacTCP

After you install new software on your hard disk, if you have problems with your TCP/IP applications, look in the Control Panels folder for a MacTCP file. If one is there, remove it from the Control Panels folder and restart your machine. This procedure should enable your TCP/IP applications to work properly.

Each time you install a new application program, you may want to verify whether or not the software's installer also installed MacTCP, and follow the above procedure if necessary.

Incorrect "Guide" File Balloons

System 7.5.2 includes Apple Guide documents which provide the on-screen instructions and other information that you need to help you use your computer. However, if you turn on Balloon Help (by choosing Show Balloons from the ? menu) and point to a Guide file icon on the hard disk, the balloon may give you the wrong information about where the file belongs or what you can do with it. To avoid being misled by incorrect balloons, follow the guidelines below:

- Leave Guide files where they are. Some Guide files (for example, the Guide file named "Macintosh Guide") belong in the Extensions folder. Others will not work if they are put into the Extensions folder.
- Keep application programs that have Guide files in the same folder as the Guide file. For example, keep the file named "File Assistant Guide" in the same folder as the File Assistant program. If you move a Guide file that belongs with an application program, you won't be able to get help while using the program.

QuarkXPress

To use QuarkXPress with System 7.5 on a Power Macintosh, you must upgrade to QuarkXPress version 3.3.1 or later. For upgrade information, contact Quark, Inc.

The Assistant Toolbox and Non-Networked Printers

If the Assistant Toolbox extension is installed on your computer, the Print Later option (LaterLaser) works only with networked PostScript printers. If you are printing on a non-networked printer—particularly a LaserWriter Select 310—you should open the Extensions Manager control panel and turn off the Assistant Toolbox extension.

Help with the Japanese or Chinese Language Kit

To use this software effectively, use version 1.2 (or later) of the Japanese Language Kit and version 1.1.1 or later of the Chinese Language Kit. In the United States, you can obtain an upgrade by calling the Apple Order Center.

AppleShare Server Software version 4.1**

If you purchase AppleShare server software version 4.1, make sure to choose Custom Install (instead of Easy Install) when you install it.

**NOTE:

This note is not included in the original ReadMe File.
AppleShare 4.1 is not supported on the Power Macintosh 9500. This section of the ReadMe file is referring to the client portion of the AppleShare installation. At the time of this writing, there is no tested or supported version of AppleShare Server software available for the Power Macintosh 9500 family of computers.

Printing with Apple PhotoFlash

If you have problems printing images with the PhotoFlash software, make sure that you choose a printer in the Chooser before you choose the Print command

from the File menu.

Using PowerTalk and PowerTalk Direct Dialup Mail

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Important Information About Macintosh PC Exchange

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Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with PC Exchange and should not be used while PC Exchange is installed. Version 2.0 of PC Exchange contains an easier and more intuitive method for accessing DOS and Apple II ProDOS disks on a Macintosh.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Macintosh, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working with PC-Format Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the Macintosh-, DOS-, or ProDOS-format partitions as individual logical drives on the Macintosh desktop. If the disk contains both Macintosh and DOS-format partitions, PC Exchange will only recognize the Macintosh partition. In addition, PC Exchange will only recognize ProDOS-format partitions on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Macintosh-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Macintosh, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize SCSI removable media devices, you must turn on the device and eject any cartridges before you turn on your Macintosh system.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a PC-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. Do not use the MS-DOS Fdisk command to initialize a removable media cartridge. In addition, you should use the MS-DOS Format command to format the disk before you copy DOS files to a newly initialized removable media cartridge on a PC.

When you initialize a removable media cartridge on a PC-compatible computer, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for PC Exchange to recognize SCSI hard disk drives, you must turn on the drive before you turn on your Macintosh.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk on a PC-compatible computer, use the MS-DOS Fdisk command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS Format command to format and erase the disk before you copy DOS files to a new SCSI hard disk on a PC.

Tips and Problems

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- A "Sad Mac" error may occur on your Macintosh if a removable media cartridge is left in the drive during startup. To keep this problem from occurring, manually eject removable media cartridges from the drive before you turn on your Macintosh.

- PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

Important Information About Virtual Memory

=====

Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory may help you avoid running out of memory.

Your computer comes with virtual memory turned on. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems using certain applications, you may want to turn off virtual memory. For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. Then click "How do I use hard disk space as memory?" and "How do I manage Power Macintosh memory?"

For best performance, try setting virtual memory to no more than 50% more than the amount of physical memory (RAM), or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (150% of 16, which is less than 50% of 50).

To improve performance, you can also add physical memory (RAM) to your computer. See the user's manual that came with your computer for more information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

27 May 1996 Updated for technical accuracy.

12 Jul 1995 - Added information clarifying AppleShare support.

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Tech Info Library Article Number:18001



Tech Info Library

Macintosh 630 Family: Sound Specifications (6/95)

Revised: 6/21/95
Security: Everyone

Macintosh 630 Family: Sound Specifications (6/95)

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Article Created: 21 June 1995

TOPIC -----

What are the sound output and input specifications for the Macintosh 630 series computers?

DISCUSSION -----

The level at the sound output jack is nominally 0.5 volts RMS into 39 ohms. This makes it suitable for either headphones or line-level applications. If a load of less than 39 ohms is connected, clipping of the output waveform can result. So, if both the front and rear sound output jacks are to be used simultaneously, the combined impedance must not be below 39 ohms.

Sound input impedance is 100k ohms. Average line level is 100 mV RMS. Average microphone level is 70 mV RMS, and the maximum input level is 1.8 V RMS.

Support Information Services

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Tech Info Library Article Number:18002



Tech Info Library

Easy Access: Features and How to Use (7/95)

Revised: 7/19/95
Security: Everyone

Easy Access: Features and How to Use (7/95)

Article Created: 22 June 1995
Article Reviewed/Updated: 19 July 1995

TOPIC -----

This article describes the features of the Easy Access control panel.

DISCUSSION -----

Easy Access is a control panel intended to help physically challenged users interact with their computer.

Easy Access is a control panel intended to help physically challenged users interact with their computer. Easy Access lets you:

- Set the computer so you can control the pointer from the numeric keypad instead of using a mouse (Mouse Keys)
- Type keyboard shortcuts without having to press the modifier keys at the same time (Sticky Keys)
- Type very slowly (Slow Keys)

You can activate these modifications using preassigned keyboard shortcuts or by opening the Easy Access control panel.

Mouse Keys -- Controlling the Pointer from the Keyboard

Within the Easy Access Control Panel is a feature called Mouse Keys. You can use the numeric keypad on the right-hand side of the keyboard (instead of the mouse) to control the movement of the pointer on the screen.

To turn Mouse Keys on, press Command-Shift-Clear (the Clear key is on the numeric keypad.)

To turn Mouse Keys off, press Clear.

With Mouse Keys on, you can click, drag, and perform all the usual mouse actions from the numeric keypad. The 5 key serves as the mouse button: press once to click; press twice to double-click. The 0 key locks the mouse button down for dragging. The decimal point key (to the right of 0) or the 5 key unlocks the mouse button. The numbers 1, 2, 3, 4, 6, 7, 8, and 9 move the pointer on the screen.

You can adjust how quickly the pointer moves on the screen and how long the delay is before the pointer starts moving when you press a mouse key. You can make these adjustments in the Easy Access Control Panel.

Sticky Keys -- Making Keyboard Shortcuts Easier to Type

=====

The Easy Access Control Panel also includes a feature called Sticky Keys. You can type keyboard shortcuts (such as Command-S for Save) without actually pressing the keys simultaneously.

To turn Sticky Keys on or off, press the Shift key 5 times without moving the mouse.

With Sticky Keys on, you can type a keyboard shortcut by first pressing the modifier key (Command, Control, or Shift) and then pressing the character key. An icon in the right end of the menu bar (to the right of the Application menu icon) changes to indicate whether Sticky Keys is on and whether a modifier key has been pressed or locked.

You can have Sticky Keys make an alert sound when a modifier key is pressed. You set this option in the Easy Access Control Panel.

Slow Keys -- Adjusting the Keyboard for Very Slow Typing

=====

Within the Easy Access Control Panel is a feature called Slow Keys. You can type very slowly and the computer ignores accidental keystrokes by delaying the acceptance of the next keystroke.

To turn Slow Keys on or off, hold down the Return key for about 4 seconds, until an alert sound indicates that the feature is on or off.

You can adjust how long you want Slow Keys to delay acceptance of the next keystroke. You can also set Slow Keys to make an audible click each time a key is pressed. You make these adjustments in the Easy Access Control Panel.

Easy Access only works if it is in the Control Panels folder inside the System Folder when the Macintosh starts up.

This article was published in the "Information Alley":

Volume II, Issue 6, Page 6

Article Change History:

19 Jul 1995 - Updated from Info Alley.

Support Information Services

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Tech Info Library Article Number:18003



Tech Info Library

QuickDraw GX 1.1.2: Which Drivers Are New? (6/95)

Revised: 6/22/95
Security: Everyone

QuickDraw GX 1.1.2: Which Drivers Are New? (6/95)

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Article Created: 22 June 1995

TOPIC -----

This article lists which drivers are updated by QuickDraw GX software version 1.1.2.

DISCUSSION -----

The following GX printer drivers are included with QuickDraw GX 1.1.2:

Printer Driver	Version
Color SW 2400 GX	1.0.1
ImageWriter GX	1.1.1
ImageWriter LQ GX	1.1.1
LaserWriter GX	1.1.2
LaserWriter IIIS GX	1.1.1
LW 300/LS GX	1.1.1
StyleWriter GX	1.1.1

Support Information Services

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Tech Info Library Article Number:18004



Tech Info Library

Power Macintosh With PCI Bus: GeoPort Compatibility (6/96)

Revised: 6/27/96
Security: Everyone

Power Macintosh With PCI Bus: GeoPort Compatibility (6/96)

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Article Created: 22 June 1995
Article Reviewed/Updated: 27 June 1996

TOPIC -----

Can I use a GeoPort with my new Power Macintosh 7200, 7500, 7600, 8500, and 9500?

DISCUSSION -----

The Power Macintosh 7200, 7500, 7600, 8500, and 9500 can use a GeoPort Telecom Adaptor with Apple Telecom 2.1 or later software. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any devices attached to the printer port (except serial printers, which can remain attached).

Article Change History:
27 Jun 1996 - Added additional computer.
03 Oct 1995 - Added LocalTalk section.
13 Sep 1995 - Updated with new information for accuracy.

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Tech Info Library Article Number:18005



Tech Info Library

System 7.5.2: Available for Earlier Macintosh Computers? (4/96)

Revised: 5/21/96
Security: Everyone

System 7.5.2: Available for Earlier Macintosh Computers? (4/96)

=====

Article Created: 21 June 1995
Article Reviewed/Updated: 10 April 1996

TOPIC -----

I heard that Apple has released System 7.5.2 on its PCI-based Power Macintosh computers. I was wondering if and when Apple will make it available as an upgrade to System 7.5.1?

DISCUSSION -----

System 7.5.2 is a hardware specific release that currently runs on the new Power Macintosh 7200, 7500, 8500, and 9500 systems, as well as the PowerBook 190, 2300, and 5300 computers. System 7.5.2 is based on System 7.5.1 with specific enablers for each of these systems. The components of this release do not function on earlier Macintosh systems.

However, many of the new technologies included in System 7.5.2 have been included in the recent system update, System 7.5 Update 2.0, which you can use on these and earlier Macintosh computers. After installing System 7.5 Update 2.0, you will have System 7.5.3 installed on your computer.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the "Information Alley":
Volume II, Issue 11, Page 13

Article Change History:

10 Apr 1996 - Added information about system update.

07 Feb 1996 - Corrected minor typo.

29 Sep 1995 - Added Info Alley information; updated article.

30 Aug 1995 - Updated to include new computers with System 7.5.2.

Support Information Services

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Tech Info Library Article Number:18006



Tech Info Library

System 7.5: Improper Shutdown Notification (11/96)

Revised: 11/5/96
Security: Everyone

System 7.5: Improper Shutdown Notification (11/96)

Article Created: 22 June 1995
Article Reviewed/Updated: 5 November 1996

TOPIC -----

Can you explain the operation of the shutdown check warning in System 7.5 and in pre-System 7.5 Performa system software?

DISCUSSION -----

System 7.5.x
=====

In System 7.5.x, the General Controls control panel uses the Notification Manager to issue the message about improper shutdown. The file called General Controls Prefs in the Preferences folder is where the current checkbox setting of whether to issue the notification is kept.

During a normal shutdown or restart the Shutdown Check file is deleted by the Finder. When the General Controls control panel initializes, it looks for the presence of the Shutdown Check file. If it is found, then a crash situation is assumed. The found Shutdown Check file is kept and made invisible, if it is not already. If the Shutdown Check file is not found during startup, a new one is created. The creation time and date of the Shutdown Check file is the approximate startup time of the last successful startup for the System Folder of the startup volume.

Developer guidelines evangelize that dialogs not be issued during an extension loading time. This is why you do not see the notification as the General Controls control panel loads. The approved method for issuing messages from extensions is the Notification Manager. General Controls posts the improper shutdown warning notification to be displayed as the Finder comes up.

The notification message could be misleading if you switch between multiple startup volumes. For example, you set the startup volume to be another volume other than the current volume. Before restarting normally you crash, and the computer starts up from the newly selected startup volume. You then operate from

this new startup volume for a number of days. Finally you choose the original volume to startup from in the Startup Disk control panel and restart. The old Shutdown Check file is now found by the General Controls control panel and the system realizes that it was not shutdown properly the last time.

Another similar example might be after a crash, if you start up from a floppy disk. Restarting from the floppy-based System Folder does not generate an improper shutdown notification, but when you return to starting from the hard drive the warning notification is issued.

You should interpret the warning notification based on whether the current volume being booted from had shutdown normally the last time it was active.

Pre-System 7.5

=====

Prior to System 7.5, the Performa control panel was used on Macintosh Performa computers to determine if the computer had been shut down correctly or not. The Performa control panel also created an invisible file to monitor the proper shutdown process, but this file was called the Performa Shutdown Check and was located in the Preferences folder within the System Folder.

Sometimes this preference file would become corrupted creating bogus improper shutdown messages. In other words, even if you had shut down properly the computer would report that you had not. In these cases, deleting the Performa Shutdown Check and Performa Preferences files will resolve this issue. Both files are located in the Preferences folder.

You need to trash the Performa Shutdown Check file and the Performa Preferences file. These files are located within your Preferences folder within your System Folder on your hard disk. Once you have trashed these items, restart the computer.

This article was published in the "Information Alley":
Volume II, Issue 6, Page 4

Article Change History:

05 Nov 1996 - Added Performa software information.
19 Jul 1995 - Updated from Info Alley.

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Tech Info Library Article Number:18011



Tech Info Library

Power Macintosh: Video Blinking At Startup (10/96)

Revised: 10/16/96
Security: Everyone

Power Macintosh: Video Blinking At Startup (10/96)

Article Created: 26 June 1995
Article Reviewed/Updated: 16 October 1996

TOPIC -----

I noticed when my Power Macintosh 9500 series computer is starting up that the screen blinks off and on for a second during the startup process. Is this normal or is there something wrong with my computer?

DISCUSSION -----

The video blinking or flash is normal behavior for a PCI-based Power Macintosh computer and does not indicate a hardware problem. The flash will occur on Power Macintosh 7200/7500/8500/9500 computers.

The reason that the video goes blank for a short time at startup is the video card initially uses the driver contained on the ROM of the video card. Early in the startup process, a newer video driver is swapped in from either the Graphic Accelerator extension in the 9500 series or ROM of the 7200/7500/8500 series computers. It is during the swapping of the video driver that the flash occurs. This is normal.

A consequence of the new driver loading is if you have installed a custom StartupScreen in the System Folder, the system will startup with the custom screen, flash, and then display a grey screen for the rest of the startup sequence. At the time of this article, it is not possible to get a startup screen to remain visible throughout the startup process.

You can verify the driver swap is causing the issue you are experiencing by forcing the Power Macintosh to use the first video driver contained in ROM. This is done by holding down the Command-Shift-N-D keys at startup. You will notice that the video 'blanking' does not occur because the video driver is not being swapped.

This troubleshooting tip can be helpful for a couple of reasons:

..TIL18012-Power_Macintosh-Video_Blinking_At_Startup_10-96.pdf

- It can be used to demonstrate that the video driver is actually being swapped because it does not 'blink' when the video driver on ROM is used.
- If the 'software' video driver on the Power Macintosh 9500 is corrupt for some reason you can revert back to the video driver in ROM to determine where the problem might be (that is, it can be corrupt software or a bad card).

IMPORTANT: Since the video driver in the "Graphic Accelerator" extension contains a newer video driver, you should only bypass this video driver for troubleshooting purposes. Running the system off the ROM based video driver continually may produce unpredictable results.

This article was published in the "Information Alley":
Volume I, Issue 8, Page 5

Article Change History:

16 Oct 1996 - Reviewed for technical accuracy.
27 Sep 1995 - Updated to identify issue on all PCI-based Computers.
28 Aug 1995 - Added Info Alley information.

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Tech Info Library Article Number:18012



Tech Info Library

LaserWriter 4/600 PS: Mac OS Requirements (6/95)

Revised: 11/2/95
Security: Everyone

LaserWriter 4/600 PS: Mac OS Requirements (6/95)

=====

Article Created: 26 June 1995

TOPIC -----

The specifications for the LaserWriter 4/600 PS state that it requires System 7.1.1. but the manual indicates that it requires System 7.1. Can you please clarify this?

DISCUSSION -----

The LaserWriter 4/600 PS requires System 7.1 or later. However, in order to use the desktop printing feature, System 7.1.1 or later is needed.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18013



Tech Info Library

LaserWriter: Toner cartridge life (12/96)

Revised: 12/9/96
Security: Everyone

LaserWriter: Toner cartridge life (12/96)

Article Created: 26 June 1995
Article Reviewed/Updated: 9 December 1996

TOPIC -----

Why is there such a difference between the rated life of the LaserWriter toner cartridges and the actual life that I experience?

DISCUSSION -----

It is nearly impossible to provide accurate toner cartridge life information because there are many variables affecting the toner requirements for a document. The formatting of the document, font type, and the inclusion of graphics significantly change the toner requirements.

To provide information about the average life of a toner cartridge, many manufacturers provide consumers with the expected number of pages that can be printed assuming a specific toner density. For instance, the LaserWriter 16/600 PS toner cartridge is expected to last 6,000 pages at 5% coverage. An average double-spaced Letter or A4 page using a single, monospaced font has a density close to 5%. Making a simple modification to the document, such as changing the font or making it bold, may increase the actual density value to 6% or 7%. Changing from a double-spaced to a single-spaced format doubles the amount of toner used.

Because most customers print a variety of different documents, the actual page life of a toner cartridge may vary significantly. For example, with a page density of 5%, the LaserWriter 16/600 PS has a rated life of 6,000 pages. However, if a solid black page (100% density) is printed, then the cartridge will run out of toner after approximately 300 pages [6,000 pages/(100%/5%)]. It is unusual to print solid black pages during normal use so most customers will experience a toner life somewhere between the two extremes.

Many laser printers also have the capability to adjust the toner density using a manual adjustment or software tool such as the Apple Printer Utility. Consult the printer's manual for more detailed information on changing the settings.

The chart below provides the approximate number of pages for the toner cartridges in each of these LaserWriter printers listed.

Begin_Table

Printer	Part#	Yield (5% coverage)
LaserWriter Pro 810 (Extended Capacity)	M3602G/A	13,000
LaserWriter Pro 600, 630, and 16/600 PS	M2473G/A	6,000
LaserWriter 12/640 PS	M4683G/A	6,000
LaserWriter II series	M6002 (new)	4,000
	M2795G/A (remftd)	4,000
LaserWriter Select 300, 310, and 360	M1960G/A	4,000
LaserWriter and LaserWriter Plus	M0180	4,000
Personal LaserWriter LS, SC, NT, and NTR	M0089LL/A	3,000
Personal LaserWriter 300, 320, and 4/600 PS	M2045G/A	3,000
Color LaserWriter 12/600 PS	Cyan M3757G/A	4,000
Color LaserWriter 12/660 PS	Magenta M3760G/A	4,000
	Yellow M3758G/A	4,000
	Black M3756G/A	4,000

End_Table

Article Change History:

09 Dec 1996 - Added Color LaserWriter toners.
 20 Jun 1996 - Added LaserWriter 12/640 PS information.
 20 May 1996 - Added table with approximate yields.

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Tech Info Library Article Number:18014



Tech Info Library

Color LaserWriter 12/600 PS: Maximum Page Count (6/95)

Revised: 6/26/95
Security: Everyone

Color LaserWriter 12/600 PS: Maximum Page Count (6/95)

Article Created: 26 June 1995

TOPIC -----

What is the maximum page count value for the Color LaserWriter 12/600 PS?

DISCUSSION -----

The maximum page count for the Color LaserWriter 12/600 PS is a 32-bit number with a maximum value of 4,294,967,296.

This value could be reached in approximately 1,047,553 days (2,870 years) assuming these conditions:

- Maximum throughput of 3 pages per minute
- 30 second pause to reload paper every 250 pages
- Overhead for replacing the consumables
- Printing occurring 24 hours per day
- Daily output of 4,100 pages per day

This estimate does not take into account the fact that the printer is rated to print a minimum of 300,000 black and white pages, or 150,000 color pages.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18015



Tech Info Library

System 7.5 Update 1.0: Finder Update Message (6/95)

Revised: 6/26/95
Security: Everyone

System 7.5 Update 1.0: "Finder Update" Message (6/95)

=====

Article Created: 26 June 1995

TOPIC -----

After reinstalling System 7.5, the following message is displayed after the desktop appears:

"The system extension "Finder Update" cannot be used, because it is too new."

There does not seem to be any problem as the computer seems to operate properly after clearing the dialog box. What does this message mean?

DISCUSSION -----

This message is a result of having reinstalled System 7.5 over System 7.5.1 and not reinstalling the update. The solution is to install the System 7.5 Update 1.0.

Support Information Services

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Tech Info Library Article Number:18018



Tech Info Library

System 7.x: Double-Clicking on Extensions(6/95)

Revised: 6/26/95
Security: Everyone

System 7.x: Double-Clicking on Extensions(6/95)

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Article Created: 26 June 1995

TOPIC -----

Whenever I double-click on an extension, I get an error message that states:

"This file adds functionality to your Macintosh. To add this file's functionality to your Macintosh, place the file in the Extensions folder and then restart the computer."

But when I do this, and then double-click on the file again, I get the same message! What's wrong?

DISCUSSION -----

Extensions modify (extend) the operation of your system software. They are programs which are automatically loaded by the system at startup time.

Extensions, as with many other items in your System Folder, are not designed to be double-clicked on, and you will not be able to use them by trying to open them.

The error message you are seeing is generic, and will be generated whenever you double-click or try to open an extension, no matter where you double-click on it.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18019



Tech Info Library

ColorSync 2.0: White Paper (1 of 2) (4/97)

Revised: 4/28/97
Security: Everyone

ColorSync 2.0: White Paper (1 of 2) (4/97)

Article Created: 26 June 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article contains part 1 of the ColorSync 2.0 White Paper.

DISCUSSION -----

ColorSync 2.0 Overview
=====

ColorSync 2.0 is a second-generation color management system from Apple Computer, Inc. ColorSync 2.0 will fulfill the promise of desktop publishing-from plain-paper office documents to glossy, high-quality magazines and books-by making available stunning, easy-to-use color.

The Evolution of Color
=====

With the advent of low-cost color printers and other devices, color has become available to a much larger audience. However, a key element has been missing that prevents color from becoming an easy-to-use tool. This missing piece is a system for automatically ensuring color fidelity between devices. ColorSync 2.0 is the crucial piece of technology that will make working with color easy, fast, and consistent. This is accomplished by providing an open architecture and a powerful method for exchanging and matching color information between input devices, displays, applications, and output devices.

ColorSync 2.0 is designed to remove the frustration associated with using color. Different people have different uses for color, ranging from a chart in a presentation to a glossy, six-color annual report. ColorSync 2.0 provides solutions for many of the different uses of color, while delivering an open architecture for those who need special tools.

Business and desktop publishing color users will love the simple plug-and-play nature of ColorSync 2.0. By selecting applications and color peripherals that support ColorSync, such as Apple color displays and printers, they can enable automatic matching of colors between the screen and the printer. ColorSync 2.0 removes the guesswork involved in using color.

ColorSync 2.0 provides powerful tools that are essential in the commercial publishing and prepress markets. High-end users, such as service bureaus, trade shops, and printers, require color solutions that produce the most accurate color reproduction while still supporting existing tools and work flows. ColorSync 2.0 provides one of the fastest, most accurate color-matching systems available on any personal computer system today. And it's an open system, allowing third-party tools to extend its capabilities.

Finally, ColorSync 2.0 offers substantial benefits for developers. Now there's a standard architecture and profile format for color matching on the desktop that delivers the solution that users have asked for. No more decisions about which applications programming interface (API) and profile format to use, or time wasted writing custom routines. The ColorSync 2.0 API provides the most powerful "plumbing" for color management.

Features of ColorSync 2.0

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ColorSync 2.0 is more than a simple follow-up to ColorSync 1.0. It has been redesigned based on feedback from customers, developers, and industry experts. While Apple has retained the simplicity of ColorSync, fundamental changes have been made to improve its architecture and performance. Some of the improvements ColorSync 2.0 has to offer are:

- Higher quality, higher performance transformation engine

ColorSync 2.0 provides a default color-matching method (CMM), which transforms color information between documents. This CMM was developed in conjunction with one of the world's leading manufacturers of prepress hardware and software. It provides excellent quality and performance, as well as compatibility with CMMs from other companies.

- Expanded, compatible architecture

The ColorSync 2.0 architecture has been expanded to support a wider array of functions, as well as third-party products, such as alternate CMMs.

- ICC profile compatibility

ColorSync 2.0 supports profiles which conform to the International Color Consortium (ICC) profile specification including ColorSync 2.0 profiles. The ICC profile format is an industry standard, allowing the same device profiles to be used across multiple platforms. In addition, these profiles contain more information than ColorSync 1.0 profiles, enabling higher quality color-matching results.

- Support for PostScript Level 2 devices

The Apple LaserWriter 8.3 driver supports ColorSync 2.0 for printing to color PostScript devices. This allows all devices with ICC-compatible profiles to work with ColorSync 2.0.

- Support for more than four-color devices

ColorSync 2.0 adds support for devices and processes that use more than the four process colors, such as Hi-Fi color printing. This is extremely powerful for prepress users who often have five- and six-color jobs. Support for more than three-color input devices has also been added, allowing for up to eight colors on input and output.

- Increased performance

ColorSync 2.0 is PowerPC native and provides excellent throughput, especially on Power Macintosh machines. Preliminary benchmarks show that ColorSync 2.0, running on a Power Macintosh 8100/80, can transform a 4-inch x 5-inch image at 300 dots per inch (approximately 5.5 megabytes in size) from one color space to another in approximately 5 seconds, more than five times faster than ColorSync 1.0.

- Increased application support

Most of the top publishing applications will offer support for ColorSync 2.0, providing users with a complete solution from start to finish. Every day, more developers are choosing to support ColorSync 2.0.

Hardware and System Requirements

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ColorSync 2.0 is system-level software, so no special hardware is necessary. However, ColorSync does require certain baseline hardware and software configurations to perform properly. ColorSync 2.0 is fat binary; it supports both 68000-family and PowerPC processors.

Minimum requirements:

- A 68020 or later processor, or
- A PowerPC 601 or later processor
- System 7.1 or later
- A hard disk drive
- A system with a minimum of 5 megabytes of RAM
- Color display with 8-bit or higher color support
- ColorSync 2.0 (or ICC-compatible) profiles for installed peripherals
- A supporting printer driver, such as the Apple LaserWriter 8.3 version driver

Compatibility

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ColorSync 2.0 is backward-compatible with ColorSync 1.0. This means that any application, driver, or CMM that implements ColorSync 1.0 will function normally

with ColorSync 2.0 installed. In addition, ColorSync 2.0 supports the International Color Consortium (ICC) profile standard. This ensures that devices with ICC profiles are compatible with ColorSync 2.0.

QuickDraw GX versions 1.1 and later integrate ColorSync 2.0 for color-matching functions. Users of QuickDraw GX have the added benefit of accurate color matching.

ColorSync 2.0 will be available with several Apple products, including peripherals, computers, and system software updates. Look for the ColorSync logo on popular applications and peripherals.

As it has done with other system extensions in the past, Apple will offer developers the option of licensing ColorSync 2.0 for applications they are developing that may benefit from ColorSync 2.0.

Why Is Color Management Needed?

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Why don't the colors on the display match the colors that come out of the printer? How come digital proofs look different from film proofs? There are many reasons, based in complex color science, why the appearance of a color image is difficult to predict. In many ways, communication in color has problems similar to those with communication in languages. Each device is like a person, speaking his or her own language. When one device that speaks French attempts to communicate with another device that speaks Japanese, there is a breakdown, and the message isn't communicated. What's needed is an interpreter that is capable of interpreting the language as well as the dialect, to ensure that the message is properly communicated.

There are two basic concepts to understand when working with color. The first is how devices reproduce color, and the second is how desktop devices communicate in color.

Each device that is capable of reproducing color has a range of colors that it can accurately reproduce, better known as the gamut. Each type of device, such as a display or printer, has a unique gamut. A device's gamut is a subset of a larger standard area of color, known as a color space. Different types of devices work in different color spaces. For example, displays work in a different color space than do printers. It is important to understand the impact that gamuts and color spaces have on color reproduction and the types of work that are being produced on the desktop. This is easily illustrated by a familiar problem: The colors selected on a display may be much brighter and more saturated than the color that comes out of the printer. The reason for this may be that the color selected on the display is in gamut for the display, but is not in gamut for the printer. The gamuts of desktop devices, such as displays and printers, are relatively small when compared with the visible spectrum of light.

The second problem exists in the method that desktop devices communicate with each other. Before the evolution of desktop publishing, special-purpose, computer-based systems were used for many of the tasks involved in color publishing. These were known as color electronic publishing systems, or CEPS.

CEPS offered many benefits over the traditional processes of color printing, such as improved quality and accuracy, and a complete solution from a single vendor. However, they required an enormous investment in equipment and training, as well as functionality limited to a single task for each computer. These factors limited the widespread use of color, leaving it in the control of experts.

The desktop publishing revolution delivered tools that reduced the complexity and cost of publishing. And a single desktop computer could perform a wide variety of tasks. Today color is used more widely than ever before. Quality color devices, such as color printers and scanners that were previously extremely expensive, now cost less than \$500.

Suddenly the tools for the in-house creation of color documents quickly became available and easy to use. However, a new set of problems reduced their power and effectiveness. With these new tools came incredible creative power, providing designers and artists with the ability to electronically manipulate color data themselves. However, in practice these tools required an unrealistic level of training and expertise due to the inherent complexity of color. So while color seemed within reach, it was in fact still as far away as ever. If high-quality color was to reach the masses, either the user's knowledge about color had to increase or the tools had to incorporate this knowledge.

Device-Dependent Color

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Why is color so complex? As discussed before, each color device has a range of colors that it can accurately reproduce. The problem occurs when a color that was specified on one device is reproduced on a different device. This is a common occurrence when working with color on the desktop. A color is selected based upon what it looks like on the screen, such as a deep, rich blue. The color that appears on the printer, however, is much less saturated than the color that was specified on the display. The gamuts of the two devices are different, and no translation has occurred between the two. Color in this case is device dependent-the desired appearance of color depends on its being reproduced on a particular device.

Many of the new software and peripherals that became color-aware were manufactured by different companies. So it was common to have a scanner, display, and printer from three different manufacturers, as well as image manipulation and page layout software from different software vendors. But none of these devices communicated in the same language of color. The tools and power of CEPS were now available to anybody for a fraction of the cost. But the continuity that brought the entire system together, the solution that a CEPS provided, was missing. How could these elements be enabled to work together?

In addition, the users of desktop systems, the graphic artists and designers, lacked the color expertise that prepress experts had accumulated. The tools they used were not equipped with the understanding of how color was delivered to different devices, so they failed to deliver a comprehensive solution. The color expert needed to become an integral part of the system.

The Color Management Wave =====

The color spaces typically used by devices are made up of the additive or subtractive primary colors. The additive colors, red, green, and blue (commonly referred to as RGB), are used by all color displays and many scanners. The subtractive primaries, cyan, magenta, and yellow, with the addition of black (commonly referred to as CMYK or process colors), make up the color space used by output devices, as well as some scanners. The two color spaces also have many areas that do not overlap.

Using color science, Apple developed a methodology to address the problem of device-dependent color. The fundamental solution was to create device-independent color, or colors that are not dependent on any particular device. The idea is to use color spaces that represent the entire range of visible colors as translation spaces. This means that any color that is selected on a display is in the gamut of this neutral color space. In 1931, the CIE (Commission Internationale d'Eclairage) established standards for a series of color spaces that represented the visible spectrum-60 years before the arrival of desktop color!

The CIE color spaces form the foundation of device-independent color for color management. Many of these spaces, such as CIE XYZ and CIE Lab, are widely used in desktop color management systems today. These color spaces, along with several other pieces that will be described in the following sections, together form a system for managing and matching colors.

Device Characterization, Device Calibration, and Gamut Mapping =====

In order to accurately render colors from one device's color space to another, some resource must exist that describes each device's color capabilities. Today's systems use profiles. Profiles are basically dictionaries that contain data on a specific device's color information, including its gamut, colorants, and modes of operation. These profiles are created by color scientists working with highly sensitive measuring devices called spectrophotometers. The resulting measurements are input to a custom software package that uses several complex algorithms, the result of which is a profile. This process, known as device characterization, must be repeated to refine the profile until quality results are generated.

It is important to recognize that a device profile represents that device in its factory condition. In reality, devices of the same type will deviate, resulting in inconsistencies, and may require device calibration. This process is much simpler than device characterization, and should be performed on a regular basis to ensure accuracy.

The profiles are then used by a color transformation engine, or a color matching method (CMM). The CMM translates data from one device's colors to another, via an independent color space. The CMM receives the necessary information from the profiles, so that it can accurately transform a color from one device to another. The result is color that is consistent from device to device. It is not possible to have perfect color matches between devices due to differences in

each device's gamut. For example, many of the deep, saturated blues and greens that appear on a display cannot be reproduced by printers using the CMYK ink set.

In this instance, the CMM must perform gamut mapping, a process by which the next closest reproducible color is selected. Most matching systems offer several gamut-mapping methods, or rendering styles. Because the use of color varies from business graphics to photographic reproduction, the rendering intent of a color must be specified to produce the best possible results.

In the late 1980s, a number of leading color technology companies developed systems for color desktop publishing applications. These were commonly known as color management systems, or CMSs. The first CMSs promised to solve the problem of unmatched colors across desktop color devices. These pioneers took the first steps in creating a solution. However, these systems lacked key features, which resulted in poor acceptance by users.

One of the fundamental problems that prevented widespread adoption of early color management systems was the fact that each was implemented using a different architecture. In order to perform color-matching functions, an application manufacturer would have to select one system and then make specific calls to it. However, because there was no common color management framework for applications to use, each application had to use a unique system, with no compatibility between profiles and no consistency among the results.

Because no single system was widely adopted, all of the systems failed to provide a satisfactory solution. From a user's perspective, there was no guarantee that peripherals and applications would all work together to provide a complete work flow with consistent results. And because each system was proprietary, users couldn't exchange files, like profiles, with users of different systems.

These early CMSs primarily addressed only the prepress market. In fact, they provided high-end tools that were very similar to the CEPS systems, but ran on the desktop. They didn't intend to provide a solution for less experienced users of color, such as graphic artists and designers or business users. So color still required expertise and continued to be difficult to use.

New and Improved ColorSync

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To address many of the issues surrounding color use, Apple Computer introduced ColorSync 1.0 in 1993. The goal of ColorSync was to provide a common architecture for color-management systems. ColorSync 1.0 was an important first step toward a solution, but it did not completely meet customer needs in certain key areas. The API lacked the necessary prepress functionality for high-end users. The profile format was structured in such a way that it did not contain enough data for higher quality transformations. These elements resulted in somewhat limited developer adoption. Without widespread application and driver support, there were limited vehicles to use ColorSync 1.0. Based on input from end-users and developers, Apple returned to the drawing board to redesign ColorSync. The result is a greatly refined solution, ColorSync 2.0.

Begin_Table

Differences Between ColorSync 1.0 and 2.0

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	ColorSync 1.0	ColorSync 2.0
	-----	-----
Profiles:	ColorSync 1.0	Apple Supplied ColorSync 2.0 or third-party ICC- compatible profiles
PowerPC Native:	Yes*	Yes
Channel Limit:	Up to 4	Up to 8
CMMs:	ColorSync 1.0 Default CMM	ColorSync 2.0 Default CMM and CMMs
third-party		
LaserWriter Driver Support:	None	Apple LaserWriter 8.3

End_Table

* Note: ColorSync 1.0.5 is PowerPC native.

ColorSync 2.0 greatly improves on the three key elements of ColorSync: the ColorSync API, the Apple Default CMM, and ColorSync 2.0 (or ICC-compatible) profiles.

Article Change History:

09 Apr 1997 - Removed out dated on line references.

11 Aug 1995 - Reformatted to make more readable on the World Wide Web.

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Tech Info Library Article Number:18020



Tech Info Library

ColorSync 2.0: White Paper (2 of 2) (6/95)

Revised: 6/30/95
Security: Everyone

ColorSync 2.0: White Paper (2 of 2) (6/95)

Article Created: 30 June 1995

TOPIC -----

This article contains part 2 of the ColorSync 2.0 White Paper.

DISCUSSION -----

Framework for Color Matching

A very important piece of any color-matching solution is a consistent method for users to gain access to the tools that are necessary to complete a task. ColorSync 2.0 provides an architecture that allows applications and drivers to request color-matching functions. This type of interface is commonly known as an applications programming interface (API). The ColorSync 2.0 API provides a powerful array of functions for color-matching needs. For example, the 2.0 API adds functions for features like device simulation, support for color separations using more than four colors, and PostScript driver support. In conjunction with the ICC profile format, ColorSync 2.0-supporting applications can actually store the color data for the device on which the file was created inside the file. For example, storing a scanner's color data in the file on disk ensures accuracy regardless of the system or platform the file is used on.

The ColorSync 2.0 API thus removes the need for application vendors to call specific APIs for color matching. With the release of ColorSync 2.0, most color management manufacturers will release new versions of their software that work within the ColorSync 2.0 architecture. This means much less work for application vendors—they need only call one API for all color management and matching functions. Now an avenue exists for popular tools to work together to ensure that color is communicated accurately, and consistent with the user's intent, across all applications and devices.

The API is only one piece of the solution, the framework for color matching. It is not capable of actual transformations of color data. The second piece of the system is the transformation engine that actually changes color data. This is

known as a color matching method, or CMM. ColorSync 2.0 contains a default CMM provided by Apple. The default CMM was developed with the help of a leading manufacturer of prepress equipment, with many years of experience with color science. The result is a CMM that not only produces excellent results, but is extremely fast.

The default Apple CMM is a powerful engine capable of handling the most complex color jobs. However, some users may need a different engine. The ColorSync 2.0 architecture is designed not only to allow the use of CMMs from other developers, but to provide a mechanism for cohabitation and cooperation of CMMs. This allows ColorSync to be flexible enough to provide solutions that the default CMM may not offer. This adaptability protects users with existing color management products and those whose needs may change. It also allows VARs and developers to add value by developing new CMMs without having to create new APIs, system calls, and profile formats.

To accurately transform data between two devices, the CMM must have the necessary information about the devices in use. This information is provided by the profiles. ColorSync 2.0 recognizes profiles in conformance with the International Color Consortium (ICC) profile specification. ICC was founded in 1993 to create standards for the use of color on the desktop. Apple led the way for the foundation of this specification by offering the ColorSync profile specification as a starting point. The result was a broad, cross-platform implementation for color management profiles. The benefit for the user is clear: One profile is all that is needed for any color-matching functions on any popular platform. Apple supplies ColorSync 2.0 profiles for Apple's color-capable peripheral devices with ColorSync 2.0, and ColorSync 2.0 and ColorSync 2.0 profiles are ICC compatible.

Working with Color: Before and After ColorSync =====

To better explain the how ColorSync 2.0 works, let's look at an example of what it has been like to work with color before ColorSync 2.0.

Jill, a graphic designer, is hired to create an advertisement for a new product. The ad needs to include a picture of the product, the company logo, and an attractive design. The final piece will be printed on an offset printing press, using high-quality paper and the traditional CMYK inks. Jill begins the process by scanning an image of the product. Jill examines the scanned image on screen, judging and correcting the color of her scan based on what she sees on her screen. And what she sees is misleading because she has not compensated for the differences between her scanner and her display. When Jill feels that the color on screen matches the original, she moves on to the next step, assembling and laying out the page.

Next Jill inserts the color image and the company's logo into the page layout. The company logo uses spot colors from a swatch book, or colors that require special inks or special ink combinations. Often, spot colors are outside the gamut of a conventional process (CMYK) printing device, while they are in gamut for the display. However, Jill feels that the color logo she sees on her screen accurately represents the colors used in the company's logo.

Next, she places some text in front of a color box. Jill selects the color based on screen values that correspond to the colors in the image the company has provided. Again, she has selected the color based on what she saw on her screen, without compensation for the printing press. After Jill assembles the document, she produces a comprehensive, or "comp" print of the document on her desktop printer. The comp allows her to check that all of the elements look as she intended. It also allows the client to examine the document.

As Jill examines the print, she notices that much of the color on the print is different from the colors on her screen. She must now go back several steps to correct the color. She will spend time repeating this process until the color from her desktop printer is what she wants. Because Jill is unable to preview what the color will look like, she is essentially guessing. And she must perform this process for each design comprehensive she produces for her client so that the client sees the most accurate representation possible.

Once the client views the comps, they may want to make several changes to the document, including changes to the colors that Jill has selected. Once a final comp is selected, Jill must prepare the document for the printing press. She will make the painful discovery that the press proof from the printing press does not match her desktop proof. At this point, she has spent many extra hours and dollars trying to match colors between her monitor, desktop printer, and printing press. She has three alternatives. The first is to have a trade shop or service bureau produce color proofs of her document. However, this would cost her a lot of money and reduce the control she has over the design process. Her second alternative is to simply guess how the colors will be reproduced. However, this may result in an unhappy client. Her third and most sensible alternative is to use a system that will automatically compensate for the differences in color between her devices, thus reducing the frustration, time, and money spent trying to get the results she wants. Jill wants to spend her talent and effort on creating the best possible design, not on trying to make colors match.

Let's examine her work flow using ColorSync 2.0:

Jill begins the process by scanning an image of the product, and then examines the scanned image on screen. She judges the color of her scan based on what she sees on her screen, confident that ColorSync 2.0 has compensated for the differences between her scanner and monitor, as well as alerting her to any colors that are out of gamut for her target printing device. She can now move ahead with the color correction process with confidence that the colors she sees on her screen will be very similar to those produced by her desktop printer.

Next Jill inserts the color image and the company's logo into the page layout. She doesn't worry about the spot colors used in the company logo because the logo file has the source device's color data attached to it, in this case, the display of the machine on which the logo was created. This means that ColorSync 2.0 will automatically adjust the colors between the logo file and her display to ensure accurate viewing of the logo.

Jill then places some text in front of a color box. She selects the color based on screen values that correspond to colors in the image the company has

provided. Again, she has selected the color based on what she saw on her screen, but this time she is confident that the color she has selected will reproduce accurately on the printing press. This is because ColorSync 2.0 knows which output device she will be using, and can adjust on-screen colors for that device. Now that the designer has the document assembled, she produces a comp of the document on her desktop printer. Before she prints, she tells ColorSync 2.0 that her current printing device is a desktop printer, such as an ink-jet or dye-sublimation printer, and that she wants her printer to simulate the printing press on which she'll print the final piece.

ColorSync 2.0 automatically maps the colors from her display to her printer, while keeping her intent of simulating a printing press. The result is a comp that very closely matches her display. She can now show her comps to the client with confidence in the color. Once the client has approved a design, Jill prepares the document for the printing press, where thousands of copies will be printed. Because she's using ColorSync 2.0, she easily creates color separations for the printing press. ColorSync 2.0 ensures that her digital proof closely matches her press output. ColorSync 2.0 has saved Jill enormous time, money, and frustration compared with her previous process. She now has more time to focus on design.

In our example, all steps are performed on a single workstation by a single user. However, in creating color documents, it is common for elements of that document to be created by different people, using different applications running on different computers. These factors can significantly affect the color fidelity between steps. However, ColorSync 2.0 is versatile enough to handle any color job, from a business graph in a presentation to the most difficult prepress task.

Developer and User Benefits

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ColorSync 2.0 offers a wide array of benefits for different types of users. Depending on the implementation of a particular application making calls to ColorSync 2.0, different levels of functionality and control become available. The result ranges from automatic color matching to high-end prepress functionality.

Business and desktop graphics users don't need to spend valuable time trying to get colors to look right. ColorSync 2.0 eliminates the guesswork involved in using color by putting the color science in the operating system. Colors that are defined on the screen in presentation or spreadsheet programs are automatically adjusted so that the colors from the printer match those on the screen. It is critical to have this type of solution implemented in the operating system so that color fidelity is consistent across all applications. To do otherwise would produce inconsistent, unacceptable results. Only one operating system currently offers this comprehensive solution: MacOS.

Commercial publishing and prepress users require the highest level of accuracy and performance from their tools. High-end users will appreciate the open approach Apple has taken to implementing ColorSync 2.0. Whether they use a drum scanner, a digital camera, or the hi-fi color process, they'll find that ColorSync 2.0 can handle the wide range of data they need.

A Labor-Saving Framework for Developers

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The key to the success of any color management system is that it be a complete solution. This requires the widespread adoption of ColorSync 2.0 by the manufacturers of products used in working with color, including application and device manufacturers, the operating system, and other third-party tools. ColorSync 2.0's expansive architecture provides developers with the plumbing needed to access system-level functionality for color management. With one framework for these functions, application vendors need only write one common set of calls, greatly reducing the development workload.

Before ColorSync 2.0, a manufacturer would have to decide which color management system to support, and then develop to that proprietary system. Application developers can now include color management in their applications without the burden of selecting a single system. Because ColorSync 2.0 has an open architecture, products from other companies can easily work with ColorSync. Developers' color management systems and their supporting products, which were previously proprietary, can plug into Apple's architecture to offer additional functionality to supporting products. Minimal work is required to ensure compatibility with ColorSync 2.0 and supporting applications.

To ensure that peripheral manufacturers benefit from a common framework, Apple led the way in developing the ICC standard-profile format. This format offers many benefits to both end-users and developers. Now peripheral manufacturers need only create one ICC-compatible profile for a device, eliminating the need for several profiles for each CMS and platform.

Together, ColorSync 2.0 and ICC-compatible profiles offer the ability to store the data about an element's original color space in the disk file. This ensures that any user who has ColorSync 2.0 installed can accurately reproduce that element, thus eliminating the possibility of a user not having the necessary profile. ColorSync will read this source data, and provide the necessary information to the CMM for proper display or printing. A variety of different tools are available to developers through the ColorSync 2.0 architecture.

An Open Solution

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ColorSync 2.0 alone does not provide a color management solution. Together with Apple's developers, ColorSync 2.0 provides a powerful solution for the needs of users working with color. This solution generates consistent, predictable results as color information is scanned, manipulated on the display, and then printed.

This solution levels many of the roadblocks to users of color, making color accessible to those who previously were intimidated by the daunting challenges of working with color.

Users of all Macintosh applications will be able to take advantage of the capabilities ColorSync 2.0 brings to the Macintosh. All in all, ColorSync 2.0

..TIL18021-ColorSync_2-0-White_Paper_2_of_2_6-95.pdf

allows Macintosh to be the computer of choice for anyone who wants to communicate effectively and powerfully with graphics, type, and color.

Support Information Services

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Tech Info Library Article Number:18021



Tech Info Library

Powerbook 500 Series: Setting Up An External Modem (6/95)

Revised: 6/26/95
Security: Everyone

Powerbook 500 Series: Setting Up An External Modem (6/95)

=====

Article Created: 26 June 1995

TOPIC -----

I have a PowerBook 520 which does not have an internal modem. I cannot figure out how to set it up to use it with an external modem. In the manual it says that I should open the PowerBook Setup control panel and choose the Compatible option. I do not have that choice in my PowerBook Setup control panel. What do I do now?

DISCUSSION -----

In the PowerBook "Getting Started" manual the instructions for installing/using an external modem (pg. 106) indicate that you should open the PowerBook Setup control panel and select Compatible for the Modem Setting.

However, this manual was written under the assumption that you may have an internal modem installed in your PowerBook. Not all PowerBooks have internal modems. The Compatible option will only show up in the PowerBook Setup control panel if your PowerBook has an internal modem installed. If you have no internal modem, you will have no choices for Modem Setting.

The step described in the manual is an extra step required only for PowerBook computers with internal modems. You can skip this step and go on to the next step in the manual.

Support Information Services

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Tech Info Library Article Number:18022



Tech Info Library

Power Macintosh 9500: Optimizing PCI card performance (7/96)

Revised: 7/13/96
Security: Everyone

Power Macintosh 9500: Optimizing PCI card performance (7/96)

Article Created: 27 June 1995
Article Reviewed/Updated: 13 July 1996

TOPIC -----

This article discusses a configuration tip to provide optimal performance in Power Macintosh 9500 computers using more than three PCI cards.

DISCUSSION -----

In the Power Macintosh 9500, there are six PCI slots (A1, B1, C1, D2, E2, F2), which are serviced by two PCI controller chips (Bandit 1 and Bandit 2). Theoretically, each controller chip can handle up to four PCI cards. However, in order to even the data bandwidth load, three PCI slots are distributed to each controller. Specifically, Bandit 1 controls slots A1-C1, and Bandit 2 controls slots D2-F2. This distribution can almost be thought of as two PCI buses with three slots each.

The slots on the logic board are labeled by letter and number. The labelling, which is printed next to the slot, is used only to identify the physical location of the slot on the logic board. Located between the Power Supply and the bottom of the case, the slots look like:

Power Supply

-----	PCI Slot A1
-----	PCI Slot B1
-----	PCI Slot C1
-----	PCI Slot D2
-----	PCI Slot E2
-----	PCI Slot F2

Bottom of Case

Additionally, the I/O circuitry on the logic board, which controls functions such as ADB and Serial I/O, was designed to be accessed through the PCI bus. The I/O circuitry functions as a PCI card built into the logic board. When

considering performance of the PCI bus, it can be assumed that I/O functions will consume some of the bandwidth of the PCI bus. Depending on the amount of I/O activity, the PCI bus handling I/O may run slower than the PCI bus that does not.

On the Power Macintosh 9500, the I/O functions are handled by the first PCI controller (Bandit 1). Because the first PCI controller handles both I/O functionality and slots A1-C1, performance of cards in these slots may be decreased.

In order to achieve optimal performance of PCI cards, slots D2-F2 should be used first. However, when using high-bandwidth cards, which are moving large amounts of data across the PCI bus, it may be beneficial to evenly distribute the cards between the two buses. In such circumstances, it is likely that the I/O bandwidth is much smaller than that of the high-bandwidth card. To distribute data evenly across the entire PCI bus, you may want to use the following order: D2, A1, E2, B1, and so on.

This article was published in the Information Alley on 02 July 1996.

Article Change History:

13 Jul 1996 - Added alley info.

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Tech Info Library Article Number:18023



Tech Info Library

Internet Server For WWW: Errors in Documentation (8/95)

Revised: 8/18/95
Security: Everyone

Internet Server For WWW: Errors in Documentation (8/95)

Article Created: 27 June 1995
Article Reviewed/Updated: 18 August 1995

TOPIC -----

This article describes an error in the documentation for the Apple Internet Server Solution for the World Wide Web.

DISCUSSION -----

Configure MacTCP

Error:

Steps 2 to 4 are out of order. You cannot type in an IP number until you set addressing for manual.

Correction:

When installing MacTCP it defaults to manual addressing.

Article Change History:

18 Aug 1995 - Removed manual correction for MacTCP Ping, manual is correct.
12 Jul 1995 - Changed title for consistency.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18024



Tech Info Library

MacTCP and SOCKS Compliance (6/95)

Revised: 6/27/95
Security: Everyone

MacTCP and SOCKS Compliance (6/95)

=====

Article Created: 27 June 1995

TOPIC -----

I need to know what, if any support, MacTCP has for SOCKS, and whether SOCKS support is implemented at the application level, for example Mosaic, Netscape, and so on?

DISCUSSION -----

SOCKS is a public domain Internet socket service consisting of client library routines and a daemon which interact through a simple protocol to provide convenient and secure network connectivity through a firewall host.

SOCKS support would be implemented in the various clients (ftp, telnet, www, and so on), and not directly in the protocol stack (MacTCP) itself. The library functions could be included in the protocol stack but support would still be required in the applications. It is not essential to have the library integrated into the protocol stack to provide SOCKS capabilities. Any client can implement the library routines within the application to allow SOCKS functionality.

The only applications we are aware of that provide support for SOCKS on the Macintosh is Netscape and InterCon Systems Corporation's TCP/Connect II. TCP/Connect II offers a suite of applications (mail, news, ftp, and www).

Support Information Services

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Tech Info Library Article Number:18026



Tech Info Library

MAE 2.0: Technical Frequently Asked Questions (6/96)

Revised: 6/25/96
Security: Everyone

MAE 2.0: Technical Frequently Asked Questions (6/96)

Article Created: 27 June 1995
Article Reviewed/Updated: 25 June 1996

TOPIC -----

This article is the MAE 2.0 Technical Frequently Asked Questions (FAQ) for users of Macintosh Application Environment (MAE).

DISCUSSION -----

Table Of Contents

- File System
- Networking
- Floppy Disks and CD-ROMs
- Performance
- Keyboard and Display
- Prints and PostScript
- Other

Entire document is new for version 2.0 of MAE.

See Also:

- MAE 2.0 Tech Notes, available on <http://www.mae.apple.com> or via anonymous ftp from <ftp.support.apple.com> in directory /pub/mae/technotes.
- MAE 2.0 README.TXT (on MAE 2.0 product CD-ROM)

File Systems

Question: How do I show files and directories whose names begin with "." in MAE Finder windows?

Answer: You can show/hide these files and directories by setting the appropriate

check box in the Views control panel.

Question: Why are file sizes different in MAE and UNIX?

Answer: Using MAE to copy files from a CD or from network-based volumes can result in source and destination files of different sizes, as viewed by the UNIX file system. This is due to MAE's default of storing files in AppleSingle format. Since MacOS files have both resource and data forks, MAE handles these files differently on a UNIX File system, in a format called "AppleSingle". For more details, refer to "AppleSingle and AppleDouble File Formats" in the MAE 2.0 Tech Notes (see "See Also" following the table of contents of this document).

Question: Why won't my UNIX applications recognize files from MAE applications?

Answer: This is related to the previous question. By default, UNIX files are written by MAE in AppleSingle format. Since UNIX and its applications know nothing about the Macintosh "resource headers" tacked onto the beginning of files in their AppleSingle representation, UNIX applications may see these files as corrupted. For more details, refer to "AppleSingle and AppleDouble File Formats" in the MAE 2.0 Tech Notes.

This "corruption" can occur in a number of different ways. For example, under FileShare, if a UNIX file is dragged from a Macintosh to MAE, the file will be written by MAE in AppleSingle format, which may make it unusable. This occurs because the Macintosh doesn't know anything about UNIX files, so when it sends one to MAE, MAE thinks it's a Macintosh file and writes it to disk accordingly.

This situation does not occur between two MAE sessions that are sharing files, since MAE recognizes UNIX files for what they are and does not store "resource" information about them. When dragging a UNIX file between two MAE sessions, MAE correctly treats the file as a UNIX file.

Using ftp utilities such as Fetch from MAE can also be problematic. When "getting" a file, Fetch will pass the file to MAE to be written to disk. This works fine for Macintosh files since they will be written as AppleSingle files. However, when "getting" a UNIX file, MAE will likewise write this file as an AppleSingle file, which can make it unusable by UNIX applications.

Text files are handled differently by MAE. Text files are always written by MAE in AppleDouble format to facilitate reading and writing by both Macintosh and UNIX applications (newline characters are automatically translated by MAE; they are stored on disk as UNIX newlines). So in the examples above, when dragging a text file from a Macintosh to MAE or when Fetch gets a file using ftp "Text" mode (i.e., ASCII mode), MAE will write the file in AppleDouble format.

NOTE: Fetch 3.0 and higher will not work with MAE 2.0.2, use version 2.x.x.

As a rule of thumb, it's best to use UNIX to work with UNIX files and MAE to work with Macintosh files. If your environment requires the same (non-text) files to be regularly handled by both MAE and UNIX, then you're probably a candidate for running MAE in AppleDouble mode, by launching it with the

-filedouble option.

Question: Can I run UNIX commands located on Macintosh floppy disks?

Answer: MAE does not support execution of UNIX commands from Macintosh floppy disks.

Networking

Question: I like to have the Chooser open and available throughout my MAE session. Does this generate unnecessary network traffic?

Answer: The Chooser generates significant traffic only when it is the foreground application and a Chooser device (such as AppleShare) is selected. It generates minimal traffic when it is the foreground application and no Chooser devices are selected. It generates no traffic when it is in the background. Keeping the Chooser open when using other applications should not generate network traffic or impact network performance.

Question: I just launched MAE. I see the message "Unable to open the file '/dev/appletalk/lap/ethertalk0/control, please be sure the file exists'" in the UNIX window from which I launched MAE. What does this mean?

Answer: AppleTalk is not installed properly. AppleTalk installation must be done as root on each system on which you want to run MAE. You cannot simply copy your MAE binaries from machine to machine. The AppleTalk installation correctly configures your kernel and creates device files used by AppleTalk.

Question: Whenever I use Find File to search a folder exported via FileSharing from a workstation running MAE 2.0, both the client and the server appear to hang. Is this a bug?

Answer: This is a file system problem. FindFile uses PBCatSearch to search the entire volume anytime a search is done. For large volumes with nested mountpoints, PBCatSearch can take a very long time. It is best not to use FindFile to search remote volumes.

Question: I have two ethernet cards installed on my workstation; can I select either card for my MacTCP interface?

Answer: No. The MacTCP driver will use the first interface detected by the ifconfig command. If more than one ethernet card is installed, MacTCP will be configured for the first card.

Question: Can I use the MacTCP control panel to set my MacTCP ip address?

Answer: No. When you run MacTCP on MAE, it uses the host and ip configuration of

the UNIX workstation on which you are running MAE. This control panel is for information only. As a user, you cannot reset your workstation's ip/host information using MacTCP.

Question: We use File Sharing to share files between Macintoshes and workstations running MAE 2.0. We have experienced problems when accessing files exported from an MAE workstation while performing server maintenance chores on that workstation. In particular, changing access permissions or ownership seems to adversely affect clients accessing the file server. Is there any way we can prevent this?

Answer: It is best not to attempt to alter the sharing status of a folder while it is being used by a remote client. If you want to alter the status of a shared folder (by changing its access permissions, changing its owner, or unsharing it) you should check the "File Sharing Monitor" to see that no one is using the folder before changing its sharing status.

Floppy Disks and CD-ROMS

Question: (Sun only) I'm having difficulty mounting CD-ROM discs on Solaris 2.4.

Answer: MAE may be unable to mount CD-ROMs under Solaris 2.4, even though the file macdisk.Solaris is unchanged from Solaris 2.3, where CD-ROMs can be mounted without difficulty.

For mounting CD-ROMs in MAE while running Solaris 2.4, follow these steps:

Step 1

Verify that Volume Manager patch 101907-05 has been loaded.
(/etc/showrev -p will list all installed patches.)

Step 2

Under Solaris 2.4, modify the macdisks.Solaris file in this manner (scsi6 should be replaced with the correct SCSI ID# of the CD-ROM Drive):

```
scsi6:removable:ro:/vol/dev/aliases/cdrom0
```

NOTE: After inserting the CD-ROM, wait 5 seconds before attempting to mount it in MAE. The Volume Manager first must create an entry in aliases for 'cdrom0' before MAE will be able to read the alias directory.

This will properly allow MAE to mount CD-ROMs without modifying the /etc/vold.conf directory, thereby allowing the user to mount UNIX CD-ROMs with the Volume Manager.

Question: Is there any way of accessing a Mac-formatted hard disk from MAE if I connect it to the SCSI bus on my workstation?

Answer: No. MAE does NOT support HFS format hard disks (only CD-ROMs and

floppies). You may potentially damage your workstation or Mac disk if you try to connect the two.

Question: What kinds of removable media are compatible with MAE?

Answer: The current release of MAE only supports Macintosh formatted CD-ROMs and Macintosh formatted 1.4 Meg floppy disks.

Question: Are ISO 9660 format CD-ROMs compatible with MAE?

Answer: No. Do not add the "ISO 9660 File Access" extension (or any of the other Mac CD-ROM extensions) to your System Folder.

If ISO 9660 CD-ROMs are mounted under UNIX (Solaris 2.3 does this automatically), the mounted directory should be accessible to MAE. (It does not appear as an icon on the desktop.)

Performance

Question: Can MAE be run as an X Application over the network?

Answer: Yes. However, MAE was optimized to run as a local application and be displayed on the local workstation console. While MAE is certainly an X application and can be run remotely, it is graphics intensive and may run significantly slower over the network. MAE performance is highly dependent upon the X server, X client, and network bandwidth/traffic.

Question: Can I increase the performance of MAE when using a remote X-Client over the network?

Answer: Yes. Changing the Monitors Control Panel to "Black and White" will reduce the amount data sent over the network to the X-Client. This can make a significant difference when running remotely, especially with graphics intensive applications.

Question: Will performance be affected if my home directory is located on a remote volume?

Answer: Yes. The "System Folder", which contains the MacOS system files, is built in your home directory when you start MAE for the first time. Performance will be affected since the code in this folder must be executed to run MAE and it will run more slowly when the System Folder is located on a remote volume.

Question: Can I run MAE with my home directory physically located on a machine running SunOS 4.1.x and NFS mounted to a Solaris 2.x workstation running MAE?

Answer: Yes, but be careful with your permissions. Performance may also be

significantly affected.

Keyboard and Display

Question: Why does the cursor sometimes disappear from the screen, when I'm using MAE with a black and white monitor?

Answer: The MAE cursor can "disappear" when it enters an area of the MAE screen that is the same color as the cursor. This is most prevalent when running MAE in monochrome mode and you move an all black cursor (for example, the I-beam cursor) over an all black region of the screen. If your X Server supports color cursors, you can control the foreground and background colors of the MAE cursor by setting the TBFGCURSORCOLOR and TBBGCURSORCOLOR environment variables, as in the following c-shell example:

```
setenv TBFGCURSORCOLOR red
setenv TBBGCURSORCOLOR blue
```

Question: When I try to abort an MAE application by pressing Command-Option-Escape, MAE hangs. What's the problem?

Answer: This feature is not implemented in MAE 2.0. Avoid trying to abort applications with Command-Option-Escape on both Sun and HP.

Printers and PostScript

Question: I'm having trouble getting my PostScript printer to print reliably under MAE. What should I do?

Answer: While developing MAE, we couldn't test on all possible PostScript printers - there are just too many. Also, many older PostScript printers have very little memory (for example, the original Apple LaserWriter(tm), only had 1 Mbyte of RAM), making it difficult to print complicated documents on them. A Macintosh computer, by communicating directly with the printer, can circumvent this memory limitation by optimizing the feeding of PostScript to the printer. MAE's LprWriter, however, uses the underlying UNIX print spooler, and does not communicate directly with the printer. It is therefore possible for a printer to be unable to print a complex document from MAE that it can print successfully from a Mac.

Other tips:

1) The LprWriter driver generates Level 1 PostScript, which should print on any "real" PostScript printer that has enough memory. (Some companies didn't license a PostScript interpreter from Adobe but wrote their own; these often have problems.)

2) It is very important to specify the correct PPD file for the printer. The PPD file contains information about resident fonts, memory size, page sizes, etc. An incorrect PPD specification can create many problems.

3) If the PPD file for a printer isn't shipped with MAE, you can try to get it directly from the printer manufacturer, or from Adobe. Adobe, the creator of PostScript, maintains archives of PPD files, and technical papers about PostScript. These are available on the Internet, at Adobe's ftp server, ftp.adobe.com (130.248.1.4). The login is "anonymous" (without the quotes), and you should use your email address as the password. PPD files are in the directory : /pub/adobe/PPD/mac

NOTE: all spaces in PPD filenames have been replaced with tildes (~), to make it easier to retrieve the files. After downloading a PPD from this directory, change all tildes in the filename to spaces.

You can also send mail to their email server:
ps-file-server@adobe.com

Send an email message with just the word "help" in the subject for instructions on how to use the email server.

Other

Question: Why won't my Solaris 2.4 machine successfully run MAE unless it is connected to a network? Without a network, MAE hangs after the "Welcome to Macintosh" screen, and I must kill MAE from a UNIX shell. If the same machine is added to a network, MAE starts up fine.

Answer: Solaris 2.4 workstations not connected to a network require Sun's patch 101945-27 (this "megapatch" is newer than the patches recommended in the MAE 2.0 README). connected to a network. This patch can be found at sunsite.unc.edu. After installing the patch, remove the file /tmp/at if it exists.

Question: Why won't MAE 2.0 produce sound on my HP Workstation?

Answer: See ISSUES RELATED TO SOUND in the README file delivered with MAE 2.0. Final check: be sure the AUDIO environment variable is set to the target audio server.

Question: Using Aldus Persuasion 3.0 with MAE, I can open documents, but can't save them. What's the problem?

Answer: You will have to save your Persuasion 3.0 documents under a name different from their original name. This workaround is necessitated by an incompatibility between MAE and Persuasion 3.0 that causes Persuasion to think the original document is locked; it therefore opens a copy, with a generic 'untitled' name. Because it thinks the original document is locked, you can't save the modifications under the original name.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple

Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

25 Jun 1996 - Updated Fetch information.

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Tech Info Library Article Number:18027



Tech Info Library

QuickTake 150: Developers Can Contact APDA (6/95)

Revised: 6/27/95
Security: Everyone

QuickTake 150: Developers Can Contact APDA (6/95)

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Article Created: 27 June 1995

TOPIC -----

A developer is requesting information in order to write an interface to use the QuickTake 150 on a computer that is not compatible with Mac OS or Windows.

DISCUSSION -----

Apple Computer supports the QuickTake cameras on two platforms, Macintosh and Windows. If a developer wants to support platforms other than these, there is technical documentation available from the Apple Programmers and Developers Association (APDA) called the QuickTake Software Developers Kit.

It would also be possible to download images from a QuickTake camera into either a Windows or Macintosh computer, and then transfer the files to another platform in a image file format that is compatible with that machine.

Search the Technical Information Library (TIL) for "APDA" in order to locate contact information.

Support Information Services

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Tech Info Library Article Number:18028



Tech Info Library

AudioVision 14 Display: System 7.5 Compatibility (7/96)

Revised: 7/19/96
Security: Everyone

AudioVision 14 Display: System 7.5 Compatibility (7/96)

=====
Article Created: 27 June 1995
Article Reviewed/Updated: 19 July 1996

TOPIC -----

Are there any known issues with the AudioVision Display Software 1.0.2 and System 7.5?

DISCUSSION -----

The AudioVision Display Software was not fully tested using System 7.5, so there were some software related issues. Instead of using the AudioVision Display software, you should upgrade to the AppleVision software v1.0.2 or later which addresses all of the AudioVision issues. The AppleVision software is available on Apple Software Update sites.

Article Change History:
19 Jul 1996 - Rewrote and updated entire discussion.

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Tech Info Library Article Number:18029



Tech Info Library

Macintosh Performa 640 DOS Compatible: Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 640 DOS Compatible: Specifications (4/97)

Article Created: 27 June 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides the specifications of the Macintosh Performa 640CD DOS Compatible computer.

DISCUSSION -----

Common Features

=====

Integration

- Run Mac OS and DOS or Windows software simultaneously
 - applications, games and CD-ROM titles
- Toggle between operating systems with a keystroke
 - single monitor supports both
- Copy & paste between OS environments
- Easily share files and folders
- Use Mac compatible printer and peripherals with both operating systems
- Supports Apple monitors (High Resolution RGB up to Multiple Scan 15) or VGA and SVGA monitors

Storage

- 1.4 MB Apple SuperDrive floppy
 - Read and write Mac OS, MS-DOS, OS/2 and ProDOS disks
- 500 MB IDE hard drive, 1/3 height
 - PC files reside in virtual drive container
- Double-speed CD-ROM drive

Options

- CommSlot Ethernet card
 - 10 BASE-T, thin, thick, AAUI

- Apple Presentation System

Bundled Hardware

- Apple Multiple Scan 15 Display
- AppleDesign Keyboard
- Global Village TelePort Gold 14.4Kps Fax Modem

Environment

- Operating Temperature
 - 50° F to 104° F (10° C to 40° C)
- Storage Temperature
 - -40° F to 116.6° F (-40° C to 47° C)
- Relative Humidity
 - Operating: 10% RH to 90% noncondensing
 - Non-operating: 5% RH to 95% noncondensing
- Altitude
 - Operating: -1,000 to 10,000 feet
 - Non-operating: -1,000 to 40,000 feet

Weight

- 19 Pounds (8.6 Kg)

Dimensions

- 12.6" X 16.5" X 4.3" (320 mm X 419 mm X 109 mm)

Electrical Requirements

- Line voltage: 100-240 volts AC, RMS, single-phase, nominal
- Frequency: 50-60 hertz (Hz)
- Power consumption: 45 watts maximum, not including monitor

ADB Power Requirements

- Maximum current draw for all ADB devices is 500 milliamperes (mA) (a maximum of three Apple Desktop Bus devices is recommended)
- Mouse draws up to 10 mA
- Keyboard draws 25-80 mA (varies with model).

Other

- Front headphone jack
- Front controls for volume
- Infrared remote control
- Power on/off from keyboard

Macintosh Features

=====

Processor & RAM

- 68LC040 running at 66/33 MHz
- 8 MB RAM standard
 - 4 MB on logic board, 4 MB in SIMM
 - Expandable up to 52 MB (32 MB in one SIMM, 16 MB in other)
 - Two 72-pin SIMM sockets
 - Expand single SIMM at a time
 - 80 ns or faster
- 1 MB ROM

Expansion & Ports

-
- Video-in slot (Optional)
 - TV tuner slot (Optional)
 - Communications slot
 - SCSI, two serial, ADB, sound-in, sound-out
 - Internal LC-Compatible 68030 processor-direct slot (PDS) with installed DOS-Compatibility Card*

Video

-
- 1 MB DRAM video frame buffer
 - 16-bit color at 640x480, 8-bit color at 800x600, 832x624
 - Supports video in a window with optional card

Sound

-
- 8-bit monophonic sound input
 - 8-bit stereophonic sound output (16-bit CD stereophonic playback)
 - Sound input port for optional microphone or line input
 - Two sound output ports, level nominally 0.5 volts RMS into 39 ohms
 - Internal speaker, muted whenever a plug is inserted into either sound output port

Software

=====

System software

-
- Mac OS System 7.5.1 with Apple Guide, AppleScript, PC Exchange
 - At Ease

Third-party software bundles

-
- American Heritage Dictionary
 - ClarisWorks
 - Quicken
 - MacLink Plus/Easy Open Translators
 - Click Art Performa Collection
 - MacGallery Clip Art Treasure Pak
 - Espresso
 - Zip Zap
 - TelePort Gold II for Performa
 - TelePort Modem Legend Tour

CD bundles

- TIME Almanac Reference Edition
- CardShop/StickerShop Plus
- 3D Atlas
- 1995 Grolier's MM Encyclopedia
- Club KidSoft

DOS/Windows Features

=====

Processor & RAM

- 486 DX/2 running at 66 MHz
- 4 MB RAM standard on SIMM
 - Expand up to 32 MB
 - One 72-pin SIMM socket
 - 80 ns or faster
- DMA for shared-memory support provided through Mac OS system software

Networking

- Included ODI driver supports Novell NetWare IPX and TCP/IP protocols

Sound

- SoundBlaster 16 compatible audio out

Ports

- Joystick (DB-15)
- Serial ports emulate PC serial interface (COM1, COM2)
- Printer port emulates parallel port (LPT1) supporting PostScript, Epson and HP PCL-style printer drivers

Video

- 512K DRAM video frame buffer
- 8-bit color at 640x480
 - 4-bit color at 800x600
- Supports VGA, SVGA, EGA, CGA standards

Software

- DOS 6.22 and Windows 3.1 included
- SoundBlaster

*Note: The Macintosh Performa 640CD DOS Compatible computer is not upgradeable to a PowerPC processor. The DOS Compatibility Card is installed in the single PDS slot.

Article Change History:

..TIL18031-Macintosh_Performa_640_DOS_Compatible-Specifications_4-97.pdf

28 Apr 1997 - Removed out dated on line references.

14 Jul 1995 - Changed access

13 Jul 1995 - Clarified bundle information

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Tech Info Library Article Number:18031



Tech Info Library

Video Capture: Bottom Part Of Screen Out Of Sync (6/95)

Revised: 6/27/95
Security: Everyone

Video Capture: Bottom Part Of Screen Out Of Sync (6/95)

=====

Article Created: 27 June 1995

TOPIC -----

I have a Macintosh Performa 636/CD with Apple's Video In card installed. The Video In card was part of the Apple TV/Video System I purchased. When my computer is in video capture mode the bottom 1/8 inch of the screen seems out of sync. What could be causing this to occur?

DISCUSSION -----

The problem you are seeing will be exhibited on any computer using any video in card. The problem is actually generated by the video camera recorder itself and captured on the resulting video tape.

The "tearing" of the picture at the bottom of the screen is a result of the technology used in consumer grade video camera recorders and video cassette decks. The tearing (missing line) is not usually visible on a television screen because the television overscans the picture which covers for the flaw.

Support Information Services

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Tech Info Library Article Number:18032



Tech Info Library

Color LaserWriter 12/600 PS: Pantone Software (7/95)

Revised: 7/27/95
Security: Everyone

Color LaserWriter 12/600 PS: Pantone Software (7/95)

Article Created: 27 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

The Color LaserWriter 12/600 PS includes a card referring to Pantone calibration software. What is this software, and where is it available?

DISCUSSION -----

The PANTONE software basically consists of PANTONE color palettes that have been "tuned" for the Color LaserWriter 12/600 PS. The palettes have been created in application-specific file formats for the most popular desktop publishing applications that use the PANTONE color matching system. Loading these color palettes into the specified applications allows you to closely match screen colors to output colors on the Color LaserWriter 12/600 PS.

The PANTONE files for the Color LaserWriter 12/600 PS are available on online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
27 Jul 1995 - Updated information

Support Information Services

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Tech Info Library

At Ease for Workgroups 3.0: Mounted Volumes (8/95)

Revised: 8/14/95
Security: Everyone

At Ease for Workgroups 3.0: Mounted Volumes (8/95)

=====

Article Created: 27 June 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

This article describes a security issue in At Ease for Workgroups 2.0.3 that was fixed in At Ease for Workgroups 3.0.

DISCUSSION -----

If the At Ease disk, in At Ease for Workgroups 2.0.3, is a mounted volume and a User's privileges are Go To Finder, the user will find the mounted volume on the desktop when they are in the Finder.

In At Ease for Workgroups 3.0, a mounted volume is dismounted when a user executes the Go To Finder command. The volume will have to be re-mounted after they are in the Finder.

Article Change History:
14 Aug 1995 - Added keyword.

Support Information Services

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Tech Info Library Article Number:18034



Tech Info Library

Connection Kit for Macintosh 2.0: Create Import Template (6/95)

Revised: 6/27/95
Security: Everyone

Connection Kit for Macintosh 2.0: Create Import Template (6/95)

Article Created: 27 June 1995

TOPIC -----

How do I create a template to import data from another Macintosh application in the Connection Kit for Macintosh 2.0?

DISCUSSION -----

Template creation should follow these general steps:

Step 1

Export the data from the Macintosh application in a delimited ASCII (text) format file. The field delimiting character can be a TAB or any ASCII character, and the record delimiting character can be a Carriage Return or any ASCII character.

Step 2

Open the text file in a word processor to view the sequence of the exported data. Note the sequence of the fields and the ASCII character that separates the fields and the records.

Step 3

Create the template in the Connection Kit matching the EXACT sequence of the fields in the exported data. Follow the steps on pages 6 through 9 in the Newton Connection 2.0 Update addendum on how to create a template. Note the sequence of the fields you Add to the right hand window of the Template window, it must match exactly the sequence of the exported data.

Step 4

Once the template is created, import the text file and verify the data is placed in the correct fields in the Connection Kit. If the data is not placed in the correct field(s), the template will need to be edited to match the sequence of the delimited ASCII text file.

Specific template field information follows for the applications within the Connection Kit.

Names Template Fields

Ms./Mr.
First Name
Last Name
Title
Company
Address
Address2
City
State
Zip Code
Country
E-Mail
Phone1
PhoneKey1
Phone2
PhoneKey2
Phone3
PhoneKey3
Phone4
PhoneKey4
Birthday
Folder
List By
Card Style
Notes

Names template fields defined:

PhoneKey - Description of Phone fields (choices are Home, Work, Fax, Car, Beeper, Mobile and other) Any other information in this field will be ignored when imported into the MessagePad.

Folder - The folder name where you would like the data to reside once the data is on the MessagePad. The folder name must match exactly the folder name on the MessagePad. For instance, if you have a folder name of "Personal" in this field and you have a folder name of "Personal" on the MessagePad, the Name card will be placed in this folder. If you do not have a "Personal" folder on the MessagePad, the note will be placed in the "Unfiled" folder.

List By - How the Name cards will be listed in the MessagePad. List By will be either Last Name or Company. Any other information in this field will be ignored when brought over to the MessagePad.

Card Style - There are 4 card styles for the Apple MessagePad. These styles are Style1, Style2, Style3 and Style4. Any other information in this field will be ignored when brought over to the MessagePad.

Notes - These are text notes attached to the Name cards.

Names Example:

Mr. (TAB) John (TAB) Doe (TAB) Apple Computer, Inc. (TAB) 1200 West Orion (TAB)
Anytown (TAB) Texas (TAB) 78456 (TAB) 213-555-9999 (carriage return)

Notes Template Fields

Created

Text

Folder

Notes template fields defined:

Created - The creation date of the Note.

Text - The text of the Note.

Folder - The folder name where you would like the data to reside once the data is on the MessagePad. The folder name must match exactly the Folder name on the MessagePad.

Notes Example:

5/24/95 (TAB) Buy groceries before lunch (TAB) Personal Folder

Dates

All Dates data to be imported MUST have a Type of "Meeting", "Day Note", or "To Do Item". The data will not be imported if the text of the Type does not match exactly. Note that importing Repeating Meetings into the Connection Kit is not supported. Repeating Meetings can only be exported from the Connection Kit.

Meeting Template Fields

Type

Title

Date

Start Time

Duration (minutes)

Notes

Meeting template fields defined:

Type - Type will always be Meeting.

Title - The title of the Meeting.

Date - The date the meeting is on.

Start Time - The time the meeting starts in Military Time format.

Duration - Length of the meeting in minutes.

Notes - Any notes attached to the Meeting Slip.

Meeting Example:

Meeting (TAB) Lunch (TAB) 5/24/95 (TAB) 12:00:00 (TAB) 60 (TAB) Discuss business
(Carriage Return)

Day Note Template Fields

Type

Title

Date

Notes

Day Note template fields defined:

Type - Type will always be Day Note.

Title - The title of the Day Note.

Date - The date the Day Note is on.

Notes - Any notes attached to the Meeting Slip.

Day Note Example:

Day Note (TAB) Vacation (TAB) 5/24/95 (TAB) Trip to the beach (Carriage Return)

To Do Item Template Fields

Type

Title

Date

Priority

Done

To Do Item template fields defined:

Type - Type will always be To Do Item.

Title - The title of the To Do Item.

Date - The date the To Do Item is on.

Priority - The priority of the To Do Item; either 1, 2, or 3

Done - Whether or not the To Do Item is completed or not. Completed = True, Not
completed = False

To Do Item Example:

To Do Item (TAB) Buy Groceries (TAB) 5/24/95 (TAB) 2 (TAB) False (Carriage
Return)

Support Information Services

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Tech Info Library Article Number:18036



Tech Info Library

Connection Kit for Macintosh 2.0:Export Application Data (6/95)

Revised: 6/27/95
Security: Everyone

Connection Kit for Macintosh 2.0:Export Application Data (6/95)

=====

Article Created: 27 June 1995

TOPIC -----

I would like to download data from a Macintosh database to my MessagePad. The Connection Kit for Macintosh 2.0 does not have a built-in translator for my application. I understand I need to export the application data in a delimited ASCII (text) file, but I'm unsure how to do this.

DISCUSSION -----

The data export process will vary from application to application. In general terms, you can follow the guidelines below to export your data in an delimited text file. For specific information on how to export data from an application, always consult the manual or contact the developer of the application for information. After the data is exported, you will need to import it into a Newton Connection Kit template you create.

Overview

Database information can be defined in general terms by Fields and Records. Groups of fields often compose a single record. A business card can be used to visualize fields and records. The individual pieces of information on the business card such as First Name, Last Name, Company, Address, City, State, Phone Number can be viewed as fields. The entire business card with all of the information on it can be viewed as a record. A group of business cards in a rolodex can be viewed as multiple records in a database.

Export Process

To begin the export process, choose the command to export data in the database or contact manager. In most cases, you will then need to choose the export file type. A Tab or Comma Separated ASCII Text format will work well with the Connection Kit. The Tab or Comma character is used to separate the data fields and is known as a delimiter. Any other ASCII character can also be used as a delimiter to separate the data into distinct fields.

After selecting the export format file type, the application may ask you to select the data fields to export and to indicate an export order, or it may just export the data in the order it is currently in. Applications will vary on the amount of control you have to export the data. Again, for specific information on how to export data from an application, always consult the manual or contact the developer of the application for information.

In general terms, what happens next is the application goes to the first record in the database, takes all information in the first field (for example First Name) and copies it to the text file. The application then enters a delimiter into the text document, goes back to the first record, copies the data in the second field (for example Last Name), and places this data back into the text file AFTER the delimiter. This cycle repeats itself until all of the field data in the first record is placed in the text file. After the first record has been exported, many applications will place a carriage return between it and all subsequent records until all records are exported. Any other ASCII character can also be used as a delimiter to separate the data into distinct records.

Export Example:

An example of how a contact database with the fields first name, last name, address, city, state, zip and phone number would look after exported in a tab delimited text (tab separated) format.

Record 1:

John (tab) Doe (tab) 1200 West Orion (tab) Anytown (tab) Texas (tab) 78456 (tab)
213-555-9999 (carriage return)

Record 2:

Joanne (tab) Doe (tab) 1200 East Big Dipper (tab) Some-town (tab) Texas (tab)
78346 (tab) 213-555-1212 (carriage return)

Once the data has been exported into the delimited text file, the file is ready to be imported into the Connection Kit via a template you create.

For information on how to create a template in the Connection Kit, see the following TIL article: "Connection Kit for Macintosh 2.0: Create Import Template"

Support Information Services

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Tech Info Library Article Number:18037



Tech Info Library

Macintosh LC 630: Screen Control Panel and Beeping (6/95)

Revised: 6/28/95
Security: Everyone

Macintosh LC 630: Screen Control Panel and Beeping (6/95)

Article Created: 27 June 1995

TOPIC -----

What could cause a Macintosh LC 630 computer to beep when trying to wake up after the After Dark Screen Saver has come on?

DISCUSSION -----

System 7.5 and later versions of System 7.1 that shipped with the all-in-one 500 series Macintosh computers include a control panel called Screen. The Screen control panel is designed primarily for use on all-in-one style Macintosh computers, such as the Macintosh Performa and LC 500 series.

Included systems are:

Macintosh Performa 550, 560
Macintosh Performa 575 series
Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh LC 580

You can set the Screen control panel to automatically dim the screen after a certain amount of time. After the selected period of time has passed without mouse movement or keyboard input, this control panel will dim the screen and "put the system to sleep." Upon moving the mouse or pressing a key on the keyboard, the image will come back up but you will not be able to click the mouse or type until the beeping stops, usually about ten seconds.

The Screen control panel will also load and allow you to turn it on but will not dim the external monitor on these systems:

Macintosh LC 630
Macintosh Quadra 630

Macintosh Performa 630 series

Macintosh Performa 640 series

In this case, the Screen control panel tries to put the machine to sleep, but the external monitor still displays the image. When you move the mouse or press a key on the keyboard, the control panel senses your input and starts beeping as if it is working normally.

You are seeing After Dark running and when you move the mouse you, are hearing the Screen control panel "wake up" your Macintosh. Since the Screen control panel is not working as intended you should turn it off or drag it out of your System Folder.

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Tech Info Library Article Number:18038



Tech Info Library

Japanese Language Kit: Freezes at Shutdown (4/97)

Revised: 4/28/97
Security: Everyone

Japanese Language Kit: Freezes at Shutdown (4/97)

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Article Created: 27 June 1995
Article Reviewed/Updated: 28 April 1997

TOPIC -----

I did a clean install of System 7.5 (International). Then I installed the Japanese Language Kit. It works ok with the Japanese script, but when I shut down or restart, it locks up.

DISCUSSION -----

This problem is fixed in System 7.5 Update 1.0, which can be found in the CD Extras folder on the JLK 1.2 CD, or Apple SW Updates on CompuServe and Apple's internet servers.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18039



Tech Info Library

PC Net Exchange: Read Me File (6/95)

Revised: 6/27/95
Security: Everyone

PC Net Exchange: Read Me File (6/95)

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Article Created: 27 June 1995

TOPIC -----

This article contains the ReadMe file for PC Net Exchange software.

DISCUSSION -----

PC Net Exchange 1.0.1

PC Net Exchange is a utility program that helps users of Mac OS computers share DOS/Windows files, over an AppleTalk network, with users of AppleShare Client for Windows software. This document describes PC Net Exchange and how it works with AppleShare Client for Windows and PC Exchange. PC Net Exchange is distributed free of charge—see the notice at the end of this document for details. For information about purchasing AppleShare Client for Windows and PC Exchange, see your authorized Apple dealer.

Note: None of the products described in this document translates or converts DOS/Windows data files into Macintosh data files, or Macintosh data files into DOS/Windows data files.

AppleShare Client for Windows

The AppleShare Client for Windows software provides file services and print services for Windows computer users on an AppleTalk network. The file services let you share files from your Windows computer with Mac OS computer users on the network. You can use AppleShare Client for Windows to create, copy, use, and delete files on a Mac OS-based computer that is running either AppleShare or Macintosh file sharing.

PC Exchange

The PC Exchange utility lets you use PC-formatted floppy and SCSI disks on a Macintosh computer just as you would use Macintosh-formatted disks. PC Exchange automatically identifies PC disks and files with "PC" icons, and you can save, delete, copy, and open files as usual. PC Exchange internally labels these files as text files, and you can open these files from within any Mac OS-based application that supports text files. (If they are indeed text files, you will be able to use them from within the application you opened. If they are not text files, then the Mac OS-based application will open the files but will not be able to display the contents of the files properly.)

You use PC files other than text files with your Mac OS applications by using the PC Exchange control panel to map PC filename suffixes to Mac OS application document types. (A PC filename suffix is the three characters following the "dot" in a DOS/Windows filename.) Once you have mapped a PC filename suffix to a document type, the Mac OS treats any PC file whose name ends with this suffix as a Mac OS document of that type. You see the file in the Finder represented by the appropriate Mac OS document icon. You can open the document directly from the Finder, automatically starting the appropriate Mac OS application. If the file's format is the type you specified in the mapping process, you will be able to use the file just as if it had been created by the Mac OS-based application.

PC Net Exchange

You can install PC Net Exchange with PC Exchange on your Mac OS servers to extend this suffix-based file-mapping capability to your network. If PC Net Exchange is installed, you can map such files on the Mac OS-based system to Mac OS documents in the same way that you map PC files on locally attached PC disks. Any mapping that you've previously defined is automatically implemented.

If PC Net Exchange is installed on a server, files that users have copied or saved to that server by using AppleShare Client for Windows appear as "PC" (text) files, and you can map these files to Mac OS application document types with the PC Exchange control panel. If PC Exchange is not installed, such files appear on the server as "PC" (text) files, but you cannot map these files to Mac OS document types.

System Requirements

Windows system

- AppleShare Client for Windows version 1.0 or later

Mac OS system

- Macintosh system software version 7.1 or later
- Macintosh PC Exchange 2.0.3 or later

Installing PC Net Exchange

To install PC Net Exchange on your Mac OS system:

1. Drag the PC Net Exchange icon into the Extensions folder inside your System Folder.

2. Restart your computer.

Known Limitations

Some DOS/Windows applications store changes to a document in a temporary file, then rename that file to the original document name when the user saves the document. PC Net Exchange cannot detect this type of file activity, and therefore cannot assign the correct icon to the file. To allow PC Net exchange to assign the "PC" icon to such a file, drag the file into another folder, then back to its original location, or copy the file from the Windows computer to the Mac OS computer using the Windows File Manager.

NOTICE: This document and the software described in it are copyrighted. PC Net Exchange 1.0.1 is released by Apple Computer, Inc., as "freeware." That is, you may use the software free of charge, but Apple makes no warranty or representation, either expressed or implied, with respect to the software, its quality, performance, merchantability, or fitness for a particular purpose. As a result, this software is distributed "as is," and you, the user, are assuming the entire risk as to its quality and performance. Apple provides no support of any kind for this software. You may distribute PC Net Exchange and this Read Me file to others on the condition that you distribute both together and at no charge. The same proprietary and copyright notices must be affixed to any permitted copies as were affixed to the original. Under the law, copying includes translating into another language or format.

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Tech Info Library Article Number:18040



Tech Info Library

Apple Software Updates Info Available via email (2/97)

Revised: 2/13/97
Security: Everyone

Apple Software Updates Info Available via email (2/97)

Article Created: 28 June 1995
Article Reviewed/Updated: 13 February 1997

TOPIC -----

You can obtain the latest information on where to find Apple Software Updates via automated email. Below is a list of the documents we currently have available as well as instructions on where to send the email message to and what to request

DISCUSSION -----

You can obtain the latest information on where to find Apple Software Updates via automated email. Here are the documents we currently have available, where to send the email message, and what to type.

This information is also on the following web page:
<http://206.160.172.8/subscribe/subscribe.html>

This page automates all requests, including one time requests for information, shown below:

You can obtain the latest information on where to find Apple Software Updates via automated email. Here's the documents we currently have available, where to send the email message to and what to type:

* Where to find Apple Software Updates

-> Send email to info@thing1.info.apple.com with the subject: swwhere

* US Apple Software Updates Available Online - Current Apple SW Updates Available online.

-> Send email to info@thing1.info.apple.com with the subject: swupdates

* Worldwide Apple Software Updates Available Online - Current Worldwide Apple SW Updates Available Online.

-> Send email to info@thing1.info.apple.com with the subject: wswupdates

* Current list of all Apple Mailing Lists

-> Send email to info@thing1.info.apple.com with the subject: listinfo

The information you requested will be sent by reply mail as soon as possible.

The previous version of this article was published in the "Information Alley":
Volume II, Issue 8, Page 4

Article Change History:

13 Feb 1997 - Removed two words begin-Table

06 Feb 1997 - Updated Mailing List Web page URL.

08 Jan 1996 - Added Web page URL

02 Nov 1995 - Major revision of this article.

28 Aug 1995 - Added Info Alley information; made minor format changes.

Support Information Services

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Tech Info Library Article Number:18041



Tech Info Library

DOS Compatibility Card: Using PhotoCDs in DOS (8/95)

Revised: 5/7/96
Security: Everyone

DOS Compatibility Card: Using PhotoCDs in DOS (8/95)

Article Created: 28 June 1995
Article Reviewed/Updated: 22 August 1995

TOPIC -----

I cannot get a PhotoCD to mount using MS-DOS or Windows. My Window CD-ROM discs work properly. How can I use PhotoCD discs with my DOS Compatibility Card?

DISCUSSION -----

There is no way to use a PhotoCD disc in the MS-DOS/Windows environment on the DOS Compatibility Card. However, Apple includes the drivers necessary for the Macintosh to read Photo CD discs, so you can read the disc using the Macintosh environment. Here is a workaround for this problem.

Workaround

It is possible to save the Photo CD files in a TIFF format with various graphic applications such as Adobe PhotoShop or Storm PhotoFlash on the Macintosh. Once the photos are converted, you can share the files on your hard disk drive with Windows.

Article Change History:
22 Aug 1995 - Added information on the problem and solution.

Support Information Services

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Tech Info Library Article Number:18044



Tech Info Library

System Software: Version Matrix, System 6.0.x to 7.0.1 (9/96)

Revised: 9/9/96
Security: Everyone

System Software: Version Matrix, System 6.0.x to 7.0.1 (9/96)

=====

Article Created: 28 June 1995
Article Reviewed/Updated: 9 September 1996

TOPIC -----

This article lists all Macintosh computers that can run system software previous to System 7.1.

For information on System software after 7.0.1, search the TIL using search string "system and enabler and matrix" to locate "System Software: 7.1 and Later Enabler Matrix"

DISCUSSION -----

Use the following chart to determine which version of system software you should be using on your Macintosh computer:

KEY:

! - Not supported

OK - Works with this version of system software

Macintosh	7.0.1	7.0	6.0.8	6.0.7	6.0.5	6.0.4	6.0.3	6.0.2
-----	----	----	----	----	----	----	----	----
128K*	!	!	!	!	!	!	!	!
512K*	!	!	!	!	!	!	!	!
512Ke*	!	!	!	!	!	!	!	!
XL/Lisa*	!	!	!	!	!	!	!	!
Plus	OK	OK	OK	OK	OK	OK	OK	OK
SE	OK	OK	OK	OK	OK	OK	OK	OK
SE/30	OK	OK	OK	OK	OK	OK	OK	OK
Classic	OK	OK	OK	OK	!	!	!	!
Classic II	OK	!	!	!	!	!	!	!

Portable	OK	OK	OK	OK	OK	OK	!	!
II	OK	OK	OK	OK	OK	OK	OK	OK
IIx	OK	OK	OK	OK	OK	OK	OK	OK
IIcx	OK	OK	OK	OK	OK	OK	OK	!
IIci	OK	OK	OK	OK	OK	OK	!	!
IIfx	OK	OK	OK	OK	OK	!	!	!
IIsi	OK	OK	OK	OK	!	!	!	!
LC	OK	OK	OK	OK	!	!	!	!
LC II	OK	OK	OK	!	!	!	!	!
Quadra 700	OK	!	!	!	!	!	!	!
Quadra 900,950	OK	!	!	!	!	!	!	!
PowerBook 100	OK	!	!	!	!	!	!	!
PowerBook 140, 145,145B,170	OK	!	!	!	!	!	!	!

All the systems not listed above require System 7.1 or later. Use search string "system and enabler and matrix" to locate "System Software: 7.1 and Later Enabler Matrix" for more information.

*NOTE: These early Macintosh computers will not operate with System 6, use system 3.2 instead.

Article Change History:

09 Sep 1996 - Reviewed for accuracy.

07 Jul 1995 - Clarified information on later operating systems.

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Tech Info Library Article Number:18046



Tech Info Library

LW Pro 810: Printer Utility Cannot Configure IP Address (6/95)

Revised: 6/28/95
Security: Everyone

LW Pro 810: Printer Utility Cannot Configure IP Address (6/95)

=====

Article Created: 28 June 1995

TOPIC -----

I'm trying to set the IP address of my LaserWriter Pro 810 with the Apple Printer Utility. My LaserWriter 16/600 PS works fine, but I can't get the same dialogs to come up.

DISCUSSION -----

The Apple Printer Utility does not support the LaserWriter Pro 810, although the LaserWriter Pro 810 has enough common characteristics for some information to be retrieved. You should refer to the LaserWriter Pro 810 documentation to configure its various features.

You can also search the Tech Info Library for more information, use the search string, "Pro 810 and TCP/IP".

Support Information Services

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Tech Info Library Article Number:18047



Tech Info Library

Apple Telecom 2.0 and Earlier: PCI Bus Power Mac Issue (5/96).

Revised: 5/23/96
Security: Everyone

Apple Telecom 2.0 and Earlier: PCI Bus Power Mac Issue (5/96).

=====

Article Created: 28 June 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

This article discusses compatibility issue between PCI bus Macintosh computers (like the Power Macintosh 9500) and Apple Telecom software.

DISCUSSION -----

Power Macintosh computers that ship with the PCI bus are not compatible with Apple Telecom 2.0 or earlier versions when used with a GeoPort Telecom Adapter. Users should upgrade to Apple Telecom 2.1 or later software.

If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any LocalTalk devices attached to the printer port (serial devices can remain attached).

Article Change History:
23 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18049



Tech Info Library

GeoPort 2.1 Telecom Adapter ReadMe (5/96)

Revised: 5/27/96
Security: Everyone

GeoPort 2.1 Telecom Adapter ReadMe (5/96)

Article Created: 28 June 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the GeoPort Telecom Adapter 2.1 Read Me file.

DISCUSSION -----

Software Included in the GeoPort Telecom Adapter Kit

Apple Telecom Software 2.1

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 8100 series, and 9500 series.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.1 software on Macintosh systems equipped with an Express Modem card.

NOTE: For Power Macintosh 9500 series, version 2.1 or higher of Apple Telecom Software is required. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any devices attached to the printer port (except serial printers, which can remain attached).

IMPORTANT: If you select "Sleep" from the Special Menu available on some Power Macintosh models while there is an active GeoPort connection, the GeoPort

Telecom Adapter will automatically disconnect the call without warning.

MegaPhone

This is a basic screen-based telephone application that delivers support of the telephony capabilities of the Apple Telecom 2.x software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information.

The full-featured version of MegaPhone is included in the GeoPort Telecom Adapter Kit, which can be purchased separately. The Kit also includes the GeoPort Telecom Adapter, Apple Telecom 2.x software, and SITcomm SE/GTA, which is a terminal emulator application.

Upgrading From Previous Releases of GeoPort Telecom Adapter Software

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If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

NOTE: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version; you may delete them.

Connection (CCL) Scripts for Apple Remote Access

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)
ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center.

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select it in the Apple Remote Access Setup control panel.

NOTE: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Remote Access Dial Back

If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX With QuickDraw GX 1.1

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The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex grayscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

NOTE: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk Network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript printers.

Troubleshooting

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Connecting to Online Services That Do Not Support Data Compression or Error Correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying incoming calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone), we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing Fax Storage Folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Using a Centris 660AV or Quadra 660AV/840AV

If you are using a Centris 660AV or Quadra 660AV/840AV and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with the GeoPort Telecom Adapter. To change this setting, open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

Clicking Sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660AV/840AV). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

What Goes Where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter ReadMe
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Manual for users who upgrade electronically)
- About Fax Sender GX (Manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- Modem AT Command Set
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender

- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)
- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

26 May 1996 - Updated for technical accuracy.

02 Aug 1995 - Updated with final version.

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Tech Info Library Article Number:18050



Tech Info Library

MegaPhone ReadMe (8/95)

Revised: 8/4/95
Security: Everyone

MegaPhone ReadMe (8/95)

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Article Created: 28 June 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article is the MegaPhone Read Me file that comes with GeoPort 2.1 Telecom Adapter.

DISCUSSION -----

Please read this entire document carefully. It includes installation instructions and a description of the version of MegaPhone included with your new Power Macintosh.

MegaPhone is a screen-based telephone designed to work with the Macintosh Telephony Architecture and other features of the Macintosh Operating System such as PowerTalk. The version included on your new Macintosh is specifically designed to work in its basic mode with the GeoPort Telecom Adapter from Apple. However, you are able to use some features even without an adapter.

By default MegaPhone assumes that you do not have a GeoPort Telecom Adapter and uses the "DemoDialer Telephone Tool." Using this tool, MegaPhone can emit Touch Tone sounds through a Macintosh's speaker, but cannot answer incoming calls (because your Macintosh is not connected to a phone line). Running in this mode gives you a telephone dialer and a preview of what you could do with a GeoPort Telecom Adapter connected to your Macintosh.

PLEASE NOTE: Even though MegaPhone does not require a GeoPort Telecom Adapter, it does require that the Telephone Manager software be installed. To install the Telephone Manager software, you must install the Apple Telecom Software 2.1 in the Apple Extras folder on your Macintosh's hard drive. See the GeoPort Telecom Adapter ReadMe for further information.

If you already have a GeoPort Telecom Adapter and would like to use it with this Macintosh and this version of MegaPhone, please follow these steps:

..TIL18051-MegaPhone_ReadMe_8-95.pdf

Step 1

Install the Apple Telecom 2.1 software which is in the Telecom Software folder within the Apple Extras folder on your hard drive.

Step 2

Attach your GeoPort Telecom Adapter to the modem port on your Macintosh. IT CAN ONLY BE CONNECTED TO THE MODEM PORT.

Step 3

Launch MegaPhone.

Step 4

Select "Preferences..." from the "File" menu.

Step 5

Select "General" from the "Topic" pop-up menu in the Preferences dialog.

Step 6

At the bottom of the Preferences dialog is an area labeled "Hardware." Click on the "Change..." button in this area.

Step 7

Select the GeoPort Telephone Tool from the "Phone Type" pop-up menu.

Step 8

Click the OK button.

Step 9

You should now be back in the Preferences dialog. Click the OK button.

After this, you can use MegaPhone and your GeoPort Telecom Adapter to make and receive telephone calls.

At this point, MegaPhone is running in its basic mode. The full-featured MegaPhone has many convenient features to help you use your telephone more effectively. Please see the brochure included with your Macintosh for more information, or to order the full-featured MegaPhone, you can call Cypress Research at 1-800-515-8111, extension 3112. To receive more information via fax, you can call 1-800-CR-INFO-1, extension 3112.

Also, if you buy a GeoPort Telecom Adapter Kit (version 2.0 or later), a free 30-day trial of the full-featured MegaPhone is included. For the Power Macintosh 7200, 7500, 8500, and 9500 series, you need Apple Telecom Software 2.1 or later.

Article Change History:

04 Aug 1995 - Changed access privileges.

Support Information Services

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Tech Info Library Article Number:18051



Tech Info Library

Apple Media Tool: v2.0 Frequently Asked Questions (1/96)

Revised: 1/17/96
Security: Everyone

Apple Media Tool: v2.0 Frequently Asked Questions (1/96)

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Article Created: 28 June 1995
Article Reviewed/Updated: 17 January 1996

TOPIC -----

This article lists frequently asked questions (FAQ) on the Apple Media Tool, version 2.0.

Questions Answered in this FAQ:
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- 1) Does the Apple Media Tool (AMT) support QuickTime VR and QuickDraw 3D?
- 2) Does the AMT come with some simple editing tools (like Persuasion, to create a colored background, simple graphics, etc.)?
- 3) What is involved in making a truly cross platform application? (I'm using AMT as an example of developing on the Mac and deliver on anything, from Mac to Windows to Pippin to SetTop boxes.)
- 4) What is involved in making a single CD that would be able to be read from a Macintosh or a Windows machine?
- 5) Do I always have to have the "Media" folder? Isn't there an option to make it a single document that could be sent over a network?

DISCUSSION -----

1) Question: Does the Apple Media Tool (AMT) support QuickTime VR and QuickDraw 3D?

Answer: Apple Media Tool 2.0 supports QuickTime 2.0, QuickTime VR, and QuickDraw 3D much better than version 1.2.

2) Question: Does the AMT come with some simple editing tools (like Persuasion,

to create a colored background, simple graphics, etc.)?)

Answer: The Apple Media Tool will probably never come with editors built-in because third party products almost always do a better job. You can use Persuasion as a simple editor from within the Apple Media Tool to create PICTs as backgrounds.

Examples of applications with built-in color graphics editors are Director and HyperCard 2.2/2.3. Not many people use these to build shipping multimedia projects. Most developers use PhotoShop or Fractal Design Painter as the graphics editor for anti-aliased text and more control over gradient ramps, textures, color control and file formats.

3) Question: What is involved in making a truly cross platform application? (I'm using AMT as an example of developing on the Mac and deliver on anything, from Mac to Windows to Pippin to SetTop boxes.)

Answer: Apple Media Tool is one of the only truly cross-platform development tools. It creates files that can be used on ISO 9660 CD-ROMs that will play on Macintosh computers, computers running Windows, Pippin products, and ITV setup boxes.

4) Question: What is involved in making a single CD that would be able to be read from a Macintosh or a Windows machine?

Answer: Creating an ISO 9660 CD-ROM is something that most CD-R authoring software does as one of its output options. Examples of CD-R authoring applications included Hybrid 1.1.2 from Sony, and Toast from Catalogic in Mountain View, California, which will create bootable CD-ROMs and Enhanced CD-ROMs that will play in audio CD players. There are many other packages on the market.

5) Question: Do I always have to have the "Media" folder? Isn't there an option to make it a single document that could be sent over a network?

Answer: You always have to create media assets that reside in folders separate from the project that you create. That is the way the Apple Media Tool was designed. This feature makes it better than Macromedia Director. You can change the media assets at any time in the future without changing the source code to the project and re-compiling everything.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

17 Jan 1996 - Changed distribution status.

10 Nov 1995 - Updated title.

Support Information Services

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Tech Info Library Article Number:18052



Tech Info Library

Personal LaserWriter LS: Time Out Error (6/95)

Revised: 6/28/95
Security: Everyone

Personal LaserWriter LS: Time Out Error (6/95)

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Article Created: 28 June 1995

TOPIC -----

I am using System 7.5 and a Personal LaserWriter LS printer. When I attempt to print from any application, I intermittently get an error message stating that there is a receive time out error and to check the Peripheral-8 cable.

DISCUSSION -----

This error occurs when using the LaserWriter LS driver and System 7.5. The correct driver to use with the LaserWriter LS and System 7.5 is the LaserWriter 300 driver (v. 1.2). This version of the LaserWriter 300 driver is included with System 7.5, and it is also available on the online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18053



Tech Info Library

CLW 12/600 PS & CLW 12/660 PS: Memory Configuration (5/97)

Revised: 5/2/97
Security: Everyone

CLW 12/600 PS & CLW 12/660 PS: Memory Configuration (5/97)

Article Created: 28 June 1995
Article Reviewed/Updated: 02 May 1997

TOPIC -----

This article describes the memory configuration and expansion on the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers.

DISCUSSION -----

The Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers include 8 MB on the logic board as well as two SIMM expansion slots.

The standard RAM configuration of the Color LaserWriter 12/600 PS is 12 MB, which includes a 4 MB SIMM installed in one of the two SIMM slots. The Color LaserWriter 12/660 PS printer has 16 MB of RAM, which includes two 4 MB SIMMs in both of the SIMM slots.

The memory of both Color LaserWriter printers is expandable to 40 MB using standard 72-pin, 60ns SIMMs, 2K and 4K refresh in 1, 4, or 16 MB configurations. It is possible to mix SIMMs of different sizes in the two slots.

The table below lists the possible DRAM configurations for 1 MB, 4 MB, and 16 MB SIMMs installed in the printer.

DRAM configurations for the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS:

Begin_Table

SIMM slot J10	SIMM slot J11	Total Installed DRAM
-----	-----	-----
4 MB	0 MB	12 MB*
4 MB	1 MB	13 MB
4 MB	4 MB	16 MB**
16 MB	0 MB	24 MB

16 MB	1 MB	25 MB
16 MB	4 MB	28 MB
16 MB	16 MB	40 MB

* Color LaserWriter 12/600 PS shipped configuration

** Color LaserWriter 12/660 PS shipped configuration

End_Table

NOTE:

When installing memory simms of different sizes, the larger simm always goes in slot J10.

It is important to remember, however, that you must use single-sided memory SIMMs when upgrading the printer's memory, if you intend to fill both memory slots. Double-sided SIMMs are recognized as two individual memory banks and could, therefore, cause problems when the printer attempts to address the memory SIMM in the other slot.

IMPORTANT:

You CANNOT use 8 MB SIMMS in either the Color LaserWriter 12/600 PS or the Color LaserWriter 12/660 PS printer.

Article Change History:

23 Octob 1996 - Updated to include current models.

02 May 1997 - Corrected error in simm installation note.

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Tech Info Library Article Number:18054



Tech Info Library

Token Ring 4/16 NB & Token Ring NB/c Differences (6/95)

Revised: 6/28/95
Security: Everyone

Token Ring 4/16 NB & Token Ring NB/c Differences (6/95)

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Article Created: 28 June 1995

TOPIC -----

What are the differences between the Apple Token Ring 4/16 NB Card and the Apple Token Ring NB/c Card?

DISCUSSION -----

The Apple Token Ring 4/16 NB Card is a 9-inch bus master network interface card. The card operates independently of the main Macintosh processor, executing multiple networking protocols or network application programs concurrently.

The Apple Token Ring NB/c Card was designed to the 2.0 NuBus specifications, and it functions as a NuBus slave device. As a NuBus slave, it will relinquish control of all of its internal resources to the NuBus master.

In summary, the Apple Token Ring 4/16 NB Card can be configured to be a bus master or a slave device, whereas the Token Ring NB/c Card can only be configured as a slave device.

Support Information Services

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Tech Info Library Article Number:18055



Tech Info Library

Power Macintosh 9500 Series: Frequently Asked Questions (5/96)

Revised: 5/23/96
Security: Everyone

Power Macintosh 9500 Series: Frequently Asked Questions (5/96)

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Article Created: 28 June 1995
Article Reviewed/Updated: 20 May 1996

TOPIC -----

This article includes Frequently Asked Questions (FAQ) about the Power Macintosh 9500 Series computers.

Questions in this FAQ:
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- 1) If I add more memory to my system, what kind do I need?
- 2) Which DIMMs are supported?
- 3) How much benefit is gained from interleaving?
- 4) Does this Power Macintosh use the same self-terminating connectors as the original Power Macintosh?
- 5) Is the Power Switch a "hard switch"?
- 6) Can NuBus cards be used with these Power Macintosh computers?
- 7) Can these Power Macintosh computers accommodate any PCI card?
- 8) Are these computers PCI card plug-and-play?
- 9) Which version of Mac OS should be used with the Power Macintosh 9500/120 and 9500/132 computers?
- 10) How does "processor upgradeability" work?
- 11) My computer came with Open Transport 1.0, and my PPP software says I need version 1.0.7. How can I get version 1.0.7?

12) I started my Power Macintosh computer from the startup CD, but Disk First Aid says "files are open" and won't allow me to click on Repair. How can I close those files and repair the directory?

13) I have an old program that requires fewer than 256 colors, but in the Monitors control panel I cannot select anything lower than 256 colors.

14) As my computer starts up, my display flashes off and back on again. Why?

15) How can I obtain the built-in Ethernet address for my computer?

16) I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I be using?

17) What causes Type 11 errors?

18) 5) Question: I need to run DOS software on my Power Macintosh 9500 series computer. What are my options?

DISCUSSION -----

1) Question: If I add more memory to my system, what kind do I need?

Answer: You need Dual Inline Memory Modules (DIMMs) that are 64-bit-wide, 168-pin, fast-paged mode, 70 nanosecond RAM.

2) Question: Which DIMMs are supported?

Answer: The 4, 8, 16, 32, and 64 MB DIMMs are supported.

3) Question: How much benefit is gained from interleaving?

Answer: Interleaving provides maximum performance to you. If the DIMMs are not paired in the A and B slots, the system does not perform to its capability. Interleaving lets the computer read and write data to memory at the same time other reads and writes are occurring. This improves performance. DIMMs need to be the same size for interleaving to work.

4) Question: Does this Power Macintosh use the same self-terminating connectors as the original Power Macintosh?

Answer: Yes, the self-terminating connector is the same.

5) Question: Is the Power Switch a "hard switch"?

Answer: No. It is a "smart switch". You cannot turn off power by just pressing the power actuator button. If you press the Power Key, it quits all applications and shuts down the machine.

6) Question: Can NuBus cards be used with these Power Macintosh computers?

Answer: NuBus cards cannot be used in this Power Macintosh. However, to preserve your investment in NuBus technology, a NuBus expansion chassis for PCI will be available from Second Wave, Inc. This chassis will enable you to continue to use your existing NuBus cards in Power Macintosh systems with PCI slots.

7) Question: Can these Power Macintosh computers accommodate any PCI card?

Answer: These systems support any PCI 2.0-compliant card. However, a Mac OS-specific software driver is required for each card, just as PCI drivers are required for any other operating system.

8) Question: Are these computers PCI card plug-and-play?

Answer: For the most part, yes. The PCI card needs to include either a Mac OS driver or a new ROM so the Mac OS can recognize it.

9) Question: Which version of Mac OS should be used with the Power Macintosh 9500/120 and 9500/132 computers?

Answer: The minimum system software these computers use is Mac OS version 7.5.2. However, we recommend using the System 7.5 Update 2.0 to upgrade to Mac OS version 7.5.3. The update is available online for download from the Apple Software Updates areas.

If you do not have access to an online service or the Internet, then you can order the update on CD-ROM or floppies in the U.S. for a \$13 shipping and handling fee. The number to call in the United States to order the update is 1-800-293-6617, ext. 984.

10) Question: How does "processor upgradeability" work?

Answer: Power Macintosh 9500 series computers are equipped with a removable processor card. This processor card can be replaced with a more powerful processor card.

Apple currently offers The Power Macintosh Processor Upgrade Card in two processor speeds: one with a 120-megahertz PowerPC 604 RISC processor, and the other with the even more powerful 132-megahertz PowerPC 604.

Power Macintosh 9500 series computers that are capable of accepting processor upgrade cards will be able to support cards of up to 200 MHz, as they become available.

11) Question: My computer came with Open Transport 1.0 and my PPP software says I need version 1.0.7. How can I get version 1.0.7?

Answer: We recommend updating to Open Transport 1.1 which is installed by the System 7.5 Update 2.0. See the answer to question 9 on how to obtain a copy of the update.

12) Question: I started my Power Macintosh computer from the startup CD, but Disk First Aid says "files are open" and won't allow me to click on Repair. How can I close those files and repair the directory?

Answer: Virtual memory is active when started from the Power Macintosh CD. Here are two ways to disable virtual memory:

- Insert the CD into the computer. Open the Startup Disk control panel and select the Power Macintosh CD. Restart the computer and hold down the Shift key. Release the Shift key when you see the Extensions Off message at the Welcome to Macintosh screen. Virtual memory is now off and Disk First Aid should be able to attempt repairs.

- Start the computer with the Power Macintosh CD in the drive and hold down the C key. When you see the happy Macintosh on the screen, immediately release the C key and hold down the Shift key. Release Shift when you see the Extensions Off message at the Welcome to Macintosh screen. Virtual memory is now off and Disk First Aid should be able to attempt repairs.

13) Question: I have an old program that requires fewer than 256 colors, but in the Monitors control panel I cannot select anything lower than 256 colors. What can I do?

Answer: The built-in video does not support fewer than 256 colors or grays. If you have a program that requires black and white, 4, or 16 colors to run, then you cannot run these programs. Check with the software vendor for availability of a compatible version. You could also check with video card vendors to see if any offer support for fewer than 256 colors.

14) Question: As my computer starts up, my display flashes off and back on again. Why?

Answer: The software video driver for the monitor is loading up. This is normal and is addressed in the Power Macintosh 7200/9500 Read Me file.

15) Question: How can I obtain the built-in Ethernet address for my computer?

Answer: With Mac OS 7.5.2, the Apple LAN Utility version 1.0b4e1 can obtain the built-in Ethernet address in the Power Macintosh 9500 series computers. While this utility is not supported by Apple, it is available on the online services.

The Tech Info Library article, "Power Macintosh 9500: Can't Get Ethernet Address", has additional steps to get the hardware address if you connect to a

UNIX host.

We recommend updating to Mac OS 7.5.3 using the System 7.5 Update 2.0. With the update install you can then choose Get Info from under the File menu when in the AppleTalk and TCP/IP control panels to get the built-in Ethernet address.

16) Question: I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I be using?

Answer: You should use at least Apple Telecom 2.2. Apple Telecom 2.3 is the current version but adds no additional functionality to the Power Macintosh 9500. Note that currently you must have AppleTalk inactive or set to the Ethernet port for the GeoPort to work correctly. This will be addressed in a future update of the system software.

Note: Apple Telecom 2.2 or later will install the Audio Tuneup extension into the Extensions folder. This is not needed when the System 7.5 Update 2.0 is installed and the installer will remove it if present. If you install the Apple Telecom software after installing the update, then remove the Audio Tuneup file from the Extensions folder or reinstall the update.

17) Question: What causes Type 11 errors?

Answer: Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- Incompatible software running in emulation.
- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Power Macintosh computer).
- RAM problems: bad RAM has been installed.

For steps on how to troubleshoot such problems, use the search string "type 11 power" to locate the Tech Info Library article, "Power Macintosh: Meaning of Error Type 11." Use the search string "sys7 extension troubleshoot" to locate the article "Troubleshooting Macintosh System 7 INIT Conflicts."

18) Question: I need to run DOS software on my Power Macintosh 9500 series computer. What are my options?

Answer: With a Power Macintosh 9500 series computer, there are several ways to accomplish this.

- Apple offers two PC Compatibility cards featuring either a Pentium 100-megahertz processor on a 12-inch card (M4092LL/A) or a 586 100-megahertz processor on a 7-inch card (M4091LL/A). These PC Compatibility Cards let you run MS-DOS and Windows applications directly on your Power Macintosh computer. You can switch instantly between Mac OS, Windows, and MS-DOS environments with a single keystroke.

- Orange Micro has announced a version of their Orange PC card for PCI based

Power Macintosh computers. The Orange PC cards use an expansion slot inside of your Power Macintosh 9500 series computer. You can get more information by contacting Orange Micro directly. Their phone number is 714-779-2772.

- Reply, Inc. has also announced a version of their DOS on Mac card for PCI based Power Macintosh computers. The Reply cards use an expansion slot inside of your Power Macintosh 9500 series computer. You can get more information by contacting Reply directly. Their phone number is 800-801-6898.

- You can use Insignia Solutions' SoftWindows emulator. This is a Macintosh application which emulates a PC DOS/Windows environment. You can get more information, such as pricing, performance, system requirements, and compatibility information from Insignia by calling them at 800-848-7677.

These articles can help you answer additional questions you may have about the Power Macintosh 9500 series computers:

"Power Macintosh 9500 Series: Memory Questions & Answers"

"Power Macintosh 7500, 8500, 9500 Series: SCSI-2 Compliance"

"Difference Between a SIMM and a DIMM"

"Power Macintosh 9500 Series: Technical Specifications"

"Power Macintosh Processor Upgrade Card: Specifications"

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

20 May 1996 - Updated information.

29 Mar 1996 - Updated information.

13 Nov 1995 - Updated with additional technical information.

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Tech Info Library Article Number:18056



Tech Info Library

LaserWriter 8.3: Read Me (4/97)

Revised: 4/2/97
Security: Everyone

LaserWriter 8.3: Read Me (4/97)

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Article Created: 29 June 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

The following article is the Read Me document for the LaserWriter 8.3 driver software.

DISCUSSION -----

About Your Apple Macintosh LaserWriter Printer Software

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This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference. The topics are:

- Installing the Printer Driver Software
- Using the Apple Color LaserWriter 12/600 PS Printer
- Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS
- Desktop PrintMonitor Version 1.0.1
- Apple Printer Utility Version 2.0
- LaserWriter 8 Printer Driver Version 8.3

Installing the Printer Driver Software

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The manual that came with your printer contains detailed installation instructions. You cannot install the software and fonts by dragging their icons to your hard disk; you must use the Installer program as described in the printer manual. Your Macintosh must have System 7.1 or later. The printer software does not support QuickDraw GX systems.

IMPORTANT: Before installing the printer software, restart your system with all Extensions turned off. To do this, hold down the Shift key while you restart your computer. Hold the Shift key down until you see the message "Extensions off" or until your normal desktop appears.

The Installer does not remove versions of the LaserWriter printer driver earlier than version 8.0. If you no longer need these files, you may remove them from your System Folder.

The Installer does remove earlier versions of the LaserWriter 8 driver (for example, LaserWriter 8.0) and replaces the PPD files for Apple LaserWriter printers with the latest versions.

When you choose Easy Install, the Installer places the following files in the System Folder on your hard disk:

- LaserWriter 8.3 is placed in the Extensions folder.
- The PPD files used by LaserWriter 8 are placed in the Printer Descriptions folder inside the Extensions folder.
- TrueType fonts are installed in the Fonts folder.
- The Apple Printer Utility and this Read Me file are placed in the Apple LaserWriter Software folder.
- For desktop printing, Desktop Print Monitor, Desktop Printer Spooler, and Desktop Printer Extension are placed in the Extensions folder.
- ColorSync 2.0 is placed in the Extensions folder. The ColorSync profiles are placed in a folder called ColorSync Profiles (in the Preferences folder inside the System Folder). The ColorSync System Profile control panel is placed in the Control Panels folder (inside the System Folder).
- If your system has System Software 7.1.1, Finder 7.1.3 is placed in your System Folder, and Finder Help 7.1.3 is placed in the Extensions folder.
- If your system has System 7.1.1 or 7.1.2, these files are placed in the Extensions folder: Thread Manager 2.1, Network Extension 7.1.3, Macintosh Drag and Drop 1.1, and Dragging Enabler.

IMPORTANT: If the Installer is unable to remove old files from your hard disk, it will terminate the installation procedure. If this happens, please remove old copies of the LaserWriter 8 driver and the PPD files. Then move your Fonts folder from the System Folder to the desktop. Run the Installer again. Once installation is complete, move the fonts from the Fonts folder on the desktop back to the new Fonts folder in your System Folder.

Using the Apple Color LaserWriter 12/600 PS Printer

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This section provides additional information on using the Color LaserWriter 12/600 PS Printer.

About the Demonstration Page

When the power is turned on, the Color LaserWriter 12/600 PS automatically prints a startup page and a demonstration page. For legal and B5 paper sizes, only the startup page prints; the demonstration page is not printed. You can use the Apple Printer Utility to turn off the printing of the startup and demonstration pages.

About the Apple Color LaserWriter 12/600 PS Status Panel

As described in the Color LaserWriter 12/600 PS manual, Appendix G, the status panel lights aid in indicating hardware service problems found during printer startup. If the Alert light is flashing and all the door lights are flashing, check all the printer doors; one of them is open. If the Paper Out and Paper Jam lights are blinking alternately, a hardware problem has been detected. To identify the problem, notice which toner lights (C, M, Y, Bk) and how many of the maintenance lights (in the area on the right-hand side of the status panel) are on, and refer to the table below. Each area listed under "Problem" represents a general circuit area for the service technician to investigate, not necessarily the exact cause of the problem.

If you have an external SCSI hard disk drive attached but don't turn it on before you turn on the printer's power, the printer may indicate a hardware failure. To correct the problem, turn the hard disk drive on and restart the printer.

Obtaining the Best Results for Business Graphics

To obtain the best results for business graphics, colors should be 100% saturated. For example, to print pure yellow, define yellow as 100% red and 100% green without any blue. Then print your document, selecting the Color/Grayscale option in the Print Options dialog.

Printing on Legal-Size Paper

In the standard memory configuration, the Color LaserWriter 12/600 PS uses a higher compression technique for legal-size paper using only the cyan, magenta, and yellow colors. As a result of this compression technique, very complex pages may show missing pixels in fine lines or small text, "jaggies" (edges with low-resolution appearance), and color changes. To improve the image quality of such pages, you can increase the printer's memory to 16 MB or more. With at least 16 MB of printer memory, the Color LaserWriter 12/600 PS can achieve the same quality with legal-size pages as with letter and A4 sizes using all four colors (cyan, magenta, yellow, and black.)

Printing Images on the Color LaserWriter 12/600 PS Printer

The Color LaserWriter 12/600 PS Printer's highest resolution for printing images is 150 x 150 dpi. No gain in image quality is achieved if higher resolution images are used. All other types of documents print at 600 x 600 dpi.

Avoiding Hue Shifts When Printing to File

When you save an image in an Encapsulated PostScript (EPS) file all the PostScript settings relating to the original output device in effect are saved along with the image data. When the image is printed later, the settings that were in effect may cause major hue shifts. To prevent these hue shifts save the image in TIFF format instead of EPS.

The Density Control Panel

The Color LaserWriter 12/600 PS has been adjusted at the factory to produce the best possible image quality. However, small variations exist among different printers. To make subtle changes to image quality, you can use the Density Control Panel on the back of the printer. NOTE: If changing the settings produces inferior image quality, return to the factory settings by following these steps: Select each color using the Color Select button, then press the - or + button to move the indicator light to the center position. When the indicator is in the center, press Enter to make the setting permanent. Repeat this procedure for all four colors.

Printer's Processor Speed

In the printer manual, Appendix A contains a typographical error: the microprocessor speed is 30 MHz, not 25 MHz as printed.

Setting Your ColorSync System Profile for Best Printing Results

Before using ColorSync color matching to print to the Color LaserWriter 12/600 PS printer, set the ColorSync System Profile for the monitor connected to your system. To do this, open Control Panels in the System Folder and double-click ColorSync System Profile. Make sure the following settings are selected:

- Set the profile for the monitor connected to your system. For the best color match when printing, select the "page-white" or "D50" system profile for your type of monitor if one is available.
- For the best visual match between the colors on your monitor and printed colors, select the Page-White Gamma option in the Monitors control panel. To select a gamma option, open the Monitors control panel, then hold down the Option key while you click the Options button. In the Options window, click the Use Special Gamma checkbox to put an X in it. Then choose Page-White Gamma from the list.
- On a multiscan monitor, make sure that the color temperature, or intensity, is set to 9300K (the default setting). See the monitor manual for instructions. If the Page-White Gamma option is selected with a color temperature other than 9300K, your monitor colors could look too red or too blue compared to printed colors.

Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS

To order printer supplies for the Color LaserWriter 12/600 PS direct from Apple, call 1-800-600-7805. For order numbers, see Appendix A of the printer manual:

- toner cartridges
- transparencies
- photoconductor cartridge (includes toner disposal boxes)
- fuser oil
- fuser

Instructions for replacing the fuser are in Appendix F of the printer manual. Instructions for replacing other printer parts come in the new packages.

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696, extension 525.

Desktop PrintMonitor Version 1.0.1

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Creating Desktop Printers

You create desktop printers by selecting a printer in the Chooser. When you close the Chooser, the desktop printer icon is created.

System Software Requirements for Desktop Printing

Desktop printing requires System 7.1.1 (System 7 Pro) or greater. If you have System 7.1 and you want to use desktop printing, you can upgrade your Macintosh to use a later version of System software. Contact your Apple-authorized dealer.

Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an earlier version of the PrintMonitor. Later versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version).
- Obtain a set of installation disks for the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5 and install the printing software again. An English language version of the Desktop PrintMonitor is installed.

Removing the Desktop Printing Software

The desktop printing software uses both the Desktop PrintMonitor and the PrintMonitor software. The Desktop PrintMonitor requires 200-400K of memory in addition to the memory required by the PrintMonitor. If you don't want to use the desktop printing software, you can remove it. Follow these steps:

1. Drag any print spool files found in the PrintMonitor Documents folder (in the System Folder) to the Trash. Warning: these jobs will not be printed.
2. Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions off" appears or until your normal desktop appears.
3. Drag the following files from the Extensions folder to the Trash:
 - Desktop PrintMonitor 1.0.1
 - Desktop Printer Spooler 1.0.2
 - Desktop Printer Extension 1.0.1.
4. Restart your computer.

Using Save or Open With Desktop Printers

When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Having More Than Five Desktop Printers

If you want to have more than five or six desktop printers, you must increase the Desktop PrintMonitor memory allocation by 10K for each additional desktop printer you want. To do so, select the Desktop PrintMonitor icon (it's in the Extensions folder inside the System Folder), choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

Apple Printer Utility Version 2.0

Installing the printer software creates the Apple LaserWriter Software folder containing this Read Me file and the Apple Printer Utility program version 2.0. The Apple Printer Utility program works with all Apple PostScript Level 2 printers.

Downloading PostScript Fonts on a GX System With the Apple Printer Utility

When GX is installed, any PostScript fonts (often called Type 1 fonts) in the Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a new folder called Archived Type 1 Fonts in the System Folder. If you want to download these fonts to your printer, use the Apple Printer Utility to send the fonts in the Archived Type 1 Fonts folder, not the GX-converted versions in the Fonts folder.

Removing Fonts From a Hard Disk Attached to the Printer

If a font is downloaded to both the printer's RAM and the printer's hard disk with the same name, and you remove the font on the hard disk, the RAM font will also be removed. If you remove the RAM font, the font on the hard disk will not be removed.

LaserWriter 8 Printer Driver Version 8.3

The software includes version 8.3 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This section contains information about the software and information on using it with several of the printers.

What's New in Version 8.3

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LaserWriter 8 now provides support for color matching and for embedded JPEG-compressed documents. LaserWriter 8 now supports ColorSync 2.0, Apple's latest system software for device-independent color-matching services, and PostScript Level 2 color matching.

Using Color Matching

When ColorSync 2.0 is installed and the ColorSync Profiles folder contains printer profile(s), there are two new options in addition to color/grayscale output:

- ColorSync Color Matching invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct CMYK information to the printer. With ColorSync

Color Matching, most of the work is done by your Macintosh.

- PostScript Color Matching is an alternative to ColorSync Color Matching. When you are printing to a PostScript Level 2 printer, and it is efficient to let the printer do most of the work, this option is a good choice.

Here are some tips on using color matching:

- Color output will vary depending on the application you are using.
- Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.
- When you print with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.
- Application programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.

PPD Files

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The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, you need to go through a simple setup procedure. When selecting your printer for the first time, or after installing an additional option, click the Setup button in the Chooser. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

Creating EPS Files

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You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, you may create an extremely large file.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other programs that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver With LaserWriter Printers

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When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- The LaserWriter 8 driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text in some documents reflows or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.
- Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless you select the Unlimited Downloadable Fonts option in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.
- Printing multiple documents with the Finder may not work if the documents have been created by different application programs.
- If you encounter a timeout (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

LaserWriter 16/600 PS

If Tray Switching is turned on and you have an optional 500-sheet feeder that contains the same size paper as the 250-sheet feeder, use the 500-sheet feeder as the preferred paper source for optimal printing performance. See the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

LaserWriter Pro 810

- With some graphics programs, bitmapped graphics printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box will be reduced in size by 25%.

LaserWriter Pro 600 and 630

- When you print envelopes from the optional envelope feeder, you cannot use Auto Select as the Paper Source (in the Print dialog box).
- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter II NT and II NTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.

- Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter IIg and IIx

- When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter IIx/IIg printers to be more compatible with other Apple LaserWriter printers. If your legal-size documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.
- Some form-printing application programs cannot print forms using the Layout settings in the Page Setup dialog box.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.5.1 or later.

Using the LaserWriter 8 Driver With Application Programs

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- Color output will vary depending on the application you are using.
- With many application programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.
- Some programs may not be able to print from the Finder or use the Drag and Drop printing feature.
- Some programs may print in color when Black and White mode is selected.
- Programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.

Adobe Illustrator 5.5

- Multiple-page documents may not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Aldus Freehand 4.0 & Freehand 5.0

- Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- Some paper sizes in Freehand may not be supported by the printer and may generate Postscript errors.

Aldus PageMaker 5.0

- Documents that have been set up using a page layout from the Layout pop-up menu may not print correctly with the Print-Option command; use the Print command with PageMaker's Thumbnail option.
- When using a page layout from the Layout pop-up menu with the Print-Option command, the document will be printed in reverse order.
- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus Personal Press 2.02

- Using several font style combinations in text can result in spacing problems.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5.2

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if you use the Geneva, New York, or Monaco fonts.

ClarisDraw 1.0

- Some shapes that contain gradients may not print correctly.

CricketDraw III 2.01

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

DeltaGraph Pro 3.0.4

- Printing with Unlimited Downloadable Fonts may cause some elements to be shifted and fonts to substitute Courier.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Designer/Manager 1.4.2

- Do not print documents that contain JPEG images in Black and White mode; your system will restart.
- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

MacDraft 3.01 and earlier versions

- When you print using the Cut Marks option, a PostScript error results.

MacDraw Pro 1.5

- Rotated text within a frame that is placed in another application program may not print correctly.

MacWrite Pro

- Colored text with colored underlines may not print correctly from the Finder.

Microsoft Excel 5.0

- Colored horizontal cell borders will often not appear in the printout. This happens with any color printing option and on most printers.

Microsoft PowerPoint 3.0

- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Microsoft Works 4.0

- There are 24 new shapes available through the tools palette. Colored shadows for any of these shapes will appear correctly on screen. But these colored shadows will only print in gray, regardless of what the print color options

might be.

Painter 3.0

- When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0

- When you print using the Invert option, images do not print inverted correctly.

Publish It!

- Use a pre-LaserWriter 8 version of the driver, or contact the publisher of the application program.

QuarkXPress 3.3.1

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- Some imported JPEG files may not print correctly.

RagTime 3.2

- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 or later with the LaserWriter 8 printer driver; earlier versions will not work.
- With the Unlimited Downloadable Fonts option selected, you may not be able to print complex documents.
- Documents that use pen patterns will print patterns as solid gray.

Studio/8 & Studio/32

- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0

- When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.
- When you select the Unlimited Downloadable Fonts option, Watermark option, and Color/Grayscale option, black text prints as gray.

How to Get Updated Printer Software

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The latest LaserWriter 8 software is posted to the following commercial online services and Internet sites.

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

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Adobe and PostScript are trademarks of Adobe Systems Incorporated, which may be registered in certain jurisdictions.

Article Change History:

02 Apr 1997 - Removed outdated internet references.
20 Nov 1995 - Added keyword and reviewed.

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Tech Info Library Article Number:18057



Tech Info Library

System 7.5: Not Enough Memory to Load Extensions Message (7/95)

Revised: 7/27/95
Security: Everyone

System 7.5: Not Enough Memory to Load Extensions Message (7/95)

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Article Created: 29 June 1995
Article Reviewed/Updated: 27 July 1995

TOPIC -----

I have a Quadra 800 with System 7.5 (no update) and Apple Menu Options 1.0.2. When I restart my Macintosh, the extensions load but a window comes up with the following message:

"There is not enough memory to load all of your extensions...To make more memory available, remove one or more extensions from the Extensions folder or reduce the size of the RAM disk and/or Disk Cache in the Memory Control panel then restart your Macintosh."

DISCUSSION -----

The first step in troubleshooting this problem is to make sure you have not created a RAM disk. Check your memory control panel and make sure that RAM Disk is set to Off, and restart.

The next step is to make sure you are not having a conflict with any third party extensions. Use the following steps to troubleshoot your third party extensions in System 7.5:

Step 1

Under the Apple menu, choose Control Panels.

Step 2

Double click the Extensions Manager control panel.

Step 3

Pull down the Sets menu in the upper right corner of the Extensions Manager and choose System 7.5 Only.

Step 4

Under Special, choose Restart.

If the same error occurs, then it is not a result of a third party extension conflict. Further, if you restart your Macintosh computer while holding down the shift key to turn all the extensions off and the error message does not come up, then you may be having a problem with an Apple extension.

Apple Menu Options 1.0.2 may generate this error when its preference file becomes corrupted. You can create a new Preference file by dragging the "Apple Menu Options Prefs" file from the Preferences folder in your System Folder to the Trash and restarting your Macintosh.

Article Change History:

27 Jul 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18058



Tech Info Library

Macintosh: Starting from Floppy or CD-ROM disc (6/95)

Revised: 2/17/97
Security: Everyone

Macintosh: Starting from Floppy or CD-ROM disc (6/95)

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Article Created: 29 June 1995

TOPIC -----

This article describes all the ways you can start a Macintosh computer from either a Utilities disk, Disk Tools disk, Install Me First CD, Apple Macintosh CD, Power Macintosh CD, Macintosh Performa CD, or System 7.5 Upgrade CD.

DISCUSSION -----

You may occasionally need to start your Macintosh from a device other than your hard drive in order to correctly use software such as Disk First Aid, Apple HD SC Setup, other utilities, or to troubleshoot an issue with other disk volumes.

Macintosh system software normally resides on the hard disk. System software, however, may also be installed on a floppy disk or on a CD-ROM disc, and it may be desirable to start the system using that software in order to investigate issues relating to the system software on the hard disk, or the hard disk itself.

If you have a Disk Tools disk or Utilities disk:

Step 1

Under Special, choose Shut Down.

Step 2

Insert the Disk Tools disk or Utilities disk.

Step 3

Turn on the computer.

The computer will take longer than normal to start up. When it is finished

starting up, the Trash icon will appear on the screen.

The Disk Tools or Utilities disk icon will appear in the upper right hand corner of the screen. If your hard disk or Macintosh HD icon is visible, it should be right below the Disk Tools disk or Utilities disk icon.

Note: To eject the disk, choose "Restart" from your Special menu.

If you are trying to start up with the System 7.5 Personal Upgrade CD:

Use the Disk Tools disk in the pouch which accompanies the System 7.5 CD to start the computer as described above. The Disk Tools disk that comes with this CD disc has the Apple CD-ROM extension, which will allow it to mount the System 7.5 CD disc once the CD is inserted.

Note: If you have an external CD-ROM drive, make sure it is turned on prior to starting the computer with the Disk Tools disk.

If you have a Power Macintosh system with an Apple Macintosh CD or Power Macintosh CD, or if you have a Macintosh Performa 6100 or 5200 series computer with a Macintosh Performa CD:

Step 1

Insert the CD-ROM.

Step 2

Under Special, choose Shut Down.

Step 3

Hold down the "c" key (lower-case C; if you have a keyboard with a physical latch for the Caps Lock key, make sure the Caps Lock key is in the "up" position).

Step 4

Startup your computer.

Step 5

Hold down the "c" key until you see Welcome to Macintosh.

The computer will take longer than normal to start up. When it is finished starting up, the Trash icon will appear on the screen.

The Apple Macintosh CD, Power Macintosh CD, or Macintosh Performa CD icon will appear in the upper right hand corner of the screen. If your hard disk or Macintosh HD icon is visible, it should be right below the CD icon.

Note:

To eject the CD-ROM disc, choose "Restart" from your Special menu. Immediately after you hear the startup chime, press the eject button on the front of the computer. The CD-ROM caddy will pop out or CD-ROM tray will open.

If the computer, for any reason, fails to start from your CD-ROM drive, follow the instructions described below.

If you have an Install Me First CD, or an Apple Macintosh CD on a non-Power Macintosh system, or a Macintosh Performa CD for a Performa 500 or 630 series computer:

Step 1

Insert the CD-ROM.

Step 2

Under Special, choose Shut Down.

Step 3

Hold down the Option, Command (Apple), Shift, and Delete keys. If you have a keyboard with a physical latch for the Caps Lock key, make sure the Caps Lock key is in the "up" position.

Step 4

Startup your computer.

Step 4

Continue holding down the Option, Command, Shift, and Delete keys until you see Welcome to Macintosh.

The computer will take longer than normal to start up. When it is finished starting up, the Trash icon will appear on the screen.

On the top right hand side of the screen, you should see the Apple Macintosh CD, Install Me First CD icon, or Macintosh Performa CD icon. If your hard disk or Macintosh HD icon is visible, it should be right below the CD icon.

Note:

To eject the CD-ROM disc, choose "Restart" from your Special menu. Immediately after you hear the startup chime, press the eject button on the front of the computer. The CD-ROM caddy will pop out or CD-ROM tray will open.

If you are using any type of startup CD, and can start your computer normally:

Step 1

Insert your startup CD disc.

Step 2

Choose Control Panels from your Apple menu.

Step 3

Open the Startup Disk control panel.

Step 4

Click once on the CD icon to highlight it.

Step 5

Close the Startup Disk control panel.

Step 6

Under special, choose Restart. If the CD disc pops out, push it back in.

Note:

To eject the CD-ROM disc, choose "Restart" from your Special menu. Immediately after you hear the startup gong, depress the eject button on the front of the computer. The CD-ROM caddy will pop out or CD-ROM tray will open.

Support Information Services

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Tech Info Library Article Number:18059



Tech Info Library

Power Macintosh with CD: How to Make Emergency Disk (6/95)

Revised: 6/30/95
Security: Everyone

Power Macintosh with CD: How to Make Emergency Disk (6/95)

Article Created: 29 June 1995

TOPIC -----

I have a Power Macintosh computer which shipped with a CD-ROM drive. I have purchased a third-party disk management utility which states I should use a "Disk Tools" disk in order to create an emergency disk. I did not receive one with my computer. How can I create an emergency disk?

DISCUSSION -----

Apple currently ships a CD-ROM drive as part of many Power Macintosh systems. If you received a Power Macintosh CD or an Apple Macintosh CD as part of your bundle, that effectively replaces a conventional Disk Tools floppy disk. In addition to containing conventional disk diagnostic software, the Power Macintosh CD also contains a complete back-up of your system software.

The Apple Macintosh CD and Power Macintosh CD also have a folder called Disk Images. You can use the files within this folder to create a Disk Tools disk appropriate for your computer. However, depending upon the version of system software you have, it may not be appropriate for use with your third-party utility. The Disk Tools disk is a startup disk which was designed to provide a framework from which the Apple applications Apple HD SC Setup and Disk First Aid could be run.

You can get instructions on how to use Disk Copy, the program that manipulates disk images, by consulting the Tech Info Library article entitled "Apple Disk Copy 4.2 Instructions".

In many cases, you can still use your Apple Macintosh CD or Power Macintosh CD as a start-up disk, then insert a floppy disk containing whatever disk-based diagnostic software you are trying to run.

Follow these steps to start your Power Macintosh computer from your startup CD:

With your Macintosh turned on:

Step 1

Insert the CD-ROM disc.

Step 2

Under the Special menu, choose Restart.

Step 3

Hold down the "c" (lower-case C) key until you see Welcome to Macintosh.

Follow these steps to start any CD-ROM drive equipped Macintosh computer from your startup CD:

With your Macintosh turned on:

Step 1

Insert the CD-ROM disc.

Step 2

Under the Apple menu, choose Control Panels.

Step 3

Double click on the Startup Disk control panel.

Step 4

In the Startup Disk control panel, click on the CD-ROM icon to highlight it.

Step 5

Close the Startup Disk control panel and restart your Macintosh.

-or-

Step 1

Insert the CD-ROM disc.

Step 2

Under the Special menu, choose Restart.

Step 3

Immediately hold down the Shift-Option-Command(Apple)-Delete keys.

Step 4

Continue holding these four keys until you see the Welcome to Macintosh screen.

The first device mounted on your desktop beneath the Application menu in the upper right corner of your screen is the device that your computer used to startup.

If the software you are using does not support the use of a startup CD, or does not contain instructions on how to use the startup CD with that product, or does not work with the Disk Tools disk for your version of system software, you should contact the manufacturer of the software for further assistance.

Support Information Services

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Tech Info Library Article Number:18060



Tech Info Library

HyperCard: Printing White Text on Black in Quickdraw GX (8/95)

Revised: 8/28/95
Security: Everyone

HyperCard: Printing White Text on Black in Quickdraw GX (8/95)

=====

Article Created: 29 June 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

I am printing a HyperCard card with white text on a black background. The printed card comes out all black with no text shown. If I select some other fill pattern, the outline of the text shows but the fill pattern is inside the character outlines.

This only happens when I use the LaserWriter GX driver.

DISCUSSION -----

This is the correct behavior when using a QuickDraw GX driver. HyperCard is using black & white QuickDraw, which does not let the background pattern show through. The non-GX LaserWriter drivers also use the black & white QuickDraw. QuickDraw GX, however, uses the Color QuickDraw model, which lets the patterns behind outlined text show through. If you print your card with the non-GX StyleWriter and LaserWriter 300 drivers, while set to grayscale, they give you the same result as QuickDraw GX drivers because of Color QuickDraw.

The workaround is to use the non-GX print drivers. Another alternative is to use the QuickDraw GX Helper to turn off desktop printing for the application during this print operation.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 12

Article Change History:
28 Aug 1995 - Updated from Info Alley article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18061



Tech Info Library

System 7.5.1: Sharing Removable Volumes (6/95)

Revised: 6/30/95
Security: Everyone

System 7.5.1: Sharing Removable Volumes (6/95)

Article Created: 29 June 1995

TOPIC -----

I understood that System 7.5.1 supported sharing removable volumes on the fly. But when I eject one of my CD discs, insert another, and choose "Sharing" under the file menu, I get the following error:

"One or more items could not be shared, because not all volumes are available for file sharing."

DISCUSSION -----

System 7.5.1 does support sharing removable media and automatically shares CD discs when they are inserted. Once inserted, it takes a moment or two to prepare the given volume for file sharing. You do not need to open the Sharing window unless you wish to change the access privileges of that volume.

If you attempt to open the Sharing window before the operating system is ready to share the volume, you get the error indicated above. Click the "OK" button and choose "Sharing" again, by that time, the volume is ready to be shared, and the "Sharing" window opens normally.

Support Information Services

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Tech Info Library Article Number:18062



Tech Info Library

Performa with CD: Can I Make Emergency Disk? (8/95)

Revised: 8/28/95
Security: Everyone

Performa with CD: Can I Make Emergency Disk? (8/95)

Article Created: 29 June 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

I have a Macintosh Performa computer. I have purchased a third-party disk management utility which states I should use a Disk Tools disk to create an emergency disk. I did not receive one with my computer. How can I create an emergency disk?

DISCUSSION -----

If you do not have a CD-ROM drive built into your computer, or do not have a Macintosh Performa CD, your Utilities floppy disk effectively replaces the Disk Tools disk. Note, however, that depending on the version of system software you are using, your third-party utility may not be able to use the Utilities disk in place of Disk Tools to create an emergency disk. You will have to contact the third-party software vendor to get specific instructions about whether or not you can make the emergency disk with the Utilities disk.

However, in many cases you may not need an emergency disk to troubleshoot and fix your problems. Apple currently ships a CD-ROM drive as part of many Performa computers. If you received a Macintosh Performa CD as part of your bundle, that effectively replaces a conventional Disk Tools or Utilities disk. In addition to containing conventional disk diagnostic software, it also contains a complete backup of your system software.

In many cases, it is possible to use the Performa CD as a start-up disk, then insert a diskette containing whatever third-party diagnostic or disk management utility software you need to run. In other words, even if you cannot make an emergency disk, you may still be able to start up your computer and use your diagnostic software.

Follow these steps to start your Performa 6100 series computer from your startup CD:

With Your Computer Turned On

=====

Follow these steps to start your Performa 6100 series computer from your startup CD:

Step 1

Insert the CD-ROM disc

Step 2

Under the Special menu, choose Restart.

Step 3

Hold down the c (lower case C) key until you see "Welcome to Macintosh".

With Your Macintosh Turned On

=====

Follow the steps in either Method 1 or Method 2 to start any CD-ROM equipped Macintosh computer from your startup CD:

Method 1

Step 1

Insert the CD-ROM disc.

Step 2

Under the Apple menu, choose Control Panels.

Step 3

Double click on Startup Disk control panel.

Step 4

In the Startup Disk control panel, click on the CD-ROM icon to highlight it.

Step 5

Close the Startup Disk control panel and restart your Macintosh.

Method 2

Step 1

Insert the CD-ROM disc

Step 2

Under the Special menu, choose Restart.

Step 3

Immediately hold down the Shift-Option-Command-Delete keys.

Step 4

Continue holding these four keys until you see the "Welcome to Macintosh" screen.

The first device mounted on your desktop beneath the Application menu is the device that your computer used to startup.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 10

Article Change History:

28 August 1995 - Reworded for clarity, added Info Alley information.

Support Information Services

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Tech Info Library Article Number:18063



Tech Info Library

DOS Compatibility Card: Using Macintosh Disks in DOS (6/95)

Revised: 6/30/95
Security: Everyone

DOS Compatibility Card: Using Macintosh Disks in DOS (6/95)

=====

Article Created: 30 June 1995

TOPIC -----

My Macintosh DOS Compatible computer ejects Macintosh formatted disks when I am in the MS-DOS environment. This is inconvenient because I am attempting to reformat these disks as PC disks in the MS-DOS environment. Why is this happening? How can I reformat the disks?

DISCUSSION -----

Using PC Exchange, the Macintosh environment is able to read and format MS-DOS disks. However, the MS-DOS environment does not have software enabling it to read Macintosh formatted disks. So, in order to prevent accidental erasure of the data on a Macintosh formatted disk, the disk is automatically ejected on the DOS side.*

To use Macintosh formatted disks on the DOS side, you must first reformat them in the Macintosh environment using PC Exchange. To do this:

1. Switch to the Macintosh environment using the Command-Return shortcut.
2. Insert the unlocked Macintosh disk
3. Highlight the disk icon
4. Select Erase Disk from the Special menu
5. Change the format to DOS 1.4 MB (high-density disks) or DOS 720k (low density disks)
6. Click Erase

*Note: The Power Macintosh DOS Compatibility Read Me file incorrectly states that both PC and Macintosh floppy disks are automatically mounted when inserted

into the floppy drive in either operating environment.

Support Information Services

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Tech Info Library Article Number:18064



Tech Info Library

Dubl-Click Software (6/95)

Revised: 6/30/95
Security: Everyone

Dubl-Click Software (6/95)

=====

Article Created: 30 June 1995

Dubl-Click Software

20310 Empire Ave.
Suite A102
Bend, OR 97701

503-317-0355 (all inclusive)

503-317-0430 FAX

Company Profile:

Software developer of "Go Figure." Also specializes in desktop utilities for icon management, font management, and customizable calculators.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18065



Tech Info Library

Postscript Errors Printing From MAE to Sparc Printer (6/95)

Revised: 6/30/95
Security: Everyone

Postscript Errors Printing From MAE to Sparc Printer (6/95)

=====

Article Created: 30 June 1995

TOPIC -----

I'm having a problem printing from MAE 2.0 on a Sun workstation with SunOS Solaris 2.3 using Newsprint 2.5 to a Sun Sparcprinter. This printer works fine in UNIX. I've tried both lp and lpr, and selected LPRWriter with the Generic printer description, and I get the following error printed without any other text: error offending command, f3_1. Do you know what is wrong?

DISCUSSION -----

This Sun configuration ships with only the courier font enabled. For additional postscript fonts to be used (as needed by MAE), the Font Password must be ordered from Sun which licenses these fonts.

Support Information Services

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Tech Info Library Article Number:18066



Tech Info Library

Power Macintosh 8500/120: Description (5/97)

Revised: 5/2/97
Security: Everyone

Power Macintosh 8500/120: Description (5/97)

Article Created: 3 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article contains a description of the Power Macintosh 8500/120 computer.

DISCUSSION -----

Overview

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If your profession demands a high-performance, expandable computer that can handle any media as easily as text, the Apple Power Macintosh 8500/120 system is for you. Featuring a new Power Macintosh architecture with even greater multimedia capabilities than previous models, the 8500/120 is the system of choice for in-house publishing, media authoring, and technical applications.

Built-in video input and output capability of near-broadcast quality, high-resolution graphics (up to 1,280 by 1,024 pixels), and CD-quality stereo sound add vitality to professional projects and let you explore new computer-enabled applications. For example, the Power Macintosh 8500/120 supports the capture of quarter-screen video in real time. Combine this capability with Apple's QuickTime software, and media authoring has never been easier.

Three Peripheral Component Interconnect (PCI) slots let you take advantage of a wide range of high-performance expansion cards. Because PCI is an industry standard, you can find inexpensive PCI cards for a variety of uses, including video compression, video production, and high-speed networking. Many PCI cards include the necessary software to work with Macintosh systems.

With a PowerPC 604 RISC processor running at 120 megahertz that you can upgrade yourself when faster versions become available, the Power Macintosh 8500/120 offers high-end PowerPC technology now—with plenty of room to grow later.

..TIL18068-Power_Macintosh_8500-120-Description_5-97_(TA33983).pdf

Power Macintosh 8500 systems run most applications written for 680x0-based Macintosh computers, as well as applications that have been accelerated to take advantage of their PowerPC processors. By adding SoftWindows software from Insignia Systems, you can also run MS-DOS and Windows applications, enabling the 8500 to fit into almost any computing environment.

The Power Macintosh 8500/120: Exceptional performance for handling even the most complex computing tasks and enhancing your creativity.

Features

=====

High Performance

- 120-MHz PowerPC 604 processor, user upgradable to faster processor when available (up to 150 MHz)
- Built-in floating-point processor and 32K cache
- 256K level-2 cache on a DIMM

Communications and multimedia

- 64-bit VRAM graphics subsystem
- Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- Quadruple-speed CD-ROM drive
- 16-bit stereo audio input and output
- 24-bit composite and S-video input and output
- Support for speech-recognition and text-to-speech capabilities
- Optimized for QuickTime Conferencing software

Expandability

- Three industry-standard PCI expansion slots
- SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- Internal expansion bay for additional hard disk drive

Compatibility

- 10Base-T and AAUI Ethernet connectors
- Open Transport networking software (TCP/IP and AppleTalk)
- Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- Allows you to open and use MS-DOS 6.0 and Windows 3.1 documents and disks
- Runs MS-DOS and Windows applications via SoftWindows software (not included) System 7.5 software
- Makes working with different applications consistent, so they are easier to learn and use
- Allows easy customization of your Macintosh to reflect the way you work
- Provides active assistance in learning new features with Apple Guide

Included Software

=====

The Power Macintosh 8500/120 series comes with Macintosh System Software 7.5.2. The following Apple and third-party software is also included:

- Apple Telecom 2.1
- Megaphone 1.0.2sp (which does not include the 30-day trial of Megaphone's advanced telephony features)
- Drive Setup 1.0 (a new version, with a new user interface, of the hard drive setup utility that included support for: partitioning drives, larger drive volumes - up to 2 terabytes - and removable media drives)
- CD-ROM 5.1
- Energy Saver
- Energy Saver Apple Guide (on-line active assistance)
- Apple Video Player (Allows simple display, capture and cut and paste of video input)
- Sound & Displays control panel (replaces the current Monitors, Sounds, and AV Setup control panels, providing a simplified interface that makes all of the video, monitor, and sound input and output much more accessible and usable)
- Sound & Displays Apple Guide (on-line active assistance)
- Control Strip (like the control strip on PowerBooks)
- PlainTalk 1.4 (which includes all the new TTS voices and a scaled back version of the Speech Recognition)
- Simple Sound (which provides users with an easy way to record sounds)
- QuickTime 2.09
- QuickDraw 3D
- Video Shop (AVID VideoShop 3.0.2 will be included to support an out-of-box editing solution)
- Lotus Notes Express (a \$99 value, Lotus Notes Express introduces Power Macintosh customers to this industry-standard "groupware" product and gives them access to seven frequently used Lotus Notes applications)

What's In The Box

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The Power Macintosh 8500 series computers will ship with the following components in the box:

- Power Macintosh 8500/120 computer
- Mouse
- PlainTalk Microphone
- Power cable
- Power Macintosh 8500 User's Guide
- Power Macintosh 8500 Technical Specifications
- Power Macintosh 8500 bootable CD
- Product Registration card
- PCI Brochure
- RSA coupon
- Apple Resource Guide
- Warranty Card, decals, software license agreement, Visa application form
- Packing Slip

Ordering Information

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Power Macintosh 8500/120 16/1 GB/4xCD Configuration*

- Power Macintosh 8500/120 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone
- Order No. M3104LL/A

Power Macintosh 8500/120 16/2 GB/4xCD Configuration*

- Power Macintosh 8500/120 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone
- Order No. M3105LL/A

Power Macintosh 8500 Logic Board Upgrade

- Owners of the Macintosh Quadra 800 and 840AV; Workgroup Server 80 and 8150; and Power Macintosh 8100/80, 8100/100, and 8100/110 will be able to upgrade to the Power Macintosh 8500/120 via a logic board upgrade.
- Order No. M3807LL/A

NOTE: This upgrade will not be available until 2 months after the introduction date of the Power Macintosh 8500 series computers.

Power Macintosh GeoPort Telecom Adapter

- Order No. M3127LL/A

* All configurations include mouse; system software version 7.5.2; Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.
17 Sep 1996 - Clarified energy saving information.

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Tech Info Library Article Number:18068



Tech Info Library

Power Macintosh 8500/120: Technical Specifications (9/96)

Revised: 9/30/96
Security: Everyone

Power Macintosh 8500/120: Technical Specifications (9/96)

Article Created: 3 July 1995
Article Reviewed/Updated: 18 September 1996

TOPIC -----

This article contains a list of technical specifications for the Power Macintosh 8500/120 computer.

DISCUSSION -----

Upgradable Microprocessor

- PowerPC 604 microprocessor running at 120 MHz, upgradable to 250 MHz processor when available
- Integrated floating-point unit, 32K cache, and three integer units
- High-speed system bus (up to 50 MHz)

Memory

- RAM: 16 MB of RAM, expandable to 512 MB via 8 DIMM sockets
(Note: There is no RAM soldered to the logic board. The DIMM sizes installed at the factory will vary according to availability; there will be either two 8 MB DIMMs or one 16 MB DIMM. If you are installing more RAM, the DIMMs should be 64-bit-wide, 168-pin fast-paged mode, with 70-ns RAM access times or faster.)
- Standard Level 2 (L2) Cache: 256K L2 cache on a 160-pin DIMM
(Theoretical support for up to 4 MB of L2 cache.)
- VRAM: DIMMs must be 32-bit-wide, 112-pin fast-paged mode with 70ns RAM access time or faster. Do not use the 256 K or 512 K VRAM SIMMs used in older Macintosh computers
- 4 MB of ROM

Disk Drives

- Internal 1 GB or 2 GB Fast SCSI hard disk
- Internal Apple SuperDrive floppy disk drive

- Accepts high-density 1.4 MB disks and 800K disks
- Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal AppleCD 600i quadruple-speed CD-ROM drive
- Expansion bay for additional 3.5-inch hard disk

Interfaces

- Three PCI expansion slots compatible with PCI 2.0-compliant cards (Note: These slots are not NuBus-compatible)
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10Base-T and AAUI-15 Ethernet connectors
- Internal Fast SCSI bus (up to 10 MB/s)
- External SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- RCA phono jacks for line-level stereo audio input and output
- Mini jacks for stereo audio input and output
- All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- DB-15 connector for monitor
- Composite connectors (RCA phono jacks) for composite video input and output
- S-video input and output connectors
- Internal digital audio/video (DAV) connector for video compression/decompression cards

Audio System

- Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- 16-bit stereo input and output
- Sample rates of 44.1 and 22.05 kilohertz (kHz)
- Sound input connector line level: 2.8 volts peak-to-peak (Vpp) nominal, into 3.0-kilohm (k) impedance (minimum)
- RCA-type input connector line level: 2.4 Vpp nominal, into 13.5-k impedance (minimum)
- Sound output connector line level: 2.7 Vpp nominal, into 32-k impedance
- RCA-type output connector level: 2.9 Vpp nominal into 2-k impedance (minimum)
- Sound input signal-to-noise ratio (SNR): >83 decibels (dB) A-weighted with no audible discrete tones
- RCA-type input SNR: >77 dB A-weighted with no audible discrete tones
- Sound output SNR: >84 dB A-weighted with no audible discrete tones
- RCA-type output SNR: >84 dB A-weighted with no audible discrete tones
- Bandwidth: 10 Hz to 18 kHz (+0.1 dB, -3.0 dB) at 44.1-kHz sample rate
- RCA-type input total harmonic distortion plus noise (THD + N): less than 0.018 percent A-weighted; measured 10 Hz to 30 kHz with a 2.4-Vpp sine wave input

Video Input/Output Subsystem

- 24-bit video input

- Real-time video playthrough of up to 640 by 480 pixels with NTSC;
768 by 576 pixels with PAL and SECAM
- Up to 320- by 240-pixel capture at 25 frames per second with
NTSC (with 2 GB drive)
- Maximum capture size of 640 by 480 pixels with NTSC
- 24-bit video output
 - Support for NTSC and PAL
 - Convolution for flicker reduction at all bit depths

Graphics Support

- 2 MB of VRAM, expandable to 4 MB
- Fast 64-bit data path to VRAM
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color up to 1,152- by 870-pixel resolution
- Refresh rate of up to 75 Hz

GeoPort Telephony*

- 14.4-Kbit/s modem support
- V.17 fax support
- GeoPort Fax and GeoPort Telephony software included
- Speakerphone and answering-machine capability

* Note: Requires GeoPort Telecom Adapter

Clock/Calendar

- Custom integrated circuit with long-life battery

Keyboard And Mouse

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

Electrical Requirements And Compliance

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

ADB Power Requirements

- Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size And Weight

- Height: 14 in. (35.6 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)

- Weight: 25 lb. (11.3 kg)

Operating Environment

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116 degrees F
(-40 degrees to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

18 Sep 1996 - Updated speed of processor card support.
17 Sep 1996 - Clarified energy information.
12 Jul 1996 - Modified title.

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Tech Info Library Article Number:18069



Tech Info Library

Power Macintosh 7500 Series: Description (4/97)

Revised: 5/2/97
Security: Everyone

Power Macintosh 7500 Series: Description (4/97)

Article Created: 3 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article contains a description of the Power Macintosh 7500/100 series of computers.

DISCUSSION -----

Overview

The Apple Power Macintosh 7500/100 computer is a professional computer with a new architecture that offers more flexible capabilities than previous models. If you need increased performance and expandability for your business, regardless of its size, the 7500/100 delivers—and preserves your investment into the future.

Built-in video input capability, high-resolution graphics (up to 1,280 by 1,024 pixels), and CD-quality stereo sound add vitality to everyday business projects and let you explore new computer-enabled applications. For example, the Power Macintosh 7500/100 optimizes the transfer of video data between a network and the computer's display monitor, making this an ideal system for videoconferencing. Apple's own QuickTime Conferencing software is even included.

Power Macintosh 7500 systems include three Peripheral Component Interconnect (PCI) expansion slots. Because PCI is an industry standard, you can find inexpensive PCI cards for a variety of uses, including video-conferencing, connection to faster peripherals, and high-speed networking. Many PCI cards include the necessary software to work with Macintosh systems. PCI support allows you to standardize on one type of card in your organization, saving you support time and dollars.

Connecting your computer to an Ethernet network is easier than ever with the Power Macintosh 7500, because it includes both AAUI and 10Base-T connectors.

With a PowerPC 601 RISC processor running at 100 megahertz that you can upgrade to an even more powerful 604 processor, the Power Macintosh 7500/100 gives you all the advantages of PowerPC technology now—with plenty of room to grow later.

Power Macintosh 7500 systems run most applications written for 680x0-based Macintosh computers, as well as applications that have been accelerated to take advantage of their PowerPC processors. By adding SoftWindows software from Insignia Systems, you can also run MS-DOS and Windows applications, enabling the 7500 to fit into almost any computing environment.

Whether you are selecting computers for a large corporation or a one-person home office, the Power Macintosh 7500/100 system's PowerPC performance and PCI expandability offer the versatility you need for professional computing.

Features

=====

High Performance

- 100-MHz PowerPC 601 processor, user upgradable to 604 processor
- Built-in floating-point processor and 32K cache

Communications and multimedia

- 64-bit VRAM graphics subsystem
- Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- Quadruple-speed CD-ROM drive
- 16-bit stereo audio input and output
- 24-bit composite and S-video input
- Support for speech-recognition and text-to-speech capabilities
- Optimized for QuickTime Conferencing software

Expandability

- Three industry-standard PCI expansion slots
- SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- Internal expansion bay for additional hard disk drive

Compatibility

- 10Base-T and AAUI Ethernet connectors
- Open Transport networking software (TCP/IP and AppleTalk)
- Runs most 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- Allows you to open and use MS-DOS 6.0 and Windows 3.1 documents and disks
- Runs MS-DOS and Windows applications via SoftWindows software (not included)

System 7.5 Software

- Makes working with different applications consistent, so they are easier

to learn and use

- Allows easy customization of your Macintosh to reflect the way you work
- Provides active assistance in learning new features with Apple Guide

Included Software

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The Power Macintosh 7500 series comes with Macintosh System Software 7.5.2. The following Apple and third-party software is also included:

- Apple Telecom 2.1
- Megaphone 1.02sp (which does NOT include the 30-day trial of Megaphone's advanced telephony features)
- Drive Setup 1.0 (a new version, with a new user interface, of the hard drive setup utility that includes support for: partitioning drives, larger drive volumes—up to 2 terabytes—and removable media drives)
- CD-ROM 5.1
- Energy Saver
- Energy Saver Apple Guide (on-line active assistance)
- Apple Video Player (Allows simple display, capture and cut and paste of video input)
- Apple VideoPhone (Apple VideoPhone uses the built-in QuickTime Live API to provide a point to point video conferencing over a LAN network)
- Sound & Displays control panel (replaces the current Monitors, Sounds, and AV Setup control panels, providing a simplified interface that makes all of the video, monitor, and sound input and output much more accessible and usable)
- Sound & Displays Apple Guide (on-line active assistance))
- Control Strip (like the control strip on PowerBooks)
- PlainTalk 1.4 (which includes all the new TTS voices and a scaled back version of the Speech Recognition)
- Simple Sound (which provides users with an easy way to record sounds)
- QuickTime 2.09
- QuickDraw 3D
- Video Shop (AVID VideoShop 3.0 will be included to support an out-of-box editing solution)
- Lotus Notes Express (a \$99 value, Lotus Notes Express introduces Power Macintosh customers to this industry-standard "groupware" product and gives them access to seven frequently used Lotus Notes applications)

What's In The Box

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The Power Macintosh 7500 series computers will ship with the following components in the box:

- Power Macintosh 7500 series computer
- Mouse
- PlainTalk Microphone
- Power cable
- Power Macintosh 7500 User's Guide

- Power Macintosh 7500 Technical Specifications
- Power Macintosh 7500 bootable CD
- Product Registration card
- PCI Brochure
- RSA coupon
- Apple Resource Guide
- Warranty Card, decals, software license agreement, Visa application form
- Packing Slip

Ordering Information

=====

Power Macintosh 7500/100 16/500/4xCD configuration*

- Power Macintosh 7500/100 computer with 16/16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 500 MB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone
- Order No. M3100LL/A

Power Macintosh 7500/100 16/1 GB/4xCD configuration*

- Power Macintosh 7500/100 computer with 16/16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone
- Order No. M3102LL/A

Power Macintosh GeoPort Telecom Adapter

- Order No. M3127LL/A

* All configurations include mouse; system software version 7.5.2;

Article Change History:

01 May 1997 - Removed out dated on line references.

28 Apr 1997 - Removed out dated on line references.

17 Sep 1996 - Corrected Energy compliance info.

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Tech Info Library Article Number:18070



Tech Info Library

Open Transport 1.0.1 Patch Information (7/95)

Revised: 7/5/95
Security: Everyone

Open Transport 1.0.1 Patch Information (7/95)

=====

Article Created: 5 July 1995

TOPIC -----

I'm having problems using Open Transport 1.0 with some network applications like Fetch, Eudora, or Netscape. How can I get them to work?

DISCUSSION -----

A patch to Open Transport version 1.0 has been released. Users who are experiencing problems sending files (using programs such as Fetch) or using SLIP and PPP LAPs should try installing, Open Transport 1.0.1 patch.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Information From the Read Me File
=====

Problems Truncating Data When Sending and Open Transport 1.0.1

This patch fixes a problem truncating data when sending, which occurred with the Open Transport TCP backward compatible (MacTCP) interface. Using Open Transport 1.0 in certain situations, the connection could be closed before all of the data was transferred. In this case, the receiver would get a short file, missing some of the bytes at the end, and may not have (depending on the application used) received an error indicating this problem had occurred.

Changes in Open Transport 1.0.1 for SLIP/PPP LAPs From Open Transport 1.0

-
- Fixed a crash that would occur shortly after the completion of automatic connection with some LAPs (Link Access Protocol) like MacPPP and MacSLIP. This would occur when the LAP displays a dialog box during its connection establishment.

NOTE: With Open Transport 1.0 and 1.0.1, automatic connections are possible only for direct connections or very rapid modem connections (less than 15 seconds).

- Open Transport now works correctly with InterPPP or MacPPP when they coexist in the same System Folder with other SLIP and PPP LAPs. With Open Transport 1.0, InterPPP or MacPPP could be selected in the TCP/IP control panel, but they couldn't connect if they existed in the same System Folder. For example, the connect button of the Config PPP control panel of MacPPP would be dimmed.

- Fixed problem with MacSLIP. With Open Transport 1.0, MacSLIP could be selected in the TCP/IP control panel, but opening a TCP/IP endpoint would fail. Typically an application would display an alert like "Cannot open name resolver".

Support Information Services

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Tech Info Library Article Number:18071



Tech Info Library

MAE 2.0: Timbuktu Pro Does Not Work With TCP/IP (7/95)

Revised: 7/5/95
Security: Everyone

MAE 2.0: Timbuktu Pro Does Not Work With TCP/IP (7/95)

=====

Article Created: 5 July 1995

TOPIC -----

I have MAE 2.0 and I'm running Timbuktu Pro which works properly with AppleTalk, but fails when using TCP/IP. Why is this happening?

DISCUSSION -----

The reason Timbuktu Pro does not work with MAE 2.0 and TCP/IP is due to the version of MacTCP in MAE 2.0. According to the Timtukbu Pro release notes, Timtukbu Pro requires at least MacTCP version 2.x. The version shipped with MAE 2.0 is based on MacTCP 1.1.x.

This issue has been reported to Engineering as a compatibility problem. We have no information on if or when this issue will be addressed.

Support Information Services

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Tech Info Library Article Number:18072



Tech Info Library

LaserWriter 16/600 PS: Cannot Receive Faxes with ECM (7/95)

Revised: 7/5/95
Security: Everyone

LaserWriter 16/600 PS: Cannot Receive Faxes with ECM (7/95)

=====

Article Created: 05 July 1995

TOPIC -----

What causes the LaserWriter 16/600 PS to only receive the first inch of a sent fax? When this happens, the sender also receives an error message. This occurs when sending a fax from different fax machines, such as the Canon t400, Canon 630, Canon Fax 270, and a Pitney Bowes 9550. Faxes sent from other machines are received properly.

DISCUSSION -----

Apple worked with Canon to verify that this is related to an option on the sending machines called ECM (Error Correction Mode). When the sender selects ECM, the fax fails. However, the same fax job is completed successfully with ECM turned off.

The work around is to turn off error correction on the sending machines. Please note that this problem potentially could happen from other fax machines besides those listed above.

Support Information Services

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Tech Info Library Article Number:18074



Tech Info Library

LaserWriter 8: Tray Selection Printing from Finder (9/95)

Revised: 9/1/95
Security: Everyone

LaserWriter 8: Tray Selection Printing from Finder (9/95)

=====

Article Created: 05 July 1995
Article Reviewed/Updated: 01 September 1995

TOPIC -----

On a LaserWriter Pro 600 or 630 and the LaserWriter 16/600 PS with the 500-sheet cassette, printing from the Finder only applies tray selections to the first print job. This is apparent using SimpleText if one selects the following options in the Print window:

First From: Cassette (250) Sheets
Remaining From: Cassette (500) Sheets

If you use different paper in both cassettes, you will notice that after it prints the first file correctly (first page from 250, successive from 500), it then starts printing every page from the 250 sheet cassette. Printing each file individually from within SimpleText works fine.

DISCUSSION -----

This is a known issue and is due to how various applications and the LaserWriter driver manipulate the print record. In simple terms, it is up to the application and print driver to store information (such as paper tray use) so that it can be used for successive jobs in a scenario such as the one you described. There has been some past confusion in the developer community with regard to this. As a result, engineering has decided to resolve this issue by modifying the next version of the LaserWriter driver (beyond 8.3) to ensure that paper tray information is saved and used appropriately.

In the interim, there is only one good workaround we are aware of:

- Use QuickDraw GX.

If QuickDraw GX is being used, this is NOT a problem. QuickDraw GX is very feature rich with respect to paper tray usage, as each individual page of a document has its own "definition" or paper type. For example, you can define the

first page of a document to be LetterHead and a second page to be plain paper, and if the 250-sheet and 500-sheet cassette have been defined respectively as such then tray selection is automatic -- the first page of each document comes from the 250-sheet cassette, and the second from the 500-sheet cassette.

Paper types such as LetterHead can be defined/created with the QuickDraw GX Paper Type editor that ships with QuickDraw GX. In terms of "setting" each page of a document to be of a defined paper type, this functionality is ONLY present with QuickDraw GX aware applications (such as WordPerfect 3.1) via the "Custom Page Setup" menu item in the File menu. Custom Page Setup is the recommended user interface for utilizing GX paper types.

One less graceful workaround is to print the files individually.

Article Change History:

01 Sep 1995 - Revised for technical accuracy.

25 Aug 1995 - Added still more info. to discussion; retitled.

27 Jul 1995 - Added additional info. to discussion; retitled for clarity.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18075



Tech Info Library

LaserWriter 8.3: Does Not Create Desktop Fax Sender (8/95)

Revised: 8/3/95
Security: Everyone

LaserWriter 8.3: Does Not Create Desktop Fax Sender (8/95)

=====

Article Created: 03 August 1995

TOPIC -----

After installing LaserWriter 8.3 software and using the new desktop printing functionality without QuickDraw GX, the Fax Sender chooser item does not create a desktop printer.

I am confused because Fax Sender does not have a corresponding desktop printer yet it does work.

Are there any compatibility issues with 3rd party print drivers and desktop printers?

DISCUSSION -----

The new Desktop Printing software only supports Apple print drivers, and specifically, only the ones that use PrintMonitor. The ability to create a desktop icon for the Fax Sender driver is being considered for the next version of Desktop Printing software.

The new Desktop Printing software is designed to replace the old PrintMonitor, therefore, any driver that uses PrintMonitor is compatible with the new Desktop Printing software.

The Desktop Printing software has been tested with all of the Apple PostScript and QuickDraw "PrintMonitor-saavy" print drivers including: LW 7.x, 8.x, 8.xf, LaserWriter Select 300, StyleWriter II, and others. Apple ran some simple tests with LaserWriter 8.2.2f and successfully sent PostScript fax jobs via the desktop printer. Tests were also run with Adobe's PS Printer drivers 8.2 and 8.3 with no problems found. The only print drivers that will not have a desktop printer created are third party drivers that have their own printmonitor-type applications. It is only these 3rd party QuickDraw direct connect drivers where Desktop Printing is bypassed and the third party software takes precedence.

With regards to PostScript/network printers, the LaserWriter 8.x driver uses the

PPD files of the 3rd party PostScript printer, and then creates a desktop printer.

Support Information Services

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Tech Info Library Article Number:18076



Tech Info Library

DMF Formatted Disks: Second Disk Installation Fails (10/96)

Revised: 10/30/96
Security: Everyone

DMF Formatted Disks: Second Disk Installation Fails (10/96)

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Article Created: 05 July 1995
Article Reviewed/Updated: 30 October 1996

TOPIC -----

I am trying to install Word 6.0 for Windows on my DOS Compatible Macintosh. The first disk installs correctly but then fails on the second disk. I have gotten a new copy of the software but this copy does not read from drive A, I get a message saying, "System Error". When I try to cancel the installation, I get a message saying the compressed file can't be decompressed, and it may be corrupted.

I am also unable to mount the disks with PC Exchange.

DISCUSSION -----

Microsoft uses a new disk format, DMF (Distributed Media Format) that lets them ship their software on a small number of disks by using a 1.6 MB floppy disk format. The current PC Compatible (360K/720K/1.4MB) or Apple (400K/800K/1.4MB) floppy drives cannot read this type of format.

The disk set for Microsoft Word 6.0 for Windows contains one 1.4 MB disk with an installer program and other 1.6 MB formatted disks. Although the 1.6 MB disks cannot normally be read by the floppy drive, the installer modifies the hardware-level floppy driver and DOS BIOS calls, which enables the PC to read the new format.

The Microsoft DMF installer program may be incompatible with the Macintosh DOS Compatible computers, as well as the Insignia SoftWindows product. The installer attempts to modify the DOS BIOS and hardware-level floppy driver, which can not be done in these hardware emulation implementations.

There is a Fix

PC Exchange 2.0.7 lets DMF formatted disks be used with Macintosh DOS Compatible computers. PC Exchange 2.0.7 available with the DOS Compatibility 1.5 Software

Update for Power Macintosh/Performa 6100 DOS Compatible, Macintosh Performa 630, 640CD DOS Compatible, and Macintosh LC 630 DOS Compatible computers. The DOS Compatibility 1.5 update is available at Apple Computer's Software Updates locations online, or a disk set can be mailed for a shipping and handling charge by contacting 1-800-SOS-APPL (1-800-767-2775).

The DOS Compatibility 1.5 Software Update is not supported on the Quadra or Centris 610 DOS Compatible computers.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

30 Oct 1996 - Added the fix to the article.
24 Jul 1995 - Updated technical information.
06 Jul 1995 - Corrected typo.

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Tech Info Library Article Number:18077



Tech Info Library

System 7.x: Fonts Included With Major System 7 Releases (7/95)

Revised: 7/5/95
Security: Everyone

System 7.x: Fonts Included With Major System 7 Releases (7/95)

=====

Article Created: 05 July 1995

TOPIC -----

This article contains a comprehensive list of Fonts included with major releases of Macintosh System 7.

DISCUSSION -----

* - Included TrueType font

9,...,24 - Bitmap sizes installed

System 7.0

=====

	TrueType	Bitmaps
	-----	-----
Courier/Courier Bold	*	9,10,12,14,18,24
Helvetica/Helvetica Bold	*	9,10,12,14,18,24
Symbol	*	9,10,12,14,18,24
Times/Times Bold	*	9,10,12,14,18,24
Times Italic/Times Bold Italic	*	9,10,12,14,18,24
Athens		18
Cairo		18
London		18
Los Angeles		12,24
Palatino		9,10,12,14,18,24
San Francisco		18
Venice		14

Note:

Chicago 12, Monaco 10,12 and Geneva 9,10,12 are available only as ROM bitmaps.

System 7.0.1

=====

	TrueType	Bitmaps
	-----	-----
Chicago	*	
Courier/Courier Bold	*	9,10,12,14,18,24
Geneva	*	9,10,12,14,18,24
Helvetica/Helvetica Bold	*	9,10,12,14,18,24
Monaco	*	12
Symbol	*	9,10,12,14,18,24
Times/Times Bold	*	9,10,12,14,18,24
Times Italic/Times Bold Italic	*	9,10,12,14,18,24
New York	*	9,10,12,14,18,24
Athens		18
Cairo		18
London		18
Los Angeles		12,24
Palatino		9,10,12,14,18,24
San Francisco		18
Venice		14

Note:

Geneva 9 bitmap is Italic only.

System 7.1

=====

	TrueType	Bitmaps
	-----	-----
Chicago	*	
Courier/Courier Bold	*	9,10,12,14,18,24
Geneva	*	9,10,12,14,18,24
Helvetica/Helvetica Bold	*	9,10,12,14,18,24
Monaco	*	12
Symbol	*	9,10,12,14,18,24
Times/Times Bold	*	9,10,12,14,18,24
Times Italic/Times Bold Italic	*	9,10,12,14,18,24
Palatino/Palatino Bold	*	9,10,12,14,18,24
Palatino Italic/Palatino Bold Italic	*	9,10,12,14,18,24
Athens		18
Cairo		18
London		18
Los Angeles		12,24
Mobile		18
Palatino		9,10,12,14,18,24
San Francisco		18
Venice		14

Note:

Geneva 9 bitmap is Italic only.

System 7.5

=====

	TrueType	Bitmaps
	-----	-----
Chicago	*	
Courier/Courier Bold	*	9,10,12,14,18,24
Geneva	*	9,10,12,14,18,24
Helvetica/Helvetica Bold	*	9,10,12,14,18,24
Monaco	*	12
Symbol	*	9,10,12,14,18,24
Times/Times Bold	*	9,10,12,14,18,24
Times Italic/Times Bold Italic	*	9,10,12,14,18,24
Palatino/Palatino Bold	*	10,12,14,18,24
Palatino Italic/Palatino Bold Italic	*	10,12,14,18,24

The Apple Classic Fonts are NOT provided with System 7.5, they are part of no-charge license for System 7.0.1, and therefore may be distributed freely to Macintosh users.

Note:

Geneva 9 bitmap is Italic only.

Support Information Services

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Tech Info Library Article Number:18078



Tech Info Library

HyperCard 2.3: Errors in Documentation (9/95)

Revised: 9/26/95
Security: Everyone

HyperCard 2.3: Errors in Documentation (9/95)

Article Created: 05 July 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

This article describes errors in the Reference Manual for HyperCard 2.3.

DISCUSSION -----

Page 6-33

In describing using Linkto, instructs the user:

2. With the Button tool still selected, double-click the button you want to link.

The problem is that the Button Info dialog box does not display the Link to button, unless you hold down the option key while double-clicking the button you want to link. Per the instruction, the Button Info dialog box shows the Tasks button.

The manual should read:

2. With the Button tool still selected, hold down the Option key on your keyboard and double-click the button you want to link.

Pages 3-22 and 6-37

In describing adding visual effects, instructs the user:

1. Choose the button tool and double-click the Next button.

The Button Info Dialog box appears.

2. Click the Effect button.

There is no Effect button unless the user holds down the Option key while double-clicking on the Next button.

The manual should read:

1. Choose the button tool, hold down the Option key on your keyboard, and double-click the Next button

The Button Info Dialog box appears.

2. Click the Effect button.

Incorrect Screen Shots

Pages 2-29, 4-20, 6-3, and 6-17 of HyperCard Reference manual show screen shots of the incorrect version of the Button Info window.

Appendix B, page 141 of the Getting Started manual documents the replacement of the LinkTo and Effects buttons with the Tasks button and shows the correct screen shot.

This article was published in the "Information Alley":
Volume II, Issue 9, Page 17

Article Change History:

26 Sep 1995 - Added Info Alley information; updated article.
06 Jul 1995 - Clarified what the Appendix section shows.

Support Information Services

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Tech Info Library Article Number:18079



Tech Info Library

Power Macintosh 7500 Series: Technical Specifications (9/96)

Revised: 9/17/96
Security: Everyone

Power Macintosh 7500 Series: Technical Specifications (9/96)

Article Created: 6 July 1995
Article Reviewed/Updated: 17 September 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7500 series of computers.

DISCUSSION -----

Upgradable Microprocessor

- PowerPC 601 microprocessor running at 100 MHz, upgradable to PowerPC 604 microprocessor
- Integrated floating-point unit and 32K cache
- High-speed system bus (up to 50 MHz)

Memory

- RAM: 16 MB of RAM, expandable to 512 MB via 8 DIMM sockets
(Note: There is no RAM soldered to the logic board. The DIMM sizes installed at the factory will vary according to availability; there will be either two 8 MB DIMMs or one 16 MB DIMM. If you are installing more RAM, the DIMMs should be 64-bit-wide, 168-pin fast-paged mode, with 70-ns RAM access times or faster.)
- Optional Level 2 (L2) Cache: L2 Cache Slot for optional 256K, 512K, or 1MB L2 cache on a 160-pin DIMM. (Theoretical Support for up to 4 MB of L2 cache.)
- VRAM: 2 MB of VRAM, expandable to 4 MB.
DIMMs must be 32-bit-wide, 112-pin fast-paged mode with 70ns RAM access time or faster. Do not use the 256 K or 512 K VRAM SIMMs used in older Macintosh computers.
- 4 MB of ROM

Disk Drives

- Internal 500 MB or 1 GB Fast SCSI hard disk

- Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4 MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal AppleCD 600i quadruple-speed CD-ROM drive
- Expansion bay for additional 3.5-inch hard disk

Interfaces

- Three PCI expansion slots compatible with PCI 2.0-compliant cards (Note: These slots are not NuBus-compatible)
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10Base-T and AAUI-15 Ethernet connectors
- Internal Fast SCSI bus (up to 10 MB/s)
- External SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- RCA phono jacks for line-level stereo audio input and output
- Mini jacks for stereo audio input and output
- All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- DB-15 connector for monitor
- Composite connectors (RCA phono jacks) for composite video input
- S-video input connector
- Internal digital audio/video (DAV) connector for video compression/decompression cards 24-bit video input
- Real-time video playthrough of up to 640 by 480 pixels with NTSC and 768 by 576 pixels with PAL and SECAM
- Up to 320- by 240-pixel capture at 15 frames per second with NTSC
- Maximum capture size of 640 by 480 pixels with NTSC

Audio System

- Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- 16-bit stereo input and output
- Sample rates of 44.1 and 22.05 kilohertz (kHz)
- Sound input connector line level: 2.8 volts peak-to-peak (Vpp) nominal, into 3.0-kilohm (k) impedance (minimum)
- RCA-type input connector line level: 2.4 Vpp nominal, into 13.5-k impedance (minimum)
- Sound output connector line level: 2.7 Vpp nominal, into 32-k impedance
- RCA-type output connector level: 2.9 Vpp nominal into 2-k impedance (minimum)
- Sound input signal-to-noise ratio (SNR): >83 decibels (dB) A-weighted with no audible discrete tones
- RCA-type input SNR: >77 dB A-weighted with no audible discrete tones
- Sound output SNR: >84 dB A-weighted with no audible discrete tones
- RCA-type output SNR: >84 dB A-weighted with no audible discrete tones
- Bandwidth: 10 Hz to 18 kHz (+0.1 dB, -3.0 dB) at 44.1-kHz sample rate
- RCA-type input total harmonic distortion plus noise (THD + N): less than 0.018 percent A-weighted; measured 10 Hz to 30 kHz with a 2.4-Vpp sine

wave input

Graphics Support

- 2 MB of VRAM, expandable to 4 MB
- Fast 64-bit data path to VRAM
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color of up to 1,152- by 870-pixel resolution
- Refresh rate of up to 75 Hz

GeoPort Telephony*

- 14.4-Kbit/s modem support
- V.17 fax support
- GeoPort Fax and GeoPort Telephony software included
- Speakerphone and answering-machine capability

* Requires GeoPort Telecom Adapter

Clock/Calendar

- Custom integrated circuit with long-life battery

Keyboard And Mouse

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

Electrical Requirements And Compliance

- Line voltage: 100 to 240 V AC, RMS single phase
- Frequency: 50 to 60 Hz, single phase
- Power: 150 W maximum, not including display

ADB Power Requirements

- Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size And Weight

- Height: 6.15 in. (15.6 cm)
- Width: 14.37 in. (36.5 cm)
- Depth: 16.93 in. (43.0 cm)
- Weight: 22 lb. (9.97 kg)

Operating Environment

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116 degrees F
(-40 degrees to 47 degrees C)

..TIL18080-Power_Macintosh_7500_Series-Technical_Specifications_9-96.pdf

- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

17 Sep 1996 - Updated information.

02 Jan 1996 - Clarified VRAM information.

18 Sep 1995 - Corrected minor typo.

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Tech Info Library Article Number:18080



Tech Info Library

Power Macintosh 7200/75 & 7200/90: Description (4/97)

Revised: 4/29/97
Security: Everyone

Power Macintosh 7200/75 & 7200/90: Description (4/97)

Article Created: 6 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article contains a description of the Power Macintosh 7200/75 and 7200/90 computers.

DISCUSSION -----

Overview
=====

Apple Power Macintosh 7200/75 and Power Macintosh 7200/90 systems offer enhanced expandability and performance that make them ideal for small and medium-size businesses, for home offices, and for running productivity applications in any size of organization.

Each Power Macintosh 7200 computer comes with three Peripheral Component Interconnect (PCI) slots for high-performance expansion cards. Because PCI is an industry standard, you can find inexpensive PCI cards for a variety of uses, including graphics, faster communications with peripherals, and high-speed networking. Many PCI cards include the necessary software to work with Macintosh systems.

Power Macintosh 7200 systems enable you to incorporate high-resolution graphics and stereo sound into your business, education, and personal projects. Both models support screen resolutions of up to 1,280 by 1,024 pixels. They also come with Apple's GeoPort Fax and GeoPort Telephony software (requires GeoPort Telecom Adapter).

The graphics, telephony, and expansion capabilities are all implemented with the legendary plug-and-play simplicity of Macintosh computers. Even complex solutions become easy to use with the Power Macintosh 7200 series.

Built with high-efficiency PowerPC 601 processors, Power Macintosh 7200

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computers offer you a performance choice of 75 or 90 megahertz operation. Whichever speed you choose, you get all the advantages of PowerPC technology. If your computing needs later increase, either model can be upgraded to a Power Macintosh 7500 system.

Power Macintosh 7200 systems run virtually all applications written for 680x0-based Macintosh computers, as well as applications that have been accelerated to take advantage of PowerPC processors. By adding SoftWindows software from Insignia Systems, you can also run MS-DOS and Windows applications, enabling the 7200 series to fit into almost any computing environment.

Whether you need power and expandability for everyday number crunching, office productivity, or an innovative multimedia project, Apple Power Macintosh 7200 systems offer the features you need at an affordable price.

Features

=====

High Performance

- 75- or 90-MHz PowerPC 601 processor
- Built-in floating-point processor and 32K cache
- Built-in graphics acceleration

Communications And Multimedia

- Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- Quadruple-speed CD-ROM drive
- 16-bit stereo audio input and output

Expandability

- Three industry-standard PCI expansion slots
- SCSI connector for external hard disks, CD-ROM drives, and other SCSI devices
- Internal expansion bay for additional storage device
- Up to 256MB of RAM
- Up to 4MB of VRAM

Compatibility

- 10Base-T and AAUI Ethernet connectors
- AppleTalk networking
- Open Transport networking software (TCP/IP and AppleTalk)
- Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- Allows you to open and use MS-DOS 6.0 and Windows 3.1 documents
- Runs MS-DOS and Windows applications via SoftWindows software (not included)
- Reads Macintosh, Windows, MS-DOS, OS/2, and ProDOS floppy disks
- System 7.5 software

..TIL18081-Power_Macintosh_7200-75_and_7200-90-Description_4-97.pdf

- Makes working with different applications consistent, so they are easier to learn and use
- Allows easy customization of your Macintosh to reflect the way you work
- Provides active assistance in learning new features with Apple Guide

Included Software

=====

The Power Macintosh 7200 series comes with Macintosh System Software 7.5.2. The following Apple and third-party software is also included:

- Apple Telecom 2.1
- Megaphone 1.02sp (which does NOT include the 30-day trial of Megaphone's advanced telephony features)
- Drive Setup 1.0 (a new version, with a new user interface, of the hard drive setup utility that includes support for: partitioning drives, larger drive volumes—up to 2 terabytes—and removable media drives)
- CD-ROM 5.1 (new driver software that offers CD+ compatibility)
- Energy Saver (provides compliancy with Energy Star requirements)
- Energy Saver Apple Guide (on-line active assistance)
- Lotus Notes Express (a \$99 value, Lotus Notes Express introduces Power Macintosh customers to this industry-standard "groupware" product and gives them access to seven frequently used Lotus Notes applications)

What's In The Box

=====

The Power Macintosh 7200 series computers will ship with the following components in the box:

- Power Macintosh 7200 series computer
- Mouse
- Power cable
- Power Macintosh 7200 User's Guide
- Power Macintosh 7200 Technical Specifications
- Power Macintosh 7200 bootable CD
- Product Registration card
- PCI Brochure
- RSA coupon
- Apple Resource Guide
- Warranty Card, decals, software license agreement, Visa application form
- Packing Slip

Ordering Information

=====

Power Macintosh 7200/75 8/500/4xCD*

- Power Macintosh 7200/75 computer with 8MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 500 MB hard disk drive, and an internal quadruple-speed CD-ROM drive.
- Order No. M4303LL/A

Power Macintosh 7200/90 8/500/4xCD*

-
- Power Macintosh 7200/90 computer with 8 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 500MB hard disk drive, and an internal quadruple-speed CD-ROM drive.
 - Order No. M4082LL/A

Power Macintosh GeoPort Telecom Adapter

-
- Order No. M3127LL/A

* All configurations include mouse; system software version 7.5.2; complete setup, learning, and reference documentation; and limited warranty.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

12 Jul 1996 - Modified title.

04 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18081



Tech Info Library

Internal HD Format: Fails To Recognize Hard Drive (7/95)

Revised: 7/6/95
Security: Everyone

Internal HD Format: Fails To Recognize Hard Drive (7/95)

Article Created: 05 July 1995

TOPIC -----

Non-Apple utilities, such as Drive 7, can be used to reformat the internal IDE drive installed on some Macintosh computers. However, when you subsequently attempt to reformat the drive with Apple's Internal HD Format, you get an error message stating that no drive was found, and to use Apple HD SC Setup instead.

What is causing Internal Hard Drive Format to fail in this situation? Is there a work around?

DISCUSSION -----

The Drive 7 software replaces the original driver with its own ATA driver, and thus prevents any other hard drive utility, such as Apple's Internal HD Format, from modifying or deleting its driver. Internal Hard Drive Format recognizes that it is unable to modify the driver and therefore states that it cannot see a valid drive.

Drive 7 users can remove the partition code from their IDE drive by selecting "Unpartition ATA disk" from the Functions menu in the Drive 7 application. This information is documented in Drive 7's Read Me file as well as the user manual. However, Drive 7's error message should not be telling users to use Apple HD SC Setup. Apple has contacted Casa Blanca Works and recommended that they change this message in future versions.

For additional assistance with this issue, you should contact Casa Blanca Works. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18082



Tech Info Library

Power Macintosh 7200/75 & 7200/90: Specifications (9/96)

Revised: 9/23/96
Security: Everyone

Power Macintosh 7200/75 & 7200/90: Specifications (9/96)

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Article Created: 6 July 1995
Article Reviewed/Updated: 10 September 1996

TOPIC -----

This article contains a list of technical specifications for the Power Macintosh 7200/75 and 7200/90.

DISCUSSION -----

Microprocessor

- PowerPC 601 microprocessor running at 75 MHz (7200/75 model)
- PowerPC 601 microprocessor running at 90 MHz (7200/90 model)
- Integrated floating-point unit and 32K cache

Memory

- 8 MB of RAM, expandable to 256 MB via 4 DIMM sockets
(Note: There is no RAM soldered to the logic board. The DIMM sizes installed at the factory will vary according to availability; there will be either two 4 MB DIMMs or one 8 MB DIMM.)
- Level 2 (L2) Cache: L2 Cache Slot for Optional 256KL2 cache on a 160-pin DIMM. (These computers theoretically support 512K and 1 MB of L2 cache, but these configurations have not been tested and are not supported by Apple.)
- 4 MB of ROM
- 1 MB of Video RAM (VRAM) in both the Power Macintosh 7200/75 & 7200/90 models

Disk Drives

- Internal 500 MB SCSI hard disk
- Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4 MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks

- Internal AppleCD 600i quadruple-speed CD-ROM drive
- Expansion bay for additional 3.5-inch hard disk

Interfaces

- Three PCI expansion slots compatible with PCI 2.0-compliant cards
(Note: These slots are not NuBus-compatible)
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10Base-T and AAUI-15 Ethernet connectors
- Internal and external SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- Mini jacks for stereo audio input and output
 - 16-bit audio
 - Up to 44.1-kHz sampling rate
- DB-15 connector for monitor

Audio System

- Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
 - 16-bit stereo input and output
 - Sample rates of 44.1 and 22.05 kilohertz (kHz)
 - Input line level: 2 volts peak-to-peak nominal, into 6.5-Kilohm (k) impedance
 - Output line level: 2.2 volts peak-to-peak nominal, into 1 k impedance
 - Input through output SNR*: >74 decibels (dB) typical
 - Bandwidth: 10 Hz-19 kHz (+/- 2 dB) at 44.100 kHz sample rate
 - THD+N*: Less than 0.06%; measured 30 Hz-16 kHz with a 2-Vpp sine wave input
- *SNR is signal-to-noise ratio; THD+N is total harmonic distortion plus noise.

Graphics Support

- VRAM-based accelerated graphics
- 1 MB of VRAM, expandable to 4 MB
- 64-bit data path to VRAM (with 2 MB of VRAM)
- Support for display resolutions of up to 1,280 by 1,024 pixels
- 24-bit color of up to 1,024- by 768-pixel resolution
- Refresh rate of up to 75 Hz

GeoPort Telephony*

- 14.4-Kbit/s modem support
 - V.17 fax support
 - GeoPort Fax and GeoPort Telephony software included
 - Speakerphone and answering-machine capability
- * Requires GeoPort Telecom Adapter

Clock/Calendar

- Custom integrated circuit with long-life battery

Keyboard And Mouse

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

Electrical Requirements And Compliance

- Line voltage: 100 to 240 V AC, RMS single phase
- Frequency: 50 to 60 Hz, single phase
- Power: 150 W maximum, not including display
- Energy Star compliant

ADB Power Requirements

- Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size And Weight

- Height: 6.15 in. (15.6 cm)
- Width: 14.37 in. (36.5 cm)
- Depth: 16.93 in. (43.0 cm)
- Weight: 22 lb. (9.97 kg)

Operating Environment

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116 degrees F
(-40 degrees to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

10 Sep 1996 - Clarified cache information.
12 Jul 1996 - Modified title.
08 Feb 1996 - Added VRAM info for 7200/90.

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Tech Info Library Article Number:18083



Tech Info Library

PowerBook Duo Dock Plus: Description (9/95)

Revised: 9/21/95
Security: Everyone

PowerBook Duo Dock Plus: Description (9/95)

Article Created: 6 July 1995
Article Reviewed/Updated: 21 September 1995

TOPIC -----

This article contains a description of the PowerBook Duo Dock Plus.

DISCUSSION -----

Overview
=====

The Apple PowerBook Duo system is an excellent choice if you want an extremely small but powerful computer—with expansion capabilities that let you turn it into a full Macintosh desktop system.

At the heart of the PowerBook Duo system are the award-winning PowerBook Duo subnotebook computers. Weighing less than 5 pounds, they are light enough to take anywhere, yet powerful enough for any computing task.

When you are back at the office and want the capabilities of a desktop Macintosh computer, just slip your PowerBook computer into a PowerBook Duo Dock Plus. PowerLatch docking technology provides easy, reliable connections between the two, so you have instant access to such desktop resources as a large color display, full-size keyboard, mouse, printers, and network resources.

The PowerBook Duo Dock Plus supports Apple displays of up to 21 inches and has two full-size NuBus slots that let you add the capabilities you want. It also includes a high-speed Ethernet port for quick and easy access to network resources. The 1.4-megabyte Apple SuperDrive lets you read, write, and format Macintosh, Windows, and MS-DOS floppy disks. There's even room for an additional hard disk.

With this docking solution, when you want to take your work with you, you simply press the eject button and the PowerBook Duo computer slides out, ready for computing wherever you go. All of your applications and most recent files are

stored securely on the computer's hard disk drive.

And when you are away from your office, you can use the portable PowerBook Duo computer to work with external displays, CD-ROM drives, and other peripherals.

Features

=====

Ease of Use

- PowerLatch docking technology for easy, automatic, one-step docking

Disk Drive

- Internal 1.4 MB Apple SuperDrive

Display Support

- 1 MB of VRAM for thousands of colors on 17-inch displays and 256 colors on 20- and 21-inch displays
- Support for most Apple displays, including the Apple Multiple Scan 20 Display (19.1- inch diagonal viewable image size), as well as most VGA and SVGA displays

Expansion

- Two NuBus expansion slots
- Ten built-in ports, including a SCSI port for up to six peripherals, such as an external hard disk or CD-ROM

Communications

- Built-in support for high-speed Ethernet for rapid data transfer
- Pass-through port for modem in PowerBook Duo

Security

Security key for locking PowerBook Duo and slot for security cable

Ordering Information

=====

PowerBook Duo Dock Plus*

Order No. M4219LL/A

Includes:

- PowerBook Duo Dock Plus with internal 1.4 MB Apple SuperDrive
- 1 MB of VRAM
- Built-in support for high-speed Ethernet
- Mouse and microphone
- Power cable

- Security keys
- Complete setup, learning, and reference documentation
- Limited warranty

PowerBook Duo VRAM Expansion Kit for Duo Dock

Order No. M13114LL/A

PowerBook Math Coprocessor Kit

Order No. M6775LL/A

Apple Ethernet NB Card

Order No. M0417LL/A

Macintosh HDI-20 External 1.4 MB Floppy Disk Drive

Order No. M8061LL/A

Apple HDI-30 SCSI Disk Adapter

Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

Order No. M2538LL/A

* Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

21 Sep 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18084



Tech Info Library

Macintosh Duo MiniDock: Description (7/95)

Revised: 7/6/95
Security: Everyone

Macintosh Duo MiniDock: Description (7/95)

=====

Article Created: 6 July 1995

TOPIC -----

This article describes the features of the Macintosh Duo MiniDock.

DISCUSSION -----

Overview

=====

The Macintosh Duo MiniDock provides expansion capabilities for the Macintosh PowerBook Duo computers.

When you are away from your office and want to work with desktop resources, you can use the portable Macintosh Duo MiniDock. It provides standard Macintosh connections to large displays, a modem, and other peripherals.

Apple's new PowerLatch docking technology ensures easy, automatic docking between the Macintosh PowerBook Duo and the Duo MiniDock, so there is no need to plug and unplug cables or to reconfigure the system each time you insert the PowerBook Duo into the Duo MiniDock.

Macintosh Duo MiniDock Features

=====

- Small size and weight for easy portability
- PowerLatch docking technology
- Built-in video support for 256 colors
- Supports most Apple displays, including the Macintosh 16" Color Display, as well as some VGA and SVGA displays

- 9 built-in ports, including SCSI port
- Slot for a security cable
- Port for connecting external floppy disk drive

Ordering Information

=====

Macintosh Duo MiniDock

- Order No. M4181LL/A
- Macintosh Duo MiniDock
- Complete setup, learning, and reference documentation (U.S., Japan)
- Limited warranty statement

Macintosh PowerBook Duo Floppy Adapter

- Order No. M4180LL/A
- Macintosh PowerBook Duo Floppy Adapter
- Plastic case for storage and travel
- Limited warranty statement

Macintosh HDI-20 External 1.4MB Floppy Disk Drive

Order No. M8061LL/A

Apple HDI-30 SCSI Disk Adapter Cable

Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

Order No. M2538LL/A

Support Information Services

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Tech Info Library Article Number:18086



Tech Info Library

Open Transport 1.0.1 Patch Read Me (11/95)

Revised: 11/15/95
Security: Everyone

Open Transport 1.0.1 Patch Read Me (11/95)

Article Created: 6 July 1995
Article Reviewed/Updated: 15 November 1995

TOPIC -----

This article is the Open Transport (OT) 1.0.1 ReadMe file.

DISCUSSION -----

Open Transport 1.0.1 Patch for Power Macintosh 9500

1) Problems truncating data when sending and Open Transport 1.0.1

This patch fixes a problem truncating data when sending, which occurred with the Open Transport TCP backward compatible (MacTCP) interface. Using OT 1.0 in certain situations, the connection could be closed before all of the data was transferred. In this case, the receiver would get a short file, missing some of the bytes at the end, and may not have (depending on the application used) received an error indicating this problem had occurred.

2) Changes in OT 1.0.1 for SLIP/PPP LAPs since OT 1.0

- Fixed a crash that would occur shortly after the completion of automatic connection with some LAPs (Link Access Protocol) like MacPPP and MacSLIP. This would occur when the LAP displays some dialog during its connection establishment. NOTE: with OT 1.0 and 1.0.1 automatic connections are possible only for direct connections or very rapid modem connections (< 15 seconds).
- OT now works correctly with InterPPP or MacPPP when they coexist in the same System Folder with other SLIP and PPP LAPs. With OT 1.0, InterPPP or MacPPP could be selected in the TCP/IP control panel but they couldn't connect if they existed in the same System Folder. For example the connect button of the Config PPP control panel of MacPPP would be gray (inactive).
- Fixed problem with MacSLIP. With OT 1.0, MacSLIP could be selected in the TCP/IP control panel but opening a TCP/IP end point would fail. Typically an

application would display an alert like "Cannot open name resolver".

Miscellaneous TCP/IP LAP Information

Because of the fundamental architectural differences between MacTCP and Open Transport, we cannot insure a 100% compatibility when using SLIP and PPP Link Access Protocol (LAP) modules written for MacTCP.

The following SLIP and PPP LAPs are supported with various levels of success:

- InterSLIP
 - Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.
 - The version 1.0.1 of InterSLIP is very unstable on Power Macintosh 9500 and the version 1.0.2d2 should be used instead.
- InterPPP 1.2.9
 - With some Internet providers, the user would experience a crash with HTML readers (Netscape, NCSA Mosaic, MacWeb) when receiving large picture.
- MacSLIP 2.0.6
 - Connect at System Startup doesn't work.
- MacPPP 2.0.1
 - The way that MacPPP 2.0.1 opens a connection is mostly incompatible with OT. The same problem exists with MacPPP 2.1 SD and MacPPP 2.0.1 cm4. New releases of MacPPP will fix this problem.
 - The open button doesn't work. The only way to open a connection is by opening a TCP/IP application. However, OT might time-out before the completion of the connection so that it cannot get the correct IP address from the LAP.
 - Cannot re-connect after disconnecting MacPPP without restarting the System first.

Known General TCP/IP LAP Limitations

-
- There is currently no way to report a change of IP address to OT from a SLIP or PPP LAP. Change of IP address happens when the SLIP or PPP connection goes down or up after using a TCP/IP application. The work around is to restart the Macintosh.
 - Once a TCP/IP application is opened over a SLIP or PPP LAP, one cannot use another SLIP or PPP LAP without first restarting the Macintosh. This is the same limitation as with MacTCP except that the TCP/IP control panel does not warn you to restart the System.
 - When a SLIP or PPP LAP is selected in the TCP/IP control panel, and "Manually" is selected in the Configure pop-up menu, the value of the IP address entered in this control panel is ignored by OT. If you get assigned a static IP address by

your SLIP or PPP provider you should set it in the LAP configuration program. If the IP address is assigned dynamically, you should configure the LAP configuration program for dynamic addressing.

- BootP configuration may time-out for SLIP and PPP connection if the BootP server is busy or the connection speed is too low.
- OT TCP/IP 1.0/1.0.1 supports only LAPs that have been verified to work (with some caveats) with OT. A list of supported LAPs (identified by their creatorId) is hard coded in the product. LAPs that are not in the list will not appear in the TCP/IP control panel (in Connect Via:). The list of supported LAPs currently is comprised of: InterSlip, MacPPP, InterPPP, and MacSLIP. Note that some PPP products share the same creatorId (and actually same source base) as InterPPP and as a result appear in the TCP/IP control panel as "InterPPP". If more than one such products is installed, only the first one will be shown in the popup. Note that the user has no way of telling which one was actually selected.

Article Change History:

15 Nov 1995 - Updated InterSLIP information.

Support Information Services

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Tech Info Library Article Number:18088



Tech Info Library

LW 16/600 PS, TCP/IP, LPD, and Multiple Copies Problem (6/95)

Revised: 7/6/95
Security: Everyone

LW 16/600 PS, TCP/IP, LPD, and Multiple Copies Problem (6/95)

Article Created: 6 July 1995

TOPIC -----

I'm trying to print multiple copies of a document to a LaserWriter 16/600 PS from a Sun Workstation using the following command:

```
lpr -#3 -Progue.txt
```

My problem is only one copy prints, however the queue shows multiple copies to be printed. Is there a fix or workaround for this?

DISCUSSION -----

We test and were able to reproduce this problem. We believe this is a problem with the LaserWriter 16/600 PS printer's built-in LPD printing facility through TCP/IP. We were able to print multiple copies of a file (with the same `lpr -#n` command) to a LaserWriter 16/600 PS printer with AppleTalk from an A/UX machine however.

A workaround to print multiple copies of a file is to repeat the file name on the command line, as shown below:

```
lpr -Plw16 foo foo foo
```

We have informed engineering of this issue, however we have no information if or when a fix will be implemented.

Support Information Services

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Tech Info Library Article Number:18089



Tech Info Library

Multiple Scan 15 Display: No Sound From Speakers (7/95)

Revised: 7/6/95
Security: Everyone

Multiple Scan 15 Display: No Sound From Speakers (7/95)

=====

Article Created: 05 July 1995

TOPIC -----

I have a Multiple Scan 15 Display, and I do not get any sound out of the built-in speakers.

DISCUSSION -----

In order to have sound output from the speakers on the Multiple Scan 15 Display, the sound output cable, which is included with the display, must be connected. To properly connect the cable, follow these steps:

1. Attach one end of the included sound output cable to the sound output port on the back of the computer.
2. Attach the other end of the sound output cable to the sound output port on the back of the monitor.

Support Information Services

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Tech Info Library Article Number:18090



Tech Info Library

QuickTake 100: Upgrade to QuickTake 100 Plus (Discontinued)

Revised: 12/18/95
Security: Everyone

QuickTake 100: Upgrade to QuickTake 100 Plus (Discontinued)

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Article Created: 06 July 1995
Article Reviewed/Updated: 15 December 1995

TOPIC -----

This article describes the QuickTake 100 Upgrade Program, which has been discontinued.

DISCUSSION -----

The QuickTake 100 Upgrade Program was in effect from August 2 to December 15, 1995. It was a firmware upgrade only; there was not any upgrade to the external housing or plastics, but the upgraded camera included a QuickTake 100 Plus label. The specific features and items included were:

- Increased storage capabilities. 1 MB of FLASH EPROM, which stores up to 32 standard-resolution images, 16 high-resolution images or a combination of high- and standard-resolution images
- Close-up Lens. Capable of provide accurate image capture from 10 to 14 inches
- Larger image size. 640 X 480 resolution (for both high- and standard-quality)
- QuickTake 150 Manual
- PhotoFlash 2.0 (for owners of the QuickTake 100 for Macintosh)
- PhotoNow! (for owners of the QuickTake 100 for Windows)

The upgraded firmware has a one-year warranty.

Article Change History:
15 Dec 1995 - Updated information.
07 Aug 1995 - Reviewed for technical accuracy.
25 Jul 1995 - Updated with latest information

Support Information Services

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Tech Info Library Article Number:18091



Tech Info Library

Disk First Aid: Extra Floppy Disk Shows in Main Window (9/95)

Revised: 9/26/95
Security: Everyone

Disk First Aid: Extra Floppy Disk Shows in Main Window (9/95)

=====

Article Created: 27 June 1995
Article Reviewed/Updated 26 September 1995

TOPIC -----

I am using Disk First Aid 7.2 after booting from Disk Tools. When Disk First Aid's main window opens I see the Disk Tools disk on the Internal Floppy Drive and I see the SCSI ID 0 for the hard drive and I also see a third floppy disk named "unknown disk". What should I do?

DISCUSSION -----

This issue has been occasionally reported to occur on PowerBooks. You should first make sure you do not have a RAM disk turned on in the memory control panel. To remove the extra floppy icon, you must reset your parameter ram using the following procedure:

Step 1

Restart your computer.

Step 2

After you hear the startup chime hold down the Command, Option, P, and R keys on the keyboard.

Step 3

Continue holding these keys down until you hear a second startup chime.

When you restart with the Disk Tools disk and run Disk First Aid, the extra floppy will be gone.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 19

Article Change History:

26 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18092



Tech Info Library

At Ease 3.0 WorkGroups: Gray Buttons In At Ease Setup (8/95)

Revised: 8/14/95
Security: Everyone

At Ease 3.0 WorkGroups: Gray Buttons In At Ease Setup (8/95)

=====

Article Created: 06 July 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

I am in the At Ease Setup program in At Ease 3.0 for WorkGroups and I cannot select certain items. Sometimes the On and Off buttons are gray and other times, I am unable to select a Setup or a User from the lists because they are grayed out. Why is this happening?

DISCUSSION -----

You have logged into At Ease Setup as a Middle Level Administrator (MLA). The SuperUser can allow MLAs different privileges, and depending on those privileges different parts of At Ease Setup may not be available.

For example, no MLA can turn At Ease on or off, or access the network menu so these options are grayed out for every MLA. Another MLA may not be able to add or modify Setups, so when they log on the Setup list will be grayed out in addition to the On/Off buttons.

Article Change History:
14 Aug 1995 - Added keyword.
07 Jul 1995 - Made minor technical updates.

Support Information Services

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Tech Info Library Article Number:18093



Tech Info Library

PC Net Exchange: Difference Between 1.0 and 1.0.1 (7/95)

Revised: 7/7/95
Security: Everyone

PC Net Exchange: Difference Between 1.0 and 1.0.1 (7/95)

=====

Article Created: 07 July 1995

TOPIC -----

What is the difference between version 1.0 and 1.0.1 of PC Net Exchange?

DISCUSSION -----

PC Net Exchange 1.0.1 corrects an issue where your Macintosh would hang if you tried to copy a DOS file which had a three or four character name and no file name extension.

Support Information Services

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Tech Info Library Article Number:18094



Tech Info Library

Drive Setup: Compatible With Which Computers? (7/96)

Revised: 9/23/96
Security: Everyone

Drive Setup: Compatible With Which Computers? (7/96)

Article Created: 06 July 1995
Article Reviewed/Updated: 2 July 1996

TOPIC -----

Which computers can use Drive Setup?

DISCUSSION -----

Power Macintosh computers

Drive Setup is supported on all of the current Power Macintosh computers. This includes all the original Power Macintosh computers as well as the PCI-based Power Macintosh computers.

IMPORTANT: Drive Setup is not supported with the Macintosh Processor Upgrade. If the upgrade is installed in a 64040- or 68LC040-based desktop computer with an IDE drive, use the 601 Processor Upgrade control panel to turn the card off before using Drive Setup.

The original Power Macintosh upgrade card is not supported either.

Desktop computers with IDE drives

Drive Setup is supported on 68040- or 68LC040-based desktop computers that have IDE drives installed, which includes:

- Macintosh LC 580
- Macintosh 630 series (LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640)

IMPORTANT: Drive Setup is not supported on any 68LC040 processor equipped computers without IDE drives, even if the computer has a Power Macintosh Upgrade Card installed. If Drive Setup is launched on a computer that is not supported, a dialog box appears with the message, "Drive Setup cannot be launched on this computer," and an OK button.

PowerBook computers with IDE Drives

Drive Setup is supported on most PowerBook computers with an IDE drive, which includes:

- PowerBook 190
- PowerBook Duo 2300
- PowerBook 5300

IMPORTANT: The only exception is the PowerBook 150, which must use the Internal HD Format utility.

Drive Setup 1.0.4 is included with System 7.5 Update 2.0, which is available on online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 02 May 1996.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

- 02 Jul 1996 - Added Fax Doc word
- 06 May 1996 - Added alley information.
- 19 Apr 1996 - Updated technical information.
- 04 Oct 1995 - Clarified supported computer systems.

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Tech Info Library Article Number:18095



Tech Info Library

Intelligent Resources Integrated Systems (7/95)

Revised: 7/7/95
Security: Everyone

Intelligent Resources Integrated Systems (7/95)

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Article Created: 7 July 1995

Intelligent Resources Integrated Systems

3030 Salt Creek Lane
Suite 100
Arlington Heights, IL 60005-5000

800-882-8388

Company Profile:

Computer video technology including PCI cards. Their Video Explorer system brings full-bandwidth digital video capabilities to Power Macintosh computers with PCI slots.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18096



Tech Info Library

Apple RAID Software 1.0.2 Read Me (7/95)

Revised: 7/7/95
Security: Everyone

Apple RAID Software 1.0.2 Read Me (7/95)

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Article Created: 7 July 1995

TOPIC -----

This article is the Apple RAID Software, version 1.0.2, ReadMe file.

DISCUSSION -----

This Read Me contains important additions to the Apple RAID Software Administrator's Guide, and includes the following sections:

- 4 GB Volume Support
- Locating the Apple RAID Software Files on Your Startup Disk
- Reinstalling Apple RAID Software
- Back Up Your Data
- Initializing Apple RAID Disks With Other Disk Utilities
- Losing Power During Initialization
- Using Apple HD SC Setup With Apple RAID
- Extra Disk for Faster Recoveries
- Apple RAID and Third-Party SCSI and PDS Cards
- Apple RAID and Virtual Memory
- Using Thousands or Millions of Colors
- Choose Screen Savers Carefully
- Restoring Volumes With Retrospect
- Using the Microsoft Mail Backup Utility With Apple RAID
- Slow Startup With 2-Gigabyte Drives
- Use Shielded SCSI Cables
- Remove Switched-Off Devices From the SCSI Bus
- Do Not Use SCSI-1 Devices in a SCSI Bus Containing SCSI-2 Devices
- Handling Spontaneous Mirror Failures
- Rebuilding Mirrored Volumes While Running AppleShare
- Installing a Driver While Rebuilding a Mirrored Volume
- Restarting Stalled Rebuilds
- Dealing with Rebuild Failures

4 GB Volume Support

Apple RAID now supports volumes as large as 4 GB (rather than 2 GB as stated in the manual).

Locating the Apple RAID Software Files on Your Startup Disk

The Apple RAID Software program is installed in the Apple Menu Items folder in the System Folder on the startup disk. The Apple RAID Monitor is installed in the Extensions folder in the System Folder on the startup disk. The Apple RAID Software Read Me (this document) and the Simple Text text-processing program are installed in an Apple RAID folder in the top-most directory of your startup disk.

Reinstalling Apple RAID Software

The files for reinstalling Apple RAID are on the Workgroup Server Software CD-ROM disc (not on the Apple RAID Software CD-ROM disc as stated in the manual).

Back Up Your Data

Apple RAID mirrored volumes will not protect you from all types of data loss. Equipment theft or natural disasters such as fire or flooding, for example, can result in data loss. Therefore, make sure you continue to back up all your data, including data residing in Apple RAID mirrored or striped volumes.

Initializing Apple RAID Disks With Other Disk Utilities

Use Apple HD SC Setup or a third-party disk utility to delete or unmount the Apple RAID volumes before reinitializing an Apple RAID-formatted disk. Non-Apple RAID disk utilities may not be able to unmount Apple RAID volumes during initialization.

Losing Power During Initialization

If a disk loses power while you are initializing it with Apple RAID, it may cause your server to crash immediately or later when the system starts up. If you suspect that your server is crashing due to this problem, start up your server with the offending disk switched off. Turn the disk on while the Finder is active and initialize the disk with Apple HD SC Setup or a third-party disk utility. If this initialization is successful, then reinitialize the disk with Apple RAID.

Using Apple HD SC Setup With Apple RAID

- Updating the Driver on Apple RAID-formatted Disks

Always use the "Install Driver" command on the Disk menu in Apple RAID if you need to update the driver file on Apple RAID-formatted disks. Never use Apple HD SC Setup to update the driver on an Apple RAID-formatted disk, even though version 7.3.4 of Apple HD SC Setup allows you to do this, and the instructions for installing new versions of system software instruct you to do this. If you

use Apple HD SC Setup instead of Apple RAID to update the driver file, you will lose all data contained in the RAID volumes on the disk. However, you can retrieve your data if the Apple RAID partition map is intact. Start the Apple RAID program, select the disk, and choose "Install Driver" from the Disk menu. If this option is not enabled, the Apple RAID partition map has been damaged and no recovery is possible; you need to reinitialize the disk.

- A Message Indicates an Apple RAID Disk has no Initialized Volumes

When scanning for disks in the Apple HD SC Setup program, Apple RAID-initialized disks might display the message "This disk contains no initialized Macintosh volumes." The current version of Apple HD SC Setup does not recognize Apple RAID mirrored or striped volumes and will display the above message if the disk does not contain an Apple RAID standard (HFS) volume.

Extra Disk for Faster Recoveries

An extra disk that is initialized for Apple RAID, connected to the server, and switched on will reduce the time required to recover an Apple RAID mirror volume from a failed disk. (The extra disk must be large enough to hold the mirror volume.) Having such an extra disk on hand is recommended but not required for using Apple RAID Software.

Apple RAID and Third-Party SCSI and PDS Cards

Apple RAID supports built-in SCSI buses only; it has not been tested with third-party SCSI accelerator cards. You may experience difficulties if Apple RAID is installed on a server that contains a third-party SCSI card. The same is true for SCSI PDS cards.

Apple RAID and Virtual Memory

Apple RAID makes extensive use of direct memory access and may not work with virtual memory turned on. Make sure that virtual memory is turned off on your server.

Using Thousands or Millions of Colors

Using thousands or millions of colors on a server may degrade performance and cause problems with Apple RAID. If you experience problems creating new volumes with Apple RAID, set your server to 256 colors or fewer in the Monitors control panel. You can also try an alternative method for creating new volumes: instead of Shift-clicking disks in the Disks column and dragging them to the Volumes column in the Setup window, use the Apple RAID menu commands for creating a new volume, as explained in Chapter 3 of the Apple RAID Software Administrator's Guide.

Choose Screen Savers Carefully

There are many screen savers that can be used to prevent screen burn-in on Workgroup Servers. Some screen savers are quite elaborate and perform many complex calculations to draw a single picture on the screen. Since such calculations require significant amounts of CPU time, more complex screen savers

reduce the performance of your Workgroup Server. Choose a screen saver that interferes least with your Workgroup Server, such as a screen saver built-in to an application that you run.

Some screen savers or their modules are not compatible with Apple RAID Software and can cause your Workgroup Server to crash or hang. Before purchasing or using a screen saver, check with the screen saver's manufacturer to determine if the screen saver will work properly with your Workgroup Server and with Apple RAID.

Restoring Volumes with Retrospect

If your Apple RAID volume icon appears as a generic hard disk icon after you restore with Retrospect, you can recover the Apple RAID volume icon as follows:

- 1) Select an Apple RAID volume of the same type (mirrored, striped, or standard).
- 2) Choose Get Info from the File menu, click on the icon, and choose Copy from the Edit menu.
- 3) Select the Apple RAID volume with the generic icon.
- 4) Choose Get Info from the File menu, click on the icon, and choose Paste from the Edit menu.

The icon will be restored.

Using the Microsoft Mail Backup Utility With Apple RAID

Due to the way in which the Microsoft Mail Backup Utility shuts down the system, the automatic backup feature of Microsoft Mail causes mirrored volumes to become out of sync. The best way to back up your Microsoft Mail Server is to follow the instructions for a manual backup in the Microsoft Mail documentation.

Slow Startup With 2-Gigabyte Drives

Some 2-gigabyte disks take a long time to reach full speed. Apple RAID might wait for such disks to spin up, which may increase the time it takes to start up your server if a 2-gigabyte drive is attached.

Use Shielded SCSI Cables

Make sure all SCSI cables are shielded. You might experience I/O errors when adding additional disks to the SCSI chain if the cables aren't shielded. A shielded SCSI cable is thicker and stiffer than an unshielded SCSI cable. Check with the manufacturer if you're unsure whether the cable is shielded. All Apple SCSI cables are shielded.

Remove Switched-Off Devices From the SCSI Bus

Apple recommends that you remove from the SCSI bus, SCSI devices that are switched off and unnecessary for your work. Removing unused devices avoids signal strength problems for the remaining devices on the bus.

Do Not Use SCSI-1 Devices in a SCSI Bus Containing SCSI-2 Devices

Older disks, usually under 200 megabytes in size, cause trouble when connected to a SCSI bus containing SCSI-2 devices. Most older disks are only SCSI-1-compliant and are not always compatible with a bus using SCSI-2 devices.

Handling Spontaneous Mirror Failures

Sometimes a mirror volume may fail for no apparent reason. The volume will rebuild with no problem and disk test utilities will show no defects. In most cases the disk that failed will develop a media failure within a few weeks. If a disk begins to cause spontaneous mirror failures, consider replacing the disk before it fails completely.

Rebuilding Mirror Volumes While Running AppleShare

When rebuilding a failed or out-of-sync mirror volume while AppleShare is running, set the AppleShare Remote User Activity slide bar to less than 50%. If AppleShare is under particularly heavy use, set the slide bar to an even smaller percentage of the processor's time. These settings ensure that Apple RAID will receive the necessary processing time to perform the rebuild. (See your AppleShare documentation for details about setting the Remote User Activity slide bar.)

Installing a Driver While Rebuilding a Mirror Volume

Apple recommends that you do not update the Apple RAID driver on a disk on which a mirrored volume is currently being rebuilt.

Restarting Stalled Rebuilds

If there appears to be no disk activity during a rebuild, the rebuild may be stalled. Restarting the system should cause the rebuild to continue.

Dealing with Rebuild Failures

If a rebuild failure occurs, check that all devices on the SCSI bus are properly attached, terminated, and powered on. Retry the rebuild with the rebuild rate slide bar set to less than 75% of maximum.

Support Information Services

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Tech Info Library Article Number:18098



Tech Info Library

Macintosh: Resetting PRAM Resets Some Video Cards (7/95)

Revised: 7/7/95
Security: Everyone

Macintosh: Resetting PRAM Resets Some Video Cards (7/95)

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Article Created: 7 July 1995

TOPIC -----

I have a SuperMac video card in my Macintosh computer. When I reset (zapped) my PRAM (Parameter RAM), the monitor became out of sync. What should I do to correct this?

DISCUSSION -----

SuperMac cards must be configured for the specific display they are connected to. If you move the card to a different slot in your Macintosh, connect a different monitor to it, or reset (zap) PRAM, you need to reconfigure the card to output the proper signals and timings required by your display.

How To Reconfigure
=====

Step 1

Hold down the Option key on your keyboard at startup.

Step 2

Release the Option key when the "Round Robin" configuration cycle begins.

Step 3

When you see an image of a keyboard, on your screen, that is clear, centered, and at the resolution you want to use, press the Space bar. The computer restarts, and the card and display should now be properly configured.

Support Information Services

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Tech Info Library

Apple Multiple Scan Displays: X-Ray Level Emitted (7/95)

Revised: 7/7/95
Security: Everyone

Apple Multiple Scan Displays: X-Ray Level Emitted (7/95)

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Article Created: 07 July 1995

TOPIC -----

I have an Apple Multiple Scan 17 Display and an Apple Multiple Scan 20 Display.
Do these monitors emit X-Rays?

DISCUSSION -----

All CRTs (cathode ray tubes) in displays emit some level of X-rays. X-rays are emitted as a byproduct of the high (anode) voltage that is needed to develop an image on the face (front) of the tube. X-rays are reduced using a variety of techniques like adding certain metals to the CRT glass to add shielding and reducing or limiting the anode voltage.

In most countries, the level of X-radiation from displays and televisions are legally controlled or regulated. In the United States, acceptable X-ray levels are defined by the FDA (Food and Drug Administration) CFR-21 regulations for consumer safety. The definition usually contains levels or thresholds that define acceptable vs. unacceptable limits to protect consumers.

The FDA CFR-21 dictates that X-ray levels for monitors must be lower or less than 5 milliroentgens per hour. The FDA has also defined another level in CFR-21 that is better than the acceptable limit by a factor of ten (at 0.5 milliroentgens per hour). The Apple Multiple Scan 17 and 20 Displays have X-ray levels below 0.5 milliroentgens per hour.

Support Information Services

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Tech Info Library Article Number:18101



Tech Info Library

Apple Media Tool: Slow QuickTime When Controller Enabled (7/95)

Revised: 7/7/95
Security: Everyone

Apple Media Tool: Slow QuickTime When Controller Enabled (7/95)

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Article Created: 07 July 1995

TOPIC -----

I am using the Apple Media Tool, and I get slow, jerky playback of my QuickTime movie when the QuickTime controller bar is enabled. Movies play fine if the controller bar is not present.

DISCUSSION -----

The slower playback is normal when running a project from within the Apple Media Tool program. Controller performance is corrected when the project is made into a runtime.

To check true QuickTime performance:

Step 1

Save project as text.

Step 2

Use Runtime Maker to compile the saved text file (.k file) into a runtime.

Step 3

Evaluate QuickTime performance in the runtime.

Support Information Services

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Tech Info Library Article Number:18103



Tech Info Library

Sound Manager 3.1: ReadMe File (7/95)

Revised: 2/13/96
Security: Everyone

Sound Manager 3.1: ReadMe File (7/95)

Article Created: 07 July 1995

TOPIC -----

This article contains the Read Me file for the Sound Manager 3.1 extension.

DISCUSSION -----

WELCOME TO SOUND MANAGER 3.1

The Sound Manager 3.1 software consists of

- the Sound Manager system software extension
- a new version of the Sound Control Panel
- a technical note explaining some of the new features

Available since the introduction of the Macintosh II in 1987, the Sound Manager is Apple's digital audio software solution that allows any application to play and record sounds using the built-in sound hardware found on Macintosh computers. Sound Manager 3.0, released in 1993, added support for 16-bit CD-quality audio, redirection of sound to third-party hardware cards, and plug-in audio compression/decompression software (codecs).

Sound Manager 3.1 adds two new audio codecs, significant performance increases on the Power Macintosh line of computers, better integration with QuickTime, and asynchronous alert sounds. It is completely backwards compatible with previous versions of the Sound Manager.

INSTALLING SOUND MANAGER 3.1

To install Sound Manager 3.1:

1. If you received a floppy disk labeled "Sound Manager", insert it into your computer and open it. If you downloaded Sound Manager 3.1

electronically, make sure the Sound Manager files you downloaded are visible.

2. Drag the Sound Manager and Sound control panel icons from the Sound Manager disk onto your System Folder icon (not into the open folder).
3. Click OK in the dialog box that appears.
4. Restart your Macintosh.

NEW FEATURES OF SOUND MANAGER 3.1

1.) New audio codecs

The Sound Manager previously supported only MACE audio compression at ratios of 3:1 and 6:1. Sound Manager 3.1 adds two new compression formats: IMA and uLaw.

The IMA 4:1 audio compression format is based on a standard proposed by the Interactive Multimedia Association, and is used to compress 16-bit sound with a ratio of 4:1. It is particularly good at compressing CD-quality music and is fully integrated into QuickTime.

The uLaw 2:1 format (pronounced "mu-law") is an international standard for compressing voice-quality audio (typically 16-bit, 8 kHz speech) with a ratio of 2:1. It is often used in telephony applications, and also on the Internet as the encoding format for ".au" sound files.

2.) Better performance on Power Macintosh

Sound Manager 3.1 is much faster on Power Macintosh computers --in many cases 4-7 times more efficient than previous versions. This means that your application can do more while sound is playing or recording. Sound Manager 3.1 is also more robust: many bugs have been fixed and a number of commonly requested features have been added. Refer to the Technical Note for more information.

3.) Improved integration with QuickTime

QuickTime 2.1 uses the new audio codecs included in Sound Manager 3.1 to allow compressed audio capture in the IMA and uLaw formats and compressed audio export from a movie to an AIFF file. QuickTime 2.1 will also use Sound Manager 3.1 to directly import common audio file formats such as ".wav" and ".au".

4.) Support for asynchronous alert sounds

The Sound Manager previously tied up your Macintosh while playing an alert sound, forcing you to wait until the sound was done playing before you could continue. Sound Manager 3.1 removes this limitation by playing alert sounds asynchronously, so alert dialogs and other interface elements can continue processing while the alert sound is playing.

Support Information Services

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Tech Info Library Article Number:18104



Tech Info Library

AppleCD 300e Plus & CD 600: Button Will Not Open Tray (11/95)

Revised: 11/16/95
Security: Everyone

AppleCD 300e Plus & CD 600: Button Will Not Open Tray (11/95)

Article Created: 07 July 1995
Article Reviewed/Updated: 16 November 1995

TOPIC -----

I have a Macintosh computer with an AppleCD 300 Plus. My CD-ROM tray does not always open when I press the eject button. Is this normal?

DISCUSSION -----

On tray loading CD-ROM drives like the AppleCD 300 Plus and the AppleCD 600, the tray can only be opened with the button when:

- There is nothing in the drive.
- The CD-ROM software has not loaded.

At all other times, you must request that the system software eject the CD. This can be done by dragging the CD to the Trash, or by clicking on the CD icon, and then choosing "Put Away" from the File menu.

To eject a CD from a computer at start up, press and hold the eject button until the CD is ejected.

If you find that you cannot eject the CD tray with no CD-ROM in the drive, please contact the Apple Assistance Center at 800-SOS-APPL for further support.

Article Change History:
16 Nov 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18105



Tech Info Library

Desktop Printing: Allocating Memory (9/95)

Revised: 9/29/95
Security: Everyone

Desktop Printing: Allocating Memory (9/95)

Article Created: 7 July 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

What is the benefit of changing the Desktop PrintMonitor's or a given Desktop Printer's preferred memory size?

DISCUSSION -----

This article describes the benefit of changing the preferred memory size of the Desktop PrintMonitor or a given Desktop Printer.

Desktop PrintMonitor's Preferred Memory

The Desktop PrintMonitor requires approximately 6K for each Desktop Printer created on a 680x0 Macintosh computer and 9K for each Desktop Printer on a Power Macintosh computer. The default setting of 160K lets you create approximately eight Desktop Printers on a 680x0 Macintosh and four on a Power Macintosh.

If you create more Desktop Printers than can be supported by the Desktop PrintMonitor, an appropriate alert is given the next time you attempt to print. This alert instructs you to increase the memory size of the Desktop PrintMonitor, but does not indicate by how much. If you follow the 6K per printer for 680x0 Macintosh computers and 9K per printer for Power Macintosh computers rule of thumb when adjusting memory, you will avoid further low memory problems with the Desktop PrintMonitor.

Desktop Printer's Preferred Memory

Increasing the preferred memory size in a Desktop Printer's Get Info window lets the Desktop Printer handle larger, more complex print jobs without asking you to increase memory to the printer. Most of the time, you never have to make adjustments to a Desktop Printer's memory size.

The default memory size for Desktop Printers will be ample for most printing

tasks. When it is not, the Desktop Printer temporarily increases its memory size by 50%. If this adjustment is not adequate, a message appears asking if you would like the Desktop Printer to temporarily adjust its size an additional 50%.

You may need to permanently increase a Desktop Printer's memory if you regularly print large, complex documents. A typical document of this type might include a full page, true color image, employ ColorSync, and print to a color laser printer.

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Article Change History:

29 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18106



Tech Info Library

Desktop Printing: Identified Issues (1/96)

Revised: 9/30/96
Security: Everyone

Desktop Printing: Identified Issues (1/96)

Article Created: 7 July 1995
Article Reviewed/Updated: 17 January 1996

TOPIC -----

This article describes several identified issues when using desktop printing.

DISCUSSION -----

- If you try to create a Desktop Printer when the Desktop Printer Spooler is not in the System Folder, multiple Desktop Printers are generated. The only way to stop this is to reboot with extensions off.

Status: Fixed with Desktop PrintMonitor v1.0.2 and later.

- A similar problem can occur if your system crashes while a spool file is being generated. The only resolution if this happens is to restart with extensions off and remove the spool file from the PrintMonitor Documents folder.

Status: Currently under investigation.

- The Finder crashes if you try to create a Desktop Printer in the "Restricted Finder" of At Ease 3.0.

Status: Fixed in Desktop Printer software v1.0.3.

- Scheduled, non-network backups crash Retrospect if version 1.0 of the Desktop Printing software is installed. This version shipped with a limited number of StyleWriter 1200 Printers.

Status: Fixed in Desktop Printer software version 1.0.1 and later.

- A generic Desktop Printer is created when PDF Writer v.2.0 creates a PDF in

the background. This printer is fully functional, but is not supported.

- The View menu is available when a Desktop Printer's Get Info window is in the foreground. If you try to use this menu, a bus error results.

Status: Fixed in Desktop Printer software v1.0.3.

Article Change History:

17 Jan 1996 - Changed distribution status.

28 Nov 1995 - Updated with fixes implemented in version 1.0.3.

Support Information Services

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Tech Info Library Article Number:18107



Tech Info Library

Apple Macintosh CD: v1.0,1.0.1,2.0 Extras Folder ReadMe (4/97)

Revised: 4/3/97
Security: Everyone

Apple Macintosh CD: v1.0,1.0.1,2.0 Extras Folder ReadMe (4/97)

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Article Created: 07 July 1995
Article Reviewed/Updated: 03 April 1997

TOPIC -----

The following article is the Read Me document for the Extras folder on the Apple Macintosh CD--versions 1.0, 1.0.1, and 2.0.

It is different than the ReadMe file found in the Apple Extras folder on the Power Macintosh CD--versions 1.0 and 2.0 (for that ReadMe file see TIL Article: "Power Macintosh CD: v1.0, 2.0 Extras Folder ReadMe").

DISCUSSION -----

The Extras folder contains several application programs and control panels for you to try on your Power Macintosh computer. You can use these programs to learn about new System 7.5 features. The programs are listed below. Most of the programs are in individual folders, and are accompanied by information explaining how to use the programs.

IMPORTANT If you have questions about third-party application programs in the Extras Folder, you should contact the software vendor directly. The telephone number or address for each vendor is located with the software program.

Eric's Solitaire Sample

The solitaire games include Klondike and Eight-off (by Delta Tao Software, Inc.).

Important: In order to run this application, you must be booted off the hard drive rather than the CD.

Video Monitor

To use the Video Monitor program, you must have a Power Macintosh 6100/60AV, 7100/66AV, or 8100/80AV; and you must have video equipment connected to your computer's video ports. You can use the Video Monitor program to display video

images in a window and to capture or print one frame of a video image. For basic instructions for using Video Monitor, pull down the Guide (question mark) menu and choose Macintosh Guide. You'll find information about Video Monitor in the Macintosh Guide index. The Video Monitor Read Me file inside the Video Monitor folder contains additional information.

FusionRecorder

This audio and video capture program records and plays high-quality sound and, if you have an AV-equipped Power Macintosh, QuickTime video movies. For instructions, see the FusionRecorder Read Me files.

HyperCard Player

HyperCard Player is an application program that lets you balance your checkbook, play games, organize addresses, and accomplish many other tasks. Read "What is HyperCard?" in the HyperCard Player 2.2 folder for more information.

QuickTime

QuickTime lets you add video, animation, sound, and other effects to your documents. See the QuickTime Read Me file for more information.

Graphing Calculator

This is a handy calculator program which demonstrates your Power Macintosh computer's speed, and shows how speed can improve a Macintosh application program's performance. For more information about this program, start the program and select Help from the Equation menu. You can also view a self-running demonstration program by selecting Full Demo from the Demo menu.

Text-to-Speech

A feature that allows your Macintosh to speak to you. See About Text-to-Speech in the Text-to-Speech folder for information on trying the text-to-speech feature.

PlainTalk for Power Macintosh

This software offers you speech recognition and text-to-speech. With speech recognition, you can speak standard Macintosh menu commands out loud, and create your own speech-activated commands. IMPORTANT: You must have an Apple AudioVision Monitor or a PlainTalk Microphone to use speech recognition. Text-to-speech lets your Macintosh speak to you. For more information, see the "About Text-to-Speech" file in the Text-to-Speech folder. In order to install QuicKeys™, you must be booted off the hard drive rather than the CD.

PowerTalk Extras Folder

Apple's PowerTalk Direct Dial-up Mail lets you exchange mail with PowerTalk users everywhere—not just on your computer network. If you have a modem and a telephone line, you can connect with other PowerTalk users and exchange mail and documents.

You can use PowerTalk's universal mailbox for sending to and receiving from a variety of sources, including CompuServe, faxes, the Internet, pagers, and QuickMail. When installed on your Macintosh or Powerbook computer, a personal gateway provides direct access to a specific communication service.

For more information, open the Apple PowerTalk Tour folder and double-click the PowerTalk Tour icon.

QuickDraw GX Extras Folder

QuickDraw GX Print Extensions by Peirce Software, Inc. enhance the QuickDraw GX printing capabilities. With these print extensions you can print watermarks in the background of each page, and print 2,3,4, 6, 9, or 16 pages on each printed page. For more information, see the "Peirce Instructions & Info" file in the Peirce Watermark & Paper Saver folder.

Linotype-Hell's QuickDraw GX Type Expo is a tour of new features found in QuickDraw GX fonts. See "About the GX Type Expo" in the GX Type Expo folder for more information.

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(8/11/94)

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Tech Info Library Article Number:18108



Tech Info Library

Power Macintosh CD: v1.0, 2.0 Extras Folder ReadMe (7/95)

Revised: 7/7/95
Security: Everyone

Power Macintosh CD: v1.0, 2.0 Extras Folder ReadMe (7/95)

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Article Created: 07 July 1995

TOPIC -----

The following article is the readme document for the Apple Extras folder on the Power Macintosh CD--versions 1.0 and 2.0.

It is different than the readme file found in the Extras folder on the Apple Macintosh CD--versions 1.0, 1.0.1, and 2.0 (for that ReadMe file see TIL Article: "Apple Macintosh CD: v1.0,1.0.1,2.0 Extras Folder ReadMe").

DISCUSSION -----

The Apple Extras folder contains several application programs and control panels for you to try on your Power Macintosh. Each program is in its own folder, along with a document that explains how to use the program.

- **AppleScript:** Use AppleScript to automate any actions you do repeatedly on your computer--like opening a document, reformatting it, and printing it out. AppleScript can record your actions so you can do them in one step next time, using a single keyboard command. AppleScript is explained in detail in "Getting Started With AppleScript," which you'll find in the AppleScript folder. (You'll use DocViewer to view "Getting Started With AppleScript." DocViewer is explained at the end of this document.)

The version of AppleScript that you received with your computer includes AppleScript basics. With this version, you can create scripts to control any scriptable application programs you have installed on your Macintosh. If you want additional scripting options, see an Apple-authorized dealer for information about the AppleScript Scripter's Kit. The Scripter's Kit contains additional AppleScript software and manuals. (Macintosh software developers may also wish to order the "AppleScript Developer's Toolkit 1.1," available from APDA.)

- **CPU Energy Saver** (for Power Macintosh 7100/66, 7100/66AV, 8100/80, and 8100/80AV computers): You can set the computer to turn on or off automatically,

using the CPU Energy Saver control panel. The CPU Energy Saver Read Me file explains how to install and use this control panel. IMPORTANT: CPU Energy Saver does not work on Power Macintosh 6100/60 or 6100/60AV computers.

- Energy Saver (for monitors): This control panel lets you set your monitor to go into low power mode after your computer has been idle for a specified amount of time. The Energy Saver Read Me file explains how to install and use this control panel.
- FusionRecorder: This audio and video capture program records and plays high-quality sound and, if you have an AV-equipped Power Macintosh, QuickTime video movies. For instructions, see the FusionRecorder Read Me file. (You'll use DocViewer to view the FusionRecorder Read Me file. DocViewer is explained at the end of this document.)
- LaserWriter 8.1.1: The LaserWriter 8.1.1 program is special software (called a "driver") that your Macintosh uses when you print documents. To install LaserWriter 8.1.1, follow the instructions in the LaserWriter 8.1.1 Read Me file.
- Graphing Calculator: This program demonstrates your Power Macintosh computer's speed, and shows how speed can improve a Macintosh application program's performance. For more information about this program, start the program and select Help from the Equation menu. You can also view a self-running demonstration program by selecting Full Demo from the Demo menu.
- Video Monitor: To use the Video Monitor program, you must have a Power Macintosh 6100/60AV, 7100/66AV, or 8100/80AV; and you must have video equipment connected to your computer's video ports. You can use the Video Monitor program to display video images in a window and to capture or print one frame of a video image. Basic instructions for using Video Monitor are provided in the Getting Started manual that came with your computer. The Video Monitor Read Me file contains additional information.
- DocViewer: To view the AppleScript Guide or the FusionRecorder Read Me file, you use a program called DocViewer. DocViewer displays files for you to read on the screen. You can also use it to search for specific topics in files, and print out pages of information. The DocViewer Read Me file explains how to use DocViewer.

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Tech Info Library Article Number:18109



Tech Info Library

Apple Media Conference: Using TCP/IP w/ PowerTalk Installed 8/95

Revised: 8/15/95
Security: Everyone

Apple Media Conference: Using TCP/IP w/ PowerTalk Installed 8/95

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Article Created: 10 July 1995
Article Reviewed/Updated: 15 August 1995

TOPIC -----

I cannot use TCP/IP addresses in Apple Media Conference with PowerTalk Collaboration Services activated. I have to open the PowerTalk Setup control panel deactivate Collaboration Services, then restart my Macintosh. Is there any way to use both PowerTalk and TCP/IP from within Apple Media Conference?

DISCUSSION -----

Although you can select TCP/IP as the default for watching or broadcasting, this preference is not used when PowerTalk Collaboration Services is activated. With PowerTalk active, the PowerTalk dialog always appears when trying to watch or broadcast a QuickTime Conference. To enter TCP/IP addresses instead of using the PowerTalk dialog, hold down the OPTION key when choosing Broadcast or Watch from the File menu.

Article Change History:
15 Aug 1995 - Changed access information.

Support Information Services

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Tech Info Library Article Number:18112



Tech Info Library

DOS Compatibility Card: Playing Audio CD-ROMs (7/95)

Revised: 7/10/95
Security: Everyone

DOS Compatibility Card: Playing Audio CD-ROMs (7/95)

=====

Article Created: 10 July 1995

TOPIC -----

I have a Power Macintosh 6100 DOS Compatible with a built-in AppleCD 300i plus CD-ROM drive. Can I play audio Compact Discs from within Microsoft Windows?

DISCUSSION -----

With the DOS Compatibility Card in the Power Macintosh 6100 series, Macintosh Performa 6100 series, or Macintosh 630 series, you have the ability to play audio Compact Discs in Microsoft Windows if you are using an AppleCD 150, AppleCD 300, or AppleCD 300 Plus CD-ROM drive. Before you can play an audio CD, however you must configure Windows to play them.

Another option is to the Mac OS to play Audio CD-ROM discs using the AppleCD Audio Player. When you switch back to MS-DOS or Windows environment, the Audio CD-ROM will continue playing.

Configuring Windows For Audio CD-ROM Discs

=====

Step 1

Open the Main group

Step 2

Open the Control Panel and Double-Click the Drivers icon.

Step 3

Click on Add

Step 4

Select [MCI] CD Audio

Step 5

Insert Windows disk 5 and type in "A:\" in the dialog box that appears.

Step 6

Click the 'OK' button to install the driver from the floppy disk.

A dialog appears informing you that one CDROM drive was detected.

Step 7

Click the 'OK' button, and close all open windows except the Program Manager window.

Microsoft Windows is now configured to play Audio Compact Discs.

Playing Audio CD-ROM Discs

=====

Step 1

Open the Accessories group

Step 2

Double-click on the Media Player icon.

Step 3

Insert an Audio CD into the CD-ROM drive.

Step 4

Choose CD Audio from the Device menu

Step 5

Click the Play button.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, Performa 640, LC 630, and Quadra 630.

The following computers are in the Macintosh Performa 6100 series: Performa 6110, Performa 6112, Performa 6115, Performa 6117, and Performa 6118.

Support Information Services

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Tech Info Library Article Number:18113



Tech Info Library

Macintosh: Startup from CD-ROM & Hard Disk Does Not Mount (7/95)

Revised: 7/10/95
Security: Everyone

Macintosh: Startup from CD-ROM & Hard Disk Does Not Mount (7/95)

=====

Article Created: 10 July 1995

TOPIC -----

When I start up my Macintosh computer from a CD-ROM disc while pressing Command-Option-Shift-Delete, my hard disk fails to mount on the desktop along with the CD-ROM volume.

DISCUSSION -----

The failure of the hard disk to mount in this circumstance can be caused by a number of specific factors, such as the ROMs of the particular Macintosh computer being used and the system software version on the CD-ROM. In general, however, this occurs by pressing Command-Option-Shift-Delete longer than necessary. When held down for an extended time, these keys may be interpreted differently during startup, which can produce undesired effects such as the hard disk not mounting.

The timing of this key sequence is essential in properly mounting the disk drive. There is no need to keep the keys pressed once the "happy Macintosh" appears on the screen. At this point, the startup volume has already been chosen and continuing to keep the keys held down past this point may cause further undesired effects.

Support Information Services

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Tech Info Library Article Number:18114



Tech Info Library

DOS Compatibility Card: Maximum Amount of Shared RAM (7/95)

Revised: 7/10/95
Security: Everyone

DOS Compatibility Card: Maximum Amount of Shared RAM (7/95)

=====

Article Created: 10 July 1995

TOPIC -----

I have a Power Macintosh DOS Compatibility Card, and I am sharing memory from the Macintosh logic board. How does the PC Setup control panel determine which memory choices to make available?

DISCUSSION -----

Memory allocated in the PC Setup Control Panel is shared in the following increments: 2, 4, 8, 16, 32, and 64 MB. The PC Setup control panel allows you to choose any one of these settings with the following constraints:

- The DOS Compatibility Card can only share up to half of the Macintosh logic board's RAM.
- Based on the one half constraint and the amount of RAM available, the PC Setup offers the next lowest increment.
- Memory sharing only works if no SIMM is installed on the DOS Compatibility Card.

Examples:

RAM Installed on Macintosh Logic Board	PC Setup control Panel Offers
-----	-----
8 MB	2 and 4 MB
16 MB	2, 4, and 8 MB
24 MB	2, 4, and 8 MB
40 MB	2, 4, 8, and 16 MB*

NOTE:

one half of 40 MB is 20 MB and the next lowest increment is 16 MB.

Support Information Services

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Tech Info Library Article Number:18115



Tech Info Library

PowerBook Duo Dock Plus: Technical Specifications (12/95)

Revised: 12/13/95
Security: Everyone

PowerBook Duo Dock Plus: Technical Specifications (12/95)

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Article Created: 6 July 1995
Article Revised/Updated: 13 December 1995

TOPIC -----

This article contains the technical specifications for the PowerBook Duo Dock Plus.

DISCUSSION -----

Displays Supported

- Most Apple displays, including the Apple Multiple Scan 20 Display
- Physically supports monitors weighing up to 85 lb.
- Most VGA and SVGA monitors with adapter

Video RAM (VRAM)

- 1MB of VRAM standard

Color Depth Support

- Built-in support for 16-bit color. Permits display of thousands of colors on monitors up to 17 inches and 256 colors on 20- and 21-inch monitors

Disk Drives

- Built-in Apple SuperDrive 1.4MB floppy disk drive that uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Optional internal hard disk (many capacities available)

Interfaces

- One high-speed Ethernet port

- One Apple Desktop Bus (ADB) port supporting a keyboard, mouse, and other input devices
- Two serial (RS-422) ports for printers, modems, AppleTalk network, and other devices
- One Video-out port for external monitor
- One HDI-30 SCSI port for external hard disks, scanners, CD-ROM drives, and other devices
- One Pass-through port for the optional modem in the PowerBook Duo notebook computer
- Sound-in/sound-out ports
- Two NuBus slots for expansion cards that provide Ethernet, Token Ring, additional video, or other capabilities

Networking

- Serial port for AppleTalk networking

Security

- Key lock prevents removal of PowerBook Duo from the PowerBook Duo Dock Plus
- Slot for cable to secure the Duo Dock Plus to a desk

Electrical Requirements

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 87 W maximum

ADB Power Requirements

- Maximum current draw for all Apple Desktop Bus devices: 500 mA (a maximum of three Apple Desktop Bus devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25-80 mA

Size and Weight

- Height: 4.8 in. (12.1 cm)
- Width: 12.3 in. (31.1 cm)
- Depth: 16.3 in. (41.3 cm)
- Weight: 13.1 lb. (5.95 kg)
(Note: Weight is greater with internal hard disk installed)

Operating Environment

- Operating temperature: 50° to 95° F (10° to 35° C)
- Storage temperature: 40° to 116° F (-40° to 47° C)
- Relative humidity: 20% to 95% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Article Change History

13 Dec 1995 - Added information about internal built-in Ethernet port.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18116



Tech Info Library

Power Macintosh 9500: Problems With ATI Display Card (11/95)

Revised: 11/17/95
Security: Everyone

Power Macintosh 9500: Problems With ATI Display Card (11/95)

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Article Created: 10 July 1995
Article Reviewed/Updated: 17 November 1995

TOPIC -----

I have a Power Macintosh 9500/120 computer that came with the ATI display card. I have two monitors, a Sony GDM-1932, and a Radius Pressview 21SR. I cannot get either of these monitors to synchronize correctly. Radius has explained that their monitor uses Sync on green. The Sony monitor will sync to other resolutions, but not the 1280x1024.

Is there a difference in the sense codes for this resolution? Is there a way to get the Radius monitor to work with the ATI display card?

I have contacted a few manufacturers of display adapters for Macintosh computers, but they have not been able to help me. They claim the 1280x1024 resolution has not been supported on any Apple Macintosh Computers in the past.

DISCUSSION -----

The ATI display card does not support sync on green, this is why the Radius monitor does not work properly. However, the workaround section of this article provides some level of support for both your monitors. You also need to purchase a BNC to VGA cable for the Radius monitor before you can use the workaround.

Normally, on a Power Macintosh 9500 with the standard display card and a non-Apple display (such as a Sony GDM-1932), you would also need a multiple scan display. This display would have to be able to synchronize to 640 x 480 at 60Hz to set up a higher resolution, such as 1024 x 768. Once the higher resolution was set, you could disconnect the multiscan display and connect the non-Apple display. Then the computer would start using the new video scan rate each time the computer is powered on.

This is because the computer uses sense codes to detect the type of monitor that is connected to it. The computer only starts up at 1280 x 1024 scan rates after you set the Monitors control panel and the settings are stored in PRAM. With no

setup information in PRAM, the computer starts at the best scan rate and resolution for the detected display (usually 640 x 480). If you do not have an Apple display to use for setup, you must use a workaround to set the Monitors control panel to the 60Hz scan rate.

Workaround

=====

Step 1

Using a display adaptor, set the display type to VGA/SVGA. (This is 'G' for the video adaptor from Enhance Cable Technology.) Starting up the Macintosh computer with the display adaptor attached between the display and the Macintosh video port starts by default at 640x480 at 60Hz resolution.

Step 2

Open the Monitors control panel. Normally, the control panel Options button only allows safe operating resolutions.

Step 3

Hold down the Option key on the keyboard when you select the Options button in the Monitors control panel. The options panel also shows unprotected scan rates that the video card supports.

Step 4

You can select the 1280x1024 @ 60Hz scan rate from the list. The video scan rate changes, depending on whether you have selected Rearrange on Close or Rearrange on Restart on the bottom of the Monitors control panel window.

Step 5

If you have selected Rearrange on Close and you select a scan rate currently not supported by an Apple display, you are prompted with a dialog box that asks if the monitor display is correct. The dialog only appears if you select an unprotected scan rate.

If you do not select the OK button within about 10 seconds, the system assumes that you do not have a properly synchronized display and reverts back to the previous scan rate.

Following the above procedure, you should be able to set your display to the 1280 x 1024 at 60Hz resolution and scan rate. Please contact Enhance Cable Technology for additional information.

NOTE:

This article provides some information about a non-Apple product. Apple Computer, Inc. is not responsible for content referring to that product. Please

contact the vendor, Enhance Cable Technology, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the "Information Alley":
Volume II, Issue 9, Page 12

Article Change History:

17 Nov 1995 - Reviewed.

26 Sep 1995 - Added Info Alley information; updated article.

24 Aug 1995 - Added information on sync on green.

Support Information Services

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Tech Info Library Article Number:18117



Tech Info Library

Performa with Backup CD: Need to Back Up Hard Drive? (9/95)

Revised: 9/8/95
Security: Everyone

Performa with Backup CD: Need to Back Up Hard Drive? (9/95)

=====

Article Created: 10 July 1995
Article Reviewed/Updated: 8 September 1995

TOPIC -----

My Macintosh Performa computer came with a backup CD with all the software already on it. Do I still have to run Apple Backup to copy my software to floppy disks?

DISCUSSION -----

Everything that came pre-loaded on your Performa computer is included on the Macintosh Performa CD. It is not necessary for you to run the Apple Backup program to back up your pre-loaded software. However, you should still back up your personal files and any other software you add later. This can be done by simply copying files to disks or if they are too large to fit in 1.44 MB segments, use a third party backup utility to backup only designated or modified files.

If at some time you remove software from your computer, you will need to run the Apple Restore program and restore the software. The Apple Restore program includes options for restoring just your System software or all the extra software that came pre-loaded on your hard drive. This will restore all the programs, but will replace them so that there are no duplicate copies on your hard drive. You will not lose any personal files.

Computers that include the Performa Backup CD are:

Macintosh Performa 550 (later versions)
Macintosh Performa 575, 577, 578
Macintosh Performa 630CD, 635CD, 636CD, 637CD, 638CD
Macintosh Performa 5200 series
Macintosh Performa 6110CD, 6112CD, 6115CD, 6116CD, 6118CD, 6200CD, 6216CD, 6218CD, 6220CD, 6230CD

Article Change History:

08 Sep 1995 - Added additional Performa models that include the CD.

Support Information Services

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Tech Info Library Article Number:18119



Tech Info Library

AppleShare for Windows: Install Issue w/Ethernet Pro NIC (7/95)

Revised: 7/20/95
Security: Everyone

AppleShare for Windows: Install Issue w/Ethernet Pro NIC (7/95)

=====

Article Created: 10 July 1995
Article Reviewed/Updated: 20 July 1995

TOPIC -----

I have an Ethernet Pro Network Interface Card and am trying to run Appleshare for Windows. Whenever I launch Appleshare for Windows, I get the message, "AppleTalk Driver was not loaded. Please reinstall AppleShare".

DISCUSSION -----

If the workstation has an Intel Ethernet Pro Network Interface card installed when the Appleshare for Windows installation takes place, the Installer omits a necessary parameter for protocol AARP.

You must edit the NET.CFG file and change the line -
 PROTOCOL AARP ETHERNET_SNAP
to-
 PROTOCOL AARP 80F3 ETHERNET_SNAP

Article Change History:
20 Jul 1995 - Corrected format problem.

Support Information Services

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Tech Info Library Article Number:18120



Tech Info Library

Japanese Language Kit: Subscript Katakana Characters? (7/95)

Revised: 7/10/95
Security: Everyone

Japanese Language Kit: Subscript Katakana Characters? (7/95)

=====

Article Created: 10 July 1995

TOPIC -----

The Japanese written language uses Katakana characters to phonetically spell out many American English words for which there is no Japanese equivalent. Neither Kanji nor Hiragana are used for phonetically translated American English words.

Is there a way to use the Japanese Language Kit to input a subscript vowel behind a Katakana character.

For example, the word 'party' is written phonetically 'pa-tei'. Te is a Katakana character that needs the subscript vowel 'i' behind it to achieve the correct pronunciation.

DISCUSSION -----

As of the date of this article, the Japanese Language Kit does not have the capability to subscript a vowel behind a Katakana character.

You will need to use a word processor application to subscript the character or reduce the size of the font to get the desired effect.

Support Information Services

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Tech Info Library Article Number:18121



Tech Info Library

LaserWriter 4/600 PS: Maximum Printable Area (11/95)

Revised: 11/6/95
Security: Everyone

LaserWriter 4/600 PS: Maximum Printable Area (11/95)

Article Created: 10 July 1995
Article Reviewed/Updated: 6 November 1995

TOPIC -----

What are the maximum printable areas for Letter and Legal size paper on the LaserWriter 4/600 PS? Is additional memory required to achieve these results?

DISCUSSION -----

The maximum margins for Letter and Legal paper on the LaserWriter 4/600 are:

Begin_Table

	Letter	Legal/US Legal
Left	.10	.10
Right	.19	.19
Top	.17	.15
Bottom	.13	.13

Maximum
Imageable 8.21 x 10.7 8.21 x 13.72
Area

End_Table

The results are posted in fractions of an inch.

The Laserwriter 4/600 PS does not require additional memory to perform edge-to-edge printing because of the use of Adobe memory booster compression technology which allows printing of complex pages with less memory.

Support Information Services

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Tech Info Library Article Number:18123



Tech Info Library

LaserWriter 4/600 PS: Advantages of Increasing Memory (11/95)

Revised: 11/6/95
Security: Everyone

LaserWriter 4/600 PS: Advantages of Increasing Memory (11/95)

=====

Article Created: 10 July 1995
Article Reviewed/Updated: 6 November 1995

TOPIC -----

What are the advantages to adding additional memory to the LaserWriter 4/600?

DISCUSSION -----

Adding memory to the Laserwriter 4/600 has the following advantages:

- More fonts can be downloaded at one time
- More space is available to store the calculations needed for large or complex images
- More space is available for font caching, which maintains recently used fonts in memory for faster access.

Support Information Services

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Tech Info Library Article Number:18124



Tech Info Library

Power Macintosh 9500:Incompatible w/Energy Saver Software (2/97)

Revised: 2/11/97
Security: Everyone

Power Macintosh 9500:Incompatible w/Energy Saver Software (2/97)

Article Created: 10 July 1995
Article Reviewed/Updated: 11 February 1997

TOPIC -----

Why can I not get the Ecologic module in Berkley System's After Dark 3.0 to work with my Power Macintosh 9500 computer?

DISCUSSION -----

This module in After Dark relies on Apple's Energy Saver software. The Energy Saver software in System 7.5.2 is incompatible with the Power Macintosh 9500 series of computers.

Ecologic module of After Dark 3.0 is compatible with the Energy Saver software in System 7.5.3 or later. You should update your system software with system software updates which can be found at Apple Computer's online software update locations.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
11 Feb 1997 - Added System 7.5.3 or later is compatible.

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Tech Info Library Article Number:18125



Tech Info Library

Apple CD-ROM drives: Audio CD Playback (7/95)

Revised: 7/24/95
Security: Everyone

Apple CD-ROM drives: Audio CD Playback (7/95)

Article Created: 12 July 1995
Article Reviewed/Updated: 24 July 1995

TOPIC -----

This article addresses many issues regarding the playthrough of audio CDs on Apple CD-ROM drives.

DISCUSSION -----

Question:
Does the processor load affect sound quality of audio CDs?

Answer:
The processor load does not have any effect on the performance of audio CDs.*

Question:
Where is the audio signal generated?

Answer:
The sound for Red Book** audio discs is created by a Digital to Analog converter in the CD-ROM drive.

Question:
How does sound get routed to the speaker on an internal CD-ROM drive?*

Answer:
The internal CD-ROM drives's audio output is connected to the logic board. That circuit is passed through the sound chip, and is then output through the regular sound output architecture. No additional processor load is incurred during the trip through the sound chip.

This analog signal is then passed into the sound chip, converted to digital data, manipulated, converted to an analog signal, and passed directly to the

internal speaker(s) as a monaural signal or to the speaker jack as a stereo signal.

Question:

How does this differ on an external CD-ROM drive?

Answer:

On an external CD-ROM drive, the sound signal is routed to the RCA jacks on the back of the drive and to the stereo headphone jack on the front of the drive. This signal can then be connected to the sound input jack on the Macintosh for playback on the internal speaker(s), provided that the computer involved supports playthrough from the microphone port. The microphone input jack then goes into the same sound chip for processing.

Question:

What software components can affect an audio CD performance issue, such as a skipping CD?

If the regular CD-ROM Setup software, Foreign File Access extension, Audio CD Access or their dependent preferences are corrupted, then sound quality could be compromised or altogether stopped.

Question:

Can the use (or non-use) of QuickTime, QuickTime PowerPlug, MultiMedia Tuner, Sound Manager, the Sound control panel, or virtual memory make a difference in the quality of audio CD playthrough?

Answer:

No, because those software components and variables do not have a function in audio CD-ROM playback. If affecting one of these variables does make a difference, they are suppressing a symptom, not correcting it.

Question:

How does the AppleCD Audio Player command the CD-ROM drive to play a track?

Answer:

AppleCD Audio Player reads the "Red Book" audio tracks and knows where tracks begin and end, how long they are and all the available information about the track. It will command the CD to either play the entire content of the CD, or the AppleCD Audio Player software can be configured to play specific tracks.

Question:

What troubleshooting steps are recommended, to rectify erratic audio CD sound?

Answer:

Once verifying that it is an issue with audio CD playback, follow these steps for troubleshooting::

Step 1

Clean the CD. Use a lint-free cloth, sweeping from the hub of the CD, outwards.

Step 2

Try repeating the issue by using multiple CDs.

Step 3

Move these preferences out of the System Folder, and restart.

- AppleCD Audio Player Prefs
- CD Remote Programs
- Sound Preferences

Note: CD Remote Programs contains AppleCD Audio Player's default programs, such as CD titles, track names, and so on.

Step 4

Re-install the system software.

Step 5

Clean install.

Notes:

*The Macintosh Quadra 840AV and 660AV computers use the DSP (Digital Signal Processor) to digitize audio from the CD player, which is then sent to the DAC (Digital-to-Analog Converter) to create analog audio. This causes a slight processor load on the main processor and may affect playback.

**The Red Book specification is for digital audio CDs. All audio CDs use this specification to assure that any audio CD-ROM in the world works with any audio CD-player. The Red Book specification was developed by Phillips and Sony.

Article Change History:

24 Jul 1995 - Minor formatting changes

Support Information Services

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Tech Info Library Article Number:18126



Tech Info Library

Energy Saving Control Panels: Description & Compatibility 10/96

Revised: 2/17/97
Security: Everyone

Energy Saving Control Panels: Description & Compatibility 10/96

Article Created: 10 July 1995
Article Reviewed/Updated: 1 October 1996

TOPIC -----

What is the difference between all the different energy-saving control panels, and how do I know when to use them?

DISCUSSION -----

Energy Related Control Panels Overview

There are four different energy-related control panels in System 7.5.

- Auto Power On/Off: Turns the computer ON and OFF at specified times.
- CPU Energy Saver: Turns the computer OFF at specified times, but not ON.
- Energy Saver 1.0: Puts an external monitor into energy-saving mode.
- Screen: Puts an internal monitor into energy-saving mode.
- Energy Saver 2.0: Combines functionality of CPU Energy Saver, Energy Saver 1.0, and Auto Power On/Off. Energy Saver 2.0 is compatible only on PCI-based Power Macintosh computers, which includes the Power Macintosh 5400, 6400, 7200, 7500, 7600, 8500, and 9500 series computers.

These control panels only work on certain Macintosh computers. In addition, the Energy Saver 1.0 control panel requires an Energy Star-compliant monitor as well as a Macintosh computer compatible with this software. See the chart at the end of this article for a list of compatible systems.

Although many Energy Saver control panels are compatible with many Macintosh Performa computers, not all Energy Saver control panels are bundled with

Macintosh Performa computers. Many Macintosh Performa computers include modems and MegaPhone software, which allow you to use your computer as an answering machine. If you have installed Auto Power On/Off, it is possible for your computer to be inadvertently shut down while your computer is set to answer phone messages. To avoid this, Macintosh Performa computers do not ship with the Auto Power On/Off control panel.

None of the energy-related control panels mentioned here are supported on PowerBook or PowerBook Duo products.

Auto Power On/Off

This feature lets you set your Macintosh computer to power ON and OFF at a pre-determined time, on a daily basis, or for one particular day. It also has a check box labelled "Automatically restart after power failure". If you check this box and the power goes off, the computer automatically restarts. You can use the Auto Power On/Off feature in conjunction with other System 7.5 features. For example, you could set your system to power on at night and run an AppleScript that re-indexes all of your database files or backs up your hard drive.

This control panel can only be used on computers that can be turned off by using the Shut Down command (soft power off) and that have the "Cuda" ADB controller chip or a version of the Motorola 68HC05 microcontroller chip. The chart at the end of this article lists the Macintosh models this control panel is compatible with.

NOTE: Not included with all system software prior to System 7.5

CPU Energy Saver

This feature lets you set your Macintosh to turn OFF at a specified time. However, you cannot set your system to turn ON with this feature. It can only be used on computers that can be turned off by using the Shut Down command (soft power off), such as the Quadra 700. This feature is only installed by System 7.5 if Auto Power On/Off is NOT compatible with the Macintosh and CPU Energy Saver IS compatible with the Macintosh.

NOTE: This control panel did not ship with system software older than System 7.5, although it was released separately before System 7.5.

Energy Saver 1.0

This feature lets you set your Macintosh to put external monitors into sleep mode. It was originally designed to work with the built-in video of Macintosh LC III, Quadra 610-950, Power Macintosh, and Performa 450-467, 63x, 611x.

This feature requires an Energy Star-compliant monitor. Compliant models include:

- Apple Color Plus 14-in. Display
- Macintosh Color Display (newer M1198LL/B version)

- Apple AudioVision 14 Display
- Apple Multiple Scan 14, 15, 17, and 20 Displays

NOTE:

Not included with system software prior to System 7.5, although it was made available separately.

This feature did not come preinstalled on some Performa 630- and 6110-series systems and was not included on the backup CDs that shipped with these systems. Customers who want the Energy Saver software can copy it from the disk that comes with the Multiple Scan 15 Display. (Be sure not to copy the Display Enabler extension, since the Performa 630- and 6110-series systems have the Display Enabler's functionality built into the hardware.)

If Energy Saver is installed on a computer that has an incompatible monitor, the monitor goes black after the specified inactivity period has passed, but the incompatible monitor is NOT in low power mode, and therefore is NOT saving energy. Monitors that do not support this Energy Saver function, or monitors that use video cards, are not harmed by the installation of this control panel, but they do not save energy with Energy Saver installed.

The Energy Saver control panel has a slider bar to adjust the monitor inactivity period, from 15 to 60 minutes. Energy Saver can be turned on by clicking the check box nearest the slider bar. The settings take effect immediately; you do not need to restart the computer.

When the Apple Energy Star-compliant monitor has been inactive (that is, you have not used the mouse or keyboard) for the time specified in the Energy Saver control panel, the screen of the monitor goes black. This indicates that the monitor is in low-power mode, and is saving energy. The computer is still functioning.

The monitor returns to a fully active state approximately 20 seconds after you use the keyboard or mouse. You hear a number of beeps while the screen is updated to reflect its current state. (The beep volume cannot be adjusted; it is independent of all system sound controls.)

Screen

This control panel lets you set your Macintosh computer to put internal monitors into sleep mode.

The Screen control panel can only be used on certain "all-in-one" Macintosh systems, such as the LC/Performa 500-series.

This feature shipped with some Performa 630-series systems and appears to work, but does not really save energy. The Screen control panel should be removed from these systems. Use the Energy Saver control panel in its place.

Energy Saver 2.0

This control panel combines functionality of CPU Energy Saver, Energy Saver 1.0, and Auto Power On/Off. Energy Saver 2.0 is compatible only on PCI-based Power

Macintosh computers, which includes the Power Macintosh 5400, 7200, 7500, 7600, 8500, and 9500 series computers.

NOTE: Energy Saver 2.0 is available only in System 7.5.2 or later when used on a PCI-based Power Macintosh computer.

Begin_Table

WHEN TO USE WHICH ENERGY-SAVING CONTROL PANELS

	< FOR MONITORS>		< FOR COMPUTER>	
YES = preferred				
OK = compatible, but not preferred			Auto	CPU
NO = incompatible	Energy		Power	Energy
	Saver	Screen	On/Off	Saver
-----+-----+-----				
COMPACT MACINTOSH SYSTEMS				
Macintosh 128K, 512K, 512Ke, XL	NO	NO	NO	NO
Macintosh Plus, SE, SE/30	NO	NO	NO	NO
Classic, Classic II, Performa 200	NO	NO	NO	NO
Color Classic, Color Classic II	NO	YES	YES	OK
-----+-----+-----				
MACINTOSH II SYSTEMS				
Macintosh II, IIx, IIfx	YES	NO	NO	YES
Macintosh IICx, IICI	YES	NO	NO	YES
Macintosh IISI, IIvi, IIvx	YES	NO	YES	OK
-----+-----+-----				
MACINTOSH LC SYSTEMS				
Macintosh LC, LC II	NO	NO	NO	NO
Macintosh LC III, LC 475	YES	NO	NO	NO
Macintosh LC 520, 550, 575, 580	NO	YES	YES	OK
Macintosh LC 630	YES	NO	YES	OK
-----+-----+-----				
MACINTOSH CENTRIS & QUADRA SYSTEMS				
Macintosh Quadra 605	NO	NO	NO	NO
Macintosh Centris/Quadra 610	YES	NO	NO	NO
Macintosh Quadra 630	YES	NO	YES	OK
Macintosh Centris/Quadra 650	YES	NO	NO	YES
Macintosh Centris/Quadra 660AV	YES	NO	NO	NO
Macintosh Quadra 700	NO	NO	NO	YES
Macintosh Quadra 800	YES	NO	NO	YES
Macintosh Quadra 840AV, 950	YES	NO	YES	OK
Macintosh Quadra 900	NO	NO	YES	OK
-----+-----+-----				
MACINTOSH PERFORMA SYSTEMS				
Performa 200	NO	NO	NO	NO
Performa 250, 275	NO	YES	YES	OK
Performa 400, 405, 410, 430	NO	NO	NO	NO

Performa 450, 460, 466, 467	YES	NO	NO	NO
Performa 475, 476	YES	NO	NO	NO
Performa 520, 550, 560	NO	YES	YES	OK
Performa 570-, 580-series	NO	YES	YES	OK
Performa 600	YES	NO	YES	OK
Performa 630-, 640-series	YES	NO	YES	OK
Performa 5200-series	NO	YES	YES	OK
Performa 6100-series	YES	NO	NO	NO
Performa 6200-series	YES	NO	OK*	NO
Performa 6300-series	YES	NO	OK	YES
Performa 6400 series	YES•	NO	NO•	NO
-----+-----+-----				
POWER MACINTOSH SYSTEMS				
Power Macintosh 5200/75 LC	NO	YES	YES	OK
Power Macintosh 5260	NO	YES	YES	OK
Power Macintosh 5400	YES•	NO	NO•	NO
Power Macintosh 6100/60, 6100/66	YES	NO	NO	NO
Power Macintosh 6200/75	YES	NO	YES	NO
Power Macintosh 7100/66	YES	NO	YES	OK
Power Macintosh 7100/80	YES	NO	YES	NO*
Power Macintosh 7200 Series	YES•	NO	NO•	NO
Power Macintosh 7500 Series	YES•	NO	NO•	NO
Power Macintosh 7600 Series	YES•	NO	NO•	NO
Power Macintosh 8100/80	YES	NO	YES	OK
Power Macintosh 8100/100, 8100/110	YES	NO	YES	NO*
Power Macintosh 8500 Series	YES•	NO	NO•	NO
Power Macintosh 9500 Series	YES•	NO	NO•	NO
-----+-----+-----				
MACINTOSH WORKGROUP SYSTEMS				
Workgroup Server 95	YES	NO	YES	NO
Workgroup Server 8150	YES	NO	YES	NO
Workgroup Server 9150	YES•	NO	NO•	NO
-----+-----+-----				

End_Table

* These Power Macintosh computers included the Connectix Desktop Utility (CDU) software. The Connectix Desktop Utility makes these units Energy Star compliant.

- Use Energy Saver 2.0.x included with System 7.5.2 for this function.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 6

Article Change History:

- 01 Oct 1996 - Added current models.
- 24 Sep 1996 - Added 5400 and 6400.
- 23 Sep 1996 - Corrected typo.

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Tech Info Library Article Number:18127



Tech Info Library

Power Macintosh:Interleaving & DIMM Population Guidelines (7/96)

Revised: 7/13/96
Security: Everyone

Power Macintosh:Interleaving & DIMM Population Guidelines (7/96)

Article Created: 10 July 1995
Article Reviewed/Updated: 13 July 1996

TOPIC -----

How do I populate DIMMs in my PCI-based Power Macintosh Computer to maximize performance using memory interleaving? If I have an odd number of DIMMS, where should I place the odd DIMM to get the best performance from memory interleaving?

DISCUSSION -----

Memory interleaving is accomplished by 'pairing' two DIMMs in corresponding slots. That is, one DIMM in A1, and another DIMM in B1 will set the machine up to use memory interleaving.

If you have an odd number of DIMMs, the matched pairs will run the memory interleaved. The odd DIMM will then run non-interleaved. For the interleaving to be most effective, the DIMMs must be the same size and speed, (usually, should be of the same manufacturer, but not necessary). In reference to the memory addressing, the A1/B1 will be the lower addresses, going up to the A6/B6 being the highest address.

In relation to performance, it really does not matter where the DIMMs are placed. The software is intelligent enough to figure out which banks are being used, and is able to "stitch" the memory together as required.

Note:

Memory interleaving is only available in the Power Macintosh 7500, 7600, 8500, and 9500 series computers. The Power Macintosh 7200 uses a different memory controller which does not support interleaving.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

This article was published in the Information Alley on 26 June 1996.

Article Change History:

13 Jul 1996 - Added alley info.

02 Jul 1996 - Added Fax Doc word

26 Jun 1996 - Added 7600.

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Tech Info Library Article Number:18128



Tech Info Library

PowerBook 500 Series: Slow External Mouse (9/95)

Revised: 9/26/95
Security: Everyone

PowerBook 500 Series: Slow External Mouse (9/95)

Article Created: 10 July 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

When I connect an external mouse to my PowerBook 540c the mouse tracks very slowly. When I open the Mouse control panel it shows it is set to Fast. Sometimes when I select Fast in the Mouse control panel and it will track fast. I usually plug my external mouse in when I'm tired of using the built in Trackpad. Why does this happen?

DISCUSSION -----

It is very important that you do not plug the mouse into the ADB port when the computer is "powered on". This may damage the ADB port or mouse. However, it is safe to plug in the ADB device when the Macintosh PowerBook 540c is in the sleep mode.

Plugging in a mouse device on any Macintosh computer while the unit is powered on can result in slow mouse (cursor) movement and possible damage to the ADB port. In addition, the Macintosh PowerBook 500 series computers have two control panels influencing the speed of movement of the cursor: the Trackpad and Mouse. Their settings are related to each other. When you make a change in the Trackpad control panel, the Mouse control Panel also changes.

Check to make sure the Trackpad and Mouse control panels are set to the same speed. Open the Mouse control panel and click on the speed you want, even if the speed is already selected. By clicking on the speed you will be sure to save that setting. Do the same for the Trackpad control panel.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 17

Article Change History:

26 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18130



Tech Info Library

Color LaserWriter 12/600 PS: Intermittent Printing (9/95)

Revised: 9/18/95
Security: Everyone

Color LaserWriter 12/600 PS: Intermittent Printing (9/95)

Article Created: 10 July 1995
Article Reviewed/Updated: 18 September 1995

TOPIC -----

The technical specifications for the Color LaserWriter 12/600 PS listed in Appendix A of the user's manual state that the photosensitive drum life expectancy is:

- 40,000 pages in black and white or 10,000 pages in color, continuous printing.
- 13,000 pages in black and white or 6,500 pages in color, intermittent printing.

What is intermittent printing?

DISCUSSION -----

Intermittent printing occurs when the printer receives a job after it has entered sleep mode. When the printer wakes from sleep mode, it performs a warm-up sequence. During the warm up sequence, the transfer drum and photosensitive drum are both rotated several times creating friction between the two. This friction causes wear on the photosensitive material causing the photosensitive drum to eventually wear out. Thus, life expectancy of the photosensitive drum is determined by the thickness of the photosensitive material, which is reduced very slightly every time the printer warms up.

One method for monitoring the effectiveness of the photoconductor is to print the startup and demonstration pages after a new photoconductor is installed and record the current date and page count on the top of the page. Compare the original print samples with those printed later on to determine whether the photoconductor should be replaced.

Article Change History:
18 Sep 1995 - Added additional information to discussion.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18131



Tech Info Library

Performa 6200CD Series: Specifications (4/97)

Revised: 5/2/97
Security: Everyone

Performa 6200CD Series: Specifications (4/97)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article gives the technical specifications for the Performa 6200 series computers.

The following computers are in the Macintosh Performa 6200 series: Performa 6200, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

These products differ in several ways:

- Amount of RAM installed
- Video In Card installed
- TV Tuner Card installed
- MPEG Card installed
- Application software installed

DISCUSSION -----

Microprocessor

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus

Memory

- 8 MB or 16 MB RAM (one or two 8 MB SIMMs installed)*
- Expandable up to 64 MB (32 MB x 2 slots)
- Two 72-pin SIMM slots, 80 ns or faster
- Expandable one SIMM at a time
- 32-bit memory bus
- 4 MB ROM on 64-bit PPC bus

Storage

- 1.4 MB Apple SuperDrive disk drive - read and write MS-DOS disks
- 1 GB IDE hard drive, 1/3 height
- AppleCD 600i CD-ROM drive (Quad Speed)

Expansion & Ports

- LC processor direct slot (MPEG card installed in the Macintosh Performa 6230CD)
- Video-in slot for optional video capture card (installed in the Macintosh Performa 6220CD and 6230CD)
- TV tuner slot (installed in the Macintosh Performa 6220CD)
- Communications slot (internal modem installed in entire Performa 6200 series)
- SCSI interface for connecting up to five external devices
- One serial (RS-232/RS-422) printer port**
- ADB port
- Sound-in (PlainTalk compatible)
- Sound-out

Video

- 1 MB DRAM video frame buffer
- 16-bit color at 640x480, 8-bit color at 800x600, 832x624
- Supports Video In with optional card
- Apple Multiple Scan 15 Display included with Macintosh Performa 6200CD, 6218CD, and 6230CD

Sound

- 16-bit CD audio
- 16-bit sound out and internal***
- PlainTalk (or line level) microphone required

Communications

- Internal Global Village Communications Teleport Gold IIv 14.4 Kbps fax send/receive modem (installed in Communications slot)
- Megaphone software, speaker phone and digital answering machine

Ergonomic Features

- Front controls for volume and contrast
- Front headphone jack
- Infrared remote control
- Power on/off from keyboard

Keyboard

- Includes AppleDesign Keyboard
- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Apple Desktop Mouse 11

Clock/Calendar

- CMOS customer chip and battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.
- Third-party options provide alternative input and output devices

Electrical Requirements

- 110 - 240v, 50 - 60 Hz
- Power consumption 45 watts max (excluding monitor)
- EPA Energy Star compliant

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32 cm)
- Depth: 16.5 in. (41.95 cm)
- Weight: 19 lb. (8.6 kg)

Operating Environment

- 10°C to 40° C (50°F to 104°F)

System Software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundles

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Begin_Table

Entire 6200CD series

- At Ease
- ClarisWorks
- Quicken
- Newton Tour
- WealthBuilder
- Mangia
- Virex
- Global Fax software
- Global Village Tour
- MacLinkPlus/Easy Open Translators
- Widget Workshop
- ClickArt Performa Collection
- MacTess Home Learning Software
- MacGallery Clip Art
- American Heritage Dictionary
- Power Pete
- Megaphone for Performa

End_Table

Performa 6200CD & 6218CD

- The Writing Center
- Fine Artist
- Espresso

Performa 6216CD

- Espresso

Performa 6220CD

- Fine Artist

Performa 6230CD

- The Writing Center
- Fine Artist
- Espresso
- Personal Assist

CD bundles

=====

Entire 6200CD series

- 1995 Grolier's Multimedia Encyclopedia
- Smithsonian's America
- Family Doctor

Performa 6200CD

- Thinkin Things 2
- Professor Piccolo
- Club KidSoft
- 3D World Atlas
- My First Incredible Amazing Dictionary

Performa 6216CD

- Time Almanac Reference Edition
- Trivial Pursuit
- MusicNet CD
- Microsoft Bookshelf

Performa 6218CD

- Trivial Pursuit
- The Even More! Incredible Machine
- Professor Piccolo
- Felix The Cat CD

- Club KidSoft CD
- CardShop Plus/StickerShop Plus
- 3D World Atlas
- Earth Explorer
- The Way Things Work
- Time Almanac Reference Edition
- My First Incredible Amazing Dictionary
- Hometime: Weekend Home Projects
- Sharks!
- Thinkin Things 2

Performa 6220CD

-
- Avid VideoShop
 - Professor Piccolo
 - Club KidSoft CD
 - 3D World Atlas
 - Thinkin Things 2

Performa 6230CD

-
- Thinkin Things 2
 - Professor Piccolo
 - My First Incredible Amazing Dictionary
 - 3D World Atlas
 - Club KidSoft CD
 - Ocean Life: Hawaiian Islands (MPEG)
 - Time Almanac (MPEG)

Notes:

*The Macintosh Performa 6200CD and 6216CD have 8 MB of RAM; the Macintosh Performa 6218CD, 6220CD, and 6230CD each have 16 MB of RAM.

**The modem serial port is disabled with an internal modem installed in the Communications Slot.

*** The Macintosh User's Guide for Macintosh Performa 6200CD computers incorrectly states that these computers have 8-bit sound.

Product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Article Change History:

01 May 1997 - Removed out dated on line references.
08 Feb 1996 - Removed keyword.
20 Nov 1995 - Added keyword.

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Tech Info Library Article Number:18132



Tech Info Library

Macintosh Performa 6200 Series: Description (4/97)

Revised: 5/2/97
Security: Everyone

Macintosh Performa 6200 Series: Description (4/97)

Article Created: 11 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article provides a description of the Macintosh Performa 6200 series computers.

The following computers are in the Macintosh Performa 6200 series: Performa 6200, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

DISCUSSION -----

Overview

The Apple Macintosh Performa 6200CD computer brings multimedia to life in a modular system that is easy to set up. With its PowerPC processor technology, it offers high performance now, yet can grow with your multimedia and general computing needs for years to come.

Packed in one box are the computer (with Apple's System 7.5 operating software already loaded), a color display, a keyboard, and a mouse. In addition, the Performa 6200CD comes with a variety of home, education, and home-business programs, plus CD multimedia titles—just a sampling of the thousands of Macintosh applications the computer can run. Like all Macintosh computers, the Performa 6200CD is very easy to set up, learn, and use.

This affordable system includes features that are expensive add-ons with other computers. A quadruple-speed CD-ROM drive accesses CD-based data quickly. Stereo 16-bit sound provides high-quality playback from audio CDs. An internal 14.4 Kbps fax send/receive modem also functions as a speakerphone and digital answering machine. An audio-input port lets you record your own sounds. And AppleTalk networking gives you easy access to printers, electronic-mail servers, and file servers.

Every Performa 6200CD system also offers advanced multimedia expansion options.

With a video-in card, you can connect to an external video source such as a VCR or cam-corder to capture video images and use them in your Macintosh applications. A video-out interface box lets you connect the computer to a large-screen TV for presentations. The optional internal TV tuner shows television channels in a window on your computer's display. An MPEG (Motion Picture Experts Group) provides full-motion, VHS quality playback from CD-ROM drives.

The Macintosh Performa 6200CD computer, with its wealth of ready-to-use features and software, adds up to an expandable, flexible multimedia system.

Power and speed

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus

Memory

- 8 MB or 16 MB RAM expandable up to 64 MB

Display

- 1 MB DRAM video frame buffer
- 16-bit color at 640x480, 8-bit color at 800x600, 832x624

Expansion

- Comes with built-in ports for hard drives, printers, scanners, and modems
- Supports most processor-direct cards compatible with Macintosh Quadra 605 and Macintosh LC series of computers via an internal expansion slot
- Includes a communications slot with a 14.4 Kbps fax send/receive Global Village IIv modem installed
- Has video slot for NTSC, PAL, and SECAM video-input card
- Includes expansion bay for television tuner
- External drop box provides expansion for NTSC or PAL video output

Audio System

- Stereo 16-bit sound capable of driving stereo headphones or other stereo equipment through the sound jacks
- Stereo 16-bit CD playback
- One sound-in port
- Front and rear headphone jacks

System Software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Begin_Table

Third-party software bundles

=====

Entire 6200CD series

- At Ease
- ClarisWorks
- Quicken
- Newton Tour
- WealthBuilder
- Mangia
- Virex
- Global Fax software
- Global Village Tour
- MacLinkPlus/Easy Open Translators
- Widget Workshop
- ClickArt Performa Collection
- MacTess Home Learning Software
- MacGallery Clip Art
- American Heritage Dictionary
- Power Pete
- Megaphone for Performa

Performa 6200CD & 6218CD

- The Writing Center
- Fine Artist
- Espresso

Performa 6216CD

- Espresso

Performa 6220CD

- Fine Artist

Performa 6230CD

- The Writing Center
- Fine Artist
- Espresso
- Personal Assist

CD bundles

=====

Entire 6200CD series

- 1995 Grolier's Multimedia Encyclopedia
- Smithsonian's America
- Family Doctor

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- Thinkin Things 2
- Professor Piccolo
- Club KidSoft
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- My First Incredible Amazing Dictionary

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- Time Almanac Reference Edition
- Trivial Pursuit

- MusicNet CD
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- The Even More! Incredible Machine
- Professor Piccolo
- Felix The Cat CD
- Club KidSoft CD
- CardShop Plus/StickerShop Plus
- 3D World Atlas
- Earth Explorer
- The Way Things Work
- Time Almanac Reference Edition
- My First Incredible Amazing Dictionary
- Hometime: Weekend Home Projects
- Sharks!
- Thinkin Things 2

Performa 6220CD

- Avid VideoShop
- Professor Piccolo
- Club KidSoft CD
- 3D World Atlas
- Thinkin Things 2

Performa 6230CD

- Thinkin Things 2
- Professor Piccolo
- My First Incredible Amazing Dictionary
- 3D World Atlas
- Club KidSoft CD
- Ocean Life: Hawaiian Islands (MPEG)
- Time Almanac (MPEG)

End_Table

Configurations and Ordering Information

=====

Macintosh Performa 6200CD 8/1 GB

- Macintosh Performa 6200 computer with 8 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
- Apple Multiple Scan 15 Display
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4100LL/A

Macintosh Performa 6216CD 8/1 GB

- Macintosh Performa 6216 computer with 8 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4105LL/A

Macintosh Performa 6218CD 16/1 GB

- Macintosh Performa 6218 computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
- Apple Multiple Scan 15 Display
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4102LL/A

Macintosh Performa 6220CD 16/1 GB

- Macintosh Performa 6220 computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
- Video In and TV Tuner cards installed
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4104LL/A

Macintosh Performa 6230CD 16/1 GB

- Macintosh Performa 6230 computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
- MPEG card installed
- Video In card installed
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4103LL/A

Optional Enhancements

- Apple Video System
- Order No. M2894LL/C

- Apple TV/Video System
- Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Apple Ethernet CS Thin Coax Card

Order No. M2708ZLL/A

- Apple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

- Apple Ethernet CS AAUI Card

Order No. M3066Z/A

- Apple MPEG Media System

Order No. M4243LL/A

Note:

Product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Article Change History:

01 May 1997 - Removed out dated on line references.

04 Jan 1996 - Removed keyword.

05 Oct 1995 - Updated video option part numbers.

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Tech Info Library Article Number:18133



Tech Info Library

Open Transport: Duplicate IP Address on Network (10/96)

Revised: 10/29/96
Security: Everyone

Open Transport: Duplicate IP Address on Network (10/96)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 29 October 1996

TOPIC -----

I have a new Power Macintosh 9500 and I have been unsuccessful in determining an IP Address for the Power Macintosh 9500. I used a piece of software that allows me to assign an IP address to machines on my network to paste an address from a Centris 610 to my Power Macintosh 9500.

I have been successful in downloading files from the Internet to both machines with the same address on the same sub-node simultaneously.

How is this possible?

DISCUSSION -----

You should never have two machines on the same network with the same IP Address. You may encounter trouble with lost packets and dropped connections later on if you continue to use your machine in this configuration.

Normally, if any computer has the same IP Address as a host on the network the host will shutdown the connection. The first release of Open Transport in System 7.5.2 did not check to see if there was a duplicate IP Address and therefore will not present you with a warning or dialog that this condition exists.

This issue has been resolved, you should update to Open Transport 1.1.

Article Change History:
29 Oct 1996 - Updated article, changed distribution.
22 Aug 1995 - Changed title.

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Tech Info Library Article Number:18134



Tech Info Library

StyleWriter 1200: Freezes When Printing Arabic or Hebrew (5/96)

Revised: 5/23/96
Security: Everyone

StyleWriter 1200: Freezes When Printing Arabic or Hebrew (5/96)

Article Created: 7 July 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

I have been using Macintosh computers with both U.S. System 7.1 and System 7.5 and the resources for Arabic and Hebrew for some time without a problem. After purchasing and installing an Apple StyleWriter 1200, whenever I print, the computer seems to hang several seconds after the print dialog closes. The problem occurs even when I try "Print Window" in System 7.1 or "Print Desktop" in System 7.5. Is there something wrong with my printer?

DISCUSSION -----

If you are using a StyleWriter 1200 and WorldScript I with Arabic or Hebrew resources, you may notice the following problem: Whenever you attempt to print, the computer seems to hang for several seconds after the print dialog closes. This happens when you try to Print Window (in System 7.1) or Print Desktop (in System 7.5).

This problem is caused by a known conflict between the WorldScript I software and StyleWriter 1200 v.2.0 software. Printing with the StyleWriter 1200 v2.0 printer driver freezes your 1-byte international system a few seconds after the print dialog box closes.

Your system becomes a 1-byte international system when you install the secondary language resources. These resources include the WorldScript I software. The system does not freeze when printing if WorldScript I is not installed, but then you will not be able to see or print Arabic or Hebrew properly. Only the Arabic and Hebrew Language Kits are affected by this conflict.

The problem was fixed in the StyleWriter 1200 v2.1 and also in the Color StyleWriter 2400 v2.1 software which are both available from online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the "Information Alley":
Volume II, Issue 12, Page 13

Article Change History:

23 May 1996 - Updated for technical accuracy.
05 Oct 1995 - Added Info Alley information; updated article.
28 Aug 1995 - Updated printer driver online availability information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18135



Tech Info Library

System 7.5: Easy Open, Translators and Desktop Rebuild (8/95)

Revised: 8/14/95
Security: Everyone

System 7.5: Easy Open, Translators and Desktop Rebuild (8/95)

Article Created: 11 July 1995
Article Reviewed/Updated: 14 August 1995

TOPIC -----

I am running At Ease 3.0 and System 7.5.1 on my Macintosh LC 575. I recently upgraded to ClarisWorks 4.0. I have a WriteNow file that ClarisWorks 3.0 used to translate perfectly whenever I double-clicked the file. Now when I double-click a WriteNow, or any other file that ClarisWorks previously was able to translate, I get a message stating that ClarisWorks could not find the appropriate translators. When I look in my System Folder, all the translator files are in the ClarisWorks Translators folder within the Claris folder.

DISCUSSION -----

The issue you are experiencing here is not related to At Ease or the newer version of ClarisWorks. You can test this by turning off At Ease using the At Ease Setup application and restarting. If the same failure occurs, then you have ruled out At Ease interfering with ClarisWorks' translators.

Since the ClarisWorks Translators folder has all the necessary translation files available, the issue is related to access and interaction with those files.

System 7.5 includes a control panel called Macintosh Easy Open (MEO), which builds a table of file types, applications, and the translators available to those applications that give them the ability to open different file types. When you double-click a file, the Finder checks with MEO to see what application it should use to launch, or perhaps translate, a file.

Since you installed the new version of ClarisWorks, MEO now needs to update this table. This can be done by rebuilding the Desktop file of your Macintosh in the following way:

Step 1

Make sure you have turned off At Ease using the At Ease Setup program.

Step 2

Restart your Macintosh and hold down the Space Bar until the Extensions Manager control panel opens.

Step 3

Use the pull down menu in the Extensions Manager to choose "All Off"

Step 4

Scroll down to the Control Panels section of the Extensions Manager window and click the Macintosh Easy Open item to put a check mark by it.

Step 5

Close the Extensions Manager window by clicking on the close box in the upper left corner.

Step 6

Immediately hold down the Command (Apple) and Option keys until you see the dialog box, "Are you sure you want to rebuild the desktop file?"

Step 7

Click Okay.

After the desktop rebuilds you can test to see if you have been successful by double clicking the file in question. Once you have determined everything is working normally, you can go back to the Extensions Manager and turn on all the extensions you usually use including At Ease. You need to restart to have the reactivated extensions load.

It is a good idea to rebuild the desktop file this way after installing any new software.

Article Change History:

14 Aug 1995 - Added keyword.

24 Jul 1995 - Made minor grammatical changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18136



Tech Info Library

Desktop PrintMonitor: Cannot Disable Manual Feed Dialog (6/96)

Revised: 6/24/96
Security: Everyone

Desktop PrintMonitor: Cannot Disable Manual Feed Dialog (6/96)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 24 June 1996

TOPIC -----

I have recently installed the software for my Apple StyleWriter 1200 Printer with its new Desktop Printer software components. Is there a way for me to turn off the dialog warning that appears when I start a manual feed print job like I was able to do in previous versions of PrintMonitor?

DISCUSSION -----

The desktop printing software is included with the LaserWriter 8.3 driver. The software is also included in the original disk sets of the StyleWriter 1200, 1500, and 2xxx printers.

The version of Desktop Printing software you are using will determine how you turn this manual alert feature off. The latest version of the Desktop Printer software is available from online services.

If you have Desktop Printing software prior to version 1.0.3, you must use an older version of the PrintMonitor. First you must turn off the Desktop PrintMonitor through the Extensions manager or remove the desktop printer software. To remove the desktop printer software, refer to the Read Me file for your printer. The ReadMe file will also define the steps necessary to use the older PrintMonitor.

If you have Desktop Printing Software version 1.0.3 or later, it is set up to notify you about manually feeding paper the same way your PrintMonitor was set. For example, if you turned off notification for manual feeding in your PrintMonitor, the Desktop PrintMonitor will also have manual feed notification turned off.

You can change how the Desktop PrintMonitor notifies you about manual feeding, by following this procedure:

Step 1

Hold down the Shift key and restart your computer, keeping the Shift key depressed until the message "Extensions off" or your normal desktop appears.

Step 2

Open your System Folder and then open your Extensions folder.

Step 3

Double-click the PrintMonitor application.

Step 4

Choose Preferences from the File menu.

Step 5

Select your manual feed option and click OK.

Step 6

Close the PrintMonitor.

Step 7

Restart your computer.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

24 Jun 1996 - Revised information on resetting manual feed notification.

11 Aug 1995 - Corrected minor typo.

10 Aug 1995 - Updated to include information on LW8.3 and how to remove.

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Tech Info Library Article Number:18137



Tech Info Library

MAE 2.0: Serial Port Commtoolbox Not Supported (7/95)

Revised: 7/11/95
Security: Everyone

MAE 2.0: Serial Port Commtoolbox Not Supported (7/95)

=====

Article Created: 11 July 1995

TOPIC -----

I am running the Macintosh Application Environment (MAE) 2.0 on a Sun Sparcstation (Solaris). When I try to run the Newton Connection Kit via the serial port I get a "Commtoolbox cannot be found" error.

DISCUSSION -----

The current version of MAE 2.0 does not support serial port communication on the Unix workstation (Sun or HP). The commtoolbox or Newton Connection/Tool Kit were not fully tested to work in MAE.

Serial port support has been on the feature request list of future MAE releases.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18138



Tech Info Library

Power Macintosh: Native Excel Libraries Not Loading (7/95)

Revised: 7/24/95
Security: Everyone

Power Macintosh: Native Excel Libraries Not Loading (7/95)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 24 July 1995

TOPIC -----

When I try to launch the PowerPC native version of Excel, the Power Macintosh displays an error message stating that a certain library cannot be found. All the Microsoft files are installed but I still get the message. What is wrong?

DISCUSSION -----

The error message is somewhat misleading because the problem Microsoft Excel is having when launching is due to running out of RAM. On a 16 MB Power Macintosh running System 7.5 and Excel for Power Macintosh, there is not enough RAM to load all of the libraries that Excel requires. When the Code Fragment Manager tries to load the libraries, the load fails due to lack of RAM, and the Code Fragment Manager reports the library cannot be found.

One solution is to turn on Virtual Memory (VM) in the Memory control panel to at least 17 MB total. The Get Info window for Excel states the application requires 9300 KB RAM when not using VM. However, the libraries make up the other 4 MB of the RAM requirement when not using VM. Virtual memory starts file-mapping, which lowers the memory requirement for Excel from about 13 MB to about 4 MB.

Another solution is to add more physical RAM to the Power Macintosh.

Article Change History:
24 Jul 1995 - Made minor grammatical changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18139



Tech Info Library

Open Transport: LocalTalk in Appletalk Panel (8/95)

Revised: 8/22/95
Security: Everyone

Open Transport: LocalTalk in Appletalk Panel (8/95)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 22 August 1995

TOPIC -----

I have a new Power Macintosh 9500 computer. In the AppleTalk control panel under "Connect via", I have an option for "LocalTalk" in addition to "Ethernet", "Printer port", and "Modem port". Where did that come from?

DISCUSSION -----

You have installed the Apple Internet Router software, which is not compatible with the new Open Transport software in System 7.5.2.

Remove the "Router", "LocalTalk (Built-in)", and "LocalTalk (Modem)" files from your Extensions folder and restart you Power Macintosh.

Article Change History:
22 Aug 1995 - Changed title.
08 Aug 1995 - Made minor technical corrections.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18140



Tech Info Library

Simpletext 1.2: Cursor prints on QuickDraw Printers (5/96)

Revised: 5/23/96
Security: Everyone

Simpletext 1.2: Cursor prints on QuickDraw Printers (5/96)

=====

Article Created: 11 July 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

When I print from SimpleText 1.2, the cursor prints out also. This happens when I print to my Apple StyleWriter Printer but not my LaserWriter Pro 630.

Is this a bug with my Apple StyleWriter Printer?

DISCUSSION -----

This is a known issue with SimpleText 1.2 and QuickDraw printers. This problem has been corrected in SimpleText 1.3. This version of SimpleText began shipping with QuickDraw 3D and is available on several online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
23 May 1996 - Updated for technical accuracy.
27 Jul 1995 - Added information about software availability online.

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Tech Info Library Article Number:18142



Tech Info Library

Pwr Mac 9500 Series: Incompatible w/ Newton Toolkit (10/95)

Revised: 10/30/95
Security: Everyone

Pwr Mac 9500 Series: Incompatible w/ Newton Toolkit (10/95)

=====

Article Created: 12 July 1995
Article Reviewed/Updated: 30 October 1995

TOPIC -----

This article discusses compatibility between the Newton Toolkit and Power Macintosh 9500 computers.

DISCUSSION -----

The Newton Toolkit v1.0.1 and v1.5.1 are not compatible with Power Macintosh 9500 computers. There is an updater available from online services and the Internet which updates the Newton Toolkit to a beta version of 1.5.2. Newton Toolkit is a Newton software development program available through Apple Programmers and Developers Association (APDA).

In addition to the update, the latest System Enabler is needed on the Power Macintosh 9500. This enabler can be found on v2.0 of the Power Macintosh 9500 compact disc. Open Transport v1.0.6 and later also installs the latest System Enabler.

SYMPTOM: Error Message - "Could Not Obtain Required Resource" when opening the Newton Toolkit Application.

SOLUTION: Updated Power Macintosh 9500 Enabler and Newton Toolkit.

SYMPTOM: Newton Toolkit Application crashes without an error.

SOLUTION: Updated Power Macintosh 9500 Enabler and Newton Toolkit.

Article Change History:

30 Oct 1995 - Added information on obtaining new version of Toolkit.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18143



Tech Info Library

DOS Compatibility Card: Which SIMMs To Use? (7/95)

Revised: 7/24/95
Security: Everyone

DOS Compatibility Card: Which SIMMs To Use? (7/95)

=====

Article Created: 12 July 1995
Article Reviewed/Updated: 24 July 1995

TOPIC -----

The DOS Compatibility Card Read Me states the following:

"You may find that, even when SIMMs are added to the Power Macintosh 6100 DOS Compatible mother board, you get less shared memory (MB) than you requested from the PC Setup Control Panel.

.	SET	ALLOCATED
.	8	4
.	16	8
.	32	8

The design of some memory SIMMs do not permit the DOS Compatibility Card to utilize the full capacity of the memory."

What type of SIMMs should be used in order to fully utilize the capacity of the memory?

DISCUSSION -----

Non-composite SIMMs can be fully utilized. The DOS Compatibility Card uses 72-pin, 80 ns or faster, non-composite SIMMs. Thus, if the correct SIMMs are used, the DOS Compatibility Card should be able to utilize the full capacity of the memory.

Apple SIMMs are non-composite. Contact the manufacturer or vendor of the SIMM to determine whether any added SIMMs are composite or non-composite.

Article Change History:
24 Jul 1995 - Corrected RAM speed info

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18144



Tech Info Library

Apple MessagePad: Flash RAM Cards Do Not Completely Erase (9/95)

Revised: 9/26/95
Security: Everyone

Apple MessagePad: Flash RAM Cards Do Not Completely Erase (9/95)

=====

Article Created: 12 July 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

When I erase a 2 MB flash RAM card in my Apple MessagePad, there is 2k in use and 1865k free. What happened to the rest of the 2 MB of RAM?

DISCUSSION -----

The RAM loss is caused by the nature of flash RAM.

Flash RAM is allocated in blocks, and unlike static RAM, flash RAM cannot be erased. Instead, if you want to erase a bit in a block of flash RAM, the entire block minus the bit must be copied to another block of flash RAM. Thus, there must always be at least one block of free flash RAM at all times.

The Apple MessagePad actually keeps a few blocks free for performance reasons. These free blocks account for the missing RAM.

This article was published in the "Information Alley":
Volume II, Issue 9, Page 19

Article Change History:
26 Sep 1995 - Added Info Alley information

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18145



Tech Info Library

Macintosh Performa 5200CD Series: Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 5200CD Series: Specifications (4/97)

Article Created: 12 July 1995
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 5200 series computers.

The following computers are in the Macintosh Performa 5200 series: Performa 5200 and Performa 5215. The Performa 5215 Canadian-French software bundle is also provided.

DISCUSSION -----

Microprocessor

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus
- Bus speed is 37.5 MHz. (processor speed/2)

Memory

- 8 MB (one 8 MB SIMMs installed)
- Expandable up to 64 MB (32 MB x 2 slots)
- Two 72-pin SIMM slots, 80 ns or faster
- Expandable one SIMM at a time (do not have to be similar density)
- 32-bit memory bus
- 1 MB DRAM frame buffer (separate from RAM) for video memory, not expandable
- 4 MB ROM on 64-bit PPC bus

Form Factor

- All in one enclosure
- Tilt from - 5° to +15°, Swivel 360°
- Front controls for volume and contrast
- Front headphone jack

- Infrared remote control
- Single power plug for system
- Power on/off from keyboard

Storage

- 1.4 MB Apple SuperDrive disk drive - read and write MS-DOS disks
- 790 MB or 1 GB IDE hard drive, 1/3 height*
- AppleCD 600i CD-ROM drive (Quad Speed)

Video Display

- 15" flat square shadow mask CRT
- .28 mm dot pitch
- User adjustable resolutions from 640x480 (63 DPI) to 832x624 (81 DPI) without restarting
- Refresh rate up to 75 Hz
- Low emissions (ELF, VLF)

Video Resolutions

Begin_Table

Resolution	Max. Bit Depth	Max. Number of Colors
-----	-----	-----
640 x 480	16	32,768
800 x 600	8	256
832 x 624	8	256

End_Table

Interfaces

- LC processor direct slot
- Video-in slot for optional video capture card
- TV tuner slot
- Communications slot (internal modem installed in entire Performa 5200 series)
- SCSI interface for connecting up to five external devices
- One serial (RS-232/RS-422) printer port**
- ADB port
- Sound-in (requires PlainTalk microphone)
- Sound-out
- Apple External Video Connector (M4099LL/A)
 - Purchased separately from the computer itself, this internal cable allows you to connect a Macintosh compatible display externally for video mirroring functionality.

Sound

- Integrated stereo speakers
- Built-in microphone
- 16-bit CD audio, 16-bit sound

Communications

- Internal Global Village Communications Teleport Gold IIv 14.4 bps fax send/receive modem (installed in Communications slot)
- Megaphone software, speaker phone and digital answering machine

Keyboard

- Includes AppleDesign keyboard
- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Apple Desktop Mouse 11

Clock/Calendar

- CMOS customer chip and battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.
- Third-party options provide alternative input and output devices

Electrical Requirements

- 110 - 240v, 50 - 60 Hz
- Power consumption 125 watts
- EPA Energy Star compliant

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height: 17.5 in. (44.5 cm)
- Width: 15.1 in. (38.3 cm)
- Depth: 16.0 in. (40.6 cm)
- Weight: 47 lb. (21.15 kg)

Operating Environment

- 10°C to 40° C (50°F to 104°F)

System Software Requirements

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundles

=====

Begin_Table

Macintosh Performa 5200CD

- | | |
|-----------------------|-------------------------------------|
| • At Ease | • MacLinkPlus/Easy Open Translators |
| • ClarisWorks | • American Heritage Dictionary |
| • Quicken | • ClickArt Performa Collection |
| • Global Village Tour | • Megaphone for Performa |
| • MacGALLERY Clip Art | • Newton Tour |
| • Global Fax software | |

Macintosh Performa 5215CD - U.S.

- | | |
|-----------------------|-------------------------------------|
| • At Ease | • MacLinkPlus/Easy Open Translators |
| • ClarisWorks | • American Heritage Dictionary |
| • Quicken | • ClickArt Performa Collection |
| • Personal Assist | • Megaphone for Performa |
| • MacGALLERY Clip Art | • Newton Tour |
| • Global Fax software | • Global Village Tour |
| • Power Pete | • Widget Workshop |
| • Mangia | • Virex |
| • Espresso | • WealthBuilder |
| • Fine Artist | • MacTess Home Learning Software |
| • The Writing Center | |

Macintosh Performa 5215CD - French

- | | |
|------------------------|--------------------------------|
| • System 7.5 (French) | • ClickArt Performa Collection |
| • ClarisWorks (French) | • KidWorks 2 |
| • Quicken | • Spectre |
| • At Ease | • Claris Organizer |
| • MacGALLERY Clip Art | |

End_Table

CD bundles

=====

Macintosh Performa 5200CD

- 1995 Grolier's Multimedia Encyclopedia
- Electronic Arts 3D Atlas

Macintosh Performa 5215CD - U.S.

- Club KidSoft
- Thinkin Things 2
- My First Incredible Amazing Dictionary
- Smithsonian's America
- The Family Doctor
- Professor Piccolo

Macintosh Performa 5215CD - French

- Grolier Encyclopedia
- Microsoft Dinosaurs
- 3D Atlas
- The Family Doctor
- Rosetta Stone
- Marie Victorin
- Leonardo the Inventor
- Nikoli's Trains
- Les Voyages de Jacques Cartier

Notes:

*The Macintosh Performa 5200CD has a 790 MB IDE hard drive; the Macintosh Performa 5215CD has a 1 GB IDE hard drive.

**The modem serial port is disabled with an internal modem installed in the Communications Slot.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

18 Oct 1996 - Added French software configuration for 5215.

16 Oct 1995 - Removed keyword.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18146



Tech Info Library

MAE: Problems Using MS-DOS or Solaris Disks (7/95)

Revised: 7/12/95
Security: Everyone

MAE: Problems Using MS-DOS or Solaris Disks (7/95)

Article Created: 12 July 1995

TOPIC -----

I am having difficulty mounting or reformatting MS-DOS or Solaris disks on my Sun Workstation running MAE.

DISCUSSION -----

If you insert a floppy disk formatted for MS-DOS or Solaris into a Sun workstation and try to mount it in MAE by clicking the Mount Floppy/CD button, MAE displays an alert box. The alert box appears because the Solaris file manager mounts the floppy disk before MAE has the opportunity to mount it preventing MAE from accessing the floppy disk. The icon for the floppy disk appears on your Solaris desktop. You can not reformat MS-DOS disks as Macintosh disks, and can not use them on the MAE desktop.

You have several options for dealing with this situation:

- If you want to use the files on the disk, the contents of the disk will show up as UNIX files in /floppy in your Solaris file system.
- If you do not want to use the files on the disk, and you want to format it as a Macintosh disk, you can eject the disk, insert it into a Macintosh computer, and reformat it as a Macintosh disk.
- If you do not want to use the files on the disk, and you want to format it as a UNIX disk, you can try to reformat the disk on a UNIX workstation that is not running the Solaris File Manager.

Support Information Services

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Tech Info Library Article Number:18147



Tech Info Library

PowerBook 500 Series: Global Village 2.5/PCMCIA Conflict (5/96)

Revised: 5/13/96
Security: Everyone

PowerBook 500 Series: Global Village 2.5/PCMCIA Conflict (5/96)

Article Created: 28 June 1995
Article Reviewed/Updated: 13 May 1996

TOPIC -----

I have a PowerBook 500 series computer. I just installed the Global Village PowerPort 2.5 for 500 & Duo software. Since I installed this software I have been getting a -29 error during startup and the PowerPort software has not been loading. This only happens when I have the PCMCIA Expansion Module installed. It happens even if the PCMCIA cage is empty. What is wrong?

DISCUSSION -----

This issue is caused by lack of memory available for the PCMCIA Expansion Module drivers when they load during startup. Installing Network Software Installer (NSI) 1.5 corrects the problem. NSI 1.5 causes the drivers to load differently. After you install NSI 1.5 the conflict will no longer occur.

You should also install the latest version of the Global Village software for the PowerBook 500 & 2300 series (PP500Duo 2.5.5) It can be downloaded from the WWW at FTP.globalvillage.com/pub/software/mac/.

These articles can help you locate the NSI 1.5 software update mentioned here:

- "Where To Find Apple Software Updates"
Lists online services for "free" Apple software updates.
- "Obtaining Apple Product Support in the USA"
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:
13 May 1996 - Added info about new Global Village software.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18148



Tech Info Library

PowerBook 200 Series: Type III Battery and System 7.5.1 (9/95)

Revised: 9/26/95
Security: Everyone

PowerBook 200 Series: Type III Battery and System 7.5.1 (9/95)

=====

Article Created: 22 June 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

I have a Macintosh PowerBook Duo (200 series). Since I installed the System 7.5 Update 1.0, the external recharger gives a red light when I try to charge a Type III battery. This occurs even after following the instructions for loading the proper power management code into the charger. This happened with a brand new battery.

DISCUSSION -----

Resolution

You need to install the Type III battery extension into the System folder. Do not remove this extension even after you have installed System 7.5 and the System 7.5 Update 1.0. The extension is on a disk called Battery Tools, which ships with the Type III battery.

Background

When the System 7.5 Update 1.0 extension loads, it replaces the PG&E (battery management) code. This PG&E code then reloads to the external battery charger. Because of this, the external recharger does not recognize the Type III batteries and you get the red light. However, the batteries charge fine in the computer itself.

Conclusion

You need to use the Type III Battery extension to get the external charger to work with System Software 7.5.1 (System 7.5 plus the System 7.5 Update 1.0) and Type III batteries.

These articles can help you locate the software (Type III Battery extension) mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

This article was published in the "Information Alley":
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Article Change History:
26 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18149



Tech Info Library

Apple HD SC Setup: How to Initialize an Apple Hard Drive (9/95)

Revised: 9/26/95
Security: Everyone

Apple HD SC Setup: How to Initialize an Apple Hard Drive (9/95)

Article Created: 10 July 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

This article describes what to do if you run Disk First Aid and it finds a problem, but it says it cannot repair it. Before you decide that you need to reformat your hard drive, there are a few other things to check.

DISCUSSION -----

WARNING! You must back up all of your data before reformatting a hard drive because the formatting process deletes all data.

Verify Your Process
=====

You should first verify that you are running Disk First Aid correctly. You cannot repair the boot volume (the startup disk) with Disk First Aid. In other words, if you are started up from your hard drive, Disk First Aid cannot repair the problems with the hard drive until you restart your Macintosh computer from another startup disk. For Disk First Aid to be able to repair a volume, make sure you are starting up from any one of the following disks:

- The Disk Tools floppy disk which came with your computer
- A bootable floppy disk or CD-ROM which contains your current system software (correct System Enabler) and utility programs
- Any other bootable disk (floppy or hard) from which you can start up your computer and run Disk First Aid

Disk First Aid also cannot repair a disk on which it is located (basically, it cannot repair itself), or any disk on which File Sharing is active.

Run Disk First Aid

=====

Step 1

Start up from the Disk Tools disk or CD-ROM

Step 2

Open the Disk Tools disk or the Apple Macintosh CD. Apple Macintosh CD users should open the Utilities Folder.

Step 3

Double-click the Disk First Aid icon. Select the main hard drive's icon at the top of the Disk First Aid window.

Step 4

Click Verify. Disk First Aid checks your hard disk for any potential problems. If it finds a problem, click Repair. It attempts to fix the problem.

Step 5

When you are finished verifying the hard disk, choose Quit from the File menu to return to the desktop. If you get a message that states that Disk First Aid cannot repair the problems with your hard drive, you should reformat it.

Reformatting Using Apple HD SC Setup

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Step 1

Locate the Apple HD SC Setup application icon on the Disk Tools disk or CD-ROM and open it.

Step 2

If the "volume name" or the SCSI ID number shown does not belong to the hard disk you want to initialize, click the Drive button until the hard disk you want to initialize is the selected hard disk. The internal hard drive should be ID 0. Remember, you cannot initialize your current startup disk or the disk on which the Apple HD SC Setup program is located.

Step 3

When the SCSI ID number (and name, if any) of the hard disk you want to initialize is shown, click the Initialize button. A dialog appears in which you must confirm or cancel your decision to erase all the data on the drive.

Step 4

Click the Init button to initialize the hard disk. A message displays to update

you on the initialization process. If a message reports that initialization failed, begin the process again.

Step 5

In the dialog box that appears asking you to name the disk, type in the name you want and click OK.

Step 6

Click Quit when the message reports that initialization was successful.

Step 7

If initialization fails, you should have your hard drive checked by an authorized Apple Service Technician.

Non-Apple Hard Drives

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If you have a non-Apple hard drive, you will get a message that says, "Unable to find a suitable SCSI drive". The use of Apple HD SC Setup is supported for Apple hard disk drives only. HD SC Setup does not update the driver software on or reformat non-Apple drives. If you are using a non-Apple hard disk drive, you must use third party formatting software to reformat the drive. If you have a question about a specific third-party hard disk or driver version, contact the vendor.

It is important to note that the hard disk drives sold by Apple in some Macintosh computers have different firmware than the drives sold by various third-party vendors, even though the manufacturer of the mechanisms may be the same.

This firmware contains information that lets HD SC Setup determine the type and size of the drive it is reading. If HD SC Setup does not understand the information in the firmware of a third-party drive, it will not access the drive in any way.

CAUTION: A/UX USERS

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If you purchased a hard disk with the A/UX operating system installed on it, DO NOT initialize that disk; doing so erases A/UX. Refer to the instructions that came with the A/UX operating system before you proceed.

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26 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18150



Tech Info Library

Power Macintosh 7200 Series: Using a Microphone Read Me (8/95)

Revised: 8/4/95
Security: Everyone

Power Macintosh 7200 Series: Using a Microphone Read Me (8/95)

Article Created: 13 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article contains the Using a Microphone ReadMe file for the Power Macintosh 7200 series computers.

DISCUSSION -----

If the sound produced by your microphone is at mic-level, you can use the Sound control panel to turn on microphone amplification.

First you must install the Sound Input Amplification extension. Follow these steps:

Step 1

Drag the Sound Input Amplification icon to the System Folder on your hard disk. Do not open the System Folder.

Step 2

When a message appears asking if you want the file placed in the Extensions folder, click OK.

The amplification type for most standard microphones, which do not include pre-amplifiers, is mic-level. The Apple PlainTalk microphone has a pre-amplifier, and the sound it produces is at line-level. Other sources, such as CD and cassette tape players, also produce sound at line-level. (Refer to the material that came with your microphone if you are not sure whether or not it has a pre-amplifier.)

To choose an amplification type:

Step 1

Open the Sound control panel.

Step 2

Use the pop-up menu to choose Amplification.

Step 3

Click Microphone Amplification On.

Your choice takes effect immediately.

The Apple PlainTalk microphone comes with a pre-amplifier and produces sound at line-level. If you use this microphone, you can leave the Amplification setting at the default setting (Microphone Amplification Off).

For more information about these settings, open the Sound control panel, choose Amplification from the pop-up menu, and turn on Balloon Help.

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Article Change History:

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library

Power Macintosh 7200 Series: Pointer Mode Read Me (8/95)

Revised: 8/4/95
Security: Everyone

Power Macintosh 7200 Series: Pointer Mode Read Me (8/95)

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Article Created: 13 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article contains the Pointer Mode Read Me file for the Power Macintosh 7200 series computers.

DISCUSSION -----

Including the Pointer in Screen Captures

If you take a screen shot and the pointer does not appear in the captured graphic, you can use the Pointer Mode control panel to ensure that the screen-capture program includes the pointer.

To install the Pointer Mode control panel, follow these steps:

1. Drag the Pointer Mode control panel icon to the System Folder icon on your hard disk (do not open the System Folder).
2. When a message appears asking if you want the control panel placed in the Control Panels folder, click OK. Your computer recognizes that this is a control panel and automatically places it in the Control Panels folder.

To use the Pointer Mode control panel:

1. Open the Apple menu and choose Control Panels.
2. Double-click the Pointer Mode control panel to open it.
3. Click the checkbox to set the pointer to standard mode.

If you find that the pointer flashes a lot when you place it over graphics, you may want to use the Pointer Mode control panel to turn off standard mode.

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Article Change History:

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18152



Tech Info Library

Open Transport: Networking Read Me (11/95)

Revised: 1/4/96
Security: Everyone

Open Transport: Networking Read Me (11/95)

Article Created: 13 July 1995
Article Reviewed/Updated: 15 November 1995

TOPIC -----

The following article is the ReadMe file for Open Transport, which is included on the Power Macintosh 7200 and 9500 series computers.

DISCUSSION -----

About Open Transport Networking

MacTCP

If you have problems with TCP/IP application after installing new networking software, open the Control Panels folder and look for the MacTCP control panel. If one is there, remove it from the Control Panels folder and restart your computer. Each time you install new networking software, you may want to verify whether or not the software's installer also installed MacTCP, and follow this procedure.

Application Compatibility Comments

-
- FTPd: Application currently is experiencing sporadic failures with TCP/IP MacTCP compatibility. These failures are rare and generally do not result in loss of data or other problems.
 - MacTCP Watcher, TCP/Connect II, MacTCP Switcher, and Anarchie are applications that are known to be incompatible with Open Transport. Developers are revising their products to be compatible with Open Transport.
 - Timbuktu works only with AppleTalk using Open Transport.
 - Eudora: Open Transport supports commercial version 2.11 and shareware version 1.5.1 of Eudora.

- FileMaker Pro TCP/IP networking throughput is noticeably slower than with classic MacTCP.
- NFS/Share for large file transfers must have a blocksize of 16K or smaller.

TCP/IP LAP (Link Access Protocol) Support Caveats

- Only the following MacTCP Link Access Modules are supported: "InterSLIP", "InterPPP", "InterPPP II", "TCP/IP PPP", "MacSLIP", and "MacPPP".
- Open Transport does not support SLIP and/or PPP connections occurring automatically when the networking application is executed with the currently available MacTCP Link Access Modules (e.g. MacPPP, InterSLIP, InterPPP, MacSlip). SLIP/PPP connections must be started up using the 3rd-party-supplied control panel before running the TCP/IP application.
- InterSLIP: Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.
- InterPPP 1.2.9: May crash when receiving a large graphic file via HTML readers.
- MacSLIP 2.0.6: Connect at System Startup doesn't work.
- MacPPP: MacPPP versions 2.0.1, 2.0.1 cm4, and 2.1 SD exhibit incompatibilities with Open Transport in opening connections. Future versions (e.g. MacPPP 2.2.0) will address this incompatibility. The MacPPP "Open" button does not work; the only way to open a connection is by opening a TCP/IP application. However, Open Transport might time-out before the completion of the connection so that it cannot get the correct IP address from the LAP. After disconnecting MacPPP, you must restart your Macintosh in order to connect again.
- Once a TCP/IP application is opened over a SLIP or PPP LAP, you cannot use another SLIP or PPP LAP without restarting the Macintosh.
- When a SLIP or PPP LAP is selected in the TCP/IP control panel, and "Manually" is selected in the Configure pop-up menu, the value of the IP address entered in this control panel is ignored by Open Transport. If you are assigned a static IP address by your SLIP or PPP provider, you should set it in the LAP configuration program. If your IP address is assigned dynamically, you should configure the LAP configuration program for dynamic addressing.

PowerShare Mail Server

There is a known compatibility problem between Open Transport and version 1.0 of the PowerShare Mail Server. If you set up the PowerTalk Universal Mailbox to read mail on the same machine on which the PowerShare Mail Server is running, the Mail Server may crash some time later, usually on shutdown. The workaround is to use another machine to read mail. This problem will be fixed in PowerShare Collaboration Servers version 1.1.

Article Change History:

15 Nov 1995 - Correct InterSLIP information.

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18153



Tech Info Library

Power Macintosh 7200 and 9500 Series: Read Me (4/97)

Revised: 4/29/97
Security: Everyone

Power Macintosh 7200 and 9500 Series: Read Me (4/97)

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Article Created: 13 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

The following article is the ReadMe file for the Power Macintosh 7200 and 9500 series computers.

DISCUSSION -----

Important Information About Your Power Macintosh 7200 or 9500

CONTENTS
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Tips

- Apple Personal Diagnostics
- AppleShare Server Software
- Energy Saver Control Panel (Power Macintosh 7200 only)
- Installing Acrobat Reader Software from a Bootable CD-ROM
- Japanese and Chinese Language Kits
- Pointer Mode Control Panel (Power Macintosh 7200 only)
- Reconnecting to a Server
- Software for the GeoPort Telecom Adapter
- StyleWriter and StyleWriter II Printers
- Using a Microphone (Power Macintosh 7200 only)
- Using MIDI Products

Important Information About Document Auto-Save (Power Macintosh 7200 Only)

- Compatibility with Your Applications
- Other Document-Saving Products
- Applications That Auto-Save
- RAM Disks
- Self-Dismissing Dialogs
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- Apple File Exchange and Macintosh PC Exchange
- AutoDoubler
- Compressed PC Disks and Files
- Working With Disks Containing Multiple Partitions
- Working With DOS-Format SCSI Removable Media Devices
- Working With DOS-Format SCSI Hard Disk Drives
- Tips and Problems

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- AppleShare Displays Incorrect Information for Large Drives
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- Printing with Apple PhotoFlash
- QuarkXPress
- Screen Flashes at Startup
- The Assistant Toolbox and Non-Networked Printers
- Using a RAM Disk

Tips

====

Apple Personal Diagnostics

To use Apple Personal Diagnostics (APD) on this Power Macintosh computer, you should upgrade to APD v1.1.3 or greater. An upgrade patch for owners of APD v1.1 and APD v1.1.1 is available.

If you run the Logic Board tests in APD v1.1, your computer may freeze and need to be restarted; or APD v1.1 may falsely report a logic board error when none has actually occurred. APD v1.1.1 and v1.1.3 correct these Logic Board test errors. APD v1.1.3 also corrects a reporting error regarding processor speed in the System Info/Basic Info screen.

...Note: This note is not in the original Read Me file.

Apple Personal Diagnostics 1.1.3 is not supported on the Power Macintosh 7200 computer. As of the modification date of this article, the Power Macintosh 9500 is the latest released computer supported by Apple Personal Diagnostics. Apple has no plans to support the Power Macintosh 7200 in future releases of APD....

AppleShare Server Software

We do not recommend using version 4.1 or earlier of AppleShare Server Software on the Power Macintosh 7200 & 9500. Version 4.1 is intended only for Apple

Workgroup Servers, and earlier versions will not work.

Energy Saver Control Panel (Power Macintosh 7200 Only)

Do not remove the Energy Saver extension from the Extensions folder. If you remove it, you cannot turn off any energy-saving features the control panel is currently set to provide, such as automatic sleep or shutdown.

Installing Acrobat Reader Software from the Bootable CD-ROM

When you install Acrobat Reader 2.0.1 software onto your hard drive, make sure that the bootable CD-ROM disk that came with your Power Macintosh is not the startup disk. Then open the appropriate Installer to install Acrobat Reader 2.0.1 software.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your Power Macintosh, make sure you use version 1.2 or later. In the United States, you can obtain an upgrade, with proof of purchase, by calling the Apple Order Center. Customers outside the US should contact their local Apple representative.

To use the Chinese Language Kit with your Power Macintosh, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, first install the WorldScript Updater 1.0. Then install the Chinese Language Kit version 1.1. Finally, install the Chinese Language Kit Updater to update your software to version 1.1.1.

Pointer Mode Control Panel (Power Macintosh 7200 Only)

The Pointer Mode control panel lets you control the way the mouse pointer works with certain types of graphics software and screen capture programs. For more information, read the document titled "Pointer Mode Read Me" in the Pointer Mode folder (inside the Apple Extras folder).

Reconnecting to a Server

If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu once power is restored, you get a message that the disk could not be opened because you do not have enough access privileges. Before you can reconnect to the server, you must close any open files. If you need to save work in a file, use "Save As..." to save it on a different disk.

Software for the GeoPort Telecom Adapter

For Power Macintosh 7200 series, 7500/100, 8500/120, and 9500 series computers, the software necessary to use the GeoPort Telecom Adapter is Apple Telecom software version 2.1 or later. Apple Telecom 2.1 is included in the Apple Telecom folder within the Apple Extras folder, and on the Power Macintosh CD.

The Apple Telecom folder also contains MegaPhone™ 1.0.2, a screen-based telephone application that supports the telephone capabilities of the Apple

Telecom 2.1 software, including dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information.

If you previously purchased the Apple Telecom 2.0 upgrade package or a Geoport Telecom Adapter Kit that included Apple Telecom 2.0, you also received SITcomm SE/GTA (a terminal emulation program). SITcomm is compatible with the Power Macintosh 7200, 7500, 8500, and 9500 series.

If you are using a GeoPort Telecom Adapter with Apple Telecom 2.1 software, be sure to disable LocalTalk. To do this, disconnect any devices attached to the printer port (except serial printers, which can remain attached).

Apple Telecom 2.2 is available as part of the GeoPort Telecom Adapter Kit, which can be purchased separately. The kit includes MegaPhone as well as SITcomm SE/GTA. Apple Telecom 2.2 along with MegaPhone (but without SITcomm) will also be available as a free upgrade on CompuServe, America Online, and all Apple Internet sites.

StyleWriter and StyleWriter II Printers

If you use a StyleWriter or StyleWriter II printer with your Power Macintosh, use the StyleWriter 1200 printer software (called a "printer driver") that's already installed on this computer with System 7.5.2. Do not install your older StyleWriter driver; it is not compatible with Power Macintosh computers. For more information about choosing a printer and printing, choose Macintosh Guide from the Guide (question mark) menu, and choose the Printing & Fonts topic area.

Using a Microphone (Power Macintosh 7200 Only)

If you attach a microphone to your Power Macintosh 7200, read the document titled "Using a Microphone" in the Sound-Input Level folder (inside the Apple Extras folder). This document explains how to use the Sound control panel to choose the amplification type appropriate for your microphone.

Using MIDI Products

MIDI users may experience slight performance issues due to the new serial architecture of this computer. MIDI Drivers written specifically for this new technology are currently being developed which will resolve these issues. Please check with the distributor of your MIDI product about the availability and necessity of an update compatible with the serial architecture of the Power Macintosh 7200 & 9500.

Important Information About Document Auto-Save (Power Macintosh 7200 only)

=====

The Energy Saver control panel that comes installed on the Power Macintosh 7200 contains a feature named "Document Auto-Save". The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Below are some helpful tips for working with Document Auto-Save. For more information about Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide (question mark) menu, and choose the Power & Energy Saving topic area.

Compatibility with Your Applications

Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes that ask the user to save changes to new or modified documents. When an application is incompatible with Document Auto-Save, it will either not automatically quit, or it displays alerts or dialog boxes which Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave no documents open that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel to sleep instead of shutting down when unsaved documents are open.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Applications That Auto-Save

Document Auto-Save performs more quickly and efficiently if you have enabled auto-saving in the applications that support it. For example, Microsoft Word has an option available that will save your changes at pre-determined time intervals. It is recommended that you take advantage of application auto-saving whenever possible.

RAM Disks

Do not choose a folder on a RAM disk for auto-saving untitled documents unless you have installed a product which preserves the RAM disk contents before shutdown. Otherwise, your auto-saved documents will be lost when an idle or scheduled shutdown occurs.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Stickies Windows

If you are using the Document Auto-Save feature of the Energy Saver control panel, and you have any Stickies notes open during an idle or scheduled shutdown, an extra carriage return is inserted in the active (frontmost) Stickies note window. No other Stickies windows will be affected.

Important Information About Macintosh PC Exchange

Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with Macintosh PC Exchange and should not be used while PC Exchange is installed. Version 2.0 of PC Exchange contains an easier method for accessing DOS and Apple II ProDOS disks on a Macintosh.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Macintosh, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the Macintosh-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both Macintosh- and DOS-format partitions, PC Exchange will only recognize the Macintosh partition. In addition, PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Macintosh-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Macintosh, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your Macintosh computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize SCSI hard disk drives, you must turn on the drive before you turn on your Macintosh.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

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- A "Sad Mac" icon may appear on your Macintosh screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your Macintosh.

- Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory may help you avoid running out of memory.

Your computer comes with virtual memory turned on. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems (such as your computer's responses seeming unusually slow) using certain application programs, you may want to turn off virtual memory. For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. Then click "How do I use hard disk space as memory?" and "How do I manage Power Macintosh memory?"

For best performance, try setting virtual memory to no more than 150% of the memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive). A maximum of 1 gigabyte (GB) of disk space can be used as virtual memory. If your hard disk has additional disk space available, the amount over 1 GB cannot be used as virtual memory.

To improve performance, you can also add memory (RAM) to your computer. See the user's manual that came with your computer for more information.

Troubleshooting

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AppleShare Displays Incorrect Information for Large Drives

If you use File Sharing to connect to a disk attached to another computer, and the shared disk is larger than 2 gigabytes (GB), the Get Info box for that disk shows an incorrect size. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

Incorrect Balloons for Guide File Icons

System 7.5.2 includes Apple Guide documents, which provide the on-screen instructions and other information that help you use your computer. However, if you turn on Balloon Help—by choosing Show Balloons from the Guide (question mark) menu—and point to a Guide file icon (any icon with the Guide question mark

on it) on the hard disk, the balloon may give you the wrong information about where the file belongs or how to use it. To avoid being misled by incorrect balloons, follow the guidelines below:

- Leave Guide files where they are. Some Guide files (for example, the Guide file named "Macintosh Guide") belong in the Extensions folder. Other Guide files do not belong in the Extensions folder—and will not work if they are put there.
- Keep application programs that have Guide files in the same folder as the Guide file. For example, keep the file named "File Assistant Guide" in the same folder as the File Assistant program. If you move a Guide file that belongs with an application program, you won't be able to get help while using the program.

PowerTalk and PowerTalk Direct Dialup Mail

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Presenting QuickTime Movies at Double Size

Using MoviePlayer 2.0, you can play a movie at double (2X) size. You cannot present a movie (that is, play the movie on a second monitor) at double size. Presenting a movie at 2X size results in the MoviePlayer application quitting without warning.

••NOTE: This is not in the original ReadMe file.
The early releases of the Power Macintosh 7200 and 9500 shipped with MoviePlayer 1.0 installed on the hard drive.••

Printing With Apple PhotoFlash

If you have problems printing images with the PhotoFlash software, make sure that you choose a printer in the Chooser before you choose the Print command from the File menu.

QuarkXPress

To use QuarkXPress with System 7.5 or later on a Power Macintosh, you must upgrade to QuarkXPress version 3.3.1 or later.

Screen Flashes at Startup

You may see the screen flash during startup of your Power Macintosh. The flash is normal. It occurs because software needed to use the monitor is being loaded.

The Assistant Toolbox and Non-Networked Printers

The Print Later option (LaterLaser) of the Assistant Toolbox extension is not compatible with some non-networked PostScript printers. If you have the Assistant Toolbox extension installed on your computer and you want to print

with a non-networked printer, you may want to turn off the Assistant Toolbox extension.

For example, if you want to print with a LaserWriter Select 310 printer, you need to turn off the Assistant Toolbox extension (in the Extensions Manager control panel) to be able to use the Print Later option.

Using a RAM disk

If your computer has 8 megabytes of RAM (random access memory), and you wish to set up a RAM disk, allocate no more than 500K to the RAM disk. Otherwise, when you start your Macintosh you may see the message, "This disk is unreadable by this Macintosh. Do you want to initialize the disk?" (Important: This message applies to the RAM disk only. Your hard disk will not be initialized.)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

27 May 1996 - Updated for technical accuracy.

09 Jan 1996 - Added note about Apple Personal Diagnostics and 7200 support.

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Tech Info Library Article Number:18155



Tech Info Library

Macintosh Performa 5200CD Series: Description (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 5200CD Series: Description (4/97)

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Article Created: 13 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 5200 series computers.

The following computers are in the Macintosh Performa 5200 series: Performa 5200 and Performa 5215.

DISCUSSION -----

The Macintosh Performa 5200CD combines the ultrahigh performance of PowerPC technology with sound, video, and CD-ROM multimedia capabilities in an all-in-one system that's easy to set up.

And it's a Macintosh, so you are assured that it runs easy-to-use Macintosh software. It also runs applications accelerated for Power Macintosh computers at two to six times the speed of Macintosh computers based on the 68040 chip.

This multimedia computer supports up to 32,000 colors on its built-in 15-inch color display (12.8-inch viewable image size), and includes a CD-ROM player for both multimedia and audio CD sound that can be played using its stereo speakers or headphones.

Its multimedia options offer new ways to interact with information. You can connect to an external video source such as a VCR or camcorder to cut and paste video images. You can also add a connection to a large-screen TV or LCD projection panel for displaying presentations. And you can add an internal TV tuner—with a remote control—to view television channels in a window on your display.

Multiple ports allow you to connect it to peripherals such as external disk drives or scanners. And a flexible communications slot makes it easy to add a modem or an Ethernet networking card.

Based on the fast 75-megahertz PowerPC 603 microprocessor, the Macintosh Performa 5200CD comes with 8 megabytes of RAM, expandable to 64 megabytes. Its 500-megabyte hard disk offers ample room for multimedia storage.

The affordable Macintosh Performa 5200CD includes standard features that are expensive add-ons for other com-puters. These include 16-bit CD stereo sound and AppleTalk networking for access to printers, electronic mail, and file sharing.

Incredibly capable, yet amazingly affordable, the Macintosh Performa 5200CD will bring high-performance multimedia computing within the reach of people in schools, offices, and homes.

Power and speed

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus

Memory

- 8 MB or 16 MB RAM expandable up to 64 MB
- 1 MB DRAM frame buffer (separate from RAM) for video memory, not expandable

Display

- 15" flat square shadow mask CRT
- .28 mm dot pitch
- Resolutions from 640x480 to 832x624

Expansion

- Comes with built-in ports for hard drives, printers, scanners, and modems
- Supports most processor-direct cards compatible with Macintosh Quadra 605 and Macintosh LC series of computers via an internal expansion slot
- Includes a communications slot with a 14.4 Kbps fax send/receive Global Village IIv modem installed
- Has video slot for NTSC, PAL, and SECAM video-input card
- Includes expansion bay for television tuner
- External drop box provides expansion for NTSC or PAL video output

Audio System

- Stereo 16-bit sound capable of driving stereo headphones or other stereo equipment through the sound jacks
- Stereo 16-bit CD playback
- Integrated stereo speakers
- Built-in microphone

System Software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Begin_Table

Third-party software bundles

=====

Macintosh Performa 5200CD

- At Ease
- ClarisWorks
- Quicken
- Newton Tour
- MacGallery Clip Art
- Global Fax software
- MacLinkPlus/Easy Open Translators
- American Heritage Dictionary
- ClickArt Performa Collection
- Megaphone for Performa
- Global Village Tour

Macintosh Performa 5215CD

- At Ease
- ClarisWorks
- Quicken
- Personal Assist
- MacGallery Clip Art
- Global Fax software
- Power Pete
- Mangia
- Espresso
- Fine Artist
- The Writing Center
- MacLinkPlus/Easy Open Translators
- American Heritage Dictionary
- ClickArt Performa Collection
- Megaphone for Performa
- Newton Tour
- Global Village Tour
- Widget Workshop
- Virex
- WealthBuilder
- MacTess Home Learning Software

CD bundles

=====

Macintosh Performa 5200CD

- 1995 Grolier's Multimedia Encyclopedia
- Electronic Arts 3D Atlas

Macintosh Performa 5215CD

- Club KidSoft
- Thinkin Things 2
- My First Incredible Amazing Dictionary
- Smithsonian's America
- The Family Doctor
- Professor Piccolo

End_Table

Configurations and Ordering Information

=====

Macintosh Performa 5200CD 8/790

- Macintosh Performa 5200 computer with 8 MB of RAM, 1 MB of video memory built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 790 MB IDE internal hard disk drive
- Built-in 15 inch display
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs

- AppleDesign Keyboard
- Order No. M4110LL/A

Macintosh Performa 5215CD 8/1 GB

-
- Macintosh Performa 5215CD computer with 8 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1 GB IDE hard disk drive
 - Global Village internal 14.4 Kbps fax/send modem
 - Built-in 15 inch display
 - AppleDesign Keyboard
 - Order No. M4107LL/A

Optional Enhancements

-
- Apple Video System

Order No. M2894LL/C

- Apple TV/Video System

Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Apple Ethernet CS Thin Coax Card

Order No. M2708ZLL/A

- Apple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

- Apple Ethernet CS AAUI Card

Order No. M3066Z/A

- Apple MPEG Media System

Order No. M4243LL/A

Note:

Product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

05 Oct 1995 - Updated video option part numbers.

14 Aug 1995 - Added Internet table formatting convention.

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Tech Info Library Article Number:18156



Tech Info Library

At Ease: Unable To Access The Documents Folder Message (9/95)

Revised: 9/27/95
Security: Everyone

At Ease: Unable To Access The Documents Folder Message (9/95)

=====

Article Created: 14 August 1995
Article Reviewed/Updated: 27 September 1995

TOPIC -----

I am running At Ease for Workgroups and using a server as the At Ease disk. When I turn on any of my client Macintosh computers running At Ease for Workgroups, I get the message "Unable to access the documents folder on the At Ease disk. Please contact your server's administrator." The server shows up on the network, but no machine in the workgroup is able to find the documents folder.

DISCUSSION -----

This message is indicating that At Ease cannot find the server, since the server does show up on the network, the preferences file for At Ease has become corrupted.

You can correct this by following these steps:

Step 1

Restart one of your client computers while holding down the Shift key until you see the message, "Welcome to Macintosh, Extensions off".

Step 2

Enter the administrator's password when At Ease asks you to do so.

Step 3

Drag the At Ease Prefs file from the At Ease folder in your System Folder to the Trash.

Step 4

Choose Restart from the Special menu.

Step 5

On the server you are using as the At Ease disk, open the At Ease folder.

Step 6

Drag the At Ease Prefs file to the Trash.

Step 7

On the client machine, mount the At Ease server volume.

Step 8

Launch At Ease Setup.

Step 9

If you are using At Ease 2.0, 2.0.1 or 2.0.3, under Options Choose "At Ease Disk..."

Click the radio button next to Mounted Server, select the mounted volume, click Okay.

If you are using At Ease 3.0, under Network choose At Ease Server, click the button next to Mounted Server, select the mounted volume, click Okay.

You next need to update all the other computers on the network using the Remote Administration features of At Ease. If the computers you wish to update are unable to launch At Ease, follow the above procedure omitting steps 5 and 6.

If some of your At Ease client machines are able to launch into At Ease, update them using the following procedure. From within At Ease Setup on the first client you just reconfigured, follow these steps:

If you are using At Ease 2.0, 2.0.1, or 2.0.3

=====

Step 1

Under Options choose Update Computers... A dialogue box appears with a list of all the computers running At Ease with Allow Remote Administration checked in the Security window under the Options menu.

Step 2

Select each computer you want to update, click Okay.

If you are using At Ease 3.0

=====

Step 1

Under Network choose At Ease Computers, a dialogue box appears with a list of all the computers running At Ease with Allow Remote Administration selected in the User Settings window under the Security menu.

Step 2

Click each computer you want to update, click Okay.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 14

Article Change History:

27 Sep 1995 - Added Info Alley information; updated article.
30 Aug 1995 - Corrected minor typo.
28 Aug 1995 - Corrected minor typo.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18157



Tech Info Library

MAE: Freezes in AutoContent Wizard in PowerPoint 4.0 (7/95)

Revised: 7/13/95
Security: Everyone

MAE: Freezes in AutoContent Wizard in PowerPoint 4.0 (7/95)

=====

Article Created: 13 July 1995

TOPIC -----

I am using Office 4.2.1 on a SPARC running MAE 2.0. When I launch the Wizard software within PowerPoint 4.0, MAE locks up.

I increased the PowerPoint's memory to 3.5 MB and the Wizard starts to load but then gives an error message that the Cue Cards did not load.

DISCUSSION -----

Engineering has been able to duplicate the similar hanging situation at the final step after choosing the "AutoContent Wizard" way for creating a new presentation.

Engineering has also encountered the following error message if the Microsoft Office Manager control panel was placed in the Control Panels folder:

"Microsoft Office Manager could not start due to a memory error."

We did not get the "Cue Cards did not load..." message though.

Engineering is investigating this compatibility problem.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18159



Tech Info Library

QuickDraw GX: Paper Type Editor (7/95)

Revised: 7/13/95
Security: Everyone

QuickDraw GX: Paper Type Editor (7/95)

=====

Article Created: 13 July 1995

TOPIC -----

I am having trouble creating paper types using Paper Type Editor 1.0.2, with QuickDraw GX 1.1.2. When I go to select LWP 630 (change from Any Printer) from Printer option, I get the message "Editor cannot switch printer settings: Printer doesn't contain any paper types." Why is this happening?

DISCUSSION -----

This is a known issue identified in the original version of the Paper Type Editor. There were plans to allow individual printers to have paper types, however, this feature was never implemented. The Paper Type Editor was never changed to reflect this, and so the reason for the message "...Printer doesn't contain any paper types" when selecting a specific printer.

The Paper Type Editor will be revised (in the next major release of QuickDraw GX) so that specific printers WILL NOT show up in the list. In the interim, the simple workaround is to ignore individual printers and select "LaserWriter GX" for any network LaserWriter printer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18161



Tech Info Library

QuickTime VR: Processing Time To Create VR Movie (7/95)

Revised: 7/13/95
Security: Everyone

QuickTime VR: Processing Time To Create VR Movie (7/95)

Article Created: 13 July 1995

TOPIC -----

This article illustrates some typical steps you would take to create a QuickTime VR movie and the processing time involved.

DISCUSSION -----

Apple has done some testing to help you get an idea of the performance and time needed for post production work on a VR project. Here are some typical times for the steps that you perform creating a VR movie.

The estimated times for each command are from a Power Mac 8100 and a 33 MHz RC68040. The numbers indicate the native tools really benefit the Power Macintosh user.

.	Processing time required on:	
VR Action	8100 Power Mac	33 MHz 040 w/FPU
=====	=====	=====

Stitching 2 PICTs together	2 Minutes	20 Minutes
----------------------------	-----------	------------

You could have as many as 18 stitches for one panorama, typically 12 for a 15-18 mm lens.

Dicing one panorama node	2 Minutes	20 Minutes
--------------------------	-----------	------------

Time is PER DICE, one node might require 24 dices.

Linking	2 Minutes	20 Minutes
---------	-----------	------------

To link nodes to nodes, time PER LINK. You need to link twice to move back and forth between nodes.

Compression per node	2 Minutes	20 Minutes
----------------------	-----------	------------

POWER MAC EXAMPLE:

If you were stitching 12 PICTs for a single node, that computation could take 24 minutes for the entire node.

If you then diced that node, it would probably take 48 minutes.

For linking this node to another, 4 minutes.

Compression of this node, 2 minutes.

The grand total for post production time on one node is around 78 minutes. This doesn't include planning, shooting, or learning the tools.

A QuickTime VR movie of rotation around a stationery object would require similar steps to those shown above, but may include many more shots. To do a complete rotation of an object (24 shots around the object at 0°, 24 shots at +10°, 24 shots at +20°, and so on) the movie would consist of over 600 PICTs.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18162



Tech Info Library

Macintosh Performa 631CD: Technical Specifications (11/95)

Revised: 5/2/97
Security: Everyone

Macintosh Performa 631CD: Technical Specifications (11/95)

Article Created: 13 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 631CD computer.

DISCUSSION -----

Microprocessor

- 66/33-MHz Motorola 68LC040 with 32-bit data bus
(66-MHz processor/33-MHz data bus)

Memory

- 8 MB RAM, expandable to 52 MB
- RAM expansion via two 72-pin SIMM sockets
(one double-sided SIMM can take up to 32 MB; one single-sided SIMM can take up to 16 MB)

Disk Drives

- One built-in Apple SuperDrive 1.4MB floppy disk drive
- One internal 500 MB IDE type hard disk
- AppleCD 300i Plus CD-ROM player

Video Display

- Comes with Apple Performa Plus Display: 14-inch RGB Color Monitor color display, 640-pixel by 480-pixel resolution, 0.28-mm dot pitch, noninterlaced
- Supports Apple displays of up to 15 inches
- Works with a wide range of third-party VGA and SVGA displays
- 1MB DRAM display support, independent from system DRAM
- Standard 16-bit color for display of up to 32,768 colors on monitors of

up to 14 inches and on 15-inch monitors at 640- by 480-pixel resolution

- Standard 8-bit color for display of 256 colors on 15-inch monitors at 800-pixel by 600-pixel resolution

Modem

-
- Comes with TelePort/Gold II for Performa from Global Village Communications: 14,400-bps send and receive fax and 14,400-bps send and receive data.

Interfaces

-
- One Apple Desktop Bus (ADB) port supports a keyboard, mouse, and other devices
 - Two (RS-232/RS-422) serial ports
 - SCSI interface port for connecting up to five external peripheral devices
 - Internal expansion slot compatible with most Macintosh Performa 400 and 500 series, Macintosh Quadra 605, Macintosh LC II, LC III, LC 475, LC 520, and LC 575 processor-direct cards
 - Communications slot for future addition of either Ethernet card or 14.4-baud fax/modem card
 - Video slot for NTSC, PAL, and SECAM video-input card
 - Dedicated connector for internal TV tuner
 - One standard monitor port also supports connection to external video-out (NTSC or PAL) drop box

Audio capabilities

-
- 8-bit on-board Stereo sound output and mono sound in
 - Stereo 16-bit CD playback
 - One sound-in port
 - Front and rear headphone jacks

Networking

-
- Built-in AppleTalk port

Keyboard and Mouse

-
- AppleDesign Keyboard
 - Apple Desktop Bus Mouse II

Clock/Calendar

-
- Custom integrated circuit with long-life lithium battery

Disability Access

-
- CloseView, Easy Access, and the ability to substitute visual cue for beep included with system software. These built-in solutions and third-party options provide alternative input and output devices for people with disabilities.

Electrical Requirements

- 100-240 volts AC, 50-60 Hz
- Power: 45 W maximum, not including monitor

ADB Power Requirements

- 500ma maximum draw

Size and Weight

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32 cm)
- Depth: 16.5 in. (41.95 cm)
- Weight: 19 lb. (8.6 kg) with CD-ROM player
(varies based on internal devices installed)

Operating Environment

- Operating temperature 50° F to 104° F (10° C to 40° C)
- Storage temperature -40° F to 116.6° F (-40° C to 47° C)
- Relative Humidity 5% to 95% noncondensing
- Altitude Works below 10,000 feet (3048 m)

Software

=====

System software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundle

- At Ease
- ClarisWorks
- Click Art Performa Collection
- Crossword Wizard
- MacGallery Clip Art Treasure Pak
- MacLink Plus Easy Open T ranslators
- Quicken
- Spectre Challenger
- Spin Doctor Challenge
- The American Heritage
- The Writing Center
- Thinkin Things

CD bundle

- Grolier's Multimedia Encyclopedia
- TIME Almanac Reference Edition
- Electronic Arts 3D Atlas
- The Family Doctor

- Wacky Jack's CD Game Show
- Dole Five-a-Day Adventure
- Club KidSoft CD

Article Change History:

28 Apr 1997 - Removed out dated on line references.

29 Nov 1995 - Corrected minor typo.

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Tech Info Library Article Number:18163



Tech Info Library

Macintosh Performa 631CD: Description (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 631CD: Description (4/97)

=====

Article Created: 14 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 631CD computer.

DISCUSSION -----

Overview
=====

The Apple Macintosh Performa 631CD computer is one of the most affordable and flexible Apple multi-media system. It is upgradeable to take advantage of PowerPC technology, so it can bring you multimedia opportunities for years to come.

Packed in one box are the computer, display, keyboard, mouse, and fax/modem, as well as operating system software. In addition, the computer includes 14 useful home, education, and home-business software programs, and 7 valuable CD-ROM reference titles. Like all Macintosh computers, the Performa is very easy to learn about and use, and it runs thousands of Macintosh education, business, and multimedia programs.

The Performa 631CD also has advanced multimedia expansion options that offer new ways to interact with information. You can connect it to an external video source such as a VCR or camcorder to cut and paste video images. You can also add an option to connect your computer to a large-screen TV for displaying presentations. And you can add an internal TV tuner to view television channels in a window on your display.

This affordable computer includes many standard features that are expensive add-ons for other computers. It provides 16-bit CD stereo sound; support for Apple and third-party displays; and AppleTalk networking for access to printers, electronic mail, and file sharing. With its wealth of software, the Macintosh

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Performa 631CD computer adds up to expandable, flexible multimedia systems.

Features

=====

Complete system

- Ready to run, right out of the box
- Easy to set up, learn, and use
- Includes computer, color 14-inch display (11.9 inch diagonal viewable image size), keyboard, mouse, digital sound, and internal speaker all in one box
- Includes built-in, double-speed, tray-loading CD-ROM player
- Comes with 14.4K-bps external fax modem
- Requires no additional software or cables
- Includes energy-saving feature that reduces power consumption by 50 percent for EPA Energy Star compliance

Expansion

- Ready for PowerPC upgrade
- Comes with built-in ports for hard drives, printers, scanners, and modems
- Supports most processor-direct cards compatible with Macintosh Performa 400 and 500 series, and Macintosh LC computers via internal expansion slot
- Includes a communications slot for an Ethernet connection or 14.4K bps fax/data modem
- Has video slot for NTSC, PAL, and SECAM video-input cards
- Standard monitor port also provides expansion via external drop box for NTSC or PAL video output
- Includes connector for TV tuner

Power and speed

- 66/33-MHz Motorola 68LC040 with 32-bit data bus
(66-MHz processor/33-MHz data bus)

Memory

- 8 MB RAM expandable up to 52 MB

Audio System

- 8-bit on-board Stereo sound output and mono sound in
- Stereo 16-bit CD playback
- One sound-in port
- Front and rear headphone jacks

Software

=====

System software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundle

- At Ease
- ClarisWorks
- Click Art Performa Collection
- Crossword Wizard
- MacGallery Clip Art Treasure Pak
- MacLink Plus Easy Open Translators
- Quicken
- Spectre Challenger
- Spin Doctor Challenge
- The American Heritage
- The Writing Center
- Thinkin Things

CD bundle

- Grolier's Multimedia Encyclopedia
- TIME Almanac Reference Edition
- Electronic Arts 3D Atlas
- The Family Doctor
- Wacky Jack's CD Game Show
- Dole Five-a-Day Adventure
- Club KidSoft CD

Configurations and Ordering Information

Macintosh Performa 631CD 8/500

- Macintosh Performa 631 computer with 8 MB of RAM, 1 MB of video memory built-in AppleCD 300i internal double speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 500 MB IDE internal hard disk drive
- Performa Plus 14 Display
- Global Village external 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order N@LL/A

Optional Enhancements

- Apple Video System
- Order No. M2894LL/C

- Apple TV/Video System
- Order No. M2896LL/C

- Apple Presentation System
- Order No. M2895LL/A

- Apple Ethernet CS Thin Coax Card

Order No. M2708ZLL/A

- Apple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

- Apple Ethernet CS AAUI Card

Order No. M3066Z/A

- Apple MPEG Media System

Order No. M4243LL/A

Article Change History:

28 Apr 1997 - Removed out dated on line references.

05 Oct 1995 - Updated video option part numbers.

13 Sep 1995 - Minor correction on type of modem included.

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Tech Info Library Article Number:18164



Tech Info Library

Power Macintosh 9500: Worldscript Updater 1.0 Issue (8/95)

Revised: 8/31/95
Security: Everyone

Power Macintosh 9500: Worldscript Updater 1.0 Issue (8/95)

Article Created: 14 July 1995
Article Reviewed/Updated: 31 August 1995

TOPIC -----

I installed Chinese Language Kit (CLK) 1.1 and Chinese Language Kit Updater 1.1.1 on my Power Macintosh 9500/120 computer. Why doesn't it work?

DISCUSSION -----

WorldScript Updater 1.0 must be installed first for the Chinese Language Kit to work on the Power Macintosh 7200/7500/8500/9500 series of computers.

Installation Steps

You must perform the installation in the following order:

Step 1

Install WorldScript Updater 1.0

Step 2

Install Chinese Language Kit 1.1

Step 3

Install Chinese Language Kit Updater 1.1.1

If you install WorldScript Update 1.0 last, your System file could end up being corrupted. If this occurs, you need to perform a "clean install" of the System Software, then reinstall the preceding items in that order.

Additional Information

Refer to the Tech Info Library article titled "System 7.5: Clean Install Procedure" for clean install instructions or the article titled System 7.5 Clean Install in the "Information Alley" Volume I, Issue 18, Page 8.

This article was published in the "Information Alley":
Volume II. Issue 8, Page 11

Article Change History:

31 Aug 1995 - Added other PCI-based Macintosh information.

28 Aug 1995 - Updated from Info Alley.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18165



Tech Info Library

Macintosh Performa 6116CD: Description (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 6116CD: Description (4/97)

=====

Article Created: 14 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 6116CD computer.

DISCUSSION -----

Overview

=====

The Macintosh Performa 6116CD brings together the performance of Power PC technology with world class ease-of-set up and use and price/performance in a complete system. It is targeted at families and individuals looking for a complete high performance multimedia com-puter system. All systems include the CPU, monitor, fax modem, Apple Design Keyboard and Mouse as well as leading third party software applications.

In addition, the Macintosh Performa 6116CD with PowerPC Technology is bundled with 18 software applications to take advantage of Power Macintosh capabilities of two to six times the speed of previous Macintosh computers based on the 040 chip. It also supports MS-DOS and Windows applications when using SoftWindows software or when using an optional DOS Compatibility card.

Based on the 60-megahertz PowerPC 601 microprocessor co-developed by Apple, IBM, and Motorola, the Macintosh Performa 6116CD has built-in, floating-point math coprocessors and comes with a 700 MB hard disk with 8 megabytes of RAM, expandable to up to 72 megabytes in addition to a built in CD-ROM. It also provides on-board high-speed Ethernet support.

Additionally, the Performa 6116CD can easily be expanded as it includes eight built-in ports and one expansion slot.

This affordable computer includes an Apple 14" diagonal high-resolution color display along with a fast, Global Village 14.4k-bps modem, as well as speech-recognition, and text-to-speech capabilities that are built into the

computer. With an AV expansion kit the Macintosh Performa 6116CD can add the functionality of S-video and composite video input as well as output for use with televisions, video cameras, and video recorders. The Macintosh Performa 6116CD provides an affordable gateway to Power PC technology and the future of personal computing.

Features

=====

Fast, easy setup

- Simple to set up and learn; your system is ready to go the first time you turn it on
- Includes 14" color display (11.9 inch diagonal viewable image size), keyboard, mouse, digital sound, and internal speaker all in one box
- Built-in, double speed, tray-loading CD-ROM player
- Includes 14.4K-bps Global Village modem

Compatibility

- Runs Macintosh applications
- Reads Macintosh, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats

Communications

- GeoPort- and LocalTalk-compatible serial ports
- 16-bit stereo audio input and output
- Built-in AppleTalk networking
- Built-in Ethernet networking

Power and memory

- PowerPC 601 RISC microprocessor
- 8 MB of RAM standard, expandable to 72 MB

Audio System

- 16-bit stereo in and out
- Output port for stereo compact disc audio and stereo computer-generated sound.
- Input port for stereo sound input (supports 16-bit stereo audio)

System 7.5 software

- PC Exchange for reading and writing MS-DOS and Windows disks
- AppleScript for scripting in and between Macintosh applications
- QuickTime for working with video and sound as easily as text and graphics • TrueType fonts for outstanding results on the screen and the page
- Apple Guide

Third-party software bundle

- | | |
|--------------------------------------|---------------------------------|
| • At Ease | • American Heritage Dictionary |
| • ClarisWorks | • Quicken |
| • MacLink Plus/Easy Open Translators | • Click Art Performa Collection |
| • MacGallery Clip Art Treasure Pak | • Now Up-To-Date |

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- Now Contact
- Spin Doctor Challenge
- TelePort Modem Legend Tour
- Spectre Challenger
- TelePort Gold II for Mac Performa

CD bundle

- 3D Atlas
- Club KidSoft Sample
- The Family Doctor
- 1995 Groiler's MM Encyclopedia
- TIME Almanac Reference Edition
- Around the World in 80 Days

Configurations and Ordering Information

=====

Macintosh Performa 6116CD 8/700

- Macintosh Performa 6116 computer with 8 MB of RAM, built-in AppleCD 300 Plus internal double speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 700 MB internal hard disk drive
- Performa Plus 14 Display
- Global Village external 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4094LL/A

Optional Enhancements

- DOS Compatibility Card

Order No. M3581LL/A

- Power Macintosh 6100/60 NuBus Adapter Card

Order No. M2337LL/A

- Power Macintosh GeoPort Telecom Adapter

Order No. M3127LL/C

- PlainTalk for Power Macintosh

Order No. M2844LL/A

Article Change History:

28 Apr 1997 - Removed out dated on line references.

27 Jul 1995 - Corrected typo

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Tech Info Library Article Number:18166



Tech Info Library

Macintosh Performa 636CD: Description (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 636CD: Description (4/97)

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Article Created: 14 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 636CD computer.

DISCUSSION -----

Overview

=====

The Apple Macintosh Performa 636CD computer is one of the most affordable and flexible Apple multi-media system. It is upgradeable to take advantage of PowerPC technology, so it can bring you multimedia opportunities for years to come.

Packed in one box are the computer, keyboard, mouse, and fax/modem, as well as operating system software. Configured specifically for higher education, the computer includes useful education and personal productivity programs. Like all Macintosh computers, the Performa is very easy to learn about and use, and it runs thousands of Macintosh education, business, and multimedia programs.

The Performa 636CD also has advanced multimedia expansion options that offer new ways to interact with information. You can connect it to an external video source such as a VCR or camcorder to cut and paste video images. You can also add an option to connect your computer to a large-screen TV for displaying presentations. And you can add an internal TV tuner to view television channels in a window on your display.

This affordable computer in-cludes many standard features that are expensive add-ons for other computers. It provides 16-bit CD stereo sound; support for Apple and third-party displays; and AppleTalk networking for access to printers, electronic mail, and file sharing. With its wealth of software, the Macintosh Performa 636CD computer adds up to expandable, flexible multimedia systems.

Features

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Complete system

- Ready to run, right out of the box
- Easy to set up, learn, and use
- Includes built-in, double-speed, tray-loading CD-ROM player
- Includes energy-saving feature that reduces power consumption by 50 percent for EPA Energy Star compliance

Expansion

- Ready for PowerPC upgrade
- Comes with built-in ports for hard drives, printers, scanners, and modems • Supports most processor-direct cards compatible with Macintosh Performa 400 and 500 series and Macintosh LC computers via internal expansion slot
- Includes a communications slot for an Ethernet connection or 14.4K bps fax/data modem
- Has video slot for NTSC, PAL, and SECAM video-input cards
- Standard monitor port also provides expansion via external drop box for NTSC or PAL video output
- Includes connector for TV tuner

Power and speed

- 66/33-MHz Motorola 68LC040 with 32-bit data bus
(66-MHz processor/33-MHz data bus)

Memory

- 8 MB RAM expandable up to 52 MB

Display

- Supports Apple displays of up to 15 inches
- Works with a wide range of third-party VGA and SVGA displays
- 1MB DRAM display support, independent from system DRAM
- Standard 16-bit color for display of up to 32,768 colors on monitors of up to 14 inches and on 15-inch monitors at 640- by 480-pixel resolution
- Standard 8-bit color for display of 256 colors on 15-inch monitors at 800-pixel by 600-pixel resolution

Audio System

- 8-bit on-board Stereo sound output and mono sound in
- Stereo 16-bit CD playback
- One sound-in port
- Front and rear headphone jacks

Software

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System software

..TIL18167-Macintosh_Performa_636CD-Description_4-97_(TA34067).pdf

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundle

- At Ease
- ClarisWorks
- Click Art Performa Collection
- MacGallery Clip Art Treasure Pak
- MacLink Plus Easy Open Translators
- Spectre Challenger
- Spin Doctor Challenge
- The American Heritage

CD bundle

- Grolier's Multimedia Encyclopedia
- TIME Almanac Reference Edition

Configurations and Ordering Information

Macintosh Performa 636CD 8/500

- Macintosh Performa 636 computer with 8 MB of RAM, 1 MB of video memory built-in AppleCD 300 Plus internal double speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 500 MB IDE internal hard disk drive
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4156LL/A

Optional Enhancements

- Apple Video System

Order No. M2894LL/C

- Apple TV/Video System

Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Apple Ethernet CS Thin Coax Card

Order No. M2708ZLL/A

- Apple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

- Apple Ethernet CS AAUI Card

Order No. M3066Z/A

- Apple MPEG Media System

Order No. M4243LL/A

Article Change History:

28 Apr 1997 - Removed out dated on line references.

05 Oct 1995 - Updated video option part numbers.

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Tech Info Library Article Number:18167



Tech Info Library

Macintosh Performa 6116CD: Technical Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 6116CD: Technical Specifications (4/97)

Article Created: 14 July 1995
Article Reviewed/Updated: 24 July 1995

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 6116CD computer.

NOTE:

Because of differences in bundling and configuration, other Macintosh Performa 6100 series computers are not included in this article. See the article titled "Performa 6100 Series: Specifications" for information about these other models.

DISCUSSION -----

Microprocessor

- 60-MHz PowerPC 601 RISC Processor

Memory

- 4 MB ROM
- 256 bytes of non-volatile parameter memory
- 8 MB of RAM standard, expandable to 72 MB
- 2 SIMM slots (1 pair)
- 80 ns (nanosecond) SIMMs or faster
- SIMMs can be 4 MB, 8 MB, 16 MB or 32 MB, but must be installed in pairs of the same size. For example, you should install two 8 MB SIMMs in first two adjoining slots.
- Possible RAM configurations are 8, 16, 24, 40 and 72 MB.
- L2 Cache Slot for Optional 256K Macintosh Cache Card

RAM note: All 8MM RAM configurations come with 8MB of RAM soldered onto the logic board

Form Factor

- Modular desktop enclosure (similar to Quadra 610, 660av enclosure)

Disk Drives

- One Built-in Apple SuperDrive 1.4 MB floppy disk drive that uses high-density floppy disks and reads, writes, and formats Macintosh, MS-DOS, OS/2, and ProDOS disks.
- Support for one internal one-third, 5.25-inch height SCSI devices, one of which may be used for removable media, such as an internal CD-ROM drive.
- One 700 MB internal one-third height hard disk
- Internal Apple CD-ROM drive; AppleCD 300i drive
- Optional external SCSI hard disk drive (many capacities available)

Video Display

- Comes with Performa Plus 14 Display
- DRAM based video: 16 bit on 14-inch monitors, 8 bit on 16-inch monitors. DRAM based video is not expandable. (The table below details support for specific monitors.)
- VRAM based video: No VRAM video support or expansion.

Monitor:	Resolution:	Colors or Grays:
12-inch Color	512 by 384	thousands
12-inch Monochrome	640 by 480	256
13-inch or 14-inch Color or VGA	640 by 480	thousands
15-inch Portrait Monochrome	640 by 870	256
16-inch Color	832 by 624	256
Multiple Scan 15 Display	640 by 480	thousands
Multiple Scan 15 Display	832 by 624	256

Note: Built-in video (HDI-45 with 640K DRAM support) doesn't support any monitor with a resolution greater than 832 by 624. To use a larger monitor (19-inch, 20-inch, or 21-inch), a third-party video card or the AV card must be used.

Interfaces

- One internal Nubus 90 PDS slot. Support block transfers to and from main memory, 2x block transfers card to card. There is a NUBUS adapter for the Power Macintosh 6100. A NuBus card Requires an adapter card & bracket. There is only one slot, so it supports one PDS card OR one NuBus card.
- One Apple Desktop Bus (ADB) port, supporting a keyboard, mouse, and other devices.
- One AAUI-15 Ethernet connector.
- Two serial (RS-232/RS-422) ports.
(1 Printer/LocalTalk, 1 Modem, both support GeoPort)
- SCSI interface for connecting up to a total of seven SCSI devices.
- Sound output port for stereo compact disc audio and stereo computer-generated sound.
- Sound input port for stereo sound input (supports 16-bit stereo audio)

- One AV Display Connector supports the Apple AudioVision 14 Display. The bundled Video Adapter Cable (Part #M2681LL/A) allows you to connect a monitor with a standard DB-15 connector to your Power Macintosh built-in video.
- One internal 601 PDS (processor direct slot)
- One internal L2 (Level 2) cache slot

Audio System

- 16-bit stereo in and out
- Sample rates of 48, 44.1, 24, 22.05 kilohertz (kHz)
- Input line level: 1 volt peak-to-peak
- Output line level: 1 volt peak-to-peak
- Input SNR (signal-to-noise ratio): 82 decibels (dB) with no audible discrete tones
- Output SNR: 85 dB with no audible discrete tones
- Bandwidth: 20 Hz-20 kHz (+/- 2 dB) at 44.100 kHz sample rate
- THD+N (Total harmonic distortion plus noise): Less than 0.05 percent; measured 20 Hz-20kHz with a 1-Vrms sine wave input.

Networking

- Built-in Ethernet
- Serial port for AppleTalk
- Integrated GeoPort telecommunications architecture for data, fax, and voice connectivity.

Keyboard

- AppleDesign keyboard included

Mouse

- Apple Desktop Bus Mouse II

Clock/Calendar

- CMOS custom chip with long-life lithium battery.

Apple PlainTalk Microphone (optional)

- The microphone is unidirectional and optimized for use with speech recognition.

Modem

- Comes with TelePort/Gold II for Performa from Global Village Communications: 14,400-bps send and receive fax and 14,400-bps send and receive data.

Electrical Requirements

- Line voltage: 100 to 240 VAC, RMS single phase, automatically configured

- Frequency: 50 to 60 hertz, single phase
- Power Supply Output Rating (Power available for internal devices)
 - Continuous output 86W
- A/C Line Input (Power drawn by the Power Macintosh 6100/60)
 - Maximum continuous 132W
 - Peak input 201W

ADB Power Requirements

- Maximum current draw for all ADB devices: 500 milliamps (a maximum of three Apple Desktop Bus devices is recommended)
- Mouse draws 10 milliamps.
- Keyboard draws 25 to 80 milliamps, depending on the keyboard model used.

Size and Weight

Main unit

- Height: 3.4 inches (8.5 cm)
- Width: 16.3 inches (41.5 cm)
- Depth: 15.6 inches (39.7 cm)
- Weight*: 14.0 pounds (6.4 kg)

*Weight varies based on internal devices installed

Mouse

- Height 1.3 inches (33 mm)
- Width 2.4 inches (61.7 mm)
- Depth 4.2 inches (107.3 mm)
- Weight 4 ounces (0.10 kg)

Operating Environment

- Operating temperature: 50 degrees to 104 degrees F (10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116.6 degrees F (-40 degrees to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048m)

Software

System software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundle

- At Ease
- ClarisWorks
- MacLink Plus/Easy Open Translators
- American Heritage Dictionary
- Quicken
- Click Art Performa Collection

- MacGallery Clip Art Treasure Pak
- Now Contact
- Spin Doctor Challenge
- TelePort Modem Legend Tour
- Now Up-To-Date
- Spectre Challenger
- TelePort Gold II for Mac Performa

CD bundle

- 3D Atlas
- Club KidSoft Sample
- The Family Doctor
- 1995 Groiler's MM Encyclopedia
- TIME Almanac Reference Edition
- Around the World in 80 Days

Article Change History:

28 Apr 1997 - Removed out dated on line references.

24 Jul 1995 - Added note about other 6100 series computers

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Tech Info Library Article Number:18168



Tech Info Library

Macintosh Performa 636CD: Technical Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 636CD: Technical Specifications (4/97)

Article Created: 14 July 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 636CD computer.

DISCUSSION -----

Microprocessor

- 66/33-MHz Motorola 68LC040 with 32-bit data bus
(66-MHz processor/33-MHz data bus)

Memory

- 8 MB RAM, expandable to 36 or 52 MB (depending on the model*)
- RAM expansion via one or two 72-pin SIMM sockets (depending on the model*)
(one double-sided SIMM can take up to 32 MB; one single-sided SIMM can be up to 16 MB)

*Note: Later models have two SIMM slots. Earlier models have one.

Disk Drives

- One built-in Apple SuperDrive 1.4MB floppy disk drive
- One internal 500 MB IDE type hard disk
- AppleCD 300i Plus CD-ROM player

Video Display

- Supports Apple displays of up to 15 inches
- Works with a wide range of third-party VGA and SVGA displays
- 1MB DRAM display support, independent from system DRAM
- Standard 16-bit color for display of up to 32,768 colors on monitors of

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up to 14 inches and on 15-inch monitors at 640- by 480-pixel resolution

- Standard 8-bit color for display of 256 colors on 15-inch monitors at 800-pixel by 600-pixel resolution

Modem

- Comes with TelePort/Gold II for Performa from Global Village Communications: 14,400-bps send and receive fax and 14,400-bps send and receive data.

Interfaces

- One Apple Desktop Bus (ADB) port supports a keyboard, mouse, and other devices
- Two (RS-232/RS-422) serial ports
- SCSI interface port for connecting up to five external peripheral devices
- Internal expansion slot compatible with most Macintosh Performa 400 and 500 series, Macintosh Quadra 605, Macintosh LC II, LC III, LC 475, LC 520, and LC 575 processor-direct cards
- Communications slot for future addition of either Ethernet card or 14.4-baud fax/modem card
- Video slot for NTSC, PAL, and SECAM video-input card
- Dedicated connector for internal TV tuner
- One standard monitor port also supports connection to external video-out (NTSC or PAL) drop box

Audio capabilities

- 8-bit on-board Stereo sound output and mono sound in
- Stereo 16-bit CD playback
- One sound-in port
- Front and rear headphone jacks

Networking

- Built-in AppleTalk port

Keyboard and Mouse

- AppleDesign Keyboard
- Apple Desktop Bus Mouse II

Clock/Calendar

- Custom integrated circuit with long-life lithium battery

Disability Access

- CloseView, Easy Access, and the ability to substitute visual cue for beep included with system software. These built-in solutions and third-party options provide alternative input and output devices for people with disabilities.

Electrical Requirements

100-240 volts AC, 50-60 Hz

Power: 45 W maximum, not including monitor

ADB Power Requirements

500ma maximum draw

Size and Weight

-
- Height: 4.3 in. (10.95 cm)
 - Width: 12.6 in. (32 cm)
 - Depth: 16.5 in. (41.95 cm)
 - Weight: 19 lb. (8.6 kg) with CD-ROM player
(varies based on internal devices installed)

Operating Environment

Operating temperature 50° F to 104° F (10° C to 40° C)

Storage temperature -40° F to 116.6° F (-40° C to 47° C)

Relative Humidity 5% to 95% noncondensing

Altitude Works below 10,000 feet (3,048 m)

Software

=====

System software

-
- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundle

-
- At Ease
 - ClarisWorks
 - Click Art Performa Collection
 - MacGallery Clip Art Treasure Pak
 - MacLink Plus Easy Open Translators
 - Spectre Challenger
 - Spin Doctor Challenge
 - The American Heritage

CD bundle

-
- Grolier's Multimedia Encyclopedia
 - TIME Almanac Reference Edition

Article Change History:

28 Apr 1997 - Removed out dated on line references.

29 Nov 1995 - Corrected minor typo.

24 Aug 1995 - Added information about number of SIMM slots.

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Tech Info Library Article Number:18169



Tech Info Library

Macintosh Performa 640CD DOS Compatible: Description (4/97)

Revised: 5/2/97
Security: Everyone

Macintosh Performa 640CD DOS Compatible: Description (4/97)

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Article Created: 14 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article provides a description of the Macintosh Performa 640 DOS Compatible computer.

DISCUSSION -----

Overview

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The Apple Macintosh Performa 640CD DOS Compatible computer is the perfect choice for your family when you want to keep your compatibility options open. It runs DOS, Windows, and Macintosh applications simultaneously, which essentially makes it two advanced CD multimedia computers in one.

The Performa 640CD DOS Compatible features dual microprocessors. Its 68LC040 processors provide excellent performance for easy-to-use Mac OS applications, while its 486DX2 processor delivers strong performance for DOS and Windows applications.

Because it's DOS-compatible, you can now easily use DOS and Windows applications, CDs, and games on a Macintosh. You can instantly switch between the Macintosh operating system (Mac OS) and the DOS or Windows environment. You can even cut, copy, and paste information between them. And it allows you to use Macintosh printers and peripherals with both operating systems.

Packed in one box are the computer, display, keyboard, mouse, fax/modem, and operating system soft-ware. In addition, this Performa in-cludes useful home, education, and home-business software programs, as well as CD-ROM reference titles.

Its advanced multimedia expansion options let you tailor it to fit your needs. You can connect it to an external video source such as a VCR or camcorder to cut and paste video images. You can also add an option to connect your computer to a

large-screen TV for displaying presentations. And you can add an internal TV tuner to view television channels in a window on your display.

The Macintosh Performa 640CD DOS Compatible computer delivers DOS and Windows compatibility, Macintosh usability, and advanced multimedia capabilities—making it one of the most versatile and capable multimedia computers ever built.

Features

=====

Complete, compatible system

- Ready to run Macintosh, DOS 6.22, and Windows 3.1 programs, right out of the box
- Includes Microsoft MS-DOS 6.22, Windows 3.1, and Macintosh System 7.5 software
- Easy to set up, learn, and use
- Includes Macintosh and DOS-compatible computer capabilities, color 15-inch display (13.3-inch viewable image size), built-in tray-loading CD-ROM player, keyboard, mouse, digital sound, and internal speaker all in one box
- Comes with external fax/modem that supports both Macintosh and Windows
- Requires no additional software or cables

Compatibility

- Built-in 68LC040 and 486DX2 microprocessors allow it to run MS-DOS, Windows 3.1, and Macintosh applications simultaneously
- Runs MS-DOS and Windows 3.1 applications, games, and CD-ROM discs directly on a 486 processor
- Supports Sound Blaster 16 sound output for PC multimedia compatibility
- Supports VGA and SVGA monitors
- Includes ODI driver for Novell NetWare IPX and TCP/IP support in the DOS and Windows environments
- Supports DOS-formatted floppy disks
- Includes PC game port

Integration

- Lets you copy and paste between Mac OS and DOS or Windows environments
- Allows you to share folders and disks between Mac OS and DOS or Windows environments
- Includes Macintosh PC Exchange, which you can customize to launch Mac OS applications when opening a DOS or Windows file
- Lets you print from either environment with a Macintosh-compatible printer

Processor and Memory

- 66/33 MHz 68LC040 microprocessor
 - 8MB of RAM (expandable to 52 MB of RAM)
- 1MB ROM
- 66 MHz 80486 DX2 microprocessor
 - 4MB of RAM (expandable to 32 MB of RAM)

Audio System

- 8-bit stereo sound in Macintosh environment
- Stereo 16-bit CD playback in Macintosh environment
- Sound Blaster 16-compatible 16-bit stereo sound output in DOS and Windows environments
- One sound-in and one sound-out port for Macintosh environment
- Front and rear headphone jacks
- Front panel push-button volume control

Upgrades

- The DOS-Compatibility Card uses the single PDS slot. Thus, the Macintosh Performa 640 DOS Compatible cannot be upgraded to a PowerPC processor.

Software

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System software

- Mac OS 7.5.1
- MS-DOS 6.22
- Windows 3.1.1
- SoundBlaster

Third-party software

- | | |
|--------------------------------------|------------------|
| • American Heritage Dictionary | • At Ease |
| • MacLink Plus/Easy Open Translators | • Quicken |
| • MacGALLERY Clip Art Treasure Pak | • Espresso |
| • Click Art Performa Collection | • ZipZap |
| • TelePort Gold II for Performa | • Global Village |
| • TelePort Modem Legend Tour | |

CD bundle

- | | |
|--|------------------------------------|
| • 1995 Grolier Multimedia Encyclopedia | • 3D Atlas |
| • Club KidSoft CD | • Sticker Shop Plus/Card Shop Plus |
| • TIME Almanac CD-ROM titles included | |

Configurations and Ordering Information:

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Macintosh Performa 640CD 12/500

- Macintosh Performa 640 computer with 12 MB of RAM, 1 MB of video memory built-in AppleCD 300 Plus internal double speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 500 MB IDE internal hard disk drive
- Multiple Scan 15 Display
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M3939LL/A

Optional Enhancements

- Apple Video System

Order No. M2894LL/C

- Apple TV/Video System

Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Macintosh Ethernet CS Thin Coax Card

Order No. M2708Z/A

- Macintosh Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

- Macintosh Ethernet CS AAUI Card

Order No. M3066Z/A

Article Change History:

01 May 1997 - Removed out dated on line references.

05 Oct 1995 - Updated video option part numbers.

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Tech Info Library Article Number:18170



Tech Info Library

Macintosh: Video Mirroring Compared To Dual Video (9/95)

Revised: 9/29/95
Security: Everyone

Macintosh: Video Mirroring Compared To Dual Video (9/95)

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Article Created: 14 July 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

What is the difference between video mirroring and dual video?

DISCUSSION -----

Video mirroring lets you display the same Macintosh image, complete with the menu bar, on two screens simultaneously. The second device can be a monitor, television, or overhead projector depending on the connection you have available. This capability is most useful for those in education or training environments who want to connect large monitors or projection screens to their computer.

Video mirroring is built-in on some PowerBooks, and an add-on option to both the Macintosh LC 580 and Power Macintosh 5200 computers. If you do not have built-in or add-on video mirror support, you can still get the benefits of this type of technology if your computer has a standard DB-15 video-out port, by using the Apple Presentation System or similar products from third party vendors.

Dual Video

Dual video means there are two independent video channels, each with its own dedicated Video RAM (VRAM). On Macintosh computers, this always means there is at least one video card installed. For example, the Power Macintosh 6100 series has built-in video capability, but the addition of a Power Macintosh AV card adds an independent additional video-out capability with a separate amount of VRAM. If you connect one monitor to each port on the Power Macintosh 6100 AV, you would see a "virtual desktop". You could have a window on one screen, your primary display, and a window on the second screen, the secondary display. You can arrange the orientation of the monitors so that the mouse will move between the two monitors at the point where they touch in the Monitors control panel. Only one monitor can display the menu bar, but you can choose which is the main monitor in the Monitors control panel. You do not get two identical images when

using dual video.

Due to the highly integrated characteristics of this type of multiple device support, you can theoretically have as many displays as you have slots. You could, for example, populate each available expansion slot on your Macintosh computer with a video card, and have that many monitors creating a large virtual desktop.

There is no processor performance degradation from the use of multiple displays. The relative performance of each display depends on the performance characteristics of the attached video card.

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Volume II, Issue 11, Page 6

Article Change History:

29 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18172

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Tech Info Library

TITLE

MacTCP: Error Codes Defined

Article ID: 18173
Created: 7/14/95
Modified: 2/3/98

TOPIC

The following list defines error message name-to-number mapping, Internet Control Message Protocol(ICMP), and other miscellaneous types throughout the MacTCP driver.

DISCUSSION

These error messages DO NOT apply to Open Transport.

Error Messages

-23000	ipBadLapErr	Unable to initialize the local network handler.
-23001	ipBadCnfgErr	The manually set address is configured improperly.
-23002	ipNoCnfgErr	A configuration resource is missing.
-23003	ipLoadErr	Not enough room in the application heap (Macintosh 512K enhanced only)
-23004	ipBadAddr	Error in getting an address from a server or the address is already in use by another machine.
-23005	connectionClosing	A TCPClose command was already issued so there is no more data to send on this connection.
-23006	invalidLength	The total amount of data described by the WDS was either 0 or greater than 65,535 bytes.
-23007	connectionExists	The TCP or UDP stream already has an open connection.
-23008	connectionDoesntExist	The TCP stream has no open connection.
-23009	insuuficientResources	64 TCP or UDP streams are already open.
-23010	invalidStreamPtr	The specified TCP or UDP stream is not open.
-23011	streamAlreadyOpen	An open stream is already using the receive buffer area.
-23012	connectionTerminated	The TCP connection was broken; the reason will be given a terminate ASR.
-23013	invalidBufPtr	The receive buffer area pointer is 0 (nil).
-23014	invalidRDS	The RDS refers to receive buffers not

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.		owned by the user.
-23014	invalidWDS	The WDS pointer was 0 (nil).
-23015	openFailed	The connection came halfway up and then failed.
.		
-23016	commandTimeout	The specified command action was not completed in the specified time period.
.		
-23017	duplicateSocket	A stream is already open using the local UDP port or a TC connection already exists between the local IP address and TCP port, and the specified remote IP address and TCP port.
.		
.		
.		
-23032	ipDontFragErr	The pack is too large to send without fragmenting and the Don't Fragment flag is set.
.		
.		
-23033	ipDestDeadErr	The destination host is not responding to address resolution requests.
.		
-23035	icmpEchoTimeoutErr	The icmp echo packet was not responded to in the indicated timeout period.
.		
-23036	ipNoFragMemErr	Insufficient internal driver buffers available to fragment this packet on send.
.		
-23037	ipRouteErr	No gateway available to manage routing of packets to off-network destinations.
.		
-23041	nameSyntaxErr	The <<hostname>> field had a syntax error. The address was given in dot notation (that is, W.X.Y.Z) and did not conform to the syntax for an IP address.
.		
.		
.		
.		
-23042	cacheFault	The name specified cannot be found in the cache. The domain name resolver will now query the domain name server and return the answer in the callback procedure.
.		
.		
.		
.		
-23043	noResultProc	No result procedure is passed to the address translation call when the resolver must be used to find the address.
.		
.		
.		
-23044	noNameServer	No name server can be found for the specified name string.
.		
-23045	authNameErr	The domain name does not exist.
-23046	noAnsErr	None of the known name servers are responding.
.		
-23047	dnrErr	The domain name server has returned an error.
.		
-23048	outOfMemory	Not enough memory is available to issue the needed DNR query or to build the DNR cache.
.		
.		

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Communications-Networking

Category: MacTCP

Sub Category: General Topics

..TIL18173-MacTCP_Error_Codes_Defined_(TA34071).pdf

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Tech Info Library

MacTCP: Error Codes Defined (7/95)

Revised: 7/14/95
Security: Everyone

MacTCP: Error Codes Defined (7/95)

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Article Created: 14 July 1995

TOPIC -----

The following list defines error message name-to-number mapping, Internet Control Message Protocol(ICMP), and other miscellaneous types throughout the MacTCP driver.

DISCUSSION -----

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Error Messages -----

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.		
-23001	ipBadCnfgErr	The manually set address is configured improperly.
.		
-23002	ipNoCnfgErr	A configuration resource is missing.
-23003	ipLoadErr	Not enough room in the application heap (Macintosh 512K enhanced only)
.		
-23004	ipBadAddr	Error in getting an address from a server or the address is already in use by another machine.
.		
.		
-23005	connectionClosing	A TCPclose command was already issued so there is no more data to send on this connection.
.		
.		
-23006	invalidLength	The total amount of data described by the WDS was either 0 or greater than
.		

.		65,535 bytes.
-23007	connectionExists	The TCP or UDP stream already has an open connection.
.		
-23008	connectionDoesntExist	The TCP stream has no open connection.
-23009	insuuficientResources	64 TCP or UDP streams are already open.
.		
-23010	invalidStreamPtr	The specified TCP or UDP stream is not open.
.		
-23011	streamAlreadyOpen	An open stream is already using the receive buffer area.
.		
-23012	connectionTerminated	The TCP connection was broken; the reason will be given a terminate ASR.
.		
-23013	invalidBufPtr	The receive buffer area pointer is 0 (nil).
.		
-23014	invalidRDS	The RDS refers to receive buffers not owned by the user.
.		
-23014	invalidWDS	The WDS pointer was 0 (nil).
-23015	openFailed	The connection came halfway up and then failed.
.		
-23016	commandTimeout	The specified command action was not completed in the specified time period.
.		
-23017	duplicateSocket	A stream is already open using the local UDP port or a TC connection already exists between the local IP address and TCP port, and the specified remote IP address and TCP port.
.		
.		
.		
.		
-23032	ipDontFragErr	The pack is too large to send without fragmenting and the Don't Fragment flag is set.
.		
.		
-23033	ipDestDeadErr	The destination host is not responding to address resolution requests.
.		
-23035	icmpEchoTimeoutErr	The icmp echo packet was not responded to in the indicated timeout period.
.		
-23036	ipNoFragMemErr	Insufficient internal driver buffers available to fragment this packet on send.
.		
-23037	ipRouteErr	No gateway available to manage routing

.		of packets to off-network destinations.
-23041	nameSyntaxErr	The <<hostname>> field had a syntax error. The address was given in dot notation (that is, W.X.Y.Z) and did not conform to the syntax for an IP address.
.		
.		
.		
.		
-23042	cacheFault	The name specified cannot be found in the cache. The domain name resolver will now query the domain name server and return the answer in the callback procedure.
.		
-23043	noResultProc	No result procedure is passed to the address translation call when the resolver must be used to find the address.
.		
.		
.		
-23044	noNameServer	No name server can be found for the specified name string.
.		
-23045	authNameErr	The domain name does not exist.
-23046	noAnsErr	None of the known name servers are responding.
.		
-23047	dnrErr	The domain name server has returned an error.
.		
-23048	outOfMemory	Not enough memory is available to issue the needed DNR query or to build the DNR cache.
.		
.		

Support Information Services

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Tech Info Library Article Number:18173



Tech Info Library

MacTCP: How It Uses FTP Address to Connect (9/95)

Revised: 9/26/95
Security: Everyone

MacTCP: How It Uses FTP Address to Connect (9/95)

=====
Article Created: 14 July 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

I am beginning to use MacTCP and some Internet software for the first time. I have noticed that many times I type a hostname and do not connect to the server I intended to.

DISCUSSION -----

When you ask MacTCP to connect to a hostname, several steps occur before MacTCP connects.

If the Name is "Fully Qualified"
=====

MacTCP checks the hostname for a period. If the hostname ends in a period, MacTCP looks up exactly what was typed. This applies to names of any length. The default domain in MacTCP is ignored.

Examples

- If you ftp to ftp.info.apple.com, MacTCP always connects you to ftp.info.apple.com. (since it ends in a period).
- If you ftp to ftp. MacTCP looks for ftp. (it also ends in a period).

If the Name is "Partially Qualified"
=====

If the name typed is longer than one word (separated by periods), MacTCP connects to whatever was typed. The default domain in MacTCP is ignored.

Examples

- If you type ftp.info.apple.com, MacTCP looks for ftp.info.apple.com.
- If your default domain is apple.com and you type ftp.info, MacTCP ignores the domain and looks for ftp.info.

NOTE: Most Macintosh users expect this behavior, but it is important to remember that other TCP/IP software (UNIX, Open Transport, DOS software) may behave differently. Ideally, the second example would have resulted in a lookup for ftp.info.apple.com.

If the Name is Just a Hostname
=====

If the name is one word, then add the "default domain" from the MacTCP control panel.

Example

- If your domain is info.apple.com and you type ftp, MacTCP looks for ftp.info.apple.com.
- If the hosts file or domain name servers have information on the host and the host is working, you should connect to the desired machine.

This article was published in the "Information Alley":
Volume II, Issue 9, Page 13

Article Change History:
26 Sep 1995 - Added Info Alley information; updated

Support Information Services

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Tech Info Library Article Number:18174



Tech Info Library

System 7.5: Installing From Non-Apple CD-ROM (7/95)

Revised: 7/14/95
Security: Everyone

System 7.5: Installing From Non-Apple CD-ROM (7/95)

Article Created: 14 July 1995

TOPIC -----

I have installed System 7.5 from CD on my Macintosh computer and when I restart, my machine crashes immediately. I have tried starting with extensions off, but it still fails to get to the "Welcome to Macintosh" screen. I want to reinstall the System 7.5 software again but, I have a non-Apple CD-ROM drive and the CD will not mount when I start up off Disk Tools. How can I reinstall from the CD-ROM drive?

DISCUSSION -----

The proper way to install any system software is to start your computer off a volume other than the one to which the software is to be installed. This is most commonly done by starting off the Disk Tools disk and installing onto the volume you want to upgrade. When you want to install from a CD-ROM disc, you boot from the Disk Tools disk and then put in the CD-ROM disc and install on the hard drive. This procedure works for Apple CD-ROM Drives only because Apple's Disk Tools disk may not have the necessary drivers to mount your CD-ROM drive.

Because you have a third party CD-ROM drive, you were forced to insert the CD-ROM disc after you already were running your computer off the System software on your hard drive. You were then installing new system software over your existing active system software which may not execute properly.

The steps to remedy this situation is to re-install the previous system software and then to re-install the CD-ROM drive software which came with the your third party CD-ROM drive. You can now access the System 7.5 CD-ROM disc and use the disk images to make floppy disks of the System 7.5 install disks. You can then use these disks to follow the procedure for installing System 7.5 from floppies.

Page 10 of the System 7.5 Upgrade Guide contains the following:

"IMPORTANT: If you are installing from a CD onto a Macintosh with a non-Apple

CD-ROM drive, make a backup copy of the System 7.5 software before you begin installation. If you encounter problems during installation, you can install System 7.5 from the backup disks. (You won't be able to use your CD-ROM drive again until the System 7.5 software is installed on your computer. The startup disk that comes with your CD recognizes only Apple CD-ROM drives.) For instructions and disk images, see the Back-up CD folder on your CD."

Support Information Services

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Tech Info Library Article Number:18175



Tech Info Library

Power Macintosh 9500: Which Shared Library Manager? (5/96)

Revised: 5/21/96
Security: Everyone

Power Macintosh 9500: Which Shared Library Manager? (5/96)

=====

Article Created: 17 July 1995
Article Reviewed/Updated: 17 May 1996

TOPIC -----

Do any Power Macintosh series computers need both the Shared Library Manager and the Shared Library Manager PPC to run correctly?

Since I have a Power Macintosh series Computer should I remove the Apple Shared Library Manger and keep only the Shared Library Manager PPC?

DISCUSSION -----

You should not remove either of these components from the Extensions folder. Your Power Macintosh series computer needs both extensions so it can work properly with all native and emulated Apple Shared Library Manager (ASLM) clients and libraries.

Article Change History:
17 May 1996 - Updated technical information

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:18176



Tech Info Library

PowerBook 550c (Japan Only): Technical Specifications (7/95)

Revised: 7/18/95
Security: Everyone

PowerBook 550c (Japan Only): Technical Specifications (7/95)

=====

Article Created: 7 July 1995

TOPIC -----

This article provides technical specifications for the Macintosh PowerBook 550c computer.

****NOTE:** This is a product released only in Japan.**

DISCUSSION -----

On May 30, 1995, Apple Japan introduced the PowerBook 550c. The PowerBook 550c features five major changes over the previous PowerBook 500 series computers:

- Uses 66/33 MHz 68040 microprocessor with built-in Floating Point Unit . (FPU) - also called a math coprocessor.
- Includes 750 MB internal hard disk drive
- Uses 10.4 inch (264 mm) active matrix color display
- Weighs 6.8 lbs (3.1 kg). Approximately 7 oz. (200 gm) lighter than the . PowerBook 540c.
- The entire unit is a dark grey (versus the current duo tone color).

Also, since this is a Japanese Macintosh PowerBook 500 series computer, the keyboard has a Japanese Industrial Standard (JIS) layout.

Microprocessor

- 66/33-MHz 68040 microprocessor (with FPU). (the two speeds refer to the . internal processor and bus interface, respectively)
- 32-bit Address and Data bus
- Daughterboard (memory expansion) has a 32-bit bus running at 33MHz

RAM

- 4 MB RAM on logic board.
- Expandable to 36 MB with 70ns low power self-refreshing RAM (Apple 8 MB

. RAM Expansion Kit, or Third Party higher density RAM card)

Storage

- One built-in 1.4 MB Apple SuperDrive disk drive that uses high-density . floppy disks; it reads, writes, and formats Macintosh, MS-DOS, OS/2, and . ProDOS disks.
- One internal 750 MB hard disk.

Display/Video Out

- 10.4-inch (diagonal), backlit, active matrix color display
- 640 x 480 pixels, with 256 colors by 400 pixels with thousands of colors
- Sleeps on close
- User-configurable
- External display port (micro DV-14) supports 8-bit video
- External display options:
 - . Macintosh 12" Monochrome Display
 - . Macintosh 12" RGB Display
 - . AppleColor High Resolution RGB Display
 - . Macintosh Color Display
 - . Macintosh 16" Color Display
 - . Macintosh Portrait Display
 - . Some VGA and SVGA monitors (third party adapter required)
- Two video-out modes:
 - Video mirroring for simultaneous display of the same image on two . screens.
 - Dual display for full use of both screens.

Networking

- Serial/LocalTalk
- Built-in High Speed Ethernet with Apple AUI connector

System Software

- Requires KanjiTalk System 7.5 or later
- No Enabler is required

Battery

- Nickel-metal-hydride PowerBook Intelligent Batteries each provide up to . 3.5 hours of use before recharge.
- EverWatch battery-saver technology
- Batteries recharge in two hours when computer is in sleep or shutdown; . four hours when running.
- PowerBook Control Strip allows user to monitor time remaining, charge . time, and battery usage
- Backup rechargeable lithium battery maintains RAM in sleep modem while . main battery is removed for up to three minutes.

Keyboard and Tracking Device

- Built-in keyboard with standard size JIS keyboard with 79 keys including
. 12 function keys
- Two-level tilt adjustment
- Power-on key located on Keyboard
- Solid-state trackpad provides precise cursor control in response to the
. user's fingertip over its surface

Clock/Calendar

- CMOS custom chip with long-life lithium battery.

Microphone

- Built-in omnidirectional; output voltage is 4 mV, peak to peak, at
. normal volume

Interfaces

- One Apple Desktop Bus (ADB) port for keyboard, mouse, and other devices.
- One RS-422 serial port for LocalTalk networking, printers, modems, and
. other devices.
- One high-speed Ethernet port
- One HDI-30 SCSI port for hard disks, scanners, CD-ROM drives, and other
. devices (up to 6 devices can be chained).
- One slot for optional modem.
- One video-out port, supporting 8 bit density and 256 colors.
- One stereo sound output port for external audio amplifier or headphones.
- One stereo sound-in port.
- Security slot for use with third-party equipment to lock the computer.
- 90-pin processor direct slot (PDS) for connecting PDS devices or
. optional PowerBook PCMCIA Expansion Module allows use of two Type II
. or one Type III PCMCIA-type card).
- One RAM slot

Modem

- Optional Apple Express Modem II

Built-in Stereo Sound

- CD-quality, 16-bit stereo sound capable of driving headphones or other
. stereo equipment.
- Two built-in stereo speakers
- Digital-to-analog and analog-to-digital conversion sampled
. at 11.035, 22.050, or 44.100 kHz.

Disability Access

- Easy Access and the ability to substitute visual cue for beep included
. with system software. These built-in solutions and third-party options
. provide alternative input and output devices for people with
. disabilities.

ADB Power Requirements

- Maximum current draw for all ADB devices is 200 mA (a maximum of . three ADB devices is recommended)

Electrical Requirements

- Line voltage: 100 to 240 volts, 50 to 60 Hz

Environmental Requirements

- Operating temperature: 50 to 104° F (10 to 40° C)
- Storage Temperature: -13°F to +140°F (-25 to +60° C)
- Relative humidity: 20% to 80% noncondensing
- Altitude: max. 10,000 ft. (3,048 m)
- Maximum Storage Altitude: 15,000 ft. (4,722 m)

Size and Weight

- Height: 2.3 in. (5.7 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 9.7 in. (24.5 cm)
- Weight: 6.8 lb. (3.1 kg)

Noise Level

- Noise free except for disk drive use.

Security

- Slot for security cable

Ordering Information

Ordering Information

PowerBook 550c 12/750

Order No. M4286J/A

- PowerBook 550c computer with 12 MB of RAM, built-in 1.4 MB Apple . SuperDrive, and internal 750 MB hard disk drive
- Two PowerBook Intelligent Batteries and AC adapter
- KanjiTalk 7.5 CD-ROM
- Complete setup, learning, and reference documentation
- Training software
- Limited warranty
- PowerBook Mobility Bundle

PowerBook 8 MB Memory Expansion Kit

Order No. M1913LL/A

PowerBook Intelligent Battery

Order No. M1908LL/A

PowerBook AC Adapter

Order No. M1910J/A

PowerBook PCMCIA Expansion Module

Order No. M2995J/A

Apple HDI-30 SCSI Disk Adapter

Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

Order No. M2538LL/A

PowerBook Express Modem II Kit

Order No. M1953J/A

Article Change History:

18 Jul 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18177



Tech Info Library

LaserWriter 8.3: Desktop Print Spooler Causes Lockup (7/95)

Revised: 7/14/95
Security: Everyone

LaserWriter 8.3: Desktop Print Spooler Causes Lockup (7/95)

=====

Article Created: 14 July 1995

TOPIC -----

When I start up my computer, I am unable to select any menus or click on anything without the computer locking up. This started after installing the LaserWriter 8.3 driver.

DISCUSSION -----

These symptoms can occur when using PowerTalk on a Macintosh computer that is not a Power Macintosh. The solution is to update the Desktop Print Spooler, which was included with the LaserWriter 8.3 driver. The latest version is 1.0.2, and it is available on many online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:18178



Tech Info Library

Changing Names of Speech Setup Characters (7/95)

Revised: 7/14/95
Security: Everyone

Changing Names of Speech Setup Characters (7/95)

=====

Article Created: 19 Jan 1995
Article Reviewed/Updated: 14 July 1995

TOPIC -----

Customer has asked if any of the cartoon characters used in the speech set up menu can be changed along with their names.

DISCUSSION -----

Although it is NOT supported by Apple Computer, Inc., it is possible to change the character names and icons using ResEdit. You will need to modify the "SR Monitor" extension.

Character names can be found in the "STR " resource. Character icons can be found in the "PICT" resource.

*** WARNING ***

The instructions in this article refer to using ResEdit to alter your system software. Apple Computer, Inc., is not liable for any damage done to your software through the use of ResEdit to alter the software. The User Assistance Center phone representatives (at 800-SOS-APPL) do not provide technical support for ResEdit. They will not help you to perform the procedure described here. ResEdit is supported by APDA. For contact information on APDA, search the Tech Info Library under "APDA".

Article Change History:
14 Jul 1995 - Added ResEdit warning.

Support Information Services

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Tech Info Library Article Number:18179



Tech Info Library

Multiple System Folders On A Single Volume (7/95)

Revised: 7/14/95
Security: Everyone

Multiple System Folders On A Single Volume (7/95)

=====

Article Created: 8 February 1995
Article Reviewed/Updated: 14 July 1995

TOPIC -----

Is it okay to have a copy of the System in a folder labeled "Copy of System?"

DISCUSSION -----

With System 6.0.x, it was NOT okay to have two different System Folders, even if the names of the folders were different.

With System 7.x, it is possible to have multiple System Folders on a volume, as long as one folder is the "blessed" System Folder (that is, the blessed folder has a small Macintosh icon inside the icon of the folder). However, Apple Computer, Inc. still recommends using only one System Folder per volume. Any other situation is entered at your own risk. Apple Assistance Phone representatives will not help you manage multiple System Folders on one volume during troubleshooting.

Article Change History:
14 Jul 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18180



Tech Info Library

Color LaserWriter 12/600 PS: Order of Toner Application (7/95)

Revised: 7/17/95
Security: Everyone

Color LaserWriter 12/600 PS: Order of Toner Application (7/95)

Article Created: 17 July 1995

TOPIC -----

What is the order of application in which the colored toner is applied to the paper on the Color LaserWriter 12/600 PS ?

DISCUSSION -----

The Color LaserWriter 12/600 PS uses monocomponent toner cartridges to transfer each individual color to the Organic Photo Conductor (OPC). This process is referred to as CMYK (or, C=Cyan, M=Magenta, Y=Yellow, and K=Black). CMYK is often confusing to some customers who interpret CMYK as the order in which the monocomponent toner is attracted to the OPC and then imparted to the paper. The order in which the toner is applied and attracted to the paper is:

Normal Print Mode

-
1. Magenta monocomponent toner
 2. Cyan monocomponent toner
 3. Yellow monocomponent toner
 4. Black monocomponent toner
 5. Fuser assembly, exit path

Best Print Mode

-
1. Paper attached to transfer drum for one complete revolution
 2. Magenta monocomponent toner
 3. Cyan monocomponent toner
 4. Yellow monocomponent toner
 5. Black monocomponent toner
 6. Fuser assembly, exit path

Support Information Services

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Tech Info Library Article Number:18181



Tech Info Library

LW 16/600 and 12/600: Install Drivers on Windows NT (12/95)

Revised: 12/5/95
Security: Everyone

LW 16/600 and 12/600: Install Drivers on Windows NT (12/95)

Article Created: 17 July 1995
Article Reviewed/Updated: 5 December 1995

TOPIC -----

This article explains how to install the LaserWriter 16/600 PS and Color LaserWriter 12/600 PS drivers on Windows NT 3.5.

DISCUSSION -----

Step 1

From Windows NT 3.5, choose Create Printer from the Print Manager's Printer menu. The Create Printer dialog box appears.

Step 2

Select Other (at the bottom of the list) in the Driver Combo box.

Step 3

Insert the Apple Windows Printer Disk 2 into the floppy disk drive.

Step 4

Verify that the correct floppy drive is indicated in the Install Driver dialog box and click OK. A list of printer drivers appears.

Step 5

Select the printer driver that corresponds to your printer and click OK.

Step 6

Follow the instructions on the screen. If you are installing software from the Windows NT 3.5 CD, you may need to type the path for your driver location. The

path may be similar to this:

"c:\windows\system32\spool\drivers\w32x86\1\".

Click Continue and OK to complete the installation.

Step 7

If you are installing Windows NT 3.5 software from floppy disks, you copy the following files (followed by their locations) to the path of your driver location:

PSCRIPTUI.DLL (Disk 13)

PSCRIPT.DLL (Disk 13)

PSCRIPT.HLP (Disk 18)

Article Change History:

05 Dec 1995 - Included Color LaserWriter 12/600 PS.

08 Aug 1995 - Reformatted for readability.

Support Information Services

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Tech Info Library Article Number:18182



Tech Info Library

Power Macintosh 9500 Series: Cannot Print to HP Printer (7/95)

Revised: 7/17/95
Security: Everyone

Power Macintosh 9500 Series: Cannot Print to HP Printer (7/95)

=====

Article Created: 17 July 1995

TOPIC -----

I have a Power Macintosh 9500 computer, and I cannot print to my Hewlett Packard 550c printer when connected via the serial port.

DISCUSSION -----

There is a known problem with serial printing to a 500 series based HP (Hewlett Packard) printer from a Power Macintosh 9500/120. As a workaround, you can print with LocalTalk. To do this, follow these steps:

1. Use LocalTalk connectors and cable; do not use a serial cable.
2. Verify that the correct port is selected in the Chooser. For example, if the LocalTalk cable is connected to the printer port, the printer port must be chosen in the Chooser.
3. Select the HP AppleTalk driver in the Chooser. Be sure to have the printer turned on before selecting the driver, or the printer may not appear in the chooser.

Hewlett Packard and Apple are working together on this issue, and this article will be updated when more information is available.

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Tech Info Library Article Number:18183



Tech Info Library

Power Macintosh 5200/75 LC: Mirrored Video Port Pin-Outs (7/95)

Revised: 7/17/95
Security: Everyone

Power Macintosh 5200/75 LC: Mirrored Video Port Pin-Outs (7/95)

=====

Article Created: 17 July 1995

TOPIC -----

Could you provide the Mirrored Video Port (MVP) pin-out information for the Macintosh 5200/75 LC and Performa computers?

DISCUSSION -----

Because the MVP Video output is a mirrored version of the internal video, the display resolution is set by the internal monitor setting. The MVP port retains the same monitor size as is set for the internal monitor.

The pin-outs are as follows:

Mirrored Video Port (MVP)

DB-15	MVP Con	Description
=====	=====	=====
1	1	Ground
2	3	Red Video
3	5	Composite Sync
4	7	NO Connection
5	9	Green Video
6	11	Ground
7	13	NO Connection
8	15	Attn Dot Clk Signal
9	2	Blue Video
10	4	NO Connection
11	6	Ground
12	8	Vertical Sync
13	10	Ground
14	12	Ground
15	14	Horizontal Sync
Shell	16	Ground

Support Information Services

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Tech Info Library Article Number:18184



Tech Info Library

How De-installing QuickDraw GX Affects Fonts (9/95)

Revised: 9/28/95
Security: Everyone

How De-installing QuickDraw GX Affects Fonts (9/95)

=====

Article Created: 17 July 1995
Article Reviewed/Updated: 28 September 1995

TOPIC -----

The following discussion is a list of common Questions and Answers (Q&A) about how fonts are handled when QuickDraw GX is de-installed.

DISCUSSION -----

QUESTION: Does De-installing QuickDraw GX un-convert the fonts, or does it simply copy the archived fonts back into the Fonts folder?

ANSWER: Performing a "Custom Remove" of ATM GX using the QuickDraw GX Installer deletes the "converted" Type 1 font(s) and copy back the screen and printer Type 1 fonts from the Archived Type 1 fonts folder to the Fonts folder.

The only fonts "converted" when installing QuickDraw GX are Type 1 fonts. However, these fonts were actually not "converted," but instead a new font is created from the screen and printer fonts. The screen and printer fonts are then placed into the Archived Type 1 fonts folder.

NOTE: This process ONLY takes place if ATM GX is selected as part of the QuickDraw GX installation, otherwise the Type 1 screen and printer fonts are left unprocessed in the Fonts folder.

QUESTION: Are the QuickDraw GX-modified fonts which are trashed during De-installation from the removed Fonts folder?

ANSWER: They are not "trashed" -- the originals are moved back as explained in the previous answer.

QUESTION: What if non-QuickDraw GX-converted fonts are in the System Folder's Fonts folder?

ANSWER: If there are "non-converted" screen and printer Type 1 fonts in the Fonts folder when the de-install takes place, they are left alone. The only fonts deleted are the "converted" Type 1 fonts in the Fonts folder.

QUESTION: Is this process of converting the fonts the same as the Type 1 Enabler program?

ANSWER: Yes.

QUESTION: How are the fonts modified?

ANSWER: A totally new font is created from the screen and printer Type 1 fonts. Basically, the screen font is duplicated and the Type 1 data is added to the new font.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 16

Article Change History:
28 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18186



Tech Info Library

Color StyleWriter Pro: Watermark, N-up, Desktop Printing (7/95)

Revised: 7/17/95
Security: Everyone

Color StyleWriter Pro: Watermark, N-up, Desktop Printing (7/95)

=====

Article Created: 17 July 1995

TOPIC -----

We have several Color StyleWriter Pro printers. We would like to use some of the new features that are included with the new print drivers for the StyleWriter 1200, 2200 and 2400. My questions are:

1. Will any of these drivers work on a Color StyleWriter Pro and allow the use of Desktop Printing, WaterMarking and N-up printing? If so, which driver?
2. Is this a supported solution?

DISCUSSION -----

None of the new drivers will work with the Color StyleWriter Pro. Watermark and N-up features are built in to these specific drivers so those functions are not available for the Color StyleWriter Pro.

However, you can use your original Color StyleWriter Pro print driver and still get desktop printing capability. The desktop printing software is backward compatible with and supported on any Apple print driver that uses PrintMonitor.

The desktop printing software is not currently available separately. However, it is included with the LaserWriter 8.3 software. The software is also included in the original disk sets of the StyleWriter 1200, 2200, and 2400 printers.

NOTE:

Desktop printing REQUIRES Finder version 7.1.3 or greater to operate, thus requiring Systems 7.1.1 or greater.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18189



Tech Info Library

Color LaserWriter 12/600 PS: 4-Pass and 1-Pass Printing (7/95)

Revised: 7/17/95
Security: Everyone

Color LaserWriter 12/600 PS: 4-Pass and 1-Pass Printing (7/95)

Article Created: 17 July 1995

TOPIC -----

When I print a grayscale picture on the Color LaserWriter 12/600 PS, I notice that the printer still uses the four-pass printing mode. Why is this, and is there any way around this? Also, what does the printer look for when determining if it is going to use the single-pass or four-pass mode?

DISCUSSION -----

Four-pass printing (which uses all the cartridges, CMYK) is not automatic when Color/Grayscale is selected in the Print dialog of the LaserWriter 8.3 driver. On the Color LaserWriter 12/600 PS, the printer controller primarily determines whether to switch between single-pass and four-pass printing modes. It does this by parsing the PostScript input stream for any "color information". If found, the printer is placed into four-pass mode by the controller. The following should help in characterizing the manner in which the Color LaserWriter 12/600 PS is placed into four-pass mode:

The Color LaserWriter 12/600 PS WILL be placed into four-pass mode IF:

- The document to be printed contains a bitmapped image, black and white or color (in other words, if the PostScript "image" operator is used).

It would take an enormous amount of "processing" time in the printer to look at the bitmapped data to check for any color information.

- The document to be printed contains one or more non-black pixels.

If the entire page has only black and white data, but there is one color pixel in the page, then the printer will go to four-pass mode.

- An EPS file being printed contains any references to color usage.

If the EPS file uses PostScript "color operators" such as "setcmyk", the printer

will go into four-pass mode even if "Black and White" is selected in the driver.

- The document to be printed is a Legal-sized page, and there is only 12 MB of RAM in the printer.

An exception to this occurs if only black and white text is being printed. In that case, the printer will use single-pass mode. Otherwise, the reasoning for going into four-pass mode is strictly for less memory usage.

- An application uses anything other than the PostScript "setgray" operator.

Support Information Services

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Tech Info Library Article Number:18190



Tech Info Library

Color LaserWriter 12/600 PS: Duplex Printing Not Supported (7/95)

Revised: 7/17/95
Security: Everyone

Color LaserWriter 12/600 PS: Duplex Printing Not Supported (7/95)

=====

Article Created: 17 July 1995

TOPIC -----

Can I print on both sides of the paper using a Color LaserWriter 12/600 PS?

DISCUSSION -----

Duplex printing is not supported on the Color LaserWriter 12/600 PS. Using duplex printing can cause complications with the printer.

The toner material, if already applied and fused to the paper, can become sticky if passed through the fuser assembly again. It could then possibly adhere itself to the heater rollers in the fuser making it very difficult to remove. Damage to the fuser's heater rollers is possible.

Once the paper passes through the fuser assembly, and moisture is evaporated from it by the fuser's heater bulbs, the paper may tend to curl slightly. This may also cause potential paper jams or misfeeds.

Support Information Services

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Tech Info Library Article Number: 18191



Tech Info Library

Color LaserWriter: Changing Communications Settings (8/96)

Revised: 8/28/96
Security: Everyone

Color LaserWriter: Changing Communications Settings (8/96)

Article Created: 17 July 1995
Article Reviewed/Updated: 28 August 1996

TOPIC -----

How do I change the communications settings on my Color LaserWriter 12/600 PS?
Is that the purpose of the toggle switch on the back of the printer?

DISCUSSION -----

You can adjust many of the Color LaserWriter 12/600 PS communication settings. Though the standard (factory default) communication settings work well for most environments, you might want to customize communication settings to turn off network interfaces you do not need. For example, if you know the printer will never receive a NetWare message over the network, you can turn off the interface and stop the printer from sending out unnecessary NetWare packets.

There is a small toggle switch on the back of the Color LaserWriter 12/600 PS. It is located on the right of the I/O board on the top rear of the printer, has a solid square box to the left of it and an outlined box to the right. Using this switch and the Apple Printer Utility, you can change the default communications settings of the printer.

When the switch is set to the right, the Apple Printer Utility can be used to change the default settings. However, when the switch is set to the left, settings cannot be changed. Settings for some of the options, such as the startup page for example, are not affected by the position of the switch.

If you attempt to change the settings while the switch is in the left position, you get a message stating that some settings will not be saved on the next power cycle.

To reset the printer to the default settings, use the Printer Utility and click on the Set Defaults option. If you do not have access to the Printer Utility, move the switch to the left, and restart the printer. Keep the switch in this position while the printer starts up. Then, move the switch back to the right to

change the settings. Moving the switch while the printer is on does not harm the printer. Resetting the switch will not erase the IP number assigned through a printer utility.

This article was published in the "Information Alley":
Volume II, Issue 9, Page 18

Article Change History:

28 Aug 1996 - Added IP status when switch is reset.

26 Sep 1995 - Added Info Alley information; updated article.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18192



Tech Info Library

QuickDraw GX 1.1.2: Desktop Printer Icons Won't Stay Put (8/95)

Revised: 8/28/95
Security: Everyone

QuickDraw GX 1.1.2: Desktop Printer Icons Won't Stay Put (8/95)

Article Created: 17 July 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

It appears that the latest QuickDraw GX 1.1.2 does not retain the positions of the desktop printer icons on the Finder Desktop like QuickDraw GX 1.1.1 did. How can I fix this?

DISCUSSION -----

This is a known problem with QuickDraw GX 1.1.2, and will be fixed in the next major release of QuickDraw GX.

Workaround

Fortunately, there is a quick workaround for this problem. Follow these steps:

Step 1

Starup with Extensions off.

Step 2

Move the desktop printer icons to where you want them on the desktop.

Step 3

Restart

The desktop printers should remain where you have placed them.

This article was published in the "Information Alley":
Volume II, Issue 8, Page 12

Article Change History:

28 Aug 1995 - Updated from Info Alley article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18194



Tech Info Library

Power Macintosh: Composite DIMMs Not Recommended? (7/95)

Revised: 7/18/95
Security: Everyone

Power Macintosh: Composite DIMMs Not Recommended? (7/95)

=====

Article Created: 18 July 1995

TOPIC -----

I know there was an issue with composite SIMMs and Power Macintosh computers. I was wondering if there was a similar issue concerning Power Macintosh computers using Composite or Non-Composite DIMMs.

DISCUSSION -----

Apple does not recommend or support composite DIMMs in any Macintosh model which uses 168-pin DIMMs.

Composite DIMMs, like composite SIMMs, are made up of lower-density components to construct a single bank of memory. Combining multiple chips to achieve a larger sum of memory can load down the signal to a point where the signal becomes unreliable.

Apple's Developer Note states the following:

The number of DRAM devices in a RAM DIMM for the Power Macintosh 9500 computers is constrained by the load limits of the unbuffered signals. On each DIMM, a maximum of two devices can be connected to each data line and a maximum of eight devices can be connected to each /RAS line.

DIMMs used with Apple's products are to meet the following JEDEC Joint Electron Device Engineering Council standards. Its mechanical design is defined by the MO-161 specification published by the JEDEC JC-11 committee; its electrical characteristics are defined by the JEDEC Standard No. 21-C.

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Tech Info Library Article Number:18195



Tech Info Library

Power Macintosh 9500 Series: Memory Questions & Answers (1/96)

Revised: 1/24/96
Security: Everyone

Power Macintosh 9500 Series: Memory Questions & Answers (1/96)

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Article Created: 18 July 1995
Article Review/Updated: 24 January 1996

TOPIC -----

The following is a list of common questions and answers (Q&A) concerning the new type of RAM, DIMMs (Dual Inline Memory Modules) used in the Power Macintosh 9500 series computers.

Questions Answered in this Article:
=====

1) How many SIMM (Single Inline Memory Module) slots are available in the Power Macintosh 9500 computers?

2) What are the sizes and specifications of the DIMMs that I can use in the Power Macintosh 9500?

3) Is the 16 MB standard configuration of these computers using up any slots or is the RAM soldered onto the logic board?

4) Does memory (DIMMs) have to be installed in pairs?

5) Are there any guidelines I should follow if I want to take advantage of memory interleaving?

DISCUSSION -----

1) Question: How many SIMM (Single Inline Memory Module) slots are available in the Power Macintosh 9500 computers?

Answer: There are no SIMM slots in the Power Macintosh 9500 computers. Memory expansions slots on the Power Macintosh 9500 are called Dual Inline Memory Module (DIMM) slots, not SIMM slots. There are 12 DIMM slots total in the Power Macintosh 9500.

2) Question: What are the sizes and specifications of the DIMMs that I can use in the Power Macintosh 9500?

Answer: Your computer can use any DRAM configuration with DIMMs of these sizes: 8, 16, 32, or 64 MB. The exact configuration depends on the density of the DRAM chips that are mounted on the DIMMs. (The DIMMs support both 2K and 4K refresh rates.)

You can increase you computer's DRAM to up to 768 MB using 16-megabit (Mbit) DRAM technology. The main logic board has 12 slots (each with a 64-bit data bus) where DIMMs can be installed.

Note: The Power Macintosh 9500 series is designed to expand to a DRAM capacity of up 1.5 gigabyte (GB) using 128 MB DIMMs. However, these DIMMs are not currently readily available and have not been tested by Apple Computer, Inc. for use in the Power Macintosh 9500 series computers.

****IMPORTANT****

The DIMMs should be 5-volt, 64-bit-wide, 168-pin fast-paged mode, with 70-nanosecond (ns) RAM access time or faster. DIMMs taller than 1.25 inches cannot fit in to the Power Macintosh 9500 computer. The Single Inline Memory Modules (SIMMs) from older Macintosh computers are not compatible with the 9500 and cannot be used.

3) Question: Is the 16 MB standard configuration of these computers using up any slots or is the RAM soldered onto the logic board?

Answer: The Power Macintosh 9500 series computers come standard with 16 MB of memory. Since there is no memory soldered on to the logic board Apple currently configures the computer with either two 8 MB DIMMs or one 16 MB DIMM depending on availability.

4) Question: Does memory (DIMMs) have to be installed in pairs?

Answer: Unlike the original Power Macintosh computers, the Power Macintosh 9500 DIMMs do not have to be installed in pairs. If you decide to have additional DRAM installed in your computer, the DIMMs can be installed one-at-a-time in any order in any of the memory slots.

However, if you intend to take advantage of the increase in performance that memory interleaving offers, you will need to install the DIMMs in identical pairs. With memory interleaving you can see up to an 8% increase in performance depending on various factors including the applications being used.

One of the main reasons that the SIMMs have to be installed in pairs on the original Power Macintosh computers is that the 72-pin SIMMs used in those computers are 32-bit wide SIMMs. However, the data buses of the Power Macintosh computers prior to the 9500 series are 64-bits wide. Thus you have to install two SIMMs to accommodate the 64-bit wide data bus.

The Power Macintosh 950, on the other hand, uses 168 pin, 70ns or faster DIMMs which are 64-bit wide. Therefore, it only takes one DIMM to meet the 64 bit wide data bus requirement, and you only have to install one DIMM at a time.

5) Question: Are there any guidelines I should follow if I want to take advantage of memory interleaving?

Answer: if you wish to take advantage of the Power Macintosh 9500 series computers' memory interleaving capability, which provides maximum performance, you must have the DIMMs installed in pairs, and in paired slots. (A1 and B1 are the first pair of slots, A2 and B2 are the second, and so on.) Memory interleaving allows the computer to read or write its memory while other memory reads or writes are occurring, thus providing faster performance.

Paired DIMMs should be the same size and speed. DIMMs purchased for different manufacturers can be paired as long as they are the same size and speed.

Article Change History:

24 Jan 1996 - Added information about memory interleaving and revised format.

08 Aug 1995 - Added information about size of DIMMs included.

28 Jul 1995 - Added explanation on number of DIMM slots

Support Information Services

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Tech Info Library Article Number:18196



Tech Info Library

Power Mac 7500,7600,8500,9500 Series: SCSI-2 Compliance (2/97)

Revised: 2/26/97
Security: Everyone

Power Mac 7500,7600,8500,9500 Series: SCSI-2 Compliance (2/97)

Article Created: 5 July 1995
Article Reviewed/Updated: 26 February 1997

TOPIC -----

This article contains the answers to questions about the SCSI (Small Computer Systems Interface) buses in the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers.

Questions Answered in this Article:
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- 1) How many SCSI buses do the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers have?
- 2) What are the speeds of the SCSI buses?
- 3) How many SCSI devices can I attach to these computers internally?
- 4) How many SCSI devices can I attach to these computers externally?
- 5) Does one SCSI bus have precedence over the other?
- 6) Is the external SCSI port SCSI-2 or Fast SCSI-2?
- 7) Is our MESH Fast SCSI controller fully compliant with the SCSI-2 'Fast' specification as defined in the SCSI-2 spec?
- 8) Since the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers are SCSI-2 compliant will we see better SCSI performance?
- 9) Did Apple implement SCSI disconnect/reconnect?
- 10) Will third-party manufacturers be able to optimize their equipment to take advantage of Fast SCSI-2?

11) If I remove the internal Apple hard drive, is the internal SCSI bus terminated or not?

12) Are the internal hard drives included with the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers Fast SCSI devices?

13) What is meant by "dual-channel asynchronous SCSI"? How does this affect the internal SCSI termination on these computers?

DISCUSSION -----

1) Question: How many SCSI buses do the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers have?

Answer: There are two SCSI buses on the Power Macintosh Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers. There is an internal bus and an external bus.

2) Question: What are the speeds of the SCSI buses?

Answer: The internal bus has a maximum transfer rate of 10 MB/sec. The external bus has a maximum transfer rate of 5 MB/sec.

3) Question: How many SCSI devices can I attach to these computers internally?

Answer: There is a connector for the external bus inside the computer on the logic board, however, it is generally easier to simply hook internal devices to the internal bus.

There are 4 drive bays inside the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers but one is used by the floppy drive. If your computer has a hard drive and CD-ROM drive you will have room for one more internal SCSI device for a maximum of three (3) on the internal SCSI chain due to physical constraints.

4) Question: How many SCSI devices can I attach to these computers externally?

Answer: The external bus can have up to 7 SCSI devices attached to it. Make sure that you do not exceed the maximum cable length (6 meters or 20 feet) including the cables inside the devices. Additionally all SCSI devices must be powered on when your Macintosh is on.

5) Question: Does one SCSI bus have precedence over the other?

Answer: Because you can have two SCSI devices at the same SCSI address (one on each bus) the internal bus (all addresses) is set up to take precedence over the external bus. For startup drives the setting in the Startup Disk control panel is used.

6) Question: Is the external SCSI port SCSI-2 or Fast SCSI-2?

Answer: The external SCSI channel on the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers is SCSI-2 compliant but does not support Fast SCSI-2. The external SCSI channel supports the SCSI-2 standard at 5 MB per second. The internal SCSI channel supports the Fast SCSI-2 standard at 10 MB per second for a hard disk array. Both internal and external buses are 8-bit only, not wide.

7) Question: Is the MESH Fast SCSI controller fully compliant with the SCSI-2 'Fast' specification as defined in the SCSI-2 spec?

Answer: The Fast mode is completely SCSI-2 compliant.

8) Question: Since the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers are SCSI-2 compliant will we see better SCSI performance?

Answer: By itself, SCSI-2 does not mean added performance, although, generally speaking SCSI-2 products are newer and tend to be faster just because they take advantage of the latest software and hardware advances. Optional SCSI-2 modes like 'FAST' and 'WIDE' offer improved SCSI performance.

9) Question: Did Apple implement SCSI disconnect/reconnect?

Answer: Yes, Apple implemented disconnect/reconnect per the SCSI-2 standard.

10) Question: Will third-party manufacturers be able to optimize their equipment to take advantage of Fast SCSI-2?

Answer: Apple cannot comment on the compatibility of third-party products. Please check with the manufacturer of your third-party products for compatibility with the Fast SCSI-2 standard on the internal SCSI channel of these Power Macintosh computers.

11) Question: If I remove the internal Apple hard drive, is the internal SCSI bus terminated or not?

Answer: The Apple internal drive supplies termination to the internal SCSI bus when it ships from the factory. If the drive is removed and another drive is installed, then that drive should be terminated. If no drive is installed on the internal SCSI bus, then the ribbon cable should be removed from the logic board to prevent problems with termination.

12) Question: Are the internal hard drives included with the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers Fast SCSI devices?

Answer: Yes, the internal hard disks shipped with the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 are Fast SCSI devices capable of up to 10 MB per second transfer rates.

14) Question: What is meant by "dual-channel asynchronous SCSI"? How does this affect the internal SCSI termination on these computers?

Answer: Computers with dual-channel asynchronous SCSI have a single SCSI controller which manages SCSI communications across two separate SCSI buses: an internal/external SCSI bus (Bus 1) and an internal SCSI bus (Bus 0).

There are no devices attached internally to Bus 1 in Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers.

Bus 1 has automatic termination, which means that circuitry on the logic board senses whether or not there are any external SCSI devices attached. If there are no external SCSI devices connected, the logic board automatically terminates itself at the 50-pin logic board connector, thus terminating both ends of the SCSI chain.

Once an external SCSI device is connected to the 25-pin external connector, the circuitry senses the device and disables termination at the 50-pin logic board connector. The computer then relies on the external SCSI device to provide the proper termination.

Bus 0 is a completely separate SCSI bus with its own SCSI controller. In Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers, Bus 0 provides Fast SCSI communications up to 10 MB per second.

This bus has a 50-pin flat ribbon cable with two 50-pin connectors on it. Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 series computers ship with the internal hard drive and CD-ROM drive connected to this SCSI bus. The internal hard drive is terminated, which terminates the SCSI bus.

Unlike Bus 1, Bus 0 does not have automatic termination because it is exclusively an internal SCSI bus. If additional devices are added to Bus 0, only the last device should contain termination resistors.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

26 Feb 1997 - Added additional computers.

22 Jul 1996 - Updated title.

02 Jul 1996 - Added Fax Doc word

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Tech Info Library Article Number:18198



Tech Info Library

Color StyleWriter 2400: Installing LocalTalk Option (7/95)

Revised: 7/28/95
Security: Everyone

Color StyleWriter 2400: Installing LocalTalk Option (7/95)

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Article Created: 18 July 1995
Article Reviewed/Updated: 28 July 1995

TOPIC -----

This article describes the Color StyleWriter 2400 LocalTalk Option (M3458LL/A).

DISCUSSION -----

The Color StyleWriter 2400 LocalTalk Module allows Color StyleWriter 2400 users to connect their printers directly to LocalTalk networks, thereby eliminating the need for a dedicated host, as is necessary with ColorShare. The LocalTalk Module is user installable; it plugs directly into the printer's serial port.

This procedure covers the installation of the optional LocalTalk module, which enables the printer to connect to a LocalTalk network.

- Using a small flat-blade screwdriver, release the mounting tab and remove the interface cover from the rear case.
- Plug the LocalTalk connector into the serial port on the printer.
- Insert the upper edge of the LocalTalk module into the rear case of the printer, and then snap the bottom into place.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:
28 Jul 1995 - Added part number.

Support Information Services

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Tech Info Library Article Number:18200



Tech Info Library

Imaging: Glossary of Terms (7/95)

Revised: 7/19/95
Security: Everyone

Imaging: Glossary of Terms (7/95)

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Article Created: 19 July 1995

TOPIC -----

This article describes some of the common terms used when discussing imaging technology.

DISCUSSION -----

1 bit

A bit is the smallest quantity of data. One bit of information can have two possible values: 1 or 0.

4 bits

4 bits of information have 16 possible values.

Application Programming Interface - An architecture that allows applications and drivers to request functions from a specific program or system extension.

ASIC

Stands for Application Specific Integrated Circuit. ASICs are designed to either reduce cost by putting many functions in one piece of silicon or improve performance by putting software functionality into hardware.

Bilevel data

Data that represents objects that have one of two states: typically black or white. Text and line art are examples of bilevel data.

Binary data

Objects that are represented by combinations of 1s and 0s. The other common form of data is ASCII, where objects are described by a combination of numbers and letters.

Bitmap

A pixel-by-pixel representation of an object.

CIE Committee

Commission International de l'Eclairage (International Commission on Illumination).

CIE XYZ and LaB

Device-independent color spaces defined by the CIE committee.

CMYK

Cyan, Magenta, Yellow and black. The three subtractive primary colors, plus black make the process printing colors.

Color Electronic Publishing Systems, or CEPS

Computer-based systems for inputting, manipulating, assembling and outputting data, both color and black and white, in various forms of media. Examples are from Linotype, Scitex, and Crosfield.

Color Management System

A system for communicating color fidelity across devices, such as input, display, and output devices.

Color Matching Method

The routine used by a color management system to apply transformations to color data.

Color separation

The process of separating color into the primary process colors in preparation for printing.

Color space

A set of parameters that describe color values, such as RGB (red, green, blue) or CMYK (cyan, magenta, yellow, black).

Colorants

The colors used by a color device to reproduce color. A printing press uses the CMYK colorants.

Continuous tone

An image that has no apparent steps between one shade and the next.

Controller

A circuit board that controls what the print engine outputs.

Decompress

The process of restoring a compacted version of an object to its full size.

Device calibration

The process of adjusting a device to compensate for differences due to manufacturing, age, environmental conditions, and media inconsistencies.

Device characterization

The process of creating a device profile, which involves measuring colors with a highly sensitive measuring device.

DPI

Dots per inch; the number of dots that can be placed horizontally and vertically. This is also known as printer resolution.

Fat Binary

An application that supports both PowerPC and 68000 processors.

Gamma

The overall darkness of a gray ramp.

Gamut

The range of colors that a device can reproduce.

Gamut mapping

The process of altering a color so that it can be reproduced on a particular device.

Gray

The intensity of a black-and-white object.

Grayscale

A range of gray levels.

Halftone

The process of converting multilevel data into bilevel data.

Halftone cell

The pattern of white-and-black pixels that is repeated.

Halftone screen

See halftone cell

Halftone screen dot

The black portion of the halftone cell. The most common halftone cells grow from the center so a "dot-like" structure is formed as darker grays are formed.

Halftone screen elements

The pixels that make up the halftone cell.

Halftone screen pattern

The shape that all of halftone elements form when combined.

Halftone screen (line screen)

A term to describe how many lines (dots) of resolution are available with a particular halftone cell. For example on a 300-dots-per-inch printer, a 3 x 3 halftone cell at 0 degrees gives a 100-dots-per-inch halftone screen. This can be calculated by dividing the resolution of the printer by the number of elements in the halftone cell.

Hi-Fi color process

The use of more than the four basic colors in the printing process to produce more vibrant color.

ICC profile

A cross-platform standard used to represent the color capabilities of device.

Ideal edge

The line the high-definition ASIC calculates to be the best edge for a particular segment of text or line.

Images

The term used to describe multibit scanned data.

Intermediate gray levels

Gray levels obtained by turning on less than a 300-dots-per-inch pixel.

International Color Committee (ICC)

A committee formed in 1993 to establish standards for electronic color publishing. The first standard is the ICC profile, which is a cross-platform specification for color management profiles.

Line screen

See halftone screen.

Lines per inch

Same as line screen.

Linear toner response

See grayscale linearity.

Multibit data

Objects that contain more than one bit of information (color or gray) per pixel.

Page buffer

Printer memory set aside to store the image prior to sending it to the laser printer.

Photosensitive drum

A cylinder coated with a material that holds a charge when exposed to light. A photosensitive drum is what the laser strikes in the toner cartridge of a laser printer.

Pixel

The smallest area that can be addressed in both the horizontal and vertical direction.

PostScript

A language that is used to described graphic objects. A PostScript interpreter is software that executes a PostScript language program and turns the description of an object into bits in a frame buffer.

Process colors

The four primary colors used in the printing process. These are CMYK (Cyan, Magenta, Yellow, and Black).

Profile

A file containing the color reproduction capabilities of a given input, display, or output device. Color management systems use profiles to interpret color data between devices.

Pulse

The term used to describe turning on the laser beam for a period of time. The laser can be pulsed for each pixel. With high definition, the laser is pulsed for a shorter period of time (or multiple times) to turn on less than one whole pixel.

Rendering styles

The method in which color is reproduced, taking into consideration the intent of the color. For example, photographic colors require less saturated rendering than business graphics do.

RET (Resolution Enhancement Technology)

Hewlett-Packard's technique to rapidly pulse the laser to smooth the edges of fonts and lines. RET is included in the Hewlett-Packard LaserJet III printer.

RGB

The additive colors Red, Green, and Blue. Combined, these colors make white and are usually used in color displays.

Screen angle

The angle at which the halftone cell repeats. Typically 45-degree halftone cells are used because they mask banding that the eye picks up with zero-degree cells.

Screen frequency

See line screen.

Simulation

Using one device to predict the results another device, usually a printing device.

Spectrophotometers

A device that measures the wavelength of a color.

Spot colors

Colors used in printing that are not part of the process ink set. These are usually used in addition to the process colors. Examples are Pantone, Toyo, and Focoltone.

Toner

The substance that is used in laser printers to form the black dots.

Support Information Services

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Tech Info Library Article Number:18202



Tech Info Library

PowerPC: SPEC ratings for 601, 601+, and 602 (10/96)

Revised: 10/23/96
Security: Everyone

PowerPC: SPEC ratings for 601, 601+, and 602 (10/96)

Article Created: 19 July 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article contains the SPEC ratings for the PowerPC 601, 601+, and 602 chips used in Power Macintosh computers. MIPS (Millions of Instructions Per Second) ratings are not provided for PowerPC chips.

Note: This information comes from Motorola and IBM. For additional information, contact Motorola or IBM's web sites at:

Motorola: <http://www.mot.com/SPS/PowerPC/>

IBM: <http://www.chips.ibm.com/products/ppc/index.html>

For additional information about SPEC ratings, contact
<http://www.specbench.org/>.

DISCUSSION -----

PowerPC Chip:	601	601+	602
Technology:	0.6 micron CMOS	0.5 micron CMOS process	0.5 micron CMOS process
Die Size:	10.95mm x 10.95mm	8.6mm x 8.6mm (74mm^2)	7.04mm x 7.04mm (50mm^2)
Transistors:	2.8 mil - 1 mil for logic	2.8 mil - 1 mil for logic	1 million
Cache:	32K Unified	32K Unified	
Temp. Range:	0°C to 85°C	0°C to 85°C	0°C to 105°C
Performance:	60+ SPECint92 @ 66MHz	105 SPECint92 @ 100MHz (est.)	40 SPECint92 @ 66MHz

80+ SPECfp92 @ 66MHz	125 SPECfp92 @ 100MHz (est.)
-------------------------	---------------------------------

85 SPECint92 @ 80MHz

105 SPECfp92 @ 80MHz

Signal I/Os:	184	184	98
Power Supply:	3.6V ±5%	5.0V±5% & 2.5V±.2V or 3.3V±5% & 2.5V±.2V	3.3V±0.3V
Power Dissipation:	5.6W @ 50MHz 7.0W @ 66MHz 8.0W @ 80MHz	4W @ 100MHz	<1200mW @ 66MHz, 3.3V
Packaging:	Ceramic quad flat pack (304 pins)	Ceramic quad flat pack (304 pins)	Plastic quad flat pack (144 pins)

Article Change History:
23 Oct 1996 - Added URLs.

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Tech Info Library Article Number:18203



Tech Info Library

PowerPC: SPEC Ratings For 603 & 603e Chips (1/97)

Revised: 1/28/97
Security: Everyone

PowerPC: SPEC Ratings For 603 & 603e Chips (1/97)

Article Created: 19 July 1995
Article Reviewed/Updated: 28 January 1997

TOPIC -----

This article contains the SPEC ratings for the PowerPC 603 and 603e chips used in Power Macintosh computers. MIPS (Millions of Instructions Per Second) ratings are not provided for PowerPC chips.

DISCUSSION -----

Begin_Table

PowerPC Chip:	603	603e
Technology:	0.5 micron CMOS process	0.5 micron CMOS process
Die Size:	7.4mm x 11.5mm (85mm^2)	8.4mm x 11.67mm (98mm^2)
Transistors:	1.6 million	2.6 million
Cache:	16K Split	32K Split
Temp. Range:	0°C to 105°C	0°C to 105°C
Performance:	75 SPECint92 @ 80MHz 65 SPECfp92 @ 80MHz 62 SPECint92 @ 66MHz 54 SPECfp92 @ 66MHz	120 SPECint92 @ 100MHz 105 SPECfp92 @ 100MHz
Signal I/Os:	165	165
Power Supply:	3.3V±5%	3.3V±5%
Power		
Dissipation:	2.5 W @ 80MHz	3W @ 100MHz

2.2W @ 66.67MHz

Packaging:	C4 Ceramic quad flat pack	C4 Ceramic quad flat pack
	(240 pins)	(240 pins)

End_Table

Article Change History:

28 Jan 1997 - Corrected minor typo.

23 Oct 1996 - Added URLs.

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Tech Info Library Article Number:18204



Tech Info Library

PowerPC: SPEC ratings for 604 & 620 chips (10/96)

Revised: 10/23/96
Security: Everyone

PowerPC: SPEC ratings for 604 & 620 chips (10/96)

Article Created: 19 July 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article contains the SPEC ratings for the PowerPC 604 and 620 chips used in Power Macintosh computers. MIPS (Millions of Instructions Per Second) ratings are not provided for PowerPC chips.

Note: This information comes from Motorola and IBM. For additional information, contact Motorola or IBM's web sites at:

Motorola: <http://www.mot.com/SPS/PowerPC/>

IBM: <http://www.chips.ibm.com/products/ppc/index.html>

For additional information about SPEC ratings, contact
<http://www.specbench.org/>.

DISCUSSION -----

PowerPC Chip:	604	620
Technology:	0.5 micron CMOS process	0.5 micron CMOS process
Die Size:	12.4mm x 15.8mm (196mm^2)	17.1mm x 18.2mm (311mm^2)
Transistors:	3.6 million (1.5 million for logic)	7 million
Cache:	32K Split	64K Split
Temp. Range:	Not Available	Not Available
Performance:	160 SPECint92 @ 100MHz(proj) 165 SPECfp92 @ 100MHz(proj)	225 SPECint92 @ 133MHz(est) 300 SPECfp92 @ 133MHz(est)
Signal I/Os:	171	482

Power Supply:	3.3V	3.3V±0.3V
Power Dissipation:	<10W @ 100MHz (est)	30W @ 133MHz
Packaging:	Ceramic quad flat pack (256 pins)	25 x 25 Ball Grid Array

Article Change History:
23 Oct 1996 - Added URLs.

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Tech Info Library Article Number:18205



Tech Info Library

No Computer Sound Troubleshooting Steps (7/95)

Revised: 7/19/95
Security: Everyone

No Computer Sound Troubleshooting Steps (7/95)

Article Created: 19 July 1995

TOPIC -----

What could be causing my computer to not play sounds?

DISCUSSION -----

Step 1

Check the volume in the Sound control panel to make sure the volume is not turned all of the way down.

Step 2

Check to see if anything (such as a microphone) is plugged into the speaker port on the back of your computer. If you have a microphone, it must be connected to the microphone port and not to the speaker port. If you have external speakers connected, disconnect them and see if your computer will play sounds through the internal speaker. Having anything connected to the speaker port will automatically disable the internal speaker. If your computer will play sounds with nothing connected to the speaker port, you will need to examine your speakers.

Step 3

If you still cannot hear any sound and have nothing connected to the speaker port, you should reinstall your system software. If reinstalling system software does not resolve your issue, contact an Apple authorized service provider. You may locate one in your area by calling 800-538-9696.

Support Information Services

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Tech Info Library Article Number:18206



Tech Info Library

Power Macintosh 9500: Pinouts (7/95)

Revised: 7/19/95
Security: Everyone

Power Macintosh 9500: Pinouts (7/95)

=====

Article Created: 19 July 1995

TOPIC -----

This article presents the pinouts for Power Macintosh 9500 series computers. These pinouts include: ADB, GeoPort, SCSI, a floppy disk drive, built-in Ethernet, high-quality 16-bit stereo sound, and various levels of monitor support depending on the model.

DISCUSSION -----

Apple Desktop Bus (ADB)

One connector is located on the back panel of Power Macintosh computers. It is a 4-pin mini-DIN socket.

Pin	Description
---	-----
1	Data; grounded by an open collector or pulled to +5 V through 470
2	Power on, fed by +5 V through 100 k ; connect to pin 4 to turn on the system
3	+5 V at 500 mA maximum drain; protected by a 1.25-A circuit breaker
4	Ground return

Ethernet

All models of Power Macintosh contain built-in Ethernet. The 9500's offer two types of connection.

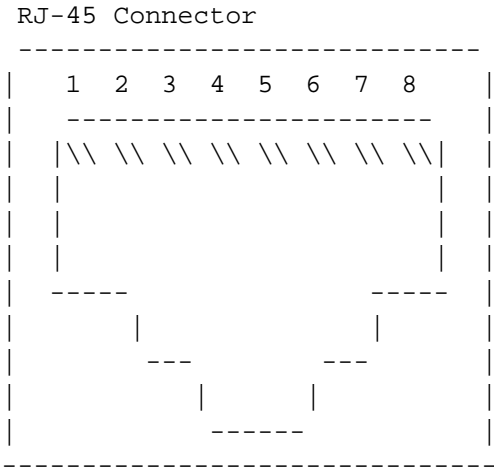
One AAUI-15 Ethernet connector

Pin	Description	Pin	Description
---	-----	---	-----
1	+5 V	8	+5 V
2	DI+	9	DO+

3	DI-	10	DO-
4	Ground	11	Ground
5	CI+	12	No Connection
6	CI-	13	No Connection
7	+5 V	14	+5 V

And One 10Base-T Ethernet connector (NOTE: If both 10BASE-T and AAUI connectors are plugged in, the computer uses the 10BASE-T connector by default.)

The pin configurations for 10BASE-T are as follows:



Contact:	Signal:
1	TD+
2	TD-
3	RD+
4	Not Used by 10BASE-T
5	Not Used by 10BASE-T
6	RD-
7	Not Used by 10BASE-T
8	Not Used by 10BASE-T

Serial Ports

The back panel of all Power Macintosh models contain two I/O ports for serial telecommunication data. Both sockets accept 9-pin plugs allowing either port to be independently programmed for asynchronous or synchronous communication formats up to 9600 bps. This includes AppleTalk and the full range of Apple GeoPort protocols.

Pin	Name	Function
1	SCLK(out)	Reset pod or get pod attention
2	Sync(in)/SCLK(in)	Serial clock from pod (up to 920 Kbit/sec.)
3	TxD-	Transmit -
4	Gnd/shield	Ground
5	RxD-	Receive -
6	TxD+	Transmit +

7	Wakeup/TxHS	Wake up CPU or do DMA handshake
8	RxD+	Receive +
9	+5 V	Power to pod (350 mA maximum)

SCSI Connection

The SCSI interface in Power Macintosh computers exists in two forms: an internal 50-pin ribbon connector for internal devices and an external DB-25 connector for external devices.

Pin Number		Description	Pin Number		Description
-----		-----	-----		-----
Internal	External		Internal	External	
1	7	Ground	2	8	/DATA0*
3	9	Ground	4	21	/DATA1
5	14	Ground	6	22	/DATA2
7	16	Ground	8	10	/DATA3
9	18	Ground	10	23	/DATA4
11	24	Ground	12	11	/DATA5
13		Ground	14	12	/DATA6
15		Ground	16	13	/DATA7
17		Ground	18	20	/DATAP
19		Ground	20		No connection
21		Ground	22		No connection
23		Ground	24		No connection
25		No connection	26	25	TERMPWR
27		Ground	28		No connection
29		Ground	30		No connection
31		Ground	32	17	/ATN
33		Ground	34		No connection
35		Ground	36	6	/BUSY
37		Ground	38	5	/ACK
39		Ground	40	4	/RST
41		Ground	42	2	/MSG
43		Ground	44	19	/SEL
45		Ground	46	15	/C/D
47		Ground	48	1	/REQ
49		Ground	50	3	/I/O

* A slash (/) before a signal name indicates that it is in the low state when active.

Floppy Disk Drive Connection

All Power Macintosh models contain one internal Apple superDrive floppy disk drive, which supports GCR and MFM formats for 1.44 MB disks.

Pin	Signal	Description	Pin	Signal	Description
---	-----	-----	---	-----	-----
1	GND	Ground	11	+5 V	+5 V
2	PH0	Phase 0 state control	12	SEL	Head select
3	GND	Ground	13	+12 V	+12 V

4	PH1	Phase 1 state control	14	/ENBL*	Drive enable
5	GND	Ground	15	+12 V	+12 V
6	PH2	Phase 2 state control	16	RD	Read data
7	GND	Ground	17	+12 V	+12 V
8	PH3	Phase 3 register write strobe	18	WR	Write data
9	NC	No connection	19	+12 V	+12 V
10	/WRREQ	Write data request	20	NC	No connection

* A slash (/) before a signal name indicates that it is in the low state when active.

Monitor Support

The Power Macintosh 9500/120 includes an accelerated display card based on the mach64 graphics accelerator from ATI Technologies, Inc.

Pin	Description	Pin	Description
---	-----	---	-----
1	Red ground	9	Blue video signal
2	Red video signal	10	Monitor sense 2
3	Composite synchronization	11	Synchronization ground
4	Monitor sense 0	12	Vertical synchronization
5	Green video signal	13	Blue ground
6	Green ground	14	Horizontal synchronization ground
7	Monitor sense 1	15	Horizontal synchronization
8	No connection		

The Power Macintosh 9500/132 requires a third-party (non-Apple) graphics accelerator for display support.

Sound I/O

All Power Macintosh computers contain external stereo 3.5mm jacks for sound I/O, connected through amplifiers to the AWAC chip.

Panel label	Description
-----	-----
Audio In	8 k impedance, 2 V rms maximum, 22.5 dB gain available
Audio Line Out	37 impedance, 0.9 V rms maximum, attenuated -22,5 dB (crosstalk degrades from -80 to -32 dB when the audio output is connected to 32 headphones)

Support Information Services

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Tech Info Library Article Number:18207



Tech Info Library

Power Macintosh: Apple Accelerated Graphics Card Pinouts (7/95)

Revised: 7/19/95
Security: Everyone

Power Macintosh: Apple Accelerated Graphics Card Pinouts (7/95)

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Article Created: 19 July 1995

TOPIC -----

This article presents the pinouts for the Apple Accelerated Graphics Card available in the Power Macintosh 9500/120 computer.

DISCUSSION -----

The Apple Accelerated Graphics Card is based on the mach64 Graphics Accelerator card from ATI Technologies, Inc.

Pin	Description	Pin	Description
---	-----	---	-----
1	Red ground	9	Blue video signal
2	Red video signal	10	Monitor sense 2
3	Composite synchronization	11	Synchronization ground
4	Monitor sense 0	12	Vertical synchronization
5	Green video signal	13	Blue ground
6	Green ground	14	Horizontal synchronization ground
7	Monitor sense 1	15	Horizontal synchronization
8	No connection		

Note:

The Power Macintosh 9500/132 computer does not come with the Apple Accelerated Graphics Card. It requires a third-party (non-Apple) graphics accelerator for display support.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18208



Tech Info Library

Power Macintosh 9500/120: Portrait Monochrome Display (12/95)

Revised: 12/12/95
Security: Everyone

Power Macintosh 9500/120: Portrait Monochrome Display (12/95)

Article Created: 19 July 1995
Article Reviewed/Updated: 12 December 1995

TOPIC -----

Does the video card that comes pre-installed in the Power Macintosh 9500/120 support the Apple Portrait Display? If so, does the card support 256 shades of gray?

DISCUSSION -----

The Apple portrait display (Monochrome 15-in. display) is supported by the Power Macintosh 9500/120 Apple Accelerated Graphics Card (ATI). The Technical Specification booklet which came with the computer lists the Portrait Display incorrectly as an RGB monitor. The color depth is also incorrect for both memory configurations.

The proper listing should be:

Monitor	Resolution	Max Colors	Max Colors
		2 MB	4 MB
-----	-----	-----	-----
15-in Portrait monochrome	640x870	8bpp (256 shades)	8bpp (256 shades)

Article Change History:
12 Dec 1995 - Corrected type of display in topic area.

Support Information Services

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Tech Info Library Article Number:18209



Tech Info Library

LaserWriter Pro 630: Not Appearing on Novell 4.1 Network (7/95)

Revised: 7/19/95
Security: Everyone

LaserWriter Pro 630: Not Appearing on Novell 4.1 Network (7/95)

=====

Article Created: 19 July 1995

TOPIC -----

Our Novell server was just recently upgraded from NetWare 4.0.2 to 4.1. Since the upgrade, I am no longer able to see any of the LaserWriter 630 printers on the network even though other printers appear normally. The LaserWriter 630 printers do not appear using ATCON, nor do they appear from the Macintosh clients. What is causing this?

DISCUSSION -----

This situation can occur when NetWare OS versions are upgraded, but the Network Interface Card (NIC) driver on the NetWare server is not the current version. The upgrade from NetWare 4.0.2 to 4.1 involved a number changes to the Appletalk protocol stack and the network interface ODI and supporting NLM's (NetWare Loadable Module), which may require an updated driver. The network interface card manufacturer should be contacted to obtain the most current driver. You should also verify that the driver supports NetWare 4.1.

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Support Information Services

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Tech Info Library Article Number:18212



Tech Info Library

LaserWriter 360f: FAX Speed Unrelated to RAM Size (7/95)

Revised: 7/19/95
Security: Everyone

LaserWriter 360f: FAX Speed Unrelated to RAM Size (7/95)

=====

Article Created: 19 July 1995

TOPIC -----

How does the amount of RAM affect the faxing capabilities of LaserWriter 360f?
Will more RAM allow this printer to send faxes faster (by imaging them faster)?

DISCUSSION -----

Adding RAM will not significantly increase the speed of Fax jobs. Please note that in the tests we ran it seems to have run "slightly" faster with 16 MB. However, when you take into consideration switched phone lines and retries to the printer the time differences noted are insignificant.

Here are the results of the benchmark test.

Test 1 - 1 page document
=====

	From Start to dial tone	From Dial Tone to EOJ
7 MB	1 Minute 15 seconds	39 seconds
16 MB	1 Minute 5 seconds	38 seconds

Test 2 - 5 page document
=====

	From Start to dial tone	From Dial Tone to EOJ
7 MB	3 Minute 19 seconds	2 Min 46 seconds
16 MB	3 Minute 15 seconds	2 Min 46 seconds

Support Information Services

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Tech Info Library

Grolier's Encyclopedia: Map and Timeline Issues (1/96)

Revised: 1/4/96
Security: Everyone

Grolier's Encyclopedia: Map and Timeline Issues (1/96)

Article Created: 19 July 1995
Article Reviewed/Updated: 4 January 1996

TOPIC -----

I have a Macintosh Performa computer, which included the Grolier's Multimedia Encyclopedia '95 CD. However, the Maps and Timelines do not display on my computer.

DISCUSSION -----

This issue is documented in the 1995 Grolier Multimedia Encyclopedia Read Me file, which is included on the CD. If you have a Power Macintosh computer set to display in 256 colors, you may not see the timelines or maps. In order to properly view the CD on a Power Macintosh computer, the Monitors control panel must be set to thousands of colors or higher.

Note that with a multiple scan display if you have the monitor set at a high resolution, you can display fewer colors. If you view at a lower resolution, you can display more colors. So, you may need to change the resolution in order to view in thousands of colors. Follow these steps to change the number of colors being displayed:

Step 1

Open the Monitors control panel.

1. If Thousands is an option, select it, and close the Monitors control panel. You should be able to view the timelines and maps.

2. If Thousands is not an option, follow Step 2.

Step 2

Click on the Options button.

Step 3

Note what the current monitor setting is and try the next lower resolution. For example, if it is set to 832 x 624, try 640 x 480. Click on the OK button.

Step 4

1. If you can then select thousands, follow Step 5.

2. If you still cannot select Thousands, repeat Steps 2-3 until you can select Thousands.

Step 4

Once you are able to select Thousands in the Monitors control panel you should be able to view the timelines and maps. If not, contact Mindscape, the publisher of the Groliers encyclopedia, for additional assistance.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

04 Jan 1996 - Changed title.

05 Dec 1995 - Revised wording.

Support Information Services

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Tech Info Library Article Number:18214



Tech Info Library

LaserWriter 7.x Driver Not Included With AppleShare 4.1 (7/95)

Revised: 7/19/95
Security: Everyone

LaserWriter 7.x Driver Not Included With AppleShare 4.1 (7/95)

=====

Article Created: 19 July 1995

TOPIC -----

I just installed System 7.5.1 and AppleShare Print Server 4.1 on my Workgroup Server 8150. I then received an error message something like, "Print server had trouble getting to the LaserWriter file. Please make sure the print drivers are installed correctly," when the server restarted. What is the problem?

DISCUSSION -----

You need the LaserWriter 7.x driver. The LaserWriter 7.x driver is not on the AppleShare 4.1 installer, and not on the System 7.5 Update 1.0 Installer.

You can find the LaserWriter 7.2 driver on the System Software 7.5 Installer by selecting Custom Install, Printing, and LaserWriter. You can also find LaserWriter 7.1.2 driver on the System Software 7.1.2 Installer, System Software 7.1 Installer, or LaserWriter II Installer v5.0 software by clicking the Custom button and scrolling to LaserWriter software.

Support Information Services

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Tech Info Library Article Number:18215

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Tech Info Library

TITLE

Apple Displays: Frequently Asked Questions

Article ID: 18216
Created: 7/19/95
Modified: 1/12/00

TOPIC

This document contains the answers to frequently asked questions (FAQ) about Apple displays.

Questions in this FAQ:

1. I have an Apple Multiple Scan 15 Display and a Macintosh IIsi and IIfx. The monitor will not work with either computer. Do I need an adapter?
2. I attached an Apple Multiple Scan Display to my computer and I am not able to switch resolutions, even though the computer I am using supports the different resolutions. What is causing this?
3. I have a monitor that uses a Sony Trinitron picture tube. About a third of the way from the top and/or bottom of the monitor, I see a very thin gray line. Is there something wrong with my monitor?
4. There is a large black border around the edge of the viewable area of my monitor and the picture does not fill the entire screen. Is there something wrong with my monitor?
5. I have a monitor experiencing one of the following symptoms:
 - a jittering or shaking picture
 - discolored areas in the picture
 - horizontal lines cycling across the screen
 - distorted image

What is causing this?

6. I purchased an Apple monitor and I cannot plug the power cable into the wall outlet. It has a shield around it that prevents this. How do I plug this monitor in?
7. I have changed some of the settings on my Apple Multiple Scan Display. How can I restore the monitor to the factory settings?
8. I connected my Multiple Scan 15 Display to my computer and I cannot get sound to play through the speakers on the monitor. Why is this?

DISCUSSION

1. **Question:** I have an Apple Multiple Scan 15 Display and a Macintosh IIsi and IIfx. The monitor will not work with either computer. Do I need an adapter?

Answer: Out of the box the Apple Multiple Scan 15 Display is not compatible with the Macintosh IIsi and IIfx. The problem is related to the sync lines. The IIfx and IIsi were designed to work with the 13-inch HighRes RGB, which uses a composite sync input. The Multiple Scan 15 Display only accepts sync on separate input lines, one for the horizontal and one for the vertical.

To use the monitor with either of these computers, you must either use a video card that is compatible with the Apple Multiple Scan 15 Display, or use a special display adapter available from some third-party companies.

Display adapters are available from several third-party companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

2. **Question:** I attached an Apple Multiple Scan Display to my computer and I am not able to switch resolutions, even though the computer I am using supports the different resolutions. What is causing this?

Answer: Many older Macintosh computers did not support resolution switching using software and require a cable adapter to produce different resolutions. Other computers do not provide the proper sync signals to work with the monitor and require an adapter to get any picture. The table below gives details for what is needed to use Apple computers with Apple Multiple Scan Displays.

The following (B revision) video cards can provide 832 x 624 resolution when used with a video adapter:

- Macintosh 4/8
- Macintosh 8/24
- Macintosh 8/24GC

The following computers do not produce the proper sync signal to produce a picture on the monitor. An adapter must be used to view a correct video signal on these computers. These computers can support a maximum 640 x 480 video signal.

- Macintosh LC
- Macintosh LC II
- Macintosh Performa 400, 405, 410, 430
- Performa 600, 600CD
- Macintosh IIfx
- Macintosh IISI
- Macintosh IICx

The following computers and video cards require a cable adapter to provide 832 x 624 resolution:

- PowerBook 180, 180c, 160, 165, 165c
- PowerBook 500 Series
- PowerBook MiniDock and DuoDock (the DuoDock does not require an adapter when used with System 7.5)
- Macintosh LC III
- Macintosh Performa 450, 460, 466, 467
- Macintosh Display Card 4*8, 8*24, and 8*24 GC

The following computers and video card do not require an adapter:

- Macintosh Quadra Series
- Macintosh Centris Series
- Macintosh LC 475
- Macintosh Performa 475 and 476
- Macintosh 630 family
- Power Macintosh Family
- Macintosh Display Card 8*24AC

Multiple Scan 17 and 20 Displays

To get higher resolutions, your computer must support that resolution. The number of colors at the various resolutions depends on the amount of Video RAM (VRAM) you have in your Macintosh.

The following computers and video cards require a cable adapter to provide different resolutions:

- Macintosh II series
- PowerBook 180, 180c, 160, 165, 165c
- PowerBook 500 Series
- PowerBook MiniDock and DuoDock (the DuoDock does not require an adapter when used with System 7.5)
- Macintosh LC, LC II, LC III
- Macintosh Performa 450, 460, 466, 467
- Macintosh Display Card 4*8, 8*24, and 8*24 GC

The following computers and video card do not require an adapter:

- Macintosh Quadra Series
- Macintosh Centris Series
- Macintosh LC 475
- Macintosh Performa 475 and 476
- Macintosh 630 family
- Power Macintosh Family
- Macintosh Display Card 8*24AC

Display adapters are available from several third-party companies such as Griffin Technology and MacAdapt.

3. **Question:** I have a monitor that uses a Sony Trinitron picture tube. About one third of the way from the top and/or bottom of the monitor, I see a very thin gray line. Is there something wrong with my monitor?

Answer: When you display a white or light background on some Apple color displays, you may notice a thin gray horizontal line or lines across the screen. These thin lines are supporting or stabilizing wires inside the CRT and are part of Sony's Trinitron CRT technology.

Sony Trinitron CRTs have a specially constructed aperture grill that improves the CRT's convergence and produces a sharp and clear image. The aperture grill is a grid of vertical wires located just behind the CRT screen. These CRTs require a horizontal stabilizing wire or wires to help support the aperture grill. The supporting wires, which are thinner than a human hair, stabilize the aperture grill against shocks.

The Macintosh 13-inch Hi-Res RGB Monitor and 14-inch Macintosh Color Display have a single support wire across the bottom third of the display. Other Apple displays that feature Sony's Trinitron or Mitsubishi's Diamondtron CRT's have two support wires visible across the top and bottom thirds of the screen.

Note: These are not screen defects. Their presence cannot be adjusted out or eliminated by repairing or replacing modules in the display.

4. **Question:** There is a large black border around the edge of the viewable area of my monitor and the picture does not fill the entire screen. Is there something wrong with my monitor?

Answer: It is normal for your monitor to have a black border around the displayed picture. The closer an image gets to the edges of a display, the lower its quality. The black border will vary in size, depending on the type of monitor you have. Some Apple displays allow you to fill most of the screen using a button on the front of the display.

5. **Question:** I have a monitor experiencing one of the following symptoms:

- a jittering or shaking picture
- discolored areas in the picture
- horizontal lines cycling across the screen
- distorted image

What is causing this?

Answer: These symptoms can all be caused by electromagnetic interference. All monitors are subject to electromagnetic interference. Larger monitors are affected more by this than smaller ones.

If your monitor is exhibiting any of the above symptoms, try temporarily moving it to a different location to check for interference. If the symptom does not occur after moving the monitor, then there was likely a source of interference in the area where the monitor was originally located.

Possible sources of electromagnetic interference include:

- other monitors
- fluorescent lights
- anything with a motor (fans, air conditioners, and so on)
- anything with a magnet (some mobile phones, speakers, and so on)

6. **Question:** I purchased an Apple monitor and I cannot plug the power cable into the wall outlet. It has a shield around it that prevents this. How do I plug this monitor in?

Answer: The power cable you are describing is designed to be connected to the power outlet on the back of your computer. Look on the back of the computer just above where the computer's power cord is connected. There will usually be a receptacle there with three prongs in it. Plug the shielded end of the monitor's power cable into this receptacle.

If your computer does not have such a receptacle (many older Macintosh models did not), you can obtain a regular power cord from most computer dealers and electronic stores. If you take the power cord you have to the location from which you purchased it, they may be able to swap it for the power cable you need.

7. **Question:** I have changed some of the settings on my Apple Multiple Scan Display. How can I restore the monitor to the factory settings?

Answer: You can restore the monitor to factory settings as follows:

- Multiple Scan 15 Display: open the front panel and press the Recall button.
- Multiple Scan 17 and 20 Displays: Open the front panel. On the extreme left, you will see a recessed button with a triangle icon over it and next to it, a button with a circle icon. Using a pen tip or something similar, hold in the button with the triangle and while holding it in, press the button with the circle.

This procedure may also help if the monitor is out-of-focus, has a tilted raster, is experiencing pin-cushioning, and so on.

8. **Question:** I connected my Multiple Scan 15 Display to my computer and I cannot get sound to play through the speakers on the monitor. Why is this?

Answer: To get computer sounds to play through the speakers of an attached Multiple Scan 15 Display, you must connect the sound out cable that came with the monitor from the sound output port on the back of your computer (the one with the speaker icon) to the sound port on the monitor.

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Article 17159: "[Locating Vendor Information](#)"

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Monitors-Displays

Category: General Topics

Sub Category: General Topics

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Tech Info Library

Apple Displays: Frequently Asked Questions (7/96)

Revised: 3/19/97
Security: Everyone

Apple Displays: Frequently Asked Questions (7/96)

=====

Article Created: 19 July 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple displays.

Questions in this FAQ:
=====

- 1) I have an Apple Multiple Scan 15 Display and a Macintosh IIsi and IIfx.
The monitor will not work with either computer. Do I need an adapter?
- 2) I attached an Apple Multiple Scan Display to my computer and I am not able to switch resolutions, even though the computer I am using supports the different resolutions. What is causing this?
- 3) I have a monitor which uses a Sony Trinitron picture tube. About a third of the way from the top and/or bottom of the monitor, I see a very thin gray line. Is there something wrong with my monitor?
- 4) There is a large black border around the edge of the viewable area of my monitor and the picture does not fill the entire screen. Is there something wrong with my monitor?
- 5) I have a monitor experiencing one of the following symptoms:
 - A jittering or shaking picture
 - Discolored areas in the picture
 - Horizontal lines cycling across the screen
 - Distorted image

What is causing this?

- 6) I purchased an Apple monitor and I cannot plug the power cable into the wall outlet. It has a shield around it that prevents this. How do

I plug this monitor in?

- 7) I have changed some of the settings on my Apple Multiple Scan Display. How can I restore the monitor to the factory settings?
- 8) I connected my Multiple Scan 15 Display to my computer and I cannot get sound to play through the speakers on the monitor. Why is this?

DISCUSSION -----

1) Question:

I have an Apple Multiple Scan 15 Display and a Macintosh IIsi and IIfx. The monitor will not work with either computer. Do I need an adapter?

Answer:

Out of the box the Apple Multiple Scan 15 Display is not compatible with the Macintosh IIsi and IIfx. The problem is related to the sync lines. The IIfx and IIsi were designed to work with the 13-inch HighRes RGB, which uses a composite sync input. The Multiple Scan 15 Display only accepts sync on separate input lines, one for the horizontal and one for the vertical.

To use the monitor with either of these computers, you must either use a video card that is compatible with the Apple Multiple Scan 15 Display, or use a special display adapter available from some third-party companies.

Display adapters are available from several third-party companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

2) Question:

I attached an Apple Multiple Scan Display to my computer and I am not able to switch resolutions, even though the computer I am using supports the different resolutions. What is causing this?

Answer:

Many older Macintosh computers did not support resolution switching using software and require a cable adapter to produce different resolutions. Other computers do not provide the proper sync signals to work with the monitor and require an adapter to get any picture. The table below gives details for what is needed to use Apple computers with Apple Multiple Scan Displays.

The following (B revision) video cards can provide 832x624 resolution when used with a video adaptor:

- Macintosh 4/8
- Macintosh 8/24
- Macintosh 8/24GC

The following computers do not produce the proper sync signal to produce a picture on the monitor. An adapter must be used to view a correct video signal on these computers. These computers can support a maximum 640x480 video signal.

- Macintosh LC

- Macintosh LC II
- Macintosh Performa 400, 405, 410, 430
- Performa 600, 600CD
- Macintosh IIfx
- Macintosh IIsi
- Macintosh IICI

The following computers and video cards require a cable adapter to provide 832x624 resolution:

- PowerBook 180, 180c, 160, 165, 165c
- PowerBook 500 Series
- PowerBook MiniDock and DuoDock (The DuoDock does not require an adapter when used with System 7.5)
- Macintosh LC III
- Macintosh Performa 450, 460, 466, 467
- Macintosh Display Card 4•8, 8•24, and 8•24 GC

The following computers and video card do not require an adapter

- Macintosh Quadra Series
- Macintosh Centris Series
- Macintosh LC 475
- Macintosh Performa 475 and 476
- Macintosh 630 family
- Power Macintosh Family
- Macintosh Display Card 8•24AC

Multiple Scan 17 and 20 Displays

To get higher resolutions, your computer must support that resolution. The number of colors at the various resolutions depends on the amount of Video RAM (VRAM) you have in your Macintosh.

The following computers and video cards require a cable adapter to provide different resolutions

- Macintosh II series
- PowerBook 180, 180c, 160, 165, 165c
- PowerBook 500 Series
- PowerBook MiniDock and DuoDock (The DuoDock does not require an adapter when used with System 7.5)
- Macintosh LC, LC II, LC III
- Macintosh Performa 450, 460, 466, 467
- Macintosh Display Card 4•8, 8•24, and 8•24 GC

The following computers and video card do not require an adapter

- Macintosh Quadra Series
- Macintosh Centris Series
- Macintosh LC 475
- Macintosh Performa 475 and 476
- Macintosh 630 family
- Power Macintosh Family
- Macintosh Display Card 8•24AC

Display adapters are available from several third-party companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

3) Question:

I have a monitor which uses a Sony Trinitron picture tube. About one third of the way from the top and/or bottom of the monitor, I see a very thin gray line. Is there something wrong with my monitor?

Answer:

When you display a white or light background on some Apple color displays, you may notice a thin gray horizontal line or lines across the screen. These thin lines are supporting or stabilizing wires inside the CRT and are part of Sony's Trinitron CRT technology.

Sony Trinitron CRTs have a specially constructed aperture grill which improves the CRT's convergence and produces a sharp and clear image. The aperture grill is a grid of vertical wires located just behind the CRT screen. These CRTs require a horizontal stabilizing wire or wires to help support the aperture grill. The supporting wires, which are thinner than a human hair, stabilize the aperture grill against shocks.

The Macintosh 13-inch Hi-Res RGB Monitor and 14-inch Macintosh Color Display have a single support wire across the bottom third of the display. The Macintosh 16-inch Color Display and the Multiple Scan 17 and 20 Displays have two support wires visible across the top and bottom thirds of the screen.

Note that these are not screen defects. Their presence cannot be adjusted out or eliminated by repairing or replacing modules in the display.

4) Question:

There is a large black border around the edge of the viewable area of my monitor and the picture does not fill the entire screen. Is there something wrong with my monitor?

Answer:

It is normal for your monitor to have a black border around the displayed picture. The closer an image gets to the edges of a display, the lower its quality. The black border will vary in size, depending on the type of monitor you have. Some Apple displays allow you to fill most of the screen using a button on the front of the display.

5) Question:

I have a monitor experiencing one of the following symptoms:

- A jittering or shaking picture
- Discolored areas in the picture
- Horizontal lines cycling across the screen
- Distorted image

What is causing this?

Answer:

These symptoms can all be caused by electromagnetic interference. All monitors are subject to electromagnetic interference. Larger monitors are affected more by this than smaller ones.

If your monitor is exhibiting any of the above symptoms, try temporarily moving it to a different location to check for interference. If the symptom does not occur after moving the monitor, then there was likely a source of interference in the area where the monitor was originally located.

Possible sources of electromagnetic interference include:

- Other monitors
- Fluorescent lights
- Any thing with a motor (fans, air conditioners, and so on)
- Anything with a magnet (some mobile phones, speakers, and so on)

6) Question:

I purchased an Apple monitor and I cannot plug the power cable into the wall outlet. It has a shield around it that prevents this. How do I plug this monitor in?

Answer:

The power cable you are describing is designed to be connected to the power outlet on the back of your computer. Look on the back of the computer just above where the computer's power cord is connected. There will usually be a receptacle there with three prongs in it. Plug the shielded end of the monitor's power cable into this receptacle.

If your computer does not have such a receptacle (many older Macintosh models did not), you can obtain a regular power cord from most computer dealers and electronic stores. If you take the power cord you have to the location from which you purchased it, they may be able to swap it for the power cable you need.

7) Question:

I have changed some of the settings on my Apple Multiple Scan Display. How can I restore the monitor to the factory settings?

Answer:

You can restore the monitor to factory settings as follows:

- Multiple Scan 15 Display: open the front panel and press the Recall button.
- Multiple Scan 17 and 20 Displays: Open the front panel. On the extreme left, you will see a recessed button with a triangle icon over it and next to it, a button with a circle icon. Using a pen tip or something similar, hold in the button with the triangle and while holding it in, press the button with the circle.

This procedure may also help if the monitor is out-of-focus, has a tilted raster, is experiencing pin-cushioning, and so on.

8) Question:

I connected my Multiple Scan 15 Display to my computer and I cannot get sound to play through the speakers on the monitor. Why is this?

Answer:

To get computer sounds to play through the speakers of an attached Multiple Scan 15 Display, you must connect the sound out cable that came with the monitor from the sound output port on the back of your computer (the one with the speaker icon) to the sound port on the monitor.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

20 Mar 1996 - Added additional third-party information.

08 Feb 1996 - Revised question 1 to include new third-party information.

09 Jan 1996 - Clarified question 2.

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Tech Info Library Article Number:18216



Tech Info Library

Apple Remote Access: Frequently Asked Questions (11/95)

Revised: 2/12/96
Security: Everyone

Apple Remote Access: Frequently Asked Questions (11/95)

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Article Created: 19 July 1995
Article Reviewed/Updated: 10 November 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple Remote Access (ARA).

Questions in this FAQ:
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- Why does ARA give me an error whenever I launch it?
- My modem is not on the list of ARA scripts, Where can I get the script for my modem?
- When I use ARA to dial the other computer, it connects for a few seconds, then hangs up.
- My modem will not connect at high speed. It is a 14.4 baud modem and I have selected the appropriate modem script, but I can only connect at 9600 baud. What can I do?
- I'm connected via ARA, but where is the stuff on my other computer?
- I can see the host network but the host network machines cannot see me. Why is this?
- Why can my 1.0 ARA not connect to my 2.0 server?
- Why does my ARA refuses to start up?
- I am using AppleShare and ARA and I cannot access my users and groups control panel.

DISCUSSION -----

Question:

Why does ARA give me an error whenever I launch it?

Answer:

You need to turn on AppleTalk. ARA cannot function without AppleTalk being turned on in the Chooser. It will give a number of artificial errors if AppleTalk is inactive, such as:

- "Every time I try to use ARA, my computer tells me to reinstall. I've tried reinstalling several times, to no avail."
- "I keep getting some sort of weird error on startup or launch of ARA" Common ones are no description, inits turned off, Error number -5555 or larger.
- "AppleTalk Remote Access Setup Error: No Description"

Question:

My modem is not on the list of ARA scripts, where can I get the script for my modem?

Answer:

If your Modem is not listed in the default set of ARA modem Scripts, please contact your modem manufacturer's technical support staff for information on their specific ARA script. Some modem companies provide a Bulletin Board Service (BBS) and others will mail you a modem script.

Question:

When I use ARA to dial the another computer, it connects for a few seconds, then hangs up.

Answer:

This is most likely a script problem. You need to call the manufacturer of your modem, and get the latest script. Refer to the answer above.

Question:

My modem will not connect at high speed. It is a 14.4 kbps modem and I have selected the appropriate modem script, but I can only connect at 9600 bps. What can I do?

Answer:

Make sure you are using a hardware handshake cable. You can check with the modem manufacturer to verify this.

Question:

I'm connected via ARA, but where is the stuff on my other computer?

Answer:

Connecting via ARA is just like being connected to the network. You still need to go to the Chooser, click on AppleShare, select a server, and so on. Do the

things you would normally do if you were connected to the network. Note: Other computers cannot see you. Refer to the question below.

Question:

I can see the host network but the host network machines cannot see me. Why is this?

Answer:

ARA only acts as a half router, it only goes one way. The caller can see the remote network but the remote network cannot see the callers network. If you want to set up a full router that will join the two networks you need to use the wide area features of the Apple Internet Router 3.0.

Question:

Why can my 1.0 ARA not connect to my 2.0 server.

Answer:

You need to download the ARA 1.0 Client Enabler which will let a 1.0 client call into a 2.0 server. Otherwise, ARA 1.0 is incompatible with 2.0 servers. However, you can put the 2.0 client into compatibility mode and dial into a 1.0 server.

Question:

Why does my ARA software refuses to launch?

Answer:

You need to be using at least AppleTalk version 57.04. Old installers will sometimes install an old version. Just reinstalling using the ARA installer after running an older installer will fix the problem.

Question:

I am using AppleShare and ARA and I cannot access my Users and Groups control panel.

Answer:

ARA uses the same Users and Groups file that is used by file sharing unless you have installed the AppleShare file server. In order to change the users and groups information under AppleShare you must run AppleShare Admin. The users dialog will have an "allow this user to log in" option below the standard preferences information if ARA has been installed. ARA is incompatible with AppleShare 2.0 and with AppleShare Pro.

Article Change History:

10 Nov 1995 - Change article title.

Support Information Services

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Tech Info Library Article Number:18217



Tech Info Library

Apple IDE Hard Disk and Creating Partitions (4/96)

Revised: 4/19/96
Security: Everyone

Apple IDE Hard Disk and Creating Partitions (4/96)

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Article Created: 20 July 1995
Article Reviewed/Updated: 19 April 1996

TOPIC -----

Is it possible to make partitions on an Apple IDE hard disk? What kind of software can I use?

DISCUSSION -----

Yes, it is possible to partition an IDE hard drive on a Macintosh. You may use Apple's Drive Setup software to accomplish this task. With Drive setup you may partition Apple hard drives as follows:

- 1 HFS Volume
- 2 HFS Volumes
- 3 HFS Volumes
- 4 HFS Volumes
- 5 HFS Volumes
- 6 HFS Volumes
- 7 HFS Volumes
- 8 HFS Volumes

- 1 ProDOS, 1 HFS Volume
- 2 ProDOS, 1 HFS Volume

Drive Setup 1.0.4 is included with System 7.5 Update 2.0, which is available on online services. Drive Setup supports the following computers:

Power Macintosh computers

Drive Setup is supported on all of the current Power Macintosh computers. This includes all the original Power Macintosh computers as well as the PCI-based Power Macintosh computers.

IMPORTANT: Drive Setup is not supported with the Macintosh Processor Upgrade. If the upgrade is installed in a 64040- or 68LC040-based desktop computer with an IDE drive, use the 601 Processor Upgrade control panel to turn the card off before using Drive Setup.

The original Power Macintosh upgrade card is not supported either.

Desktop computers with IDE drives

Drive Setup is supported on 68040- or 68LC040-based desktop computers that have IDE drives installed, which includes:

- Macintosh LC 580
- Macintosh 630 series (LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640)

IMPORTANT: Drive Setup is not supported on any 68LC040 processor equipped computers without IDE drives, even if the computer has a Power Macintosh Upgrade Card installed. If Drive Setup is launched on a computer that is not supported, a dialog box appears with the message, "Drive Setup cannot be launched on this computer," and an OK button.

PowerBook computers with IDE Drives

Drive Setup is supported on most PowerBook computers with an IDE drive, which includes:

- PowerBook 190
- PowerBook Duo 2300
- PowerBook 5300

IMPORTANT: The only exception is the PowerBook 150, which must use the Internal HD Format utility.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the "Information Alley":
Volume II, Issue 12, Page 5

Article Change History:

19 Apr 1996 - Added PowerBook information.
05 Oct 1995 - Added Info Alley information; updated article.
04 Oct 1995 - Further clarification on supported computer systems.

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Tech Info Library

Apple LaserWriter Printers: Frequently Asked Questions (7/96)

Revised: 12/20/96
Security: Everyone

Apple LaserWriter Printers: Frequently Asked Questions (7/96)

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Article Created: 20 July 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple LaserWriter printers.

Questions in this FAQ:
=====

- 1) How do I share a printer on a network using Grayshare?
- 2) Some of my page size options don't show up (such as the 500-sheet tray) and/or, I get frequent PostScript errors when printing. What is causing this?
- 3) I have a PowerBook 500 series computer and a QuickDraw LaserWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be OK, what is causing this?
- 4) When I try to install the software for my Personal LaserWriter 300, I get a message saying that System 7 or greater is needed, but I already have system 7 installed.
- 5) When I select the LaserWriter icon in my Chooser, no printer name appears on the right. Why is this?
- 6) When I print from the manual feed tray with background printing on, I get a message telling me to select the PrintMonitor from the Applications Menu and then have to click OK. Is there any way to avoid these steps?

DISCUSSION -----

- 1) How do I share a printer on a network using Grayshare?

Answer:

QuickDraw LaserWriters cannot be directly connected to a network with LocalTalk cables. Some, however, can be shared on a network with Apple's Grayshare technology.

The following QuickDraw LaserWriters can use this technology:

LaserWriter Select 300

Personal LaserWriter 300

Personal LaserWriter LS (when using the LaserWriter 300 driver)

NOTE: The computer to which the printer is directly attached should have at least a 68020 processor.

Sharing a Printer

To share one the above LaserWriters with others, follow these steps:

Step 1

In order to share a printer, you must be connected to an AppleTalk network.

• LocalTalk Connection

The LocalTalk connector goes into the printer port. The peripheral-8 cable (serial cable) connects the printer to the Macintosh. It goes into the modem port.

• Ethernet or Token Ring Connection

Since both Ethernet and Token Ring connections don't require you to use a serial port on your Macintosh, you can use either the printer or modem port to connect the printer to your Macintosh.

Step 2

Open the Chooser and select the appropriate printer icon.

Step 3

Click the icon of the port your printer is connected to. If you are using the printer port to connect your Macintosh to the network, you must connect your LaserWriter to the modem port.

Step 4

Click the Setup button to open the Sharing Setup dialog box.

Step 5

Select the "Share this Printer" checkbox. This places an "X" in the checkbox. You have the option of naming your printer and entering a password. If you use a

password for the printer, only users who know the password can use the printer from their computers.

If you want a record of what is printed on your printer, select the "Keep Log of Printer Usage" checkbox.

Step 6

Click "OK" to close the Sharing Setup dialog box, then close the Chooser window.

Your printer is now available to others on the network.

Printing to a Shared Printer

To print to a shared printer, follow these steps:

Step 1

Open the Chooser and select the appropriate printer icon. A list of available printers displays.

Step 2

Click the name of the shared printer that you want to use. If the printer requires a password, a dialog appears, and you must enter the password.

Step 3

Close the Chooser

You are now ready to print to the shared printer.

2) Some of my page size options do not show up (such as the 500-sheet tray) and/or, I get frequent PostScript errors when printing. What is causing this?

Answer:

Symptoms like this can occur when you are using a PostScript printer with LaserWriter 8 Driver, and you have not setup the printer properly in the Chooser. Follow the instructions below to properly setup your printer.

Step 1

Open the Chooser

Step 2

Select the LaserWriter 8 icon

Step 3

Select the name of the printer from the list that appears on the right

Step 4

Select the Setup button

Step 5

Select Auto Setup

Step 6

The driver selects a PostScript Printer Description (PPD) for the printer. a message appears on the screen that reads "PostScript Printer Description File Selected:" followed by the name of your printer. If the name of your printer does not appear, use the Select PPD button to manually select the proper PPD. If the PPD is not listed, reinstall your printer software and try the process again.

Step 7

If you have added any paper trays or RAM to the printer, you may need to configure them before they will be accessible. Select the Configure button. If this button does not appear, select the More Choices button. You will see options for the various paper trays. If you have added a particular tray, make sure to change the option near the tray's name to read "Installed". If you have added additional RAM, make sure you change the option next to the RAM button to the closest value.

Step 8

Select OK to leave the Chooser

Your printer is now setup properly.

3) I have a PowerBook 500 series computer and a QuickDraw LaserWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be OK, what is causing this?

Answer:

The PowerBook 520c and 540c computers use a single serial port which is a combination Printer/Modem port. In order to use this port for serial printing, use the following information to properly configure your PowerBook 500 series computer:

Step 1

If the Express Modem is installed:

- A) Open the Express Modem control panel and select Use External Modem.
- B) Open the PowerBook Setup control panel and select Normal.

Step 2

Open the Chooser and do the following:

A) If you are using the PowerBook 200 series, turn OFF AppleTalk. If you are using the PowerBook 500 series, you do not have to disable AppleTalk. If you are using Ethernet; you MUST verify that the Network Control Panel is set for Ethernet.

- Select the serial printer driver.
- Select the "printer/modem" icon (or the modem icon if the printer/modem icon is not available).

Step 3

If the Assistant Toolbox extension is enabled, disable it using the Extensions Manager control panel.

NOTE:

U.S. PowerBook 500 series computers will have a Global Village PowerPort Mercury modem installed, not an Express modem, and therefore will only need to have the PowerBook Setup control panel set to normal for step #1.

A similar situation can also occur when using other serial printers. If you see no port selection choices, make sure the PowerBook Setup control panel is set for Normal.

4) Question: When I try to install the software for my Personal LaserWriter 300, I get a message saying that System 7 or greater is needed, but I already have System 7 installed.

Answer:

This message usually occurs when you are trying to install the printer software on a computer on which the driver is already installed.

Check the Chooser to verify the driver is not already there. If it is not, install the printer software.

Step 1

Insert the printer installation disk and double-click the Installer

Step 2

When the Welcome to the Installer screen appears, click OK

Step 3

When the Install screen appears, select Customize or Custom Install

Step 4

Choose the individual portions of software you want to install. If you have System 7.5, elect to install software for system 7.1.

Step 5

Click Install

5) Question: When I select the LaserWriter icon in my Chooser, no printer name appears on the right. Why is this?

Answer: There could be many things causing this. Try the following (these steps apply only to PostScript LaserWriters which use the LaserWriter or LaserWriter 8 driver):

- Check the cable connection. Disconnect the cables and re-connect them. Be sure you are using the correct type of cables. Many older LaserWriters use LocalTalk cables and have not been tested with serial cables. Check the printer manual to see if this is the case.

- If you are using AppleTalk, make sure the printer is connected to the printer port and not the modem port.

- Make sure AppleTalk is set to Active in the Chooser. If it is inactive, make it active and restart.

- Make sure your Network control panel is set correctly. If you are using AppleTalk, set it to "LocalTalk Built In". If you are using EtherTalk, make sure it is set to EtherTalk.

- Verify the switch setting on the printer. Most printers have some method of setting the port settings on the printer. Depending on the type of printer, it may be a SCSI-ID type switch, a set of DIP switches, or a dial. Set the switch as follows:

- For an original LaserWriter or LaserWriter Plus, set it to AppleTalk
- If the printer has a SCSI-ID type switch, set it to 0 (zero)
- For a LaserWriter IInt or IIntx set all DIP switches up
- For a LaserWriter 16/600 PS, set the switch down

The above steps will resolve most problems. If the cable is damaged the above steps will not let you see the printer, and you must replace the damaged cable.

6) Question: When I print from the manual feed tray with background printing on, I get a message telling me to select the PrintMonitor from the Applications Menu and then have to click OK. Is there any way to avoid these steps?

Answer:

To disable the notification message, do this:

Step 1

Open the System Folder and then open the Extensions folder

Step 2

Double-click the PrintMonitor application

Step 3

Select Preferences from the File menu

Step 4

Where it says "When manual feed job starts:" select "Give no notification"

This disables the message.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

17 Nov 1995 - Reviewed and reformatted article.

Support Information Services

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Tech Info Library Article Number:18219



Tech Info Library

Apple LaserWriter Printers: Frequently Asked Questions (7/96)

Revised: 12/20/96
Security: Everyone

Apple LaserWriter Printers: Frequently Asked Questions (7/96)

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Article Created: 20 July 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple LaserWriter printers.

Questions in this FAQ:
=====

- 1) How do I share a printer on a network using Grayshare?
- 2) Some of my page size options don't show up (such as the 500-sheet tray) and/or, I get frequent PostScript errors when printing. What is causing this?
- 3) I have a PowerBook 500 series computer and a QuickDraw LaserWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be OK, what is causing this?
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DISCUSSION -----

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• Ethernet or Token Ring Connection

Since both Ethernet and Token Ring connections don't require you to use a serial port on your Macintosh, you can use either the printer or modem port to connect the printer to your Macintosh.

Step 2

Open the Chooser and select the appropriate printer icon.

Step 3

Click the icon of the port your printer is connected to. If you are using the printer port to connect your Macintosh to the network, you must connect your LaserWriter to the modem port.

Step 4

Click the Setup button to open the Sharing Setup dialog box.

Step 5

Select the "Share this Printer" checkbox. This places an "X" in the checkbox. You have the option of naming your printer and entering a password. If you use a

password for the printer, only users who know the password can use the printer from their computers.

If you want a record of what is printed on your printer, select the "Keep Log of Printer Usage" checkbox.

Step 6

Click "OK" to close the Sharing Setup dialog box, then close the Chooser window.

Your printer is now available to others on the network.

Printing to a Shared Printer

To print to a shared printer, follow these steps:

Step 1

Open the Chooser and select the appropriate printer icon. A list of available printers displays.

Step 2

Click the name of the shared printer that you want to use. If the printer requires a password, a dialog appears, and you must enter the password.

Step 3

Close the Chooser

You are now ready to print to the shared printer.

2) Some of my page size options do not show up (such as the 500-sheet tray) and/or, I get frequent PostScript errors when printing. What is causing this?

Answer:

Symptoms like this can occur when you are using a PostScript printer with LaserWriter 8 Driver, and you have not setup the printer properly in the Chooser. Follow the instructions below to properly setup your printer.

Step 1

Open the Chooser

Step 2

Select the LaserWriter 8 icon

Step 3

Select the name of the printer from the list that appears on the right

Step 4

Select the Setup button

Step 5

Select Auto Setup

Step 6

The driver selects a PostScript Printer Description (PPD) for the printer. a message appears on the screen that reads "PostScript Printer Description File Selected:" followed by the name of your printer. If the name of your printer does not appear, use the Select PPD button to manually select the proper PPD. If the PPD is not listed, reinstall your printer software and try the process again.

Step 7

If you have added any paper trays or RAM to the printer, you may need to configure them before they will be accessible. Select the Configure button. If this button does not appear, select the More Choices button. You will see options for the various paper trays. If you have added a particular tray, make sure to change the option near the tray's name to read "Installed". If you have added additional RAM, make sure you change the option next to the RAM button to the closest value.

Step 8

Select OK to leave the Chooser

Your printer is now setup properly.

3) I have a PowerBook 500 series computer and a QuickDraw LaserWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be OK, what is causing this?

Answer:

The PowerBook 520c and 540c computers use a single serial port which is a combination Printer/Modem port. In order to use this port for serial printing, use the following information to properly configure your PowerBook 500 series computer:

Step 1

If the Express Modem is installed:

- A) Open the Express Modem control panel and select Use External Modem.
- B) Open the PowerBook Setup control panel and select Normal.

Step 2

Open the Chooser and do the following:

A) If you are using the PowerBook 200 series, turn OFF AppleTalk. If you are using the PowerBook 500 series, you do not have to disable AppleTalk. If you are using Ethernet; you MUST verify that the Network Control Panel is set for Ethernet.

- Select the serial printer driver.
- Select the "printer/modem" icon (or the modem icon if the printer/modem icon is not available).

Step 3

If the Assistant Toolbox extension is enabled, disable it using the Extensions Manager control panel.

NOTE:

U.S. PowerBook 500 series computers will have a Global Village PowerPort Mercury modem installed, not an Express modem, and therefore will only need to have the PowerBook Setup control panel set to normal for step #1.

A similar situation can also occur when using other serial printers. If you see no port selection choices, make sure the PowerBook Setup control panel is set for Normal.

4) Question: When I try to install the software for my Personal LaserWriter 300, I get a message saying that System 7 or greater is needed, but I already have System 7 installed.

Answer:

This message usually occurs when you are trying to install the printer software on a computer on which the driver is already installed.

Check the Chooser to verify the driver is not already there. If it is not, install the printer software.

Step 1

Insert the printer installation disk and double-click the Installer

Step 2

When the Welcome to the Installer screen appears, click OK

Step 3

When the Install screen appears, select Customize or Custom Install

Step 4

Choose the individual portions of software you want to install. If you have System 7.5, elect to install software for system 7.1.

Step 5

Click Install

5) Question: When I select the LaserWriter icon in my Chooser, no printer name appears on the right. Why is this?

Answer: There could be many things causing this. Try the following (these steps apply only to PostScript LaserWriters which use the LaserWriter or LaserWriter 8 driver):

- Check the cable connection. Disconnect the cables and re-connect them. Be sure you are using the correct type of cables. Many older LaserWriters use LocalTalk cables and have not been tested with serial cables. Check the printer manual to see if this is the case.

- If you are using AppleTalk, make sure the printer is connected to the printer port and not the modem port.

- Make sure AppleTalk is set to Active in the Chooser. If it is inactive, make it active and restart.

- Make sure your Network control panel is set correctly. If you are using AppleTalk, set it to "LocalTalk Built In". If you are using EtherTalk, make sure it is set to EtherTalk.

- Verify the switch setting on the printer. Most printers have some method of setting the port settings on the printer. Depending on the type of printer, it may be a SCSI-ID type switch, a set of DIP switches, or a dial. Set the switch as follows:

- For an original LaserWriter or LaserWriter Plus, set it to AppleTalk
- If the printer has a SCSI-ID type switch, set it to 0 (zero)
- For a LaserWriter IInt or IIntx set all DIP switches up
- For a LaserWriter 16/600 PS, set the switch down

The above steps will resolve most problems. If the cable is damaged the above steps will not let you see the printer, and you must replace the damaged cable.

6) Question: When I print from the manual feed tray with background printing on, I get a message telling me to select the PrintMonitor from the Applications Menu and then have to click OK. Is there any way to avoid these steps?

Answer:

To disable the notification message, do this:

Step 1

Open the System Folder and then open the Extensions folder

Step 2

Double-click the PrintMonitor application

Step 3

Select Preferences from the File menu

Step 4

Where it says "When manual feed job starts:" select "Give no notification"

This disables the message.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

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PowerBook Software: Frequently Asked Questions (8/96)

Revised: 12/20/96
Security: Everyone

PowerBook Software: Frequently Asked Questions (8/96)

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Article Created: 20 July 1995
Article Reviewed/Updated: 15 August 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about PowerBook software.

Questions Answered in This FAQ:
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- 1) What is the Control Strip and how can I get it?
- 2) I am using System 7.1, can I use the Control Strip?
- 3) I want to use the Control Strip software on my desktop Macintosh. Is this possible?
- 4) The Control Strip is stuck in the middle of the screen. How can I move it?
- 5) Whenever I hit a key on my keyboard I hear a beep sound and the character does not register on the screen. What's going on?
- 6) What is a system enabler, why do I need it, and which version should I use?
- 7) I just installed a screen saver but I've noticed that after the screen saver kicks in, it slows down significantly. What is causing this?
- 8) What is processor cycling and how do I turn it off?
- 9) What does the Assistant Toolbox extension do?
- 10) What does PowerBook File Assistant do?
- 11) I am trying to use PowerBook File Assistant to synchronize two files but I get the error message that they do not have the same creation date. How can

I get around this?

12) Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

13) Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

14) I have connected a 14" display to my PowerBook, but I am only getting a 640 x 400 image on the external monitor. What should I do?

15) How do I back up the files on my PowerBook 145B or 150?

16) I made a backup of the information on my PowerBook 145B/150 hard drive. Now I would like to restore just one of my control panels. Can I restore a single file from the backup?

17) I did not make a backup of the system software on my PowerBook 145B (or PowerBook 150), and now I think I need to reload the operating system. I do not want to upgrade to System 7.5. Where can I get a new copy of the software that came with my PowerBook?

18) I am upgrading my PowerBook with Express Modem to System 7.5. What version of the Express Modem software should I be using?

19) Do I need the Duo Battery Patch?

20) What ColorSync System Profile should I use on my PowerBook?

21) What is an extension conflict and how do I know if I have one?

22) How do I troubleshoot an extension conflict?

23) What is zapping the PRAM and when should I do it?

24) Where else can I go for answers?

DISCUSSION -----

1) Question: What is the Control Strip and how can I get it?

Answer: The Control Strip is a PowerBook-specific feature (until recently, see below) that allows easy access to AppleTalk, file sharing, hard disk spin down, the PowerBook control panel, PowerBook sleep, and sound volume. The Control Strip also gives an indication of the battery level, estimated battery time remaining, and battery usage level. The Control Strip is a thin, horizontal bar that can be easily dragged to any part of the screen, resized, reordered, or closed. In addition to the Apple Control Strip modules, there are many other Control Strip modules available as shareware at online services. To add a Control Strip module, drag the module into the Control Strip Modules folder in the System Folder and restart the computer. The Control Strip comes with system software versions 7.1.1 and later.

2) Question: I am using System 7.1, can I use the Control Strip?

Answer: The Control Strip only works with system software version 7.1.1 and later. If you try to drag the Control Strip modules and control panel into a System 7.1 (or earlier) System Folder, the Control Strip will not show up.

3) Question: I want to use the Control Strip software on my desktop Macintosh. Is this possible?

Answer: Until recently, Apple has only supported the use of the Control Strip software on PowerBooks. There are third-party patches to allow use of the Control Strip on a desktop Macintosh, but this solution is not supported by Apple. The only desktop configuration currently supported with the Control Strip is a desktop Macintosh using the AppleVision 1710 Display, which comes with software that allows the Control Strip to be used on any Macintosh.

4) Question: The Control Strip is stuck in the middle of the screen. How can I move it?

Answer: You can drag the Control Strip vertically and horizontally at any time by holding down the Option key while dragging it. You can also rearrange the order of the Control Strip modules by holding down the Option key while dragging the modules in the Control Strip.

5) Question: Whenever I hit a key on my keyboard I hear a beep sound and the character does not register on the screen. What's going on?

Answer: You have invoked the Slow Keys feature of the Easy Access control panel. Slow Keys is designed to make typing easier for disabled persons and requires that you hold down a key for several seconds before it is recognized. Slow Keys is activated by holding down the Return key for more than 5 seconds. You can turn Slow Keys off in the Easy Access control panel or remove Easy Access from the control panel folder altogether and restart the computer.

6) Question: What is a system enabler, why do I need it, and which version should I use?

Answer: A system enabler provides system software code for your specific PowerBook to work with system software. An enabler is not required if you are using a version of the system software that was released after your particular model of PowerBook was released. For instance, if you are using a PowerBook 160 and System 7.5, you do not need a system enabler. If the enabler is needed and is missing, the computer will start up with an error message about the version of the system software being incorrect. The correct enabler can usually be found in the System Folder on the Disk Tools disk that came with the PowerBook.

7) Question: I just installed a screen saver but I've noticed that after the

screen saver kicks in, it slows down significantly. What is causing this?

Answer: It is most likely the case that processor cycling is activating and causing the screen saver to slow down. For instructions on turning processor cycling off, see the question below.

8) Question: What is processor cycling and how do I turn it off?

Answer: All PowerBook models implement a feature called processor cycling (formerly known as processor rest) intended to save battery life. This feature activates when the computer detects that the keyboard, mouse, trackball, or Trackpad has not been used for more than a few seconds. At this time, the processor speed is reduced to about 3 MHz and all processing functions become extremely slow. Processor cycling will not activate while the computer is doing any sort of data transfer.

Note that by default processor cycling is on, and although it is intended to for battery life conservation, it will also activate while running off AC power.

The method of turning off processor cycling will depend on the version of the system software you are using:

System 7.0.1

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Step 1

Open the Portable control panel.

Step 2

While holding down the Option key, click on the word "Minutes".

Step 3

Select Don't Rest and click OK.

System 7.1

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Step 1

Open the PowerBook control panel.

Step 2

While holding down the Option key on the keyboard, click the Options... button in the control panel.

Step 3

Select "Don't allow cycling".

System 7.5 or later
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Step 1

Open the PowerBook control panel.

Step 2

Make sure the toggle switch in the control panel is set to Easy.

Step 3

While holding down the Option key on the keyboard, drag the toggle switch from Easy to Custom and let go.

Step 4

Uncheck the "Allow processor cycling - more battery savings" checkbox.

9) Question: What does the Assistant Toolbox extension do?

Answer: The Assistant Toolbox extension adds several features and functionalities to a PowerBook:

* Battery Management

The Assistant Toolbox adds to the base system's ability to manage battery life.

* Persistent RAM disk

Gives the PowerBook the ability to save RAM disk data to the hard disk when shutting down and read it back in when starting up. Normally, a RAM disk is lost when the PowerBook is completely shut down.

* Sleep Fkey

Using the key sequence Command (Apple)-Shift-0 (the number), you can quickly put the PowerBook to sleep.

* Later Laser

Later Laser allows deferred printing of documents when the PowerBook is disconnected from a printer or network. When you reconnect, the documents print when the printer is available. Later Laser is only active when a laser printer is chosen.

* SCSI Sleep

SCSI Sleep mounts any previously connected hard drives as a PowerBook comes out of sleep.

* Anti-Submarining Cursor

The Anti-Submarining Cursor feature is a software fix for the "submarining" cursor effect on the gray-scale passive-matrix screens. "Submarining" is when

the cursor disappears as it is moved quickly. This is an important feature for all passive-matrix gray-scale PowerBooks.

* Always AppleTalk

The Always AppleTalk feature lets you activate AppleTalk without restarting the computer.

All of these features are built in to the Assistant Toolbox extension and are loaded automatically when the extension is loaded.

10) Question: What does PowerBook File Assistant do?

Answer: PowerBook File Assistant, now simply named File Assistant, is a program that can automatically synchronize a file, a folder, or an entire volume between two computers. This program can be very useful for PowerBook owners that often find themselves in the situation where they are maintaining a database on a central computer and then updating the information on the road with the PowerBook. When the user comes back with the updated information, they simply connect the two computers and run the File Assistant program and all files on both computers are up to date and synchronized. The File Assistant program is bundled on the hard drive of all currently available PowerBook computers.

11) Question: I am trying to use PowerBook File Assistant to synchronize two files but I get the error message that they do not have the same creation date. How can I get around this?

Answer: PowerBook File Assistant will not synchronize two files that have the same name but different creation dates. If File Assistant generates this message in error, remove the Assistant Data file from the Preferences folder within the System Folder, and set up the synchronization again.

12) Question: Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook models that have only one serial port (200's, 2300's, 190's, 5300's), the serial port is mapped as a modem port. Under normal conditions this isn't a problem - the internal modem can be used at the same time as a serial device such as a printer is being used. The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there's an update.

13) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook with a single serial port (200's, 2300's, 190's, 5300's) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook:

Step 1

AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.

Step 2

If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.

Step 3

When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

14) Question: I have connected a 14" display to my PowerBook, but I am only getting a 640 x 400 image on the external monitor. What should I do?

Answer: It sounds like you have video mirroring enabled. Open the PowerBook Display control panel and see if mirroring is on. If so, it generates the same image on both displays. Since many PowerBooks have a screen resolution of 640 x 400, the external monitor mirrors that resolution.

Turn off mirroring, then check your settings in the Monitors control panel. To make your external monitor the main monitor, drag the menu bar in the Monitors control panel from monitor 1 to monitor 2.

15) Question: How do I back up the files on my PowerBook 145B or 150?

Answer: Instructions for backing up the information on the PowerBook 145B or PowerBook 150 are available in the online Apple Technical Information Library. Use the search string "PowerBook 145B and backup" instructions to locate the article "PowerBook 145 & 150: Backup and Restore Instructions." The instructions are also detailed in the User's Guide that comes with both computers.

16) Question: I made a backup of the information on my PowerBook 145B/150 hard drive. Now I would like to restore just one of my control panels. Can I restore a single file from the backup?

Answer: No. The PowerBook 145B and 150 backup does not allow for restoring single files.

17) Question: I did not make a backup of the system software on my PowerBook 145B (or PowerBook 150), and now I think I need to reload the operating system. I do not want to upgrade to System 7.5. Where can I get a new copy of the software that came with my PowerBook?

Answer: You can order a pre-made backup of the operating system for a PowerBook 145B and 150 by contacting Apple at 800-767-2775. A shipping and handling fee will apply.

18) Question: I am upgrading my PowerBook with Express Modem to System 7.5. What version of the Express Modem software should I be using?

Answer: You should upgrade your Express Modem software to at least version 1.5.3. Earlier versions may not work properly with System 7.5.

19) Question: Do I need the Duo Battery Patch?

Answer: The Duo Battery Patch should be installed on any PowerBook Duo 210, 230, or 250 that is using PowerBook Duo Enabler 1.0, and has an Express Modem installed. This is the only configuration of PowerBook Duo which receives any benefit from the presence of the Duo Battery Patch. System software versions 7.1.1 and later do not require the patch.

20) Question: What ColorSync System Profile should I use on my PowerBook?

Answer: If you have a PowerBook 180c, 540c, 5300c, 5300ce use PowerBook 180c Standard.

If you have a PowerBook 165c, 520c, 190cs, 5300cs use PowerBook 165c Standard.

If you have a PowerBook 270c, 280c, 2300c use PowerBook 270c Standard.

Non-color PowerBooks do not use ColorSync.

21) Question: What is an extension conflict and how do I know if I have one?

Answer: The resources that are added to your system software by programs and utilities are typically called extensions or INITs and are kept in the Extensions folder or the Control Panels folder in the System Folder. If these extensions are not completely compatible, they can cause the computer to do strange things.

With PowerBooks, symptoms that are typical of being caused by an extension conflict are: freezing, Type XX errors (where XX is a number), "floating point coprocessor not installed" errors, not coming out of sleep properly, not

auto-dimming the display, not auto-sleeping, not spinning down the hard drive, not reading floppy disks correctly, displaying anomalous information or "garbage" on the screen, getting errors when printing, not accessing external devices, modem not connecting properly or dropping the line, not connecting to a network properly, and many others.

22) Question: How do I troubleshoot an extension conflict?

Answer: If a problem is consistent and "testable," it is very easy to determine if the problem is being caused by an extension conflict.

If you are using System 7.1 or earlier, try starting up the computer with the Shift key held down to turn the extensions off. You should see the message "Welcome to Macintosh, Extensions Off." If the symptoms go away when the extensions are off, then you have an extension conflict.

Identifying the Conflicting Extension:

Step 1

Create a new folder on the desktop called "Removed Extensions."

Step 2

Move all items of Kind "system extension," "control panel," or "Chooser extension" from the System Folder, Extensions folder, and Control Panels folder to this new folder. When you open these folders, choose "by Kind" from the View menu to help identify the files you need to move.

Step 3

Close the System Folder, and restart the Macintosh. Test for the problem.

Note: If the problem still occurs, check your System Folder to make sure you've removed all the extensions and control panels.

Step 4

Move a few items from the new folder on the desktop to the closed System Folder and restart the Macintosh. Make sure you note which items you moved.

Step 5

Attempt to recreate the original problem.

Repeat steps 4 and 5 for each item in the Removed Extensions folder until the problem recurs. The last item returned to the System Folder is likely to be the cause of the problem.

If you are using System 7.5 or later, you have the luxury of having a built-in Extensions Manager in the Control Panels folder. Select the System 7.5 Only set of extensions from the Extensions Manager control panel, then restart. If the

symptoms go away, then you have an extension conflict. You can then use the Extensions Manager to turn a few extensions and control panels off at a time, then restart the computer. When the problem comes back, one of the items you last selected is most likely causing the problem. You can also activate the Extensions Manager by holding down the Space Bar while the computer is starting up.

23) Question: What is zapping the PRAM and when should I do it?

Answer: "Zapping" or resetting the PRAM (parameter RAM) resets most of the information in the PRAM chip to its default value. This chip is powered by the backup battery and is used to hold settings that you want to be set even after the computer has been turned off, such as the time (although the time is not reset when zapping the PRAM). Many control panel settings such as sound, mouse speed, and memory are kept in the PRAM as well as many network, SCSI, and screen settings.

To reset the PRAM, restart the computer and hold down the Command (Apple), Option, P, and R keys. Wait for the computer to make its startup chime twice. You may then release the keys. Be aware that resetting the PRAM will reset such settings as the sound volume and mouse speed to their default value, and will purge the contents of a RAM disk if you are using one.

You should only reset the PRAM if you are having a problem that you think could be caused by corrupted information in the PRAM chip. A good tip that the PRAM might be corrupted is if a certain control panel won't hold it's setting or isn't operating correctly, the computer is having trouble printing, or there is a problem with networking.

24) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

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15 Aug 1996 - Updated Question 8 about processor cycling.
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Tech Info Library

PowerBook Software: Frequently Asked Questions (8/96)

Revised: 4/21/97
Security: Everyone

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Article Created: 20 July 1995
Article Reviewed/Updated: 15 August 1996

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Answer: You can drag the Control Strip vertically and horizontally at any time by holding down the Option key while dragging it. You can also rearrange the order of the Control Strip modules by holding down the Option key while dragging the modules in the Control Strip.

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Answer: You have invoked the Slow Keys feature of the Easy Access control panel. Slow Keys is designed to make typing easier for disabled persons and requires that you hold down a key for several seconds before it is recognized. Slow Keys is activated by holding down the Return key for more than 5 seconds. You can turn Slow Keys off in the Easy Access control panel or remove Easy Access from the control panel folder altogether and restart the computer.

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8) Question: What is processor cycling and how do I turn it off?

Answer: All PowerBook models implement a feature called processor cycling (formerly known as processor rest) intended to save battery life. This feature activates when the computer detects that the keyboard, mouse, trackball, or Trackpad has not been used for more than a few seconds. At this time, the processor speed is reduced to about 3 MHz and all processing functions become extremely slow. Processor cycling will not activate while the computer is doing any sort of data transfer.

Note that by default processor cycling is on, and although it is intended to for battery life conservation, it will also activate while running off AC power.

The method of turning off processor cycling will depend on the version of the system software you are using:

System 7.0.1

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Step 1

Open the Portable control panel.

Step 2

While holding down the Option key, click on the word "Minutes".

Step 3

Select Don't Rest and click OK.

System 7.1

=====

Step 1

Open the PowerBook control panel.

Step 2

While holding down the Option key on the keyboard, click the Options... button in the control panel.

Step 3

Select "Don't allow cycling".

System 7.5 or later
=====

Step 1

Open the PowerBook control panel.

Step 2

Make sure the toggle switch in the control panel is set to Easy.

Step 3

While holding down the Option key on the keyboard, drag the toggle switch from Easy to Custom and let go.

Step 4

Uncheck the "Allow processor cycling - more battery savings" checkbox.

9) Question: What does the Assistant Toolbox extension do?

Answer: The Assistant Toolbox extension adds several features and functionalities to a PowerBook:

* Battery Management

The Assistant Toolbox adds to the base system's ability to manage battery life.

* Persistent RAM disk

Gives the PowerBook the ability to save RAM disk data to the hard disk when shutting down and read it back in when starting up. Normally, a RAM disk is lost when the PowerBook is completely shut down.

* Sleep Fkey

Using the key sequence Command (Apple)-Shift-0 (the number), you can quickly put the PowerBook to sleep.

* Later Laser

Later Laser allows deferred printing of documents when the PowerBook is disconnected from a printer or network. When you reconnect, the documents print when the printer is available. Later Laser is only active when a laser printer is chosen.

* SCSI Sleep

SCSI Sleep mounts any previously connected hard drives as a PowerBook comes out of sleep.

* Anti-Submarining Cursor

The Anti-Submarining Cursor feature is a software fix for the "submarining" cursor effect on the gray-scale passive-matrix screens. "Submarining" is when

the cursor disappears as it is moved quickly. This is an important feature for all passive-matrix gray-scale PowerBooks.

* Always AppleTalk

The Always AppleTalk feature lets you activate AppleTalk without restarting the computer.

All of these features are built in to the Assistant Toolbox extension and are loaded automatically when the extension is loaded.

10) Question: What does PowerBook File Assistant do?

Answer: PowerBook File Assistant, now simply named File Assistant, is a program that can automatically synchronize a file, a folder, or an entire volume between two computers. This program can be very useful for PowerBook owners that often find themselves in the situation where they are maintaining a database on a central computer and then updating the information on the road with the PowerBook. When the user comes back with the updated information, they simply connect the two computers and run the File Assistant program and all files on both computers are up to date and synchronized. The File Assistant program is bundled on the hard drive of all currently available PowerBook computers.

11) Question: I am trying to use PowerBook File Assistant to synchronize two files but I get the error message that they do not have the same creation date. How can I get around this?

Answer: PowerBook File Assistant will not synchronize two files that have the same name but different creation dates. If File Assistant generates this message in error, remove the Assistant Data file from the Preferences folder within the System Folder, and set up the synchronization again.

12) Question: Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook models that have only one serial port (200's, 2300's, 190's, 5300's), the serial port is mapped as a modem port. Under normal conditions this isn't a problem - the internal modem can be used at the same time as a serial device such as a printer is being used. The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there's an update.

13) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook with a single serial port (200's, 2300's, 190's, 5300's) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook:

Step 1

AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.

Step 2

If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.

Step 3

When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

14) Question: I have connected a 14" display to my PowerBook, but I am only getting a 640 x 400 image on the external monitor. What should I do?

Answer: It sounds like you have video mirroring enabled. Open the PowerBook Display control panel and see if mirroring is on. If so, it generates the same image on both displays. Since many PowerBooks have a screen resolution of 640 x 400, the external monitor mirrors that resolution.

Turn off mirroring, then check your settings in the Monitors control panel. To make your external monitor the main monitor, drag the menu bar in the Monitors control panel from monitor 1 to monitor 2.

15) Question: How do I back up the files on my PowerBook 145B or 150?

Answer: Instructions for backing up the information on the PowerBook 145B or PowerBook 150 are available in the online Apple Technical Information Library. Use the search string "PowerBook 145B and backup" instructions to locate the article "PowerBook 145 & 150: Backup and Restore Instructions." The instructions are also detailed in the User's Guide that comes with both computers.

16) Question: I made a backup of the information on my PowerBook 145B/150 hard drive. Now I would like to restore just one of my control panels. Can I restore a single file from the backup?

Answer: No. The PowerBook 145B and 150 backup does not allow for restoring single files.

17) Question: I did not make a backup of the system software on my PowerBook 145B (or PowerBook 150), and now I think I need to reload the operating system. I do not want to upgrade to System 7.5. Where can I get a new copy of the software that came with my PowerBook?

Answer: You can order a pre-made backup of the operating system for a PowerBook 145B and 150 by contacting Apple at 800-767-2775. A shipping and handling fee will apply.

18) Question: I am upgrading my PowerBook with Express Modem to System 7.5. What version of the Express Modem software should I be using?

Answer: You should upgrade your Express Modem software to at least version 1.5.3. Earlier versions may not work properly with System 7.5.

19) Question: Do I need the Duo Battery Patch?

Answer: The Duo Battery Patch should be installed on any PowerBook Duo 210, 230, or 250 that is using PowerBook Duo Enabler 1.0, and has an Express Modem installed. This is the only configuration of PowerBook Duo which receives any benefit from the presence of the Duo Battery Patch. System software versions 7.1.1 and later do not require the patch.

20) Question: What ColorSync System Profile should I use on my PowerBook?

Answer: If you have a PowerBook 180c, 540c, 5300c, 5300ce use PowerBook 180c Standard.

If you have a PowerBook 165c, 520c, 190cs, 5300cs use PowerBook 165c Standard.

If you have a PowerBook 270c, 280c, 2300c use PowerBook 270c Standard.

Non-color PowerBooks do not use ColorSync.

21) Question: What is an extension conflict and how do I know if I have one?

Answer: The resources that are added to your system software by programs and utilities are typically called extensions or INITs and are kept in the Extensions folder or the Control Panels folder in the System Folder. If these extensions are not completely compatible, they can cause the computer to do strange things.

With PowerBooks, symptoms that are typical of being caused by an extension conflict are: freezing, Type XX errors (where XX is a number), "floating point coprocessor not installed" errors, not coming out of sleep properly, not

auto-dimming the display, not auto-sleeping, not spinning down the hard drive, not reading floppy disks correctly, displaying anomalous information or "garbage" on the screen, getting errors when printing, not accessing external devices, modem not connecting properly or dropping the line, not connecting to a network properly, and many others.

22) Question: How do I troubleshoot an extension conflict?

Answer: If a problem is consistent and "testable," it is very easy to determine if the problem is being caused by an extension conflict.

If you are using System 7.1 or earlier, try starting up the computer with the Shift key held down to turn the extensions off. You should see the message "Welcome to Macintosh, Extensions Off." If the symptoms go away when the extensions are off, then you have an extension conflict.

Identifying the Conflicting Extension:

Step 1

Create a new folder on the desktop called "Removed Extensions."

Step 2

Move all items of Kind "system extension," "control panel," or "Chooser extension" from the System Folder, Extensions folder, and Control Panels folder to this new folder. When you open these folders, choose "by Kind" from the View menu to help identify the files you need to move.

Step 3

Close the System Folder, and restart the Macintosh. Test for the problem.

Note: If the problem still occurs, check your System Folder to make sure you've removed all the extensions and control panels.

Step 4

Move a few items from the new folder on the desktop to the closed System Folder and restart the Macintosh. Make sure you note which items you moved.

Step 5

Attempt to recreate the original problem.

Repeat steps 4 and 5 for each item in the Removed Extensions folder until the problem recurs. The last item returned to the System Folder is likely to be the cause of the problem.

If you are using System 7.5 or later, you have the luxury of having a built-in Extensions Manager in the Control Panels folder. Select the System 7.5 Only set of extensions from the Extensions Manager control panel, then restart. If the

symptoms go away, then you have an extension conflict. You can then use the Extensions Manager to turn a few extensions and control panels off at a time, then restart the computer. When the problem comes back, one of the items you last selected is most likely causing the problem. You can also activate the Extensions Manager by holding down the Space Bar while the computer is starting up.

23) Question: What is zapping the PRAM and when should I do it?

Answer: "Zapping" or resetting the PRAM (parameter RAM) resets most of the information in the PRAM chip to its default value. This chip is powered by the backup battery and is used to hold settings that you want to be set even after the computer has been turned off, such as the time (although the time is not reset when zapping the PRAM). Many control panel settings such as sound, mouse speed, and memory are kept in the PRAM as well as many network, SCSI, and screen settings.

To reset the PRAM, restart the computer and hold down the Command (Apple), Option, P, and R keys. Wait for the computer to make its startup chime twice. You may then release the keys. Be aware that resetting the PRAM will reset such settings as the sound volume and mouse speed to their default value, and will purge the contents of a RAM disk if you are using one.

You should only reset the PRAM if you are having a problem that you think could be caused by corrupted information in the PRAM chip. A good tip that the PRAM might be corrupted is if a certain control panel won't hold it's setting or isn't operating correctly, the computer is having trouble printing, or there is a problem with networking.

24) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 12

Article Change History:

15 Aug 1996 - Updated Question 8 about processor cycling.
29 Apr 1996 - Corrected minor typo.
29 Nov 1995 - Updated questions to apply to newer computers.

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Tech Info Library Article Number:18220



Tech Info Library

PowerBook 200 series: Frequently Asked Questions (4/97)

Revised: 4/21/97
Security: Everyone

PowerBook 200 series: Frequently Asked Questions (4/97)

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Article Created: 20 July 1995
Article Reviewed/Updated: 04 April 1997

TOPIC -----

This document contains the answers to the following frequently asked questions (FAQ) about PowerBook (Duo) 200 series computers.

- 1) What is a PowerBook Duo?
- 2) Do I need to buy a dock?
- 3) What are the differences in the different Duo Docks that Apple has sold?
- 4) I have an Apple Multiple Scan 17" monitor connected to an original Duo Dock but the only resolution I'm getting is 640x480. What's going on?
- 5) My external monitor is not displaying an image when I start up my PowerBook.
- 6) Before connecting a MiniDock, should the PowerBook be on, off, or sleeping?
- 7) My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?
- 8) Sometimes when using my PowerBook in a Duo Dock, the mouse will freeze even though the system is still working. I know the system is still working because I can see the clock in the corner ticking away. How can I fix this?
- 9) I just bought a Duo Dock with an internal hard drive. When I tried to start up my PowerBook in the dock, I got a flashing question mark on the screen, yet the PowerBook starts up fine on its own. Why is this?
- 10) When starting up, my PowerBook with Express Modem displays the Fax Modem extension icon with an "X" through it. I can't use my modem to send a fax. What's wrong?

11) Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

12) Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

13) I am upgrading my PowerBook 200 series computer with Express Modem to System 7.5. What version of the Express Modem software should I be using?

14) Do I need the Duo Battery Patch?

15) I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen.

16) I'm trying to connect my Duo as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.

17) Are current dock products, modems, and RAM compatible with a PowerBook 200 series computer upgraded to PowerPC?

18) Can the Duo be inserted into the Duo Dock while in sleep mode?

19) Where else can I go for answers?

DISCUSSION -----

1) Question: What is a PowerBook Duo?

Answer: A PowerBook Duo is Apple's smallest and lightest PowerBook computer. Unlike most other PowerBooks, it has no floppy disk drive, no SCSI port, no external video out port, no audio in or out ports, and no ADB port for external mice or keyboards. It does have a serial port, phone jack (with internal modem), and a 152-pin 32-bit PDS (processor direct slot) in the back.

The PDS allows docks to connect directly to the PowerBook Duo's logic board. These adapters let you add further expansion to the Duo - something you can't do with any other PowerBook. You can add Ethernet, video output, SCSI, PCMCIA, more serial ports, audio in/out, and more.

The beauty of a PowerBook Duo is that it allows the user the freedom of using the same computer in functionally different environments. You might have a Duo Dock II at home with a 17" monitor, a printer, and several SCSI devices connected, allowing you to use the computer just like any other desktop Macintosh. When it's time to go to the office/library/park, you simply eject the PowerBook from the dock, and you have the same processing power in a ~5 pound computer the size of a textbook.

2) Question: Do I need to buy a dock?

Answer: No. If you live or work in an environment where you have networked

access to other computers, you can always install software via a "net install." The only time you will absolutely need a floppy disk drive is if a system file gets corrupted and the computer will not start up. Then you will need a floppy disk drive to start the computer from a Disk Tools disk. But even in this situation, an Apple dealer can restore the system for a fee.

If you regularly use SCSI devices, multiple serial devices, external monitors, external ADB devices, and audio devices, then you will probably want to get a MiniDock or a full Duo Dock to compliment your PowerBook Duo.

3) Question: What are the differences in the different Duo Docks that Apple has sold?

Answer: There have been three implementations of the full Duo Dock from Apple: the Duo Dock, Duo Dock II, and Duo Dock Plus. As of this writing, the Duo Dock II and Duo Dock Plus are the only full dock products available from Apple. All three versions can potentially have 1 MB of VRAM, an internal SCSI hard drive, and all versions have the same expansion ports - video, audio in/out, ADB, SCSI (HDI-30), two serial ports, two NuBus slots, and a phone jack for the modem.

The Duo Dock Plus and Duo Dock II come with 1 MB of VRAM standard. The original Duo Dock came with 512k VRAM soldered but can be upgraded to 1 MB by installing a 512k VRAM SIMM.

The Duo Dock II comes standard with a 32k RAM cache and a math coprocessor (FPU) installed, an FPU can be added to the original Duo Dock. An FPU is not an option on the Duo Dock Plus. Note that the PowerBook Duo 280 and 280c cannot take advantage of an FPU in any Duo Dock or the 32k RAM cache in the Duo Dock II because they use the 68LC040 processor. The Duo Dock II and Duo Dock Plus can support screen sizes up to 1024x768 at 256 colors while the original Duo Dock (even with 1 MB of VRAM) can only support up to 832x624 at 256 colors.

4) Question: I have an Apple Multiple Scan 17" monitor connected to an original Duo Dock but the only resolution I'm getting is 640x480. What's going on?

Answer: The Apple Multiple Scan monitors can only switch screen resolutions on the fly on the original Duo Dock if System 7.5 (or later) is installed. A display adapter is available from Enhance Cable Technologies that will "trick" the Duo Dock into using the 832x624 screen size, but this size will still be fixed, i.e. the adapter would need to be removed to go back to 640x480. The Duo Dock II and Duo Dock Plus can switch resolutions regardless of which operating system they are running and do not need any display adapter.

5) Question: My external monitor is not displaying an image when I start up my PowerBook.

Answer: Follow this procedure:

Step 1

Shut down the PowerBook.

Step 2

Make sure the video cable connected to both the PowerBook video port and the Monitor video port is secure.

Step 3

Make sure the PowerBook is plugged into the AC Adapter, which is required to use an external monitor.

Step 4

Start up the PowerBook and open the Monitors control panel. You should see images of two monitors, representing the PowerBook display and the external monitor. If you don't see the image of the external monitor, repeat steps 1 and 2.

Step 5

In the Monitors control panel, click (and hold) the "Identify" button. A large 2 should be displayed on the external monitor icon.

Tip: If you wish to use the external monitor as your primary monitor, open the Monitors control panel and drag the menu bar from the top of the internal display (labeled 1) to the top of the external monitor (labeled 2).

6) Question: Before connecting a MiniDock, should the PowerBook be on, off, or sleeping?

Answer: Do not try to connect the MiniDock to the PowerBook while the PowerBook is on. At best the PowerBook will shut off, at worst you will damage the logic board.

The PowerBook can be in sleep mode if you are connecting to a MiniDock with serial, ADB, audio, or modem connections.

The PowerBook should be off if you are connecting to a MiniDock with SCSI devices or a monitor connected.

7) Question: My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

Answer: The technology used on the passive-matrix displays is susceptible to shadowing and ghosting, since it does not individually address each pixel on the display. Gray-scale passive-matrix displays are particularly susceptible to the symptoms. The PowerBook 100, 140, 145, 145B, 150, 160, 165, 210, 230, 520, 190, and 5300/100 all use a gray-scale passive-matrix display.

Some suggestions to reduce the effects of the shadowing:

- * Adjust the brightness and contrast settings of the display. Usually a lighter contrast setting will look better.

- * Use a darker desktop pattern. The effects of the shadowing will not be as apparent with the darker background.

- * Open the Monitors control panel and select "Black & White" instead of 16 Shades of Gray.

Although these tips can help mitigate the effects of the shadowing, some amount of screen anomalies will always be present.

8) Question: Sometimes when using my PowerBook in a Duo Dock, the mouse will freeze even though the system is still working. I know the system is still working because I can see the clock in the corner ticking away. How can I fix this?

Answer: Older PowerBook models had an issue with ADB devices cutting out when connected to a Duo Dock. If you are using System 7.1, make sure you have the PowerBook Duo Enabler v1.0 installed in the System Folder to correct the problem, this enabler is installed by the System Update 3.0. System software versions after 7.1 do not have this problem.

9) Question: I just bought a Duo Dock with an internal hard drive. When I tried to start up my PowerBook in the dock, I got a flashing question mark on the screen, yet the PowerBook starts up fine on its own. Why is this?

Answer: The version of the hard drive driver on the Duo Dock hard drive is having a conflict with the hard drive driver on the PowerBook hard drive. As a temporary fix you can hold down the Command (Apple) key while the computer is starting up to force it to boot correctly. The permanent fix is to update both drivers to the same version using a recent (System 7.1.1 or later) Disk Tools disk.

10) Question: When starting up, my PowerBook with Express Modem displays the Fax Modem extension icon with an "X" through it. I can't use my modem to send a fax. What's wrong?

Answer: Open the Preferences folder inside your System Folder and trash the Fax Preferences file, empty the Trash, and restart your PowerBook. The Fax Preferences file can be corrupted due to a system error or screen freeze, disabling the Fax Modem extension as a result.

11) Question: Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook models that have only one serial port (200's, 2300's, 190's, 5300's), the serial port is mapped as a modem port. Under normal

conditions this isn't a problem - the internal modem can be used at the same time as a serial device such as a printer is being used. The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there's an update.

12) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook with a single serial port (200's, 2300's, 190's, 5300's) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook:

Step 1

AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.

Step 2

If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.

Step 3

When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

13) Question: I am upgrading my PowerBook 200 series computer with Express Modem to System 7.5. What version of the Express Modem software should I be using?

Answer: You should upgrade your Express Modem software to at least version 1.5.3. Earlier versions may not work properly with System 7.5.

14) Question: Do I need the Duo Battery Patch?

Answer: The Duo Battery Patch should be installed on any PowerBook Duo 210, 230, or 250 that is using PowerBook Duo Enabler 1.0, and has an Express Modem installed. This is the only configuration of PowerBook Duo which receives any

benefit from the presence of the Duo Battery Patch. System software versions 7.1.1 and later do not require the patch.

15) Question: I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen.

Answer: You are most likely using the wrong SCSI cable. You should be using the HDI-30 SCSI System Cable (M2538LL/A), which is a light gray color and only has 29 pins (there is a pin missing). You are most likely using the HDI-30 SCSI Disk Adapter cable (M2539LL/A) which is dark gray and has all 30 pins.

16) Question: I'm trying to connect my Duo as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.

Answer: You may have the wrong cable. Use the Apple HDI-30 SCSI disk adapter cable, part number M2539LL/A, in conjunction with an Apple SCSI System Cable appropriate to your other Macintosh along with proper SCSI termination.

17) Question: Why does my trackball appears to "stick" or "jump" when rolled? I tried to clean it but it is not smooth.

Answer: Most PowerBook trackball problems are due to contamination of the rollers. The trackball is just like the standard Apple mouse in that dust and debris can accumulate on the rollers and impede smooth movement of the trackball.

Symptoms of a Dirty Trackball

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Symptoms that your trackball is dirty are:

- * The trackball appears to "stick" or "jump" when rolled.
- * The cursor will not track horizontally or vertically.
- * It sometimes seems like the cursor is "hitting a wall."
- * The movement of the cursor on the screen isn't smooth.
- * The trackball is physically difficult to roll.

How to Clean the Trackball

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Step 1

Remove the trackball retaining ring by turning it counterclockwise until it pops out (about 1/4 turn). You don't need tools for this; you can just press against the two small ridges on the ring with your fingernails.

Step 2

Lift the retaining ring and trackball out of its cavity.

Step 3

Locate the small rubber rollers at the left and bottom sides of the trackball cavity. Depending on your model, they may look like small rings or wheels.

Step 4

Use any reasonably clean, blunt object (such as your finger or a cotton swab) to wipe off the rollers. Do not use any liquid, including any amount of cleaning fluid or water, inside the computer.

Step 5

Locate the three bearings located at approximately clockwise 4:00, 7:00, and 11:00. Using a fingertip, dry cotton swab, or other blunt object, clean them of any debris.

Step 6

Replace the trackball and the retaining ring.

17) Question: Are current dock products, modems, and RAM compatible with a PowerBook 200 series computer upgraded to PowerPC?

Answer: Most, if not all docking products, internal modems, and RAM used with a PowerBook 200 series should still be compatible after the PowerPC 603e upgrade. All Apple products are. Check with the vendor of third-party products to be sure.

18) Question: Can the Duo be inserted into the Duo Dock while in sleep mode?

Answer: The Duo can be inserted into the Duo Dock while in sleep but the Duo will be ejected when the Duo Dock is powered on. When you bring the Duo out of sleep mode a dialogue box will appear informing you the Duo must be shut down, not in sleep mode, before it is inserted into the Duo Dock.

19) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

Article Change History:

28 Nov 1995 - Entire article rewritten to be up to date.

04 Apr 1997 - Added question 18

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Tech Info Library Article Number:18221



Tech Info Library

AppleVision 1710AV Display: Description (8/95)

Revised: 8/4/95
Security: Everyone

AppleVision 1710AV Display: Description (8/95)

Article Created: 20 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article gives a description of the AppleVision 1710AV Display.

DISCUSSION -----

Overview

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The AppleVision 1710AV is an exceptional audiovisual display designed with the mainstream business user in mind but well-suited to a wide variety of tasks, including desktop publishing and work with multimedia. An appropriate choice for those who require flexibility in a display, it combines multiple-scan capabilities with the next-generation Trinitron tube, offers a host of advanced Apple DigitalColor technology features, and boasts built-in speakers and a microphone. And it features plug-and-play compatibility with DOS and Windows software-based computers as well as Macintosh and Power Macintosh systems.

Image quality is the first concern of anyone buying a monitor, and the AppleVision 1710AV is outstanding in this area. It features internal self-calibration technology—eliminating the need to spend time and money to maintain accurate color calibration. The AppleVision 1710AV provides automatic screen-to-print matching using Apple's unparalleled ColorSync 2.0 technology. It can also be adjusted to compensate for many of the effects of ambient lighting and CRT aging. And its intuitive Macintosh software provides control over all screen functions, including geometry, brightness, contrast, and variable color temperature.

But beyond outstanding image quality, the AppleVision 1710AV has something unique to offer: integrated multimedia features that provide unprecedented performance and capabilities. Its built-in stereo speakers let you enjoy high-quality CD sound without having to give up any of your valuable desk space. And its directional microphone—capable of voice recognition—lets you annotate documents, as well as take full advantage of applications that utilize speech.

The AppleVision 1710AV is based on the next generation of Trinitron technology, which means that it offers an extremely vivid, sharp picture—as well as being incredibly easy on the eyes. And its multiple-scan technology gives you the flexibility you need, letting you view more than two full pages of information at a time at an impressive 1,280 by 1,024 pixels.

Vivid, accurate color, outstanding multimedia capabilities, and flexibility—the AppleVision 1710AV brings it all to your desktop, to put you in the vanguard of the multimedia revolution.

Features

=====

Outstanding image quality

- Features next-generation Trinitron technology for clear, sharp pictures and vivid color
- Provides outstanding color matching and extremely accurate on-screen color representation
- Adjusts luminance and color temperature to provide outstanding image quality
- Keeps colors accurate and balanced over time, by compensating for ambient lighting and CRT phosphor aging

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes—up to 1,280 by 1,024 pixels
- Features built-in intelligence, to ensure that your monitor remains calibrated
- Provides intuitive software control over all screen functions

Multimedia integration

- Provides high-quality stereo sound
- Includes a directional microphone capable of voice recognition
- Is completely integrated with all Macintosh computers that feature Apple AV Technologies, to provide a complete multimedia computing solution

Compatibility

- Works with MS-DOS and Windows software-based systems, as well as with the full line of Macintosh and Power Macintosh computers
- Supports plug-and-play connection to both Apple computers and PCs running MS-DOS and Windows

Configuration and Ordering

=====

AppleVision 1710AV Display

Order No. M3323LL/A

- AppleVision 1710AV
- AppleVision software
- PC adapter

- Integrated, attached video and Apple Desktop Bus (ADB) cable
- Integrated audio input/output cable
- Power jumper cable
- Ambient light wand
- User's Guide
- Limited warranty

Article Change History:

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18222



Tech Info Library

AppleVision 1710AV Display: Technical Specifications (10/96)

Revised: 11/14/96
Security: Everyone

AppleVision 1710AV Display: Technical Specifications (10/96)

Article Created: 20 July 1995
Article Reviewed/Updated: 14 November 1996

TOPIC -----

This article gives the technical specifications for the AppleVision 1710AV Display.

DISCUSSION -----

Picture tube

- 17-inch (16.1-inch diagonal viewable image size) Trinitron CRT
- Multiple Scan
- Resolution Range: 640 X 480 To 1280 X 1024

Screen

- Antistatic, antiglare surface treatment
- 0.26 millimeter (mm) stripe pitch

Input signals

- Red, Green, and blue signals; separate sync, composite sync, and composite video

Power savings features

- Conforms to the Energy Star Program of the United States Environmental Protection Agency
- Power saving feature compatible with Video Electronics Standards Association (VESA) Display Power Management Standard (DPMS)

Scanning Rates

- 30 Khz To 82 Khz (horizontal)

- 50 Hz To 120 Hz (vertical)

Apple Digitalcolor Technology Features

- Self-calibration against factory measurements
- Adjustment For Ambient Lighting
- Adjustment for CRT phosphor aging

User Controls

- Power-on switch
- Automatic degauss at power-up; manual degauss by turning Power Switch OFF, then ON (capable of full degauss after monitor is turned OFF For 20 minutes or more)
- Control buttons: Brightness, contrast, bass, treble, microphone, volume, and mute
- Additional picture and sound controls available using The Applevision Setup Control Panel (macintosh Users) Or On-screen Controls (ibm Pc-compatible Users)

Active Video Image Area

- Adjusted at the factory for the following standard modes:

Begin_Table

Mode	Resolution	Vertical Refresh Rate (hertz)	Horizontal Scan Rate (kilohertz)
VGA	640x480	59.95	31.47
Macintosh	640x480	66.70	35.00
VESA	640x480	75.00	37.50
VESA	800x600	75.00	46.90
SVGA	800x600	55.98	35.16
SVGA	800x600	60.00	37.80
Macintosh	832x624	75.00	49.73
XGA	1024x768	75.00	60.20
Macintosh	1024x768	75.00	60.20
	1024x768	60.00	48.30
	1280x1024	75.00	80.00

End_Table

Audio Input Signals

- Accepts audio signal of up to 6 Vpp (line level-low sensitivity) or as low as 20 mVpp (microhpone level-high sensitivity) without clipping the signal, depending upon the level and sensitivity setting.

Microphone

- Directional, optimized for use in speech recognition and other voice-related applications

Speakers

- Stereo, with ported (bass reflex) chamber design
- Maximum Loudness: 90 dB SPL at 1 kHz at 0.5 meters
- Frequency Response: 100 Hz To 17 Khz +/- 3 dB
- 13 Ohms
- 3 Watts

Headphone Jack

- Output Level: 1.75 Vpp Into 4-Ohm load and 2 Vpp into 10k-ohm load

Input Electrical Requirements

- Voltage: 90 to 132 V AC and 198 to 264 V AC
- Frequency: 47 to 63 Hz, single phase
- Power: 150 W maximum when operating; less than 11 W in standby mode; 0 W in suspend mode and when CPU is in energy-saver mode

Weight

Approximately 60 Pounds (27 Kilograms)

Size and Weight

Height: 19.7 in.(50.7 cm)
Width: 15.8 in.(40.5 cm)
Depth: 17.6 in.(45.2 cm)
Weight: 60 Pounds (27 Kilograms)

Interfaces

- Apple Desktop Bus (ADB): One input port and two ADB pass-thru output ports
- Microphone: One input port and one pass-thru output port
- Headphone/speaker: One input and one pass thru output port

Operating Environment

=====

Temperature

- Operating: 50 to 104 degrees F (10 to 40 degrees C)
- Storage: 32 to 140 degrees F (0 to 60 degrees C)
- Shipping: -40 to 151 degrees F (-40 to 65 degrees C)

Humidity (noncondensing)

- Operating: 10% To 80%
- Storage: 5% To 90%
- Shipping: 5% To 95%

Altitude (maximum)

Operating: 0-10,000 ft. (3,048 M)

Shipping: 0-35,000 ft. (10,670 m)

System Requirements

=====

- Power Macintosh, Macintosh Quadra (and corresponding Macintosh LC and Performa models), Macintosh Centris, Macintosh II (with video card), and PowerBook computers.

Note: Not all models and configurations are capable of driving the monitor to the highest resolution it supports

- System software version 7.1 or later

Monitor Cable Specifications

=====

- 15-pin DSub connector for Macintosh systems
- 15-pin DSub mini-adaptor for PC's

Monitor Signals

=====

Pin	Output Signal
---	-----
1	Red video ground
2	Red video
3	Not used
4	ID 1
5	Green video
6	Green video ground
7	ID 2
8	Not used
9	Blue video
10	ID 3
11	V sync return
12	V sync
13	Blue video ground
14	H sync return
15	H sync
Shell shield ground	

Article Change History:

14 Nov 1996 - Added speaker wattage.

04 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18223



Tech Info Library

Macintosh Performa 6100: Frequently Asked Questions (12/95)

Revised: 12/20/96
Security: Everyone

Macintosh Performa 6100: Frequently Asked Questions (12/95)

=====

Article Created: 20 July 1995
Article Reviewed/Updated: 04 December 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Macintosh Performa 6100 series computers.

Questions in this FAQ:
=====

- 1) What is the difference between native software and conventional software?
- 2) I bought a Macintosh Performa 6100 series computer and added an AV card. Can I get software that supports the video digitizer?
- 3) My computer does not remember sound settings from restart to restart. I continually have to go back to the Sound control panel and reset the CD input source.
- 4) What causes Type 11 errors?
- 5) Does my Power Macintosh have an FPU? I see errors that an FPU is not installed.
- 6) Can you install the Apple TV/Video System in a Performa 6115?
- 7) What is the difference between a Power Macintosh 6100 and a Macintosh Performa 6100 series computer?
- 8) I need to run DOS software on my Performa 6100 series computer. What are my options?
- 9) My microphone from my LC II does not work on my Performa 6100 series computer. What's wrong?

10) I have an old program which tells me to turn off 32-bit addressing. But I don't see this as an option in my Memory control panel. Why?

11) The sound from my 15" Multiple Scan Display is very low. Sometimes, I can only hear sound out the left speaker. What is wrong?

12) I have a Macintosh Performa computer which was shipped with a CD-ROM. I have purchased a third-party disk management utility or virus detector which states I should use a "Disk Tools" disk in order to create an emergency disk. I did not receive one with my computer. Should I have?

DISCUSSION -----

1) Question: What is the difference between native software and conventional software?

Answer: The Power Macintosh runs in two modes, without any further assistance from the user: it can run "native" software, which is software written for the PowerPC chip, or "conventional" software, which is software written for an older 68000, 68020, 68030, or 68040-based computer. Conventional software is sometimes referred to as "68K" software.

Conventional software runs in an "emulation" mode, which is functionally similar to the 68020 processor. The main differences between this processor and later processors are: (a) it does not have a PMMU (Paged Memory Management Unit), (b) it does not support the SWAP16 instruction, and (c) it does not support a floating point unit. The first point is necessary because the PowerPC has a newer, better, memory management model. The second point is also addressed by improvements in the PowerPC chip. The third point requires different steps to work around; see the FAQ question below. Conventional software will generally run faster than a 68020, probably between Macintosh IIci and Quadra 605 performance, depending on how many references the software makes to the native "toolbox" in the computer.

As new software is sold, you will find reference to "Fat" applications. These are programs that can be run on either a 68K or Power Macintosh computer without modification. The operating system automatically determines which part to use.

Since "Fat" applications are really two programs in one, many installers will offer either a "Power Macintosh" or "Conventional" install. If you have installed a software billing itself as "Accelerated for Power Macintosh" and, once installed, it does not recognize features which definitely exist, such as an FPU, make sure you have installed the correct version and build. Both versions will run on the Power Macintosh, but only the "native" version will benefit from all the special features of the Power Macintosh.

2) Question: I bought a Macintosh Performa 6100 series computer and added an AV card. Can I get software that supports the video digitizer?

Answer: You should contact the Apple Assistance Center at 800-538-9696. They can determine what software you are entitled to receive with the card.

3) Question: My computer does not remember sound settings from restart to restart. I continually have to go back to the Sound control panel and reset the CD input source.

Answer: If the Sound Preferences file, which stores much of this information, is corrupted, the settings may not be getting saved. To resolve this, open your System Folder, then your Preferences folder. Throw away Sound Preferences, and restart. Try to reproduce the problem.

If you have installed any type of disk compression or disk management software, check to make sure that it is not manipulating any of your Preferences files.

4) Question: What causes Type 11 errors?

Answer: Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- RAM problems: you've installed bad RAM.
- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Performa computer).
- Incompatible software running in emulation.

For steps on how to troubleshoot such problems, see the referenced Technical Information Library article.

The online Apple Technical Info Library (go shortcut "TIL") - use the search string "meaning of error type 11 and power macintosh" to locate the article "Power Macintosh: Meaning of Error Type 11".

5) Question: Does my Power Macintosh have an FPU? I see errors that an FPU is not installed.

Answer: All PowerPC chips, which are used on Power Macintosh computers, have a floating point unit.

You may be seeing the "FPU not installed" error for two reasons:

- You are running "conventional" software in 68K emulation. This operating mode does not provide access to the computer's floating point unit. Thus, the program does not work. Certain software "bridges" exist to allow conventional software access to the PowerPC's FPU. See the Redgate Communications area to search for such products.
- You are using software, in either emulation or native mode, which is simply failing. Since the PowerPC supports pipelining instructions, a number of errors are occurring simultaneously. They are eventually percolating out as an "FPU not installed" error. An error did occur, but it has nothing whatsoever to do with

the need for a floating point unit. You should apply standard troubleshooting steps to resolve this issue.

6) Question: Can you install the Apple TV/Video System in a Performa 6115?

Answer: No. The Apple TV/Video System is designed for the Performa 630 series of computers.

You can, however, install an Apple AV Technologies Video Card in the Performa 6115.

7) Question: What is the difference between a Power Macintosh 6100 and a Macintosh Performa 6100 series computer?

Answer: The Macintosh Performa 6100 series computers use the basic architecture of a Power Macintosh 6100/60. They all include CD-ROM drives, while CD-ROM drives are optional equipment on a Power Macintosh. Different Performa models come with different sized hard disks, depending on the market. Performas also come with a variety of software and CD bundles, while the Power Macintosh computers only come with the basic system software. All Performas come with a Global Village Gold II modem, while Power Macintosh computers do not come with any at all. And all Performas come with a 15" Multiple Scan Display, while Power Macintosh users are free to choose their own monitor.

As you can conclude from the above, the Performas are popular with people just starting out with computing, or who have needs that can be nicely satisfied by a complete bundle. Power Macintosh computers are favored by people who may have hardware or software left over from a previous computer, or who have very specific applications they wish to use, and who wish to "build" their own, custom configuration.

8) Question: I need to run DOS software on my Performa 6100 series computer. What are my options?

Answer: There are two ways to run DOS software:

- Use Insignia Solutions' SoftWindows emulator. This is a Macintosh application which emulates a PC DOS/Windows environment. You can get more information, such as pricing, performance, system requirements, and compatibility information from Insignia by calling them at 800-877-4292.
- You can use the Apple DOS Compatibility Card. This is a hardware solution, providing a 486 DX2 processor running at 66 MHz, SoundBlaster support, alternative video support, and up to 32 MB of on-board memory. This effectively produces a "dual processor" environment for your computer, in which Macintosh and DOS applications can run at full processor efficiency, simultaneously.

This card plugs into your single Processor Direct Slot. If you opt to use this card, you will not be able to use other PDS cards, such as an Apple AV Technologies Card, without removing this card, first.

9) Question: My microphone from my LC II does not work on my Performa 6100 series computer. What's wrong?

Answer: The microphone used with an LC II is called the Apple Omnidirectional Microphone. It comes with a 1/2" plug. The one used with the Performa 6100 series computers (as well as all Power Macintosh computers, the Performa 475/6, 500 series computers, 600 series computers, and Quadra 660AV and 840AV) is called a PlainTalk microphone. It has a 3/4" plug, the extra 1/4" of which is to reach a power source which drives an internal amplifier in the microphone.

You need to get a PlainTalk microphone. Our part number is M9060Z/A. You can order this through many Apple-authorized service providers and catalog resellers. Their numbers can be obtained by contacting our 24-hour referral service, 800-538-9696.

The online Apple Technical Info Library (go shortcut "TIL") - use the search string "plaintalk microphone" to locate the article "Macintosh: PlainTalk Audio Port Microphone Support".

10) Question: I have an old program which tells me to turn off 32-bit addressing. But I don't see this as an option in my Memory control panel. Why?

Answer: The Power Macintosh always runs in 32-bit mode. There is no way to turn it off; therefore, there is no switch in the Memory control panel.

11) Question: The sound from my 15" Multiple Scan Display is very low. Sometimes, I can only hear sound out the left speaker. What is wrong?

Answer: Most likely, the cable is not plugged in securely on the monitor's side. Remove it, then plug it back in, firmly. If this does not help, completely unplug the cable from both the Macintosh side and the monitor side, then exchange the ends.

You may also wish to check your "Volumes" setting in the Sound control panel. Select "Control Panels" from the Apple menu, then open the Sound control panel. You will see a window which lets you set your alert volumes. Click on the pop-up menu at the top of the window, then select "Volumes." Make sure your speaker volume is set to a non-low value.

12) Question: I have a Macintosh Performa computer which was shipped with a CD-ROM. I have purchased a third-party disk management utility or virus detector which states I should use a "Disk Tools" disk in order to create an emergency disk. I did not receive one with my computer. Should I have?

Answer: Apple currently ships a CD-ROM drive as part of many Performa computers. If you received a Macintosh Performa CD as part of your bundle, that effectively replaces a conventional Disk Tools disk: in addition to containing conventional disk diagnostic software, it also contains a complete back-up of your system.

In many cases, you can still use the Performa CD as a start-up disk, then insert a diskette containing whatever disk-based software you need to run.

If the software you are using does not support the use of a Performa CD, or does not contain instructions on how to use the Performa CD with that product, you should contact the manufacturer of the software for further assistance.

Article Change History:

04 Dec 1995 - Added keyword.

20 Nov 1995 - Revised title.

02 Nov 1995 - Updated Type 11 error search string.

Support Information Services

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Tech Info Library Article Number:18224



Tech Info Library

Apple Multiple Scan 14 Display: Description (8/95)

Revised: 8/4/95
Security: Everyone

Apple Multiple Scan 14 Display: Description (8/95)

=====

Article Created: 20 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article gives a description of the Apple Multiple Scan 14 Display.

DISCUSSION -----

The Apple Multiple Scan 14 Display (14-inch picture tube; 12.4-inch diagonal viewable image size) is a high-quality color monitor designed to be the optimal solution for working with today's multimedia applications. Surprisingly affordable, it combines the flexibility of multiple-scan technology with the multimedia advantage of built-in stereo speakers to give you an outstanding price/performance value.

Because the Apple Multiple Scan 14 Display uses multiple-scan technology, you can choose between different resolutions, giving you the flexibility to adjust your display to suit the particular application in which you are working—without restarting your computer. And the display's integrated front-panel stereo speakers and easy-access headphone jack let you get the most out of multi-media applications that feature compelling color images and sound.

The Apple Multiple Scan 14 Display is both simple to set up and enjoyable to use. Its conveniently located front-panel controls make it an easy task to adjust brightness and contrast for optimal viewing convenience. Its 0.28-millimeter dot pitch provides an exceptionally clear, sharp image. And it complies with the Environmental Protection Agency's Energy Star guidelines for power conservation.

Yet even with all of these features, the Apple Multiple Scan 14 Display remains affordable—making it the perfect choice for users who want a flexible, multimedia-ready, color viewing solution.

Features
=====

Outstanding image quality

- Offers industry-leading dot pitch of only 0.28 mm for clean, crisp images
- Features a shadow mask screen for clear pictures with true colors
- Degausses automatically and conveniently at startup to ensure equal distribution of colors

Multimedia integration

- Incorporates stereo speakers to get the most out of today's multimedia applications
- Provides an easy-access front-panel headphone jack for private listening

Ergonomic design

- Comes with a tilt-and-swivel base that allows you to position the monitor for optimal viewing comfort
- Provides the convenience of front-panel controls
- Features a flicker-free 72-hertz refresh rate to minimize eyestrain
- Complies fully with MPR II standards for low electrical and magnetic emissions
- Complies with the EPA's Energy Star conservation guidelines by switching into low-power mode during idle periods

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers user-adjustable resolution modes: 640 by 480 pixels and 800 by 600 pixels with various refresh rates
- Comes with mode-switching software to allow resolution changes without restarting

Compatibility and affordability

- Works with Power Macintosh, Macintosh Quadra, Macintosh Centris, Macintosh Performa, Macintosh II, and PowerBook computers,
- Provides advanced capabilities at an affordable price

Configuration and Ordering

=====

Apple Multiple Scan 14 Display
Order No. M3935LL/A

- Apple Multiple Scan 14 Display
- Apple Multiple Scan software for Macintosh
- Video cable (attached)
- Sound cable
- User's guide
- Limited warranty

Article Change History:

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18225



Tech Info Library

Apple Multiple Scan 14 Display: Technical Specifications (2/96)

Revised: 2/29/96
Security: Everyone

Apple Multiple Scan 14 Display: Technical Specifications (2/96)

Article Created: 20 July 1995
Article Reviewed/Updated: 29 February 1996

TOPIC -----

This article gives the technical specifications for the Apple Multiple Scan 14 Display.

DISCUSSION -----

Picture Tube

- 14-inch diagonal shadow mask, 12.36-inch viewable image size (measured diagonally)
- Multiple scan
- Resolution range: 640 x 480 to 800 x 600

Screen

- .28 millimeter (mm) dot pitch

Active Display Area

- 250 mm x 190 mm

Scanning Rates

- 31.5 to 48.1 kHz (horizontal)
- 60 to 72 Hz (vertical)

Input Signals

- Red, green, and blue signals; separate sync.

Power Savings feature

- Conforms to the Energy Star program of the United States Environmental Protection Agency

User Controls

- Power-on switch
- Automatic degauss at power-up; manual degauss by turning power switch off, then on (capable of full degauss after monitor is turned off for 20 minutes or more)
- Controls: brightness, contrast, horizontal shift, vertical shift, horizontal size, vertical size

Active Video Image Area

Adjusted at the factory for the following standard modes:

Begin_Table

Mode	Resolution	Vertical Refresh Rate (hertz)	Horizontal Scan Rate (kilohertz)
-----	-----	-----	-----
VGA	640x480	60.0	31.5
Macintosh	640x480	66.7	35.0
SVGA	800x600	72.0	48.1
SVGA	800x600	60.0	37.9
Macintosh	832x624*	75.0	49.7

End_Table

* M3935LL/A versions of this display do not support this resolution.

Input Electrical Requirements

- Voltage: US version: 90-132 V AC
European version: 198-264 V AC
- Frequency:
US version: 57-63 Hz
European version: 43-53 Hz
- Power: 80 W maximum when operating, less than 11 W in energy-saver mode

Size and Weight

- Height: 14.9 in. (37.8 cm)
- Width: 14.4 in. (36.5 cm)
- Depth: 15.2 in. (38.6 cm)
- 25 pounds (11.3 kg)

Interfaces

- Headphone/Speaker: One input and one pass thru output port

Operating Environment

=====

Temperature

- Operating: 50 to 104 degrees F (10 to 40 degrees C)
- Storage: 32 to 140 degrees F (0 to 60 degrees C)
- Shipping: -40 to 151 degrees F (-40 to 65 degrees C)

Humidity (noncondensing)

- Operating: 20% to 95%

Altitude (maximum)

- Operating: 0-10,000 ft. (3,000 m)
- Shipping: 0-5,000 ft. (4,500 m)

System Requirements

=====

- Power Macintosh, Macintosh LC, Macintosh Quadra, Macintosh Centris, Macintosh Performa, Macintosh II, and PowerBook computers
- System software version 7.1 or later
- Compatible display card required for use with Macintosh II. Cable adapter required for use with some Macintosh LC, Macintosh Performa models, and PowerBook computers.

Monitor Cable Specifications

=====

- 15-pin DSub connector for Macintosh systems

Monitor Signals

=====

Begin_Table

Pin	Output Signal
---	-----
1	Red video ground
2	Red video
3	Not used
4	ID 1
5	Green video
6	Green video ground
7	ID 2
8	Not used
9	Blue video
10	ID 3
11	V Sync return
12	V Sync
13	Blue video ground

14	H Sync return
15	H Sync
Shell	Shield ground

End_Table

Article Change History:

29 Feb 1996 - Clarified voltage requirements.
25 Aug 1995 - Changed "Flat Square CRT" to "shadow mask".
24 Aug 1995 - Corrected resolutions supported on M3935LL/A.

Support Information Services

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Tech Info Library Article Number:18226



Tech Info Library

QuickTime VR: Questions and Answers (4/97)

Revised: 5/2/97
Security: Everyone

QuickTime VR: Questions and Answers (4/97)

Article Created: 20 July 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article provides the answers to frequently asked questions about QuickTime VR and its requirements.

DISCUSSION -----

Question: What is Virtual Reality?

Answer: Virtual Reality describes a range of experiences that let you interact with and explore a spatial environment through your computer. These environments are typically computer renderings of simple or complex computer models. Now, with QuickTime VR, these environments can be based on photographic representations of real locations.

Question: What is QuickTime VR?

Answer: QuickTime VR lets you rotate your view of a scene through a complete 360° horizontal circle. Multiple 360 degree views can be linked together to let you travel around in an area. You can move around in space through as many points as the content developer provides. The content provider can also enable certain objects to be virtual as well, letting you view all sides of an object by turning it around using a standard pointing device like a mouse. The combination of scenes and objects provides an experience that is like being there. As you change your view of the scene, correct perspective is maintained, creating the effect of being at the location and looking around. QuickTime VR is the first mainstream technology to enable theses experiences based on real world scenes.

Question: How does QuickTime VR differ from other VR systems?

Answer: QuickTime VR differs in several ways:

- QuickTime VR uses high quality photographic representations of a space for the virtual reality experience, a breakthrough in performance and compression technology. There is no need to model and render an existing space.
- QuickTime VR is a software-only implementation; it is an extension of the QuickTime architecture. It does not require additional hardware.

QuickTime VR's breakthrough is the proprietary software engine that lets you explore real world spaces on most QuickTime capable personal computers. This differs from most virtual reality systems, which require a very fast 3-D computer with specialized hardware that lets the user explore computer generated virtual spaces.

- Easy panoramic image capture; pictures are taken with a standard 35mm camera.

Question: What software comprises QuickTime VR?

Answer: The QuickTime VR software technology includes two components:

- The QuickTime VR Authoring Tools Suite is designed for use by experienced multi-disciplinary photography/multimedia development teams to create exciting new products (typically in the form of CD-ROM titles) such as those previously described. The authoring tools run on Macintosh systems.
- The run-time software provides the environment that users need to experience QuickTime VR on their personal computers. Run-time versions are available for Macintosh and Windows environments.

NOTE: Stand-alone QuickTime VR movies can be played back using Apple's QuickTime VR Player. However, some QuickTime VR movies may be incorporated into other applications, which may require HyperCard or Macromedia Director.

Question: Where can the software be obtained?

Answer: You can obtain the software in several ways:

- The QuickTime runtime software (QuickTime VR Player) is available at Apple's QuickTime VR Web site (<http://qtvr.quicktime.apple.com>).

NOTE: The QuickTime VR Player is not supported by Apple.

- The QuickTime Authoring Tools can be purchased through Apple Programmer's and Developers Association (APDA).

For contact information on APDA, search the Tech Info Library under "APDA".

Question: What are the system requirements for QuickTime VR 1.0 runtime for

Macintosh?

Answer: The system requirements for Macintosh are:

- QuickTime-capable Macintosh
- 68030 25 MHz processor
- QuickTime 2.0
- System 7.1 or later
- 8-bit video
- 8 MB RAM
- A double speed CD-ROM is recommended for CD-based software titles

Question: What are the system requirements for QuickTime VR 1.0 runtime for Windows?

Answer: The system requirements for Windows are:

- 33MHz 386SX computer equipped with Windows 3.1
- QuickTime 2.0 for Windows
- 8-bit video card
- 8 MB RAM
- A double-speed CD-ROM is recommended for CD-based software titles

Question: What are the system requirements for QuickTime VR 1.0 Authoring Tools?

Answer: Here are the requirements for the following systems:

- 68040 33MHz-based Macintosh computer:
 - 40 MB RAM
 - 16-bit video, thousands of colors
 - Double-speed CD-ROM if using images on PhotoCD
 - Approximately 10 MB per panorama, 5 MB per object
 - System 7.1
 - MPW 3.2
 - HyperCard 2.2
 - ResEdit 2.1.1
- PowerPC-based Macintosh computer
 - 40 MB RAM
 - System 7.1.2
 - 16-bit video, thousands of colors
 - Double-speed CD-ROM if using images on PhotoCD
 - Approximately 10 MB per panorama, 5 MB per object
 - ResEdit 2.1.1
 - MPW 3.4b2 (included with QTVR Authoring Tools Suite Version 1.0)

Question: How large are QuickTime VR files? Do I need special equipment to view them?

Answer: QuickTime VR files are exceptionally small, which makes them easy and fast to download without using much computer disk space. In fact, a typical panoramic scene can be as small as 200K. Besides the computer, no additional hardware--such as accelerator boards, helmets, goggles and gloves--is needed to view QuickTime VR scenes.

Question: Where can I download QuickTime VR scenes?

Answer: Try these locations:

- Apple's QuickTime Online: (<http://quicktime.apple.com>)
- QuickTime VR Web site at: (<http://qtvvr.quicktime.apple.com>)

This article was published in the "Information Alley":
Volume II, Issue 9, Page 14

Article Change History:

1 May 1997 - Removed out dated on line references.
27 Jul 1995 - Updated technical information

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Tech Info Library Article Number:18227



Tech Info Library

Macintosh Performa 550: Upgradeable to Power Macintosh? (12/95)

Revised: 12/1/95
Security: Everyone

Macintosh Performa 550: Upgradeable to Power Macintosh? (12/95)

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Article Created: 20 July 1995
Article Reviewed/Updated: 1 December 1995

TOPIC -----

Can I upgrade a Macintosh Performa 550 to a Power Macintosh computer?

DISCUSSION -----

No, the Macintosh LC/Performa 520/550 series PowerPC Upgrade (M3395LL/A) is no longer available. The upgrade was available for several months, but has since been removed from the Apple price list.

Article Change History:
01 Dec 1995 - Changed information because upgrade is no longer available.

Support Information Services

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Tech Info Library

Apple QuickTime VR: White Paper (7/95)

Revised: 7/20/95
Security: Everyone

Apple QuickTime VR: White Paper (7/95)

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Article Created: 20 July 1995

TOPIC -----

This article contains the QuickTime VR White Paper.

DISCUSSION -----

Putting the Reality in Virtual Reality

An Overview of Apple's QuickTime VR Technology

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Walking through the corridors of the Louvre, you suddenly find yourself held in the captivating gaze of the Mona Lisa herself... Toes in the shallow tide pool, your daughter picks up a bright orange starfish and turns it every which way there is, to see what it's all about... Strolling down San Francisco's Lombard Street, you become dizzy on what you are surely convinced is the world's most crooked street... Your clients nod in approval after walking down the corridors of their planned office building from the comfort of their own boardroom.

And you do all of this from your personal computer.

Welcome to the new promise of virtual reality. Thanks to an exciting new software technology in development at Apple Computer called QuickTime VR, real-world experiences like these are now possible on an ordinary personal computer. They require no special hardware or accessories, nor any special software.

In this paper we explain the concept of virtual reality for the rest of us, and introduce the innovative new QuickTime VR software technology that makes it possible.

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I. QuickTime VR: An Overview

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Just what is Virtual Reality?

Virtual Reality describes a range of experiences that enable a person to interact with and explore a spatial environment through a computer. These environments are typically artistic renderings of simple or complex computer models. More often than not, VR applications require specialized hardware or accessories, such as high-end graphics workstations, stereo displays, 3D goggles or gloves. As an alternative to virtual reality, video has been used to view real world spaces.

Apple's QuickTime VR is system software that allows Macintosh and Windows users to experience these kinds of spatial interactions using only a personal computer, with a mouse or trackball, and a keyboard. Furthermore, through an innovative use of 360° panoramic photography, QuickTime VR enables these interactions using real-world representations, as well as computer simulations.

QuickTime VR has two components: a panoramic movie technology that allows users to explore spaces, and an object movie technology that allows users to examine objects close up and interactively.

With QuickTime VR, viewers can explore "real" spaces and objects as if they were there. As users change their view of a scene—turning left or right, looking up or down, or zooming in or out—correct perspective is always maintained, providing the effect of actually looking around. Users can also manipulate objects, looking at them from the front, back, top, bottom, or any other angle of interest.

The three defining characteristics of QuickTime VR are

- 1) it can use real-world images as well as computer-generated images;
- 2) it does not require additional hardware; and
- 3) it is an extension of the QuickTime architecture.

II. What You Can Do with QuickTime VR

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QuickTime VR is a technology that Apple is planning to license to third parties in the form of a runtime engine and authoring tools. It enables content developers, production companies and software developers to create exciting new multimedia products, typically in the form of CD-ROM titles, in a wide range of

markets. These opportunities can include:

- Education -- An application that can allow students to explore Mayan ruins, or the habitat of a beaver.
- Engineering -- Airplanes and buildings that have not been built yet can be explored and analyzed.
- Museums -- Tour museums in parts of the world you can't visit in person, and see works not normally on public display.
- Kiosks -- Malls and theme parks can use QuickTime VR to provide interactive, real-world directions to help orient a shopper or visitor.
- Architecture -- QuickTime VR can enable an interactive walk-through of a new house or office building.
- Surrogate Travel -- If you can't go there on a tour, QuickTime VR can bring a tour of Venice to you.
- Games -- Exploration and mystery games can use QuickTime VR to allow people to go through a fun house or visit a crime scene.

III. The Advantages of QuickTime VR

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The biggest difference between QuickTime VR and most virtual reality systems is its ability to use high-quality photographic representations of a space, in addition to computer-rendered representations. This, along with other innovations, results in significant advantages for both developers and users of QuickTime VR versus competing multimedia formats.

Advantages for Developers

Easy panoramic image capture Using only a standard 35mm camera and tripod, a real-world 360° scene can be photographed in a few minutes, eliminating the need for expensive panoramic cameras or long video-taping sessions. Because of the increased resolution that film offers over video, the images that QuickTime VR uses will have richer colors and sharper details. Alternatively, computer-generated scenes can be rendered using any off-the-shelf rendering package.

Faster performance QuickTime VR incorporates a revolutionary new compression/decompression algorithm that for the first time delivers the performance necessary to make the photographic-based experience realistic. The performance is independent of the complexity of the scene. And since there are no frame boundaries, QuickTime VR allows for smoother panning as well.

Small file size The capture of a single 360° view of a real scene using video techniques, such as navigable movies, would require tens of megabytes. The QuickTime VR process can store the complete 360° photographic representation in less than one megabyte. The storage required for a computer-rendered scene is even smaller.

Flexible interaction QuickTime VR provides built-in "hot spots" that enable the content developer to make any part of the 360° scene interactive. When the user clicks on a hot spot, a wide variety of actions can be triggered, including the

presentation of a photograph, an audio recording, display text, or another QuickTime VR scene.

Extension to the QuickTime family QuickTime is currently available for Macintosh and Windows personal computers, and is also being developed for consumer electronics devices, such as game players and interactive TV. Because QuickTime VR is part of the QuickTime family of products, it can be delivered on nearly 10 million QuickTime capable machines worldwide, enabling QuickTime VR authors to develop content once and deliver it many times.

In addition, QuickTime VR files can be embedded in hundreds of applications that support QuickTime. A few examples are multimedia authoring tools, presentation packages, word processors, and databases.

Advantages for Users

Realistic simulations Thanks to the use of panoramic photography, scenes built with QuickTime VR enable users to experience 360° real-world simulations. The software provides correct perspective of every view in a scene in real time, giving the user the sense of being there and looking around. Similarly, QuickTime VR maintains correct perspective with complex rendered scenes. QuickTime VR also offers the user the simulated experience of turning an object with their hand.

Intuitive usage Prior to QuickTime VR, video has been used to capture real world spaces, with the limitation that the user must view the scene in the sequence in which the video was recorded. QuickTime VR frees the user to look directly at any view of a scene or an object through a simple, intuitive user interface.

Accessibility In contrast to most virtual reality systems, which require high-end computers or specialized hardware, QuickTime VR runs on most QuickTime-capable Macintosh or Window computers and requires no specialized accessories, making it accessible to a much wider range of users. QuickTime VR requires a system running QuickTime 2.0, which makes the VR files available to any application that uses QuickTime 2.0, and ensures that all VR files may be used with a wide variety of user applications.

IV. Building QuickTime VR Applications

There are three discrete steps in creating a QuickTime VR file: capture, image input, and authoring/composition.

Capture

For real-world representations of scenes, QuickTime VR uses 360 degree panoramic photography. For rendered scene representations, standard, off-the-shelf rendering packages are used.

A 360° panoramic photograph represents the view that one would see by standing in a single spot and turning full circle. Until now, taking such a photograph

required an expensive, special purpose camera. With QuickTime VR authoring tools, that same 360° panoramic view can be captured using a standard 35mm camera to take a series of adjacent photographs. In addition to enabling many more developers to create applications, the use of commercially available 35mm cameras allows for much greater exposure control over the 360° view. The use of standard cameras also permits a wider range of effects due to the large number of existing lenses and filters that may be employed. The actual number of panoramic photographs taken for a particular scene depends on the type of experience the content developer wants to provide the end user. Capturing more panoramic images within a fixed space will yield a smoother navigational experience within that space, but will generate larger storage requirements.

For a 360° rendered view, the panorama may be created directly by the rendering package, or by generating rendered scenes equivalent to the series of photographs used in capturing a real-world panorama.

The representation of virtual objects requires that images of the object be captured from all viewpoints. These images can be rendered or photographic.

Input

Once the photographs have been taken, they are input into a personal computer using a Photo-CD scanner or other standard, commercially available image input devices.

Authoring/Composition

QuickTime VR authoring tools incorporate proprietary software that can automatically stitch together a series of photographs to produce a single, seamless digital panoramic photograph on the Macintosh. Developers can also use an interactive stitching mode, for greater control. The source images can be photographic or computer rendered. Rendering applications that can output panoramic views directly, bypass this step.

Once the panoramic image has been created, it can be post-processed using standard, commercially available painting applications.

With QuickTime VR's pixel-accurate "hot spot" technology, the content developer can enable certain objects within a scene to be interactive. This allows the user to select the object for close up viewing, and view all sides of it by turning it around using a standard pointing device such as a mouse. The combination of scenes and objects simulates to a very high degree the experience of actually being there.

QuickTime VR objects can be used independently of the panoramic scene technology as well.

V. The Run-Time Engine and Software Tools

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Apple is planning to license to third-party developers both the QuickTime VR run-time software (for Macintosh and Windows), and authoring tools

(Macintosh-based). The availability and license structures for these tools is anticipated to be disclosed before the end of 1994.

QuickTime VR will support 8-, 16-, and 24-bit video.

VI. Platform Requirements for QuickTime VR

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The minimum Macintosh system required for the run-time software is

- QuickTime 2.0,
- System 7.1 or later,
- QuickTime-capable Macintosh with a 68030, 25 MHz processor,
- 8-bit video,
- 5 MB available RAM.

Double-speed CD-ROM is recommended for CD-based software titles.

The minimum Windows system required for the run-time software is

- QuickTime 2.0 for Windows,
- Windows 3.1,
- MPC 2 configuration:
 - . - 80386, 33 MHz processor,
 - . - 8-bit video,
 - . - 8 MB available RAM.

Double-speed CD-ROM is recommended for CD-based software titles.

VII. The State of the Software and Next Steps

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In developing the QuickTime VR software, Apple Computer worked closely with Simon & Schuster Publishing to develop an interactive CD-ROM application based on "Star Trek: The Next Generation," released in the Fall of 1994.

As of this writing, QuickTime VR technology is in the final stages of completion. More specific disclosures concerning the availability and opportunities for evaluation and licensing of QuickTime VR are anticipated prior to the end of 1994.

Support Information Services

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Tech Info Library Article Number:18229



Tech Info Library

PowerBook Modem & Telecom: Frequently Asked Questions (1/97)

Revised: 1/20/97
Security: Everyone

PowerBook Modem & Telecom: Frequently Asked Questions (1/97)

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Article Created: 20 July 1995
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about common PowerBook computer's modem and telecommunication issues.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

DISCUSSION -----

1) Question: I am going to be travelling overseas with my PowerBook computer which has an internal Express Modem. Will I be able to use it to send faxes to friends in the United States?

2) Question: I recently purchased a new external modem, but cannot seem to find an appropriate Apple Remote Access (ARA) script for it. Can I get one from Apple?

3) Question: I have a PowerBook 140/145/170 with the Apple Fax/Data Modem. Can I use any version of the Express Modem software?

4) Question: Where can I find AT commands for my Express Modem?

5) Question: When starting up, my PowerBook computer which has an internal Express Modem displays the Fax Modem extension icon with an "X" through it. I cannot use my modem to send a fax. What is wrong?

6) Question: If I install Apple Telecom 2.x, can I use the Cypress Megaphone software to turn my PowerBook computer into an answering machine and speaker

phone?

7) Question: I have a computer at work running Apple Remote Access (ARA) server software and it has full access to the Internet. I would like to call in from my PowerBook using ARA client and have full access to the Internet as well. Is this possible?

8) Question: I am trying to use Apple Remote Access (ARA) on a single serial port PowerBook (200/2300/500/5300/190 series) computer with an external modem. When I try to connect I get an error saying that the modem could not be detected. How do I get around this?

9) Question: I want to use an external modem with my PowerBook 500 series computer. According to the manual that came with my PowerBook computer, I need to check Normal in my PowerBook Setup control panel. I open the control panel, and the setting is not there. What is wrong?

10) Question: Sometimes I cannot seem to use my internal modem and print at the same time. Why is this?

11) Question: I have a PowerBook 500 series computer with a Global Village PowerPort Mercury modem. Can you tell me how to send and receive faxes?

12) Question: I have a PowerBook 200 series computer with an Apple Express Modem. Can you tell me how to send and receive faxes?

13) Question: I have a PowerBook 500 series computer running System 7.5, with a Global Village PowerPort Mercury modem installed. At startup, I see the message "This Macintosh may not have been shut down properly," followed by the message "Incoming Fax cannot be received because internal modem could not be identified. To identify the modem open up PowerPort control panel hold down Option key and click on PowerPort text." Then the PowerBook locks up. What can I do?

14) Question: My modem (any modem) is dropping the connection after a few minutes. Is there anything I can do to keep this from happening?

15) Question: I am upgrading my PowerBook computer with Express Modem to System 7.5. What version of the Express Modem software should I be using? And what is the latest version of software for the Apple Express Modem?

16) Question: I just upgraded to System 7.5, now I cannot get Apple Remote Access (ARA) to connect. What is going on?

17) Question: Where else can I go for answers?

DISCUSSION -----

1) Question: I am going to be travelling overseas with my PowerBook computer which has an internal Express Modem. Will I be able to use it to send faxes to friends in the United States?

Answer: The PowerBook Express Modem is designed and rated to be used in the United States. There are both technical and legal barriers to operating this

modem overseas. It meets FCC standards, but may not meet requirements to be used in your country of destination.

On the technical side, there are third-party vendors such as TeleAdapt and Global Village who provide solutions to adapting a modem designed for one country to use in another.

As mentioned, there may be legal issues in operating your modem overseas. It is recommended you acquaint yourself with any national, regional, or local laws and conditions on using modems.

2) Question: I recently purchased a new external modem, but cannot seem to find an appropriate Apple Remote Access (ARA) script for it. Can I get one from Apple?

Answer: Some ARA Control Command Language (CCL) scripts come with the AppleTalk Remote Access application, however, if your modem is not in the pop up menu, you need to contact the modem vendor. If you have a third-party modem and do not have the correct script for ARA, contact your modem vendor.

You can also develop your own CCLs with tools from APDA, Apple's source for developer tools.

3) Question: I have a PowerBook 140/145/170 with the Apple Fax/Data Modem. Can I use any version of the Express Modem software?

Answer: You can use any version of the Express Modem software, up to 1.5.5, with your modem. You do, however, need to have the Serial Tool installed in your Extensions folder.

If you already have the older Fax Sender software installed on your system, the Serial Tool will remain on your system after installing the new Express Modem software.

Alternately, you can download the Serial Tool and manually drag it to your Extensions folder. You can download Serial Tool 1.0.2 at the following path:

USA Apple Software Updates -> Macintosh -> Network and Communications -> Communication Toolbox Tools.

4) Question: Where can I find AT commands for my Express Modem?

Answer: When your Express Modem software is installed, it copies a document titled "Express Modem AT Cmds" to your hard drive. This contains AT commands for the Express Modem. If you have installed Apple Telecom 2.0, look for it inside a folder labeled "Telecom Documents". An appendix of the Express Modem manual will also have the AT command set.

5) Question: When starting up, my PowerBook computer which has an internal

Express Modem displays the Fax Modem extension icon with an "X" through it. I cannot use my modem to send a fax. What is wrong?

Answer: Open the Preferences folder inside your System Folder and drag the Fax Preferences file to the Trash, empty the Trash, and restart your PowerBook. The Fax Preferences file can be corrupted due to a system error or screen freeze, disabling the Fax Modem extension as a result.

6) Question: If I install Apple Telecom 2.x, can I use the Cypress Megaphone software to turn my PowerBook computer into an answering machine and speaker phone?

Answer: No, this capability is only available on Power Macintosh, Quadra 660AV, and Quadra 840AV computers using the GeoPort Telecom Adapter.

7) Question: I have a computer at work running Apple Remote Access (ARA) server software and it has full access to the Internet. I would like to call in from my PowerBook using ARA client and have full access to the Internet as well. Is this possible?

Answer: Yes, to do this you will need to install the Apple IP Gateway on the computer running the ARA server software. Then the PowerBook (or any remote Macintosh computer) will have equal access to the Internet when dialing into the ARA server with ARA software.

8) Question: I am trying to use Apple Remote Access (ARA) on a single serial port PowerBook (200/2300/500/5300/190 series) computer with an external modem. When I try to connect I get an error saying that the modem could not be detected. How do I get around this?

Answer: Since ARA requires AppleTalk to be active, the single serial port will, by default, be designated for LocalTalk, not for the external modem. To get around this, open the Network control panel and select Remote Only. This will allow you to have AppleTalk active and use external serial devices, such as an external modem, at the same time. Remember to set the Network control panel back to LocalTalk if you will be using LocalTalk devices or connecting to a LocalTalk network.

9) Question: I want to use an external modem with my PowerBook 500 series computer. According to the manual that came with my PowerBook computer, I need to check Normal in my PowerBook Setup control panel. I open the control panel, and the setting is not there. What is wrong?

Answer: If you do not have an internal modem, this setting will not appear in the PowerBook Setup control panel. If you want to use an external modem with your PowerBook 500 series, simply make certain AppleTalk is inactive in the Chooser and select the modem port in your communications software. You can leave AppleTalk active if you select something other than LocalTalk in the Network control panel.

10) Question: Sometimes I cannot seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook models that have only one serial port (PowerBook 200, 2300, 190, and 5300 series computers), the serial port is mapped as a modem port. Under normal conditions this is not a problem - the internal modem can be used at the same time as a serial device such as a printer is being used. The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there is an update.

11) Question: I have a PowerBook 500 series computer with a Global Village PowerPort Mercury modem. Can you tell me how to send and receive faxes?

Answer: Instructions for sending a fax are detailed on pp. 77-89 of your PowerPort 500 Series User's Guide.

Sending a Fax

Sending a fax is a lot like printing. You can follow these instructions to send your first fax:

Step 1

Open whatever document you would like to fax. You can fax from within the application SimpleText, for example.

Step 2

Hold down the Option key on your keyboard, and choose the command Fax from your File menu.

Step 3

The Send Fax Setup dialog box will appear. Here you can enter your Station Name and Station Fax Number. Click OK when you are done.

Step 4

The GlobalFax dialog will appear. Enter the number you wish to call in the Fax field, and enter the recipient's name in the To field. You can also choose a cover sheet at this window.

Step 5

Once you have entered the fax number and name of the recipient, click the Send... button. Your software should image and fax the document.

Receiving a Fax

Instructions for receiving a fax are detailed on pp. 99-105 of your PowerPort 500 Series User's Guide.

You can configure your PowerBook to receive faxes automatically. Of course, it will have to be connected to an analog phone line. To set your PowerBook up to receive faxes automatically, follow these steps:

Step 1

Open the "Global Village Fax Center" under the Apple menu.

Step 2

Under the Fax menu, choose Setup and Receiving.

Step 3

In the Receive Fax Setup dialog box, put an X next to Receive Fax... Click OK when done.

After this, the Global Village Fax Center will answer incoming calls to receive faxes.

12) Question: I have a PowerBook 200 series computer with an internal Apple Express Modem. Can you tell me how to send and receive faxes?

Answer: Instructions for sending a fax are detailed in your Express Fax/Modem User's Guide.

Sending a Fax

Sending a fax is a lot like printing. To send a fax, follow these steps:

Step 1

Open the application from which you wish to send a fax. You can send a fax from the application SimpleText, for example.

Step 2

Press and hold the Control-Shift keys while clicking on the File menu. Select Print... (or Fax...).

Step 3

The Fax Sender dialog will appear. Here you can add names and phone numbers to your address book, select a cover page, or simply type a phone number in the "Fax Quick Send" field.

Step 4

When your setup in Fax Sender is complete, simply click on the Send button. The Fax Sender window will vanish, and your document will be imaged and faxed.

Receiving a Fax

Instructions for receiving a fax are detailed in your "Express Fax/Modem User's Guide".

To enable automatic receiving of faxes, open the application Fax Terminal. In Fax Terminal, choose Preferences... from the Fax menu. In the Preferences... window, click on the "Answer calls to receive faxes" checkbox. You can also set the number of rings before answering here. The Express Modem will now answer incoming calls to receive faxes, even when the Fax Terminal application is not open.

With Express Modem versions 1.5 and later, you can enable fax receiving by checking the "Answer calls" checkbox in the Express Modem control panel.

13) Question: I have a PowerBook 500 series computer running System 7.5, with a Global Village PowerPort Mercury modem installed. At startup, I see the message "This Macintosh may not have been shut down properly," followed by the message "Incoming Fax cannot be received because internal modem could not be identified. To identify the modem open up PowerPort control panel hold down Option key and click on PowerPort text." Then the PowerBook locks up. What can I do?

Answer: This occurs due to a conflict between the shutdown warning message in system software and the version of the Global Village modem software you have installed. Follow these steps to remedy the situation:

Step 1

Allow the computer to start up as normal. You will receive a message saying "This Macintosh may not have been shut down properly." Click "OK". Then you will receive a message that says "Incoming Fax cannot be received because internal modem could not be identified. To identify the modem open up PowerPort control panel hold down Option key and click on PowerPort text.".

Step 2

Perform a Force Quit. Hold down all three of the keys Option-Command (Apple)-Esc and release them all at the same time. A dialog box will appear, either click in the Force Quit button or hit the return key on the keyboard. The computer will finish starting up and the desktop will appear.

Step 3

Open the General Controls control panel and uncheck the Shut Down Warning. Close the General Controls.

Step 4

Restart your computer.

This disables the warning message if the computer is again shut down improperly and will prevent the lock up with the Global Village Mercury Modem software.

If you wish to have the warning message enabled in the system software, you will want to contact Global Village and obtain the latest version of their Powerport Mercury Modem software.

If for some reason the above procedure does not work then you should reinstall the Global Village Modem software. Restart with extensions off, and remove the following items from the System Folder and place them on the desktop:

- * Queue Temp and GlobalFax Preferences files from the GlobalFax Personal folder
- * GlobalFax Files and GlobalFax Personal folders
- * PowerPort 500 control panel

Then reinstall the Global Village software from original disks. Move the GlobalFax addresses from the GlobalFax Personal folder on your desktop into your new GlobalFax Personal folder in your System Folder. You may also want to save the Fax log, the cover sheets and received Faxes in the GlobalFax Files and GlobalFax Personal. The other items that you have dragged out onto your desktop you can throw away.

14) Question: My modem (any modem) is dropping the connection after a few minutes. Is there anything I can do to keep this from happening?

Answer: If the modem is disconnecting unexpectedly, a standard fix is to turn off error correction and data compression. You can do this by using the initialization string AT&F%CO\NO. Note that this might make the modem a little slower because of the lack of data compression, but it will make the connection more stable.

15) Question: I am upgrading my PowerBook computer with Express Modem to System 7.5. What version of the Express Modem software should I be using? And what is the latest version of software for the Apple Express Modem?

Answer: You should upgrade your Express Modem software to at least version 1.5.3. Earlier versions may not work properly with System 7.5. To find out what the current version of Apple Telecom is, look in the Tech Info Library for the article "Apple Software: Current Versions". The latest version of the Express Modem software is available on the following services:

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

16) Question: I just upgraded to System 7.5, now I cannot get Apple Remote Access (ARA) to connect. What is going on?

Answer: System 7.5 requires version 2.0 or later of ARA. Earlier versions will not connect or will not work properly. You can upgrade to the latest version by calling the Apple Order Center.

The Tech Info Library article titled "Locating Vendor Information" can help you

search for the Apple Order Center's phone number.

17) Question: Where else can I go for answers?

Answer: If you have not done so already, check the other PowerBook-related FAQ documents in Apple's Technical Information Library (TIL). This library is available on the Internet at <http://til.info.apple.com/> and contains thousands of technical articles.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

20 Jan 1997 - Updated online references.

02 Jul 1996 - Added Fax Doc word

27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18230



Tech Info Library

Apple StyleWriter Printers: Frequently Asked Questions (7/96)

Revised: 7/3/96
Security: Everyone

Apple StyleWriter Printers: Frequently Asked Questions (7/96)

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Article Created: 20 July 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Apple StyleWriter printers, including the portable and color models.

Questions in this FAQ:
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- How do I share a StyleWriter on a network?
- When I print anything on my StyleWriter II, there are thin white lines through all the letters. What is causing this?
- Is it OK to use ink cartridge refill kits with my StyleWriter family printer?
- I have a Color StyleWriter Pro and when I print, I get -39 errors. What is causing this?
- I have a Color StyleWriter Pro connected to my Power Macintosh. When I try to print anything, it starts to print the configuration page and freezes halfway through the process. What is causing this?
- I have a PowerBook 500 series computer and a StyleWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be sound. What is causing this?
- When I print to my StyleWriter, I get a message saying there is no paper in the printer. If I then click OK, I get a message saying the paper in the printer is the wrong size. What is causing this?
- When I try to install the software for my StyleWriter, I get a message saying that System 7 or greater is needed and I already have System 7 installed.

DISCUSSION -----

Question:

How do I share a StyleWriter on a network?

Answer:

The StyleWriter family of printers (except for the Portable StyleWriter) can be shared via Apple's grayshare technology as long as the computer to which their printer is directly attached has at least a 68020 processor.

They cannot be connected directly to a network with LocalTalk cables (The Color StyleWriter 2400 can be directly connected to a LocalTalk network if you purchase and attach the LocalTalk module for the printer) If you do not have this module, or have any other shareable StyleWriter, you can share the printer by following the instructions below.

NOTE - with the original StyleWriter, you must use the StyleWriter II driver to share the printer). Instructions for sharing the printer appear below.

Sharing a Printer

To share a StyleWriter printer with others, follow these steps:

Step 1

In order to share a printer, you must be connected to an AppleTalk network of some type.

LocalTalk Connection

The LocalTalk connector goes into the printer port. The peripheral-8 cable (serial cable) connects the printer to the Macintosh. It needs to go into the modem port.

Ethernet or Token Ring Connection

Since both Ethernet and Token Ring connections don't require you to use a serial port on your Macintosh, you can use either the printer or modem port to connect the printer to your Macintosh.

Step 2

Open the Chooser and select the appropriate printer icon.

Step 3

Click the icon of the port to which your printer is connected. If you are using the printer port to connect your Macintosh to the network, you must connect your printer to the modem port.

Step 4

Click the Setup button to open the Sharing Setup dialog box.

Step 5

Place an X in the "Share this Printer" checkbox. You have the option of naming

your printer and entering a password. If you type a password for the printer, only users who know the password can use the printer from their computers.

If you want a record of what is printed on your printer, place an X in the "Keep Log of Printer Usage" checkbox.

Step 6

Click "OK" to close the StyleWriter II Sharing Setup dialog box and close the Chooser window.

Your printer is now available to others on the network.

Printing to a Shared Printer

To print to a shared printer, follow these steps:

Step 1

Open the Chooser and select the appropriate printer icon. A list of available printers and communications ports will be displayed.

Step 2

Click the name of the shared printer that you want to use. If the printer requires a password, a dialog box appears in which you must type the password.

Step 3

Close the Chooser

You are now ready to print to the shared printer.

Question:

When I print anything on my StyleWriter II, there are thin white lines through all the letters. What is causing this?

Answer:

This can be caused by a number of things:

1) The cartridge may be running low on ink. The cartridge can print about 300 pages at 5% coverage (100 pages of double-spaced text in 12 point type). If you are nearing the end of the cartridge's life, try replacing it.

2) Make sure you are using an Apple or Canon ink cartridge and make sure the cartridge has not been refilled.

3) The ink jets may be clogged or have air bubbles in them. This can occur even with new ink cartridges. Try cleaning the ink cartridge as follows:

Remove the ink cartridge and cover the area at the bottom of the cartridge (you will see a silver strip) with a wet paper towel. Then shake the cartridge vigorously as if you were shaking down a thermometer. This should force some ink out of the jets and may eliminate the lines

4) Open up the front of the printer and move the ink cartridge assembly to the

left. Underneath where the ink cartridge was, you will see a clear plastic wiper blade and a small rectangular area with spongy material. If any lint has accumulated in this area, use your finger to wipe it off.

If you leave paper in the printer for a long time without printing, lint can build up on the paper and get inside the printer, causing the white lines.

5) You may have a defective ink cartridge. Try replacing it with a new one.

Question:

Is it OK to use ink cartridge refill kits with my StyleWriter family printer?

Answer:

Apple StyleWriter Ink Cartridges are made by Canon for Apple and meet Apple's rigid specifications.

Physical damage to the printer caused by the use of a third-party printhead cartridge or ink refill kits that DO NOT meet Apple's rigid standards WILL void the warranty.

Apple recommends the use of only Apple or compatible Canon ink cartridges with its StyleWriter printers.

Question:

I have a Color StyleWriter Pro and when I print, I get -39 errors. What is causing this?

Answer:

This will occur with the Color StyleWriter Pro driver v1.5 if you have more than 32 MB of available RAM. It is documented in the Color StyleWriter Pro v1.5 ReadMe document. To correct this, use the Color StyleWriter Pro driver v1.5.2.

This update can be obtained online from various locations where Apple posts its software. For a list of these locations, search Apple's Tech Info Library using the shortcut "software updates and online" to find the article "Where To Find Apple Software Updates"

Question:

I have a Color StyleWriter Pro connected to my Power Macintosh. When I try to print anything, it starts to print the configuration page and freezes halfway through the process. What is causing this?

Answer:

This can occur with the Color StyleWriter Pro driver v1.5 and Power Macintosh computers. To correct this , use the Color StyleWriter Pro driver v1.5.2.

This update can be obtained online from various locations where Apple posts its software. For a list of these locations, search Apple's Tech Info Library using the shortcut "software updates and online" to find the article "Where To Find Apple Software Updates"

Question:

I have a PowerBook 500 series computer and a StyleWriter Printer. When I try to print, I get messages telling me to check my connections. My connections appear to be sound. What is causing this?

Answer:

The PowerBook 520c and 540c computers employ a single serial port which is a combination Printer/Modem port. In order to use this port for serial printing, use the following information to properly configure your PowerBook 500 series computer:

Step 1

If the Express Modem is installed:

- Open the Express Modem control panel and select Use External Modem.
- Open the PowerBook Setup control panel and select Normal.

Step 2

Open the Chooser and do the following:

- If using the PowerBook 200 series, turn OFF AppleTalk. If using the PowerBook 500 series, you do not have to disable AppleTalk. If you are using Ethernet; you MUST verify that the Network Control Panel is set for Ethernet.
- Select the serial printer driver.
- Select the "printer/modem" icon (or the modem icon if the printer/modem icon is not available).

Note: Domestic PowerBook 500 series computers will have a Global Village Powerport Mercury modem installed, not an Express modem, and therefore will only need to have the PowerBook Setup control panel set to normal for step #1.

A similar situation can also occur when using the Color StyleWriter 2400 or other serial printer. If you see no port selection choices, make sure the PowerBook Setup control panel is set for Normal.

Step 3

Disable the Assistant Toolbox extension with the Extensions Manager control panel, if it is enabled.

Question:

When I print to my StyleWriter, I get a message saying there is no paper in the printer. If I then click OK, I get a message saying the paper in the printer is the wrong size. What is causing this?

Answer:

This symptom had two major causes:

- 1) You are using the wrong type of cable, have a loose cable connection, or have a defective cable. You must use a Macintosh Peripheral-8 cable to connect the StyleWriter series of printer to your Macintosh Computer. You cannot use LocalTalk cables (the only exception is when you have a Color StyleWriter 2400

with the LocalTalk module installed).

You should also disconnect the cable and reconnect it to be sure it is plugged in securely.

2) You have the printer set up incorrectly in the Chooser. Go to the Chooser and select the printer icon for your printer from the list on the left. Note that the StyleWriter II uses the "StyleWriter II" driver, not the one named simply "Stylewriter."

After selecting the correct icon, you should see a box on the right labelled "Connect To:" with the icons of the printer port and the modem port. Click on the icon that corresponds to the icon above the port to which the printer is physically attached.

Question:

When I try to install the software for my StyleWriter, I get a message saying that System 7 or greater is needed and I already have system 7 installed.

Answer:

This message usually occurs when you are trying to install the printer software on a computer on which the driver is already installed.

Check the Chooser to make sure the driver is not already there. If it is not, you can install the printer software as follows:

Step 1

Insert the printer installation disk and double click the Installer

Step 2

When the Welcome to the Installer screen appears, click OK

Step 3

When the Install screen appears, select Customize or Custom Install

Step 4

Choose the individual portions of software you want to install. If you have System 7.5, elect to install software for system 7.1.

Step 5

Click Install

This will allow you to install the software.

Question:

When I print to my StyleWriter, I get a message telling me to check my connections and print again. The connections appear to be secure. What is causing this?

Answer:

First, make sure you are using the correct type of cable. You must use a Macintosh Peripheral-8 cable to connect the StyleWriter series of printer to

your Macintosh Computer. You cannot use LocalTalk cables (the only exception is when you have a Color StyleWriter 2400 with the LocalTalk module installed).

If you are using the correct cable and have checked to make sure it is plugged in securely, you should next check to see that the printer is set up correctly in the Chooser.

Go to the Apple Menu and select Chooser, then select the printer icon for your printer from the list on the left. Note that the StyleWriter II uses the "StyleWriter II" driver, not the one named simply "Stylewriter."

After selecting the correct icon, you should see a box on the right labelled "Connect To:" with the icons of the printer port and the modem port. Click on the icon that corresponds to the icon above the port to which the printer is physically attached. You may have to turn the computer around so that you can see to which port the printer is connected.

If you have the printer connected to the printer port, make sure that AppleTalk is set to "Inactive"

The printer should now be set up correctly for printing.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

04 Jan 1996 - Removed keyword.

21 Nov 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library

FTP Software's PC/TCP: Which Works With DOS Compatible (9/95)

Revised: 9/29/95
Security: Everyone

FTP Software's PC/TCP: Which Works With DOS Compatible (9/95)

Article Created: 21 July 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

What version of FTP Software's PC/TCP IP suite works with the Power Macintosh 6100 DOS Compatible computer?

DISCUSSION -----

The version of FTP Software's PC/TCP IP suite that works with the Power Macintosh 6100 DOS Compatible computer is OnNet v1.2. This version has been tested with the Power Macintosh 6100 DOS Compatible computer. Manual editing of the net.cfg file must be done after installing the software.

Add the following lines to the net.cfg file:

```
Link Support
Max stacks 8
```

Add the following lines to the end of the Link Driver MACODI section of the net.cfg file:

```
Protocol IP 800 Ethernet_II
Protocol ARP 806 Ethernet_II
Protocol RARP 8035 Ethernet_II
```

NOTE: The software allows installation of either DOS TSRs or vxd files. In testing, only the vxd files were loaded. See the product documentation for further information.

Also, see the Tech Info Library article titled, "Pwr Mac DOS Compatibility Card: PC/TCP Does Not Function (7/95)", for a discussion of using earlier versions of FTP Software's PC/TCP packages with the Power Macintosh 6100 DOS Compatible computer.

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29 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library

MAE 2.0: 16 Bit Sound Not Supported (7/95)

Revised: 7/21/95
Security: Everyone

MAE 2.0: 16 Bit Sound Not Supported (7/95)

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Article Created: 21 July 1995

TOPIC -----

I am unable to get 16 bit sound on my SPARCstation 5 with 16 bit sound support, Solaris 2.4, and MAE 2.0. My system supports 16 bit sound, as other UNIX applications can play 16 bit sounds on my internal speaker.

The Sound control panel appears to load properly, and the sound out option is available. However, the 16 bit and Stereo option is grayed out.

Do you have any recommendations to resolve this? Also, is it possible to modify any of the UNIX files to allow MAE to properly recognize the sound capabilities of my workstation?

DISCUSSION -----

We tested with our SPARCstation 5 workstation's built-in speaker, and 16 bit sound does not seem to be compatible with MAE 2.0. The Sound control panel is grayed out.

According to Engineering, although Apple did not state MAE 2.0 supports 8 bit or 16 bit sound in our documentation, they did confirm that only 8 bit sound is supported. There is no 16 bit sound support under MAE 2.0.

Support Information Services

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Tech Info Library Article Number:18236



Tech Info Library

DHCP: Frequently Asked Questions (2/97)

Revised: 2/28/97
Security: Everyone

DHCP: Frequently Asked Questions (2/97)

Article Created: 21 July 1995
Article Reviewed/Updated: 28 February 1997

TOPIC -----

This article covers frequently asked questions (FAQ) about Dynamic Host Configuration Protocol (DHCP).

General

- 1) What is DHCP?
- 2) What is DHCP's purpose?
- 3) How is it different that BOOTP or RARP?
- 4) Why shouldn't clients assign IP numbers without the use of a server?
- 5) Can DHCP support statically defined addresses?
- 6) Can a BOOTP client boot from a DHCP server?
- 7) Can a DHCP client boot from a BOOTP server?
- 8) Can a DHCP client update its DNS entry through DHCP?
- 9) When will the server to server protocol be defined?
- 10) Is there a DHCP mailing list?
- 11) In a subnetted environment, how does the DHCP server discover what subnet a request has come from?
- 12) Where is DHCP defined?
- 13) Can a client have a home address and still float?
- 14) How can I relay DHCP if my router does not support it?
- 15) How do I migrate my site from BOOTP to DHCP?
- 16) Can you limit which MAC addresses are allowed to roam?
- 17) Can DHCP support remote access?
- 18) What are the Gotcha's?

Info on Implementations

- 19) What freeware DHCP servers are available?
- 20) What commercial DHCP servers are available?
- 21) Which vendors of client software currently support DHCP?
- 22) What are the DHCP plans of major client-software vendors?

- 23) What Routers forward DHCP requests?
- 24) What Routers include DHCP servers?
- 25) What Routers use DHCP to configure their IP addresses?
- 26) What Servers forward DHCP requests?
- 27) Which implementations support or require the broadcast flag?
- 28) How can I run Windows 95 without a DHCP server?
- 29) Do any servers limit the MAC addresses that may roam?
- 30) What analyzers decode DHCP?
- 31) What administration tools administer DHCP configurations?
- 32) What are the Gotcha's specific to various implementations?
- 33) How do I get a DHCP Client using Open Transport to release or renew a DHCP lease before the lease has expired?

DISCUSSION -----

This article provides information which did NOT originate at Apple Computer, Inc., and Apple Computer is not responsible for its content. This information is provided for your convenience. Please contact the author for additional information.

Author: John Wobus, jmwobus@syr.edu

Date: 7/5/1995

This file: [<http://web.syr.edu/~jmwobus/comfaqs/dhcp.faq.html>](http://web.syr.edu/~jmwobus/comfaqs/dhcp.faq.html)

General

1) Question: What is DHCP?

Answer: DHCP stands for "Dynamic Host Configuration Protocol".

2) Question: What is DHCP's purpose?

Answer: DHCP's purpose is to enable individual computers on an IP network to extract their configurations from a server (the 'DHCP server') or servers, in particular, servers that have no exact information about the individual computers until they request the information. The overall purpose of this is to reduce the work necessary to administer a large IP network.

3) Question: How is it different that BOOTP or RARP?

Answer: DHCP is based on BOOTP and maintains some backward compatibility. The main difference is that BOOTP was designed for manual pre-configuration of the host information in a server database, while DHCP allows for dynamic allocation of network addresses and configurations to newly attached hosts. Additionally, DHCP allows for recovery and reallocation of network addresses through a leasing mechanism.

RARP is a protocol used by Sun and other vendors that allows a computer to find

out its own IP number, which is one of the protocol parameters typically passed to the client system by DHCP or BOOTP. RARP doesn't support other parameters and using it, a server can only serve a single LAN. DHCP and BOOTP are designed so they can be routed.

4) Question: Why shouldn't clients assign IP numbers without the use of a server?

Answer: It is theoretically possible for client-machines to find addresses to use by picking an address out of the blue and broadcasting a request of all the other client machines to see if they are using them. AppleTalk is designed around this idea, and Apple's MacTCP can be configured to do this for IP. However, this method of IP address assignment has disadvantages.

- A computer that needs a permanently assigned IP number might be turned off and lose its number to a machine coming up. This has problems both for finding services and for security.
- A network might be temporarily divided into two non-communicating networks while a network component is not functioning. During this time, two different client-machines might end up claiming the same IP number. When the network comes back, they start malfunctioning.
- If such dynamic assignment is to be confined to ranges of IP addresses, then the ranges are configured in each desktop machine rather than being centrally administered. This can lead both to hidden configuration errors and to difficulty in changing the range. Another problem with the use of such ranges is keeping it easy to move a computer from one subnet to another.

5) Question: Can DHCP support statically defined addresses?

Answer: Yes. At least there is nothing in the protocol to preclude this and one expects it to be a feature of any DHCP server. This is really a server matter and the client should work either way.

6) Question: Can a BOOTP client boot from a DHCP server?

Answer: A DHCP server can be written this way. Since DHCP was developed after BOOTP, it would be logical for most server developers to support this.

7) Question: Can a DHCP client boot from a BOOTP server?

Answer: A DHCP client can be written this way, i.e. to treat a BOOTP reply as an unending lease on the IP address.

8) Question: Can a DHCP client update its DNS entry through DHCP?

Answer: There are options in DHCP through which a DHCP client can request that its DNS entry be updated. DHCP clients will be able to take advantage of planned

enhancements to the DNS protocol that will allow dynamic updates through the network.

9) Question: When will the server to server protocol be defined?

Answer: The DHC WG of the IETF is actively investigating the issues in inter-server communication. The protocol should be defined "soon".

10) Question: Is there a DHCP mailing list?

Answer: There are several:

Begin_Table

List	Purpose
----	-----
host-conf@sol.eg.bucknell.edu	General discussion
dhcp-bake@bucknell.edu	DHCP bakeoffs
dhcp-impl@bucknell.edu	Implementations
dhcp-serve@bucknell.edu	Server to server protocol

Admin requests for the host-conf list should go to host-conf-request@sol.eg.bucknell.edu; admin requests for the other lists should go to listserv@bucknell.edu.

End_Table

11) Question: In a subnetted environment, how does the DHCP server discover what subnet a request has come from?

Answer: DHCP client messages are sent to off-net servers by DHCP relay agents, which are often a part of an IP router. The DHCP relay agent records the subnet from which the message was received in the DHCP message header for use by the DHCP server.

12) Question: Where is DHCP defined?

Answer: In Internet RFCs.

RFC1541 - R. Droms, "Dynamic Host Configuration Protocol", 10/27/1993.

RFC1533 - R. Droms, "Interoperation Between DHCP and BOOTP", 10/08/1993.

RFC1532 - S. Alexander, R. Droms, "DHCP Options and BOOTP Vendor Extensions", 10/08/1993.

13) Question: Can a client have a home address and still float?

..TIL18237-DHCP-Frequently_Asked_Questions_2-97.pdf

Answer: There is nothing in the protocol to keep a client that already has a leased or permanent IP number from getting a(nother) lease on a temporary basis on another subnet (i.e., for that laptop which is almost always in one office, but occasionally is plugged in in a conference room or class room). Thus it is left to the server implementation to support such a feature. I've heard that Microsoft's NT-based server can do it.

14) Question: How can I relay DHCP if my router does not support it?

Answer: A server on a net(subnet) can relay DHCP or BOOTP for that net. Windows NT can be set up that way.

15) Question: How do I migrate my site from BOOTP to DHCP?

Answer: I don't have an answer for this, but will offer a little discussion. The answer depends a lot on what BOOTP server you are using and how you are maintaining it. If you depend heavily on BOOTP server software to support your existing clients, then the demand to support clients that support DHCP but not BOOTP presents you with problems. In general, you are faced with the choice:

1. Find a server that is administered like your BOOTP server only that also serves DHCP. For example, one popular BOOTP server, the CMU server, has been patched so that it will answer DHCP queries.
2. Run both a DHCP and a BOOTP server. It would be good if I could find out the gotcha's of such a setup.
3. Adapt your site's administration to one of the available DHCP/BOOTP servers.
4. Handle the non-BOOTP clients specially, e.g. turn off DHCP and configure them statically: not a good solution, but certainly one that can be done to handle the first few non-BOOTP clients at your site.

16) Question: Can you limit which MAC addresses are allowed to roam?

Answer: Sites may choose to require central pre-configuration for all computers that will be able to acquire a dynamic address. A DHCP server could be designed to implement such a requirement, presumably as an option to the server administrator. See section below on servers that implement this.

17) Question: Can DHCP support remote access?

Answer: PPP has its own non-DHCP way in which communications servers can hand clients an IP address called IPCP (IP Control Protocol) but doesn't have the same flexibility as DHCP or BOOTP in handing out other parameters. Such a communications server may support the use of DHCP to acquire the IP addresses it gives out. This is sometimes called doing DHCP by proxy for the client. I know that Windows NT's remote access support does this.

A feature of DHCP under development (DHCPinfrom) is a method by which a DHCP server can supply parameters to a client that already has an IP number. With this, a PPP client could get its IP number using IPCP, then get the rest of its parameters using this feature of DHCP.

SLIP has no standard way in which a server can hand a client an IP address, but many communications servers support non-standard ways of doing this that can be utilized by scripts, etc. Thus, like communications servers supporting PPP, such communications servers could also support the use of DHCP to acquire the IP addressees to give out.

I am not currently aware of any way in which DHCP can support client-computers served solely by PPP or SLIP. Such a computer doesn't have the IEEE-style MAC address that DHCP requires to act as its key to determining which client-computer is which within the same subnet. Communications servers that acquire IP numbers for their clients via DHCP run into the same roadblock in that they have just one MAC address, but need to acquire more than one IP address. One way such a communications server can get around this problem is through the use of a set of unique pseudo-MAC addresses for the purposes of its communications with the DHCP server. Another way (used by Shiva) is to use a different "client ID type" for your hardware address. Client ID type 1 means you're using MAC addresses. However, client ID type 0 means an ASCII string.

18) Question: What are the Gotcha's?

Answer:

1. A malicious user could make trouble by putting up an unofficial DHCP server.
 - The immediate problem would be a server passing out numbers already belonging to some computer yielding the potential for two or more "innocent bystander" nodes ending up with the same IP number. Net result is problems using the nodes, possibly intermittent of one or the other is sometimes turned off.
 - A lot of problems are possible if a renegade server manages to get a client to accept its lease offering, and feeds the client its own version of other booting parameters. One scenario is a client that loads its OS over the network via tftp being directed to a different file (possibly on a different server), thus allowing the perpetrator to take over the client. Given that boot parameters are often made to control many different things about the computers' operation and communication, many other scenarios are just as serious.
Note that BOOTP has the same vulnerabilities.
2. The "broadcast flag": DHCP includes a way in which client implementations unable to receive a packet with a specific IP address can ask the server or relay agent to use the broadcast IP address in the replies (a "flag" set by the client in the requests). The definition of DHCP states that implementations "should" honor this flag, but it doesn't say they "must". Some Microsoft TCP/IP implementations used this flag, which meant in practical terms, relay agents and servers had to implement it. A number of BOOTP-relay-agent implementations (e.g. in routers) handled DHCP just fine except for the need for this feature, thus they announced new versions stated to

handle DHCP.

3. Some of the virtual LAN schemes, i.e., those that use the packet's IP number to decide which "virtual LAN" a client-computer is on for the purposes of TCP/IP, don't work when using DHCP to dynamically assign addresses. DHCP servers and relay agents use their knowledge of what LAN the client-station is on to select the subnet number for the client-station's new IP address whereas such switches use the subnet number sent by the client-station to decide which (virtual) LAN to put the station on.
4. Routers are sometimes configured so that one LAN on one port has multiple network (or subnet) numbers. When the router is relaying requests from such a LAN to the DHCP server, it must pass along as IP number that is associated with one of the network (or subnet) numbers. The only way the DHCP server can allocate addresses on one of the LAN's other network (or subnet) numbers is if the DHCP server is specifically written to have a feature to handle such cases, and it has a configuration describing the situation.
5. The knowledge that a particular IP number is associated with a particular node is often used for various functions. Examples are: for security purposes, for network management, and even for identifying resources. Furthermore, if the DNS's names are going to identify IP numbers, the numbers, the IP numbers have to be stable. Dynamic configuration of the IP numbers undercuts such methods. For this reason, some sites try to keep the continued use of dynamically allocatable IP numbers to a minimum.
6. With two or more servers serving a LAN, clients that are moved around (e.g. mobile clients) can end up with redundant leases. Consider a home site with two DHCP servers, a remote site with DHCP services, and a mobile client. The client first connects to the home site and receives an address from one of the two serves. He/she then travels to the remote site (without releasing the lease at the home site) and attempts to use the acquired address. It is of course NAK'ed and the client receives an address appropriate for the remote site. The client then returns home and tries to use the address from the remote site. It is NAK'ed but now the client broadcasts a DHCPDISCOVER to get a address. The server that holds the previous lease will offer the address back to the client but there is no guarantee that the client will accept that address; consequently, it is possible for the client to acquire an address on the other server and therefore have two leases within the site. The problem can be solved by using only one server per subnet/site and can be mitigated by short lease lengths. But in a very mobile environment, it is possible for these transient servers to consume more than their fair share of addresses.
7. If departments, offices, or individuals run DHCP servers with their own small address pools on LANs shared by other departments, offices, or individuals, they can find that their addresses are being used by anyone on the LAN that happens to set their IP configuration to use DHCP.

Info on Implementations

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19) Question What freeware DHCP servers are available?

Answer: This is not necessarily a complete list.

950415 Bootp server:

Bootp 2.4.3 (not DHCP, but with the "DHCP patches" mentioned below,
can handle DHCP requests)

<ftp://ftp.mc.com/pub/bootp-2.4.3.tar.Z>

950425 Patched bootp server:

Bootp server version 2.4.3 with DHCP patches (does static allocation
of IP addresses)

http://www.sghms.ac.uk/~mpreston/bootp_dhcp.tar.Z

(within <http://www.sghms.ac.uk/~mpreston/tools.htm>)

950630 WIDE Project:

Akihiro Tominaga (tomy@sfc.wide.ad.jp)

WIDE Project

Keio Univ.

Japan

<ftp://sh.wide.ad.jp/WIDE/free-ware/dhcp/dhcp-1.2.1.tar.gz>

Check Archie for dhcp-1.2.1 because lots of sites distribute it.

20) Question: What commercial DHCP servers are available?

Answer: This is not necessarily a complete list.

Windows NT has one.

950407 FTP Software (Services OnNet Product)

950411 Sun (SolarNet)

950425 Microsoft

950425 Competitive Automation

950425 Silicon Graphics

950525 Process Software: server for OpenVMS

950613 NetWare/IP 2.1 will NOT support DHCP but support for enhanced
bootp will be provided. I'm guessing this means DHCP-format
packets, but no address leasing.

21) Question: Which vendors of client software currently support DHCP?

Answer: This is not necessarily a complete list.

950417 Shiva: proxy client for remote users (in Lanrovers and Netmodems)

950417 FTP Software: for DOS and Windows (included in PC/TCP OnNet and
PC/TCP networking software)

950419 Beame and Whiteside: NFS client

950419 Dirk Koeppen EDV-Beratungs-GmbH: TCP/IP DHCP Boot ROMs (TCP/IP
BOOT-PROM)

950421 Microsoft: Windows for Workgroups

950425 Sun

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950425 Competitive Automation
950425 Silicon Graphics
950425 Hewlett-Packard
950502 NetManage: Chameleon 4.5
950630 Beame & Whiteside Software: resells Dirk Koeppen
EDV-Beratungs-GmbH's TCP/IP BOOT-PROM
950705 Microsoft: MS-TCP/IP 3.11a & MS-TCP/IP 3.11b

22) Question: What are the DHCP plans of major client-software vendors?

Answer:

MacTCP: will support it; I have no news on when or what version.

Windows95: will support it and will not support BOOTP!

Novell: has plans for client support later in 1995

IBM AIX: will support it; I have no news on when or what version.

OS/2: will support it; I have no news on when or what version.

23) Question: What Routers forward DHCP requests?

Answer: This is not necessarily a complete list.

Cisco: (from Cisco FAQ) Routers running GSYS version 9.21(4) and 10.0(3) as well as later releases.

Wellfleet/Bay: (from Wellfleet FAQ) DHCP is supported by enabling BOOTP support (with transmission and/or reception as needed).

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Answer: Not really a DHCP question, but it has been asked a lot, particularly by sites for which changing from BOOTP represents a lot of work. Some choices:

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2. Install a non-Microsoft TCP/IP stack for Windows 95 that supports BOOTP.

3. Switch from your current BOOTP server to one that supports both BOOTP and DHCP.
4. I know nothing about it, but there exists code to make Windows 95 run BOOTP:
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 - 'When run from inetd, I had problems with "Could not bind port" and DHCP request failure. I don't know why, and the problem went away when bootpd is run as a daemon.'
 - 'Unless you set "dl" to some value in the bootptab file, the DHCP lease time, renewal time and prebinding time will be rubbish, which will cause occasional renewal problems.' One symptom you might see is Microsoft DHCP implementations using 5-minute leases, which is their default. Other

implementations may not run at all.

4. Early Microsoft DHCP client implementations required the broadcast bit. Current ones do not.
5. I have heard a vague complaints about the Microsoft implementations of DHCP: that it does not follow the standards. I could use details.
6. Early Apple Open Transport implementations did not always fill out packets to BOOTP's 300-byte minimum, thus BOOTP forwarding agents that follow the BOOTP RFC and discard such packets end up discarding such DHCP packets, causing some of the functions to fail. Open Transport 1.1 fixes this.
7. The very first announced release of Carnegie Mellon's server, dhcp-3.3.6, circa March 1996 has shown signs of needing to be shaken out to be more easily compiled outside of its development environment.

33) Question: How do I get a DHCP Client using Open Transport to release or renew a DHCP lease before the lease has expired?

Answer: Open Transport clients release their DHCP address lease whenever the TCP/IP stack becomes inactive. This can be accomplished by:

- Restarting the Macintosh
- Make TCP/IP inactive and then active by using the TCP/IP control panel:
 1. Open the TCP/IP control panel.
 2. Choose the User Mode... command from the Edit menu, select Advanced in the User Mode window and click OK.
 3. Click the Options... bottom in the control panel.
 4. In the TCP/IP Options window, select Inactive and click OK.
 5. Close the TCP/IP control panel and save changes.
 6. Re-open the TCP/IP control panel, a dialog appears stating "TCP/IP is currently inactive. Changes won't take effect until TCP/IP is made active again. Make TCP/IP Active when closing the control panel?". Click Yes.
 7. Close the TCP/IP control panel and save changes.

Article Change History:

- 28 Feb 1997 - Added question and answer 33.
- 03 Jul 1996 - Corrected typographical error.
- 11 Jun 1996 - Added new questions and answers from the web.

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Tech Info Library

DHCP: Frequently Asked Questions (3/97)

Revised: 3/10/97
Security: Everyone

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Article Created: 21 July 1995
Article Reviewed/Updated: 28 February 1997

TOPIC -----

This article covers frequently asked questions (FAQ) about Dynamic Host Configuration Protocol (DHCP).

General

- 1) What is DHCP?
- 2) What is DHCP's purpose?
- 3) How is it different that BOOTP or RARP?
- 4) Why shouldn't clients assign IP numbers without the use of a server?
- 5) Can DHCP support statically defined addresses?
- 6) Can a BOOTP client boot from a DHCP server?
- 7) Can a DHCP client boot from a BOOTP server?
- 8) Can a DHCP client update its DNS entry through DHCP?
- 9) When will the server to server protocol be defined?
- 10) Is there a DHCP mailing list?
- 11) In a subnetted environment, how does the DHCP server discover what subnet a request has come from?
- 12) Where is DHCP defined?
- 13) Can a client have a home address and still float?
- 14) How can I relay DHCP if my router does not support it?
- 15) How do I migrate my site from BOOTP to DHCP?
- 16) Can you limit which MAC addresses are allowed to roam?
- 17) Can DHCP support remote access?
- 18) What are the Gotcha's?

Info on Implementations

- 19) What freeware DHCP servers are available?
- 20) What commercial DHCP servers are available?
- 21) Which vendors of client software currently support DHCP?
- 22) What are the DHCP plans of major client-software vendors?

- 23) What Routers forward DHCP requests?
- 24) What Routers include DHCP servers?
- 25) What Routers use DHCP to configure their IP addresses?
- 26) What Servers forward DHCP requests?
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- 30) What analyzers decode DHCP?
- 31) What administration tools administer DHCP configurations?
- 32) What are the Gotcha's specific to various implementations?
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DISCUSSION -----

This article provides information which did NOT originate at Apple Computer, Inc., and Apple Computer is not responsible for its content. This information is provided for your convenience. Please contact the author for additional information.

Author: John Wobus, jmwobus@syr.edu

Date: 7/5/1995

This file: <<http://web.syr.edu/~jmwobus/comfaqs/dhcp.faq.html>>

General

1) Question: What is DHCP?

Answer: DHCP stands for "Dynamic Host Configuration Protocol".

2) Question: What is DHCP's purpose?

Answer: DHCP's purpose is to enable individual computers on an IP network to extract their configurations from a server (the 'DHCP server') or servers, in particular, servers that have no exact information about the individual computers until they request the information. The overall purpose of this is to reduce the work necessary to administer a large IP network.

3) Question: How is it different that BOOTP or RARP?

Answer: DHCP is based on BOOTP and maintains some backward compatibility. The main difference is that BOOTP was designed for manual pre-configuration of the host information in a server database, while DHCP allows for dynamic allocation of network addresses and configurations to newly attached hosts. Additionally, DHCP allows for recovery and reallocation of network addresses through a leasing mechanism.

RARP is a protocol used by Sun and other vendors that allows a computer to find

out its own IP number, which is one of the protocol parameters typically passed to the client system by DHCP or BOOTP. RARP doesn't support other parameters and using it, a server can only serve a single LAN. DHCP and BOOTP are designed so they can be routed.

4) Question: Why shouldn't clients assign IP numbers without the use of a server?

Answer: It is theoretically possible for client-machines to find addresses to use by picking an address out of the blue and broadcasting a request of all the other client machines to see if they are using them. AppleTalk is designed around this idea, and Apple's MacTCP can be configured to do this for IP. However, this method of IP address assignment has disadvantages.

- A computer that needs a permanently assigned IP number might be turned off and lose its number to a machine coming up. This has problems both for finding services and for security.
- A network might be temporarily divided into two non-communicating networks while a network component is not functioning. During this time, two different client-machines might end up claiming the same IP number. When the network comes back, they start malfunctioning.
- If such dynamic assignment is to be confined to ranges of IP addresses, then the ranges are configured in each desktop machine rather than being centrally administered. This can lead both to hidden configuration errors and to difficulty in changing the range. Another problem with the use of such ranges is keeping it easy to move a computer from one subnet to another.

5) Question: Can DHCP support statically defined addresses?

Answer: Yes. At least there is nothing in the protocol to preclude this and one expects it to be a feature of any DHCP server. This is really a server matter and the client should work either way.

6) Question: Can a BOOTP client boot from a DHCP server?

Answer: A DHCP server can be written this way. Since DHCP was developed after BOOTP, it would be logical for most server developers to support this.

7) Question: Can a DHCP client boot from a BOOTP server?

Answer: A DHCP client can be written this way, i.e. to treat a BOOTP reply as an unending lease on the IP address.

8) Question: Can a DHCP client update its DNS entry through DHCP?

Answer: There are options in DHCP through which a DHCP client can request that its DNS entry be updated. DHCP clients will be able to take advantage of planned

enhancements to the DNS protocol that will allow dynamic updates through the network.

9) Question: When will the server to server protocol be defined?

Answer: The DHC WG of the IETF is actively investigating the issues in inter-server communication. The protocol should be defined "soon".

10) Question: Is there a DHCP mailing list?

Answer: There are several:

Begin_Table

List	Purpose
----	-----
host-conf@sol.eg.bucknell.edu	General discussion
dhcp-bake@bucknell.edu	DHCP bakeoffs
dhcp-impl@bucknell.edu	Implementations
dhcp-serve@bucknell.edu	Server to server protocol

Admin requests for the host-conf list should go to host-conf-request@sol.eg.bucknell.edu; admin requests for the other lists should go to listserv@bucknell.edu.

End_Table

11) Question: In a subnetted environment, how does the DHCP server discover what subnet a request has come from?

Answer: DHCP client messages are sent to off-net servers by DHCP relay agents, which are often a part of an IP router. The DHCP relay agent records the subnet from which the message was received in the DHCP message header for use by the DHCP server.

12) Question: Where is DHCP defined?

Answer: In Internet RFCs.

RFC1541 - R. Droms, "Dynamic Host Configuration Protocol", 10/27/1993.

RFC1533 - R. Droms, "Interoperation Between DHCP and BOOTP", 10/08/1993.

RFC1532 - S. Alexander, R. Droms, "DHCP Options and BOOTP Vendor Extensions", 10/08/1993.

13) Question: Can a client have a home address and still float?

Answer: There is nothing in the protocol to keep a client that already has a leased or permanent IP number from getting a(nother) lease on a temporary basis on another subnet (i.e., for that laptop which is almost always in one office, but occasionally is plugged in in a conference room or class room). Thus it is left to the server implementation to support such a feature. I've heard that Microsoft's NT-based server can do it.

14) Question: How can I relay DHCP if my router does not support it?

Answer: A server on a net(subnet) can relay DHCP or BOOTP for that net. Windows NT can be set up that way.

15) Question: How do I migrate my site from BOOTP to DHCP?

Answer: I don't have an answer for this, but will offer a little discussion. The answer depends a lot on what BOOTP server you are using and how you are maintaining it. If you depend heavily on BOOTP server software to support your existing clients, then the demand to support clients that support DHCP but not BOOTP presents you with problems. In general, you are faced with the choice:

1. Find a server that is administered like your BOOTP server only that also serves DHCP. For example, one popular BOOTP server, the CMU server, has been patched so that it will answer DHCP queries.
2. Run both a DHCP and a BOOTP server. It would be good if I could find out the gotcha's of such a setup.
3. Adapt your site's administration to one of the available DHCP/BOOTP servers.
4. Handle the non-BOOTP clients specially, e.g. turn off DHCP and configure them statically: not a good solution, but certainly one that can be done to handle the first few non-BOOTP clients at your site.

16) Question: Can you limit which MAC addresses are allowed to roam?

Answer: Sites may choose to require central pre-configuration for all computers that will be able to acquire a dynamic address. A DHCP server could be designed to implement such a requirement, presumably as an option to the server administrator. See section below on servers that implement this.

17) Question: Can DHCP support remote access?

Answer: PPP has its own non-DHCP way in which communications servers can hand clients an IP address called IPCP (IP Control Protocol) but doesn't have the same flexibility as DHCP or BOOTP in handing out other parameters. Such a communications server may support the use of DHCP to acquire the IP addresses it gives out. This is sometimes called doing DHCP by proxy for the client. I know that Windows NT's remote access support does this.

A feature of DHCP under development (DHCPinfrom) is a method by which a DHCP server can supply parameters to a client that already has an IP number. With this, a PPP client could get its IP number using IPCP, then get the rest of its parameters using this feature of DHCP.

SLIP has no standard way in which a server can hand a client an IP address, but many communications servers support non-standard ways of doing this that can be utilized by scripts, etc. Thus, like communications servers supporting PPP, such communications servers could also support the use of DHCP to acquire the IP addressees to give out.

I am not currently aware of any way in which DHCP can support client-computers served solely by PPP or SLIP. Such a computer doesn't have the IEEE-style MAC address that DHCP requires to act as its key to determining which client-computer is which within the same subnet. Communications servers that acquire IP numbers for their clients via DHCP run into the same roadblock in that they have just one MAC address, but need to acquire more than one IP address. One way such a communications server can get around this problem is through the use of a set of unique pseudo-MAC addresses for the purposes of its communications with the DHCP server. Another way (used by Shiva) is to use a different "client ID type" for your hardware address. Client ID type 1 means you're using MAC addresses. However, client ID type 0 means an ASCII string.

18) Question: What are the Gotcha's?

Answer:

1. A malicious user could make trouble by putting up an unofficial DHCP server.
 - The immediate problem would be a server passing out numbers already belonging to some computer yielding the potential for two or more "innocent bystander" nodes ending up with the same IP number. Net result is problems using the nodes, possibly intermittent of one or the other is sometimes turned off.
 - A lot of problems are possible if a renegade server manages to get a client to accept its lease offering, and feeds the client its own version of other booting parameters. One scenario is a client that loads its OS over the network via tftp being directed to a different file (possibly on a different server), thus allowing the perpetrator to take over the client. Given that boot parameters are often made to control many different things about the computers' operation and communication, many other scenarios are just as serious.
Note that BOOTP has the same vulnerabilities.
2. The "broadcast flag": DHCP includes a way in which client implementations unable to receive a packet with a specific IP address can ask the server or relay agent to use the broadcast IP address in the replies (a "flag" set by the client in the requests). The definition of DHCP states that implementations "should" honor this flag, but it doesn't say they "must". Some Microsoft TCP/IP implementations used this flag, which meant in practical terms, relay agents and servers had to implement it. A number of BOOTP-relay-agent implementations (e.g. in routers) handled DHCP just fine except for the need for this feature, thus they announced new versions stated to

handle DHCP.

3. Some of the virtual LAN schemes, i.e., those that use the packet's IP number to decide which "virtual LAN" a client-computer is on for the purposes of TCP/IP, don't work when using DHCP to dynamically assign addresses. DHCP servers and relay agents use their knowledge of what LAN the client-station is on to select the subnet number for the client-station's new IP address whereas such switches use the subnet number sent by the client-station to decide which (virtual) LAN to put the station on.
4. Routers are sometimes configured so that one LAN on one port has multiple network (or subnet) numbers. When the router is relaying requests from such a LAN to the DHCP server, it must pass along as IP number that is associated with one of the network (or subnet) numbers. The only way the DHCP server can allocate addresses on one of the LAN's other network (or subnet) numbers is if the DHCP server is specifically written to have a feature to handle such cases, and it has a configuration describing the situation.
5. The knowledge that a particular IP number is associated with a particular node is often used for various functions. Examples are: for security purposes, for network management, and even for identifying resources. Furthermore, if the DNS's names are going to identify IP numbers, the numbers, the IP numbers have to be stable. Dynamic configuration of the IP numbers undercuts such methods. For this reason, some sites try to keep the continued use of dynamically allocatable IP numbers to a minimum.
6. With two or more servers serving a LAN, clients that are moved around (e.g. mobile clients) can end up with redundant leases. Consider a home site with two DHCP servers, a remote site with DHCP services, and a mobile client. The client first connects to the home site and receives an address from one of the two serves. He/she then travels to the remote site (without releasing the lease at the home site) and attempts to use the acquired address. It is of course NAK'ed and the client receives an address appropriate for the remote site. The client then returns home and tries to use the address from the remote site. It is NAK'ed but now the client broadcasts a DHCPDISCOVER to get a address. The server that holds the previous lease will offer the address back to the client but there is no guarantee that the client will accept that address; consequently, it is possible for the client to acquire an address on the other server and therefore have two leases within the site. The problem can be solved by using only one server per subnet/site and can be mitigated by short lease lengths. But in a very mobile environment, it is possible for these transient servers to consume more than their fair share of addresses.
7. If departments, offices, or individuals run DHCP servers with their own small address pools on LANs shared by other departments, offices, or individuals, they can find that their addresses are being used by anyone on the LAN that happens to set their IP configuration to use DHCP.

Info on Implementations

19) Question What freeware DHCP servers are available?

Answer: This is not necessarily a complete list.

950415 Bootp server:

Bootp 2.4.3 (not DHCP, but with the "DHCP patches" mentioned below,
can handle DHCP requests)

<ftp://ftp.mc.com/pub/bootp-2.4.3.tar.Z>

950425 Patched bootp server:

Bootp server version 2.4.3 with DHCP patches (does static allocation
of IP addresses)

http://www.sghms.ac.uk/~mpreston/bootp_dhcp.tar.Z

(within <http://www.sghms.ac.uk/~mpreston/tools.htm>)

950630 WIDE Project:

Akihiro Tominaga (tomy@sfc.wide.ad.jp)

WIDE Project

Keio Univ.

Japan

<ftp://sh.wide.ad.jp/WIDE/free-ware/dhcp/dhcp-1.2.1.tar.gz>

Check Archie for dhcp-1.2.1 because lots of sites distribute it.

20) Question: What commercial DHCP servers are available?

Answer: This is not necessarily a complete list.

Windows NT has one.

950407 FTP Software (Services OnNet Product)

950411 Sun (SolarNet)

950425 Microsoft

950425 Competitive Automation

950425 Silicon Graphics

950525 Process Software: server for OpenVMS

950613 NetWare/IP 2.1 will NOT support DHCP but support for enhanced
bootp will be provided. I'm guessing this means DHCP-format
packets, but no address leasing.

21) Question: Which vendors of client software currently support DHCP?

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950417 Shiva: proxy client for remote users (in Lanrovers and Netmodems)

950417 FTP Software: for DOS and Windows (included in PC/TCP OnNet and
PC/TCP networking software)

950419 Beame and Whiteside: NFS client

950419 Dirk Koeppen EDV-Beratungs-GmbH: TCP/IP DHCP Boot ROMs (TCP/IP
BOOT-PROM)

950421 Microsoft: Windows for Workgroups

950425 Sun

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950425 Competitive Automation
950425 Silicon Graphics
950425 Hewlett-Packard
950502 NetManage: Chameleon 4.5
950630 Beame & Whiteside Software: resells Dirk Koeppen
EDV-Beratungs-GmbH's TCP/IP BOOT-PROM
950705 Microsoft: MS-TCP/IP 3.11a & MS-TCP/IP 3.11b

22) Question: What are the DHCP plans of major client-software vendors?

Answer:

MacTCP: will support it; I have no news on when or what version.

Windows 95: will support it and will not support BOOTP!

Novell: has plans for client support later in 1995

IBM AIX: will support it; I have no news on when or what version.

OS/2: will support it; I have no news on when or what version.

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3. There are a number of issues regarding the patched bootp servers. These have been reported to re DD2.4.3:
 - 'When run from inetd, I had problems with "Could not bind port" and DHCP request failure. I don't know why, and the problem went away when bootpd is run as a daemon.'
 - 'Unless you set "dl" to some value in the bootptab file, the DHCP lease time, renewal time and prebinding time will be rubbish, which will cause occasional renewal problems.' One symptom you might see is Microsoft DHCP implementations using 5-minute leases, which is their default. Other

implementations may not run at all.

4. Early Microsoft DHCP client implementations required the broadcast bit. Current ones do not.
5. I have heard a vague complaints about the Microsoft implementations of DHCP: that it does not follow the standards. I could use details.
6. Early Apple Open Transport implementations did not always fill out packets to BOOTP's 300-byte minimum, thus BOOTP forwarding agents that follow the BOOTP RFC and discard such packets end up discarding such DHCP packets, causing some of the functions to fail. Open Transport 1.1 fixes this.
7. The very first announced release of Carnegie Mellon's server, dhcp-3.3.6, circa March 1996 has shown signs of needing to be shaken out to be more easily compiled outside of its development environment.

33) Question: How do I get a DHCP Client using Open Transport to release or renew a DHCP lease before the lease has expired?

Answer: Open Transport clients release their DHCP address lease whenever the TCP/IP stack becomes inactive. This can be accomplished by:

- Restarting the Macintosh
- Make TCP/IP inactive and then active by using the TCP/IP control panel:
 1. Open the TCP/IP control panel.
 2. Choose the User Mode... command from the Edit menu, select Advanced in the User Mode window and click OK.
 3. Click the Options... bottom in the control panel.
 4. In the TCP/IP Options window, select Inactive and click OK.
 5. Close the TCP/IP control panel and save changes.
 6. Re-open the TCP/IP control panel, a dialog appears stating "TCP/IP is currently inactive. Changes won't take effect until TCP/IP is made active again. Make TCP/IP Active when closing the control panel?". Click Yes.
 7. Close the TCP/IP control panel and save changes.

Article Change History:

- 10 Mar 1997 - Minor typographical correction.
- 28 Feb 1997 - Added question and answer 33.
- 03 Jul 1996 - Corrected typographical error.

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Tech Info Library Article Number:18237



Tech Info Library

Open Transport TCP/IP Configuration (11/96)

Revised: 12/20/96
Security: Everyone

Open Transport TCP/IP Configuration (11/96)

Article Created: 21 July 1995
Article Reviewed/Updated: 8 November 1996

TOPIC -----

This article provides information for configuring Open Transport TCP/IP.

DISCUSSION -----

Open Transport/TCP is supported over, but not limited to, Ethernet, Token Ring, and AppleTalk (as MacIP). It is also supported over serial lines when using backward compatible MDEV support (for example, MacPPP and InterSLIP).

Open Transport/TCP is configured using the TCP/IP Control Panel. Configuration may be done manually, or via a BOOTP, DHCP, RARP, or MacIP server. The steps to follow using each of these methods are detailed below.

By default, the TCP/IP Control Panel comes up in basic mode. Advanced or administration mode may be entered via the Edit menu. These modes allow expert users additional choices as well as the ability to augment information returned from a configuration server or to fill in gaps in the returned information.

The TCP/IP Control Panel may be used at any time to reconfigure the system. However TCP will not notice the new configuration until it has unloaded from the system. By default, this takes about 2 minutes after the last application using TCP or UDP has gone away.

Here is a description of the fields in the TCP/IP Control Panel:

Connect via:

This is where you select the interface the system is going to use. This can include, but is not limited to, Ethernet, Token Ring, AppleTalk (MacIP), and MacPPP.

Configure:

This is where you select how the system will obtain its IP address. The choices are Manually, BootP, DHCP, and RARP.

IP Address:

This is where you enter the systems IP address if you have configured it to obtain its address manually. If BootP, DHCP, or RARP were selected for the "Configure:" field, the text "<supplied by server>" will be displayed.

Domain name:

This is the default domain name used for domain name searches. For example, if a domain name of "apple.com" is configured, a search for "scott" would initially search for "scott.apple.com." It is not always necessary to fill in this field when configuring from a BootP or DHCP server since it may be returned along with the IP address. It is not necessary to have a domain name entered in this field.

Admin domain:

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches. For example, if my domain is tech.support.apple.com, and my admin domain is set to apple.com, a search for the name "scott" would first look for scott.tech.support.apple.com, then for scott.support.apple.com, then for scott.apple.com. Implicit searching will not be done unless an Admin Domain is explicitly setup and the default domain is a subdomain of the Admin Domain (per RFC 1535). If the name "scott" is not found here and Search domains are present, they are searched as well.

Search domain names:

In Advanced User mode only, you may enter Search domains. See the "Domain Name Resolver Information" for complete details on how searching and the DNR work.

Domain Name Resolver Information

When a client of the DNR requests a name-to-address mapping, the DNR checks for a "." at the end of the name. If it exists, the name is assumed to be fully qualified (see RFCs 1034 and 1035 for an explanation of the Domain Name System). Otherwise, if the name contains at least one "." internally, it is considered to be provisionally fully qualified. Otherwise, the name is assumed to be partially qualified, and the DNR will begin a search for that name in the domain name in the "Domain name:" field. If it is not found there, and there is an Admin domain configured, implicit searches will take place as described in the "Admin domain" section. If the name is still not found, the Search domains are searched. For each search domain, the configured name servers are contacted in the order specified. If the name is resolved in the first search domain, that answer is returned. If an authoritative answer that the "name-does-not-exist" is returned, the DNR begins the search in the next configured search domain. The search continues through the domains, and if no match is found, the DNR will search the

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root domain if it makes sense to do so. The DNR has an overall timeout of 2 minutes after which it will abandon its search.

Subnet mask:

This is for the subnet mask for the network the system is connected. For example, on a class C net which uses 4 bits of the host field for subnetting, the subnet mask should be entered as "255.255.255.240".

Router address:

This is for the IP address of the default IP router located on the network the system is on.

Name server addr:

This is for the IP address(es) of one or more Domain Name Servers.

Configuring Open Transport/TCP:

=====

Manual Configuration

To manually setup Open Transport/TCP, follow these steps:

Step 1

Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

Step 2

If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

Step 3

Select "Manually" as the configuration method.

Step 4

Fill in the IP address in dot notation (for example, 128.1.1.1).

Step 5

Fill in the default domain extension to be used on name searches.

Step 6

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

Step 7

Fill in the subnet mask in dot notation.

Step 8

Fill in the IP address of the default IP router.

Step 9

Fill in the IP address(es) of one or more Domain Name Servers.

Step 10

In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

Step 11

If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

DHCP Configuration

To use a DHCP server to setup Open Transport/TCP, follow these steps:

Step 1

Select the interface to use in the AppleTalk control panel.

Step 2

If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

Step 3

Select "Using DHCP" as the configuration method.

Step 4

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

Step 5

In Advanced User mode, a subnet mask may be entered but is not required. If a value is entered, it will be used if no subnet mask is returned from the DHCP server. Otherwise, any value entered is ignored.

Step 6

In Advanced User mode, the manually entered IP addresses of routers are attached to the end of the (possibly empty) list of IP routers returned by the DHCP server.

Step 7

In Advanced User mode, the manually entered IP addresses of Domain Name Servers are attached to the end of the (possibly empty) list of Name Servers returned by the DHCP server.

Step 8

In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

Step 9

If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

DHCP Address Leases

DHCP provides a network administrator with the ability to configure a host's IP address either for an unlimited or for a limited period of time. The limited lease period is under the network administrator's control and is non-negotiable. Leases may, however, be renewed at the option of the configuring server.

Open Transport/TCP fully supports DHCP address leases. Should an interface's IP address lease expire, the interface will be closed down. However, Open Transport/TCP will automatically attempt to renew any address lease that reaches it's Renewal Interval, which defaults to half of the lease's lifetime, but may be configured to a different interval by the configuring server. Renewal will be attempted regardless of how many times the lease has already been renewed.

BootP Configuration

To use a BootP server to setup Open Transport/TCP, follow these steps:

Step 1

Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

Step 2

If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

Step 3

Select "Using BootP " as the configuration method.

Step 4

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

Step 5

In Advanced User mode, a subnet mask may be entered but is not required. If a value is entered, it will be used if no subnet mask is returned from the BOOTP server. Otherwise, any value entered is ignored.

Step 6

In Advanced User mode, the manually entered IP address of the router is attached to the end of the (possibly empty) list of IP routers returned by the DHCP server.

Step 7

In Advanced User mode, the manually entered IP addresses of Domain Name Servers are attached to the end of the (possibly empty) list of Name Servers returned by the DHCP server.

Step 8

In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

Step 9

If a Hosts file is required, select it using the Hosts file button. For details

about the Hosts file, see the description which follows.

RARP Configuration

To use a RARP server to setup Open Transport/TCP, follow these steps:

Step 1

Select the interface to use, or pick "AppleTalk (MacIP)" to run over AppleTalk on the interface selected in the AppleTalk control panel.

Step 2

If an Ethernet interface is selected, a check box will appear offering the use of 802.3. By default, Open Transport/TCP uses Ethernet_II rather than 802.3.

Step 3

Select "Using RARP" as the configuration method.

Step 4

Fill in the default domain extension to be used on name searches.

Step 5

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

Step 6

Fill in the subnet mask in dot notation.

Step 7

Fill in the IP address of the IP router.

Step 8

Fill in the IP address(es) of one or more Domain Name Servers.

Step 9

In Advanced User mode only, additional search domains may be entered. See the preceding description of the Domain Name Resolver operation for details.

Step 10

If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

MacIP Server Configuration

To use a MacIP Server to setup Open Transport/TCP, follow these steps:

Step 1

Select "AppleTalk (MacIP)" as the interface to use. TCP will now run over AppleTalk on the interface selected in the AppleTalk control panel.

Step 2

Select "Using MacIP Server" as the configuration method.

Step 3

Select the zone the DDP/IP Gateway is in using the "Select Zone..." button.

Step 4

Fill in the default domain extension to be used on name searches.

Step 5

In Advanced User mode only, you may enter an Admin Domain. This is used to allow implicit searches.

Step 6

If a Hosts file is required, select it using the Hosts file button. For details about the Hosts file, see the description which follows.

Hosts File

Open Transport/TCP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is found in the System's Preferences folder. This file is parsed when Open Transport/TCP is initialized. As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (see RFC 1035 page 33).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified domain name (which, however, need not be terminated by a dot, but must contain at least one dot internally) and where

```
<rr> = [<ttl>] [<class>] <type> <rdata> OR [<class>] [<ttl>] <type> <rdata>
```

The only class currently supported is IN (Internet Domain); ttl (time to live; indicates the record's configured lifetime) is in seconds; and type can be A (host address), CNAME (canonical name of an alias), or NS (name server). If ttl is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a ttl of minus-one (-1).

\$INCLUDE and \$ORIGIN are not supported.

Examples of valid data entry lines including comments:

```
apple.com      A          130.43.2.2          ; address of host apple.com
foobar         CNAME      barfoo.apple.com ; canonical name for the host
                                     ; whose local alias is "foobar"
mit.edu.       86400      NS    achilles.mit.edu ; name server for mit.edu domain,
                                     ; entry has a one-week lifetime
```

Open Transport/TCP's Hosts file support is somewhat more stringent than that of MacTCP. MacTCP permitted violation of the Fully Qualified requirement for

<domain-name>, and this feature was often used to avoid the necessity for entering CNAME records by associating an address directly with a non-fully qualified name. For instance, this format:

```
charlie      A      128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). If such a line exists in your hosts file, kOTBadNameError will be returned when the Hosts file is read. To accomplish the same effect, use this format instead:

```
charlie      CNAME    myhost.mydomain.edu
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias "charlie" with the fully qualified domain name "myhost.mydomain.edu" and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

In general, use of the Hosts file is discouraged, as it often simply wastes memory by permanently configuring data that may only rarely be accessed. It is also highly susceptible to misuse by users who try to configure far too much information internally in order to avoid accessing DNS servers. Besides tying up memory, this practice is exactly the reason that the Domain Name System was developed in the first place - to eliminate the performance degradation caused by use of enormous hosts files.

Should a Hosts file be used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently.

Article Change History:

08 Nov 1996 - Corrected typo.

25 Jun 1996 - Made correction for technical accuracy.

20 May 1996 - Corrected reference to Ethernet_SNAP.

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Tech Info Library Article Number:18238



Tech Info Library

QuickTime VR: Glossary of Terms (7/95)

Revised: 7/21/95
Security: Everyone

QuickTime VR: Glossary of Terms (7/95)

=====

Article Created: 21 July 1995

TOPIC -----

This article describes some of the common terms used when discussing QuickTime VR technology.

DISCUSSION -----

Authoring

The process of developing a multimedia title. With QuickTime VR, the authoring process includes four steps:

- Planning
- Capturing images
- Digitizing the images
- Authoring/compositing.

Dicing

A QuickTime VR authoring process that compresses source and object PICT files, and creates MooV files. During dicing, PICT files are compressed using a compressor specified by one of the MPW scripts for dicing.

Hot spot

An interactive area in a QuickTime VR movie. Link hot spots allow a movie viewer to navigate from one node to another in the scene. Object hot spots allow a movie viewer to pick up, examine, or get more information about an object in the scene.

MPW

Macintosh Programmer's Workbench. Part of the development environment (along with HyperCard) required for authoring QuickTime VR movies.

Navigable movie

A type of VR object that allows you to manipulate a photographically captured or computer-rendered object. Also known as an object movie.

Node

A position in a scene from which you view a 360° panoramic image. Multiple nodes linked together comprise a scene. In a multi-node scene, users can jump from node to node to navigate about the scene.

Object movie

See navigable movie.

Panorama

A 360° photographic view from a position called a node. A panorama is captured for each node in a scene.

Panoramic movie

A VR movie based on a photographically captured 360° node.

Panoramic PICT

A 360° band of blended photographic images, created by the Stitcher.

Photo CD

A compact disc that contains digitized images made from photographic negatives. Photo CD is a Kodak technology.

QuickTime VR

Apple's new technology for creating VR experiences. With QuickTime VR, you can create scenes based on high-quality real-world photographic images. QuickTime VR movies can be played back on Macintosh and Windows-based computers; no specialized hardware, software, or accessories are needed.

Scene

An environment for which you create a QuickTime VR movie. Scenes can be photographed or rendered on the computer.

Scene Editor

A QuickTime VR authoring tool that lets you add and position nodes in a scene, link nodes, and link objects to nodes.

Stitching

A QuickTime VR Authoring process that creates a panoramic PICT of blended photographic images of a node.

Title

A multimedia product usually distributed on CD-ROM.

Virtual Reality (VR)

The experience of exploring and interacting with a spatial environment through a computer.

Support Information Services

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Tech Info Library Article Number:18239



Tech Info Library

System 7.1P6: Clean Restore Macintosh Performa Computers (7/95)

Revised: 7/21/95
Security: Everyone

System 7.1P6: Clean Restore Macintosh Performa Computers (7/95)

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Article Created: 21 July 1995

TOPIC -----

This article describes the procedure for a Clean Restore (Install) for a Macintosh Performa computer with no built-in CD-ROM drive and which is running System 7.1P or System 7.1.2P for Performa computers. This article assumes that you have backed up your system with Apple Restore, and have a Utilities disk and the backup disks.

This article applies to all Macintosh Performa 400 series computers, as well as some Performa 600 and 630 series computers.

If you are using System 7.5, follow the clean install instructions for System 7.5, listed elsewhere in the Tech Info Library.

DISCUSSION -----

You may wish to perform a "clean install" when normal extensions troubleshooting fails or when the troubleshooting process becomes too complex.

The process essentially allows you to "start over" with a new System Folder. You will not lose any data, but any software or fonts or configuration information which was stored in the old System Folder will become inactive.

This clean install procedure provides you with a stable foundation from which you can proceed to troubleshoot an abnormal situation.

A regular system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving most files in place, and forces the restoration software to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in

troubleshooting.

Restart From the Utilities Disk

Step 1

Shut down or turn off your computer and insert the Utilities disk.

Step 2

Turn it back on. After a while, the computer will have started by using the system software on the Utilities disk. This will take longer than normal, perhaps up to three minutes.

The desktop pattern may change. This is normal, and is a consequence of having started the system with a different startup volume. In this case, we are starting from the Utilities disk.

If you cannot start with the Utilities disk (that is, you do not see your Utilities disk icon on the top right hand side of the screen, above the hard disk, do not proceed. Call 800-SOS-APPL for further assistance.

Run Disk First Aid

Disk First Aid can detect and repair problems with a hard disk's directory structure. Before proceeding with further troubleshooting, it is important to verify that the underlying directory structure is functioning satisfactorily.

Step 1

Click on the Disk First Aid icon in the Utilities window, then select Open from the File menu. You can also double-click on the Disk First Aid icon. The Disk First Aid icon looks like a little ambulance.

Step 2

There are two distinct ways that Disk First Aid might appear.

If your version has a row of disk icons at the top of the window, and a button labeled Verify, click on the hard disk icon within the Disk First Aid window. Click on the Verify button.

If your version has four buttons, marked Drive, Eject, Open, and Cancel, check the name of the volume in the window. If it says Utilities, click the Drive button ONCE. It should then have the name of your hard disk. Click on the Open button. Another window will appear: click on the Start button. Nothing dramatic will happen while it is testing, but within a minute, the Start button will either hilite again, and a message will appear saying everything is fine, or it will report a problem.

Step 3

If Disk First Aid finds a problem, click on the Repair button.

If you receive a note stating that Disk First Aid cannot repair the hard disk, you should back up any irreplaceable data or application software on the hard disk and re-initialize it using the appropriate formatting utility for that drive. For Apple drives, use Apple HD SC Setup, which is also in the Launcher.

If you have a Performa 630 series computer, use Internal Drive Format.

Step 4

Select "Quit" from the File menu.

Update Hard Disk Driver

You should update the drivers with the version of Apple HD SC Setup that is on the Utilities disk, following these steps:

Note:

If you have a Performa 630 series computer, ignore this step. Because you have an IDE drive instead of a SCSI drive, you do not have any drivers to update.

Step 1

Click on the HD SC Setup icon in the Launcher.

Step 2

Click on the Update button. If the Update button is not hilited, or you see a message that "Drive Selection Failed," you should verify whether your hard disk has been reformatted with a third-party driver or uses driver-level compression or security software.

Step 3

When you are finished, click Quit to return to the desktop.

Step 4

Select "Restart" from your Special menu. The Utilities disk will eject; push it right back in.

Check Available Hard Disk Space

Be sure you have at least 20 MB available on the hard disk where you plan to install the system software. If there's less than 20 MB available, you'll need to identify and delete some unnecessary files by moving them to the Trash.

Make sure you do not delete anything you do not have a back-up for. If necessary, copy the files onto individual diskettes or other media before moving them to the Trash.

You can identify the amount of hard disk space available by double-clicking on your hard disk icon on the right hand side of the screen. At the top of the hard disk window, you should see a legend which indicates how much space is available. If you do not, select "by Icon" from your View menu.

Once you identify and remove redundant items, choose Empty Trash from the Special menu, and you'll have more disk space available.

Disable the System Folder

You disable the System Folder by moving the Finder and renaming the System

Folder to something else.

Step 1

Open your hard disk's icon and locate the System Folder.

Step 2

Open the System Folder and locate the Finder.

Step 3

Move the Finder to the Trash. If you get an error message saying that items can't be moved to the desktop because it is locked, try again: you probably missed the Trash.

Step 4

Move your System suitcase (the icon with a small suitcase) to the Preferences folder. We keep the System suitcase in case there are sounds inside it you may wish to recover later on.

Step 5

Close the System Folder's window and rename the System Folder to "Storage." Do this by first clicking on the closed System Folder icon, then pressing the Return key. This should hilite the words "System Folder," surrounding them with a white rectangle. Whatever you type will replace what is there. You can also hilite "System Folder" by clicking ONCE in the middle of those words, then waiting for the words to hilite.

Step 6

Close any open windows on your desktop.

Restart Your Computer

Choose Restart from the Special menu. This will automatically eject your Utilities disk.

After a few seconds, you should see a picture of a disk with a flashing question mark.

If your Macintosh computer starts up from the hard drive, you have an extra System Folder on the hard disk. You need to locate it (use the "Find" option from the File menu in the Finder) and delete it or disable it as described in the previous section, then restart.

When you get the disk with the flashing question mark on your screen, you can continue.

Restoring The System

Step 1

When you see the disk with a flashing question mark, insert the Utilities disk again. The computer should start up with the system software on the Utilities disk

Step 2

Once the computer has finished starting, double-click on Apple Restore.

Step 3

Read the welcome screen, then click on the Continue button.

Step 4

Respond to any messages you see on the screen. At this point, you will need all of your backup disks.

Step 5

When the system is finished, click the Restart button or press the Return key on your keyboard. You will have then successfully restored your files.

Step 6

After the computer finishes restarting, select Empty Trash. The old Finder will be in there, and we can get rid of it at this point.

Verify Problem Resolution

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of the clean restore procedure. You may wish to use your computer for a few days before re-introducing any other extensions or fonts.

Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Storage") such as fonts, screen savers, device drivers, and so on. If at all possible, we strongly recommend that you reinstall these items from their original disks, just in case one of the items had become corrupted and contributed to the problem.

If the original disks aren't available, you may move the non-standard items from the Storage folder to the equivalent place in the new System Folder. Be careful not to replace anything that's already in the new System Folder. Only move items that aren't already in the new System Folder.

Step 1

Open each corresponding folder within the System Folder and the Storage folder and then compare the contents.

Step 2

Move an item that isn't already in the new System Folder and its subfolders from the Storage folder and its subfolders.

Step 3

Restart your Macintosh.

It is recommended you proceed slowly when doing this. This is part of the troubleshooting process, so you do not want to move everything back at once:

instead, move a few at a time, restart, and test to make sure the original problem has gone away.

If you move the items back and the problem should recur, you probably have an extensions conflict. Done properly, you will know which set of extensions cause the problem, but sometimes intermittent extensions conflicts will require more troubleshooting.

Final Steps

Verify that your applications are performing normally. If not, refer to the application manual or contact the vendor.

We normally recommend you keep the Storage folder around for a couple of months, or until you're **completely** certain that you do not need any files from it.

When the Macintosh behaves as expected, move the Storage folder to the Trash, and choose Empty Trash from the Special menu.

Support Information Services

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Tech Info Library Article Number:18240



Tech Info Library

PowerBook: Power & Battery Frequently Asked Questions (4/97)

Revised: 4/4/97
Security: Everyone

PowerBook: Power & Battery Frequently Asked Questions (4/97)

Article Created: 21 August 1995
Article Reviewed/Updated: 04 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about PowerBook batteries and power issues.

Questions Answered in this FAQ
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- 1) How do I reset the power manager for my PowerBook?
- 2) I do not seem to be getting the battery life I once did. What should I do?
- 3) What are the various types of PowerBook batteries? Are they interchangeable?
- 4) Through troubleshooting, I have come to the conclusion my PowerBook battery is bad. It is my understanding that this battery contains unpleasant chemicals. How can I safely dispose of this battery?
- 5) What is battery memory? Should I buy a reconditioner for my battery to address battery memory?
- 6) I recently purchased a Type 3 battery for my PowerBook Duo 230. The battery works fine in my PowerBook, but a red light appears on my external battery recharger when I insert the battery. The recharger works fine with the battery that came with my PowerBook. What could be wrong?
- 7) It is my understanding that Apple no longer sells the PowerBook 100 battery. What can I do when my faithful PowerBook 100 needs a new battery?
- 8) I recently purchased a new battery for my 500 series PowerBook. My PowerBook isn't charging/recognizing this battery. What should I do?
- 9) How long can I store my PowerBook battery?

- 10) My PowerBook will not start off battery at all. Should I just buy a new battery, or is there something else I can do?
- 11) How can I increase my PowerBook computer's battery life?
- 12) What is processor cycling and how do I turn it off?
- 13) Can I charge my PB from a car cigarette lighter?
- 14) I am taking my PowerBook to another country, do I need a power converter?
- 15) Can the PowerBook 5300/190 use two batteries simultaneously?
- 16) Where else can I go for answers?

DISCUSSION -----

- 1) Question: How do I reset the power manager for my PowerBook?

Answer: Listed below are the particular methods for resetting the power manager on all PowerBook computers. Resetting the power manager can be useful if the computer does not turn on at all or if it is displaying power-related anomalies. Corruptions in the power manager are typically caused by power surges. Plugging in the PowerBook improperly can also corrupt the power manager code. The AC adapter should always be connected to a live AC outlet before it is plugged into or removed from the PowerBook.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

All of the following Power Manager Reset procedures for all of the Macintosh PowerBook computers will permanently remove a RAM disk, if present, and all of its contents.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

What Causes The Power Manager To Need Resetting?

=====

While there are several reasons a PowerBook may need its power manager circuitry reset, most of which involve some kind of power interruption to the unit, there is one very common cause - improper use of the AC Adapter.

The PowerBook power manager circuitry is most often "corrupted" by the AC Adaptor not being plugged into the PowerBook in the proper order. The AC Adapter should ALWAYS be plugged into the AC (wall) outlet before it is plugged into the PowerBook itself.

If you are using a power surge protector bar, make sure the power bar is powered on (usually has some kind of indicator light) before you plug the PowerBook AC Adapter into it. Also never turn off the power to the PowerBook by turning off the power bar's switch.

PowerBook 100

=====

Step 1

Remove the AC adapter and the battery.

Step 2

Flip the battery contact switch on the rear of the unit to the down position.

Step 3

Let the unit sit without power hooked up for 3-5 minutes.

Step 4

Simultaneously press and hold the rest and interrupt buttons on the side of the unit for 15 seconds.

Step 5

Reinstall the battery, reconnect the AC adaptor if necessary and flip the battery contact switch on the rear of the unit to the up position.

PowerBook 140, 145, 145 B and 170

=====

Step 1

Remove the AC Adapter and the battery.

Step 2

Let the unit sit without power connected for 3 to 5 minutes.

Step 3

Using two paper clips, simultaneously press and hold down the reset and interrupt buttons for 5-10 seconds.

* Both recessed buttons (commonly known as the reset and interrupt buttons) are located next to the power button on the back panel of the PowerBook.

Step 4

Reinstall the battery and, if necessary, reconnect the AC adapter.

PowerBook 160, 165, or 180

=====

Step 1

Remove the AC Adapter and the battery.

Step 2

Let the unit sit without power connected for 3 to 5 minutes.

Step 3

Reinstall the battery and, if necessary, reconnect the AC adapter.

NOTE: Steps 1 & 2 will usually reset the power manager, however if the computer still exhibits the same problem, redo steps 1 & 2 and then follow the steps listed below before reinstalling the battery.

* Using two paper clips, simultaneously press and hold down the reset and interrupt buttons for 5-10 seconds.

* Both recessed buttons (commonly known as the reset and interrupt buttons) are located next to the power button on the back panel of the PowerBook.

PowerBook 150

=====

Step 1

Remove the power adapter and battery from unit.

Step 2

Push the reset button in the back of the unit with a paper clip and hold for 5 to 10 seconds.

Step 3

Plug the AC Adapter into the AC (wall) outlet.

Step 4

Reconnect the power adapter and push the reset button in back again, but just briefly. You should hear a small pop from the speaker; do not be concerned.

Step 5

Push main power button in back (large exposed button). The unit should power up.

Step 6

Apple suggests charging the battery for at least 8 hours before running on

battery power.

If the PowerBook powers on, the battery may be reinserted. If it fails to start, the PowerBook may require service.

PowerBook 500 series

=====

Step 1

Remove the AC adapter and the battery.

Step 2

Let the unit sit without power hooked up for 3-5 minutes.

Step 3

Simultaneously press and hold down the Command, Option, Control, and Power On keys for 5-10 seconds.

Step 4

Reinstall the battery and, if necessary, reconnect the AC adapter.

PowerBook 200 and 2300 Series

=====

Follow this procedure on the PowerBook 200 and 2300 (Duo) series computers:

Step 1

Press and hold the power button on the rear of the 200 or 2300 series computer for 30-45 seconds.*

Step 2 (see Caution)

If resetting the power manager chip does not solve the problem, reset the code for the power manager chip by removing all power sources and letting the unit sit for 10 minutes. (Disconnect the AC adapter, remove the battery and the internal backup batter.) This forces the PowerBook Duo to reload the power manager code from the system software.

****Caution****

Authorized Apple Service technicians may remove the internal back up battery to reset the power manager. If you are not an authorized Apple Service technician, please note that removing the internal backup battery is not a simple procedure and is not recommended. If anything is damaged in your attempt to remove the battery, it will not be covered under warranty.

PowerBook 190, 1400, 3400 & 5300 Series

=====

The PowerBook 190, 1400, 3400 & 5300 Series have two different ways to reset the power manager. The only difference between series is the location of the reset button. See the table below for the location of the reset button for each PowerBook series.

Begin_Table

PowerBook	Reset Button Location (on rear of computer)
-----	-----
190 Series	Below the video out port
1400 Series	Between the ADB and Serial ports
3400 Series	Left of the Serial port
5300 Series	Below the video out port

End-Table

Resetting the Power Manager

Step 1

If the computer is on, turn it off.

Step 2

Restart the computer by holding down the reset button for 10-20 seconds. (See chart above for location of the reset button for your PowerBook series.)

Step 3

If the computer does not restart, repeat step 2 three or four times.

Resetting the Power Manager and PRAM

Resetting ("Zapping") the Parameter RAM (PRAM) when the computer is shutdown also resets Power Manager (also called the "PG&E"). This process resets both the power manager and the Parameter RAM.

Step 1

If the computer is on, turn it off.

Step 2

Make sure the Caps Lock key is not down.

Step 3

Restart the computer. Immediately after hearing the startup sound, simultaneously press and hold down the Command-Option-P-R keys. (If you do not hold down the key combination within 5-10 seconds after the computer restarts, you will need to repeat steps 1-3.)

Step 4

Hold down the keys until you hear the startup sound again. Then release the keys.

Step 5

If the computer shuts itself off, press the reset button on the back of the computer to turn it back on. (See chart above for location of the reset button for your PowerBook series.)

Step 6

When the computer has finished starting up, restore any custom settings for the desktop pattern, memory, network, AppleTalk, trackpad, power conservation and so forth.

PowerBook 5300 or 190 That Won't Power On

=====

This process resets both the power manager and revives PowerBook 5300 and 190 computers which do not initially turn on. In other words, reviving a machine that appears to be a "dead" unit.

Step 1

Unplug AC adapter and remove battery.

Step 2

Press and hold the Reset button on the back of the machine for about 45 seconds. (See chart above for location of the reset button.)

Step 3

Plug the AC Adapter into the AC (wall) outlet.

Step 4

Attach only the AC Adaptor to the PowerBook (don't put in the battery).

Step 5

Press the Reset button one more time and the PowerBook should startup after a brief pause.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

All of the aforementioned Power Manager Reset procedures for all of the Macintosh PowerBook computers will permanently remove a RAM disk, if present, and all of its contents.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

The Power Manager code can be fully purged by having an authorized service technician disconnect the internal backup battery and let the unit sit for 1 minute with all power removed (the battery pulled and the AC Adapter disconnected). This forces the PowerBook to reload a fresh copy of the code from the system software.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

Authorized Apple Service technicians may remove the internal back up battery to reset the power manager. If you are not an authorized Apple Service technician, please note that removing the internal backup battery is not a simple procedure and is not recommended. If anything is damaged in your attempt to remove the battery, it will not be covered under warranty.

2) Question: I do not seem to be getting the battery life I once did. What should I do?

Answer: The Apple Technical Information Library contains some good articles on maximizing battery life. Use the search string "PowerBook and tips" to find the article "PowerBook: Power and Battery Saving Tips." In general, for all PowerBook computers experiencing decreasing battery life, you will want to reset the PowerBook power manager, and check power conservation settings in the PowerBook control panel.

Next, with the PowerBook 140-190, 200, 2300, 500, and 5300 series computers, recondition the battery. To do this, operate as long as possible off the PowerBook battery, then shut down and charge the battery overnight. If performance is still not as good as should be expected, you are likely dealing with a bad battery. The PowerBook 270c, 280, 280c, 2300, 190, and 5300 can use the Battery Reconditioning software (included on the Battery Tools disk or in the Utilities Folder on the Hard Drive) to recondition the battery automatically. The PowerBook 500 series can use the Intelligent Battery Update.

You can download Battery Tools 2.0 and the Intelligent Battery Update at the following path:
Apple Software Updates -> U.S. -> Macintosh -> System Software -> Other System Software.

Note that the PowerBook 200 and 2300 series computers use a different version of the Battery Reconditioning program than the PowerBook 5300 and 190 series computers do. The version that the PowerBook 5300 and 190 series computers use is not currently available on-line.

3) Question: What are the various types of PowerBook batteries? Are they interchangeable?

Answer: All 100 series PowerBook computers except the PowerBook 100 use a nickel-cadmium (NiCad) battery. The PowerBook 100 uses a lead acid battery. The PowerBook 100 must use a lead acid battery, and no other 100 series PowerBook can use the PowerBook 100 type battery. Other than that, the 100 series batteries are interchangeable. Color 100 series PowerBook computers should be used with NiCad batteries model number M5654.

All 200 series PowerBook computers use nickel metal hydride (NiHy) batteries. PowerBook 200 series batteries are interchangeable, but earlier 200 series PowerBook computers, such as the PowerBook Duo 210 or 230, will require special software to use later model batteries, such as the Type 2 or Type 3 battery. The 2300 series uses the Type 3 battery. Use of a Type 2 battery requires PowerBook Duo Enabler 1.0 or System 7.5; use of a Type 3 battery requires the Type III Battery Extension, PowerBook Duo Enabler 2.0 and system software 7.1.x, or System 7.5. Note that System 7.5.1 requires the Type III Battery Extension only if you are using an Apple external battery recharger.

All 500 series PowerBook make use of a nickel metal hydride (NiHy) intelligent battery. There is only one type of battery for this family of PowerBook computers, and it can be used by any 500 series PowerBook.

The 5300 and 190 series PowerBook computers also use nickel metal hydride (NiHy) batteries.

4) Question: Through troubleshooting, I have come to the conclusion my PowerBook battery is bad. It is my understanding that this battery contains unpleasant chemicals. How can I safely dispose of this battery?

Answer: Apple utilizes lead-acid, nickel-hydride, and nickel-cadmium batteries in our portable products. These batteries should be returned to Apple for recycling or proper disposal.

Customers can take their failed batteries to an Apple-authorized service provider who can utilize the Apple Direct Air Shipping and Handling Program to return the failed batteries.

If the batteries are physically damaged, do not attempt to return them to Apple. Dispose of them according to your local ordinances.

5) Question: What is battery memory? Should I buy a reconditioner for my battery to address battery memory?

Answer: For an overview of battery memory, review the article "PowerBook Batteries: Memory Effect" available in the online Apple Technical Information Library. Use the search string "powerbook battery and memory" to locate this article.

In general, any PowerBook battery except the lead acid battery used by the PowerBook 100 can experience battery memory. Battery memory describes a condition where a battery is only partially discharged, then recharged. Over

time, the battery can reach a point where the perceived capacity of the battery is that level to which it has been draining to. If the battery is fully drained periodically, this effect can be minimized or eliminated.

There are third-party external battery rechargers that perform a deep discharge of the PowerBook battery as a prelude to charging. There are also a variety of software utilities made by Apple and third-party companies that will automatically fully discharge and recharge the battery.

6) Question: I recently purchased a Type 3 battery for my PowerBook Duo 230. The battery works fine in my PowerBook, but a red light appears on my external battery recharger when I insert the battery. The recharger works fine with the battery that came with my PowerBook. What could be wrong?

Answer: First, check the model number on the bottom of your battery recharger. A recharger with a model number of M7778 will only charge Type 1 batteries. A recharger with a model number of M1812 will charge Type 1, 2 or 3 batteries, but may need to be updated to use a Type 3 battery.

To update your battery recharger for a Type 3 battery, follow these steps:

If a red light appears when you place a Type 3 battery into the recharger, the recharger is either the older model or the recharger needs to be updated.

If you have a recharger model M1812 and you need to update it, follow these steps:

Step 1

Shut down the PowerBook Duo computer, make sure the Type 3 battery and any necessary software has been installed. If you're running System 7.5.1 the Type III Battery extension must be installed.

Step 2

Plug the power adapter into an AC outlet using the power cord that came with the computer.

Step 3

Snap the recharger onto the side of the power adapter.

Step 4

Plug the power adapter cable into the power adapter port on the back of the Duo computer.

Step 5

Turn on the PowerBook Duo to download the update to the charger.

7) Question: It is my understanding that Apple no longer sells the PowerBook 100 battery. What can I do when my faithful PowerBook 100 needs a new battery?

Answer: Apple continues to make PowerBook 100 batteries available as a service part and any Apple-authorized service provider can order it. The service part number for a PowerBook 100 battery is 661-0782. Additionally, a number of third-party companies make batteries for the PowerBook 100.

8) Question: I recently purchased a new battery for my 500 series PowerBook. My PowerBook isn't charging/recognizing this battery. What should I do?

Answer: Try running the Intelligent Battery Update on your battery. This will update and fix the battery if needed, or let you know that the battery needs to be replaced. The Intelligent Battery Update can be found at the path Apple Software Updates -> Macintosh -> System Software -> Other System Software.

If the Intelligent Battery Update does not alleviate the symptoms, try resetting the power manager on the PowerBook by following these steps:

Step 1

Shut down the PowerBook using the Special menu.

Step 2

Press the Command-Option-Control-Power On keys simultaneously and let go. Pressing the keys will not appear to do anything.

Step 3

Press the Power On key to start up the PowerBook. Your brightness and contrast settings may be reset and you may need to adjust them in order to see the screen.

If the symptom is still not resolved, the battery may need replacement. You can contact the Apple Assistance Center at 800-SOS-APPL (800-767-2775) or contact the Apple Referral Center at 800-538-9696 to obtain a phone number for an Apple-authorized service provider in your area.

9) Question: How long can I store my PowerBook battery?

Answer: Apple uses three different types of batteries in the PowerBook series of computers. All 100 series PowerBook computers, save the 100, use a Nickel Cadmium (NiCad) battery. The PowerBook 100 uses a lead acid battery. Both 200 and 500 series PowerBook computers use a Nickel Metal Hydride (NiHy) battery.

A lead acid battery should retain the minimal charge needed to operate a PowerBook 100 for at least 3 months. Once a lead acid battery becomes fully discharged, it may experience sulfation. Sulfation occurs when the lead electrodes inside the battery convert to lead sulfate. This destroys the battery making it unable to hold a charge.

A NiCad battery should retain the minimal charge needed to operate a 100 series PowerBook for at least 2 months. A NiCad battery stored for 6 to 12 months should still be able to accept a charge.

A NiHy battery should retain the minimal charge needed to operate a 200 or 500 series PowerBook for at least 2 months. A NiHy battery stored for 6 to 12 months should still be able to accept a charge. In the case of the Intelligent Battery used by the PowerBook 500 series, the Intelligent Battery Recondition software is often needed to revive a battery that has discharged fully while in storage.

The environmental temperature will affect the storage life of any battery - cool environments are best.

10) Question: My PowerBook will not start off battery at all. Should I just buy a new battery, or is there something else I can do?

Answer: Generally when a PowerBook battery goes bad, it provides less operating life over a period of time. If your PowerBook suddenly will not work with its battery at all, this could be an issue with the battery itself, or the logic board of your PowerBook. If possible, try your battery with another PowerBook, or try a verified-good battery in your PowerBook to help isolate the issue.

If you are not in a position to try a known good battery or verify your own battery with another PowerBook, there are still some steps you can take. First, reset the power manager of your PowerBook. Instructions for resetting the power manager on various model PowerBook computers are available in this document or at the online Technical Information Library. Use the search string "power manager and reset" to locate the article "PowerBook: Resetting Power Manager." Charge the battery overnight following this reset.

If your PowerBook still will no longer work with its battery after this process, you should seek service. Contact your local Apple-authorized service provider, or call 800-767-2775 for further assistance.

11) Question: How can I increase my PowerBook computer's battery life?

Answer: The two operations of your portable computer that drain the battery the most are using the backlight on your screen and using your hard drive. To increase battery life reduce these two factors. Set your hard drive to spin down quickly and turn off your backlight or sleep the machine when not in use. In addition, turning on processor cycling or using the slower processor speed available on some models will increase your battery life. These options are available in the PowerBook control panel.

Some steps to reduce hard drive usage are disconnecting any external peripherals, removing PC (PCMCIA) cards, increasing your disk cache in the Memory control panel, increasing the memory allowance for programs, and running frequently used programs off a ram disk, esp. if they are disk intensive.

For more information on this subject read the Tech Info Library article titled,

"PowerBook: Power and Battery Saving Tips".

12) Question: What is processor cycling and how do I turn it off?

Answer: All PowerBook models except those using the PowerPC processor implement a feature called processor cycling (formerly known as processor rest) intended to save battery life. This feature activates when the computer detects that the keyboard, mouse, trackball, or Trackpad has not been used for more than a few seconds. At this time, the processor speed is reduced to about 3 MHz and all processing functions become extremely slow. Processor cycling will not activate while the computer is doing any sort of data transfer.

Note that by default processor cycling is on, and although it is intended to for battery life conservation, it will also activate while running off AC power.

The method of turning off processor cycling will depend on the version of the system software you are using:

System 7.0.1
=====

Step 1

Open the Portable control panel.

Step 2

While holding down the Option key, click on the word "Minutes".

Step 3

Select Don't Rest and click OK.

System 7.1
=====

Step 1

Open the PowerBook control panel.

Step 2

While holding down the Option key on the keyboard, click the Options... button in the control panel.

Step 3

Select "Don't allow cycling".

System 7.5 or later
=====

Step 1

Open the PowerBook control panel.

Step 2

Make sure the toggle switch in the control panel is set to Easy.

Step 3

While holding down the Option key on the keyboard, drag the toggle switch from Easy to Custom and let go.

Step 4

Uncheck the "Allow processor cycling - more battery savings" checkbox.

13) Question: Can I charge my PB from a car cigarette lighter?

Answer: Yes, there are several commercial auto adapters on the market. We have not been able to get a complete listing of the available adapters, but a trip to your local computer store, or a call to standard mail order companies should provide you with enough information.

14) Question: I am taking my PowerBook to another country, do I need a power converter?

Answer: All of the PowerBook AC "bricks" are capable of AC power specifications from around the world. To verify, there should be a line on the AC adapter stating

AUTO RANGING INPUT:100-120V~1.5A 200-240V~0.75A.

If your AC adapter has this on it, it will adjust to the proper voltage.

Note: You will need an adapter to allow you to plug your power cord into a "foreign" plug. These are available at stores such as Radio Shack.

15) Question: Can the PowerBook 5300/190 use two batteries simultaneously?

Answer: Yes, the PowerBook 5300/190 expansion bay (where the floppy disk drive normally is) can accept a battery. BTI (800-982-8284) is in the process of releasing such a battery as of this writing. Since the expansion bay does not pass AC power through, any battery used through the expansion bay will require its own power supply for charging.

16) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

This article was published in the "Information Alley":
Volume II, Issue 11, Page 15

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

28 Feb 1997 - Added info about PC cards.
19 Sep 1996 - Removed keyword.
05 Aug 1996 - Added keyword.
04 Apr 1997 - Added 1400 and 3400 reset information.

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Tech Info Library Article Number:18241



Tech Info Library

Color LaserWriter 12/600 PS: Thin Line Next to Black Area (7/95)

Revised: 7/28/95
Security: Everyone

Color LaserWriter 12/600 PS: Thin Line Next to Black Area (7/95)

Article Created: 24 July 1995
Article Reviewed/Updated: 28 July 1995

TOPIC -----

Using a Color LaserWriter 12/600 PS, I have noticed that there appears to be a thin white line next to the black imaged area. Is the black plate printing out of register?

DISCUSSION -----

This "effect" is not caused by the paper being moved within the printer. It is a result of the Color Photograde technology creating colors from patterns of dots. The pattern is more noticeable with lighter colors next to solid black. This effect will also happen when using solid cyan or solid magenta. Most users use colors that are a combination of these pigments, such as blue, which is made of 100% Cyan and 100% Magenta so this effect is not usually noticeable.

To prevent the white line from appearing, you can create black out of Magenta, Yellow, and Cyan in 100% shades. However, this increases the cost per page and produces a more charcoal colored black.

If the line appears to be more than 1/16th of an inch, try using a different paper type and selecting "Best" from the Options menu in the Print dialogue box.

Note: Other laser printers and solid wax printers will display this effect, but sublimation printers will not because they actually create continuous tone images by varying the heat applied to solid pigment.

Article Change History:
28 Jul 1995 - Updated technical information

Support Information Services

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Tech Info Library Article Number:18242



Tech Info Library

QuickTime Conferencing: Description (8/95)

Revised: 8/4/95
Security: Everyone

QuickTime Conferencing: Description (8/95)

Article Created: 24 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

This article provides a description of QuickTime Conferencing.

DISCUSSION -----

Overview

Apple QuickTime Conferencing is a videoconferencing and collaboration solution designed as the foundation for a broad range of Apple and third-party video and document conferencing solutions.

QuickTime Conferencing is a system software extension. It includes an application that allows users of Macintosh computers to work with colleagues or customers around the corner or around the world without leaving the office.

You can share and annotate video, audio, text, images, and sound during your conferencing sessions. You can save time and money using local-area networks (LANs) such as Ethernet and Token Ring, and wide-area networks (WANs) such as ISDN and the Internet to communicate more easily and effectively. In the future IsoEthernet and Asynchronous Transfer Mode (ATM) will also be available.

QuickTime Conferencing has been designed to support open standards for interoperability. It is therefore transport-, compression-, and media-device-independent. And it provides a consistent cross-platform standard for developers that will encourage the creation of consistent user interfaces across platforms, services, and products.

Why choose QuickTime Conferencing?

- It's easy. QuickTime Conferencing is easy to set up and use. It integrates hardware, software, and network capabilities already available on your computer, allowing you to begin collaboration in a matter

of minutes.

It supports open standards for interoperability between various computer platforms. This allows you to communicate with another user at their video-ready desktop or meeting room.

QuickTime Conferencing also takes advantage of today's Apple products such as QuickTime and PowerTalk software, and will work with future Apple technologies such as OpenDoc.

- It costs less. QuickTime Conferencing takes advantage of built-in Macintosh audio/video (AV) capabilities and the advanced processing power of the PowerPC microprocessors built into Power Macintosh computers.

With Apple Macintosh AV technologies, you can connect a video camera and microphone (and external speakers, if you wish) directly to your Macintosh, without adding any special cards. And many Macintosh models and monitors include built-in speakers and microphones, making setup even easier.

With non-AV Macintosh models, QuickTime Conferencing will work with a variety of currently-available third-party video cards.

All these built-in technologies allow Apple and third-party developer partners to provide personal videoconferencing solutions at a low cost to customers.

This makes QuickTime Conferencing a videoconferencing solution that can be deployed affordably, quickly, and easily throughout large organizations.

- It's scalable. QuickTime Conferencing is extensible and scalable. It supports a range of solutions, from inexpensive software-only configurations to high-performance dedicated systems.

You pick the price/performance you desire. QuickTime Conferencing works best with Power Macintosh AV computers, but also works with Macintosh and PowerBook computers.

- It meets international and industry standards. And will establish new ones. QuickTime Conferencing supports both existing and emerging international (ITU-T) videoconferencing and networking standards.

Cross-platform support

- It supports the worldwide H.320 teleconferencing standard over ISDN (in conjunction with the Meet-Me product from SAT), providing connectivity solutions to other H.320 systems on Macintosh, IBM-PC-compatible, and UNIX systems, as well as room-based systems.

- It works with existing local and wide area networks including Ethernet, Token Ring, and ISDN and network protocols including AppleTalk and TCP/IP.

- Its software architecture supports emerging network technologies including IsoEthernet and ATM.

..TIL18245-QuickTime_Conferencing-Description_8-95.pdf

- It supports a variety of connection models including point-to-point videotelephony, multiparty videoconferencing, broadcast audio and video on a local area network, as well as audio-only or video-only for special applications.

Video format and compression support

- QuickTime Conferencing is compatible with a range of video input formats including NTSC, PAL, and SECAM, in both composite and S-video modes.
- It's also compatible with software- and hardware-based video compression standards including H.261 and JPEG, as well as Apple Video, and Indeo.

System requirements

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Hardware and software requirements

- Any 68040-based Macintosh; Power Macintosh; or PowerBook 520, 520c, 540, or 540c computer with at least 8 megabytes of memory (16 megabytes recommended), running system software version 7.1 or later.

Network requirements

- A network interface such as Ethernet, IsoEthernet, Token Ring, ISDN, FDDI, or ATM

Recommended hardware

- Power Macintosh AV or Macintosh AV computers allow digitizing of live video and capture and of live audio.
- For non-AV Power Macintosh and Macintosh computers, video digitizers and video sources (with appropriate driver software) enable the capture of live video.
- A sound digitizer allows the capture of audio.

Recommended software

- The QuickTime Conferencing system software extension works with System 7.5 features including Drag and Drop, WindowShade, and PowerTalk. And the QuickTime Conferencing application uses the System 7.5 feature, Apple Guide, which is an interactive help and learning system.
- QuickTime Conferencing works with the System 7.5 feature MacTCP for calling other users via TCP/IP.
- The System 7.5 feature PowerTalk allows universal network browsing and calling QuickTime Conferencing users via PowerTalk information cards.

Article Change History:

..TIL18245-QuickTime_Conferencing-Description_8-95.pdf

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18245



Tech Info Library

QuickTime Conferencing: Read Me (12/95)

Revised: 12/8/95
Security: Everyone

QuickTime Conferencing: Read Me (12/95)

=====

Article Created: 24 July 1995
Article Reviewed/Updated: 8 December 1995

TOPIC -----

This article contains the ReadMe file included with the QuickTime Conferencing software.

DISCUSSION -----

QuickTime Conferencing

Introduction
=====

The QuickTime Conferencing folder/disks contain video conferencing and collaboration software you can install on your computer.

QuickTime Conferencing is a system software extension. It comes with Apple Media Conference, an application program you use to set up video conferences, collaborate with others, exchange live video and sound, and share information over a network. Apple Media Conference takes advantage of the networking capability already built into your computer so you can connect with other video conferencing systems over a local or wide area network, such as an AppleTalk local area network or the TCP/IP Internet.

The instructions below explain how to install and use QuickTime Conferencing and Apple Media Conference. To print these instructions, choose Print from the File menu, and click the Print button in the dialog box that appears.

System Requirements
=====

- Quadra 660AV or 840AV, Power Macintosh AV computer, or Power Macintosh computer with AV card upgrade

- System software version 7.5 or newer
- 16 megabytes of DRAM (memory)
- Video source (for instance, a video camera or VCR)
- Audio source (for instance, a PlainTalk microphone or VCR)
- Network connection (for instance, Ethernet or ISDN)
- Network Software Installer version 1.5 or newer.

Note: QuickTime Conferencing supports Apple built-in video. Apple cannot guarantee compatibility with third-party video input cards.

Installing QuickTime Conferencing Software =====

Follow these steps to install the QuickTime Conferencing software.

Step 1

Locate the QuickTime Conferencing Install folder and open it. Double-click the Installer icon located in the folder.

Step 2

Read the message that appears, then click Continue.

Step 3

In the Easy Install dialog box, click Install. All the necessary software will be installed on your computer's hard disk.

Step 4

When installation is complete, click Restart.

Opening Apple Media Conference =====

After QuickTime Conferencing has been successfully installed, you will find the Apple Media Conference program in a folder named QuickTime Conferencing, located on your hard disk. (If you have more than one disk, the folder is located on the disk you specified in the Easy Install dialog box.) To open Apple Media Conference, double-click its icon.

When you start Apple Media Conference for the first time, you'll see a message asking if you want to go directly to Apple Media Conference Guide, an Apple Guide online help system.

Click the Guide button to see instructions that lead you through setting up your equipment and network. These instructions are part of Apple Media Conference Guide, a complete online reference to answer any questions you may have about Apple Media Conference.

Getting Help and Information

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Apple Media Conference Guide answers common questions about setting up and using Apple Media Conference. When you need help or instructions, choose Apple Media Conference Guide from the Guide menu (at the upper-right-corner of your screen) while you are using Apple Media Conference.

For detailed troubleshooting information, and tips on improving the performance of Apple Media Conference, refer to the Troubleshooting topic in Apple Media Conference Guide.

For general Macintosh help, go to the Finder by clicking anywhere on the desktop (the background area on your screen). Then open the Guide menu and choose Macintosh Guide.

For Power Macintosh 5200 LC and 5300 LC Users

Users of the Power Macintosh 5200 LC and 5300 LC series computers should note the following:

- Sound compression and sound sample rate

Sound compression is not available if the selected sound sample rate is 11.127 kHz. Sound compression is available if the selected sound sample rate is 22.255 kHz. The sound compression and sound sample rate settings are found in Sound Settings under the Settings menu. For example, if the sound sample rate is set to 22.225 kHz and you wish to change it to 11.127 kHz you must make sure the sound compression is set to "None" or you will not be able to select 11.127 kHz.

- Large window sizes and low memory problems

You may encounter memory problems when using double size windows for the self view and remote view. Increasing the amount of application memory for Apple Media Conference from 3,000 kbytes to 4,000 kbytes will solve this problem. A description of changing the amount of memory for Apple Media Conference is described below in the Troubleshooting section of this document.

- PPCPlayThru extension conflict

If the PPCPlayThru extension is present in the Extensions folder of the System Folder the volume control in Apple Media Conference will not operate properly. Removing the PPCPlayThru extension will correct the problem.

- For At Ease 3.0 and At Ease Workgroups 2.0.3 Users

For QuickTime Conferencing to operate properly certain conditions under At Ease must be set properly.

- If the user is restricted to At Ease Panels, Apple Media Conference and MoviePlayer must be enabled under "Items for this User."

- File open and save privileges must be enabled under the "Security" setup.

Both the user's folder and/or floppy should be set for these privileges. The user should also be allowed to perform screen captures.

- Apple Media Conference will not save preference settings based on individual users. Each individual user should check to make sure the settings are appropriate for their conferencing needs. To change the name of the user in Apple Media Conference choose Preferences/Conference from the Settings menu. Type your name in the user name box.

- Drag and Drop onto the desktop does not operate in the At Ease Panels level.

- You cannot share movies or sounds in the Shared Window in Apple Media Conference.

Troubleshooting =====

Apple Media Conference Guide contains more detailed information about the problems listed here, and other problems you may encounter.

- You see low memory warnings while using Apple Media Conference
Increase the amount of memory allocated for the Apple Media Conference program. To do this, quit Apple Media Conference, go to the Finder, click the Apple Media Conference program icon, choose Get Info from the File menu, and increase the value in the Preferred Size box. For more detailed instructions on increasing the memory allocated to a program, go to the Finder, open the Guide menu located in the upper-right-corner of your screen, choose Macintosh Guide, click the Topics button, click the Memory topic area, and double-click the "change a program's memory size" phrase.

- You see an error message when you plug or unplug video or audio cables during a connection

Do not plug or unplug camera, microphone, or other sound and video cables while you are connected to another caller, or viewing or sending a broadcast. This can temporarily disable the QuickTime software. You should always turn off your computer before you plug or unplug any cables.

- The video image is distorted

Make sure the settings are correct in the Video Settings dialog box. The settings should specify the video format supplied by your camera (NTSC, PAL, or SECAM). To adjust the settings, choose Video Settings from the Settings menu, choose Source from the top pop-up menu in the Video Settings dialog box, and choose the correct video format (NTSC, PAL, or SECAM) from the Format pop-up menu.

Apple Media Conference Guide contains more detailed instructions on adjusting the video (and sound) settings.

If you are using a Power Macintosh 6100AV, 7100AV, or 8100AV computer, attach your display to the monitor port located on the AV video card instead of the monitor port located on the computer's logic board. (Shut down the computer and turn off the power before you change your display's connection.) See the manual that came with your computer for more information.

- Calling TCP/IP Users with Dynamic Server-Based Addresses

If you are connecting using TCP/IP from a machine using a static IP address to a machine using MacIP (KIP) server supplied addresses, you must have a clear TCP/IP pathway between the Macintosh computer with the static address and the MacIP (KIP) server.

If you plan to use a MacIP server to allocate TCP/IP addresses, the MacIP requires a clear AppleTalk pathway from all Macintosh computers requiring an IP address to the MacIP server.

- A Note Regarding Interoperability

QuickTime Conferencing is the foundation for a broad range of Apple and third-party video and document conferencing solutions.

QuickTime Conferencing supports open standards for interoperability, so developers can use it to create software that works with a variety of network transports, compression technologies, and media devices (cameras, microphones, and so forth). QuickTime Conferencing provides consistent standards that encourage software developers to create application programs that look and act the same from a user's point of view, regardless of the computer, network service, or devices being used.

(9/12/95)

Article Change History:

08 Dec 1995 - Updated with latest Read Me.

04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18246



Tech Info Library

Performa: Modem Port Disabled w/Internal Modem Present (1/97)

Revised: 1/30/97
Security: Everyone

Performa: Modem Port Disabled w/Internal Modem Present (1/97)

=====

Article Created: 25 July 1995
Article Reviewed/Updated: 30 January 1997

TOPIC -----

I have noticed that the modem serial port is covered up on Macintosh Performa 5200 and 6200 series computers*. Why is this? Is it possible to uncover it and use it?

DISCUSSION -----

The Macintosh Performa 5200 and 6200 series computers have an internal Global Village IIv modem installed in the communications slot. The presence of the internal modem disables the external modem port. Because this port is inactive, it is covered.

If you need to use the external modem port, the internal modem must be removed. Instructions for installing a card into the communications slot are included in the Macintosh Performa User's Guide. You can follow these instructions for removing the internal modem as well. Although such cards are typically user-installable, you may want to contact an Apple-authorized service provider for assistance with this procedure.

Any damage caused by the addition or removal of the modem is NOT covered under the warranty.

*Note: Any Macintosh computer which has a communications slot will also have the external modem port disabled if an internal modem is installed. However, the external modem port is available if a network card is installed in the communications slot. The following computers have a communications slot:

- The Macintosh 57x family: Macintosh LC 575, Performa 575, Performa 577, Performa 578

- The Macintosh 580

- The Macintosh 630CD family: Macintosh LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640.
- The Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- The Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.
- The Macintosh Performa 5300CD and Power Macintosh 5300/100 LC
- The Macintosh Performa 6300CD

This article was published in the Information Alley on 26 April 1996.

Article Change History:

30 Jan 1997 - Modified title to reflect content.
26 Apr 1996 - Added alley keyword.
25 Jan 1996 - Added note about other computers.

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Tech Info Library Article Number:18250



Tech Info Library

At Ease 3.0: PC Exchange Will Not Mount PC Disks (8/95)

Revised: 8/3/95
Security: Everyone

At Ease 3.0: PC Exchange Will Not Mount PC Disks (8/95)

=====

Article Created: 03 August 1995

TOPIC -----

I am running At Ease for Workgroups 3.0 on my Macintosh computer. When I am in the Restricted Finder and insert a PC formatted disk, the Macintosh does not recognize it as a PC formatted disk and asks to initialize it. Macintosh disks mount fine in the restricted finder.

When I switch to the normal finder, PC disks mount fine. I can give the user access to the control panels in the Restricted Finder and the Macintosh will then mount PC disks, but that defeats the purpose of At Ease.

DISCUSSION -----

If a Restricted Finder Setup does not allow the user to have access to the Control Panels, PC Exchange does not work, and the Macintosh treats the disk as a non-Macintosh formatted disk.

You can work around this by adding the PC Exchange Control Panel to the Restricted Finder Items folder. This gives the setup access to only that particular control panel. Once this control panel is put in the "Items for this Setup", PC disks mount without a problem.

Support Information Services

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Tech Info Library Article Number:18254



Tech Info Library

Power Macintosh: Using Apple Serial NB Card (7/95)

Revised: 7/26/95
Security: Everyone

Power Macintosh: Using Apple Serial NB Card (7/95)

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Article Created: 26 July 1995

TOPIC -----

Can I use an Apple Serial NB card on a Power Macintosh computer? Can I use more than one Apple Serial NB card on a Power Macintosh computer?

DISCUSSION -----

The Apple Serial NB card can be used on a Power Macintosh computer. The A/ROSE extension, version 1.2.1 or later, needs to be installed. This extension comes with the Network Software Installer (NSI) 1.4.2 or later. The A/ROSE extension can also be custom installed from the System Software installer, version 7.1.2 or later.

Only one Apple Serial NB card can be used on a Power Macintosh computer since Power Macintosh computers allow only one NuBus card to be a bus master. Because of this, it is not possible to have more than one Apple Serial NB Card installed in a Power Macintosh system.

Support Information Services

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Tech Info Library Article Number:18255



Tech Info Library

CPU Energy Saver: ReadMe File (7/95)

Revised: 7/26/95
Security: Everyone

CPU Energy Saver: ReadMe File (7/95)

=====

Article Created: 26 July 1995

TOPIC -----

This is the Read Me file included with the CPU Energy Saver 1.0.6 software.

DISCUSSION -----

CPU Energy Saver Read Me
Version 1.0.6

The CPU Energy Saver control panel allows you to set your computer to shut down automatically.

- You can set your computer to shut down automatically when the computer has been idle for a specified amount of time.
- You can set your computer to shut down at a specific time of day on one or more days of the week. CPU Energy Saver notifies you several minutes before it shuts down the computer. You can specify the notification time.
- You can specify the conditions under which CPU Energy Saver does not shut down the computer, including any or all of the following:
 - You're connected to a shared disk on the network.
 - A serial port is in use by a telecommunications program or a printer.
 - A "busy" pointer (that is, a watch) is on the screen.
 - A sound is playing.

SYSTEM REQUIREMENTS

CPU Energy Saver works with all Macintosh Quadras, Power Macintoshes and upgrade cards and requires system software version 7.1 or later.

NOTE:

The original Read Me file does not note all of the incompatibilities for the

software. The CPU Energy Saver is not compatible with the Quadra 605, Centris/Quadra 610, Centris/Quadra 660AV, Performa 6100-series, Power Macintosh 6100-series and the Power Macintosh 9500-series computers. Please refer to the article titled "Energy Saving Control Panels: Description and Compatibility" for more details.

INSTALLING CPU ENERGY SAVER SOFTWARE

1. Drag CPU Energy Saver to the System Folder icon on your startup disk.
2. Click OK in the dialog box that appears.
3. Choose "Restart" from the Special menu.

COMPATIBILITY AND USE NOTES

If you have the NOW Utilities software on your system, make sure the Screen Locker component loads before CPU Energy Saver when you turn on the system. Otherwise, Screen Locker and CPU Energy Saver are incompatible. Use Startup Manager (included in NOW Utilities) to set Screen Locker to load before CPU Energy Saver.

CPU Energy Saver cannot shut down a monitor that is not plugged into the computer's power supply. Also, it cannot shut down external devices, such as hard disks or CD-ROM drives.

CPU Energy Saver may not be able to detect special "busy" pointers used by some programs.

Some screen savers may interfere with CPU Energy Saver's shutdown notification window.

In most cases, CPU Energy Saver cannot shut down your computer if a dialog box is on the screen.

CPU Energy Saver cannot determine whether the computer is doing something in the background (such as printing). However, you can set CPU Energy Saver not to shut down the computer if a serial port is being used (for printing, telecommunications, or networking, for example).

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Tech Info Library Article Number:18256



Tech Info Library

MacTCP: Configuration of Domain Name Server Information (11/95)

Revised: 11/12/96
Security: Everyone

MacTCP: Configuration of Domain Name Server Information (11/95)

Article Created: 26 July 1995
Article Reviewed/Updated: 21 November 1995

TOPIC -----

This article describes how to enter the Domain Name Server Information in the MacTCP control panel and how MacTCP uses that information to query those servers.

DISCUSSION -----

You need the following information to configure the Domain Name Server Information section of the MacTCP control panel:

Required: A list of 1 or more domain nameserver.
Optional: A default domain.

One name server configuration

=====

This configuration will send all requests to the single nameserver.

Step 1

Enter your default domain in the "domain" field.

Step 2

Enter the IP address of the nameserver in the "IP address" field.

Step 3

Click the default button.

Step 4

Enter a "." (period) for the second "domain" field.

Step 5

Enter the IP address of the nameserver in the "IP address" field.

The result should contain two entries for the same nameserver, and look like:

Domain	IP Address	Default	
<default domain>	<IP number>	(•)	<- click default radio button
.	<IP number>	()	<- type a period for domain

Two or more nameserver configuration

=====

Follow the same steps for entry of the first nameserver

For each additional nameserver, enter the following information:

Step 1

Enter a "." (period) for the second "domain" field.

Step 2

Enter the IP address of the nameserver in the "IP address" field.

Thus, the first nameserver is entered twice, and each additional nameserver is entered once.

Domain	IP Address	Default	
<default domain>	<Primary IP#>	(•)	<- click default radio button
.	<Primary IP#>	()	<- type a period for domain
.	<Secondary IP#>	()	<- type a period for domain

If you use the configuration mentioned above, MacTCP will generally ask the primary nameserver first. It will also always ask the other nameserver if the first nameserver is down or unavailable.

How MacTCP queries nameservers

=====

The actual rules MacTCP uses to establish query order in DNS are somewhat complicated. The Domain Name Server Information list functions as a list of nameservers and their trusted domain. For example:

```
apple.com      1.2.3.4
info.apple.com 5.6.7.8
microsoft.com  9.10.11.12
```

A nameserver 1.2.3.4 is trusted for any hostnames that exist in apple.com.

A nameserver 5.6.7.8 is trusted for any hostnames that exist in info.apple.com.

A nameserver 9.10.11.12 is trusted for any hostnames that exist inside

microsoft.com.

When MacTCP DNR is given a hostname, it uses a 3 step process to ask nameservers for the matching IP address:

1. Build list of trusted nameservers.

When MacTCP DNR is given a hostname, it compares each nameserver's domain to the hostname. If the hostname appears within the trusted domain of the nameserver, the nameserver is put in the list of nameservers to query.

If no nameservers are trusted for a host, then the nameserver listed by the "default" radio button will be asked as a last resort.

Note: The default radio button has two functions in MacTCP:

- The "IP address" field provides the nameserver of last resort, if no other nameservers are trusted.
- The "domain" field provides the default domain added onto single hostnames.

For example, if you tried to connect to "www.info.apple.com", the "info.apple.com" and "apple.com" nameservers are considered trusted. The "microsoft.com" nameserver cannot be trusted, because "www.info.apple.com" is not a name within "microsoft.com"

Note: This is why nameservers should be entered with their domain as "dot" (period) because you are telling MacTCP that nameserver is trusted for the entire Internet.

2. Sort nameservers for search order.

MacTCP will ask the query the nameservers with longer trusted domains first. If two nameservers are trusted for the same domain, any nameservers on the local network will be queried first.

Continuing the example, the "info.apple.com" server is considered "closer" to "www.info.apple.com" than "apple.com". MacTCP will ask "info.apple.com" and then "apple.com".

3. Resolves names (give nameserver hostname, receive IP address in return).

MacTCP asks each nameserver for the IP number of the hostname one at a time. When one nameserver failes to resolve or time out, MacTCP moves to the next nameserver. If MacTCP runs out of nameservers, it will return an error unless the hosts file can provide information.

Article Change History:

21 Nov 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library

Color LaserWriter 12/600 PS: PANTONE Files Read Me (7/95)

Revised: 7/27/95
Security: Everyone

Color LaserWriter 12/600 PS: PANTONE Files Read Me (7/95)

=====

Article Created: 27 July 1995

TOPIC -----

The following article is the Read Me document for the PANTONE Calibrated Support files for the Color LaserWriter 12/600 PS printer.

DISCUSSION -----

Overview

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The PANTONE support files enable you to load the PANTONE color table calibrated for your Apple Color LaserWriter 12/600 PS printer as a usable color palette in the most popular Pantone-licensed desktop publishing programs.

Custom CMYK combinations for almost every color in the PANTONE MATCHING SYSTEM can be selected. The only exceptions are specialty colors such as metallics, fluorescents and double impressions. For best results, be sure to use papers recommended in the printer manual.

Note: The tables and palette files provided for the Apple Color LaserWriter 12/600 PS printer are calibrated only for this printer. If you plan to create color separations, you must re-color the graphics using the built-in PANTONE color tables supplied by the PANTONE-licensed application.

Installation on a Macintosh

=====

Follow the instructions below to install the files in the PANTONE Color Charts folder. For the files in the Application Support folder, see the installation instructions for each application provided in this document in the Application Support section.

Installing and Printing the Color Charts on a Macintosh

Installing the Color Charts requires about 1.7 megabytes of hard disk space. To install the Color Charts, first open the PANTONE Color Charts folder. Then, double-click on the ColorCharts.sea file. Press Continue. The self-extracting archive application asks you for the volume and folder name that you want to use. By default the application uses the current hard disk and the folder "ColorCharts Folder". When you've selected the hard disk and the name you want to use, press the Save button. The files are decompressed. When finished the self-extracting archive application displays the message "Installation was successful!". Press Quit.

Printing the Color Charts on a Macintosh

Four versions of the Color Chart are available:

- PostScript file
- Adobe Acrobat file
- Encapsulated PostScript files
- TIFF files

You use the color chart for the Apple Color LaserWriter 12/600 PS to select the PANTONE colors that you want to use. To use the color chart, you first print it on the Apple Color LaserWriter 12/600 PS. Be sure to allow enough time to print the chart; it takes about forty-five minutes to print the complete chart.

Printing the PostScript Version of the Color Chart

Follow these steps to print the PostScript version of the Color Chart:

1. To print the PostScript version of the Color Chart, you use the Apple Printer Utility that came with your Apple Color LaserWriter 12/600 PS. Double-click the Apple Printer Utility icon located in the Apple LaserWriter Software folder to open it.
2. In the dialog box that appears, select the Apple Color LaserWriter 12/600 PS on which you want to print the color chart and press Open Printer.
3. Choose Send PostScript File from the utility's File menu.
4. In the dialog box that appears, select the color chart file, Clr LW 12/600.ps, located in the Raw PostScript folder.
5. Click Add
6. Click Send. The chart is printed on the selected printer.

Printing the Adobe Acrobat Version of the Color Chart

If you have Adobe Acrobat Reader, you can use it to print all or part of the color chart for the Apple Color LaserWriter 12/600 PS. Make sure that you have selected the desired Apple Color LaserWriter 12/600 PS printer in the Chooser first. Next, double-click the Apple Color LaserWriter.pdf file in the Adobe Acrobat folder in the ColorChart Folder. Adobe Acrobat Exchange opens the color chart. With this chart, you can print all PANTONE Colors calibrated for your printer (or print a range of pages if you don't need them all). It takes approximately forty-five minutes to print all pages.

Printing the Encapsulated PostScript Version of the Color Chart

If you have an application that uses encapsulated PostScript, you can use it to

print the Color Chart for the Apple Color LaserWriter 12/600 PS. Make sure that you have selected the desired Apple Color LaserWriter 12/600 PS printer in the Chooser first. Double-click on your application and then Open the desired file in the 11x17 Charts as EPSF folder. The suffix of each file corresponds to the range of PANTONE colors contained in the file.

Printing the TIFF Version of the Color Chart

If you have an application that can read TIFF files, such as Adobe Photoshop 3.0, you can use it to print the TIFF version of the Color Chart for the Apple Color LaserWriter 12/600 PS. Make sure that you have selected the desired Apple Color LaserWriter 12/600 PS printer in the Chooser first. Run your application and then Open the desired file in the Tiff folder within the ColorCharts Folder. You may need to reduce the size of the image before printing to the Apple Color LaserWriter 12/600 PS.

The files are named with the pages where you can find the PANTONE colors in the PANTONE Process Color Imaging Guide. For example, a file named "1-11.tif" includes PANTONE colors which appear on pages 1 through 11 in the PANTONE Process Color Imaging Guide. This book is a fan guide, displaying side-by-side color squares: one square being the solid PANTONE Color and another representing the way that color prints as a process (CMYK) color. The PANTONE Process Color Imaging Guide does not come with the PANTONE® Calibrated support files; it is purchased separately.

Note: These TIFF files can be used in any image processing software that supports CMYK TIFF and CMYK image editions.

Caution: Do not convert these images to RGB. If you do, the colors will not print properly.

Extras

=====

Two additional files are included on the PANTONE disk. First, the file labeled Clr LW 12/600.lut is an Excel spreadsheet containing each PANTONE color's cmyk values. You can optionally use this as an aid in creating cmyk separations. The second file, contained within the PANTONE ColorDrive Support folder, is a color palette for the Color LaserWriter 12/600 PS for PANTONE's ColorDrive application available separately from PANTONE.

Application Support

=====

This section explains how to load calibrated palettes for the Apple Color LaserWriter 12/600 PS printer into Pantone-licensed applications. These instructions assume you are thoroughly familiar with the correct operation and usage of the given software application.

Adobe Illustrator

The PANTONE® Calibrated support files include a color file that is similar to the standard PANTONE Colors file included with Illustrator, except that the CMYK values are calibrated for the Apple Color LaserWriter 12/600 PS printer. This file, Clr LW 12/600.ai, is located within the Illustrator folder within the

Adobe folder located in the Application Support folder.

To use the file follow these instructions. Open Illustrator 5.0, and then, use Open from the File menu to open the Clr LW 12/600.ai file. Once the file is loaded, select the Show Paint Style item from the Windows menu. The Paint Style floating window appears. Click the solid color button. The named color list then appears in the scrolling window. Scroll down until you see the PANTONE Colors appear with a "CH" suffix. This suffix distinguishes these colors from the default PANTONE Colors in Illustrator which have a "CV" suffix. You may now apply these colors to your document.

In older versions of Adobe Illustrator, you may select the calibrated PANTONE Colors through the Paint Style and Custom Color dialog boxes.

Adobe Photoshop 3.0

You can use the TIFF version of the Apple Color LaserWriter 12/600 color chart to select PANTONE colors within Photoshop. The TIFF version of the color chart is a set of files located in the Tiff folder within the ColorCharts Folder. Open the desired TIFF file from Photoshop's File menu and use the Eyedropper tool to select each PANTONE color.

Alternatively, you can use the Clr LW 12/600.aco swatch file from within Photoshop to select the desired PANTONE color.

First, move the Clr LW 12/600.aco file to the Color Palettes folder in the Goodies folder in the Photoshop folder. Next, open Photoshop. To use the swatch file, select Palettes from the Window menu; then, select Show Swatches. The swatches dialog appears. Press the arrow on the right to display the available swatch files. Select the Clr LW 12/600. Use the Eyedropper tool to select the desired PANTONE color.

Aldus FreeHand 3.1

For users of FreeHand 3.1, PANTONE color support provides a calibrated PANTONE Color Palette in the form of a loadable color library. Select the Colors menu item from the View Windows menu.

The Colors window appears. Click the arrow on the right-hand side of the Colors window and select "Import." Find and open the file "Apple Color Laser.clib". Select the PANTONE Colors from the scrolling list. (To select multiple colors, hold down the shift key.) The calibrated PANTONE colors you selected now appear in the Colors window. You may now apply them to your document.

Macromedia FreeHand 4.0/5.0

These instructions apply to both Freehand 4.0 and 5.0. Move the file named Apple Color Laser.ACF in the FreeHand folder to the Color Folder in the Aldus Folder inside the System Folder.

Open FreeHand. Create a new FreeHand document. Select Color List from the Window menu. The Color list window appears. Pull down under Options and then select the Apple Color Laser palette. The library of colors for the Apple Color LaserWriter

12/600 PS appears. Choose a desired PANTONE color and click OK.

You can use the Color Mixer item within FreeHand to identify the CMYK values for a particular PANTONE color. Choose Color Mixer from the Window menu. The Color Mixer window appears. Drag the desired PANTONE color from the library of colors for the Apple Color LaserWriter 12/600 PS into the Color Mixer box, and the CMYK values for that particular color will appear.

Aldus PageMaker 5.0

PageMaker uses the same color file as FreeHand 4.0 and 5.0.

Move the file named Clr LW 12/600.BCF in the Pagemaker folder to the Color Folder in the Aldus Folder inside the System Folder.

Open PageMaker 5.0. Select the Define Colors item from the Element Menu. On the Define Colors dialog box click the New... button. In the Edit Color dialog box that appears click on the Libraries: arrow button and select the Apple Color Laser item that appears in the hierarchical list. The library of colors for the Apple Color LaserWriter 12/600 PS appears. Holding down the shift key, click on the PANTONE colors you want to add to your working colors palette and click OK. The colors you selected will now appear in your Define colors list. You can now use these in your PageMaker documents.

Canvas

PANTONE color support provides a special palette for Canvas named Clr LW 12/600.Canvas.

To load the palette, in Canvas, choose PANTONE Colors from the Windows menu. The PANTONE Colors dialog appears. Choose Load... from the Color Sets pop-up menu. Enter the name of the Apple Color Laser palette. These colors may now be used in your artwork.

MacDraw Pro

First, move the Apple Color LW 12/600 file from the floppy's MacDraw Pro folder to the PANTONE® Palettes folder in the MacDraw Pro folder on your hard disk.

To use the new color palette follow these steps:

1. Open MacDraw Pro or double-click on your MacDraw Pro document.
2. Tear off the Color palettes floating window from the blend icon.
3. Choose Open Palette from the Color palette's File menu.
4. Then open the MacDrawPro palette provided.

Note: This palette may work with other Claris products. Since PANTONE does not support these products, do not use the Apple Color Laser palette for separations.

Quark XPress 3.3x

As Quark XPress does not support loadable palettes except as part of a document,

PANTONE color support provides Quark XPress 3.3 native files instead. The maximum number of colors in each Quark document is 200. PANTONE provides a series of files each containing a range of PANTONE colors. The file name contains the PANTONE color range contained in each file. For example, a file named PANTONE 100-249 contains PANTONE colors from PANTONE 100 to PANTONE 249.

To use these files, use Open from the Quark Express File menu to open the desired palette file.

Note: The PANTONE names in the Quark XPress Apple Color Laser palettes have a space character in front of PANTONE. Do not rename these colors without the space or Quark will re-map its default CMYK color values for PANTONE colors into your calibrated PANTONE Colors for the Apple Color LaserWriter 12/600 PS.

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Support Information Services

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Tech Info Library Article Number:18259



Tech Info Library

PC Exchange: Reason for Versions 2.0.4 and 2.0.5 (8/96)

Revised: 8/15/96
Security: Everyone

PC Exchange: Reason for Versions 2.0.4 and 2.0.5 (8/96)

Article Created: 27 July 1995
Article Reviewed/Updated: 15 August 1996

TOPIC -----

This article describes the changes made to the PC Exchange control panel, including compatibility.

DISCUSSION -----

Macintosh PC Exchange 2.0 has been updated slightly to correct for a minor bug encountered during testing of the Power Macintosh 7200, 7500, 8500, and 9500 computers.

Here are the changes that are included with PC Exchange 2.0.4 and 2.0.5. These versions are specifically for the Power Macintosh 7200, 7500, 8500, and 9500 computers.

Software Version 2.0.4

- Included on Power Macintosh 9500 computers*
- It fixed a stack overflow in the PC Exchange ProDOS component that was caused by the new native driver model. PPC code needs more stack space and used up the 8K that ProDOS allocated for itself when doing large copies.

Software Version 2.0.5

- Included on Power Macintosh 7200, 7500, 8500, and 9500 computers*
- Includes the above fix
- Fixed a deadlock condition caused by the change in how the Finder copied files to and from ProDOS disks. The Finder now does async copies and the PC Exchange ProDOS component would issue a sync read during a "completionProc" call causing a deadlock. The change does away with the calls to the driver to do reads and

use FSM's CacheUtil routines.

These issues may occur when a customer uses a ProDOS disk on one of the aforementioned computers. These issues do not occur when working with DOS disks.

* The Power Macintosh 9500 originally shipped with PC Exchange 2.0.4 installed. System 7.5.3 Revision 2 includes PC Exchange 2.0.5 and it is supported on all Macintosh computers running System 7.5.x.

Article Change History:

15 Aug 1996 - Updated article with System 7.5.3 Revision 2.

31 May 1996 - Changed distribution status.

04 Dec 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18260



Tech Info Library

OpenDoc: Overview (7/96)

Revised: 7/25/96
Security: Everyone

OpenDoc: Overview (7/96)

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Article Created: 1 August 1995
Article Reviewed/Updated: 25 July 1996

TOPIC -----

This article includes excerpts from "OpenDoc for Macintosh -- An Overview for Developers".

DISCUSSION -----

OpenDoc is a cross-platform software architecture that enables the development of component software. Component software is a term used to describe reusable, compatible building blocks of code that work seamlessly with applications--called "part editors"--from different vendors. OpenDoc consists of five functional layers:

- Compound Document Services
- Component Services
- Automation Services
- Object Management Services
- Interoperability Services

These technologies are being licensed to CI Labs, an organization established to provide open access to OpenDoc source code and specifications. CI Labs is responsible for adopting, licensing, validating, and promoting essential OpenDoc technologies. By providing reference source code for these foundation technologies, CI Labs facilitates the adoption of a common component software architecture across all major industry platforms. CI Labs also provides developers and system vendors with test suites and a conformance validation process, to ensure that software enabled by OpenDoc interoperates properly. OpenDoc will be available for Macintosh, Windows, OS/2, and UNIX systems.

OpenDoc Terminology
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Document

A collection of OpenDoc parts, assembled by a user or developer. A part becomes a document if dragged from its document to the desktop. A document becomes a part if dragged from the desktop into an open document.

Part

The fundamental building block of an OpenDoc document. This is the content that users see in their documents. The functionality in the associated part editor or part service allows the user to manipulate the part. Part viewers allow the user to view, but not edit, the part.

Container Application

A monolithic application that has been modified to support embedded OpenDoc part editors and part services.

Part Editor

A part editor displays a part's content, facilitates manipulation of the content, and provides a user interface for modifying that content. This user interface may include menus, controls, tool palettes, rulers, and other modes of interaction. (For example, a text editor is a part editor.)

Part Service

A part service provides "back-ground" functionality for a part, and provides the necessary user interface for manipulating that part's content. For instance, database access functionality would be a part service that could be added to an OpenDoc document. Its user interface could be a menu item or a database query screen.

Part Viewer

A part viewer offers a subset of a part editor's functionality; it allows users to display and print a part's content, but not to edit it. Viewers can be useful in document--sharing situations--for example, when the recipient of a document doesn't hold a license to some of the kinds of parts included in the document, or when the person sending the document doesn't want the recipient to alter it.

How OpenDoc Works

=====

By enabling users to work in a task-centric rather than an application-centric manner, OpenDoc makes it easier for them to create and edit content-rich documents. With OpenDoc, users can purchase or build a "container" document that includes all the functionality needed to complete a task. They no longer have to launch separate applications, worry about incompatible data types, and manually create links to update data. They will have the freedom to buy preassembled OpenDoc software solutions, just as they buy application suites today, or they can mix and match part editors from a variety of vendors to suit their specific

needs. No matter where the part editors are obtained, the user will be able to focus on a single solution that contains all needed functionality.

The OpenDoc model also improves upon the current drag-and-drop method of manipulating data. For example, a user can drag a desktop file icon into a document window, and it will automatically open and embed itself within the document. This contrasts sharply with today's way of doing things: opening one application, selecting an item to be edited and moved, copying it onto the Macintosh Clipboard, opening a second application, and then pasting the results into the window of this second application.

OpenDoc also supports irregularly shaped, overlapping parts, and the ability to have a variety of different parts active concurrently. What's more, between OpenDoc parts, data can be "linked" together. A link is a permanent reference from one part to another. When data in the first part changes, the link notifies the second part to change. Suppose, for example, a company creates an investment portfolio pie chart with a link to stock market data. Each time stock prices change, the chart adjusts accordingly. Before creating software enabled by OpenDoc, programmers will need to become familiar with some new naming conventions.

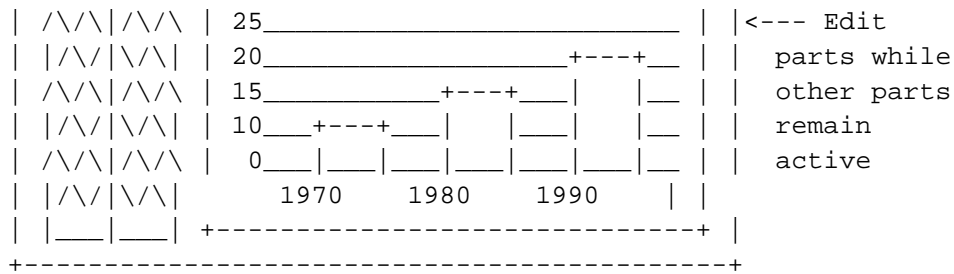
The Anatomy of an OpenDoc Document

=====

The fictional document below illustrates several unique features of OpenDoc. This oil industry report uses many OpenDoc part editors and services: a text editor, a graphics editor, a page layout editor, live buttons, a grammar checker, and a window that displays live oil commodity prices from the New York Mercantile Exchange:

Begin_Graphic

	+	-----+		Drag-and-
		THE OIL REPORT	+-----+	drop part
				services
Live data		Today's oil price:		into
feed --->		[nnnnnnn.nnn]		documents
		The History of Oil		
		Takeovers		
		Text text text text		<--- Embed
		text text text text	+-----+	buttons
		text text text text text text text text te		that link
		xt text text text text text text text text		to other
		@ text text text text text text text t		parts
Create &		/ \ ext text text text text text text		
overlap		text text text text text text te		
irregular-		/ \ / \ xt text text text text text text		
ly shaped		\ /\ text text text text text		
parts --->		/\ \ /\ \ +-----+		
		\ /\ /\ \		
		CRUDE OIL PRODUCTION		



End_Graphic

You do not need a separate application to work on each part -- just click on an area to edit it. As you click on another object, its own menu bar and tool palette appear. Parts like the live oil market commodity quotes shown in the document stay active even while others are being edited.

The ability of software enabled by OpenDoc to have multiple parts concurrently active allows the author of this newsletter to edit the crude oil production chart while the current oil prices roll across the top of the page. The editor can wrap text around the irregularly shaped oil derrick graphic part. Live buttons within the "What's Inside" field allow readers to click on a button to call up a feature article. And by dragging the "Grammar Checker" icon into the document, the part service can check grammar throughout the entire newsletter.

This article was published in the "Information Alley":
Volume II, Issue 7, Page 9

Article Change History:
25 Jul 1996 - Reviewed for accuracy.
04 Aug 1995 - Changed formatting, changed parent folder.

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Tech Info Library Article Number:18262



Tech Info Library

Macintosh 5200/5300/6200/6300: PlainTalk & 16-bit Sound (1/96)

Revised: 1/12/96
Security: Everyone

Macintosh 5200/5300/6200/6300: PlainTalk & 16-bit Sound (1/96)

Article Created: 26 July 1995
Article Reviewed/Updated: 12 January 1996

TOPIC -----

I have a Power Macintosh 5200/75 LC computer, and I am having a problem using Speech Recognition. Either it does not work well, or sometimes it doesn't work at all. I've tried using the Built-in microphone, but that doesn't seem to work well.

DISCUSSION -----

PlainTalk Speech Recognition requires 16-bit sound input in order to work properly. The recently produced versions of the Macintosh LC 5200 and Performa 5200CD and 5215CD computers support 16-bit internal sound as well as 16-bit CD sound. Early production models of Macintosh 5200 series computers support 8-bit internal sound and 16-bit CD sound. However, you can still use the Text-to-Speech feature if your computer only supports 8-bit input.

NOTE: PlainTalk 1.4.1 Speech Recognition is supported on the Macintosh 5200CD family, Macintosh 6200CD family, Macintosh 5300CD, and Macintosh 6300CD computers.

You can use the model number information below to determine whether your computer supports 8-bit or 16 bit sound. Please note that product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Begin_Table

Order no.	Product Name	Sound
=====		
M3947LL/A	Power Macintosh 5200 LC 8/500/CD	8-bit
M3917LL/A	Power Macintosh 5200 LC 8/500/CD/VI/TV	8-bit
M3947LL/B	Power Macintosh 5200 LC 8/500/4XCD	8-bit
M3940LL/A	Macintosh Performa 5200CD 8/500	8-bit

M3941LL/A	Macintosh Performa 5200CD 8/500/TV/VI	8-bit
M4110LL/A	Macintosh Performa 5200CD 8/790/14.4	16-bit
M4107LL/A	Macintosh Performa 5215CD 8/1000/14.4	16-bit

End_Table

If you don't know your model number, you can also use this procedure below to determine if your computer supports 16-bit sound input:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is grayed out, you only have 8-bit input, and English Speech Recognition will not work.

If 16-bit is not grayed out, make sure there is a dot in the radio button next to it.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

For help with installing the PlainTalk 1.4.1 Speech software, see the TIL article "PlainTalk 1.4.1: Can't Install Recognition on 8-bit Mac".

The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

12 Jan 1996 - Changed title and added information on PlainTalk 1.4.1.

21 Dec 1995 - Combined information from similar article.

Support Information Services

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Tech Info Library Article Number:18263



Tech Info Library

At Ease 3.0: How to Install on 800K Drive Macintosh (8/95)

Revised: 8/8/95
Security: Everyone

At Ease 3.0: How to Install on 800K Drive Macintosh (8/95)

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Article Created: 03 August 1995
Article Reviewed/Updated: 08 August 1995

TOPIC -----

I want to install At Ease 3.0 on my Macintosh computer, but it only has a 800K drive. Is there a way to get At Ease 3.0 on 800K floppy disks?

DISCUSSION -----

At Ease 3.0 and At Ease 3.0 for WorkGroups are available only on high density floppy disks. The outside of the box explains that the media is on 1.4 Mb floppy disks and an Apple SuperDrive floppy disk drive is required.

If your 800K drive equipped Macintosh computer is on a network, you can install At Ease 3.0 by doing a network install. The At Ease 3.0 for WorkGroups Administrator's Guide explains how to do this starting on page 20. You can also refer to the TIL article "Software Installation Over a Network" for a description of how to do this procedure.

Article Reviewed/Updated:
08 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18264



Tech Info Library

Macintosh 5200/6200 Series: Stereo Input? (7/95)

Revised: 7/28/95
Security: Everyone

Macintosh 5200/6200 Series: Stereo Input? (7/95)

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Article Created: 28 July 1995

TOPIC -----

Is it true that the Macintosh 5200 and 6200 series computers do not support stereo input? I have been unable to record a stereo system beep and have heard that the stereo input is converted to mono by the logic board.

DISCUSSION -----

The IC chip that controls sound input on the Macintosh 5200 and 6200 series computers has one input buffer and two output buffers. Because there is only one input buffer, there is only mono sound input. Output is always stereo.

You can, however, record CD stereo sound using MoviePlayer and QuickTime. With QuickTime, the sound data is read directly from the disk. The data is then converted to a QuickTime sound format. The data is not played back through the sound circuitry; it is read from the disk. Since the sound file is not played, sound does not go through the sound IC chip which would limit input to mono sound.

Additionally, CD discs play in stereo because sound is routed from the CD player to the sound output jack and bypasses the sound chip.

Support Information Services

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Tech Info Library Article Number:18267



Tech Info Library

Color LaserWriter 12/600: Some Color Files Print in B&W (7/95)

Revised: 7/28/95
Security: Everyone

Color LaserWriter 12/600: Some Color Files Print in B&W (7/95)

=====

Article Created: 28 July 1995

TOPIC -----

I am using a Color LaserWriter 12/600 on a Macintosh network. Some files I create display in color on the screen, but they print in black and white. Why?

DISCUSSION -----

Your Macintosh is only able to send color information to the printer if all the software for the printer is loaded and functioning properly. You should first make sure you are not experiencing any extension conflicts or corrupted software. For help doing this, search the TIL for the article "System 7.5: Troubleshooting Extension Conflicts". Once you are confident that you have good printing software installed, you can proceed to considering the following.

Color Tables are included in PostScript Level II which is built into the Laserwriter 8.3 driver as well as the ROM of the Color LaserWriter 12/600. Postscript is a computer/printer language used in imaging and Encapsulated PostScript (EPS) files. The printer also supports PICT and JPEG file formats in ROM.

TIFF Files -----

Some programs build options on top of the LaserWriter 8.3 print dialogue box. If a non-color PostScript Printer Description (PPD) file is selected, TIFF files will print in black and white because the color information in the file format is not included in the driver or the printer. You must make sure you select the Color Laserwriter 12/600 or compatible color profile. The Generic Color profile will work, but Generic Black and White will not.

The Laserwriter 8.3 Read Me recommends you use TIFF format for your files rather than EPS if you are not physically connected to a Color LaserWriter 12/600 when you create the file. This is because an EPS format creates a Table based on the type of printer in the Laserwriter 8 Prefs file and hue shifts can occur when

printing to a different device later on.

Windows

Color documents will print in black and white if you copy artwork between applications using the Windows clipboard. The Macintosh clipboard will retain color information when copied between programs while the Windows clipboard will not.

Support Information Services

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Tech Info Library Article Number:18269



Tech Info Library

Modern Memory Manager: Frequently Asked Questions (4/97)

Revised: 4/28/97
Security: Everyone

Modern Memory Manager: Frequently Asked Questions (4/97)

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Article Created: 28 July 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article contains frequently asked questions (FAQ) on the Modern Memory Manager.

Questions in this FAQ:
=====

- 1) What is the Modern Memory Manager?
- 2) What is the expected performance increase by turning on the Modern Memory Manager on a Power Macintosh?
- 3) Should Modern Memory Manager be turned OFF on Power Macintoshes that are not running lots of native applications?
- 4) Does Modern Memory Manager cause crashes if the system is not running native applications?

DISCUSSION -----

- 1) Question: What is the Modern Memory Manager?

Answer: The Modern Memory Manager is a completely rewritten native version of the previous Memory Management code found in operating systems previous to System 7.1.1. It offers better performance than the previous 680x0 assembly code because it runs in the native PowerPC environment. In addition, performance enhancements were made by significantly improving the heap management algorithms.

It is possible to disable this new Memory Manager and revert to the old Memory Manager in ROM. This is done through the Modern Memory Manager panel in the Memory control panel. The default setting is Modern Memory Manager On.

2) Question: What is the expected performance increase by turning on the Modern Memory Manager on a Power Macintosh?

Answer: When you turn off Modern Memory Manager, you are essentially running the Memory Manager in emulation mode, rather than in native PowerPC mode. Engineering has stated that activating Modern Memory Manager will yield a performance increase of about 20 to 30 percent, although with some applications, that number can be as high as 200 percent.

3) Question: Should Modern Memory Manager be turned OFF on Power Macintoshes that are not running lots of native applications?

Answer: All Power Macintosh systems ship from the factory with the Modern Memory manager turned ON. There are many benefits to leaving the Modern Memory Manager ON. The new Memory Manager uses native PowerPC code and better algorithms for faster performance. The Modern Memory Manager should only be turned OFF if a user's application or extension is experiencing compatibility issues.

4) Question: Does Modern Memory Manager cause crashes if the system is not running native applications?

Answer: The Modern Memory Manager does NOT cause crashes if the user is not running native or FAT applications. Non-native applications and other software written according to Inside Macintosh guidelines for the original Memory Manager should be compatible with the Modern Memory Manager. Non-native applications and other software that do not follow the Inside Macintosh guidelines could potentially crash while calling on the Modern Memory Manager's services. You can test compatibility by turning off the Modern Memory Manager in the Memory control panel.

Apple Developer Technical Support issued Technical Notes ME13 & ME14 back in 1993 to help developers write compatible software. These Technical Notes are publicly available via the internet via Apple's Web site.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a

week.

Article Change History:

09 Apr 1997 - Removed out dated on line references.

02 Jul 1996 - Added Fax Doc word

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Tech Info Library Article Number:18270



Tech Info Library

Power Macintosh 7200 & 7500: Tall PCI Cards Do Not Fit (3/96)

Revised: 3/15/96
Security: Everyone

Power Macintosh 7200 & 7500: Tall PCI Cards Do Not Fit (3/96)

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Article Created: 31 July 1995
Article Reviewed/Updated: 28 September 1995

TOPIC -----

Apple revised the baffle which helps stabilize Peripheral Component Interconnect (PCI) cards in the Power Macintosh 7200 and 7500 series computers. A modified baffle was used prior introduction of these computers, however in isolated cases some customers may have the previous baffle design. This article contains information to help you identify which baffle the customer has in their Macintosh computer.

DISCUSSION -----

Initially some PCI cards were too tall, and did not fit properly in the Power Macintosh 7200 and 7500 series computers. This often occurred when the PCI card had a SCSI or similar connector on the top of the card.

Identifying Modified Baffle
=====

There is a modified baffle, which can help with tall PCI cards. The modified baffle can be identified by examining the baffle. The bottom surface has a curved ribbing. If baffle has missing or non-continuous horizontal ribs between the two vertical curved ribs, you have a modified baffle. This helps with some PCI cards, but depending on the location of the card's connectors, the modified baffle still may not allow customers to use taller PCI cards.

The PCI specification Apple followed when creating the Power Macintosh 7200 and 7500 series computers was not specific enough about the height of the cards. Apple interpreted the PCI specification in one manner while some third parties interpreted the specification in another way. After investigation, it has been determined that Apple followed the specification properly. It is possible that the third-party vendors whose cards do not fit properly may have interpreted the height specification incorrectly.

To workaroud the problem, try removing the plastic 'baffle' cover used to cover the top edge of the cards. Be extremely careful to check for proper clearance when re-attaching the Macintosh computer's top case cover. If it still does not fit, check with the third-party vendor in question for reports of the issue and a possible resolution.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 5

Article Change History:

15 Mar 1996 - Added information on modified baffle design.
28 Sep 1995 - Added Info Alley information; updated article.
05 Sep 1995 - Made minor corrections.

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Tech Info Library Article Number:18274



Tech Info Library

Power Macintosh Computers: Supported Microphones (6/96)

Revised: 6/27/96
Security: Everyone

Power Macintosh Computers: Supported Microphones (6/96)

Article Created: 31 July 1995
Article Reviewed/Updated: 27 June 1996

TOPIC -----

What type of microphone devices are supported for use with the Power Macintosh computers?

DISCUSSION -----

Power Macintosh 6100, 7100, and 8100 Series

For the first generation of Power Macintosh computers (the 6100, 7100, and 8100 series), the microphone input jack supported line-level input signals. Apple provided the PlainTalk microphone with these computers. It is a line-level input device with a longer connector than Apple's previous microphone which receives some power from the computer. Other line-level devices were also supported via the microphone input jack on these computers.

Power Macintosh 7200 Series

For the Power Macintosh 7200 series computers, Apple provides an extension called Sound Input Amplification. It can be installed from the Apple Extras folder on the internal hard drive or System CD-ROM disc. This extension modifies the Sound control panel to provide an "amplification" menu option. With amplification turned on, sound input is amplified +25 dB, and some third-party mic-level microphones will work with the Power Macintosh 7200. Users with an Apple PlainTalk microphone should leave the Amplification setting at the default settings because this microphone comes with a pre-amplifier and produces sound at line-level.

Power Macintosh 7500, 7600, and 8500 Series

For the Power Macintosh 7500, 7600, and 8500 series computers, only line-level input devices like the PlainTalk microphone are supported at this time. The Power Macintosh 7500, 7600, and 8500 series computers also support stereo

connections via line-level RCA connectors which make it easy to connect to standard audio/video components.

Article Change History:

27 Jun 1996 - Added additional computer.

12 Jan 1996 - Updated Power Macintosh 7200 Series section.

04 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18275



Tech Info Library

Power Macintosh 7200/90: Processor Fan Power Connector (8/95)

Revised: 8/4/95
Security: Everyone

Power Macintosh 7200/90: Processor Fan Power Connector (8/95)

=====

Article Created: 31 July 1995
Article Reviewed/Updated: 4 August 1995

TOPIC -----

Where does the processor fan power connector attach to the logic board of the Power Macintosh 7200/90 computer? I cannot seem to find it.

DISCUSSION -----

For the Power Macintosh 7200/90 computers that come with processor fans (not all of them do), the power connector for the fan attaches at J70, very near the upper left corner of the microprocessor on the logic board.

Article Change History:
04 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18276



Tech Info Library

Power Macintosh: Energy Saver Message at Startup (9/96)

Revised: 9/17/96
Security: Everyone

Power Macintosh: Energy Saver Message at Startup (9/96)

=====

Article Created: 31 July 1995
Article Reviewed/Updated: 17 September 1996

TOPIC -----

Every time I start my new Power Macintosh 7200, 7500, or 8500 I get a message that describes my Energy Saver software. There are two options: OK, or Specify Settings. What should I do?

DISCUSSION -----

The Power Macintosh 7200, 7500, and 8500 computers include energy conservation software called Energy Saver. As configured by Apple, these systems are set to automatically shutdown after 30 minutes of inactivity.

These settings can be easily modified with the Energy Saver application. Each time you start your Macintosh, a message is displayed explaining the Energy Saver settings and providing an option to open the application. This message displays each time the computer starts until you click Specify Settings to open the application.

If you do not want to see this message each time you start up, click the Specify Settings button and configure the Energy Saver control panel. The message will no longer appear at startup unless the Energy Saver control panel preference file is removed from your system folder.

Apple does not recommend removing the Energy Saver program from your system folder. Since the Energy Saver application is an integral part of the operating system, removing its components prevent you from changing the current settings. The system continues to use these settings even when the application has been removed. If you want to disable the Energy Saver features, keep the Energy Saver software installed on the system and use the application settings to turn off the various features.

The Energy Saver application is not a control panel and does not function on any operating system prior to System 7.5.2.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 9

Article Change History:

17 Sep 1996 - Updated information.
27 Sep 1995 - Added Info Alley information; updated article.
08 Aug 1995 - Removed security information.

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Tech Info Library Article Number:18277



Tech Info Library

System 7.x: Allocating More Memory to a Program (9/95)

Revised: 9/27/95
Security: Everyone

System 7.x: Allocating More Memory to a Program (9/95)

Article Created: 31 July 1995
Article Reviewed/Updated: 27 September 1995

TOPIC -----

I am getting a message that tells me I do not have enough memory to open a particular file with one of my applications. How do I make more memory available for an application with System 7.1 or System 7.5?

DISCUSSION -----

This message is generated by your application program. Your program is reporting that it needs more memory to open your document. This message can appear when you attempt to open large files such as long text documents, long QuickTime movies, or any file larger than you usually work with.

You can set your application to request more memory from the Macintosh System software with the following procedure.

Follow these steps to allocate additional memory to an application program:

Step 1

Quit the application if it is running.

Step 2

Locate and click once on the application icon on your Macintosh hard drive (not the icon in the Launcher or an alias to the application).

Step 3

Choose Get Info from the File menu.

Step 4

..TIL18278-System_7-x-Allocating_More_Memory_to_a_Program_9-95.pdf

Make sure the Kind: is application program and not folder, alias' or document.
If it does not say application program, the Memory Requirements area will not be visible.

Step 5

For System 7.1 or greater, double click on the number next to the Preferred Size box in the Memory Requirements area.

Step 6

Increase the amount of memory allocated to the application in the Preferred Size box to approximately 25% to 50% more. (Example: change 1000 K to 1500 K)

Step 7

Close the Get Info window.

The next time you launch the application it asks the system to allocate to it the amount of memory in the preferred memory size box. If the system does not have the requested free RAM available, it tries to allocate a progressively decreasing amount of RAM until it decreases to the amount in the minimum requirements box in the Get Info window. If the amount of free RAM available falls below the minimum, the system reports there is not enough memory launch the application.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 8

Article Change History:
27 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18278



Tech Info Library

DOS Compatibility: Using Legent Prevail (8/95)

Revised: 8/7/95
Security: Everyone

DOS Compatibility: Using Legent Prevail (8/95)

=====

Article Created: 7 August 1995

TOPIC -----

I am using Prevail, a Windows-based application, to connect to the school district mainframe via asynchronous modem. I am using Prevail in the PC mode of a Power Macintosh 6100 DOS Compatible system. Prevail works as a client to a mainframe application called SAR, a school financial management system. I use Prevail to download reports generated by SAR to the Macintosh.

Prevail connects to the mainframe and allows initial login, but once accessing VTAM, Prevail begins to display spurious characters wrapped around the normal text (it appears it is attempting to display control characters).

The screen then returns the cursor to the upper-left of the screen and no longer displays any line breaks or returns -- all characters display in the same initial position of the screen (row 1, column 1). I can see the stream of characters appearing over the top of one another.

I tested Prevail versions 1.04.03 and 1.05 beta A and got the same behavior. I removed all unnecessary extensions on the Macintosh side and all unnecessary lines in the AUTOEXEC and CONFIG.SYS files and still had the problem. The same behaviour appears whether Windows is running in Standard or Enhanced mode.

Both application versions work properly under SoftWindows, either the Power Macintosh version or the 68040 version. Settings identical to those used with the DOS Compatible system and the same modem and modem cable were used to test this.

What is wrong?

DISCUSSION -----

Prevail does not function on the Power Macintosh 6100 DOS Compatible. This is due to Prevail's method of handling an expected signal change that never occurs, according to the developers at Legent. The signal change never occurs because

the signal is not available on the Power Macintosh 6100 DOS Compatible (RTS) due to the Macintosh RS-422 serial port implementation.

The Legent Pravail developers are aware of this problem.

Workaround

You can try using SoftWindows, an HLLAPI connection (network connection to the mainframe to bypass the serial port limitations), or a different software package that has more robust serial port drivers.

Contact Legent for additional information on the Prevail application. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18279



Tech Info Library

LaserWriter 8.3:Color LaserWriter 12/600 PS ReadMe (4/97)

Revised: 4/3/97
Security: Everyone

LaserWriter 8.3:Color LaserWriter 12/600 PS ReadMe (4/97)

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Article Created: 01 August 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contains the Read Me file included with LaserWriter 8.3 software which ships with the Color LaserWriter 12/600 PS Printer.

DISCUSSION -----

About Your Apple Macintosh LaserWriter Printer Software

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference. The topics are:

- Installing the Printer Driver Software
- Desktop PrintMonitor Version 1.0.1
- Apple Printer Utility Version 2.0
- LaserWriter 8 Printer Driver Version 8.3
- Using the Apple Color LaserWriter 12/600 PS Printer
- Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS

Installing the Printer Driver Software

The manual that comes with your printer contains detailed installation instructions. You cannot install the software and fonts by dragging their icons to your hard disk; you must use the Installer program as described in the printer manual. Your Macintosh must have System 7.1 or later. The printer software does not support QuickDraw GX systems.

IMPORTANT Before installing the printer software, restart your system with all Extensions turned off. To do this, hold down the Shift key while you restart your computer. Hold the Shift key down until you see the message "Extensions Off" or until your normal desktop appears.

The Installer does not remove versions of the LaserWriter printer driver that are older than version 8.0. If you no longer need these files, you may remove them from your System Folder.

The Installer does remove older versions of the LaserWriter 8 driver (for example, LaserWriter 8.0) and replaces the PPD files for Apple LaserWriter printers with the latest versions.

When you choose Easy Install, the Installer places the following files in the System Folder on your hard disk:

- LaserWriter 8.3 is placed in the Extensions folder.
- The PPD files which are used by LaserWriter 8 are placed in a folder called Printer Descriptions also located in the Extensions folder.
- TrueType fonts are installed in the Fonts folder.
- The Apple Printer Utility and this Read Me file are placed in the Apple LaserWriter Software Folder.
- For desktop printing, Desktop Print Monitor, Desktop Printer Spooler, and Desktop Printer Extension are placed in the Extensions folder.
- ColorSync 2.0 is placed in your Extensions folder. The ColorSync profiles are placed in a folder called ColorSync Profiles in the Preferences folder in the System Folder. The ColorSync System Profile control panel is placed in the Control Panels folder in the System Folder.
- If your system has System Software 7.1 or 7.1.1, Finder 7.1.3 is placed in your System Folder and Finder Help 7.1.3 is placed in the Extensions folder.
- If your system has System 7.1, 7.1.1, or 7.1.2, these files are placed in the Extensions folder: Thread Manager 2.1, Network Extension 7.1.3, Macintosh Drag and Drop 1.1.1, and Dragging Enabler 1.1.1.

IMPORTANT If the Installer is unable to remove old files from your hard disk, it will terminate the installation procedure. If this happens, please remove old copies of the LaserWriter 8 driver and the PPD files. Then move your Fonts folder from the System Folder to the desktop. Run the installer again. Once installation is complete, move the fonts from the Fonts folder on the desktop back to the new Fonts folder in your System Folder.

Desktop Print Monitor Version 1.0.1

Creating Desktop Printers

You create desktop printers by selecting a printer in the Chooser. The desktop printer icon is created when you close the Chooser.

Using Desktop Print Monitor on a non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an older

version of the PrintMonitor. Newer versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version)
- Obtain a set of installation disks of the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5 and install the printing software again. An English language version of the Desktop PrintMonitor is installed.

Removing the Desktop Printing Software

The desktop printing software uses both the Desktop PrintMonitor and the PrintMonitor software. The Desktop Print Monitor requires 200-400K bytes more free system memory in addition to the memory required by the PrintMonitor. If you don't want to use the desktop printing software, you can remove it. Follow these steps:

1. Drag any print spool files found in the PrintMonitor Documents folder (in the System Folder) to the Trash. Warning: these jobs will not be printed.
2. Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions Off" appears or until your normal desktop appears.
3. Drag the following files from the Extensions folder to the Trash:
 - . Desktop PrintMonitor 1.0.1
 - . Desktop Printer Spooler 1.0.1
 - . Desktop Printer Extension 1.0.1.
4. Restart your computer.

Using Save or Open with Desktop Printers

When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Having More Than Five Desktop Printers

If you want to have more than five or six desktop printers, you must increase the Desktop PrintMonitor memory allocation by 10K for each additional desktop printer you want. To do so, select its icon--it's in the Extensions folder inside the System Folder--choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

Apple Printer Utility Version 2.0

Installing the printer software creates the Apple LaserWriter Software folder and places within it this ReadMe file and the Apple Printer Utility program version 2.0. The Apple Printer Utility program is designed to work with all Apple PostScript Level 2 printers.

Downloading PostScript Fonts on a GX System with the Apple Printer Utility

When GX is installed any PostScript fonts (often called Type 1 fonts) in the

Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a folder called •Archived Type 1 Fonts• which is created in the System Folder. If you want to download these fonts to your printer using the Apple Printer Utility, you must send the fonts in the •Archived Type 1 Fonts• folder, not the GX-converted versions in the Fonts folder. Downloading GX fonts that have not been converted by GX works correctly.

Removing Fonts from a Hard Disk Attached to the Printer

If a font is downloaded to both the printer's RAM and the printer's hard disk with the same name, and you remove the font on the hard disk, the RAM font will also be removed. If you remove the RAM font, the font on the hard disk will not be removed.

LaserWriter 8 Printer Driver Version 8.3

The software includes version 8.3 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This section includes information about the software and information on using it with several of the printers.

What's new in version 8.3

LaserWriter 8 now provides support for color-matching and for embedded JPEG-compressed documents. LaserWriter 8 now supports ColorSync 2.0, Apple's latest system software for device-independent color-matching services, and PostScript Level 2 color-matching.

Using Color-matching

When ColorSync 2.0 is installed and when the ColorSync Profiles folder contains printer profile(s) there are two options for color/grayscale output:

- ColorSync Color Matching invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct CMYK information to the printer. With ColorSync Color Matching, most of the work is done by your Macintosh.
- PostScript Color Matching is an alternative to ColorSync Color Matching. This option is a good choice when printing to a PostScript Level 2 printer and when it is efficient to let the printer do most of the work.
- Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.
- When printing with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.
- Applications that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.

PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, click the Setup button in the Chooser when selecting your printer for the first time, or after installing an additional option. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

Creating EPS Files

You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other applications that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver With LaserWriter Printers

When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- The LaserWriter 8 driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text in some documents reflows or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.
- Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless you select the Unlimited Downloadable Fonts option in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.

- Printing multiple documents with the Finder may not work if the documents have been created by different application programs.
- If you encounter a time-out (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

LaserWriter 16/600 PS

If Tray Switching is turned on and you have an optional 500-sheet feeder that contains the same size paper as the 250-sheet feeder, use the 500-sheet feeder as the preferred paper source for optimal printing performance. See Chapter 5 in the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

LaserWriter Pro 810

- With some graphics applications, bitmapped graphics printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box will be reduced in size by 25%.
- When you create a PostScript file with a LaserWriter Pro 810 selected as the printer and send the file to a printer that uses PostScript Level 1, a PostScript error will occur.

LaserWriter Pro 600 and 630

- When you print envelopes from the optional envelope feeder, you cannot use Auto Select as the Paper Source (in the Print dialog box).
- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter II NT and II NTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.
- Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter IIg and IIx

- When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter IIx/IIg printers to be more compatible with other Apple LaserWriter printers. If your legal-sized documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.

- Some form-printing applications cannot print forms using the Layout settings in the Page Setup dialog box.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.5.1 or later.

Using the LaserWriter 8 Driver With Application Programs

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- With many applications, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.
- Some applications may not be able to print from the Finder or use the Drag and Drop printing feature.
- Some applications may print in color when Black and White mode is selected.
- Applications that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.

Adobe Illustrator 5.5

- Multiple-page documents may not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Adobe Photoshop 2.5 and 3.0

- Photoshop may print in color when black-&-white mode is selected.

Aldus Freehand 4.0 & Freehand 5.0

- Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- Some paper sizes in Freehand may not be supported by the printer and may generate Postscript errors.

Aldus PageMaker 5.0

- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.

- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus Personal Press 2.02

- Using several font style combinations in text can result in spacing problems.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5.2

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if you use the Geneva, New York, or Monaco fonts.

ClarisDraw 1.0

- Some shapes that contain gradients may not print correctly.

CricketDraw III 2.01

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

DeltaGraph Pro 3.0.4

- Printing with Unlimited Downloadable Fonts may cause some elements to be shifted and fonts to substitute Courier.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Designer/Manager 1.4.2

- Do not print documents that contain JPEG images in Black and White mode; your system will restart.
- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

MacDraft 3.01 and earlier versions

- When you print using the Cut Marks option, a PostScript error results.

MacDraw Pro 1.5

- Rotated text within a frame that is placed in another application may not print correctly.

MacWrite Pro

- Colored text with colored underlines may not print correctly from the Finder.

Microsoft Excel 5.0

- Colored horizontal cell borders will often not appear in the printout. This happens with any color printing option and on most printers.

Microsoft PowerPoint 3.0

- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Microsoft Works 4.0

- There are 24 new shapes available through the tools palette. Colored shadows for any of these shapes will appear correctly on screen. But these colored shadows will only print in gray, regardless of what the print color options might be.

Painter 3.0

- When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0

- When you print using the Invert option, images do not print inverted correctly.

Publish It!

- Use a pre-LaserWriter 8 version of the driver, or contact the publisher of the application program.

QuarkXPress 3.3.1

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- With some PPDs (LW 630, PLW 320), cropped graphics may not print correctly.
- Some imported JPEG files may not print correctly.

RagTime 3.2

- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 with the LaserWriter 8 printer driver; earlier versions will not work.
- When Unlimited Downloadable Fonts option is selected, ReadySetGo! will not print a document containing a JPEG, text, and polygons.
- You may not be able to print documents that contain layers of text, graphics, then text with Unlimited Downloadable Fonts option selected.
- You cannot print documents that use pen patterns.

Studio/8 & Studio/32

- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0

- When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.
- When you select the Unlimited Downloadable Fonts option, Watermark option, and Color/Grayscale option, black text prints as gray.

How to Get Updated Printer Software

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The latest LaserWriter 8 software is posted to the following commercial online services and Internet sites.

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Using the Apple Color LaserWriter 12/600 PS Printer

This section provides additional information on using the Color LaserWriter 12/600 PS Printer.

About the Demonstration Page

When the power is turned on, by default the Color LaserWriter 12/600 PS prints a startup page and a demonstration page. For legal and b5 paper sizes only the startup page prints; the demonstration page is not printed.

About the Apple Color LaserWriter 12/600 PS Status Panel

As described in the Color LaserWriter 12/600 PS manual, Appendix G, the status panel lights aid in indicating hardware service problems found during printer startup. If the Paper Out and Paper Jam lights are blinking alternately, a hardware problem has been detected. To identify the specific problem, notice which toner lights (C, M, Y, Bk) and how many of the maintenance lights (in the area on the right-hand side of the status panel) are lit, and refer to the table below:

Toner Lights ON -----	# Maintenance Lights ON -----	Problem -----
C	0	I/O Controller Board
C	1	SIMM, Slot J11
C	2	SIMM, Slot J10
M	2	Hard Drive
M	3	I/O Controller ROM
Y	0	Fuser
Y	1	Oil Pump in Fuser
Y	2	Thermal Sensor in Fuser
Y	3	Paper Feed Unit
K	0	DC Controller
K	1	Power Supply
K	2	Toner Carousel
K	3	Laser/Scanner Circuit
M & Bk	0	Main Motor
M & Bk	1	Drum Motor
M & Bk	2	Laser/Scanner
C & Bk	0	Controller Fan
C & Bk	1	Fuser Fan
C & Bk	2	Main Fan

Obtaining the Best Results for Business Graphics

To obtain the best results for business graphics, colors should be 100% saturated. For example, to print pure yellow, define yellow as 100% red and 100% green without any blue. Then print your document, selecting the Color/Grayscale option in the Options Print dialog.

Printing on Legal-sized Paper

In the standard memory configuration, the Color LaserWriter 12/600 PS uses a higher compression technique for legal-sized paper using only the cyan, magenta and yellow color planes. As a result of this compression technique, very complex pages may show missing pixels in fine lines or small text, "jaggies" (edges with low-resolution appearance) and color changes. To improve the image quality of such pages, you can increase the printer's memory to 16 MB or more. With at least 16 MB of printer memory, the Color LaserWriter 12/600 PS can

achieve the same quality with legal-size pages as with letter and A4 sizes using all four color planes (cyan, magenta, yellow and black.)

Printing Images on the Color LaserWriter 12/600 PS Printer

The Color LaserWriter 12/600 PS Printer's highest resolution for printing images is 150 x 150 dpi. No gain in image quality is achieved if higher resolution images are used. All other types of documents print at 600 x 600 dpi.

The Density Control Panel

The printer has been adjusted at the factory to produce the best possible image quality. There are always small variations in color between different printers. You can use the density control panel on the back of the printer to make subtle changes. Changing the settings however may produce images of an inferior quality. To return to the factory settings, press both the + and - buttons on the density control panel together.

Setting Your ColorSync System Profile for Best Printing Results

Before using ColorSync color-matching to print to the Color LaserWriter 12/600 PS printer, set the ColorSync System Profile for the monitor connected to your system. To do this open Control Panels in the System Folder and double-click ColorSync System Profile. Make sure the following settings are selected:

- Set the profile for the monitor connected to your system. For the best color match when printing, select the "page-white" or "D50" system profile for your type of monitor if one is available.
- For the best visual match between the colors on your monitor and printed colors, select the Page-White Gamma option in the Monitors control panel. To select a gamma option, open the Monitors control panel, then hold down the Option key while you click the Options button. In the Options window, click the Use Special Gamma checkbox to put a check in it. Then choose Page-White Gamma from the menu.
- On a multiscan monitor, make sure that the color temperature, or intensity, is set to 9300K (the default setting). See the monitor manual for instructions. If the Page-White Gamma option is selected with a color temperature other than 9300K, your monitor colors could look too red or too blue compared to printed colors.

Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS**

To order printer supplies for the Color LaserWriter 12/600 PS direct from Apple, call 1-800-600-7805. For order numbers, see Appendix A of the printer manual:

- toner cartridges
- transparencies
- photoconductor cartridge (includes toner disposal boxes)
- fuser oil
- fuser

Instructions for replacing the fuser are in Appendix F of the printer manual. Instructions for replacing other printer parts come in the new packages.

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696,

extension 525.

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Adobe and PostScript are trademarks of Adobe Systems Incorporated, which may be registered in certain jurisdictions.

End ReadME File

**This is not included in the original ReadMe file:

Here are the parts available through 1-800-600-7805:

Color LaserWriter Cyan Toner Cartridge:	M3757G/A
Color LaserWriter Magenta Toner Cartridge:	M3760G/A
Color LaserWriter Yellow Toner Cartridge:	M3758G/A
Color LaserWriter Black Toner Cartridge:	M3756G/A
Color LaserWriter Photoconductor Replacement Kit:	M3761G/A
Color LaserWriter Fuser Oil:	M3755G/A

Cassettes, transparencies, and networking options are not available through this number.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

02 April 1997 - Updated online references.

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Tech Info Library Article Number:18280



Tech Info Library

Color LaserWriter 12/600 PS: Paper Specifications (8/95)

Revised: 8/1/95
Security: Everyone

Color LaserWriter 12/600 PS: Paper Specifications (8/95)

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Article Created: 01 August 1995

TOPIC -----

What weight of paper can be used in the Color LaserWriter 12/600? What type of paper can be used in the Color LaserWriter 12/600?

DISCUSSION -----

There are two different ratings for paper weight. "Book" or "Offset" paper is measured on a system based on weight per thousand sheets. This is the type of paper used by printing companies and most often used with letterhead. "Bond" or "Stock" is measured on paper content. The paper specifications on the 12/600 are listed in "Bond" measurements (16 to 28 pounds). The equivalent offset paper would measure about 40 to 80 pounds. You should use the multi-purpose tray for weights over 24 pound Bond or 70 pound Book.

The Color LaserWriter is designed only for Plain Paper use. Plain paper is copier paper or paper designed for laser use. For better looking output than that achieved by using plain copier paper, a number of high quality "laser" papers like Legacy, Nekoosa, and Hammermill are available at office supply or graphic arts stores. These papers offer a higher reflectance and thus brighter colors.

Rag content or linen paper will cause problems when printed on the Color LaserWriter 12/600 PS. The bottom portions of printed pages will have vertical streaks of white. Subsequent printouts will have the toner from the previous printed page. This is a result of the fibers of the paper being pulled off the paper onto the fuser rollers. Once on the fuser, they still have particles of toner attached and will leave colored marks on later pages.

NOTE:

Do not use coated Ink Jet paper as it has a clay coating that melts and jams in the fuser region -- a problem that will require service attention and possibly a new fuser.

Support Information Services

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Tech Info Library Article Number:18281



Tech Info Library

Color LaserWriter 12/600 PS: QuickTake Images Print Red (8/95)

Revised: 8/1/95
Security: Everyone

Color LaserWriter 12/600 PS: QuickTake Images Print Red (8/95)

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Article Created: 01 August 1995

TOPIC -----

I have a QuickTake 150 and a Color LaserWriter 12/600 PS. My printer prints color images fine except when I try to print my QuickTake files, they appear to have a reddish tint.

DISCUSSION -----

The Quicktake software and the application Photoflash are both programs that work in the Red, Green, Blue (RGB) mode. This is called additive color. A printer operates in Cyan, Mangenta, Yellow, Black (CMYK) which is subtractive color. The difference being that a monitor emits light (a lightsource) where as a piece of paper reflects light (from exisiting light). Ink on paper is colored by light reflecting off the paper back up through the toner. That is why paper types can change the color printed on it.

To fix this, use the adjust colors function in Photoflash to increase the blue and green slider bars. Some image editing programs have built in "color balancing" filters which do the same thing. Sharpening the image and keeping the image set to "millions of colors" will also help.

Support Information Services

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Tech Info Library Article Number:18282



Tech Info Library

Apple MessagePad: Frequently Asked Questions (4/97)

Revised: 4/28/97
Security: Everyone

Apple MessagePad: Frequently Asked Questions (4/97)

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Article Created: 1 August 1995
Article Reviewed/Updated: 19 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about the Apple MessagePad.

Questions in this FAQ:

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- Does the Newton Connection Kit for Macintosh support Claris Organizer direct transfers?
- Is it possible to print to an Apple Color StyleWriter 2400 from my Apple MessagePad?
- Why does the Apple MessagePad put zeros or other characters as prefixes to phone numbers?
- How much system heap should I have on my Apple MessagePad 120? How can I increase the available heap space?
- Does the current AC Power Adapter being sold for the Apple MessagePad work for all models?
- Can I use an Apple MessagePad 110 rechargeable battery pack in an Apple MessagePad 120?
- How can I get the upgrade to Newton Connection Kit for Macintosh version 2.0.2?
- Can I upgrade an Apple MessagePad 100 to an Apple MessagePad 120?
- What is the status of the Apple MessagePad upgrade program for the Apple MessagePad 100?

- What do I need in order to use a non-Apple modem with my Apple MessagePad?

DISCUSSION -----

Question: Does the Newton Connection Kit for Macintosh support Claris Organizer direct transfers?

Answer: No. The current version of the Newton Connection Kit for Macintosh, version 2.0, does not have a translator for Claris Organizer. However, you can create custom templates that may allow you to import and export information to your Newton Connection Kit file. The instructions are included in the addendum that accompanies the Newton Connection Kit for Macintosh User's Guide.

Question: Is it possible to print to an Apple Color StyleWriter 2400 from my Apple MessagePad?

Answer: Currently, printing to the Color Stylewriter 2400 is not supported. Here is a list of Apple printers support by the MessagePad:

StyleWriter,
StyleWriter II,
Personal LaserWriter LS,
Personal LaserWriter 300 (Use the Personal LaserWriter LS driver),
LaserWriter Plus,
LaserWriter IINT and NTX,
LaserWriter IIf and IIg,
LaserWriter Select 360
LaserWriter Pro 600 and 630,
Personal LaserWriter NT and NTR.

Portable StyleWriter is supported by the Newton Print Pack - use the Canon BJ10e option.

Question: Why does the Apple MessagePad put zeros or other characters as prefixes to phone numbers?

Answer: The Apple MessagePad uses the information you have entered in the Personal Preference screen to determine how the phone number needs to be formatted for dialing.

When you set your Country preference in your Personal Preferences, you must tap Country, then select a country from the list that appears. In this case, you are in the United States, so you will select USA.

If you write the country name in the Country preference blank instead of selecting from the list, your Apple MessagePad does not understand what country you are in, and this problem occurs.

To set your access code, tap the Options button in the Call Slip window. Write in the access code needed to use your European account.

Question: How much system heap should I have on my Apple MessagePad 120? How can I increase the available heap space?

Answer: The Apple MessagePad has 110k of heap space. Apple is not aware of any application that increases the amount of heap space on an Apple MessagePad. If you have any soups on the Apple MessagePad, which are left from items that are no longer being used, you should remove them. There are various shareware utilities available that let you see and remove them.

Here are some tips regarding managing heap space.

- Remove programs that you no longer use, including programs that reside on a memory card. Each additional program, besides those located in the Apple MessagePad's ROM, takes up an additional 2K of heap memory.
- Close the Extras drawer after running any application. This saves another 3K of system memory.
- Avoid using a large number of programs that run continuously after installation. These programs consume large amounts of system memory and slow performance.

You can identify these types of programs by the way they work. If you have a program that always adds a button on a particular screen or has a "floating" window that is always available, it may be a program that is always running.

Question: Does the current AC Power Adapter being sold for the Apple MessagePad work for all models?

Answer: H0003Z/A is the Apple part number for the AC Adapter for the Apple MessagePad in the United States. It is compatible with all Apple MessagePad models and the Newton Charging Station, which are used in the United States.

Please contact the Apple Referral Center at 800-538-9696 to obtain a phone number for a local Apple-authorized Reseller.

Question: Can I use an Apple MessagePad 110 rechargeable battery pack in an Apple MessagePad 120?

Answer: Yes, you can use the rechargeable battery pack from the Apple MessagePad 110 in the Apple MessagePad 120. The accessories for the Apple MessagePad 110 and Apple MessagePad 120 are identical and interchangeable.

Question: How can I get the upgrade to Newton Connection Kit for Macintosh version 2.0.2?

Answer: Apple does not offer an upgrade to this version of the Newton Connection Kit for Macintosh. Version 2.0.2 only differs from previous versions in that it corrects an issue some customers experienced when importing large notes from

Microsoft Word. There is no new functionality.

If you are experiencing problems importing very large notes into the Connection Kit from Microsoft Word, please the Apple Assistance Center at 1 800-SOS-APPL.

Question: Can I upgrade an Apple MessagePad 100 to an Apple MessagePad 120?

Answer: Apple offers no option to upgrade the Apple MessagePad 100 or 110 to an Apple MessagePad 120. You can, however, update to Newton System Update 1.3 (the system update that comes with the 120)

Question: What is the status of the upgrade program for the Apple MessagePad 100?

Answer: The upgrade program for owners of the original Newton MessagePad has ended.

Question: What do I need in order to use a non-Apple modem with my Apple MessagePad?

Answer: In conjunction with a modem setup package, the Newton Modem Enabler 1.0 allows the use of a non-Apple modem with an Apple MessagePad 110 or 120. The Modem Enabler has not been tested with previous Apple MessagePad models and is not supported on them.

The Newton Modem Enabler 1.0 may be downloaded from the USA Apple Software Updates on any of the following online services:

- * America Online - keyword: applecomputer
- * CompuServe - GO APLSUP
- * Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>

Each modem has its own modem setup package, which is typically provided by the modem manufacturer. The modem setups supplied with the enabler include:

- . HayesCompatible.pkg
- . HayesErrorCorrecting.pkg
- . MotoCELLect14.4.pkg
- . MotoCELLectCellular.pkg

The Read Me document that accompanies the Modem Enabler explains what you need to do before installing Modem Enabler 1.0 and modem setup packages, what to do to install them, and how to work with them after they are installed.

Check with the manufacturer of your modem to verify its compatibility with the Apple MessagePad.

Article Change History:

09 April 1997 - Updated online references.

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Tech Info Library Article Number:18284



Tech Info Library

Desktop Printer Spooler 1.0.1 and PowerTalk 1.1 Issue (9/95)

Revised: 9/28/95
Security: Everyone

Desktop Printer Spooler 1.0.1 and PowerTalk 1.1 Issue (9/95)

Article Created: 1 August 1995
Article Reviewed/Updated: 28 September 1995

TOPIC -----

This article describes an issue using Desktop Printer Spooler 1.0.1 and PowerTalk 1.1 on certain Macintosh computers, and provides a workaround.

DISCUSSION -----

There is a known issue when using the Desktop Printer Spooler 1.0.1 with PowerTalk 1.1, which may cause a hang or crash on certain Macintosh computers. This hanging issue has been reproduced:

- With System Software 7.5 or 7.5.1
- With PowerTalk 1.1
- With Desktop Printing Software 1.0.1 (installed with Color LaserWriter 12/600 PS, LaserWriter 4/600 PS, and Color StyleWriter 2200 and 2400 printer software)
- On certain Macintosh computers (Quadra 840AV, Quadra 660AV, Macintosh 630 series, PowerBook Duo 230 and 280, and Macintosh II)

Workaround

The LaserWriter 8.3 Installer, a three disk set posted to online services, contains a revision of Desktop Printing Spooler Software from version 1.0.1 to 1.0.2. Desktop Printer Spooler 1.0.2 is recommended for anyone experiencing this issue. Also the Desktop Printer Spooler 1.0.2 has been posted separately if this is all you need.

Another workaround is to use a third-party extensions manager and have the Desktop Printer Spooler load last. Renaming or relocating the file causes it not to function properly.

Another workaround is to use a third-party extensions manager and have the Desktop Printer Spooler load last. Renaming or relocating the file will not

function properly.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 19

Article Change History:

28 Sep 1995 - Added Info Alley information; updated article.
09 Aug 1995 - The Desktop Printer Spooler 1.0.2 has been posted separately.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18285



Tech Info Library

AppleShare Client for Windows: AARP Issue (8/95)

Revised: 8/1/95
Security: Everyone

AppleShare Client for Windows: AARP Issue (8/95)

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Article Created: 1 August 1995

TOPIC -----

On a Windows client, when AppleTalk is initializing, a response to the first AARP (AppleTalk Address Resolution Protocol) Probe packet causes the stack to transmit another AARP Probe packet with a different tentative node address. If this second probe packet receives a response, the Windows stack continues to transmit AARP Probe packets with this same tentative node address. Is there a way to workaround this?

DISCUSSION -----

This problem will be addressed in the next release of the AppleShare Client for Windows software. As of this writing, there is no known date when this software will be available.

In the meantime, a workaround is to manually edit the AppleTalk node parameter in the SYSTEM.INI file. This address is under the [AppleTalk] heading, as can be seen in the following example:

```
[APPLETALK]  
NODE=74
```

Below is a brief description of how dynamic address assignment works:

Each protocol stack in a given node must have a protocol address. This address is usually assigned when the stack is initialized. AARP is used at AppleTalk startup time to find a unique node ID on the network. AARP must then make sure that the address it selects is not being used by another node on the data link. It does so by using the data link to broadcast a number of AARP Probe packets, which contain the tentative protocol address. When a node's AARP receives a Probe packet corresponding to one of its protocol stacks, it examines the protocol address of that stack. If the Probe's tentative protocol address matches the receiving node's address, AARP sends back an AARP Response packet to the probing node.

If the probing node receives an AARP Response packet, then the tentative protocol address is already in use and the node must pick a new tentative address and repeat the probing process.

Support Information Services

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Tech Info Library Article Number:18286



Tech Info Library

Apple Internet Connection Kit (11/95)

Revised: 9/23/96
Security: Everyone

Apple Internet Connection Kit (11/95)

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Article Created: 1 August 1995
Article Reviewed/Updated: 27 November 1995

TOPIC -----

This article describes the Apple Internet Connection Kit (AICK).

DISCUSSION -----

The Apple Internet Connection Kit is an integrated collection of Apple and third-party software that allows customers to easily connect their Macintosh directly to the Internet. The Apple Internet Connection Kit is a one-stop shop for key Internet tools that let the user get started using the Internet. It works on LAN and dial-up access, and simplifies dial-up to an Internet Service Provider (ISP).

Features

- All-in-one solution for Internet connection
- One-button install for all key applications
- Auto-configures Internet applications for the individual system
- Makes signing up with an ISP quick and easy
- Facilitates connection to Internet through local area network (LAN) or through a phone line.
- Directs customers to Internet "hot spots" in the World Wide Web (WWW), newsgroups, and File Transfer Protocol (FTP) servers.

Bundled Software

- Internet Dialer Software
- Offers a choice of qualified ISPs; streamlines the process of registration and

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configures the applications to run on a specific system.

- Apple Guide for the Internet

Provides an enhanced on-screen help feature that leads users through tasks step-by-step to master the processes, procedures, and capabilities of the Internet.

- Netscape Navigator from Netscape Communications

Browser software for exploring the World Wide Web (WWW).

- Claris EMailer from Claris

Electronic mail product that enables users to send and receive multimedia rich email messages over the Internet.

- Fetch FTP software

Helps users access File Transfer Protocol (FTP) services to download specific files.

- Stuffit Expander decompression software from Aladdin

Automatically decompresses compressed files downloaded from the Internet.

- NewsWatcher browser software

Provides users with access to Usenet newsgroup discussions.

- NCSA Telnet terminal emulation software

Allows a Macintosh computer to emulate a terminal for connection to many libraries and catalogs.

- QuickTime VR Player

Allows users to view 3D multimedia presentations and QuickTime video clips downloaded from the Internet.

- Adobe Acrobat Reader

For viewing portable document format (PDF) files in their exact original format.

- Real Audio software

Provides AM quality audio through the Internet.

- Point-to-Point (PPP) software

Allows use of the MacTCP over the modem line so that Macintosh and Internet applications communicate with protocols used by the Internet (SLIP and PPP).

- Also included

- Documentation for bundled software on CD-ROM
- The "Getting Started" guide
- Both CD and floppy versions included in set

System Requirements

The Apple Internet Connection Kit requires

- Macintosh or Mac OS-based computer
- 8MB RAM minimum

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- System 7.5 or later
- TCP/IP -- either MacTCP or Open Transport/TCP
- 9600 bps or faster modem (14,400 bps recommended) or connection to LAN already connected to the Internet.
- 10MB available hard drive space (15MB recommended)
- High density floppy drive or CD ROM drive

Pricing and Availability

The Apple Internet Connection Kit is expected to be available in Sep 1995:

M4276LL/A Apple Internet Connection Kit

M4503LL/A Apple Internet Connection Kit (20 user)

ISP Support

Once users have selected and registered with an ISP, the ISP will offer support for the following:

- Basic product use
- Applications
- Billing
- Connection

Customer Satisfaction Issues

Apple is not offering the Apple Internet Connection Kit to K-12 institutions. The Apple Education Series Personal Internet Bundle, a product better suited to the needs of K-12 institutions, is already available to K-12 institutions

Article Change History:

27 Nov 1995 - Added keyword.

04 Aug 1995 - Changed access privileges.

Support Information Services

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Tech Info Library Article Number:18287



Tech Info Library

MAE 2.0.1: Patch Release 1 for MAE 2.0 (1/96)

Revised: 1/30/96
Security: Everyone

MAE 2.0.1: Patch Release "1" for MAE 2.0 (1/96)

Article Created: 1 August 1995
Article Reviewed/Updated: 30 January 1996

TOPIC -----

This article describes MAE 2.0.1 obtained through Patch Release "1" for Macintosh Application Environment (MAE) V2.0.

DISCUSSION -----

Apple has released MAE Patch 2, a newer patch. For more information on MAE Patch 2, search for the following Tech Info Library article, "MAE: Where to Find MAE Patch 2."

Apple has created and is distributing MAE V2.0.1, the first patch release for Macintosh Application Environment (MAE) 2.0. This patch release will alleviate several problems that have been identified.

The patch can be obtained over the Internet via FTP on the ftp.support.apple.com server, in the /pub/mae/patches directory. You will also find a README file with complete details on what is contained in the patch release as well as how to download and install the patch.

Please be aware that the patch is covered by a license agreement. You MUST read and agree to the license agreement before downloading and/or using the patch software.

NOTE: This patch cannot be used with the MAE V1.0 trial.

Changes In MAE 2.0.1
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The following changes were made to MAE 2.0.1.

Updated Man Page

The online manual pages now reflect changes and features of MAE 2.0 that were omitted from the man pages supplied with the MAE 2.0 distribution.

Network Control Panel

Opening the Network Control Panel will no longer result in an error message.

(Sun only) Attention Packets

Urgent ADSP (Apple Data Stream Protocol) messages are now delivered promptly to the MAE process. Previously, there was a delay in delivering these messages.

(Sun only) ADSP Close

Custom applications that send ADSP close packets now work correctly.

Utilization of Selected AppleTalk Zone

A previously-selected AppleTalk zone is now being used as the default zone. In addition, a list of eligible devices is presented when selecting a network resource (for example, a printer). This problem only occurred under isolated circumstances.

File Transfers Under TCP

Fetch or other applications now receive large (greater than 100K) files utilizing TCP correctly. (Smaller files were not affected.)

Saving Documents When Using MacinTax

MacinTax is now able to save documents.

(HP only) Users' Guide Updated

The online Users' Guide for MAE now reflects features and changes present in v2.0 which were omitted from the MAE 2.0 distribution.

Debugging Options

Additional command line options have been added to assist in debugging MAE 2.0 problems.

(Sun only) Support for CacheFS

New functionality was added to support CacheFS, a new file system introduced with Solaris 2.4.

Support For AFS (Andrew File System)

Additional features have been added to support local cells for AFS.

Other Fixes

Various minor bugs in MAE 2.0 are corrected in MAE 2.0.1.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 6

Article Change History:

30 Jan 1996 - Updated with MAE Patch 2 information.

28 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18288



Tech Info Library

Performa 500 Series: Frequently Asked Questions (4/97)

Revised: 4/8/97
Security: Everyone

Performa 500 Series: Frequently Asked Questions (4/97)

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Article Created: 02 August 1995
Article Reviewed/Updated: 8 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Macintosh Performa 500 series computers.

Questions in this FAQ:
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- 1) Why can't I get a microphone from an earlier Macintosh computer to work on my Performa 500 series computer?
- 2) Can I upgrade my Performa 575, 577, 578, or 580 to a PowerPC processor?
- 3) Can I upgrade my Performa 550 to the PowerPC processor?
- 4) Can I add a floating-point unit (FPU) to my computer?
- 5) Can my Performa 580 support an Apple IIe card? Can the other 500 series computers?
- 6) Can I install the Apple TV/Video System on my Performa 500 series computer?
- 7) I accidentally lost a program that came with my Macintosh Performa. How do I get it back?
- 8) Where can I get the latest Apple software updates?

DISCUSSION -----

- 1) Question: Why can't I get a microphone from an earlier Macintosh computer to work on my Performa 500 series computer?

Answer: The microphone used with many early Macintosh computer models is called the Apple Omnidirectional Microphone. It comes with a 1/2" plug. The microphone used with the Performa 600 series computers (as well as all new Macintosh models) is called a PlainTalk microphone. It has a 3/4" plug, the extra 1/4" of which is used to reach a power source that attenuates the microphone.

The correct microphone for use with the Macintosh Performa 630 series is the PlainTalk microphone, part number M9060Z/A. You can order this through many Apple-authorized retailers and catalog resellers. Their numbers can be obtained by contacting our 24-hour referral service at 800-538-9696.

For further information on the PlainTalk microphone, consult the online Apple Technical Info Library on the Internet at <<http://til.info.apple.com/>>. Use the search string "plaintalk microphone" to locate the article "Macintosh: PlainTalk Audio Port Microphone Support".

2) Question: Can I upgrade my Performa 575, 577, 578, or 580 to the PowerPC?

Answer: The Macintosh Processor Upgrade Card (M3397LL/A, discontinued) upgrades Macintosh 570 and 580 series computers to Power Macintosh performance by replacing the 68LC040 processor with a PowerPC 601 processor.

The Macintosh Processor Upgrade Card, part number M3397LL/A (discontinued), must be installed by an Apple-authorized service provider, who can also tell you the current price. To locate an Apple-authorized service provider in your area, please call 1-800-538-9696.

For more information on the upgrade, use the Tech Info Library on the Internet at <<http://til.info.apple.com/>> Use the search string "upgrade and kppc and 575" to locate related articles.

3) Question: Can I upgrade my Performa 550 to the PowerPC?

Answer: No, the Macintosh LC/Performa 520/550 series PowerPC Upgrade (M3395LL/A) is no longer available. The upgrade was available for several months, but has since been removed from the Apple price list.

4) Question: Can I add a floating-point unit to my computer?

Answer: A floating point unit (FPU) or math coprocessor does not always give you a speed increase. An FPU is useful only when running programs that do extensive mathematical calculations that call for an FPU to be used.

If you have a Performa 550 or 560 computer, you may have a math coprocessor or floating point unit (FPU), Apple Service p/n 922-0107, installed in a special socket on the logic board. If you own a Performa 57x, the only way to add an FPU is to completely remove and replace the 68LC040 chip on the logic board. This upgrade is not available from Apple but may be available from a third party vendor. Apple does not recommend or support replacing the CPU chip.

From the online Apple Technical Info Library on the Internet at
<<http://til.info.apple.com/>> - use the search string "FPU Upgrade" to locate the
article "Macintosh Performa: FPU Upgrade Options."

5) Question: Can my Performa 580 support an Apple IIe card? Can the other 500
series computers?

Answer: The Apple IIe card is only compatible with computers that have the LC
style processor direct slot (PDS). This includes the Macintosh Color Classic,
Performa 400 series, LC/Performa 500 series computers (except the Macintosh LC
580 and Performa 580), and all Macintosh LC series computers except the
Macintosh 630 family and Power Macintosh 5200 LC and 5300 LC computers.

The Macintosh LC 580, Macintosh 630 Family, and Power Macintosh 5200 LC and 5300
LC only operate in 32-bit addressing mode. Since the Apple IIe card is not
compatible with 32-bit addressing, the Apple IIe Card is not compatible with
these computers.

From the online Apple Technical Info Library (go shortcut "TIL") - use the
search string "Apple IIe card and compatibility" to locate the article "Apple
IIe Card: Macintosh Compatibility."

6) Question: Can I install the Apple TV/Video System on my Performa 500 series
computer?

Answer: The Apple TV/Video System requires a special connection on the logic
board. This connection is available only in the Macintosh 630 series and Power
Macintosh or Performa 5200, 5300, 6200, and 6300 series of computers.

7) Question: I accidentally lost a program that came with my Macintosh Performa.
How do I get it back?

Answer: If you have lost or removed a program that originally shipped on your
Macintosh Performa, you can restore it with the program Apple Restore. This
will copy files back to your computer's hard drive. To copy the files back, you
will need backup disks. You were instructed to make a backup copy of your
programs on floppy disks when you first purchased your computer. You will need
these disks.

Using the Utilities disk which came with your computer, you can run Apple
Restore in order to restore the data. This process is described in detail in
Chapter 11 of your Macintosh User's Guide.

If your computer came with a built-in CD-ROM drive, you may not need to use the
above process. The Macintosh Performa CD contains a complete backup of all the
software which originally came with the computer. To restore this software, use
the instructions included in the small pamphlet which accompanied the CD-ROM
disc.

8) Where can I get the latest Apple software updates?

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Article Change History:

08 Apr 1997 - Updated with availability information.

01 Dec 1995 - Revised information about 550 upgrade.

10 Nov 1995 - Updated title.

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Tech Info Library Article Number:18290



Tech Info Library

Performa 630 Series: Frequently Asked Questions (4/97)

Revised: 5/2/97
Security: Everyone

Performa 630 Series: Frequently Asked Questions (4/97)

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Article Created: 2 August 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Macintosh Performa 630 series computers.

Questions in this FAQ:
=====

- 1) Is there an upgrade path for the Macintosh Performa 630 series to a PowerPC processor?
- 2) Can I add a second IDE drive or replace the original internal drive with a larger capacity IDE drive?
- 3) Can I add a DOS Compatibility card to my Performa 630 series computer?
- 4) If I purchase a Performa 630 series computer with the Apple Video TV System card installed, can I output the video to an NTSC device such as a television or VCR?
- 5) If my computer has been idle for a period of time and I move the mouse to turn off my screen saver, the computer will freeze momentarily and a beep for several seconds. Then the computer returns to normal. What is causing this symptom to occur?
- 6) How do I turn on(off) 32-bit addressing on my Macintosh Performa 630 computer?
- 7) Why is the sound from my 15" Multiple Scan Display so low?
- 8) How do I make an Emergency Disk?
- 9) The microphone from my former Macintosh computer model doesn't work on my

Macintosh Performa 630 series computer. What's wrong?

10) Can I install an Apple IIe card in my computer?

DISCUSSION -----

1) Question: Is there an upgrade path for the Macintosh Performa 630 series to a PowerPC?

Answer: The Macintosh Performa 630 series computers can be upgraded to the PowerPC using the Macintosh Processor Upgrade (discontinued). The Processor Upgrade includes a PowerPC 601 Processor with floating-point processor and 256K level-2 cache that is expandable to 1MB. The Macintosh Processor Upgrade lets you switch back and forth between the PowerPC 601 and 68040/68LC040 processors upon restart.

The Macintosh Processor Upgrade Card, part number M3397LL/A (discontinued), must be installed by an Apple Authorized Service Provider. To locate an Apple-authorized service provider in your area, please call 1-800-538-9696.

For more information on the upgrade use the Tech Info Library on the Internet <<http://til.info.apple.com/>>. Use the search string "upgrade kppc 630" to locate related articles.

2) Question: Can I add a second IDE drive or replace the original internal drive with a larger capacity IDE drive?

Answer: The Performa 630 series computer will only support only one internal IDE drive. It is possible to replace the internal IDE drive with a larger capacity hard disk, provided the drive is compatible with the computer.

To find out what features a third-party IDE hard drive must have to be compatible with a Macintosh 630-series computer, you can consult the Tech Info Library (go shortcut "TIL"). Use the search string "ide" to locate the article "Macintosh 630: Using Third Party IDE Hard Disks." Check with the maker of the specific third-party IDE hard drive to see if that model meets the criteria outlined in the article.

3) Question: Can I add a DOS Compatibility card to my Performa 630 series computer?

Answer: Apple does not make a separate DOS Compatibility Card for the Macintosh Performa 630 series computer. There are Macintosh 630 series systems available with the DOS compatibility card, but they must be purchased with the card already installed because of modifications to the logic board. You may want to check the Redgate Macintosh Product Registry (shortcut "redgate") for third-party solutions.

4) Question: If I purchase a Performa 630 series computer with the Apple Video/TV System card installed, can I output the video to an NTSC device such as

a television or VCR?

Answer: Video output to a TV or other NTSC device is handled by a separate component unrelated to the Apple Video/TV System. The Apple Presentation System (part number M2895LL/A) is an external portable device that connects to any Macintosh computer with a DB-15 standard video output port. Without the Apple Presentation System, you cannot display the video from the Performa 630 series computer to an NTSC device. A PAL version of the Apple Presentation System is also available.

5) Question: If my computer has been idle for a period of time and I move the mouse to turn off my screen saver, the computer will freeze momentarily and beep for several seconds. Then the computer returns to normal. What is causing this symptom to occur?

Answer: This is caused by the energy saver software installed on your computer. The software is designed to reduce the amount of power that your monitor is using when the computer is idle. When you move the mouse after the computer has been idle the computer will beep until the monitor has returned to full power. The energy saver control panel which is supported on the Performa 630 series computers is called Energy Saver. If you do not want to use the energy saver feature, you can de-select the appropriate option in the control panel. If you have a control panel named "Screen," remove it from your Control Panels folder since it is not supported on your computer.

6) Question: I have an old program which tells me to turn off 32-bit addressing. But I don't see this as an option in my Memory control panel. Why?

Answer: The Performa 630 always runs in 32-bit mode. There is no way to turn it off; therefore, there is no switch in the Memory control panel. You will probably need to upgrade your software.

7) Question: The sound from my 15" Multiple Scan Display is very low. Sometimes, I can hear sound only out of the left speaker. What is wrong?

Answer: Most likely, the audio patch cable is not plugged in securely on the monitor's side. Remove the cable, then plug it back in, firmly. If this does not help, completely unplug the cable from both the Macintosh side and the monitor side, then exchange the ends and plug the cable back in.

You may also wish to check your "Volumes" setting in the Sound control panel. Select "Control Panels" from the Apple menu, then open the Sound control panel. You will see a window which lets you set your alert volumes. Click on the pop-up menu at the top of the window, then select "Volumes." Make sure your speaker volume is set to a high value.

8) Question: I have a Macintosh Performa computer which shipped with a CD-ROM drive. I have purchased a third-party disk management utility or virus detector which states I should use a "Disk Tools" disk in order to create an emergency

disk. I did not receive one with my computer. Should I have?

Answer: Apple currently ships a CD-ROM drive as part of many Performa computers. The Macintosh Performa CD you received as part of your bundle, effectively replaces the usual Disk Tools floppy disk. In addition to containing conventional disk diagnostic software, the CD-ROM disc also contains a complete back-up of your system software and application programs.

In many cases, you can still use the Performa CD as a start-up disk, then insert a diskette containing whatever disk-based software you need to run.

To obtain more information on making an emergency disk, you can consult the online Apple Technical Info Library <<http://til.info.apple.com/>>. Use the search string "Performa and emergency disk" to locate the article "Performa with CD: How to Make Emergency Disk".

If the software you are using does not support the use of a Performa CD, or does not contain instructions on how to use the Performa CD with that product, you should contact the manufacturer of the software for further assistance.

From the online Apple Technical Info Library <<http://til.info.apple.com/>> - use the search string "Performa and emergency disk " to locate the article "Performa with CD: How to Make Emergency Disk".

9) Question: The microphone from myformer Macintosh computer does not work on my Performa 630 series computer. What's wrong?

Answer: The microphone used with an LC II is called the Apple Omnidirectional Microphone. It comes with a 1/2" plug. The microphone used with the Performa 600 series computers (as well as all Power Macintosh computers, the Performa 475/6, Performa 6100 series computers, 500 series computers, and Quadra 660AV and 840AV) is called a PlainTalk microphone. It has a 3/4" plug, the extra 1/4" of which is used to reach a power source that attenuates the microphone.

The correct microphone for use with the Macintosh Performa 630 series is the PlainTalk microphone, part number M9060Z/A. You can order this through many Apple-authorized retailers and catalog resellers. Their numbers can be obtained by contacting our 24-hour referral service at 800-538-9696.

For further information on the PlainTalk microphone, consult the Apple Technical Info Library <<http://til.info.apple.com/>> - use the search string "plaintalk microphone" to locate the article "Macintosh: PlainTalk Audio Port Microphone Support".

10) Question: Can I install an Apple IIe card in my computer?

Answer: Unfortunately, the Macintosh Performa 630 series computers do not support the Apple IIe card. Apple IIe card software is not compatible with the 32-bit addressing mode that your Macintosh Performa computer requires.

Article Change History:

01 May 1997 - Removed out dated on line references.

08 Apr 1997 - Updated with availability information.

20 Jan 1997 - Updated online references

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Tech Info Library Article Number:18291



Tech Info Library

PowerBook Duo 2300c/100: Description (4/97)

Revised: 4/29/97
Security: Everyone

PowerBook Duo 2300c/100: Description (4/97)

Article Created: 2 August 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook Duo 2300c/100 computer.

DISCUSSION -----

Overview
=====

The Macintosh PowerBook Duo 2300c/100 is Apple's smallest, lightest PowerBook computer, delivering PowerPC processor performance in a compact, flexible, and expandable system. With complete compatibility with existing PowerBook Duo 200 series peripherals and accessories, the PowerBook Duo 2300c/100 provides advances in performance without sacrificing your investment in batteries, memory, modems, or docking solutions.

The PowerBook Duo 2300c/100 brings a new level of power and performance to subnotebook computing. It includes an integrated 9.5-inch active-matrix display that offers two modes—640 by 480 pixels with 256 colors, and 640 by 400 pixels with up to thousands of colors.

An improved Apple trackpad provides increased functionality. The PowerBook Duo 2300c/100 comes with a large hard disk drive, and its memory can be easily expanded to 56 megabytes. Its advanced 100-megahertz PowerPC 603e processor not only gives this PowerBook Duo the power to handle the most complex tasks easily, but also enables it to run Insignia Solutions SoftWindows emulation software for DOS and Windows compatibility.

With the PowerBook Duo 2300c/100, you can connect to a wide range of resources—no matter where you are. Its file-transfer options include System 7 file sharing (with LocalTalk or other serial cables), as well as a configuration with an internal Express Modem for using Apple Remote Access or other on-line

services. When you're back at the office, simply insert your PowerBook Duo computer into a PowerBook Duo Dock Plus, and you're instantly working with a complete desktop Macintosh system. And with third-party docking solutions, you can take advantage of PC Card expansion capabilities and DOS compatibility solutions.

The PowerBook Duo 2300c/100 also comes with the PowerBook Mobility Bundle, a combination of communications, compatibility, power management, security, file-transfer, and entertainment software.

In short, the PowerBook Duo 2300c/100 provides outstanding performance and innovation in the smallest, lightest PowerBook computer—making it the ideal solution for mobile computing.

Features

=====

High Performance

- Uses a 100-MHz PowerPC 603e RISC processor
- Provides Power Macintosh performance in a subnotebook computer
- Provides 8 MB or 20 MB of RAM, expandable to 56 MB
- Includes an internal 750 MB or 1.1 GB hard disk drive

Innovative New Design

- Provides a 9.5-inch (diagonal), backlit, active-matrix color display for easy viewing in up to thousands of colors
- Includes improved Apple trackpad for increased functionality
- Is the smallest, lightest PowerBook computer
- Gives you the flexibility to carry just what you need

Broad Expansion Capabilities

- Comes with a built-in serial port for peripheral devices and networking
- Includes slots for an internal modem and additional RAM
- Features a docking connector for connection to a variety of docking devices that provide desktop computing capabilities
- Provides complete compatibility with existing PowerBook Duo 200 series peripherals and accessories

Easy Communications Capabilities

- Comes equipped with Apple Remote Access and PowerTalk client software
- Is available with PowerBook Duo Express Modem

Preinstalled Software

- Comes with System 7.5
- Provides active assistance in learning new features through Apple Guide
- Comes with the PowerBook Mobility Bundle, software designed to

enhance mobile computing

Ordering Information

=====

PowerBook Duo 2300c/100

- PowerBook Duo 2300c/100 computer with 8 MB of RAM and internal 750 MB hard disk drive, Battery and AC adapter, System software version 7.5.2, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
- Order No. M4220LL/A

PowerBook Duo 2300c/100

- Same as Order No. 4220LL/A, but with 20 MB of RAM, internal 1.1 GB hard disk drive, and Apple Express Modem
- Order No. M4221LL/A

PowerBook Duo 8 MB Memory Expansion Kit*

- Order No. M4185LL/A

PowerBook Duo Dock Plus

- Order No. M4219LL/A

PowerBook Duo Floppy Adapter

- Order No. M4180LL/A

Express Modem for PowerBook Duo*

(U.S., Canada, Japan)

- Order No. M4186LL/A

PowerBook High-Capacity Duo Type III Rechargeable Battery

- Order No. M2780LL/A

PowerBook Duo AC Adapter

- Order No. M4174LL/A

Macintosh External 1.4 MB Floppy Disk Drive

- Order No. M8061LL/A

PowerBook Duo Battery Recharger

- Order No. M4178LL/A

Apple HDI-30 SCSI Disk Adapter

- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

- Order No. M2538LL/A

*Dealer installation recommended

Article Change History:

28 Apr 1997 - Removed out dated on line references.

18 Mar 1996 - Reviewed for technical accuracy.

03 Oct 1995 - Changed title.

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Tech Info Library Article Number:18293



Tech Info Library

PowerBook Duo 2300c/100: Technical Specifications (2/96)

Revised: 2/15/96
Security: Everyone

PowerBook Duo 2300c/100: Technical Specifications (2/96)

Article Created: 6 July 1995
Article Reviewed/Updated: 15 February 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook Duo 2300c/100 computer.

DISCUSSION -----

Microprocessor

- 100-MHz PowerPC 603e

Memory

- 8 MB of RAM, expandable to 56 MB
(Note: The 8 MB from Apple is soldered to the logic board. There is one RAM card expansion slot.)

Storage

- Internal 750 MB or 1.1 GB hard disk drive
- Optional external Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks (requires optional floppy adapter)

Display

- 9.5-in. (diagonal) active-matrix color display
- Resolution: 640 by 480 pixels with 256 colors or 640 by 400 pixels with thousands of colors

Battery

- Nickel-metal-hydride high-capacity Type III battery provides 2 to 4

hours of use before recharge

- Battery recharges in 2 hours while computer is shut down or in sleep mode, 4 hours while running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

Ports

- Power adapter port
- 152-pin processor-direct slot (PDS) connector for connecting PowerBook Duo Dock Plus, PowerBook Duo Floppy Adapter, or third-party expansion devices
- Serial (RS-422) port
- Port for optional internal modem

Docking Options

- PowerBook Duo Dock Plus*
- PowerBook Duo Floppy Adapter
- Solutions from third-party vendors

* Note: The PowerBook Duo 2300c can also be used with Apple's previous docking stations: the Duo MiniDock, the Duo Dock II and the original Duo Dock. However, the original Duo Dock can only be used if the top cover has been upgraded with the user-installable Top Cover Upgrade for PowerBook Duo Dock, part number: M1814Z/A.)

File-Transfer Options

- LocalTalk cables and System 7 file sharing
- Serial cable and System 7 file sharing
- Express Modem and Apple Remote Access software
- Duo Dock with internal Apple SuperDrive, optional internal Duo Dock hard disk drive, and HDI-30 SCSI system cable
- Compact floppy adapter and external Apple SuperDrive

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Modem
- Optional internal PowerBook Express Modem; sends and receives data and faxes at 14.4 Kbps
- Includes Express Fax and OCR software (United States and Europe only)

Sound

- Sound output: Apple Sound Chip provides monophonic 16-bit sound, capable of driving stereo headphones or external speakers with the same signal supplied to both channels through optional PowerBook Duo Dock Plus
- Built-in speaker and integrated microphone
- Sound input: 4-voice mono sound with 16-bit analog-to-digital conversion, recording at 11- or 22-kHz sampling rate

Keyboard And Improved Apple Trackpad

-
- Built-in, 2.4-mm travel, 18-mm pitch keyboard, with integrated palm rests
 - Two-level tilt adjustment
 - Solid-state improved Apple trackpad lets you use the trackpad to select, open or close, and drag without using the trackpad button

Disability Access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical Requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

ADB Power Requirements

- Maximum current draw for all ADB devices: 100 mA with PowerBook Duo Floppy Adapter or 500 mA with PowerBook Duo Dock Plus (a maximum of three ADB devices is recommended)

Environmental Requirements

- Operating temperature: 50 degrees to 95 degrees F
(10 degrees to 35 degrees C)
- Operating temperature in Duo Dock Plus: 50 degrees to 86 degrees F
(10 degrees to 30 degrees C)
- Storage temperature: -13 degrees degrees to 140 degrees F
(-25 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size And Weight

- Height: 1.5 in. (3.8 cm)
- Width: 10.9 in. (27.7 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 4.8 lb. (2.1 kg)

Article Change History:

15 Feb 1996 - Updated sound information.
03 Oct 1995 - Added more information about docking options.
25 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18294



Tech Info Library

Telecom Software 2.3.2: Fax for PC Card Modems Read Me (4/97)

Revised: 4/3/97
Security: Everyone

Telecom Software 2.3.2: Fax for PC Card Modems Read Me (4/97)

Article Created: 2 August 1995
Article Reviewed/Updated: 03 April 1997

TOPIC -----

This article is the Fax for PC Card Modems ReadMe file included with Apple Telecom Software version 2.3.2.

DISCUSSION -----

Fax for PC Card Modems Read Me

Apple Telecom Software
=====

This software runs on the following machines with their respective PC Card modems:

- PowerBook 500 models equipped with a PCMCIA Expansion Module and a PC Card modem. The software can be used with or without the PowerBook Processor Card Upgrade Kit with PowerPC 603e installed.
- PowerBook 5300 models using a PC Card modem.
- PowerBook 190 models using a PC Card modem.

Important information about using the Apple Telecom software

This software provides fax services for use with fax class 2-compatible PC Card modems. Before using the software you should read the Apple Telecom Installation file that comes with it.

Supported Modems

The Apple Telecom software should be compatible with most fax class 2-compatible PC Card modems. The software has been specifically tested for compatibility with

the cards listed below:

- COM1-MC217 and MC218 models.
- PNB-Danube V32bis and Danube V34 models.
- TDK-DF2814 model.

Check with your Apple-authorized service provider to verify if a particular card is compatible with the software.

AppleTalk and modem use

If you are connected to an AppleTalk network, you may get better fax transmission performance if you turn off AppleTalk in the Chooser.

Apple Remote Access use

CCL (connection control language) script files for Apple Remote Access are provided for most popular modems are installed with your system software or your Apple Remote Access software (in the Extensions folder in the System folder). Additionally, an Apple Remote Access CCL, "PC Card Modems ARA 2.0", is installed in the Telecom Documents folder when you install your Apple Telecom software. To use it, you need to drag it to the Extensions folder. This CCL has been tested with the PC Card modems listed above. If it does not work correctly with your modem, you may be able to use one of the other CCL files that is already in your Extensions folder.

If you are using the TDK DF2814 Card, use the TDK DF2814 ARA 2.0 modem file.

What goes where

When you install the Apple Telecom software using the Easy Install option of the Installer program, the following files are installed on the hard disk of your choice.

Hard Disk:

- Fax for PC Card Modems Read Me
- Apple Telecom Installation
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- PC Card Modems•Alink (AppleLink CCL)
- PC Card Modems ARA 2.0 (Apple Remote Access 2.0 CCL)
- TDK DF2814•Alink (AppleLink CCL)
- TDK DF2814 ARA 2.0 (Apple Remote Access 2.0 CCL)

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Fax Extension
- Fax Sender
- Fax Sender GX
- PCMCIA Class2
- Serial Tool

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: Apple Menu Items:

- Fax Terminal (alias of Fax Terminal)

Apple Telecom Installation

=====

Installing the Apple Telecom Software for use With PC Card Modems

This document provides information on installing the Apple Telecom software that comes on your computer, and in accessing the Fax & Telephony Solutions User's Guide that you will need to use the software. You may want to print this document to keep with your user's manual.

Discovering the Apple Telecom software

The Apple Telecom software brings a complete set of fax functions to your desktop. This document tells you how to install and configure it for use with a PC Card modem. The software is designed to work with most class 2-compatible PC card fax modems and has been tested with a number of different cards. Check with your Apple-authorized service provider to verify if a particular card is compatible with the software.

Before you begin

Make sure that you are familiar with the basic operation of your Macintosh. If you are not familiar with the basic concepts, go through the Macintosh Tutorial to learn the basics. See Chapter 1 of the user's manual that came with your PowerBook for instructions on taking the Macintosh Tutorial.

Accessing the Fax & Telephony Solutions User's Guide

The documentation for the Apple Telecom software is included in a file called "Fax & Telephony User's Guide" in the Fax Software Install folder (in the Apple Extras folder) on your computer's hard disk. To print this file, connect your PowerBook to a printer and follow these steps:

Step 1

Open the Apple Extras folder.

Step 2

Open the Fax Software Install folder inside the Apple Extras folder.

Step 3

Double-click the Fax & Telephony User's Guide icon.

The cover of the manual appears on your screen.

Step 4

Choose Print from the File menu.

What you need

In order to send and receive faxes using the Apple Telecom software and a PC card modem, you need the following materials:

- a Macintosh model with built-in PC card slots or PCMCIA Expansion Module
- the Apple Telecom software
- a PC Card modem that is fax class 2-compatible
- the appropriate connector cable between PC Card modem and telephone line (furnished with your modem card)
- the Serial Tool connection tool (comes with your computer's system software and is in the Extensions folder inside the System Folder)

Installing the hardware

You need to install the modem card and connect it to the telephone line in order to use your Apple Telecom software.

1. Insert the modem card into either the upper or lower card slot.

If you do not know how to install a card, refer to the manual that came with your computer.

2. Connect the modem card to the telephone line using the appropriate cable. The cable should be provided with your PC Card modem.

Refer to the documentation that came with your modem card for information on how to connect it to the telephone line.

Installing the software

This section tells you how to install the software you need to send and receive faxes.

The Apple Telecom software is in the Apple Extras folder on your hard disk. You need to run the Installer application program included with the Apple Telecom software before using it with your PC Card modem. The Installer places all the files you need in the appropriate places on your hard disk.

To install the software:

Step 1

Open the Apple Extras folder.

Step 2

Open the Fax Software Install folder inside the Apple Extras folder.

Step 3

Double-click the Installer program icon.

Step 4

If the hard disk that you want to install the software onto is not selected, click Switch Disk until the correct hard disk appears.

Step 5

Click Install.

The Installer places all the files needed to use the Apple Telecom software in the appropriate places on your hard disk.

Step 6

When the Installation is complete, click Restart.

When your Macintosh restarts, you'll have everything you need to begin using the fax functions of the Apple Telecom software.

Setting preferences for the fax software

Once you have completed the hardware and software installations described above, you can quickly get started using some of the features of your Apple Telecom software. In order to use your Apple Telecom software for fax send and receive functions, you need to configure Fax Terminal for your hardware setup.

To configure Fax Terminal:

Step 1

Choose Fax Terminal from the Apple menu.

Step 2

Choose Preferences from the Fax menu.

The Fax Terminal Preferences dialog box appears.

Step 3

Choose PCMCIA Class 2 from the Modem Select pop-up menu.

Step 4

Choose the slot (upper or lower) that contains your modem card from the Port Select pop-up menu.

This configuration allows the Apple Telecom software to work with most available PC card modems, provided that they are fax class 2-compatible. The first chapter of the Fax &Telephony Solutions User's Guide also covers these configuration steps and shows you how to send your first fax. If you have a problem using your modem, recheck the installation of your PC card and then go through the configuration steps again.

For more information on using the Apple Telecom software, refer to Chapters 1 through 6 of the Fax &Telephony Solutions User's Guide.

Article Change History:

02 April 1997 - Updated online references, removed specific references.

10 Jan 1996 - Updated with latest Read Me file.

20 Oct 1995 - Added correct information on the TDK-DF2814 model PC modem.

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Tech Info Library Article Number:18295



Tech Info Library

Power Macintosh 6100 Series: Frequently Asked Questions (11/95)

Revised: 5/22/96
Security: Everyone

Power Macintosh 6100 Series: Frequently Asked Questions (11/95)

Article Created: 30 July 1995
Article Reviewed/Updated: 14 November 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Power Macintosh 6100 series computers.

Questions in this FAQ:
=====

- 1) What is the difference between native software and conventional software?
- 2) My computer does not remember sound settings from restart to restart. I continually have to go back to the Sound control panel and reset the CD input source.
- 3) What causes Type 11 errors?
- 4) Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I see errors that an FPU is not installed.
- 5) I need to run DOS software on my Power Macintosh 6100 series computer. What are my options?
- 6) The microphone from my former Macintosh computer model doesn't work on my Power Macintosh 6100 series computer. What's wrong?
- 7) I have an old program that tells me to turn off 32-bit addressing, but I do not see this as an option in my Memory control panel. Why?

DISCUSSION -----

- 1) Question: What is the difference between native software and conventional software?

Answer: The Power Macintosh runs in two modes, without any further assistance from the user: it can run "native" software, which is software written for the PowerPC chip, or "conventional" software, which is software written for an older 68000, 68020, 68030, or 68040-based computer. Conventional software is sometimes referred to as "68K" software.

Conventional software runs in an "emulation" mode, which is functionally similar to the 68020 processor. The main differences between the 68020 processor and later processors are: (a) it does not have a PMMU (Paged Memory Management Unit), (b) it does not support the SWAP16 instruction, and (c) it does not support a floating point unit. The first point is necessary because the PowerPC has a newer, better, memory management model. The second point is also addressed by improvements in the PowerPC chip. The third point requires different steps to work around; see the FAQ question below. Conventional software will generally run faster than a 68020, probably between Macintosh IIci and Quadra 605 performance, depending on how many references the software makes to the native "toolbox" in the computer.

As new software is sold, you will find reference to "Fat" applications. These are programs that can be run on either a 68K or Power Macintosh computer without modification. The operating system automatically determines which part to use.

Since "Fat" applications are really two programs in one, many installers will offer either a "Power Macintosh" or "Conventional" install. If you have installed a software billing itself as "Accelerated for Power Macintosh" and, once installed, it does not recognize features which definitely exist, such as an FPU, make sure you have installed the correct version and build. Both versions will run on the Power Macintosh, but only the "native" version will benefit from all the special features of the Power Macintosh.

2) Question: My computer does not remember sound settings from restart to restart. I continually have to go back to the Sound control panel and reset the CD input source.

Answer: If the Sound Preferences file, which stores much of this information, is corrupted, the settings may not be getting saved. To resolve this, open your System Folder, then your Preferences folder. Throw away Sound Preferences, and restart. Try to reproduce the problem.

If you have installed any type of disk compression or disk management software, check to make sure that it is not manipulating any of your Preferences files.

3) Question: What causes Type 11 errors?

Answer: Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- RAM problems: you have install bad RAM.
- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Power

- . Macintosh computer).
- Incompatible software running in emulation.

For steps on how to troubleshoot such problems, see the referenced Technical Information Library article.

The online Apple Technical Info Library (go shortcut "TIL") - use the search string "meaning of error type 11 and power macintosh" to locate the article "Power Macintosh: Meaning of Error Type 11".

4) Question: Does my Power Macintosh have an FPU? I see errors that an FPU is not installed.

Answer: All PowerPC chips, which are used on Power Macintosh computers, have a floating point unit.

You may be seeing the "FPU not installed" error for two reasons:

- You are running "conventional" software in 68K emulation. This operating mode does not provide access to the computer's floating point unit. Thus, the program does not work. Certain software "bridges" exist to allow conventional software access to the PowerPC microprocessor's FPU. See the Redgate Communications area to search for such products.
- You are using software, in either emulation or native mode, which is simply failing. Since the PowerPC supports pipelining instructions, a number of errors are occurring simultaneously. They are eventually percolating out as an "FPU not installed" error. An error did occur, but it has nothing whatsoever to do with the need for a floating point unit. You should apply standard troubleshooting steps to resolve this issue.

5) Question: I need to run DOS software on my Power Macintosh 6100 series computer. What are my options?

Answer: There are two ways to run DOS software:

- Use Insignia Solutions' SoftWindows emulator. This is a Macintosh application which emulates a PC DOS/Windows environment. You can get more information, such as pricing, performance, system requirements, and compatibility information from Insignia Solutions by calling the company at 800-848-7677.
- You can use the Apple DOS Compatibility Card. This is a hardware solution, that provides a 486 DX2 processor running at 66 MHz, SoundBlaster support, alternative video support, and up to 32 MB of on-board memory. This effectively produces a "dual processor" environment for your computer, in which Macintosh and DOS applications can run at full processor efficiency, simultaneously.

This card plugs into your single Processor Direct Slot. If you opt to use this card, you will not be able to use other PDS cards, such as an Apple AV Technologies Card, without removing this card, first.

The Apple part number for the DOS Compatibility Card is M3581LL/A. You can order one from any Apple-authorized reseller or Apple-authorized service provider, who can also tell you the current price. To find an Apple-authorized reseller or service provider near you, please call 800-538-9696.

6) Question: The microphone from my former Macintosh computer model doesn't work on my Power Macintosh 6100 series computer. What's wrong?

Answer: The microphone used with many early Macintosh computer models is called the Apple Omnidirectional Microphone. It comes with a 1/2" plug. The microphone used with the Performa 600 series computers (as well as all Power Macintosh computers, the Performa 475/6, Performa 6100 series computers, 500 series computers, and Quadra 660AV and 840AV) is called a PlainTalk microphone. It has a 3/4" plug, the extra 1/4" of which is used to reach a power source that attenuates the microphone.

The correct microphone for use with the Power Macintosh 6100 series is the PlainTalk microphone. Our part number is M9060Z/A. You can order this through many Apple-authorized retailers and catalog resellers. Their numbers can be obtained by contacting our 24-hour referral service at 800-538-9696.

For further information on the PlainTalk microphone, consult the online Apple Technical Info Library (go shortcut "TIL"). Use the search string "plaintalk microphone" to locate the article "Macintosh: PlainTalk Audio Port Microphone Support".

7) Question: I have an old program that tells me to turn off 32-bit addressing, but I do not see this as an option in my Memory control panel. Why?

Answer: The Power Macintosh always runs in 32-bit mode. There is no way to turn it off; therefore, there is no switch in the Memory control panel.

Article Change History:

14 Nov 1995 - Added keyword.

07 Nov 1995 - Reviewed for technical accuracy.

02 Nov 1995 - Corrected search string information.

Support Information Services

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Tech Info Library Article Number:18299



Tech Info Library

Power Macintosh 7200/7500/8500: New Items in Sys Folder 11/95

Revised: 3/20/96
Security: Everyone

Power Macintosh 7200/7500/8500: New Items in Sys Folder 11/95

Article Created: 03 August 1995
Article Reviewed/Updated: 20 November 1995

TOPIC -----

This article lists the updated Apple software components on the new Power Macintosh 7200, 7500 and 8500 computers in comparison to standard System 7.5 components. The new components of System 7.5.2 are designed to run on these Power Macintosh computers only.

The TIL article "Apple Software: Current Versions" will be updated as appropriate as future releases of our system software are made available.

"n/a" - not applicable

"-" - no version number

DISCUSSION -----

Begin_Table

Ships with:	7.5	7200	7500/8500
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System Folder

=====

Finder	7.1.4	7.5.3	7.5.3
System Enabler 701	n/a	1.1	1.2
Scrapbook File	7.5	7.5	7.5
System	7.5	7.5.2	7.5.2

System Folder:Apple Menu Items

AppleCD Audio Player	2.0	2.1	2.1
Apple Video Player (f alias)	n/a	n/a	1.3
Automated Tasks (f alias)	7.5	7.5	7.5

Calculator	7.5	7.5	7.5
Chooser	7.5	7.5.3	7.5.3
Control Panels (f alias)	7.5	7.5	7.5
Find File	1.0	1.1.1	1.1.1
Graphing Calculator	1.0	1.0	1.0
Jigsaw Puzzle	1.0	1.0.1	1.0.1
Key Caps	7.5	7.5	7.5
Note Pad	7.5	7.5	7.5
Scrapbook	7.5	7.5	7.5
Stickies	1.0	1.0.1	1.0.1
• Shut Down	1.0P	1.1	1.1

System Folder:Control Panels

Apple Menu Options	1.0	1.0.2	1.0.2
AppleTalk	n/a	1.0.6	1.0.6
Color	7.1	7.1	7.1
ColorSync System Profile	1.0.5	2.0	2.0
Control Strip	-	-	1.3
Date & Time	7.5	7.5	7.5
Desktop Patterns	7.5	7.5	7.5
Energy Saver		2.0	2.0
Extensions Manager	3.0	3.0.2	3.0.2
File Sharing Monitor	7.1	7.1	7.1
General Controls	7.5	7.5.5	7.5.5
Keyboard	7.1	7.5.1	7.5.1
Labels	7.1	7.1	7.1
Launcher	2.4	2.7	2.7
Macintosh Easy Open	1.1	1.1.1	1.1.1
Map	7.5	7.5	7.5
Memory	7.5	7.5.4	7.5.4
Monitors	7.5	7.5.3	7.5.3
Mouse	7.3	7.3.1	7.3.1
Numbers	7.1	7.1	7.1
PC Exchange	2.0.2	2.0.5	2.0.5
Sharing Setup	7.1	7.1	7.1
Sound	8.0.3	8.0.3	n/a
Sound & Displays	n/a	n/a	1.0
Startup Disk	7.3.2	7.3.2	7.3.2
TCP/IP	n/a	1.0.5	1.0.6
Text	7.1	7.1	7.1
Users & Groups	7.1	7.1	7.1
Views	7.1	7.1	7.1
WindowShade	1.3	1.3.1	1.3.1

System Folder:Control Strip Modules Folder

AppleTalk Switch	n/a	n/a	1.3
File Sharing	n/a	n/a	1.3
Sound Volume	n/a	n/a	1.3
Monitor Bit Depth	n/a	n/a	1.0
Monitor Resolution	n/a	n/a	1.0
Video Mirroring	n/a	n/a	1.3

System Folder:Extensions

7200 Graphics Accelerator	n/a	1.0	n/a
7200 & 9500 Guide Additions	n/a	1.0	n/a
7500 & 8500 Guide Additions	n/a	n/a	1.0
About Apple Guide	1.2	1.2	1.2
Apple CD-ROM	5.0.2	5.1.1	5.1.1
Apple Color SW Pro CMM		1.0	1.0
Apple Guide	1.2	1.2.7	1.2.7
Apple Photo Access	2.0	2.1	2.1
AppleScript		1.1	1.1
AppleScript	1.1	1.1	1.1
AppleScriptLib	1.1	1.1	1.1
AppleShare	3.5	3.5	3.5
Audio CD Access	5.0.2	5.1	5.1
AV Setup	n/a	n/a	1.0
Clipping Extension	7.1.4	7.1.4	7.1.4
Color Picker	2.0.1	2.0.1	2.0.1
Color SW 2000 Series CMM	n/a	1.0	1.0
Color SW 2400	n/a	2.1	2.1
Color SW Pro	n/a	1.5.2	1.5.2
ColorSync	1.0.5	2.0	2.0
Display Guide Additions	n/a	n/a	1.0.1
EM Extension	7.5	3.0.2	3.0.2
Energy Saver Extension	n/a	2.0	2.0
Energy Saver Guide Additions	n/a	1.0	1.0
Ethernet (Built-In)	n/a	1.0.1	1.0.1
File Sharing Extension	7.1.1	7.6.2	7.6.2
Find File Extension	1.0	1.1.1	1.1.1
Finder Help	7.1.4	7.5.3	7.5.3
Finder Scripting Extension	1.2	7.5.3	7.5.3
Finder Update	n/a	7.5.3	7.5.3
Foreign File Access	5.0.2	5.1	5.1
High Sierra File Access	5.0.2	5.1	5.1
ImageWriter	7.0.1	7.0.1	7.0.1
ISO 9660 File Access	5.0.2	5.1	5.1
LaserWriter	7.2	7.2	7.2
LaserWriter 8	8.1.1	8.2.2	8.2.2
LaserWriter 300	1.2	1.2	1.2
Macintosh Guide	1.2	1.2	1.2
Network	n/a	7.1.3	7.1.3
Network Extension	7.1.3	7.1.3	7.1.3
ObjectSupportLib	1.0.2	1.0.2	1.0.2
Open Tpt AppleTalk Library	n/a	1.0.6	1.0.6
Open Tpt Internet Library	n/a	1.0.6	1.0.6
Open Transport Library	n/a	1.0.6	1.0.6
Open TransportLib	n/a	1.0.6	1.0.6
OpenTptAppleTalkLib	n/a	1.0.6	1.0.6
OpenTptInternetLib	n/a	1.0.6	1.0.6
Printer Share	1.1.1	1.1.2	1.1.2
PrintMonitor	7.1.2	7.1.2	7.1.2
QuickTime	2.0	2.0	2.0.9

QuickTime PowerPlug	2.0	2.0	2.0.9
Serial (Built-In)	n/a	1.0.2	1.0.2
Shared Library Manager	n/a	2.0	2.0
Shared Library Manager PPC	n/a	2.0	2.0
Shortcuts	1.2	1.2	1.2
SimpleText Guide	n/a	n/a	1.0.1
Sound & Display Guide Additions	n/a	n/a	1.0.1
Speech Manager	1.3	1.3	1.3
StyleWriter 1200	n/a	2.1	2.1
ThreadLib	2.1	2.1.2	2.1.2
WorldScript Power Adapter	7.5.1	7.5.2	7.5.2

System Folder:Extensions:Printer Descriptions

LaserWriter	3.2	3.3	3.3
LaserWriter 16/600 PS	n/a	1.0	1.0
LaserWriter 16/600 PS Fax	n/a	1.0	1.0
LaserWriter II NT	3.7	3.7	3.7
LaserWriter II NTX	3.5	3.5	3.5
LaserWriter II NTX v50.5	1.2	1.2	1.2
LaserWriter II NTX v51.8	2.5	2.5	2.5
LaserWriter II NTX-J v50.5	1.5	1.5	1.5
LaserWriter IIIf v2010.113	3.0	3.0	3.0
LaserWriter IIIf v2010.130	3.1	3.1	3.1
LaserWriter IIg v2010.113	3.0	3.0	3.0
LaserWriter IIg v2010.130	3.1	3.1	3.1
LaserWriter Personal 320	1.10	1.11	1.11
LaserWriter Personal NT	2.8	2.8	2.8
LaserWriter Personal NTR	1.9	1.9	1.9
LaserWriter Plus v38.0	3.7	3.7	3.7
LaserWriter Plus v42.2	3.5	3.5	3.5
LaserWriter Pro 400 v2011.110	n/a	1.1	1.1
LaserWriter Pro 405 v2011.110	n/a	1.0	1.0
LaserWriter Pro 600 v2010.130	1.15	1.15	1.15
LaserWriter Pro 630 v2010.130	1.14	1.14	1.14
LaserWriter Pro 810	1.3	1.3	1.3
LaserWriter Pro 810f	1.3	1.3	1.3
LaserWriter Select 360	1.10	1.10	1.10
LaserWriter Select 360f	1.10	1.10	1.10
LaserWriter Select 610	n/a	1.30	1.30

System Folder:Extensions:Scripting Additions

AGStart	1.0	1.0	1.0
Beep	1.1	1.1	1.1
Choose Application	1.1	1.1	1.1
Choose File	1.1	1.1	1.1
Current Date	1.1	1.1	1.1
Display Dialog	1.1.1	1.1.1	1.1.1
File Commands	1.1	1.1	1.1
Load Script	1.1	1.1	1.1
MonitorDepth	1.0	1.0	1.0

New File	1.1.1	1.1.1	1.1.1
Numerics	1.1	1.1	1.1
Read/Write Commands	1.1.1	1.1.1	1.1.1
Run Script	1.1.1	1.1.1	1.1.1
Set Volume	1.0	1.0	1.0
Store Script	1.1	1.1	1.1
String Commands	1.1	1.1	1.1
Time to GMT	1.1.1	1.1.1	1.1.1

System Folder:Extensions:Scripting Additions:Dialects

English Dialect	1.1	1.1	1.1
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System Folder:Extensions:Voices Folder

Albert	n/a	n/a	1.4
Bad News	n/a	n/a	1.4
Bahh	n/a	n/a	1.4
Bells	n/a	n/a	1.4
Boing	n/a	n/a	1.4
Bubbles	n/a	n/a	1.4
Cellos	n/a	n/a	1.4
Deranged	n/a	n/a	1.4
Fred	n/a	n/a	1.4
Good News	n/a	n/a	1.4
Hysterical	n/a	n/a	1.4
Junior	n/a	n/a	1.4
Kathy	n/a	n/a	1.4
Pipe Organ	n/a	n/a	1.4
Princess	n/a	n/a	1.4
Ralph	n/a	n/a	1.4
Trinoids	n/a	n/a	1.4
Whisper	n/a	n/a	1.4
Zarvox	n/a	n/a	1.4

System Folder:Fonts

Chicago	-	-	-
Courier	-	-	-
Geneva	-	-	-
Helvetica	-	-	-
Monaco	-	-	-
New York	-	-	-
Palatino	-	-	-
Symbol	-	-	-
Times	-	-	-

System Folder:Launcher Items

Script Editor (alias)	1.1.1	1.1.1	1.1.1
SimpleText (alias)	1.1.1	1.2	1.2

System Folder:Preferences

System Folder:Preferences:ColorSync Profiles

Apple 12" RGB Standard	1.0.3	2.0	2.0
Apple 13" RGB Standard	1.0.3	2.0	2.0
Apple 16" RGB Page-White	1.0.3	2.0	2.0
Apple 16" RGB Standard	1.0.3	2.0	2.0
Apple 21" RGB Page-White	1.0.3	2.0	2.0
Apple 21" RGB Standard	1.0.3	2.0	2.0
Apple Multiple Scan 17 - 9300	1.0.3	2.0	2.0
Apple Multiple Scan 17 - D50	1.0.3	2.0	2.0
Apple Multiple Scan 17 - D65	1.0.3	2.0	2.0
Apple Multiple Scan 20 - 9300	1.0.3	2.0	2.0
Apple Multiple Scan 20 - D50	1.0.3	2.0	2.0
Apple Multiple Scan 20 - D65	1.0.3	2.0	2.0
Apple Performa Display	1.0.3	2.0	2.0
Apple Performa Plus Display	1.0.3	2.0	2.0
Apple Color SW Pro SN	n/a	1.0.3	1.0.3
Apple Color SW Pro	n/a	1.0.3	1.0.3
Color SW 2000 Series Pattern	n/a	1.0.3	1.0.3
Color SW 2000 Series Scatter	n/a	1.0.3	1.0.3
Mac Color Display Standard	n/a	2.0	2.0

MacintoshHD:

SimpleText	1.1.1	1.2	1.2
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MacintoshHD:Apple Extras

MacintoshHD:Apple Extras:Plaintalk

Plaintalk	n/a	n/a	1.4
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MacintoshHD:Apple Extras:Telecom Software

Apple Telecom	n/a	2.1	1.2
Apple Telecom 2.1 Install	n/a	2.1	2.1
Geoport Telecom Adapter ReadMe	n/a	2.1	2.1
Apple Telecom Disk 1	n/a	-	-
Fax Software	n/a	-	-
MegaPhone	n/a	1.0.2	1.0.2
Megaphone	n/a	1.0.2	1.0.2
Megaphone ReadMe			

MacintoshHD:Apple Extras:Sound Input Amplification

Sound Input Amplification	n/a	1.0	1.0
Using A Microphone ReadMe			

MacintoshHD:Apple Extras:Pointer Mode Control Panel

Pointer Mode		1.0	-
Pointer Mode Read Me			

MacintoshHD:Apple Extras:Extra Alert Sounds

Basil	n/a	1.0	1.0
Bend Me	n/a	1.0	1.0
Blue Dust	n/a	1.0	1.0
Bye!	n/a	1.0	1.0
Dewdrop	n/a	1.0	1.0
Jacaranda	n/a	1.0	1.0
Natal	n/a	1.0	1.0
Ryan's Hope	n/a	1.0	1.0
Sheet	n/a	1.0	1.0
Solly	n/a	1.0	1.0
Transvaal	n/a	1.0	1.0
Extra Alert Sounds ReadMe	n/a	1.0	1.0

End_Table

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20 Nov 1995 - Reviewed for technical accuracy; added keyword.

29 Sep 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18301



Tech Info Library

Apple Personal Diagnostics 1.1.3 Updater: ReadMe File (8/95)

Revised: 8/4/95
Security: Everyone

Apple Personal Diagnostics 1.1.3 Updater: ReadMe File (8/95)

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Article Created: 04 August 1995

TOPIC -----

This article contains the Read Me file included with the Apple Personal Diagnostics Updater 1.1.3 program available from online services.

DISCUSSION -----

This file provides step-by-step instructions on how to apply the APD 1.1.3 update to your copy of Apple Personal Diagnostics. There are two parts to updating Apple Personal Diagnostics: both the Apple Personal Diagnostics application and the APD Emergency application need to be updated.

If you have a problem launching one of the updater applications because there is not enough memory, you may want to reboot your machine with extensions turned off. To do this simply hold down the Shift key on your keyboard during the boot process.

Apple Personal Diagnostics

To update the Apple Personal Diagnostics application use the file APD 1.1.3 Updater. This application will update Apple Personal Diagnostics versions 1.1 or 1.1.1 to the latest release version 1.1.3. This document provides the step-by-step procedure on how to update your copy of Apple Personal Diagnostics.

Important: Do NOT use this application to update your original disk! Always work with a copy.

1) Use either the Search button or the Select File... button to locate your copy of Apple Personal Diagnostics to be updated. Search will scan your disk automatically and locate any copies of Apple Personal Diagnostics. Select File... will present a standard Open dialog which lets you navigate to your copy of Apple Personal Diagnostics.

The file(s) found will then appear in the scrollable area above the buttons.

- 2) Select the file you want to update from the scrollable list.
- 3) Click the Update button.
- 4) Once the update process is complete, a dialog saying "The file has been successfully updated" will appear.
- 5) Click the Quit button.

Your copy of Apple Personal Diagnostics is now updated to version 1.1.3.

- 6) Launch the updated copy of Apple Personal Diagnostics to make sure it's working correctly.

If there are any problems you can recover your old copy of Apple Personal Diagnostics from the Trash. If you have updated more than one copy of Apple Personal Diagnostics, there may be multiple copies in the trash. The file name "Apple Personal Diagnostics" is the copy you just updated.

APD Emergency

To update the APD Emergency application use the file APDE 1.1.3 Updater. This application will update APD Emergency versions 1.1 or 1.1.1 to the latest release version 1.1.3. This document provides a step-by-step procedure on how to update your copy of APD Emergency.

Important: Do NOT use this application to update your original disk! Always work with a copy.

- 1) Locate the correct APD Emergency disk for your computer. Use the instructions that follow to make a copy of this disk.
- 2) Launch Disk Copy 4.2.
- 3) Lock your APD Emergency disk and then insert it into your floppy drive.
- 4) Click on the Read Master Floppy button. Disk Copy will read the files from your disk into memory. When it's complete your disk will be ejected.
- 5) Now click on the Make A Copy button. Disk Copy will flash the message "Please insert a disk to COPY ONTO...". Insert a new blank disk into your floppy drive. (Use a blank disk because anything on this disk will be erased. If the disk has been used previously, a dialog asking if you want to erase this disk will appear.)
- 6) Click the Duplicate button. When the copy is complete the disk will be ejected.
- 7) Label the disk appropriately and quit the Disk Copy program.
- 8) Create a folder on your hard drive called "APDE".
- 9) Insert the new disk you just created back into the floppy drive.

10) Copy the file APD Emergency from the floppy to the APDE folder on your hard drive.

11) Launch the APDE 1.1.3 Updater application.

12) Use the Select File... button to locate your copy of APD Emergency to be updated. Select File... will present a standard Open dialog which lets you navigate to your copy of APD Emergency.

The file selected will then appear in the scrollable area above the buttons.

13) Click the Update button.

14) Once the update process is complete, a dialog saying "The file has been successfully updated" will appear.

15) Click the Quit button.

16) Now copy the file APD Emergency from the APDE folder on your hard drive to the floppy still in your floppy drive.

17) When asked if you want to replace the existing file, press OK.

18) Drag the APDE folder on your hard drive into the trash.

Your copy of APD Emergency is now updated to version 1.1.3.

19) In order to verify that the updated copy of APD Emergency is working correctly, boot your computer from the new APD Emergency disk and run the tests. If there are any problems, repeat the above process again.

Support Information Services

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Tech Info Library

Apple Personal Diagnostics 1.1.3: ReadMe File (8/95)

Revised: 8/4/95
Security: Everyone

Apple Personal Diagnostics 1.1.3: ReadMe File (8/95)

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Article Created: 04 August 1995

TOPIC -----

This article contains the Read Me file included with Apple Personal Diagnostics 1.1.3.

DISCUSSION -----

APPLE PERSONAL DIAGNOSTICS 1.1.3

The purpose of this document is to provide late-breaking information as a supplement to the Apple Personal Diagnostics User's Guide. Please refer to the User's Guide for operating instructions and other important and time-saving troubleshooting tips when using Apple Personal Diagnostics (APD). Also, be sure to fill out and return your software registration card so that Apple can notify you of future upgrades to APD 1.1.3 as they become available.

System Requirements

APD 1.1.3 runs on Apple computers starting with the Macintosh Plus and is fully compatible with system software versions 6.0.7 through 7.5.2 (including Performas system software). Installing and using the Automated Diagnostics functionality of APD 1.1.3 requires that your system is running system software version 7.0 or greater.

What's New

APD 1.1.3 includes the following changes and enhancements:

- APD 1.1.3 is required for the recently released Power Macintosh 9500 series computers. If you attempt to run previous versions of APD on any Macintosh with the new PCI-bus architecture (which has replaced NuBus), APD will give false RAM Test results and may crash. Note that APD 1.1.3 will not display PCI-bus information in the "Video and Expansion Cards" window of the System Info screen and will not test VRAM installed in a Power Macintosh computer.

- APD 1.1.3 now supports over 140 Macintosh computers. (See the "Computers Supported by APD" file on the Application Disk for a complete listing.)
- The two emergency disks included with APD 1.1.3 continue to provide startup and emergency repair software for most Macintosh computers, but not Macintosh computers which require MacOS 7.5.1 or 7.5.2. (See "Creating New Emergency Disks" later in this document for a complete list of the exceptions.)
- The option settings allowed by APD 1.1.3 (such as turning test selections on or off) are now saved in the preferences file, so that you do not have to reset these options each time you run APD.
- APD Emergency 1.1.3 has a new on-screen log window which displays the status and results of diagnostic tests, as well as additional hardware information.
- The APD Emergency 1.1.3 bootable disks contain the international version of the MacOS. When you boot from an APD Emergency disk, the international time and date formats will appear in the on-screen log window.
 - Time will be displayed using a 24-hour clock (instead of a 12-hour clock which is more common in the United States). For example, "13:23" is the equivalent to "1:23 pm".
 - Dates will be displayed in the DD/MM/YY format (instead of MM/DD/YY). For example, "02/03/95" is equivalent to "March 2, 1995" rather than "February 3, 1995".If you prefer to use another time and date format, please see "Creating New Emergency Disks" to create an emergency disk using the System Software from Apple Macintosh CD or Disk Tools disk that came with your Macintosh computer.
- APD 1.1.3 and APD Emergency 1.1.3 now display the location of duplicate System Folders and corrupted System files found by the System Software test.
- APD 1.1.3 now supports file checking and directory structure repair of larger volumes (over 2 GByte).
- The System Software test in APD 1.1.3 and in APD Emergency 1.1.3 will now only run once, even if it is selected as one of a suite of tests for looping. This allows more time for tests where looping is effective in finding intermittent problems.
- When you launch APD Emergency 1.1.3 from a floppy, the System Software test now deselects the floppy drive by default. (There is generally no reason to run the System Software test on the APD Emergency disk.)
- APD 1.1.3 and APD Emergency 1.1.3 System Software test now also checks for duplicate System Folders on non-boot drives.
- APD 1.1.3 and APD Emergency 1.1.3 now limits the looping of tests to a maximum of 24 hours.

Installation Instructions

1. Insert the Application Disk into your floppy drive.

2. Drag the APD application icon from the floppy drive onto your hard drive.
3. To install the Automated Diagnostics (System 7 or later only), drag the Automated Diagnostics system extension from the floppy drive onto the closed System Folder of your hard drive. Allow the system software to place the extension in the proper folder (the Extensions folder within the System Folder).

In most cases, you'll want to start up your computer and run APD from your computer's hard drive.

File Sharing Alert

Turn off File Sharing before you start the APD application. If File Sharing is on, you will receive an on-screen alert or see dimmed selection buttons. To switch File Sharing off, go into the Sharing Setup control panel and click on the stop button.

Turn Off Extensions, Applications, and Other Programs

For best results, start your system with all extensions, applications, and other programs off before launching APD (or use an extensions manager to disable extensions at startup).

To turn extensions off, shut down your system, then switch on the system while holding down the Shift key (System 7.0 and later). You should then see a message saying "Welcome to Macintosh, Extensions Off." To perform the equivalent operation on a computer running System 6.0.7 or 6.0.8, please refer to the "Software Remedies" section in the Troubleshooting chapter of the Apple Personal Diagnostics User's Guide.

There is a known conflict between APD and Thunder 7 spell checking software from Baseline Publishing. Before using APD or APD Emergency, use the Thunder 7 control panel to turn off spell checking.

Using the Emergency Disks

This package contains two emergency disks that allow you to perform certain system software repairs and to boot from a floppy disk when you are unable to boot from your system's hard drive. Each disk provides the APD Emergency application, as follows:

APD Emergency Disk 1 is a 1.4 MB bootable startup and repair disk for most Macintosh computers with a 1.4 MB floppy drive released through January 1995 (excluding Workgroup Server 9150 computers, computers in which the Macintosh Processor Upgrade card is installed, and computers requiring System Software 7.5.1 or 7.5.2).

Note: To create emergency disks for these computers see "Creating New Emergency Disks" below.

Note: If you have installed a Power Macintosh Upgrade Card, you can use APD

Emergency Disk 1 to start your Macintosh computer with the Power Macintosh Upgrade Card on or off at startup. However, if you have a problem, you may want to reset PRAM first and then use APD Emergency Disk 1 to boot your computer. (Refer to the "Software Remedies" section in the Troubleshooting chapter of the Apple Personal Diagnostics User's Guide for instructions on resetting PRAM.)

APD Emergency Disk 2 is an 800K bootable startup and repair disk providing the APD Emergency application for Macintosh computers that did not originally come with, or were not upgraded to include, a 1.4 MB floppy drive (Macintosh Plus, SE, SE/30, II, IIfx, and IIfx computers).

The system software on these disks has been minimized to reduce disk requirements. Do not use the software on these disks to install system software on your computer's hard drive. Also, make copies of the original disks to use when you need to start your computer from an emergency disk, and keep your original disks in a safe place. Please refer to the "Getting Started" section of the Apple Personal Diagnostics User's Guide for detailed instructions on the proper use of these disks.

Creating New Emergency Disks

Workgroup Server 9150 computers, computers with the Macintosh Processor Upgrade card installed, and computers requiring System 7.5.1 or 7.5.2 require different system software from that provided on APD Emergency Disk 1. To make an emergency startup disk for these computers:

1. Insert the Apple Macintosh CD or Disk Tools disk that came with your computer or Processor Upgrade Card. Create a temporary folder named Emergency Disk on your computer's hard drive and copy the System file and the System Enabler file from the Apple Macintosh CD or Disk Tools disk to the Emergency Disk folder. Eject the Apple Macintosh CD or Disk Tools disk.
2. Insert APD Emergency Disk 1 and copy the APD Emergency application to the Emergency Disk folder. Then eject the APD Emergency Disk 1.
3. Format a 1.4 MB floppy disk and label the disk APD Emergency Disk. Optionally, you may want to add your computer's model name to the label.
4. Copy the System file, the System Enabler file, and the APD Emergency application file from the Emergency Disk folder to the new emergency disk.
5. On the floppy disk, rename the APD Emergency application to Finder. (Changing the application's name to Finder lets you start up using the APD Emergency application instead of the System Finder.)
6. Eject the new emergency disk and lock the disk. Drag the Emergency Disk folder on your computer's hard drive to the Trash and empty the trash (select Empty Trash from the Special menu).
7. Check the new emergency disk you've created to make sure that your system boots correctly and that you can run the APD emergency application from the new disk.

Automated Diagnostics

Installing and running the Automated Diagnostics functionality of APD software requires that your system is running System Software version 7.0 or greater. The startup delay for Automated Diagnostics has been set to 20 minutes (default).

Certain extensions and third-party software programs that perform functions considered to be system activities may prevent Automated Diagnostics from starting up. Also, some third-party utilities may interfere with Automated Diagnostic's operation.

Automated Diagnostics runs in non-native or emulation mode on Power Macintosh computers, so it does not perform an FPU test (since Power Macintosh emulation does not provide FPU functionality).

Automated Diagnostics may erroneously report problems with drives that support removable media, if the media is removed after the Macintosh is booted.

Help Window

The default setting for the Help window is to have it hidden from view. You can activate the Help window from the Windows menu in the Menu bar. Note: In addition to hiding and showing the Help window, you can move it or change its size to suit your preferences.

Accelerator Cards

If you've installed a third-party accelerator card, you may want to remove or disable the card before running APD to avoid possible incompatibilities.

Video Mirroring

Turn off video mirroring before running APD.

RAM Test Conflicts

Turn off virtual memory and disable RAM optimization utility applications before you run APD RAM tests. (Some RAM optimization utility applications cause your system to behave as if virtual memory were on. The virtual memory setting in your system's Memory control panel cannot disable these applications.)

Low-Memory Alerts

APD returns a low-memory alert when it does not have enough memory to run or is running low on memory, for example, if you've created a report that requires more memory than is currently available. To allocate more memory to the APD application, you can do one or more of the following:

If you are using System 7, or System 6 with MultiFinder:

- Quit other applications that may be running at the same time as APD.
- If you have sufficient RAM installed in your system, quit the APD application,

open the APD Get Info box and increase the "preferred" application memory size to 1500K. (The application memory size is initially set to 1200K.)

- Close any open report.
- Reduce the size of any installed RAM disk and the system RAM cache.

If you are using System 6 with Finder rather than MultiFinder:

- Close any open report.
- Reduce the size of any installed RAM disk and the system Disk cache.

AppleTalk Zones

Under certain conditions (for example, during periods of heavy network activity) System Information may report an AppleTalk zone to be "Unknown."

System Info and Partitioned Hard Drives

The SCSI Device display in System Info does not provide information on multiple drive partitions. Typically, the display lists the name of a single partition on the drive corresponding to the SCSI device, however, the exact information that appears depends on the software used to partition the hard drive.

Looping the Floppy Drive Test

Running the Floppy Drive test for more than approximately 50 loops can cause the floppy drive to temporarily overheat and induce a test failure.

Power Macintosh Upgrade Cards

Basic Info identifies the CPU type as Power Macintosh when a computer with a Power Macintosh Upgrade or Macintosh Processor Upgrade card is operating in "Power Macintosh" mode; however, the card does not appear in Video and Expansion Card Information displays.

Creating Report Log Files

Using APD 1.1.3, you can create log files and then reload them later to compare with updated reports. Due to changes in the information included in reports, APD 1.1.3 cannot read log files created by APD 1.0.

Basic Info Reporting of Startup Devices

Basic Info lists the startup device selected in the Startup Disk control panel when APD was launched. If no device is selected in the Startup Disk control panel, or if you've disconnected (or unmounted) the original startup device, Basic Info will not reflect the current setting or may report it as an unknown device.

If you run System Software Check on the boot disk before you run System Info, then the Basic Info screen may report the startup device as an unknown device.

Benchmark Check Results

The results you get from running Benchmark checks may vary, depending on a range of different factors (see the User's Guide for more information). Therefore, you can obtain more accurate and consistent comparisons if you run Benchmark checks several times, and then average the results.

The results of the Individual Checks reflect the true speed of your system compared to a Macintosh computer chosen by you from the pull-down menu. The Overall Check graph, on the other hand, is a performance ratio that uses a relative scale of zero to 150 (or zero to 2000 on a Power Macintosh), where a Macintosh Plus equals 1. For example, if the score for your computer is 80, then you can infer that, overall, your computer is 80 times faster than a Macintosh Plus. All scores are relative to a Macintosh Plus.

Benchmark results may be affected by currently active applications and whether you are using FPU emulation software, video mirroring, accelerator cards, virtual memory, RAM optimization utilities, etc. Turn off all of these items before running APD to obtain more accurate and consistent results from the Benchmark checks.

On Macintosh Centris AV and Quadra AV computers, there is a known conflict between the Benchmark FPU checks and Express Modem software. Disable the Express Modem extension before running Benchmark checks.

Display Patterns

For a PowerBook with an external display, the Display Patterns Test uses patterns designed for an LCD display on the external monitor, rather than the specific patterns that would otherwise appear.

When using System 7.5 or third-party clock utilities, the clock may appear when test patterns display on your screen. The clock does not affect the operation of the Display Patterns checks.

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Support Information Services

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Tech Info Library Article Number:18303



Tech Info Library

Apple Media Kit: Spinning Cursor Issue on Power Macintosh 6/96

Revised: 5/23/96
Security: Everyone

Apple Media Kit: Spinning Cursor Issue on Power Macintosh 6/96

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Article Created: 4 August 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

When I launch an Apple Media Tool (AMT) project on a Power Macintosh 7200, 7500, 8500, or 9500 running System 7.5.2 with a PowerPC 604 processor, it crashes with a Type 11 error or I get a spinning cursor and the machine hangs.

This same hang occurs with my finished project when launched from its CD-ROM disc.

DISCUSSION -----

At this time, there are different solutions for what is known as the "AMK Spinning Cursor Bug" depending whether you are a user or developer. The solutions have been posted to Apple Online SW Update areas.

This issue can occur when a media application created with the Apple Media Tool is run on any Power Macintosh or PowerBook computer with System 7.5.2. The symptom is you have just clicked to go to a new screen (or launched an AMK (Apple Media Kit) program) and the computer hangs. The problem is caused by the spinning color cursors that AMK uses to indicate that processing is occurring.

The three solutions below address different audiences:

Solution 1 - for developers

Developers with existing titles should distribute the "AMK Launch'Nplay" application to customers who report crashes. Double-click the AMK Launch'Nplay application to use it, you will then be prompted with a standard get-file dialog. Navigate to your AMK application and open it. The title will be launched and will not crash -- you will notice there are no spinning cursors. You must use AMK Launch'Nplay to open a title EVERY TIME you want to play it. AMK Launch'Nplay will not run on non-PowerPC-based computers because it is only required for PowerPC-based computers.

Solution 2 - for developers

If you are an Apple Media Tool developer currently working on titles, use the "PROGRAM" file from the Apple Online SW Update areas. This is a replacement for one of the files in the AMT:Runtime Maker:CODES folder. Drag this new version to the folder and replace the old PROGRAM. Rebuild any titles you are currently working on.

Solution 3 - for programmers

If you are an Apple Media Tool Programming Environment user, replace the cursor.c file in your key:RUNTIME folder with the one from the Apple Online SW Update areas.

Solution 4 - for end users

If you are trying to use a media title such as a CD-ROM disc, and you are experiencing the symptoms described above on a Power Macintosh computer, download the AMK Spinning Cursor Bug Fix available from online services. Double-click the included AMK Launch'NPlay application to use it, you will then be prompted with a standard get-file dialog. Navigate to your AMK application and open it. The title will be launched and will not crash, you'll also notice there are no spinning cursors. You must use AMK Launch'NPlay to open a title EVERY TIME you want to play it.

Please contact AppleLink: DEVSUPPORT if you experience any problems with any of these solutions.

These articles can help you locate the AMK Spinning Cursor Bug Fix mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

23 May 1996 - Updated for technical accuracy.
04 Dec 1995 - Updated online availability of fix.

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Tech Info Library Article Number:18306



Tech Info Library

AppleShare Client for Windows: Fax Through Ethernet (8/95)

Revised: 8/7/95
Security: Everyone

AppleShare Client for Windows: Fax Through Ethernet (8/95)

=====

Article Created: 7 August 1995

TOPIC -----

Is it possible to fax from a PC running AppleShare Client for Windows to a LaserWriter 16/600 PS through an Ethernet card?

DISCUSSION -----

No. Faxing is done via the PSFax software, that ships with the LaserWriter 16/600 PS, which looks for a serial or parallel port.

Support Information Services

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Tech Info Library Article Number:18307



Tech Info Library

AppleShare Client for Windows & Intel Ethernet Pro Card (8/95)

Revised: 8/7/95
Security: Everyone

AppleShare Client for Windows & Intel Ethernet Pro Card (8/95)

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Article Created: 7 August 1995

TOPIC -----

This article describes an installer Problem on PCs which have the Intel Ethernet Pro Card.

DISCUSSION -----

During the installation process, if the workstation has an Intel Ethernet Pro network interface card, the installer omits a necessary parameter for the AARP protocol. This necessary parameter is the network number. Manually edit the NET.CFG file and insert the 80F3 address as follows:

The affected line reads:

PROTOCOL AARP ETHERNET_SNAP

It should read:

PROTOCOL AARP 80F3 ETHERNET_SNAP

Support Information Services

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Tech Info Library Article Number:18309



Tech Info Library

MacX 1.5: Product Description (9/95)

Revised: 9/22/95
Security: Everyone

MacX 1.5: Product Description (9/95)

Article Created: 7 August 1995
Article Created: 21 September 1995

TOPIC -----

This article describes MacX 1.5.

DISCUSSION -----

MacX software from Apple Computer delivers high-performance X Window computing for Macintosh and other Mac OS-based systems. This easy-to-use software helps increase users' productivity by enabling them to run both Macintosh applications and network-based X client applications on one Macintosh computer.

MacX enables a Mac OS-based computer to act as an X Window System display server. It supports the latest widely adopted standard for the X Window System: Version 11, Release 5 (X11R5). MacX 1.5 is optimized for accelerated performance on Power Macintosh computers while maintaining high performance on 680x0-based Macintosh systems.

With MacX, software developers, engineers, scientists, higher-education faculty and students, support personnel, and other users can access the rich application and development environments of network-based UNIX and VMS systems without sacrificing the productivity of the Mac OS environment.

With MacX, you can run X Window applications including OSF/Motif, OpenLook, and DECWindows programs at the same time as your familiar Macintosh applications. And MacX extends popular Macintosh features to the X Window System. For example, you can customize the software so that you can launch frequently used X Window applications simply by choosing commands from pull-down menus.

Support for multiple network protocols allows MacX to use all major X Window protocols, including TCP/IP, DECnet, and AppleTalk.

Features

Compatibility

- Support for X11R5
- Access to all X Window client applications, including OSF/Motif, OpenLook, and DECWindows
- Seamless integration between Macintosh and X Window applications
- Extensive font capabilities including font server, XLFD, and R6 font support
- Support for login via xdm/xdmcp or rsh/rexec

High performance

- Accelerated for Power Macintosh systems
- Industry-standard Backing Store/Save Under capabilities

Ease of use

- One-button installation
- Full support for Macintosh System 7 user-interface features
- Ability to copy and paste text and PICT files between X Window and Macintosh applications
- Customizable pull-down menus

Article Change History:

22 Sep 1995 - Revised with current information.

Support Information Services

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Tech Info Library Article Number:18310



Tech Info Library

System 7.5 Update: Startup Chime is Too Loud (8/95)

Revised: 8/7/95
Security: Everyone

System 7.5 Update: Startup Chime is Too Loud (8/95)

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Article Created: 07 August 1995

TOPIC -----

I just upgraded my Macintosh computer to System 7.5.1. Now when I restart the startup chime is extremely loud.

DISCUSSION -----

The System 7.5 Update 1.0 sets the alert volume to maximum during installation. Follow these steps to lower the alert volume:

Step 1

Under the Apple menu, choose Control Panels.

Step 2

Double-click on the Sound control panel.

Step 3

From the pull down menu, choose Volumes.

Step 4

Use the slider bar to adjust the sound to a desired level.

If you have a Macintosh Centris/Quadra 660AV or Quadra 840AV, some system alert sounds may not play correctly with the Alert Volume turned down. In these cases you will have to keep it at full volume.

Support Information Services

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Tech Info Library

Finder: Black Apple Menu and Colored Desktop? (8/95)

Revised: 8/7/95
Security: Everyone

Finder: Black Apple Menu and Colored Desktop? (8/95)

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Article Created: 07 August 1995

TOPIC -----

My Apple in the upper left corner of my menu bar is black. The rest of my desktop is in color. What is wrong?

DISCUSSION -----

This happens on Macintosh computers that can support 16, or 24 bit color. If you select the grays radio button in the Monitors control panel, the Apple will display solid black because of guidelines for displaying the Apple logo.

The reason that the rest of the screen is not in shades of gray, is because in addition to having selected grays, you have also set the control panel to either thousands or millions of colors. Since there are only 256 grays available to the system, everything over the 256 grays is displayed in color.

Support Information Services

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Tech Info Library Article Number:18312



Tech Info Library

MicroPrint: Ethertalk Adaptor for LaserWriter 360 Specs (8/95)

Revised: 8/7/95
Security: Everyone

MicroPrint: Ethertalk Adaptor for LaserWriter 360 Specs (8/95)

Article Created: 07 August 1995

TOPIC -----

This article contains the specifications for MicroPrint, the Ethertalk adaptor sold by Apple under part number T1556LL/A.

DISCUSSION -----

MicroPrint - LocalTalk to EtherTalk Hardware Bridge

- EtherTalk users can print to LocalTalk printers such as Apple's LaserWriter Select 360.
- Macintoshes on EtherTalk can access other shared LocalTalk devices, such as modems and file servers.
- LocalTalk based Macs can access EtherTalk based file sharing and printing services.
- Extend the useful life of LocalTalk devices in an EtherTalk environment.
- Smallest, lightest LocalTalk to Ethernet bridge available.
- Plug and Play installation.
- Lifetime Warranty and 24-hour replacement.

Product Features

MicroPrint: Supports 1 LocalTalk device.

Technical Specifications

Dimensions:
Length: 4.6" (11.6cm)
Width: 2.9" (7.5cm)
Height: .9" (2.4cm)
Weight: 4.7oz (.6kg)

..TIL18313-MicroPrint-Ethertalk_Adaptor_for_LaserWriter_360_Specs_8-95.pdf

Power: External 5V DC, 1A power adapter, 90-120V AC, 60 Hz

Connectors: 10Base-T, Thin Coax Ethernet, DIN-8 LocalTalk Minimum System, Mac Plus, System 6.0.5 or greater

Ordering Information

Part# T1556LL/A microPrint by Sonic Systems (EtherTalk adapter)
Available on the Apple Price lists.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18313



Tech Info Library

Pointer Mode Control Panel: ReadMe File (11/95)

Revised: 11/22/95
Security: Everyone

Pointer Mode Control Panel: ReadMe File (11/95)

Article Created: 04 August 1995
Article Reviewed/Updated: 22 November 1995

TOPIC -----

This article contains the Read Me file for the Pointer Mode control panel that ships with System 7.5.2 on Power Macintosh 7200 computers.

DISCUSSION -----

Including the Pointer in Screen Captures

If you take a screen shot and the pointer does not appear in the captured graphic, you can use the Pointer Mode control panel to ensure that the screen-capture program includes the pointer.

To install the Pointer Mode control panel, follow these steps:

1. Drag the Pointer Mode control panel icon to the System Folder icon on your hard disk (do not open the System Folder).
2. When a message appears asking if you want the control panel placed in the Control Panels folder, click OK. Your computer recognizes that this is a control panel and automatically places it in the Control Panels folder.

To use the Pointer Mode control panel:

1. Open the Apple menu and choose Control Panels.
2. Double-click the Pointer Mode control panel to open it.
3. Click the checkbox to set the pointer to standard mode.

If you find that the pointer flashes a lot when you place it over graphics, you may want to use the Pointer Mode control panel to turn off standard mode.

Article Change History:

22 Nov 1995 - Updated title

20 Nov 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18315



Tech Info Library

Power Macintosh 7500/8500: ReadMe File (5/96)

Revised: 3/19/97
Security: Everyone

Power Macintosh 7500/8500: ReadMe File (5/96)

Article Created: 04 August 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

This article contains the Read Me file that came with the Power Macintosh 7500 and Power Macintosh 8500 computers.

DISCUSSION -----

Important Information About Your Power Macintosh 7500 or 8500

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- Using an AudioVision 14 Monitor
- About Video Capture

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Tips

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Reconnecting to a Server

If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu once power is restored, you get a message that the disk could not be opened because you do not have enough access privileges. Before you can reconnect to the server, you must close any open files. If you need to save work in a file, use Save As to save it on a different disk.

Software for the GeoPort Telecom Adapter

For Power Macintosh computers, the software necessary to use the GeoPort Telecom Adapter is Apple Telecom software version 2.1 or later. Apple Telecom 2.1 is included in the Apple Telecom folder within the Apple Extras folder, and on the Power Macintosh CD.

The Apple Telecom folder also contains MegaPhone 1.0.2, a screen-based telephone application that supports the telephone capabilities of the Apple Telecom 2.1 software, including dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information.

If you previously purchased the Apple Telecom 2.0 upgrade package or a Geoport Telecom Adapter Kit that included Apple Telecom 2.0, you also received SITcomm SE/GTA (a terminal emulation program). SITcomm is compatible with the Power Macintosh 7500 and 8500 series computers.

If you are using a GeoPort Telecom Adapter with Apple Telecom 2.1 software, be sure to disable LocalTalk. To do this, disconnect any devices attached to the printer port (except serial printers, which can remain attached).

Apple Telecom 2.2 is available as part of the GeoPort Telecom Adapter Kit, which can be purchased separately. The kit includes MegaPhone as well as SITcomm SE/GTA. Apple Telecom 2.2 along with MegaPhone (but without SITcomm) will also be available as a free upgrade on CompuServe, America Online, and all Apple Internet sites.

Using an AudioVision 14 Monitor

It is recommended that you use the buttons on the front of the monitor, instead of the AudioVision control panel, to adjust sound and picture. See the AudioVision 14 Display user's guide for instructions on using the buttons.

About Video Capture

For best video capture performance, you need at least 16 megabytes (MB) of random-access memory (RAM) installed in your computer.

You can increase the speed of video capture by taking one or more of the following actions:

- Turn off virtual memory (VM).
- Set the screen bit depth to millions of colors.
- Reduce the size of the capture window (320x240 and smaller are the best sizes).
- Make sure that your capture program has enough extra memory allocated for one second of video at the size and bit depth that you are using to record. For example, to record 30fps at 320x240 in millions of colors requires at least 4500K (4.5 MB) free in the application partition. About This Macintosh (located under the Apple Menu) will allow you to estimate memory usage.
- Do not allocate all of the available memory to the capture application. When your capture program is running, you should have an unused block size of at least 500K in About This Macintosh.
- Do not run programs other than the capture application while capturing video. If feasible, turn off AppleTalk, the menu bar clock, and all extensions except for QuickTime. (Use the Extensions Manager control panel and restart.)
- Make sure that your hard drive has enough free space to record and is not fragmented. If you notice a performance degradation, running a disk optimizer may help.

When working with applications that support adjusting video and sound settings, the following settings will allow the highest video capture performance:

- Use the Component Video video compressor. Do not use post-compression.
- Set sound input sampling to 16 bits, stereo, and 44.1 KHz. Do not use a sound compressor.

Troubleshooting

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Energy Saver Control Panel

Do not remove the Energy Saver extension from the Extensions folder. If you remove it, you cannot turn off any energy-saving features the control panel is currently set to provide, such as automatic sleep or shutdown.

AppleShare Displays Incorrect Information for Large Drives

If you use File Sharing to connect to a disk attached to another computer, and the shared disk is larger than 2 gigabytes (GB), the Get Info box for that disk shows an incorrect size. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

AppleShare Server Software version 4.1

If you purchase AppleShare server software version 4.1, make sure to choose Custom Install (instead of Easy Install) when you install it.

... Note: The following is not included in the original ReadMe file:
We do not recommend using version 4.1 or earlier of AppleShare Server Software on the Power Macintosh 7500 & 8500. Version 4.1 is intended only for Apple Workgroup Servers, and earlier versions will not work. At the time of this writing Apple does not recommend using a PCI based Macintosh as an AppleShare Server....

Printing With Apple PhotoFlash

If you have problems printing images with the PhotoFlash software, make sure that you choose a printer in the Chooser before you choose the Print command from the File menu.

PowerTalk and PowerTalk Direct Dialup Mail

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Using a RAM disk

If your computer has 8 megabytes of RAM (random access memory), and you wish to set up a RAM disk, allocate no more than 544K to the RAM disk. Otherwise, when you start your Macintosh you may see the message, "This disk is unreadable by this Macintosh. Do you want to initialize the disk?" (Important: This message applies to the RAM disk, not to your hard disk, which will not be initialized.)

Using Virtual Memory

A maximum of 1,000 megabytes of disk space can be used as virtual memory. If your hard disk has additional disk space available, the amount over 1,000 megabytes cannot be used as virtual memory.

The Assistant Toolbox and Non-Networked Printers

The Print Later option (LaserLaser) of the Assistant Toolbox extension is not compatible with some non-networked PostScript printers. If you have the Assistant Toolbox extension installed on your computer and you want to print with a non-networked printer, you may want to turn off the Assistant Toolbox extension.

For example, if you want to print with a LaserWriter Select 310 printer, you need to turn off the Assistant Toolbox extension (in the Extensions Manager control panel) to be able to use the Print Later option.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your Power Macintosh, make sure you use version 1.2 or later. In the United States, you can obtain an upgrade by calling the Apple Order Center.

To use the Chinese Language Kit with your Power Macintosh, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, first install the WorldScript Updater 1.0. Then install the Chinese Language Kit version 1.1. Finally, install the Chinese Language Kit Updater to update your software to version 1.1.1.

Apple Personal Diagnostics

To use Apple Personal Diagnostics (APD) on this Power Macintosh computer, you should upgrade to APD v1.1.3 or greater. An upgrade patch for owners of APD v1.1 and APD v1.1.1 is available on online services and AppleLink.

If you run the Logic Board tests in APD v1.1, your computer may freeze and need to be restarted; or APD v1.1 may falsely report a logic board error when none has actually occurred. APD v1.1.1 and v1.1.3 correct these Logic Board test errors. APD v1.1.3 also corrects a reporting error regarding processor speed in the System Info/Basic Info screen.

...Note: This note is not in the original Read Me file.

Apple Personal Diagnostics 1.1.3 is not supported on the Power Macintosh 7500 or 8500 computers. As of the modification date of this article, the Power Macintosh 9500 is the latest released computer supported by Apple Personal Diagnostics. Apple has no plans to support the Power Macintosh 7500 or 8500 in future releases of APD....

QuarkXPress

To use QuarkXPress with System 7.5.2 on a Power Macintosh, you must upgrade to QuarkXPress version 3.3.1 or later.

Incorrect Balloons for Guide File Icons

System 7.5.2 includes Apple Guide documents, which provide the on-screen instructions and other information that help you use your computer. However, if you turn on Balloon Help —by choosing Show Balloons from the Guide (question mark) menu—and point to a Guide file icon (any icon with the Guide question mark on it) on the hard disk, the balloon may give you the wrong information about where the file belongs or what you can do with it. To avoid being misled by incorrect balloons, follow the guidelines below:

- Leave Guide files where they are. Some Guide files (for example, the Guide file named "Macintosh Guide") belong in the Extensions folder. Other Guide files do not belong in the Extensions folder—and will not work if they are put there.
- Keep application programs that have Guide files in the same folder as the Guide file. For example, keep the file named "File Assistant Guide" in the same folder as the File Assistant program. If you move a Guide file that belongs with an application program, you won't be able to get help while using the program.

Screen Flashes at Startup

You may see the screen flash during startup of your Power Macintosh. The flash is normal. It occurs because software needed to use the monitor is being loaded.

StyleWriter and StyleWriter II Printers

If you use a StyleWriter or StyleWriter II printer with your Power Macintosh, use the StyleWriter 1200 printer software (called a "printer driver"). Do not install your older StyleWriter driver; it is not compatible with Power Macintosh computers. For more information about choosing a printer and printing, choose Macintosh Guide from the Guide (question mark) menu, and choose the Printing & Fonts topic area.

Presenting QuickTime Movies at Double Size

Using MoviePlayer 2.0, you can play a movie at double (2X) size. You cannot present a movie (that is, play the movie on a second monitor) at double size. Presenting a movie at 2X size results in the MoviePlayer application quitting without warning.

Important Information About Virtual Memory

Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory may help you avoid running out of memory.

Your computer comes with virtual memory turned on. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems (such as your computer's responses seeming unusually slow) using certain application programs, you may want to turn off virtual memory. For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. Then click "How do I use hard disk space as memory?" and "How do I manage Power Macintosh memory?"

For best performance, try setting virtual memory to no more than 150% of the memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

To improve performance, you can also add memory (RAM) to your computer. See the user's manual that came with your computer for more information.

Important Information About Document Auto-Save

The Energy Saver control panel that comes installed on the Power Macintosh 7200 contains a feature named "Document Auto-Save". The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When an application is incompatible with

Document Auto-Save, it will either not automatically quit, or it displays alerts or dialog boxes which Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave no documents open that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel to sleep instead of shutting down when unsaved documents are open.

For more information about Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide (question mark) menu, and choose the Power & Energy Saving topic area. Below are some additional helpful tips.

Reopening Auto-Saved Documents

Document Auto-Save will automatically reopen a maximum of 10 documents per application when starting up after a scheduled or idle shutdown. If more than 10 documents were saved for any application during the idle or scheduled shutdown, the additional documents must be reopened manually.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Applications That Auto-Save

Document Auto-Save performs more quickly and efficiently if you have enabled auto-saving in the applications that support it. For example, Microsoft Word has an option available that will save your changes at pre-determined time intervals. It is recommended that you take advantage of application auto-saving whenever possible.

RAM Disks

Do not choose a folder on a RAM disk for auto-saving untitled documents unless you have installed a product which preserves the RAM disk contents before shutdown. Otherwise, your auto-saved documents will be lost when an idle or scheduled shutdown occurs.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Stickies Windows

If you are using the Document Auto-Save feature of the Energy Saver control panel, and you have any Stickies notes open during an idle or scheduled shutdown, an extra carriage return is inserted in the active (frontmost) Stickies note window. No other Stickies windows will be affected.

Important Information About Macintosh PC Exchange

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Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with Macintosh PC Exchange and should not be used while PC Exchange is installed. Version 2.0 of PC Exchange contains an easier method for accessing DOS and Apple II ProDOS disks on a Macintosh.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Macintosh, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the Macintosh-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both Macintosh- and DOS-format partitions, PC Exchange will recognize only the Macintosh partition. In addition, PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Macintosh-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Macintosh, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your Macintosh computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your Macintosh.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and

partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

- A "Sad Mac" icon may appear on your Macintosh screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your Macintosh.
- Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

Important Information About Open Transport Networking

MacTCP

After you install new networking software on your hard disk, if you have problems with TCP/IP applications, look in the Control Panels folder for a MacTCP file. If one is there, remove it from the Control Panels folder and restart your computer. Each time you install new networking software, you may want to verify whether or not the software's installer also installed MacTCP, and follow this procedure.

Application Compatibility Comments

FTPD: Application currently is experiencing sporadic failures with TCP/IP MacTCP compatibility. These failures are rare and generally do not result in loss of data or other problems.

MacTCP Watcher, TCP/Connect II, MacTCP Switcher, and Anarchie are applications that are known to be incompatible with Open Transport. Developers are revising their products to be compatible with Open Transport.

Timbuktu works only with AppleTalk using Open Transport.

Eudora: Open Transport supports commercial version 2.11 and shareware version 1.5.1 of Eudora.

FileMaker Pro TCP/IP networking throughput is noticeably slower than with classic MacTCP.

NFS/Share for large file transfers must have a blocksize of 16K or smaller.

TCP/IP LAP (Link Access Protocol) Support Caveats

Only the following MacTCP Link Access Modules are supported: "InterSLIP", "InterPPP", "InterPPP II", "TCP/IP PPP", "MacSLIP", and "MacPPP".

Open Transport does not support SLIP and/or PPP connections occurring automatically when the networking application is executed with the currently available MacTCP Link Access Modules (e.g. MacPPP, InterSLIP, InterPPP, MacSlip). SLIP/PPP connections must be started up using the 3rd-party-supplied control panel before running the TCP/IP application.

InterSLIP: Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.

InterPPP 1.2.9: May crash when receiving a large graphic file via HTML readers.

MacSLIP 2.0.6: Connect at System Startup doesn't work.

MacPPP: MacPPP versions 2.0.1, 2.0.1 cm4, and 2.1 SD exhibit incompatibilities with Open Transport in opening connections. Future versions (e.g. MacPPP 2.2.0) will address this incompatibility. The MacPPP "Open" button does not work; the only way to open a connection is by opening a TCP/IP application. However, Open Transport might time-out before the completion of the connection so that it cannot get the correct IP address from the LAP. After disconnecting MacPPP, you must restart your Macintosh in order to connect again.

Once a TCP/IP application is opened over a SLIP or PPP LAP, you cannot use another SLIP or PPP LAP without restarting the Macintosh.

When a SLIP or PPP LAP is selected in the TCP/IP control panel, and "Manually" is selected in the Configure pop-up menu, the value of the IP address entered in this control panel is ignored by Open Transport. If you are assigned a static IP address by your SLIP or PPP provider, you should set it in the LAP configuration program. If your IP address is assigned dynamically, you should configure the LAP configuration program for dynamic addressing.

PowerShare Mail Server

There is a known compatibility problem between Open Transport and version 1.0 of the PowerShare Mail Server. If you set up the PowerTalk Universal Mailbox to read mail on the same machine on which the PowerShare Mail Server is running, the Mail Server may crash some time later, usually on shutdown. The workaround is to use another machine to read mail. This problem will be fixed in PowerShare Collaboration Servers version 1.1.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

..TIL18316-Power_Macintosh_7500-8500-ReadMe_File_5-96_(TA34196).pdf

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

27 May 1996 - Updated for technical accuracy.

09 Apr 1996 - Removed keyword.

08 Feb 1996 - Added keyword.

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Tech Info Library Article Number:18316



Tech Info Library

LaserWriter 16/600 PS: Legal Size & QuickDraw GX 1.1.3 (5/96)

Revised: 6/4/96
Security: Everyone

LaserWriter 16/600 PS: Legal Size & QuickDraw GX 1.1.3 (5/96)

Article Created: 07 August 1995
Article Reviewed/Updated: 31 May 1996

TOPIC -----

When trying to print legal size documents from the manual feed or multi-purpose tray on a LaserWriter 16/600 PS using QuickDraw GX 1.1.3, the document is getting cut off at 11 inches (letter size); where part of the top and three inches from the bottom are not printed. To some, it may appear that the image is moved up the page.

DISCUSSION -----

This problem has been duplicated and reported to engineering. Setting the Multi-purpose tray for Legal-sized pages using the Apple Printer Utility will resolve this issue, however, LaserWriter GX doesn't realize that the tray has been set for Legal. When printing, this results in a dialog stating that it can't find a Legal-sized tray. Selecting "Manually feed all US Legal pages" will print the page correctly.

To set the Multi-purpose tray for Legal, launch the Apple Printer Utility, open a printer, select "Job Defaults," then "Paper Handling." Select "Legal" from the pop down menu for "Default paper size for Multipurpose Tray."

Setting the Multi-purpose tray for Legal-sized paper does not affect printing Letter-sized documents from the same tray.

This problem does not occur using the standard LaserWriter 8.x driver.

Article Change History:

31 May 1996 - Updated for QuickDraw GX 1.1.3
08 Aug 1995 - Removed misleading information.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18317



Tech Info Library

AppleVision 1710AV Display: Power Light Not Visible (8/95)

Revised: 8/17/95
Security: Everyone

AppleVision 1710AV Display: Power Light Not Visible (8/95)

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Article Created: 7 August 1995
Article Reviewed/Updated: 17 August 1995

TOPIC -----

My AppleVision 1710AV display has an image on the screen, but the power light does not appear to be on. If I am sitting directly in front of the AppleVision 1710 AV monitor, I can see the power light. If I move my head more than 30 degrees in any direction, I cannot tell if the light is on.

DISCUSSION -----

This is a common problem with some plastic lenses that cover LED power indicators. Some lenses refract light better than others, resulting in a greater angle of view from the side. On the AppleVision 1710 AV display, the plastic lens has an angle of view of about 60 degrees.

Article Change History:
17 Aug 1995 - Made minor grammatical changes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18318



Tech Info Library

Laserwriter 12/600 PS: Cost Per Page (8/95)

Revised: 8/17/95
Security: Everyone

Laserwriter 12/600 PS: Cost Per Page (8/95)

Article Created: 7 August 1995
Article Reviewed/Updated: 17 August 1995

TOPIC -----

What is the cost per page on the 12/600 Color LaserWriter PS printer?

DISCUSSION -----

The exact cost per page depends on the percentage of black and color coverage desired by the customer.

Here are some sample page coverage amounts with the estimated street price for consumables factored in:

Begin_Table

Black and White	@ 5% coverage (Typical business letter) = \$.03
Black and White	@ 7.5% coverage (Informal letter) = \$.05
Color	@ 20% coverage (Typical proposal including a chart, a small graphic and text = \$.13
Color	@ 58% coverage (Complex Desktop Publishing page) = \$.35
Color	@ 77% coverage (Presentation page with a large photo or background, graphic and text = \$.46

End_Table

Costs may vary. The color blue is made from different percentages of cyan and magenta. If a file contains blue instead of cyan, the cost is higher as more magenta is applied. There is no 100% coverage information since 100% of all colors would produce a solid "muddy" brown/black page.

Article Change History:
17 Aug 1995 - Added table tags for formatting.

Support Information Services

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Tech Info Library Article Number:18319



Tech Info Library

Megaphone for Performa: Cannot Dial Long Distance (1/97)

Revised: 1/31/97
Security: Everyone

Megaphone for Performa: Cannot Dial Long Distance (1/97)

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Article Created: 7 August 1995
Article Reviewed/Updated: 30 January 1997

TOPIC -----

When using MegaPhone to dial long distance on a Macintosh Performa 6200 series computer, there is a ring, then silence, then a short sound, then silence, and then a busy signal. Finally, an error dialog box appears. This happens repeatedly whenever we try to dial long distance.

DISCUSSION -----

The Macintosh Performa 6200 series computer comes with a Global Village Teleport Gold IIv 14.4 Kbps fax send/receive modem installed in the Communications slot. These computers are also bundled with the MegaPhone for Performa software, which lets the computer function as a speakerphone and digital answering machine.

Cypress Research released an update to the MegaPhone software which addressed some intermittent problems with MegaPhone and Global Village Gold IIv and Platinum IIv modems. MegaPhone v1.0.3P is available from Cypress Research's FTP site and from the Apple Software Updates on the online services.

You should also follow these steps to make sure your MegaPhone software is configured properly:

Step 1

Open the Telephone Setup control panel. In the General Setup area, there is an option for tone dialing. Make sure it is not checked if you are using a pulse phone line.

Step 2

If you were trying to make a call from your home, make sure that you do not have the option set to dial "9" or any other numbers before dialing a call. To check, open MegaPhone and select Preferences from the File menu. In the "General"

Topic, make sure that you have not selected the option to dial a "9" before calling. Make sure it is set to dial a "1" before making a long distance call.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Cypress Research's address and phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

30 Jan 1997 - Renamed article to better reflect contents.
10 Apr 1996 - Added note about availability from Apple's site.
05 Jan 1996 - Corrected minor typo.

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Tech Info Library Article Number:18321



Tech Info Library

PowerShare Server and Workgroup Servers (7/95)

Revised: 8/7/95
Security: Everyone

PowerShare Server and Workgroup Servers (7/95)

Article Created: 27 July 1995

TOPIC -----

I get a fatal error when trying to install the PowerShare Server software (the whole disk set) on my Workgroup Server 6150, running System Software version 7.5 or later. How can I install this successfully?

DISCUSSION -----

The disk set you describe was issued in two sets: either as a pre-Power Macintosh 10-disk set or 11-disk set for installing onto a Power Macintosh. The error is occurring because the installer script on these disks is trying to install 7.1.2 resources over your active System 7.5 software.

Follow these steps to manually install the Powershare Server software on a Workgroup Server 6150, 8150, or 9150.

Step 1

Start up from the Workgroup Server CD and run the installer for PowerTalk. (To bypass the currently selected start-up device, start or restart the computer while holding down the Command-Option-Shift-Delete key.)

Step 2

Insert the PowerShare Server Install Disk 3 and install the PowerShare Catalog Server and the PowerShare Mail Server applications.

Step 3

Place aliases to the PowerShare Catalog Server and the PowerShare Mail Server applications in the Startup Items folder of the System folder.

Step 4

Restart your Macintosh computer to make the PowerShare Server software active.

Step 5

Setup the server as per the instructions in the "PowerShare Collaboration Servers System Manager's Guide."

NOTE:

The PowerShare Admin program is on the Powershare Server Install Disk 2.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18322



Tech Info Library

SimpleSound: Creating Clickable Sound Files (5/96)

Revised: 5/21/96
Security: Everyone

SimpleSound: Creating Clickable Sound Files (5/96)

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Article Created: 7 August 1995
Article Reviewed/Updated: 20 May 1996

TOPIC -----

The SimpleSound application, which resides in the Apple Menu Items folder on Power Macintosh 7500, and 8500 (with System 7.5.2 update) systems, creates sound files that must be opened with SimpleSound in order to be played. Double-clicking on these sound files does not play back from the Finder, but launches SimpleSound instead. These sound files cannot be dropped on the System Folder and used as an alert sound.

DISCUSSION -----

On the Power Macintosh 7500, and 8500 computers, the Sound & Displays control panel replaces the current Monitors, Sounds, and AV Setup control panels, providing a simplified interface that makes all of the video, monitor, and sound input and output much more accessible and usable. It does not provide the utility to add sounds to the System file. Sounds can be recorded to the System file using the SimpleSound application.

Sound Types
=====

SimpleSound can create two types of sounds.

SimpleSound Documents

The first type of sound files that can be created are those that are identified by the Finder as SimpleSound documents. These are recorded directly to disk as standard AIFF files. The AIFF files can be opened and used by QuickTime-compatible applications, such as MoviePlayer and Avid VideoShop, as well as standard Macintosh sound editing applications (such as SoundEdit 16).

To create an AIFF sound file, open the SimpleSound application and click on

SimpleSound in the Apple Menu Items. The Alert Sounds window appears.

Select New from the File menu and record a sound as before. The standard File dialog box appears and lets you save the sound to disk.

System Sounds

The second is "System" sounds -- standard Macintosh sound files that can be played by opening them in the Finder. SimpleSound can save these directly into the System file of the current System Folder. SimpleSound cannot save these directly as "System" sound files to the Finder.

Steps for Creating Clickable "System" Sound Files

This addresses an issue on how to create clickable "System" sound files. To use SimpleSound to create System sounds, do the following:

Step 1

To open the SimpleSound application, choose SimpleSound in the Apple Menu Items. The Alert Sounds window appears.

Step 2

Click the Add... button.

Step 3

Record a sound and click the Save button.

Step 4

Quit all open applications.

Step 5

Open the System file of the current System Folder.

Step 6

Drag the newly recorded sound to another area.

You now have a clickable "System" sound file. These files can be dropped back on to the System Folder to be used as an alert sound.

This article was published in the "Information Alley":
Volume II, Issue 11, Page 4

Article Change History:

20 May 1996 - Removed references to the Power Macintosh 9500.
29 Sep 1995 - Added Info Alley information; updated article.

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Tech Info Library Article Number:18323



Tech Info Library

Plaintalk 1.4: About Plaintalk 1.4 ReadMe file(8/95)

Revised: 8/8/95
Security: Everyone

Plaintalk 1.4: About Plaintalk 1.4 ReadMe file(8/95)

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Article Created: 07 August 1995

TOPIC -----

This article contains the Read Me file for the Plaintalk 1.4 Customer Speech Recognition software package.

DISCUSSION -----

About PlainTalk 1.4

PlainTalk is a collection of software that enables your Macintosh to speak written text and respond to spoken commands. PlainTalk 1.4 includes three components, each with its own installer: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

This document describes each of these three software packages, and discusses the differences between PlainTalk 1.3 and PlainTalk 1.4.

English Text-to-Speech

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. To install the English Text-to-Speech software, you need the following software and hardware:

- any Macintosh or Power Macintosh computer
- version 6.0.7 or later of system software
- at least 300 kilobytes (K) of RAM in addition to what the rest of your system software requires
- at least 5 megabytes (MB) of space available on your hard disk

For more information about the English Text-to-Speech software, see the Using English Text-to-Speech document or the About English Text-to-Speech document in the English Text-to-Speech folder.

Mexican Spanish Text-to-Speech

With the Mexican Spanish text-to-speech software installed, many Macintosh programs can read Spanish text out loud. To install the Mexican Spanish text-to-speech software, you need the following hardware and software:

- a Power Macintosh computer or a Macintosh computer with a 68020, 68030, or 68040 processor
- version 7.0 or later of system software
- at least 1.3 MB of RAM in addition to what the rest of your system software requires
- at least 2 MB of space available on your hard disk

For more information about the Mexican Spanish Text-to-Speech software, see the Using Mexican Spanish TTS document in the Mexican Spanish Text-to-Speech folder.

English Speech Recognition

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The English Speech Recognition package includes the Speech Recognition system extension, the Speech control panel, and a utility called Speakable Items. With Speakable Items, whenever you say the name of an item inside the Speakable Items folder (which is inside the Apple Menu Items folder), the computer acts as if you double-clicked the item.

You can turn Speakable Items on and off using the Speech control panel. You can also use the Speech control panel to set several preferences for how Macintosh Speech Recognition programs listen and respond. For example, you can set the Listening options in the Speech control panel so that the recognizer only listens while you hold down a key of your choice. When you use this option recognition accuracy is improved and misfires (when the computer thinks you spoke a command but you didn't) are eliminated.

To install and use the English Speech Recognition software, including the Speakable Items software, you need the following hardware and software:

- a Power Macintosh computer
- system software version 7.5 or later
- a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audiovisual displays (Note: this version of PlainTalk does not work very well with the microphone built into some AudioVision 14 displays.)

For more information about the English Speech Recognition software and the Speakable Items utility, see the Using Speech Recognition document in the English Speech Recognition folder.

Differences between PlainTalk 1.4 and PlainTalk 1.3

Earlier versions of the PlainTalk software had a single installer program that installed both text-to-speech and speech recognition. This version (1.4) contains three different installers to make it easier to install just the parts that are appropriate for your needs: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition. It doesn't matter what order you install them in, and you don't have to install them all. However, if you install version 1.4 of English Speech Recognition or Mexican Spanish Text-to-Speech then you should also install version 1.4 of English Text-to-Speech instead of using an older version of English Text-to-Speech.

Deciding whether to upgrade to version 1.4

In general, version 1.4 offers a more robust and flexible set of features than earlier versions. However, some people in special circumstances may do better with version 1.3.

- If you have a Macintosh AV computer that has a 68040 processor and you use PlainTalk 1.3's speech recognition capabilities, Apple recommends that you continue using version 1.3 of the PlainTalk software. Though the new text-to-speech software works with these computers, the new speech recognition software does not (because it runs on Power Macintosh computers only). It is not recommended that you mix versions, using the old recognition software with the new text-to-speech software. (Note: all the new software works with Power Macintosh AV computers.)

- If you have an Apple AudioVision 14 display, Apple recommends that you keep using version 1.3, unless you have an Apple PlainTalk microphone. Version 1.4 of the speech recognition software does not work well with the microphone built into some AudioVision 14 displays.

- If you make extensive use of PlainTalk 1.3's Speech Macros, the Speech Macro Editor, or the ability to speak menu commands, then you might want to continue using version 1.3. As part of the effort to make the software more robust, version 1.4 of English Speech Recognition supports Apple's standard AppleScript ScriptEditor instead of the Speech Macro Editor, and it does not support the ability to speak menu items. This is discussed more below.

What's new in English Text-to-Speech

English text-to-speech software version 1.4 is very similar to earlier versions. The main differences are:

- English Text-to-Speech 1.4 has its own installer.
- English Text-to-Speech 1.4 includes a Speech control panel that lets you select a system-wide default voice and rate, which is used by many text-to-speech programs, including SimpleText and the Speakable Items utility.

What's new in Mexican Spanish Text-to-Speech

PlainTalk 1.4 is the first version of PlainTalk to include support for Mexican Spanish text-to-speech.

What's new in English Speech Recognition

English Speech Recognition version 1.4 has some significant differences from the speech recognition software in earlier versions of PlainTalk. Some features have been eliminated to simplify speech recognition and make it more robust and usable. Other options have been added to increase accuracy and eliminate misfires.

- Version 1.4 offers a new listening option in the Speech control panel, "Listen only while key(s) are pressed," that lets you leave Speakable Items on all the time without worrying about misfires. It also improves the accuracy of recognition.
- Version 1.4 works in a wider range of environments thanks to its greatly improved adaption to room acoustics.
- Version 1.4 does not include or support Speech Macros, the Speech Macro Editor, or Speech Rules. It still supports speaking dialog buttons and the Speakable Items folder. Any item you place inside the folder becomes speakable—saying the name of the item launches or opens the item. You can use the AppleScript ScriptEditor to create scripts that are launched by speaking a command: just save the scripts inside the Speakable Items folder. To see examples, look inside the Speakable Items folder.
- Version 1.4 runs on Power Macintosh computers only, and does not support Macintosh AV computers with 68040 processors. You can continue to use PlainTalk 1.3 on 68040 Macintosh AV computers.
- Version 1.4 does not include automatic support for recognizing the spoken names of menu commands. You can still manipulate scriptable programs, such as the Finder, using AppleScript commands. To see examples, look inside the Speakable Items folder.

Known bugs and workarounds in PlainTalk 1.4

This section describes a few bugs found at the last minute in PlainTalk 1.4, along with workarounds where possible. More troubleshooting information can be found in the documents in the three installer folders.

Apple AudioVision 14 displays. Version 1.4 of English Speech Recognition does not work well with the microphones built into some Apple AudioVision 14 displays. If you have problems using speech recognition with the microphone built into this display, you can use the Apple PlainTalk Microphone (part # M9060Z/A) or you can go back to using PlainTalk 1.3. To go back to version 1.3, use the 1.4 installers to deinstall the new version, then use your old 1.3 installers to reinstall version 1.3.

Mixing Text-to-Speech 1.4 with Speech Recognition 1.3. Apple does not recommend using version 1.4 of text-to-speech with version 1.3 of speech recognition. The PlainTalk 1.4 speech recognition options are visible in the Speech control panel but do not work with the PlainTalk 1.3 speech recognition software. If you do mix them, remember to use the correct control panel for your task: to configure

speech recognition version 1.3, use the Speech Setup control panel; to configure text-to-speech version 1.4, use the Voice option of the Speech control panel. You should ignore all the other options of the Speech control panel.

Wrong name in the Using English Speech Recognition document file. In the Using English Speech Recognition document, the phrase "Speakable Items control panel" is sometimes used where what is meant is "Speech control panel."

Popup menus in HyperCard 2.3. On some Power Macintosh computers, version 1.4 of the Speech control panel interferes with popup menus in HyperCard 2.3. If you experience this problem, you can move the Speech control panel out of the Control Panels folder (and out of the System Folder), restart your computer, and still use text-to-speech and speech recognition. If the Speech control panel is not in the Control Panels folder then Speakable Items will not turn on automatically when your computer restarts (but you can still use the Speech control panel to turn it on), and the Speech control panel's default voice and rate options will be ignored.

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Updated June 21, 1995

Support Information Services

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Tech Info Library Article Number:18330



Tech Info Library

At Ease 3.0: Rebuild Desktop After ClarisWorks 4.0 Install 8/95

Revised: 8/8/95
Security: Everyone

At Ease 3.0: Rebuild Desktop After ClarisWorks 4.0 Install 8/95

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Article Created: 08 August 1995

TOPIC -----

I have recently installed ClarisWorks 4.0 on my Macintosh computer running System 7.5.1. When I try to launch a ClarisWorks document, I get a message stating that the application cannot be found.

DISCUSSION -----

There have been reports of messages like this one and "Unable to locate appropriate translator" from users after installing ClarisWorks 4.0. This problem can be remedied by rebuilding the desktop file.

Apple recommends rebuilding the desktop file after any new software installation.

Support Information Services

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Tech Info Library Article Number:18331



Tech Info Library

Apple Telecom 2.1: SITcomm ReadMe File (8/95)

Revised: 8/8/95
Security: Everyone

Apple Telecom 2.1: SITcomm ReadMe File (8/95)

Article Created: 07 August 1995

TOPIC -----

This article contains the combined SITcomm and SITcomm SE Read Me files. SITcomm ships with the AppleTelecom 2.1 software package.

DISCUSSION -----

SITcomm Read Me
Copyright 1993-1994, Aladdin Systems, Inc.
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"Read Us First!" Folder

Now that the software is installed, you might want to refer to your User's Guide Addendum in the "Read Us First!" folder on your hard disk. This file contains additional information which will aid your understanding of the product as well as explaining any new features and enhancements that have occurred since the printing of the User's Guide.

Register Your Software

If you have not already done so, please complete and mail your postage-paid Registration Card. Registered users are entitled to free technical support, upgrade notices, and special offers on Aladdin products. The registration number for personalizing the application can be found inside of the "Quick Start" card located in your package. After personalizing, be sure to write the registration number someplace where you can reference it later.

The User's Guide

Even though the software is easy to use, the comprehensive User's Guide covers every feature of the software. An addendum to the User's Guide can be found in the "Read Us First!" folder.

The Quick Reference Card

See the Quick Reference Guide for a brief description and overview of the software. Please keep the Quick Start card in a safe and easily accessible place. Your SITcomm registration number is on the back of this card and must be provided when you contact Aladdin Systems for assistance.

Thanks

We at Aladdin Systems would like to thank you for purchasing our product and for your continued support.

The rest of this document...

Listed below are sections on known issues, potential conflicts and workarounds for SITcomm.

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Known Issues

Apple Express Modem Tool - Limitations

Users of the Apple Express Modem Tool should be aware of the following limitations:

- 1) The Express Modem Tool does not support auto-redialing.
- 2) The Express Modem Tool does not support listening for a connection (listen mode).
- 3) The Express Modem Tool does not support canceling of a dialing operation once it has begun.

If you need any of these features, it is suggested that you use the Apple Modem Tool instead, which does support them.

Apple Express Modem Tool - Display Modem Monitor Window

When this option is enabled, the tool will improperly create the Modem Monitor window between the SITcomm toolbar and the current connection window. After the window is created, nothing will be drawn in the window until after the modem connection is established.

Keypad and Cursor Windows in the Frontier Runtime Scripting Menus

Occasionally, the VT102 keypad and cursor control windows will erroneously appear in the Runtime scripting menus. If you quit Runtime, and then relaunch it, the problem should correct itself.

Apple Modem Tool - 14400 baud rate speeds

Owners of 14.4 KB modems should not be alarmed that there is not a 14400 baud rate setting in the Apple Modem Tool. Just set the the Apple Modem Tool to the 38400 setting. This will automatically optimize the speed your 14.4 KB modem can send and receive data by automatically turning on high speed transfer

protocols.

=====

Possible Conflicts & Workarounds

Userland's Frontier & Frontier Runtime

Users of Frontier and Frontier Runtime should increase the application memory size of SITcomm by 100K.

Apple VT320 Terminal Tool

Users of the Apple VT320 Terminal Tool should increase the memory application size of SITcomm by 100K.

Pacer320 Terminal Tool

Users of the Pacer320 Terminal Tool should increase the memory application size of SITcomm by 100K.

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SITcomm Special Edition Read Me
Copyright 1994, Aladdin Systems, Inc.

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"Read Us First!" Folder

This file contains additional information which will aid your understanding of the product.

Register Your Software

If you have not already done so, please complete and mail your postage-paid Registration Card. Registered users are entitled to technical support, upgrade notices, and special offers on Aladdin products.

License Agreement

You should not run SITcomm Special Edition until you have read the document called "License Agreement" which will be installed on your hard drive in the "Read Us First" folder. By running SITcomm Special Edition, you signify that you agree to the terms of the License Agreement.

The rest of this document...

Listed below are sections on known issues, potential conflicts and workarounds for SITcomm Special Edition.

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Known Issues

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Possible Conflicts & Workarounds

Apple VT320 Terminal Tool

Users of the Apple VT320 Terminal Tool should increase the memory application size of SITcomm Special Edition by 100K.

Pacer320 Terminal Tool

Users of the Pacer320 Terminal Tool should increase the memory application size of SITcomm Special Edition by 100K.

Support Information Services

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Tech Info Library Article Number:18332



Tech Info Library

Third-Party Extensions Managers & Possible Bus Errors (8/95)

Revised: 8/8/95
Security: Everyone

Third-Party Extensions Managers & Possible Bus Errors (8/95)

Article Created: 8 August 1995

TOPIC -----

After disabling most of my extensions and control panels with a third-party extensions manager, I get the following error:

"Sorry, a system error occurred. Bus error. To temporarily turn off extensions, restart and hold down the shift key."

If I restart with the shift key down, the system starts up without an error. What is the problem?

DISCUSSION -----

Your problem may be due to certain extensions not loading. When EtherTalk is selected in the network control panel, you may see this error on a Power Macintosh 8100/80 if the EtherTalk Phase 2 extension fails to load after the Apple Built-In Ethernet extension. Other Macintosh models may also exhibit this behavior. Both of these extensions are installed by the Network Software Installer (NSI) 1.5 or later.

Several third-party extension managers recognize the EtherTalk Phase 2 extension, but not the Apple Built-In Ethernet extension. So it may be possible to disable EtherTalk Phase 2 and not Apple Built-In Ethernet, resulting in the above error message. This situation does not occur when using the Extensions Manager, which comes with System 7.5.x, since the Extensions Manager does not present either extension as a choice to be deselected.

This problem can also arise when using a third-party extensions manager to execute the recommended procedure for rebuilding the desktop file with Macintosh Easy Open (MEO) installed. Normally you would disable all extensions and control panels except MEO before rebuilding the desktop file. When using a third-party extensions manager, you should disable all extensions and control panels except EtherTalk Phase 2 and MEO.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18333



Tech Info Library

Express Modem ReadMe: Apple Telecom 2.1 Software (8/95)

Revised: 8/8/95
Security: Everyone

Express Modem ReadMe: Apple Telecom 2.1 Software (8/95)

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Article Created: 8 August 1995

TOPIC -----

This article is the Express Modem Read Me file which accompanies the Apple Telecom 2.1 software.

DISCUSSION -----

This software runs on the following machines with their respective Express Modem internal modems:

- PowerBook 160, 165, 165c, 180, 180c, using an internal Apple PowerBook 14.4 Modem Card.
- PowerBook Duo 210, 230, 250, 270c, 280, 280c, using an internal Apple PowerBook Duo 14.4 Modem.
- PowerBook 520, 520c, 540, 540c, using an internal Apple PowerBook Express Modem II Card.
- LC 575, Macintosh Quadra, LC, Performa 630, using an internal Macintosh Express Fax/Modem (for the United States and Japan only).

Installing over an older version of the software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

NOTE: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

Preferred CCL scripts for Apple Remote Access

ARA 1.0: Express Modem ARA 1.x (in Extensions folder in System Folder)

ARA 2.0: Express Modem ARA 2.x (in Extensions folder in System Folder)

NOTE: These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide.

Two additional, optional connection (CCL) files, named Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG, are installed as well. When you use them, the Express Modem transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another Express Modem), you should select it in the Apple Remote Access Setup control panel.

NOTE: The Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex grayscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

NOTE: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client

machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

NOTE: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

NOTE: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

SEE ALSO: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

Auto-answer setting

If Fax Terminal is set to Auto-answer, the Manual Receive is disabled.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript printers.

Troubleshooting

• Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the Express Modem to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

• Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from

the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

- Identifying incoming calls

When answering your phone line, the Express Modem will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application, we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

- Removing fax storage folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

- Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

What goes where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- Express Modem Read Me
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (Manual for users who upgrade electronically)
- About Apple Fax Gateway (Manual for users who upgrade electronically)
- About Fax Sender GX (Manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- Modem AT Command Set
- Express Modem ARA 1.x/CNG (optional, transmits data calling tone)
- Express Modem ARA 2.x/CNG (optional, transmits data calling tone)

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- Apple Telecom Modem
- Express Modem ARA 1.x (Apple Remote Access 1.0 CCL)
- Express Modem ARA 2.x (Apple Remote Access 2.0 CCL)

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

Support Information Services

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Tech Info Library Article Number:18334



Tech Info Library

Iomega Corp. (8/95)

Revised: 8/8/95
Security: Everyone

Iomega Corp. (8/95)

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Article Created: 08 August 1995

IOMEGA Corp.

1821 W. 4000 South
Roy, UT 84067

800-777-6654

801-778-1000

801-778-3450 (fax)

Company Profile:

Manufacturers removable hard drives, floptical and optical storage devices.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18338



Tech Info Library

Sound In Options Not Available Message (9/95)

Revised: 9/15/95
Security: Everyone

"Sound In" Options Not Available Message (9/95)

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Article Created: 09 August 1995
Article Reviewed/Updated: 15 September 1995

TOPIC -----

I have a Power Macintosh running System 7.5 and can not play audio CD's. I can mount audio CD's, see the counter working in the AppleCD Audio Player, and hear audio from multimedia CD's and alert sounds without any problems. Pressing the "Options" button in the Sound In portion of the Sound control panel brings up the message "Sound input devices could not be accessed at this time." What is happening here?

DISCUSSION -----

This is an issue involving accessing sound options while running Speech Recognition. When you turn Speech Recognition on, it "listens" for commands captured by the microphone. Because of this, Speech Recognition will not allow you to select the Audio CD as the input source. Therefore, you cannot play an audio compact disc through your internal speakers while speech recognition is turned on.

Once Speech Recognition is turned off via the Speech Setup control panel, the sound in options of the sound control panel can again be accessed in the Sound In portion. Click the radio button under Audio CD and put an X in the playthrough option to hear your audio cd through your internal speakers.

Article Change History:
15 Sep 1995 - Added clarifying information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18341



Tech Info Library

AppleCD 600: Compatible with DOS Compatibility Card (8/96)

Revised: 8/19/96
Security: Everyone

AppleCD 600: Compatible with DOS Compatibility Card (8/96)

Article Created: 9 August 1995
Article Reviewed/Updated: 19 August 1996

TOPIC -----

Are the AppleCD 600i and 600e drives supported with the DOS Compatibility Card?

DISCUSSION -----

Yes, both the AppleCD 600i and 600e drives are supported using the DOS Compatible card. However you must use the Apple CD-ROM extension v5.1.1, PC Setup 1.0.7, and System 7.5.1. Both the CD-ROM Setup 5.1.1 and PC Setup 1.0.7 are available from online services. PC Setup 1.0.7 is only designed for the DOS Compatibility Card on Power Macintosh, and Macintosh 630 family computers. Apple does not recommend or support PC Setup 1.0.7 on Centris or Quadra 610 computers with a DOS Compatibility Card.

The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, Performa 640, LC 630, and Quadra 630.

There are some types of compact discs which are not supported in the MS-DOS/Windows environment, including Photo CD, and multisession compact discs. In addition to these types of discs, you cannot use multiple CD-ROM drives in the MS-DOS/Windows environment.

Audio CDs cannot be controlled from both the Windows and Macintosh environment at the same time.

The MS-DOS sets up a drive letter (E:) for a CD-ROM drive, even if there is not a drive attached. If you do not have a CD-ROM drive connected to your computer, you can gain additional memory by removing drive setup strings in the CONFIG.SYS and AUTOEXEC.BAT files.

What to Change

```
AUTOEXEC.BAT
REM  LH C:\DOS\MSCDEX /D:CDDVR /L:E

CONFIG.SYS
REM  DEVICE=C:\Apple\CDROM.SYS /D:CDDVR
```

The REM in front of the command makes MS-DOS ignore the line.

These articles can help you locate software updates mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library

Article Change History:

19 Aug 1996 - Corrected misspelling.
21 Aug 1995 - Added support information on PC Setup 1.0.7.

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Tech Info Library Article Number:18342



Tech Info Library

Transfer QuickTake Files From Macintosh to Windows (8/95)

Revised: 8/9/95
Security: Everyone

Transfer QuickTake Files From Macintosh to Windows (8/95)

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Article Created: 9 August 1995

TOPIC -----

I need to move some QuickTake files from my Macintosh to my PC. However, if I edit them on my Macintosh, I can no longer get the QuickTake files to open in Windows, why?

DISCUSSION -----

When you double click on a QuickTake file on a Macintosh, PhotoFlash opens the QuickTake file as the selected application. You can view the QuickTake file, but if you edit and save the file, and then want to move it to a Windows system, you will have to save the file in TIFF format. PhotoFlash can not save a document in QuickTake format.

For TIFF format files, save the file as a TIFF for Windows. Then add the suffix ".tif" to the file.

For QuickTake files, rename the file with a ".qtk" suffix.

More information is included in the manual on page 53.

NOTE: There is a summary of how to name the files in the QuickTake Read Me file, but not about using PhotoFlash. Also, you can view QuickTake format files, but not edit them. The advantage of using the QuickTake format, is the size of QuickTake files, which usually is 20% less than TIFF.

Support Information Services

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Tech Info Library Article Number:18343



Tech Info Library

System Update 2.0.1: ReadMe File (8/95)

Revised: 8/9/95
Security: Everyone

System Update 2.0.1: ReadMe File (8/95)

Article Created: 09 August 1995

TOPIC -----

This article contains the Read Me file for the System 2.0.1 Update for use on System 7.1 and System 7 Pro.

DISCUSSION -----

WHAT IS SYSTEM UPDATE 2.0.1?

System Update 2.0.1 is a set of software enhancements that improves the performance of Macintosh computers running system software version 7.1 and System 7 Pro.

System Update 2.0.1 provides the enhancements of Hardware System Update 2.0 and Hardware System Update 1.0, plus the following additional enhancements:

- Includes Apple HD SC Setup version 7.2.2, which gives you more flexibility to format large Apple hard disks between 1 and 2 gigabytes.
- More efficiently manages the way fonts use memory.
- Includes AutoRemounter 1.2. This release significantly reduces network traffic compared to version 1.0.
- Includes Apple Disk First Aid 7.2, a utility that repairs damaged disks.
- Updates the Macintosh PowerBook Control Panel to version 7.1.3 and Express Modem software to version 1.1.2, which includes support for communications that do not use the Apple Communications Toolbox.
- Updates System Enabler 131 (version 1.0.3) for the PowerBook 160, 165, 165c, and 180 to support 12" monitors and improve reliability. (NOTE: There is a very small chance that your PowerBook may not boot when you turn it on for the first time after the update. If this happens, turn the computer off and back on, and

press Command-Option-P-R while the computer starts up.)

- Corrects color problems with the Apple Basic Color monitor on Macintosh Centris and Macintosh Quadra computers. (NOTE: If Hardware System Update 1.0 or Hardware System Update 2.0 extensions or the Basic Color Monitor extension are already installed on your computer, this update replaces them. The 2.0.1 update removes the Basic Color Monitor and the ADBReInit extensions and replaces them with a System Update 2.0.1 extension.)

For a review of the Hardware System Update 2.0 and Hardware System Update 1.0 enhancements, see "What Other Enhancements Does System Update 2.0.1 Provide?" at the end of this document.

KNOWN ISSUES

If you install System Update 2.0.1 on a Powerbook 100 with Express Modem software installed, your Powerbook 100 may not start up properly. If this happens, turn the computer off and back on, and hold down the Shift key while the computer starts up (to start up without using extensions). When the computer is ready, drag the Express Modem extension to the Trash. (NOTE: The Powerbook 100 is not designed to use the Express Modem.)

WHO SHOULD INSTALL SYSTEM UPDATE 2.0.1?

You should install this update only if you have Macintosh system software version 7.1 or System 7 Pro installed on your computer. (NOTE: This update is not intended for Macintosh Performa users.)

If you have already installed the earlier updates, you should still install System Update 2.0.1 in order to have the latest version of all system software. System Update 2.0.1 provides additional functionality and fixes problems that the earlier updates did not address.

HOW DO I INSTALL SYSTEM UPDATE 2.0.1?

To install the 2.0.1 update, do three tasks:

1. Install the System Update
2. Update your Apple utilities
3. Update your Apple drivers

See the step-by-step instructions below.

TASK 1—INSTALL THE SYSTEM UPDATE

The Easy Install process for System Update 2.0.1 automatically determines what

elements of the updated system software your computer needs, if any. There are also two optional enhancements which you can install (in step 6 below) after the Easy Install process is complete.

To install the software update, follow these steps:

1. If you currently have the Connectix Enabler Patch on your hard disk, remove it from your hard disk before proceeding with this installation.
2. Insert the System Update 2.0.1 disk in your floppy disk drive.
3. Double-click the Installer icon.
4. Read the Welcome screen, and then click OK.
5. Click the Install button.
6. When you see a message that installation is complete, do one of the following:

- a. If you want to install the Sound Manager Update, the 720K Floppy Disk Formatter Extension, or both, click the Continue button. (See "What Other Enhancements Does System Update 2.0.1 Provide?" at the end of this document for descriptions of these enhancements.) Then click Customize and select "Sound Manager Update," "720K Floppy Disk Formatter Extension," or both from the list on your screen. When you see a message that installation is complete, click the Restart button.

- b. If you do not want the additional enhancements, click the Restart button.

7. When you finish, continue with "Task 2—Update Your Apple Utilities" below.

TASK 2—UPDATE YOUR APPLE UTILITIES

The Utilities *f* folder on the System Update 2.0.1 disk contains Apple HD SC Setup version 7.2.2 and Apple Disk First Aid version 7.2. These updates are intended to permanently replace the copies of Apple HD SC Setup and Apple Disk First Aid on your System 7.1 or System 7 Pro Disk Tools disk. This update is recommended even if you have already installed Hardware System Update 2.0. Follow the steps below to update your utilities:

1. Insert the System Update 2.0.1 disk in your floppy disk drive.
2. Choose Eject Disk from the Special menu.
3. Insert the Disk Tools disk in your floppy disk drive.
4. Click the Utilities *f* window to make it active.
5. Drag the HD SC Setup and the Disk First Aid icons to the Disk Tools disk.

6. When your Macintosh warns you that the files on your Disk Tools disk have the same names as the items that you are moving, click OK.
7. Insert specific disks as requested until the files are fully copied.
8. When you finish, continue with "Task 3—Update Your Apple Drivers" below.

TASK 3—UPDATE YOUR APPLE DRIVERS

System Update 2.0.1 also contains a driver update for Apple hard disk drives. You should install the driver update even if you have already installed Hardware System Update 2.0. Follow the steps below to install the driver update on each Apple hard disk drive you own:

1. With your computer off, insert the Disk Tools disk in your floppy drive.
2. Turn on your computer.
3. Double-click the Disk Tools icon.
4. Double-click the Disk First Aid icon in the Disk Tools window. (NOTE: The Disk First Aid utility on your Disk Tools disk should be version 7.2 if you completed "Task 2—Update Your Apple Utilities" above.)
5. Click on the driver icon which corresponds to your Apple hard disk drive. If you have more than one Apple hard disk drive, hold down the shift key and click on all of the drivers.
6. Click the Repair button. Disk First Aid will now run its tests and make any necessary repairs on your drive. This may take a few minutes depending on the size of your drive.
7. Select Quit from the File menu.
8. Double-click the Apple HD SC Setup icon in the Disk Tools window. (NOTE: For more information on Apple HD SC Setup, see your Macintosh user's guide.)
9. Click the Drive button until the name of the hard drive you want to update appears.
10. Click the Update button.
11. Repeat steps 9 and 10 for any other Apple hard disk drives you own.
12. Click the Quit button.

WHAT OTHER ENHANCEMENTS DOES SYSTEM UPDATE 2.0.1 PROVIDE?

System Update 2.0.1 includes the enhancements from Hardware System Update 2.0 and Hardware System Update 1.0 (listed below). Some enhancements are Macintosh-model specific while others apply to a range of models. The first two enhancements described below are optional for any model of Macintosh computer. (See step 6 of "Task 1—Install the System Update" for instructions to install the optional enhancements.)

- Optional: Installs the 720K Floppy Disk Formatter Extension to allow you to format low-density floppy disks as 720K MFM disks.
- Optional: Installs the Sound Manager Update to improve sound performance on most Macintosh computers. (NOTE: When this software is installed, your system sound will revert to the Simple Beep. After installation, you may wish to reset the beep in the Sound control panel to your preferred sound.)
- Provides system-level improvements to increase overall system reliability on most Macintosh models.
- Improves the reliability of high-speed modems and similar devices connected to Macintosh LC, LC II, IIsi, IIVx, IIvi, Macintosh Classic II, Macintosh Quadra 900, and Macintosh Quadra 950 computers.
- Improves the accuracy of the system's clock in Macintosh LC, LC II, IIsi, IIVx, IIvi, Macintosh Classic II, Macintosh Quadra 900, and Macintosh Quadra 950 computers.
- Corrects problems ejecting floppy disks when the computer is shut down on Macintosh IIsi, IIci, IIVx, IIvi, Macintosh Quadra 700, and Macintosh Quadra 950 computers.
- Addresses possible floppy disk drive and hard disk problems with the Macintosh IIsi, IIci, IIVx, IIvi, Macintosh Centris, Macintosh Quadra, and Macintosh PowerBook and PowerBook Duo computers.
- Removes horizontal white lines that may appear while scrolling on Quadra and Centris systems with a Macintosh 16" Color Display.
- Adds software for the Apple Adjustable Keyboard, allowing you to connect the keyboard to any Macintosh computer without separately installing special keyboard software.
- Updates the Memory control panel to version 7.1.1, fixing possible memory problems using large RAM disks with System 7.1.
- Updates the Macintosh Color Classic System Enabler (System Enabler 401, version 1.0.5), which lets you add the Apple IIe Card and software to the Color Classic. In addition, the System Enabler improves mouse performance with the Color Classic. (NOTE: To use the Apple IIe Card with system software version 7.1 on a Color Classic, you need to have version 2.2.1 of the Apple IIe Card software. You can obtain an upgrade package for the Apple IIe Card software by contacting an Apple-authorized dealer, or by using the AppleLink path Apple Products: Apple SW Updates: Macintosh: Peripheral Software: Apple IIe Card for Macintosh LC.)

Apple strives to provide maximum reliability for its customers. This update provides specific improvements that many Apple Macintosh customers will find helpful.

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Support Information Services

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Tech Info Library Article Number:18344



Tech Info Library

Apple LAN Utility 1.0b3: ReadMe File (10/95)

Revised: 10/24/95
Security: Everyone

Apple LAN Utility 1.0b3: ReadMe File (10/95)

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Article Created: 09 August 1995
Article Reviewed/Updated: 24 October 1995

TOPIC -----

This article contains the Read Me file included with the Apple LAN Utility 1.0b3 software update package. This update adds support for the Power Macintosh 9500 computer.

This utility was replaced by Apple LAN Utility 1.0b4e1 in October 1995.

DISCUSSION -----

Apple LAN Utility version 1.0b3

The Apple LAN Utility is provided to perform the following tasks for Apple LAN interfaces:

- 1) Obtain the burned-in address without connecting to a network.
- 2) Override the burned-in address with a locally-administered address (this is mostly done in SNA and DECNet environments).
- 3) Set the speed for token ring interfaces that are software selectable.

The utility is intended to handle all Apple ethernet and token ring interfaces, whether built-in or on cards. When run, the utility opens one window per interface present in the machine, describing what its configuration will be the next time that interface is activated. This utility makes no attempt to alter the current operation of an active interface.

To make any changes to an interface, it is necessary to choose "Allow Changes" from the Edit menu. This was provided to minimize the chance of accidentally overriding a burned-in address.

To remove a locally-administered address, either clear the entry or set it to 12 zeroes.

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The utility can save a tab-delimited text file describing the machine's configuration. The file has the following format:

Line 1: The Macintosh model, machine name and user name
Line 2: Title strings
Lines 3 - n: One line per interface with bus/slot, interface name, burned-in address, local address and speed

The addresses are given in hexadecimal and are quoted to allow the file to be imported into a spreadsheet if desired.

Although the text file is rather ugly when viewed in TeachText/SimpleText, it can be made to look better when viewed in a word processor or spreadsheet program by adjusting the tabs or cell sizes appropriately.

This utility is provided free of charge on an "as is" basis. This is not an official product of Apple Computer!

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Release Notes

Version 1.0b3 includes the following changes:

Support was added for the Power Macintosh 9500.

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Article Change History:

24 Oct 1995 - Added replacement version information.

Support Information Services

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Tech Info Library Article Number:18345



Tech Info Library

Macintosh LC 630 DOS Compatible: ReadMe File (8/95)

Revised: 8/9/95
Security: Everyone

Macintosh LC 630 DOS Compatible: ReadMe File (8/95)

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Article Created: 09 August 1995

TOPIC -----

This article contains the Read Me file for the Macintosh LC 630 DOS Compatible. This version of the Read Me file was included with the PC Setup 1.0.7 update software package.

DISCUSSION -----

Addendum to the Macintosh User's Guide
for the Macintosh LC 630 DOS Compatible

This document contains important information about using your Macintosh LC 630 DOS Compatible that is not included in your user's guide.

Contents

- Using the Floppy Drive
- Use of Floppy Disks as Drive Containers
- Startup Folder/Auto-start PC Conflict
- MIDI Transfers Supported on Macintosh Only
- Using the Two-Button Mouse
- Using a Flightstick Pro Joystick
- Bypassing the CONFIG.SYS and AUTOEXEC.BAT files
- Installing Corel Draw
- Using Norton Utilities
- Installing Microsoft Office, Word and Excel
- Amendments to Appendix E of the Macintosh User's Guide
- Using SAM 4.0
- SAM Intercept v4.0.2 Virus Checking
- Reinstalling DOS/Windows Software - WB.EXE File
- Printing
- Sound Control Panel Settings
- Using the Sound Blaster Card
- Using CD-ROM Drives
- Multimedia and Game Applications

- Rebuilding the Desktop
- Using PC Tools Pro 9.0
- Using MWUNDEL
- Using After Dark 3.0
- Using the Serial Port

Using the Floppy Drive

Both PC and Macintosh floppy disks are automatically mounted when inserted into the floppy drive, in either operating environment. This mounting process takes a few seconds. Macintosh users are familiar with this process; PC users will find that they should wait a few seconds before accessing the data on the floppy disk.

Certain DOS or Windows floppy disk utilities will not work with the DOS Compatibility Card. These utilities attempt to exercise direct control over the floppy drive, which they cannot do, since it is a Macintosh-controlled floppy drive. Instead, Macintosh disk utility applications should be used.

Use of Floppy Disks as Drive Containers

The LC630 DOS Compatible computer does not support the use of 3.5" floppy disks as drive containers. Floppy disks are intended for data use only.

Startup Folder/Auto-start PC Conflict

When two or more Macintosh applications are included in the Startup folder, be sure that the "Auto-start PC" is not selected in the PC Setup control panel. Under this circumstance you must switch to the PC mode manually and you must switch only after all Macintosh startup applications have finished launching.

MIDI Transfers Supported on Macintosh Only

The LC 630 DOS Compatible does not have the capability of sending and receiving MIDI data through the serial port for DOS and Windows. MIDI data does travel internally on the PC side, but when connected direct for use with a MIDI instrument, no data will transfer. MIDI transfers are fully supported on the Macintosh side.

Using the Two-Button Mouse

The standard Apple mouse has no right button and users must press the "extended =" key whenever they intend to use right button functions in one of their PC applications. However, users of a third party programmable mouse or trackball, such as Kensington Turbo Mouse 4.0 or Logitech MouseMan ADB, can use the utilities included with their mouse to map the "extended =" key to the right hand button.

The Kensington Turbo Mouse 4.0 includes two utilities to configure its buttons. They are: "Turbo Mouse Control 4.0.2" and "Turbo Mouse Basics 4.0.2". "Turbo Mouse Control 4.0.2", an application that requires an extension, does not effectively map the "extended =" key to the right button and should not be used. "Turbo Mouse Basics 4.0.2", a control panel, correctly maps the "extended =" key to the right button and should be used instead.

Using a Flightstick Pro Joystick

The Flightstick Pro Joystick for the Macintosh triggers the System beep 'Indigo' when entering the DOS environment. It also triggers this sound twice upon bootup. To correct this, remove the Indigo sound from the System file in the Macintosh System Folder.

Bypassing the CONFIG.SYS and AUTOEXEC.BAT files

To bypass these DOS startup files during the startup process, press and hold the F5 key (Command-5 on non-extended keyboards) after the memory testing is complete.

Installing Corel Draw

If you allow Corel Draw to update the AUTOEXEC.BAT file, the line:
LH C:\Apple\MacShare

is replaced with the line:
C:\DOS\SHARE.EXE /L:500 /F:5100

If the former line is needed, you should edit the AUTOEXEC.BAT file to add it back.

Using Norton Utilities

If Norton Utilities for the Macintosh v3.0 or v3.1 is being used, the "More Compatible" option should be chosen:

1. Go into Control Panels and open FileSaver
2. Click More Choices
3. Click Preferences and Update Now
4. Click More Compatible
5. Click Save

Installing Microsoft Office, Word, or Excel

When you install Microsoft Office 4.2c or later, Microsoft Word 6.0c or later, or Microsoft Excel 5.0c or later, make sure that you use a CD-ROM installation disc or floppy disks that are non-DMF. (DMF is Distribution Media Format, Microsoft's recently changed installation disk format. DMF disks store 1.7 MB of

data rather than the 1.44 MB on a single 3.5 inch high-density disk. During installation with DMF disks, an error will be reported when installing the second disk, and you won't be able to complete the installation.)

Non-DMF installation disks can be obtained from Microsoft by calling 1-800-426-9400.

Amendments to Appendix E of the Macintosh User's Guide

On page 164 of the Macintosh User's Guide, certain steps may not exactly apply to more recent versions of the Novell Netware Client disk set. For steps 4 through 7 of the procedure in the manual, all that matters is that the following exceptions apply:

The Netware directory is: C:\NWCLIENT

The LASTDRIVE setting in the CONFIG.SYS file is: LASTDRIVE=Z

The AUTOEXEC.BAT file contains the line: CALL C:\NWCLIENT\STARTNET.BAT

And be sure to load the Windows support in the directory where you have loaded Windows.

In steps 5 and 6, the defaults are already preset; you should not be required to edit the CONFIG.SYS file to set the LASTDRIVE setting or the AUTOEXEC.BAT file to add the CALL line.

In steps 8 through 10 of the same procedure: Step 8 should read "To select the driver for the network board, press return". The disk required in step 9 is the "DOS Compatibility Installer Disk for PC Environment" disk that came with your computer. In step 10 select the "Macintosh DOS Compatible Ethernet Adapter" and press return.

In the section entitled "Conserving Memory", you should not need to edit the AUTOEXEC.BAT file. The CALL line should already be included.

Using SAM 4.0

When using SAM 4.0 for the Macintosh with the "Prompt: 'Skip' is the default button" check box selected in the Floppy Drive preferences, inserting a floppy while in the PC environment causes the system to hang. The floppy cannot be accessed nor can the user switch to the Macintosh environment. To avoid this, select the "Always scan" option.

SAM Intercept v4.0.2 Virus Checking

If you have SAM Intercept 4.0.2 running on your LC630 DOS Compatible, and you attempt to mount a drive container on the desktop, the mouse cursor will indicate that you have control when, in fact, you do not. (SAM Intercept is checking the drive container for viruses but has not displayed the spinning "beach ball" cursor.) It takes approximately two minutes to complete the virus scan, after which the LC630 DOS Compatible will function normally. Version 4.0 of SAM Intercept does not exhibit this behavior.

To avoid this delay, turn off the autoscan feature as follows:

1. Launch the SAM Intercept program
2. Select "Scan" in the "Options" menu
3. Deselect the "Scan for known viruses" option.

Reinstalling DOS/Windows Software - WB.EXE File

Should it become necessary for you to re-install the DOS/Windows software, you will also need to install the WB.EXE file for execution when DOS boots. To install WB.EXE on the LC630 DOS Compatible follow these steps from the Macintosh desktop:

1. Select the PCSetup control panel and select "Shut Down PC".
2. Open the PC drive container, located on your internal hard drive, by double clicking the file "PC Drive File".
3. A hard drive icon labeled "PC BOOTDISK" will appear on the desktop. Double-click PC BOOTDISK to open the volume.
4. Insert the disk labeled "DOS Compatibility Installer Disk for PC Environment". Double-click on the diskette icon to open the main window and locate the file WB.EXE.
5. Drag it to the folder labeled "Apple".
6. When the Macintosh is finished copying the WB.EXE file, press command-Return.
7. When DOS has finished booting, type:

```
EDIT C:AUTOEXEC.BAT
```

8. Add the following line to the end of the AUTOEXEC.BAT file:

```
C:\APPLE\WB.EXE
```

9. Press Option-f to select the file menu.
10. Select the Exit option (using the up-arrow key) and press Return.
11. Press return again to save the AUTOEXEC.BAT file and exit the DOS editor.
12. At the DOS prompt type Command-Return to re-enter the Macintosh desktop.
13. Unmount the PC drive container by dragging the PC BOOTDISK icon to the Trash.
14. Select "Shut Down PC" in the PCSetup control panel.
15. Start the PC using the PCSetup control panel or by pressing Command-Return.

The WB.EXE program runs and exits when DOS boots. It does not stay resident in memory. The WB.EXE program enables the write back mode and prints a string that reads:

```
"WB.EXE Enable CPU internal cache to Write-Back.", and exits.
```

Printing

For DOS or Windows printing on the DOS Compatibility Card, we recommend using LPT1.DOS or LPT1. In general you must use printers that are Macintosh

compatible, and use their corresponding printer extension for the Macintosh, selectable in the Chooser. However, in a PC Novell Netware environment you can print to a PC-compatible printer attached to a Novell network (refer to the Network Installation Guide on how to set up a Novell client).

Printing to a Postscript Printer

If you have a Postscript printer, open the Printers icon in the Windows Control Panel and select a Postscript driver. We recommend the Laserwriter IINT driver or Windows Postscript driver. In the Macintosh Chooser, select the corresponding printer extension for your type of printer.

Printing to a QuickDraw Printer

If you have a QuickDraw (non-Postscript, non-PCL printer) such as an Apple's ImageWriter or StyleWriter, or HP's DeskJet printer:

- Open the Printers icon in the Windows Control Panel and select the Epson LQ-2500 driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".
- Click on the Epson option for "Interpret non-Postscript As" to enable the Epson emulator.

The Epson emulator works by first translating the DOS text to a similar Macintosh font, then interpreting that text into a series of QuickDraw commands.

Some characters in the original DOS character set may not have exact translations to a Macintosh font. The use of a PostScript font is recommended in these cases, since use of the PostScript standard requires no translation.

The Epson emulator does not support color or grayscale. When printing from the PC to a Color or Grayscale printer, make sure to select the Black & White option from the Print dialog.

Printing to a PCL Printer

When printing to a PCL (Page Control Language) printer, printing is limited to text-only when printing over an AppleTalk connection. To set up this configuration:

- Open the Printers icon in the Windows Control Panel and select your printer's driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".

- Click on the PCL option for "Interpret non-Postscript As" to enable PCL printing.

Additionally, PCL printing of text and graphics together is possible when printing over a Novell network, where a PC print server is connected to the PCL printer and handles the printing job. Select your printer's own driver in the Windows Control Panel.

Sound Control Panel Settings

For sounds generated by the Sound Blaster card and for sounds from the PC, the Sound Control Panel must be set with the Internal CD playthrough enabled. The User's Guide will explain how to make this setting (see pg. 69). With System 7.1.2, however, the setting is lost after each reboot. Install the System Update 3.0 software to correct this problem so that the playthrough setting is retained after each reboot.

QuickTime also turns off the playthrough option. This has the effect of cutting off all PC and Sound Blaster card sounds. QuickTime v1.6.2 will turn off playthrough and not restore it, while QuickTime v2.0 will restore playthrough back to its original state.

Using the Sound Blaster Card

The PC Sound control in the PC Setup control panel does not effect sounds produced by the Sound Blaster card. Only PC-generated sounds such as the system beep are affected by this control. Use the master volume control of the Mixer Control application from the Audio program group, or turn off the Internal CD playthrough to turn off both PC and Sound Blaster generated sounds (see pg. 69 of the User's Guide).

The Sound Blaster daughter-card included on your DOS Compatibility Card will play sounds as expected, but is not able to record them.

The DOS Compatibility Card does not fully support Sound Blaster 8-bit, Sound Blaster 2.0 or Sound Blaster Pro drivers. If problems occur, select the Sound Blaster 16 driver that comes with the DOS Compatibility Card.

Using CD-ROM Drives

Simultaneous use of multiple CD-ROM drives is not supported.

Apple 600i and Apple 600e CD-ROM drives are supported with Apple DOS Compatible cards when used with Apple CD-ROM extension version 5.0.4. Standard installations of System Software 7.5.1 or earlier do not include the Apple CD-ROM 5.0.4 driver. This driver is included with Apple 600e CD-ROM's or can be obtained from Apple Technical Support.

Audio CDs cannot be controlled from both Windows and the Macintosh environment at the same time. One or the other must be used. Photo CD's can not be read on

the PC side of the DOS Compatible.

The PC side sets up a drive letter (E:) for a CD-ROM drive although no drive is attached. If no CD-ROM drive is connected to your system, this drive letter can be freed up (and some memory) by editing these files:

```
AUTOEXEC.BAT
REM  LH C:\DOS\MSCDEX /D:CDDVR /L:E
```

```
CONFIG.SYS
REM  DEVICE=C:\Apple\CDROM.SYS /D:CDDVR
```

Prefacing these commands with "REM" will make DOS ignore them.

Playing an audio CD in Windows while running low-level media tools, such as PC Tools or Microsoft Anti-Virus, may cause a crash. It is best to reduce computer activity to a minimum while using such tools.

Multimedia and Game Applications

These types of applications, whether they are run in the PC or Macintosh environments, will see a marked performance improvement with the installation of a memory SIMM onto the DOS Compatibility Card. QuickTime application performance is especially improved with the addition of a SIMM.

Rebuilding the Desktop

If you need to rebuild the Macintosh desktop, you must either wait for the desktop to rebuild while in the Macintosh environment, or switch to the DOS environment and remain there until the rebuild is complete. Switching back to the Macintosh environment during rebuild will cause the Macintosh to crash.

Using PC Tools Pro 9.0

The CPTASK.EXE utility (Central Point Task Manager) is incompatible with the DOS Compatibility Card.

Using MWUNDEL

MWUNDEL does not work on shared folders, so files deleted by the PC in shared folders will not be recoverable. However, files in shared folders can be recovered if they are deleted from the Macintosh. Use a Macintosh utility such as Norton Disk Doctor.

Using After Dark 3.0

Do not use the PC Setup control panel "Switch at Startup" option when using After Dark. When switching to the PC side, make sure After Dark 3.0 for the

Macintosh is turned off.

Using the Serial Port

If you are using communications software that uses the serial port, the following are known errors:

- For Procomm, the auto-answer mode does not work.
- For LapLink, transferring files between two machines may not work, especially for large files.

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Tech Info Library Article Number:18346



Tech Info Library

PC Exchange 2.0.3: ReadMe File (8/95)

Revised: 10/14/96
Security: Everyone

PC Exchange 2.0.3: ReadMe File (8/95)

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Article Created: 09 August 1995

TOPIC -----

This article contains the Read Me file for PC Exchange 2.0.3. This version of the Read Me file was included with the PC Setup 1.0.7 update software package.

DISCUSSION -----

Important Information About Macintosh PC Exchange 2.0

This document contains important information about Macintosh PC Exchange 2.0 (version 2.0.3) that is not included in your user's guide.

IMPORTANT

Macintosh PC Exchange 2.0 requires Macintosh system software version 7.0.1 or later.

What is Macintosh PC Exchange 2.0?

Macintosh PC Exchange 2.0 is a System 7 compatibility utility that lets you use DOS-format disks on your Macintosh. PC Exchange makes it easy to work with DOS data files on your Macintosh and to transfer files back and forth between a Macintosh and a PC-compatible computer simply by copying the files between disks.

Please note that PC Exchange will not translate or convert DOS data files into Macintosh data files. In addition, PC Exchange does not allow you to work with MS-DOS or Windows application programs on your Macintosh.

New Features

Macintosh PC Exchange 2.0:

- now works with DOS-format and Windows-format SCSI fixed and removable media storage devices (such as Iomega Bernoulli and SyQuest cartridge drives).
- now works with Apple II ProDOS-format floppy disks.
- now works with NEC DOS-format 640K floppy disks.
- lets you access DOS-format drive container files created on a Macintosh Quadra 610 DOS-Compatible computer.
- uses minimal random-access memory (less than 5K) when not in use.
- includes an on/off switch in the control panel that allows you to turn off the PC Exchange disk-mounting capability temporarily.
- comes with built-in device drivers to support a wide variety of SCSI hard disk and removable media drives.
- works on Power Macintosh systems in Macintosh 68000 emulation mode.

Software Fixes in Version 2.0.3

- Earlier versions of Macintosh PC Exchange would fail to recognize and display DOS files on DOS-format disks when the filename contained certain international characters. In this new version, DOS filenames containing international characters will be recognized by PC Exchange. However, in most cases, the DOS international characters will be replaced with alternate Macintosh international characters.
- Earlier versions of Macintosh PC Exchange 2.0 would not allow File Sharing to be turned on when a DOS-format hard disk or removable media drive were mounted on the Desktop. This new version will allow you to turn on File Sharing while a DOS-format disk is mounted on the Desktop. However, the DOS-format disk cannot be shared using the File Sharing software.
- Macintosh PC Exchange 2.0.3 now accurately recognizes WorldScript 2-byte character DOS file and volume names.
- When erasing 800K floppy disks on a Macintosh Quadra AV system, the format popup menu would list the Macintosh 800K format option twice. This problem has been corrected in version 2.0.3 of PC Exchange.

Known Problems in Version 2.0.3 of Macintosh PC Exchange

- A "Sad Mac" error may occur on your Macintosh if a removable media cartridge is left in the drive during startup. To keep this problem from occurring, manually eject removable media cartridges from the drive before you turn on your Macintosh.

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- PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files which contain more than one gigabyte of disk space.

SCSI Hard Disk and Removable Media Drives Not Supported

The following disk drives are not supported by Macintosh PC Exchange 2.0:

- Apple 5.25-inch floppy disk drive
- Maxtor 230MB SCSI hard disk drive
- Pinnacle Micro PMO-650 SCSI magneto optical drive

Installation Information

If you have already installed another PC disk-mounting utility on your Macintosh, be sure to remove it before installing Macintosh PC Exchange.

You install Macintosh PC Exchange by dragging the PC Exchange icon into the Control Panels folder of your System Folder and restarting your Macintosh.

NOTE: If you are installing Macintosh PC Exchange on a Japanese Kanji-localized Macintosh system, you must remove the "DOS640K Driver" software extension from your Extensions folder before installing version 2.0.3 of PC Exchange. If you do not remove the DOS640K Driver, you will experience difficulties when trying to read NEC DOS-format 640K floppy disks.

Strange Text Characters in a Document

In some cases your Macintosh application program may not be able to interpret the file format of a PC document. When this happens, the document's formatting is displayed incorrectly and you may see strange characters in the document. Try using a different application program or translate the document into a different file format using one of the file format translation utilities available for the Macintosh (such as MacLinkPlus/Easy Open Translators from DataViz).

Paint Programs

Some paint programs, such as MacPaint and SuperPaint, save documents on DOS-format floppy disks very slowly. To avoid this problem, always save paint documents on your computer's hard disk. If you like, you can then copy the documents to a DOS-format floppy disk.

Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with PC Exchange and should not be used while PC Exchange is installed. Macintosh PC Exchange 2.0 contains an easier and more intuitive method for accessing DOS and Apple II ProDOS disks on a Macintosh.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option.

ClarisWorks (Version 1.0v2 or Earlier)

Some versions of ClarisWorks cannot read or write files on DOS-format floppy disks. To open a PC document in ClarisWorks, you must first copy the document to your computer's hard disk. Always save ClarisWorks documents on your Macintosh hard disk. If you like, you can then copy the documents to a PC-format floppy disk. Contact Claris to obtain version 1.0v3 or later of ClarisWorks.

Directory Assistance II

Directory Assistance II should not be used while the Macintosh PC Exchange control panel is open. You can turn off Directory Assistance II from the PC Exchange control panel by holding down the Option key while you click the Add or Change button in the control panel window. Directory Assistance II will be turned off temporarily while you use the PC Exchange control panel and will be reactivated when you close the PC Exchange control panel.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other MS-DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Macintosh, you must decompress the files and save them to a noncompressed DOS-format disk.

Working With PC-Format Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the Macintosh-, DOS-, or ProDOS-format partitions as individual logical drives on the Macintosh Desktop. If the disk contains both Macintosh and DOS-format partitions, PC Exchange will only recognize the Macintosh partition. In addition, PC Exchange will only recognize ProDOS-format partitions on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge to the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Macintosh-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Macintosh, DOS, or ProDOS

partitions, you need to use third-party software designed for partitioning hard disk and removable media drives.

Tips for Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize SCSI removable media devices, you must turn on the device and eject any cartridges before you turn on your Macintosh system.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install it's own device driver for that SCSI device.

The Eject Disk command is unavailable when working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a PC-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. Do not use the MS-DOS Fdisk command to initialize a removable media cartridge. In addition, you should use the MS-DOS Format command to format the disk before you copy DOS files to a newly initialized removable media cartridge on a PC.

When you initialize a removable media cartridge on a PC-compatible computer, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media device. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Tips for Working with DOS-format SCSI Hard Disk Drives

In order for PC Exchange to recognize SCSI hard disk drives, you must turn on the drive before you turn on your Macintosh system.

Do not install the device driver software that came with your SCSI hard disk. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install it's own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk on a PC-compatible computer, use the MS-DOS Fdisk command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS Format command to format and erase the disk before you copy DOS files to a new SCSI hard disk on a PC.

Additions to the User's Guide

If you change the volume name of a DOS-format disk to a name that is longer than 11 characters, the disk name will be shortened when you view it on a PC-compatible computer.

If Macintosh PC Exchange encounters a problem while formatting a floppy disk, an Updating Disk dialog box may appear. This dialog box shows the status of the updating process. To stop the disk from being updated, you can click the Cancel button. This cancels the initialization process and the disk is ejected from the disk drive.

You cannot create an assignment with a blank DOS suffix in the PC Exchange control panel.

Common MS-DOS File Suffixes

.BAK	Backup document (used by word processing programs)
.BAS	BASIC program (cannot be used on a Macintosh)
.BAT	Executable DOS program (cannot be used on a Macintosh)
.BMP	Windows Bitmap graphic
.CDR	CorelDraw graphic
.CGM	Computer Graphics Metafile graphic
.COM	Executable DOS file (cannot be used on a Macintosh)
.CWK	Clarisworks document
.DBF	dBASE database file
.DIF	Data Interchange Format (used by spreadsheet and database programs)
.DLL	Windows Dynamically Linked Library (cannot be used on a Macintosh)
.DOC	Microsoft Word document
.DOX	Multimate v4.0 document
.DWG	Autocad drawing
.DXF	Autocad drawing in exchange format
.EPS	Encapsulated PostScript file
.EXE	Executable DOS file (cannot be used on a Macintosh)
.INI	Windows preference file
.OBJ	Compiled object file (cannot be used on a Macintosh)
.PCC	PC Paintbrush graphics file
.PCX	PC Paintbrush graphics file
.PIC	Lotus 1-2-3 graphics file
.PM3	PageMaker 3.0 document
.PM5	PageMaker 5.0 document
.PM4	Pagemaker 4.0 document
.PRG	dBASE program file (cannot be used on a Macintosh)
.PRN	DOS 'Print' file
.RFT	DisplayWrite Revisable Form Text (DCA format)
.SAM	AmiPro document
.STY	Microsoft Word style sheet
.SYL	SYLK format (used by spreadsheet and database programs)
.SYS	DOS system file (cannot be used on a Macintosh)
.TIF	TIFF graphics file
.TXT	ASCII text file
.WDB	Microsoft Works database

.WKS	Lotus 1-2-3 spreadsheet, version 1
.WK1	Lotus 1-2-3 spreadsheet, version 2
.WK3	Lotus 1-2-3 spreadsheet, version 3
.WMF	Microsoft Windows Metafile
.WP	OfficeWriter or WordPerfect document
.WPF	WordPerfect document
.WPG	WordPerfect graphics file
.WPS	Microsoft Works word processing document
.WQ1	Quattro Pro spreadsheet
.WS	WordStar document
.XLA	Microsoft Excel add-in macro
.XLT	Microsoft Excel template
.XLC	Microsoft Excel chart
.XLM	Microsoft Excel macro
.XLS	Microsoft Excel spreadsheet
.XY	XyWrite document

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Support Information Services

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Tech Info Library

MacsBug 6.5.2: ReadMe File (8/95)

Revised: 8/9/95
Security: Everyone

MacsBug 6.5.2: ReadMe File (8/95)

Article Created: 09 August 1995

TOPIC -----

This article contains the Read Me file included with MacsBug 6.5.2

DISCUSSION -----

About MacsBug 6.5.2
7/26/95

With the 6.5.1 release, we've adopted a newer, hopefully less-confusing version strategy. From now on, each new version of MacsBug will be a "final" version. Thus, the next version will be 6.5.3, the next bug-fix version to 6.5.

•• NOTE •• - MacsBug 6.5.1 was never released, so please be sure to read what changed in that version since it's not repeated here, but is significant.

MIXED MODE STEPPING

You can now step across all Mixed Mode transitions. This means that when you come up to a MixedModeMagic trap, stepping once more lands on the first instruction on the other side, whether it's 68K or PowerPC. Similarly, when you're stepping through PowerPC code that calls the functions CallUniversalProc or CallOSTrapUniversalProc, you will automatically land on the other side of the call. When returning from a 68K routine to PowerPC code or vice-versa, stepping the return instruction will take you back to the caller, whether it's 68K or PowerPC. There should be no instances where stepping takes you into Mixed Mode itself (so if you're debugging Mixed Mode, use another debugger).

Mixed Mode stepping works equally well with accelerated ("fat") resources. If your 68K code loads and calls into a fat resource, you can simply step right into it.

NMIs IN NATIVE CODE

Using the NMI key sequence, you can now interrupt native code execution, and will land on the PowerPC instruction you interrupted. However, due to reentrancy concerns, you cannot interrupt in the middle of Mixed Mode execution, you'll land in 68K code like you used to do with older versions of MacsBug.

BUS ERROR CATCHING ON POWERPC

Bus error handling on the first-generation PowerPC machines (6100/7100/8100) now works. This really wasn't a bug in MacsBug, but I fixed it anyway. The problem was that the sound-in component trashes the bus error vector when it is loaded (this is the case in 7.5 and 7.5.1). MacsBug now takes care of the component load through a magical patch, and fixes up the bus error vector if it becomes damaged. See, MacsBug really is system software.

POWERPC STACK CRAWL

Fixed the infinite loop bug in the "SC" command when walking back over PowerPC->68K switch frames (mentioned in the 6.5.1 release notes).

POWERPC DEBUGGER/DEBUGSTR CALLS

When you execute a Debugger or DebugStr in native code, you should no longer land in the implementation (in InterfaceLib at present), you'll be in your own code right after the branch to the library where they live.

POWERPC STEPPING

Stepping or tracing with a count now works in PowerPC code.

POWERPC REGISTER DISPLAY

When on a PowerPC machine, we now show the current interrupt mask in place of the Memory Manager mode in the left sidebar area (you're always in 32-bit mode). This is shown (and is correct) when in both 68K or PowerPC code.

The current interrupt mask is shown in the PowerPC register set when the "TD" command is used.

Changed "TF" command to show the exponent and sign of each FPR as one component.

REGISTER ASSIGNMENT

You can now set and get A5 when in both 68K and PowerPC code. For the moment, this is the only 68K register you can get to since it's the most useful. This means that macros like "thecport" work regardless of the current instruction set.

The 68020-040 register formerly known as "DFC" (Data Function Code) must now be called "RDFC" so it's no longer hex (nobody cares about this register anyway).

COMMANDS FIXED/ADDED

Added a new command "STAT" and incorporated it into the StdLog macro. It shows lots of useful information you can see on the screen, but have never had an easy way of getting into the log (at least not very concisely). For instance, it identifies the names of all shipping machines that have unique box flag values, shows used stack space, max-used stack space when available, and ResErr/MemErr when they are nonzero.

The "EA" (Exit to Application) and "ES" (Exit to Shell) commands now work when you're in PowerPC code.

The "IR" (Instruction list to Return) command now works in PowerPC code with no address.

"IRP" (Instruction list to Return PowerPC) command has been added.

"GTP" (Go Till in PowerPC code) command has been added.

Restarting (RS/RB) now works in a general way on PCI-based machines. It used to need a box flag table, which was a work-around for early developmental ROMs without a reasonable Gestalt selector to identify that the machine needed a hard reset to restart.

The "DMA" (Display Memory ASCII) command now honors the DITTO mode.

WH COMMAND

When displaying the CFM library an address lives in, we now display the executable and writable status of the section the address is in (if any).

If an address is in low memory, we now say so (instead of saying it's in RAM but not in a know heap).

A-TRAP RECORDING ON QUADRA/PERFORMA 63x AND POWERBOOK 150

It works, and doesn't make your machine crash. I really don't want to tell you why 'cause it would make a great puzzle page.

A-TRAP ACTIONS

A-Trap tracing and recording no longer mask trap values into the A000-A0FF and A800-ABFF range when displaying them, all bits are shown as-is when the trap was executed.

A-Trap trace now shows the name of the real call that was made if the trap is selector-based (dispatched), rather than the trap. This means you'll see traces with information such as "SameProcess" instead of "OSDispatch", which is much more useful.

A-Trap recording and tracing now identifies Enqueue and Dequeue as stack-based traps rather than register-based (they aren't).

A-Trap break, trace, and step-spy logic has been fixed so you can now have combinations of them pending at the same time that actually work. In the past you couldn't have a trace and a break work at the same time, the first one that was activated got precedence. This means you can now have multiple trace ranges and they'll work as well.

Fixed the long-standing (since November 24, 1992, to be exact) bug where you'd land near a TRAP #5D inside MacsBug if you stepped over an A-Trap that had a break action set on it.

Setting an A-Trap break while in PowerPC code works (I was stupid and failed to install the A-Trap dispatcher patch).

68K DISASSEMBLY

When disassembling a MixedModeMagic trap (AAFE) that's at the current 68K PC, we now show the address that you'll land if you step across the mode transition, as well as the destination instruction set.

When disassembling an A-Trap instruction, the comment field now contains the implementation address of the trap, rather than the trap word. It's already shown off to the right anyway.

POWERPC DISASSEMBLY

When disassembling PowerPC code that uses an offset off of R0, we now look up macros for that address. For example, instead of getting this disassembly:

```
lwz r3, 0x064F(0)
```

you'll get:

```
lwz r3, JFlushCache(r0)
```

Throughout PowerPC disassembly all fields are now shown in hex instead of decimal.

The symbol lookup code now lets tracebacks win if they're at the same address as a previously found CFM export. This lets the disassembler munch the embedded data making the disassembly look nicer (and smaller).

The glue sniffer can now identify Microsoft-style cross-TOC glue.

SYMBOL LOOKUP

I drastically sped up CFM/traceback lookups over 6.5.1 so MacsBug is usable again.

Optimized embedded 68K symbol lookup so it's about 10% faster.

MISCELLANEOUS

Fixed all instances (hopefully) where switching ISAs while in MacsBug wouldn't cause the register names to be erased and redrawn. My internal concept of current and previous ISA was a bit loopy.

The syntax error display for all non-repeating commands has been fixed (br, etc.) You'll no longer see the entire help text as one garbled mess. Yeah, it confused me too.

The "explain significance of" feature shows nicer output for slightly-negative numbers (0 to -16M).

The display of "is a bad pointer" only yells about odd pointers on 68000s.

Made internal commands override dcmds of the same name. You can specify a dcmd (only) by putting a "[option-d]" in front of the name (and it should work for Help, too, as in "[option-d]cfm").

Allow "[option-=]" for not-equal (Dave did it, I'll never remember it).

Moved the typographical quotes up by one pixel (to make Greg Robbins happy).

BUILT-IN DEBUGGER PREFS

Fixed Get1xType and Get1xResource to be Get1IndType and Get1IndResource (we've added two macros to let you still type Get1xType and Get1xResource if you really want to).

Replaced PPCJump macro with a more general one. PPCJumpA is now the old "branch absolute" version.

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Tech Info Library

Power Macintosh 6100 DOS Compatible: ReadMe File (5/96)

Revised: 2/17/97
Security: Everyone

Power Macintosh 6100 DOS Compatible: ReadMe File (5/96)

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Article Created: 09 August 1995
Article Reviewed/Updated: 20 May 1996

TOPIC -----

This article contains the Read Me file for the Power Macintosh 6100 DOS Compatible. This version of the Read Me file was included with the PC Setup 1.0.7 update software package.

DISCUSSION -----

Using DOS and Window Applications
With the DOS Compatibility Card for Macintosh

This document contains important information about using your DOS Compatibility Card that is not included in your user's guide.

Contents:

- Using Memory Management Utilities
- Using the Serial Ports on the Macintosh
- Using Video
- Using the Apple Adjustable Keyboard
- Using Backup Programs
- Using MacShare
- Using PC Drives and Partitions
- Using Floppy Disks and CD-ROM Discs
- Installing Microsoft Office, Word, or Excel
- Using the Two-Button Mouse
- Sound Control Panel Settings
- Using the Sound Blaster Card
- Multimedia and Game Applications
- Printing
- Using After Dark 3.0
- Caches
- Serial Port Pinout

Using Memory Management Utilities

If you use a memory management utility such as EMM386 or QEMM, you need to configure it to be compatible with your DOS Compatibility Card.

- If you will be using EMM386 (included as part of DOS) and you don't require expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS RAM=D000-EFFF
```

If you require expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE RAM=D000-EFFF FRAME=D000
```

- If you use QEMM, it is recommended that you use the frame option (ST:F):

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:F ARAM=B080-B7FF ARAM=C900-DFFF R:1
```

- If you choose to use the Stealth mapping option (ST:M), set CONFIG.SYS to:

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:M X=C800-CFFF X=FC00-FCFF X=FE00-FFFF  
ARAM=B080-B7FF ARAM=C900-DFFF R:2
```

For other memory management utilities, configure them so that the only areas in the BIOS that can be mapped to upper memory are from D000 through EFFF.

Make sure you verify that the HIMEM.SYS line in the CONFIG.SYS file has the switch to turn memory testing off. If the HIMEM.SYS line doesn't turn memory testing off, the ROM BIOS may become corrupted when the DOS Compatibility Card is configured for 2 MB of memory:

```
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
```

NOTE Apple does not recommend using automated memory configuration utilities with the DOS Compatibility Card because they can require more memory than management utilities you configure manually. They can also be incompatible with the DOS Compatibility Card.

Using the Serial Ports on the Macintosh

The maximum baud rate supported by the DOS Compatibility Card when a COM port is mapped to a Macintosh serial port is 19,200. If you're capturing serial output to a Macintosh file, there is no limit.

Due to the RS-232 implementation of the Macintosh, not all RS-232 signals are available. These signals are not available: Carrier Detect (CD), Data Set Ready (DSR), Request to Send (RTS), and Ring Indicator (RI). If your application or serial device requires these signals, it will not work.

NOTE See "Serial Port Pinout" later in this document for a list of the Macintosh and PC connectors.

The DOS Compatibility Card does not support Carrier Detect (CD). You must configure your communications applications so they do not use CD. Most communications applications can be set to respond to the CARRIER string sent back by most modems.

Using Video

- Correcting Video Synchronization (Video Synch)

Some application programs that write directly to the hardware (especially games) may cause the Apple 13", 14", and 16" monitors to lose video synch when you start the program. If this happens, call the software company to see if one of the following conditions exists:

1. There is a switch to force the application program to make BIOS calls.
2. There is an upgrade available with this feature.

These applications will run on a standard VGA, SVGA, or MultiSync monitor.

- Getting Color on Your VGA Monitor

Due to the way some programs check for color VGA, they may be installed in VGA monochrome. In these cases check the documentation that came with your software to see if there is a setup option to install standard VGA. If the setup option is available, install the software with the standard VGA option. Once a program is installed with standard VGA, it will always display in color.

If you are installing Windows, even though the SETUP program comes up in color, the express setup may install in VGA monochrome. To avoid this you can use the custom setup and verify the video is set to VGA in the configuration screen.

Another way to avoid installing in VGA monochrome is to use the INSTALL.BAT file located on the DOS Compatibility Card Installer (for the DOS Environment) disk. Follow these steps:

1. Run the INSTALL.BAT command, but choose not to install.

The Installer places WINSETUP.BAT and a hardware information file on your C:/ volume.

2. Use the WINSETUP.BAT file to install Windows.

This will force Windows to install in color. You can also use the Windows SETUP program to change the video at any time.

- Using the Video Drivers

Included with your DOS Compatibility Card are video drivers for Windows and third-party applications. These drivers allow you to run Windows with 256 colors at 640 by 480, or if you are using an Apple 16" or VGA display, 16 colors at 800 by 600. Follow these steps:

1. Insert the Display Driver Disk 1 disk in the floppy disk drive while the PC

is in the foreground.

2. From DOS, set the current drive to A by typing:

A:

3. Run the setup program by typing:

SETUP

Follow the instructions on the screen to install the video drivers.

NOTE If you are using an Apple 16" monitor, DOS will always be displayed at 640 by 480 centered on your monitor.

Using the Apple Adjustable Keyboard

If you are using an Apple Adjustable Keyboard, you cannot use key combinations that combine keys from the main keyboard with function keys at the same time (such as shift-F1). For this reason, you cannot restart the DOS Compatibility Card using the Control, Alt, and Delete key combination. If you need to restart the DOS Compatibility Card, use the Reset button in the PC Setup control panel.

Using Backup Programs

To back up the drive files on your Macintosh, either make a copy of the files by duplicating them in the Finder, or use a Macintosh backup application program. Do not use PC backup programs. PC backup programs do not work because the floppy disk drive is controlled by the Macintosh.

Using MacShare

MacShare is a PC application program included with your DOS Compatibility Card software that allows the PC to view Macintosh folders and volumes as drive letters on the PC. MacShare allows as many shared drives as there are drive letters. To specify the number of drive letters, modify your CONFIG.SYS to include a LASTDRIVE statement:

LASTDRIVE=x

x must be a letter between E and Z because the PC reserves drives A through D for its floppy and hard disk drives. For example, if you use M as your LASTDRIVE value, you could have up to nine extra drives (using drives labeled E through M). The CD-ROM driver, if installed, will use one letter.

NOTE Each additional drive letter uses 100 additional bytes of PC memory.

Using PC Drives and Partitions

The PC Setup control panel allows you to use PC SCSI drives and partitions with the DOS Compatibility Card. If you use a PC drive or partition and you have a utility that mounts these devices on the Macintosh, be sure to unmount the drive or partition before starting the PC by dragging its icon to the Trash. If you don't unmount the drive or partition, you may lose data since both the Macintosh and the PC may write to the device at the same time.

NOTE If you are using Apple's Macintosh PC Exchange 2.0 to mount PC devices, the software alerts you if you try booting the PC while the device is mounted.

If you intend to mount your PC drive file, partition, or disk on the Macintosh using a utility such as Apple's Macintosh PC Exchange, do not use a PC compression program. Drives that are compressed cannot be mounted.

Using Floppy Disks and CD-ROM Discs

Simultaneous use of multiple CD-ROM drives is not supported. When the PC is in the foreground, you cannot insert Macintosh floppy disks into the floppy disk drive. The PC ejects a Macintosh floppy disk if one is inserted. Also, Photo CDs can not be read on the PC side of the DOS Compatible.

Apple 600i and Apple 600e CD-ROM drives work with the DOS Compatibility card when used with Apple CD-ROM extension version 5.0.4. Standard installations of system software version 7.5.1 or earlier do not include the Apple CD-ROM 5.0.4 driver. This driver is included with Apple 600e CD-ROMs or can be obtained from Apple Technical Support.

Write-protected PC floppy disks can be accessed by both the PC and the Macintosh. Write-enabled floppy disks can be accessed only by the environment that was in the foreground when the floppy disk was inserted.

To eject a floppy disk while the PC is in the foreground, press Command-E.

NOTE Using Command-E works only when the PC can access the floppy disk. Otherwise switch to the Macintosh and eject the floppy disk from the Macintosh.

CD-ROM discs can be accessed by both the Macintosh and PC (if the included PC software is installed). To eject a CD-ROM disc from the PC, press Command-Y. If the CD-ROM disc cannot be ejected (because a file is in use or the CD-ROM is being shared), the Macintosh beeps to notify you and will not eject the CD-ROM disc.

Audio CDs cannot be controlled from both Windows and the Macintosh environment at the same time. One or the other must be used.

The PC side sets up a drive letter (E:) for a CD-ROM drive although no drive is attached. If no CD-ROM drive is connected to your system, this drive letter (and some memory) can be freed up by editing these files:

```
AUTOEXEC.BAT
REM LH C:\DOS\MSCDEX /D:CDDVR /L:E
```

```
CONFIG.SYS
```

```
REM  DEVICE=C:\Apple\CDROM.SYS /D:CDDVR
```

Prefacing these commands with "REM" will cause DOS to ignore them.

Playing an audio CD in Windows while running low-level media tools, such as PC Tools or Microsoft Anti-Virus, may cause a crash. It is best to reduce computer activity to a minimum while using such tools.

Installing Microsoft Office, Word, or Excel

When you install Microsoft Office 4.2c or later, Microsoft Word 6.0c or later, or Microsoft Excel 5.0c or later, make sure that you use a CD-ROM installation disc or floppy disks that are non-DMF. (DMF is Distribution Media Format, Microsoft's recently changed installation disk format. DMF disks store 1.7 MB of data rather than the 1.44 MB on a single 3.5 inch high-density disk. During installation with DMF disks, an error will be reported when installing the second disk, and you won't be able to complete the installation.)

Non-DMF installation disks can be obtained from Microsoft by calling 1-800-426-9400.

Using the Two-Button Mouse

The standard Apple mouse has no right button and users must press the "extended =" key whenever they intend to use right button functions in one of their PC applications. However, users of a third party programmable mouse or trackball, such as Kensington Turbo Mouse 4.0 or Logitech MouseMan ADB, can use the utilities included with their mouse to map the "extended =" key to the right hand button.

The Kensington Turbo Mouse 4.0 includes two utilities to configure its buttons. They are: "Turbo Mouse Control 4.0.2" and "Turbo Mouse Basics 4.0.2". "Turbo Mouse Control 4.0.2", an application that requires an extension, does not effectively map the "extended =" key to the right button and should not be used.

"Turbo Mouse Basics 4.0.2", a control panel, correctly maps the "extended =" key to the right button and should be used instead.

Sound Control Panel Settings

For sounds generated by the Sound Blaster card and for sounds from the PC, the Sound Control Panel must be set with the Internal CD playthrough enabled. The User's Guide will explain how to make this setting (see pg. 54). With System 7.1.2, however, the setting is lost after each reboot. Install the System Update 3.0 software to correct this problem so that the playthrough setting is retained after each reboot.

QuickTime also turns off the playthrough option. This has the effect of cutting off all PC and Sound Blaster card sounds. QuickTime v1.6.2 will turn off playthrough and not restore it, while QuickTime v2.0 will restore playthrough

back to its original state.

Using the Sound Blaster Card

The PC Sound control in the PC Setup control panel does not effect sounds produced by the Sound Blaster card. Only PC-generated sounds such as the system beep are affected by this control. Use the master volume control of the Mixer Control application from the Audio program group, or turn off the Internal CD playthrough to turn off both PC and Sound Blaster generated sounds (see pg. 54 of the User's Guide).

The Sound Blaster daughter-card included on your DOS Compatibility Card will play sounds as expected, but is not able to record them.

The DOS Compatibility Card does not fully support Sound Blaster 8-bit, Sound Blaster 2.0 or Sound Blaster Pro drivers. If problems occur, select the Sound Blaster 16 driver that comes with the DOS Compatibility Card.

Multimedia and Game Applications

These types of applications, whether they are run in the PC or Macintosh environments, will see a marked performance improvement with the installation of a memory SIMM onto the DOS Compatibility Card. QuickTime application performance is especially improved with the addition of a SIMM.

Printing

The recommended print driver to use with your DOS or Windows application when printing to a QuickDraw (non-PostScript) printer is the Epson LQ-2500.

If the top and bottom of your document gets clipped when you are printing from your PC, follow these steps:

1. Double-click the System Folder on your Macintosh and open the Extensions folder.
2. Double-click the PC Print Spooler.
3. Choose Preferences from the File Menu.
4. Click the button for "Gaps between pages (60 lines)" (under "When emulating an Epson printer").

You can also set notification and status options in this dialog box.

For DOS or Windows printing on the DOS Compatibility Card, we recommend using LPT1.DOS or LPT1. In general you must use printers that are Macintosh compatible, and use their corresponding printer extension for the Macintosh, selectable in the Chooser. However, in a PC Novell Netware environment you can print to a PC-compatible printer attached to a Novell network (refer to the

Network Installation Guide on how to set up a Novell client).

Printing to a Postscript Printer

If you have a Postscript printer, open the Printers icon in the Windows Control Panel and select a Postscript driver. We recommend the Laserwriter IINT driver or Windows Postscript driver. In the Macintosh Chooser, select the corresponding printer extension for your type of printer.

Printing to a QuickDraw Printer

If you have a QuickDraw (non-Postscript, non-PCL printer) such as an Apple's ImageWriter or StyleWriter, or HP's DeskJet printer:

- Open the Printers icon in the Windows Control Panel and select the Epson LQ-2500 driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".
- Click on the Epson option for "Interpret non-Postscript As" to enable the Epson emulator.

The Epson emulator works by first translating the DOS text to a similar Macintosh font, then interpreting that text into a series of QuickDraw commands.

Some characters in the original DOS character set may not have exact translations to a Macintosh font. The use of a PostScript font is recommended in these cases, since use of the PostScript standard requires no translation.

The Epson emulator does not support color or greyscale. When printing from the PC to a Color or Grayscale printer, make sure to select the Black & White option from the Print dialog.

Printing to a PCL Printer

When printing to a PCL (Page Control Language) printer, printing is limited to text-only when printing over an AppleTalk connection. To set up this configuration:

- Open the Printers icon in the Windows Control Panel and select your printer's driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".
- Click on the PCL option for "Interpret non-Postscript As" to enable PCL printing.

Additionally, PCL printing of text and graphics together is possible when printing over a Novell network, where a PC print server is connected to the PCL printer and handles the printing job. Select your printer's own driver in the Windows Control Panel.

Using After Dark 3.0

Do not use the PC Setup control panel "Switch at Startup" option when using After Dark. When switching to the PC side, make sure After Dark 3.0 for the Macintosh is turned off.

Caches

Your DOS Compatibility Card works best with the Macintosh computer's caches enabled. Follow these steps to enable the caches:

1. Choose Control Panels from the Apple menu.
2. Open the Cache Switch control panel.
3. Click the button for Faster (caches enabled).
4. Close the Cache Switch control panel.

Serial Port Pinout

To connect existing PC serial devices to your Macintosh, you need cables with the correct pinout. The following chart matches the Macintosh pin (Mac Mini DIN-8) with the corresponding PC pin (DB-25):

Begin_Table

Mac Signal	Mac Mini DIN-8	DB-25	RS-232 Name
-----	-----	-----	-----
HSK _o	1	20	DTR
HSK _i	2	5,8	CTS, DTS
TXD-	3	2	TXD
GND	4	7	GND
RXDA-	5	3	RXD
TXDA+	6	N/C	
GPI	7	N/C	
RXD+	8	7	GND

End_Table

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Article Change History:

20 May 1996 - Added Serial Port Pinout Table.

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Tech Info Library Article Number:18349



Tech Info Library

At Ease: Are Hot Keys Still Active? (8/95)

Revised: 8/9/95
Security: Everyone

At Ease: Are "Hot Keys" Still Active? (8/95)

=====

Article Created: 09 August 1995

TOPIC -----

Will At Ease 3.0 for Workgroups or At Ease 2.0.3 prevent the hot key from switching a Macintosh with a DOS Compatible card to the DOS side?

DISCUSSION -----

Although At Ease will prevent you from launching a control panel, At Ease will not prevent hot keys from being activated. The purpose of a control panel is to give functionality to the Macintosh and if the functionality includes the use of a hot key, only the control panel can set whether or not it is active. However, for security reasons, At Ease does disable the space bar hot key from opening the Extensions Manager at startup time.

Currently, the hot key to toggle between Macintosh and DOS cannot be disabled (only changed) and therefore if PC Setup is loaded at startup time the hot key will be active.

Other Apple control panels that are activated or affected by hot keys are WindowShade, Easy Access, CloseView, and Keyboard. The hot keys are active if the control panel loads at startup time and the hot keys are required to use or activate that control panel.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18350



Tech Info Library

Megaphone: Caller Hears Me, I Can't Hear Them (5/96)

Revised: 5/23/96
Security: Everyone

Megaphone: Caller Hears Me, I Can't Hear Them (5/96)

Article Created: 10 August 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

This article gives suggestions for troubleshooting a problem encountered when using the MegaPhone software. After establishing a telephony connection with another person, you cannot hear the other party, but they can hear you.

DISCUSSION -----

This appears to be a conflict between the telephony software and the External CD Sound extension. The External CD Sound extension allows you to connect an external CD-ROM player and play audio CD-ROM discs through the internal speaker. See the TIL article "System 7.5: What The External CD Sound Extension Does" for more information on what this extension does.

You can work around this issue by disabling the External CD Sound extension by either removing it from your Extensions folder in your System Folder or using the Extensions Manager control panel to turn it off. In either case, you will have to restart your Macintosh before the changes will take effect.

You should also make sure that the Internal Modem Sound extension is present in your Extensions folder. If you have a Macintosh Performa 5300 or 6300 series computer, or have installed the Audio Volume Installer update, instead of the Internal Modem Sound extension, you should verify that the Audio Volume extension has not been removed.

The appropriate file can be found on your startup disc using the path: Hard Disk Files -> System Software files -> Extensions ->.

Once you copy the file to your hard disk, drag the file over your closed System Folder. Click OK when the system software asks to place the file in its proper folder.

Since your Performa has an internal CD-ROM drive, the presence or absence of the

External CD Sound extension should not affect the operation of the computer. If you want to hear audio CD-ROM discs played on an external CD-ROM player through your computer's internal speaker, you will have to reinstall the External CD Sound extension or turn it back on in the Extensions Manager and restart.

Article Change History:

23 May 1996 - Changed wording for clarity.

25 Jan 1996 - Corrected minor typo.

18 Jan 1996 - Clarified Performa 6300 information.

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Tech Info Library Article Number:18352



Tech Info Library

Quicktime 2.0: About QuickTime Extras ReadMe File (8/95)

Revised: 8/10/95
Security: Everyone

Quicktime 2.0: About QuickTime Extras ReadMe File (8/95)

=====

Article Created: 10 August 1995

TOPIC -----

This article contains the Read Me file included with the Quicktime Extras folder in the new Power Macintosh 7200, 7500, 8500, and 9500 computers.

DISCUSSION -----

Welcome to QuickTime

The QuickTime system software extension enables you to integrate graphics, sound, video, text, music, and animation into documents. By providing a standard way for all Macintosh programs to control these multimedia elements, QuickTime makes them easier to use. QuickTime 2.0 includes support for larger, smoother, video, as well as time-code, 16-bit audio compression, and MPEG. It also includes support for synthesized music.

You do not interact directly with the QuickTime extension. It works behind the scenes as part of your system software, providing new features to application programs that support QuickTime. The specific features of QuickTime and how they are presented depend on the programs you use.

The QuickTime Extras folder includes:

- sample movie files
- the QuickTime Musical Instruments extension (on the CD)
- Movie Player 1.0

••NOTE: This is not included in the original Read Me file.

The Power Macintosh 7500 and 8500 shipped with MoviePlayer 2.0 on the hard drive. ••

To play sample movies:

To play a sample movie, double-click the movie's icon, then click the Play

button of the Movie Controller.

QuickTime Musical Instruments:

The QuickTime Musical Instruments file contains many musical instrument samples that you can use in QuickTime movies.

To Install QuickTime Musical Instruments:

1. Drag the QuickTime Musical Instruments icons from the CD to your hard disk's System Folder icon (not into the open folder).
2. Click OK in the dialog box that appears.
3. Restart your Macintosh.

For Software Developers:

The QuickTime 2.0 Developer Kit includes tools for creating and editing movies, compressing audio, and adding time code to movies. It also includes sample movies such as music movies, MPEG movies, time-code movies, and technical documentation. It is available from the Apple Programmers and Developers Association (APDA) for \$195.

APDA:

1-800-282-2732 in the U.S

1-800-637-0029 in Canada

1-716-871-6555 for other countries

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Tech Info Library Article Number:18353



Tech Info Library

Performa with Backup CD: Where is Apple Backup? (8/95)

Revised: 8/10/95
Security: Everyone

Performa with Backup CD: Where is Apple Backup? (8/95)

=====

Article Created: 10 August 1995

TOPIC -----

I cannot find Apple Backup on my new Performa computer. Was I supposed to receive it?

DISCUSSION -----

Since a backup of all the software that came pre-loaded on your Performa is provided on the Macintosh Performa CD-ROM disc, and making floppy disk backups would require over 100 floppy disks, Apple Backup has been removed from the Summer 1995 release of Macintosh Performa models. This includes the Performa 631, Performa 640 DOS Compatible, 5200 series, and 6200 series computers.

If you need to back up individual files, you can drag-copy the files to floppy disks.

If you need to restore applications or your system software, you can do so from your Macintosh Performa CD, following the instructions in your Macintosh Performa User's Guide. You can also use the search string "performa adj backup" to locate the TIL article: "Performa: Backing Up and Restoring" for additional tips.

Support Information Services

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Tech Info Library Article Number:18356



Tech Info Library

PM7200/9500: Virtual Memory On with System CD (3/97)

Revised: 3/13/97
Security: Everyone

PM7200/9500: Virtual Memory On with System CD (3/97)

Article Created: 10 August 1995
Article Reviewed/Updated: 13 March 1997

TOPIC -----

Virtual memory (VM) is turned on when starting up from the Power Macintosh 7200 system CD or the Power Macintosh 9500 CD version 2.0. This prevents Disk First Aid and Drive Setup from performing their operations on the hard drive. The CD titles are "Apple Macintosh CD for Power Macintosh 7200/75 and 7200/90" and "Apple Macintosh CD for Power Macintosh 9500/120 and 9500/132." The part number for the 7200 CD is 691-0415-A, SSW Version 7.5.2, CD Version 1.0 and the part number for the 9500 CD is 691-0738-A, SSW Version 7.5.2, CD Version 2.0.

DISCUSSION -----

Background
=====

Users running Drive Setup while started up from the CD sometimes receive a message that says: "Cannot modify a disk used by Virtual Memory. To turn Virtual Memory off, consult the Macintosh Guide."

When running Disk First Aid while started up from the CD, users sometimes receive a message that says: "Some of the volumes you selected can't be repaired. You cannot repair the startup disk, the Disk First Aid disk, a write protected disk, a disk with open files, or any disk when File Sharing is active. You may still verify these disks."

Product Technical Support has confirmed that this problem occurs on any of the Power Macintosh 7200, 7500, 8500 and 9500 systems when started up from the Power Macintosh 7200 CD or 9500 CD version 2.0.

When the Power Macintosh 7200/75 and 7200/90 CDs were produced, and when the 9500/120 and 9500/132 version 2.0 CDs were produced, virtual memory was inadvertently turned on and set to 33 MB. This preference was stored in the System file on the CD. When users start up with the CD, the system software

saves its 33 MB VM Storage file out to the user's hard disk. Since this VM Storage file is in use, Disk First Aid and Drive Setup are unable to repair or format the hard drive that contains the VM Storage file. Since the System file on the CD is write protected, the VM settings cannot be modified using the Memory control panel from the hard disk when started up from the CD.

Workarounds

=====

Keyboard commands

Step 1

Insert the CD-ROM disc.

Step 2

Choose Shut Down from the Special menu.

Step 3

Hold down the "c" key (lower-case C; if the keyboard has a physical latch for the Caps Lock key, make sure the Caps Lock key is in the "up" position).

Step 4

Start up the computer.

Step 5

Hold down the "c" key until the "happy Macintosh" icon appears.

Step 6

Immediately release the "c" key and hold down either the Command key or the Shift key.

This process is rapid, lasting only about three seconds. Waiting until the "Welcome to Macintosh" screen appears before holding down the Command or Shift key does not work.

Holding down the command key at startup disables virtual memory, while holding down the Shift key at startup disables virtual memory and extensions. In either case, users are able to run Disk First Aid and Drive Setup on the their Apple hard drive.

Create a Disk Tools Disk

Users can also create a Disk Tools disk from the disk images on the CD, and restart their computer from the Disk Tools Disk. Once started up from the Disk Tools disk, users are able to use Disk First Aid and Drive Setup normally.

Rename Hard Drive to Something Other Than "Macintosh HD"

When starting up from the Apple Macintosh CD, the system file on the CD looks for a volume named "Macintosh HD" to store its virtual memory storage file. If the system cannot find a volume by this name, it ignores the internal hard drive, allowing Drive Setup and Disk First Aid to work normally.

Article Change History:

13 Mar 1997 - Changed distribution status.
03 Jan 1996 - Corrected several typos and misspellings.
22 Sep 1995 - Added an additional workaround.

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Tech Info Library Article Number:18357



Tech Info Library

Power Macintosh 7500/8500: Maximum Color Depths (10/95)

Revised: 1/4/96
Security: Everyone

Power Macintosh 7500/8500: Maximum Color Depths (10/95)

Article Created: 10 August 1995
Article Reviewed/Updated: 26 October 1995

TOPIC -----

The Power Macintosh 7500 and 8500 series computers come with 2 MB of VRAM, expandable to 4 MB. The 7500 and 8500 have 4 VRAM DIMM slots (2 in use and 2 available). VRAM DIMMs must be installed 2 at a time. A VRAM upgrade can be accomplished via two third party 1 MB VRAM DIMMs.

DISCUSSION -----

The Power Macintosh 7500 and 8500 series computers have a fast 64-bit data path to VRAM. Both can also support display resolutions of up to 1,280 by 1,024 pixels with 24-bit color of up to 1,152 by 870-pixel resolution.

DIMMs must be 32-bit-wide, 112-pin fast-paged mode with 70ns RAM access time or faster. Do not use the 256K or 512K VRAM SIMMs used in older Macintosh computers.

If your Power Macintosh 8500 computer is equipped with 2 MB of VRAM, you can switch between a monitor and a television, but you cannot view the desktop on both at the same time. For more information regarding video out to television, please refer to page 58 of the "Power Macintosh 8500 Series User's Guide".

The following table defines the maximum color depths available for a given resolution and memory size. Lower color depths are supported down to 8 bit or 256 colors. This is the same information that is reproduced in the guide that comes with each computer -- "Technical Information: Specifications for Power Macintosh 7500 series computers."

NOTE:

The maximum visible number of colors is millions. In the past, Apple has also labeled millions as 24 bit color. On AV and Power Macintosh computers, 24 bit or 32 bit can be used interchangeably to mean support for millions of colors. In some literature, you may see 32 bit shown in place of 24 bit or millions. Think

of this as 24 plus 8: 24 bit for displaying millions of colors plus 8 bit for special uses, such as alpha channel support (transparency, masking, opaque and tranlucent information) and chroma key support.

Begin_Table

Monitor	VIS*	Resolution	2 MB VRAM	4 MB VRAM	Refresh rates	
			maximum** colors	maximum** colors	Vert (Hz)	Horiz (kHz)
12" RGB	N/A	512x384	millions	millions	60	24.48
12" Monochrome	N/A	640x480	256	256	67	34.971
13" RGB Hi-Res	N/A	640x480	millions	millions	67	34.971
14" RGB Hi-Res	11.5"	640x480	millions	millions	67	34.971
VGA	***	640x480	millions	millions	60	31.505
		800x600	millions	millions	60	39.921
		800x600	millions	millions	72	48.1
		800x600	millions	millions	75	47.933
		1024x768	thousands	millions	60	48.294
		1024x768	thousands	millions	72	58.286
		1024x768	thousands	millions	75	60.093
Full-page Monochrome	N/A	640x870	256	256	75	68.773
Full-page RGB	***	640x870	thousands	millions	75	68.773
14" AudioVision	11.5"	640x480	millions	millions	67	35
16" color	14.8"	832x624	millions	millions	75	49.670
19" color	***	1024x768	thousands	millions	75	60.060
Two-page Monochrome	N/A					
		1152x870	256	256	75	68.476
Two-page RGB	11.5"	1152x870	thousands	millions	75	68.476
Multiple Scan 15	13.3"	640x480	millions	millions	67	34.971
		832x624	millions	millions	75	49.670
Multiple Scan 17	16.1"	640x480	millions	millions	67	34.971
		832x624	millions	millions	75	49.670
		1024x768	thousands	millions	75	60.060
Multiple Scan 20	19.1"	640x480	millions	millions	67	34.971
		832x624	millions	millions	75	49.670

		1024x768	thousands	millions	75	60.060	
		1152x870	thousands	millions	75	68.476	
		1280x1024	256	thousands	75	79.964	
-----	-----	-----	-----	-----	-----	-----	

* Viewable Image Size

** 256=image depth of 8 bits (bpp), thousands=image depth of 16 bits (bpp), millions=image depth of 32 bits (bpp).

*** Refer to the manual that came with your monitor to determine VIS.

N/A not available

End_Table

Article Change History:

26 Oct 1995 - Added information about connecting a TV and DIMM width.

13 Sep 1995 - Added Horizontal & Vertical headers.

16 Aug 1995 - Updated table with corrected info for Multiple Scan 20 Display.

Support Information Services

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Tech Info Library Article Number:18358



Tech Info Library

Internal HD Format: Cannot See IDE Drives (10/95)

Revised: 10/9/95
Security: Everyone

Internal HD Format: Cannot See IDE Drives (10/95)

=====

Article Created: 11 August 1995
Article Reviewed/Updated: 5 October 1995

TOPIC -----

I have a Performa 6200 series computer. When I startup from my CD-ROM disc and try to run Internal HD Format, I get a message stating that this software will not work on this hard disk and I should use Apple HD SC Setup. Apple HD SC Setup does not recognize the hard drive either which makes sense because the Performa 6200 has an IDE drive. What is wrong?

DISCUSSION -----

A change was made to the way IDE hard drives are formatted during the manufacturing process. IDE drives now include partitioning information, which the Internal HD Format application does not recognize. When the Internal HD Format application checks the partitioning information, it does not recognize the format and, by default, reports that the hard disk is a SCSI drive, thus it displays the error message referring you to Apple HD SC Setup.

This problem can occur on any IDE hard drive-equipped computer, including the Power Macintosh 5200 series, Power Macintosh 6200 series, Macintosh 630 family, and Macintosh 580 family of computers.

The Drive Setup utility that originally shipped on System 7.5.2 computers is able to correctly reformat these IDE hard drives without any problem. Drive Setup 1.0.2 is available on online services.

Once you have downloaded the file, you can use it to reformat your hard disk by following these steps:

WARNING: Reformatting or reinitializing your hard drive erases all information on your disk. Make sure you have a backup of all files you may have created and any preinstalled software that came with your computer.

Step 1

Copy the Drive Setup utility to a 3.5 inch Macintosh-formatted floppy disk.

Step 2

Insert your Macintosh Performa CD. Restart the computer, while holding down the C key on your keyboard. Once the computer has finished starting, confirm that the Performa CD is the topmost item in the upper right corner of your screen. This means its system software is running your computer.

Step 3

Insert the floppy disk containing Drive Setup 1.0.2. Double-click the floppy disk icon to open it. Double-click on the Drive Setup utility in the floppy disk window.

Step 4

Select the name of your internal hard disk (its type is IDE, and its name is normally Hard Disk).

Step 5

Click on the Initialize button. A second dialog appears, asking for confirmation.

Step 6

Click on Initialize again to confirm that you do want to initialize the hard drive.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the "Information Alley":
Volume II, Issue 12, Page 17

Article Change History:

05 Oct 1995 - Added Info Alley information; updated article.
05 Sep 1995 - Added reformatting procedure.
29 Aug 1995 - Changed unclear language.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18360



Tech Info Library

AppleVision 1710AV Display: Control Modules on a PowerBook 8/95

Revised: 8/11/95
Security: Everyone

AppleVision 1710AV Display: Control Modules on a PowerBook 8/95

=====

Article Created: 11 August 1995

TOPIC -----

How do I get the new control strip modules that come with the ApppeVision 1710AV display onto a PowerBook?

Do the control strip modules only work with the 1710AV display?

DISCUSSION -----

You can run the installer from the original AppleVision 1710AV Display disks to install the Monitor BitDepth and Monitor Resolution Control Strip modules on your PowerBook.

Alternatively, you can drag the two Control Strip modules into the Control Strip Modules folder in your System Folder. You also need to drag the Display Enabler v2.0 or later into the Extensions folder of your System Folder. You need to restart your computer for the modules to show up in the Control Strip.

These modules work with all displays including the PowerBook on-board display.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18361



Tech Info Library

Power Macintosh 5300/100 LC: Description (1/96)

Revised: 1/19/96
Security: Everyone

Power Macintosh 5300/100 LC: Description (1/96)

Article Created: 11 August 1995
Article Reviewed/Updated: 19 January 1996

TOPIC -----

This article contains a description of the Power Macintosh 5300/100 LC computer.

NOTE: This computer is only available through educational channels.

DISCUSSION -----

Overview
=====

The Power Macintosh 5300/100 LC is a Power PC processor-based multimedia workstation for the educational market. With this introduction, Apple delivers its most powerful technology to education. By uniting a high-speed, high-performance RISC processor with advanced multimedia features in an innovative all-in-one design, Apple has created the most advanced multimedia workstation for educators and students available today.

Apple, the number one worldwide vendor of multimedia systems, has been a pioneer in the integration of multimedia capabilities into its Macintosh personal computers. With the introduction of the Power Macintosh 5300/100 LC, educators can take advantage of the power of multimedia in a system designed especially for schools. Its PowerPC 603e processor not only provides the high performance required for multimedia authoring and playback, but also optimizes other curriculum and classroom productivity applications.

An extremely powerful system right out of the box, the Power Macintosh 5300/100 LC also offers room to grow. With two expansion slots--including one that can be used to add a low-cost, high-speed, Ethernet networking connection--this system is not only extremely useful today, but is an investment in the future as well.

The announcement of the Power Macintosh 5300/100 LC follows the April 1995

introduction of the highly successful Power Macintosh 5200/75 LC, which was the first Power Macintosh designed specifically for education.

The Power Macintosh 5300/100 LC features a 100 MHz PowerPC RISC 603e processor with 256K Level 2 Cache, 16 MB of RAM (expandable to 64MB) and a 1.2 GB hard disk drive. It also includes an Apple SuperDrive floppy disk drive, two expansion slots--including one that can be used to add a low-cost, high-speed Ethernet networking connection, and an internal AppleCD 600I Plus tray-loading quad-speed CD-ROM drive. Built-in multimedia technologies include a video-out connector, video capture card, TV tuner, and 16-bit stereo sound in and out.

Features

=====

Power and Speed

- 100-MHz PowerPC 603e processor with 256K Level 2 Cache

Memory and Storage

- 16MB of RAM (expandable to 64MB)
- 1 MB DRAM frame buffer (separate from RAM) for video memory, not expandable
- Apple SuperDrive floppy disk drive (reads and writes Mac OS, Windows, DOS, OS/2, and ProDOS files)
- Internal 1GB hard disk drive
- Internal AppleCD 600i Plus tray-loading quad-speed CD-ROM drive

Display

- 15-inch multiple-scan color display (supports more than 32,000 colors)

Expansion

- Macintosh LC-compatible processor direct slot
- I/O communications slot for Ethernet networking (accepts Twisted Pair, Thin Coax, or AAUI Ethernet Cards)

Built-in Multimedia Technologies

- Video-out connector for connecting to an LCD projection panel or a second monitor
- Video capture card lets you record video from camcorder, VCR, or laserdisc
- Built-in TV Tuner
- 16 bit sound in/out

System Software

- System 7.5.1 with Apple Guide, Drag and Drop, AppleScript, Macintosh PC Exchange, Macintosh Easy Open, and more

Networking

- Built-in AppleTalk networking
- File sharing without a dedicated server
- Optional Ethernet networking with Ethernet card

Ordering Information

=====

Power Macintosh 5300/100 LC 16/1.2 GB

- Power Macintosh 5300/100 LC (16/1 GB) with built-in 15-inch multiple-scan color display, AppleCD 600i Plus CD-ROM drive, stereo speakers, microphone, MVP, video-in option, AppleDesign Keyboard, and mouse.
- M4364LL/A

Article Change History:

19 Jan 1996 - Corrected bundle information.

25 Oct 1995 - Corrected System Software requirements.

05 Oct 1995 - Added video memory information.

Support Information Services

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Tech Info Library Article Number:18362



Tech Info Library

Power Macintosh 7500/8500: Geoport Clock Connector (8/95)

Revised: 8/11/95
Security: Everyone

Power Macintosh 7500/8500: Geoport Clock Connector (8/95)

=====

Article Created: 11 August 1995

TOPIC -----

What is the purpose of Geoport Clock Connector on the logic boards of the Power Macintosh 7500 and 8500 computers? Does it make the Geoport perform at a faster clock speed?

DISCUSSION -----

The Geoport Clock Connector has nothing to do with updating the Geoport to higher clock speeds. This connector is used by Peripheral Component Interconnect (PCI) cards that perform some type of network interaction with the Geoport. It provides the network clock to which the Geoport is talking. Most of the PCI cards that utilize the Geoport Clock Connector are some type of video conferencing cards, such as the H.320 card.

Apple added the Geoport Clock Connector to the logic board because not all PCI cards are physically connected to the network. Without this physical connection the PCI cards would have a difficult time synching with the network clock. If, on the other hand, the network is directly connected to the PCI card, the Geoport Clock Connector is not used at all. By synching to the network clock, the PCI card can determine what kind of timing is needed to execute certain sequences or to provide a refresh to the screen.

There are three pins in the Geoport Clock Connector. One pin is the ground. The other two pins are signal pins. The two signal pins are Serial Clock (SCLK) and Transmit Handshake (TxHs). The GeoPort specification recommends that the GeoPort device provide network synchronized clocking on either SCLK or TxHs. The H.320 card, for example, can then use the appropriate signal to synchronize its video and audio compression/decompression processing to the network.

Support Information Services

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Tech Info Library

LaserWriter 16/600 PS: Resetting Using UNIX (8/95)

Revised: 8/15/95
Security: Everyone

LaserWriter 16/600 PS: Resetting Using UNIX (8/95)

=====

Article Created: 14 August 1995
Article Reviewed/Updated: 15 August 1995

TOPIC -----

This article describes how to change subnet mask of the LaserWriter 16/600 from a UNIX workstation.

DISCUSSION -----

Follow these steps to reset the LaserWriter 16/600 PS to its default values using UNIX:

Step 1

Remove the printer and a UNIX workstation from the network.

Step 2

Connect the UNIX workstation directly to the printer

Step 3

Terminate both ends of the connection between the workstation and the printer.

Step 4

Set the subnet mask on the workstation to be the same as the printer.

Step 5

Set the default gateway on the workstation to the IP address of the printer.

Step 6

Logon onto the printer as normal using TELNET.

Step 7

Select the option to reset to factory specs.

Step 8

Set the work station back to the proper address masking

Step 9

Reconnect all hardware to the network.

Article Change History:

15 Aug 1995 - Updated for technical accuracy and changed title.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18364



Tech Info Library

Apple Workgroup Server (AWS): DAT Status Lights (8/95)

Revised: 8/11/95
Security: Everyone

Apple Workgroup Server (AWS): DAT Status Lights (8/95)

Article Created: 11 August 1995

TOPIC -----

How do I read the status lights on the DAT drive on the Apple Workgroup Server 95, 80?.

DISCUSSION -----

The front panel has two bi-color lights (LEDs). Green is used to indicate normal operation and Amber is used to imply warning conditions. Pulsing usually shows activity between the drive and the SCSI bus. If the cassette Light (Left) shows steady Amber, this indicates that the cassette is write protected. If the Drive Light (Right) shows steady Amber, this indicates a fault condition.

The following table lists the possibilities:
Begin_Table

	Cassette Light	Drive Light	Meaning
Read /Write States	Pulse Green Green Green Green	Pulse Green Green Pulse Green Off (No Light)	Cassette (Unloading) Cassette Loaded/Online Cassette Loaded/Activity Cassette Loaded/Offline
Write- Protect Status	Pulse Amber Amber Amber Amber	Green Green Pulse Green Off (No Light)	Casette (Unloading) Cassette Loaded/Online Cassette Loaded/Activity Cassette Loaded/Offline
Error States	Green Amber	Pulse Amber Amber	Media Wear (Caution) High Humidity, No termination on SCSI bus

	Pulse Amber	Pulse Amber	Self Test (Normal)
	Pulse Amber	Amber	Self Test (Failure)
-----	-----	-----	-----
Other States	Off (No Light)	Off (No Light)	No cassette loaded
	Off (No Light)	Green	Error (illegal state)
	Off (No Light)	Pulse Green	Error (illegal state)
	Off (No Light)	Amber	Error (illegal state)
	Off (No Light)	Pulse Amber	Error (illegal state)
	Pulse Green	Off (No Light)	Error (illegal state)
	Pulse Green	Green	Error (illegal state)
	Pulse Green	Amber	Error (illegal state)
	Pulse Green	Pulse Amber	Error (illegal state)
	Pulse Amber	Off (No Light)	Error (illegal state)
	Pulse Amber	Pulse Green	Error (illegal state)
	Green	Amber	Error (illegal state)
	Amber	Pulse Amber	Error (illegal state)
			(Write Protect on)
-----	-----	-----	-----

End_Table

Support Information Services

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Tech Info Library Article Number:18365



Tech Info Library

Power Macintosh: Display Shaking when Changing Color (8/95)

Revised: 8/11/95
Security: Everyone

Power Macintosh: Display Shaking when Changing Color (8/95)

=====

Article Created: 11 August 1995

TOPIC -----

When using the Monitors control panel, the Control Strip, or the Sound and Displays control panel to change the color resolution on a 13" Apple RGB Display, the image flashes off and back on during the change in color. The color change is not smooth. As the computer switches colors, the image shakes and jumps as if it was resyncing.

DISCUSSION -----

This behaviour can appear on any model of Power Macintosh including the 7200, 7500, 8500 or 9500 series computers. It has also been known to occur on other Power Macintosh computers. For a particular model of monitor, one display may exhibit the issue while another display may not.

The behaviour depends upon a combination of conditions. The differences can be from a number of factors: CPU clock differences (video circuitry in different models can have different dot clocks and timing circuitry) or component variance (clocks, countdown circuitry, also in circuitry the display). A display that exhibits this issue on one CPU may not exhibit the issue on another CPU.

The issue is cosmetic and no damage is occurring to the CPU or the display. There is no disruption in video sync and systems have stable video signals during the color depth transition.

The image bounce or flash on the display as the color depth is changed is normal for some display and CPU combinations. The display or CPU should not be replaced or serviced. Some combinations may show the effect, but it may not be present on all displays (for a certain model) or all CPUs.

Support Information Services

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Tech Info Library

Macintosh: Using 1280x1024 60Hz Resolution (2/96)

Revised: 2/8/96
Security: Everyone

Macintosh: Using 1280x1024 60Hz Resolution (2/96)

Article Created: 11 August 1995
Article Reviewed/Updated: 8 February 1996

TOPIC -----

How can I set a non-Apple display, which is connected to a Macintosh computer, to a resolution of 1280x1024 60Hz. My user's guide states that my Macintosh computer should support this VGA display at this setting.

DISCUSSION -----

Sense codes are used so the computer can detect the type of monitor that is connected to the system. The computer only starts up at 1280x1024 scan rates after you have set the monitor control panel and the settings are stored in parameter RAM (PRAM). With no setup information in PRAM, the computer starts at the best scan rate and resolution for the detected display (usually 640x480).

If your display does not support 640x480, you can usually use a multiple scan display to set the higher resolutions. Once that information is stored in PRAM, you can connect the non-Apple display. Since there are no Apple displays that support 1280x1024 60Hz (the Multiple Scan 20 only supports 75Hz), you must use a workaround to set the Monitor control panel to the 60Hz scan rate.

NOTE:

There is a least one third-party company which sells a 60 Hz adapter kit. Using this kit, you can cycle through resolution settings at startup until the proper setting is selected. Using this solution, you do not need to use the workaround provided in this article.

Using a display adaptor, set the display type to VGA/SVGA. Follow the directions in the display adapter's user's guide for the proper instructions for selecting VGA/SVGA.

Powering up the Mac with most third-party display adaptors attached between the display and the Mac video port starts up by default at 640x480 60Hz resolution.

Step 1

Open the Monitor control panel.

Step 2

Hold down the Option key while selecting the 'Options' button in the Monitor control panel. (Normally, 'Options' button will only allow 'safe' operating resolutions. If you hold down the option key on the keyboard when you select the 'options' button in the Monitor control panel, the options panel will also show 'unprotected' scan rates that is supported.)

Step 3

Select the 1280x1024 60Hz resolution.

The video scan rate will change depending on whether you have selected 'Rearrange on Close' or 'Rearrange on Restart' on the bottom of the Monitors control panel window.

If you have selected 'Rearrange on Close' and you select a scan rate currently not supported by an Apple display, you will be prompted with a dialog box asking if the monitor display is correct. If you do not click the OK button within about 10 seconds, the system will assume that you do not have a properly synchronized display and will revert back to the previous scan rate.

Following the above procedure, you should be able to set your display to the 1280x1024 60Hz resolution and scan rate.

Display adapters are available from several third-party companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

NOTE:

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for content referring to those products. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

08 Feb 1996 - Added new information on third-party products.

Support Information Services

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Tech Info Library Article Number:18367



Tech Info Library

AppleTalk Remote Access and CNG Modem CCL Scripts (8/95)

Revised: 8/12/95
Security: Everyone

AppleTalk Remote Access and CNG Modem CCL Scripts (8/95)

=====

Article Created: 12 August 1995

TOPIC -----

I'm trying to connect to an AppleTalk Remote Access (ARA) Server 2.x with my PowerBook Duo and Express Modem using Telecomm 2.0 software. The Remote Access Status Window shows I'm communicating at 14.4 kbps, but then gives me the following error message, "The connection attempt has failed. The modems did not connect properly. Please try again." ARA worked fine with my other PowerBook Duo with an Express Modem using the same password, user name, and software. I have tried a clean install of the Operating System, Express Modem, and ARA software but it still does not work. What is wrong?

DISCUSSION -----

Check your Remote Access Setup control panel to see which ARA CCL script you are using. Sometimes if the modem you are connecting to does not support CNG signals, and you have selected the Express Modem 2.x/CNG in the Access Setup control panel, it will give you this type of error. Simply using the script Express Modem 2.x instead will let you connect.

So what is CNG

When you use the CNG scripts, the Express Modem will transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem instead of a FAX or Voice call, so the call can be routed to the appropriate software supporting the service.

Support Information Services

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Tech Info Library Article Number:18369



Tech Info Library

Apple Workgroup Server 95 Read Me (8/95)

Revised: 8/12/95
Security: Everyone

Apple Workgroup Server 95 Read Me (8/95)

Article Created: 12 August 1995

TOPIC -----

This article is the ReadMe Apple Workgroup Server 95 Software upgrade.

DISCUSSION -----

This Read Me file describes the changes made to the Apple Workgroup Server 95 since its original release. You can use the Software Upgrade to upgrade your system either from the original release or from the Tune Up release. This software upgrade includes the following software.

- A/UX 3.1
- AppleShare Pro 1.1 (installed only when an earlier version of AppleShare Pro is found on the system)
- Apple DocViewer 1.1
- Retrospect 2.0Ci

Notes On Installing The Software Upgrade

Installation takes approximately 20 minutes. The installation instructions on the back cover of the Apple Workgroup Server 95 Software Upgrade CD, along with the on-screen messages, will guide you through the installation process. The following notes provide important additional information.

Space Requirements

The software upgrade requires 10 MB of free space on the root (/) volume. To complete the software upgrade process, you temporarily need approximately 20 MB of free space on the / volume. To check the amount of free space available, double-click the icon for the / hard disk. Then, if you aren't already viewing the window by icons, choose By Icon from the View menu. The amount of available space on / is shown in the upper-right corner of the window that displays the

contents of /.

Before Installing, Check Your Applications Folder

Before installing the upgrade software, make sure that the following applications reside in the Applications folder on the root (/) volume; successful upgrading of these applications depends on it: AppleShare Pro Admin, AppleShare Pro File Server, Retrospect, TextEditor, Apple HD SC Setup, and Apple DocViewer

Note that the Applications folder name starts with a leading space: "<space>Applications". If you change the name of the folder that contains the these applications, you must include the leading space at the beginning of the name for the upgrade to install completely.

Prompts for Older Versions

You will be prompted to replace newer versions of the LaserWriter and Chooser files on the root (/) volume with older ones; the older version is actually newer -- the creation dates on these files were incorrect in the original AWS 95 software.

Preferences in A/UX Startup

The upgrade software returns the preferences to their default settings. If you had modified the settings in the Preferences menu in the A/UX Startup application, you'll need to reenter your settings. These preferences determine whether A/UX automatically boots upon startup, the command that the system runs to check the root file system at startup time, whether parity checking is enabled, etc.

User Accounts on the Server

If you have created user account(s) on your server, and given them personal system folders, you must manually update the personal system folder for each user account after installing your system software. To update a personal system folder, log in to the user account and start the AWS 95 Upgrade Installer application. Use the Custom Install option to install the package "AWS 95 A/UX System Folder Upgrade" to the personal system folder for that account. This must be done for each personal system folder on your server.

Size of the A/UX Buffer Cache

If you had previously adjusted the size of the A/UX buffer cache on your server, check that your setting has not been changed by the installation procedure. If it has been changed, you'll need to reenter it.

Re-linking On-line Manuals

After completing the software upgrade, you may need to re-link the on-line manuals in the new DocViewer collection document called "AWS 95 Documentation." To re-link the files, open the collection document in the Documentation folder. Then double-click on one of the on-line manuals. When the "can not be found"

dialog box appears, click the Locate button. Locate the DocViewer file, then use the Save command from the File menu to save the collection document. Repeat this procedure for each on-line manual in the collection document.

Network Launch Fix File

You'll notice a file called Network Launch Fix on your AppleShare Pro CD. This file fixes a bug that affects AppleShare client machines of the Macintosh Quadra, Centris, and Performa 470 series of computers (which all have the 040 microprocessor). You don't need to add this file to client machines other than the 040 series, or to your server.

GENERAL NOTES

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The upgrade software improves performance in several areas, including a 400 percent increase in the speed of AppleShare Pro over AppleShare 3.0 in certain areas. See the new guide, "Tuning Server Performance and Adding Internal Drives" to learn about measuring and tuning the performance of your Apple Workgroup Server 95.

Software Enhancements

-
- The "config_server" script for preparing the system for database or file and print services.
 - UNIX Library for AppleTalk Printer Access Protocol (PAP) servers.
 - Support for UNIX file systems of 4 GB in size (AppleShare Pro is limited to 2 GB)
 - A version of sendmail that offers more security.
 - The capability to disable the autologin feature by pressing CONTROL-X when the system is about to start the Finder environment.

Hardware Enhancements

-
- Support for automatic mounting and unmounting of removable media SCSI drives from the Finder.
 - The Apple Ethernet NB Twisted-Pair Card.
 - Support for up to five internal hard drives, and for the 2 GB Apple internal drive.

A/UX Buffer Cache Default

The setting of -1 is still the default setting for the server offering file and print services. However, the action triggered by this setting has been changed to prevent the occurrence of paging of virtual memory when AppleShare Pro and Retrospect are run simultaneously.

Don't Install CD-ROM Driver Files

CD-ROM driver files are delivered with Apple CD-ROM drives and with third-party drives. Don't copy these files to your A/UX System Folders; installing these drivers is unnecessary and will prevent your system from starting up the Finder

environment.

Apple 2 GB Drive at System Startup

If your server is equipped with an Apple 2 GB hard drive, there is a slight chance that the system software might check for the hard drive before the drive has reached full speed, and as a result, the system might not start up correctly. If this situation arises, no icon for the startup disk will appear. Restart your system; the hard drive will be recognized the second time.

Symbolic Links Changed to Increase Security

To increase system security when AppleShare Pro is running, a change has been made to the behavior of symbolic links when the symbolic link involves files in more than one folder. The change causes the check for access permissions to treat the Macintosh environment as having the level of permissions of "NOBODY". This change affects the Finder and Macintosh applications, only occurs when AppleShare is running, and does not affect the CommandShell application.

Some MacDriver Partitions Incorrectly Recognized

Apple Computer has recently released HD SC Setup Version 7.2.2. This version of the disk partitioning application creates a MacDriver partition that is not understood as a valid MacDriver partition by the A/UX version of HD SC Setup. (The A/UX version of HD SC Setup is the version used by the AWS 95.) The partition that creates the problem is called MacDriver and has the partition type "Apple Driver43". The misunderstood partition causes the following behavior when using the HD SC Setup application or using HD SC Setup from within the AWS 95 Installer:

- You cannot update the partition; in the main dialog box of HD SC Setup, the Update button is greyed out.
- You can create a second MacDriver partition; after selecting "Partition...", the dialog boxes allow you to create an additional MacDriver partition. If you encounter one of these problem MacDriver partitions, remove it and create a new one using the A/UX version of HD SC Setup delivered with the AWS95.

Limit on File System Check Command

When the Apple Workgroup Server 95 starts up, the fsck command is run from the A/UX Startup application. When the fsck command is run from the A/UX Startup application, it cannot check a file system larger than 2 GB. Therefore, limit the size of your root file system to 2,097,151 KB so that the root file system can be checked at system startup. Once A/UX is running, the fsck command can check file systems as large as 4 GB.

Install Driver for the Apple Ethernet NB Twisted-Pair Card

If you are using this new interface card, install the driver on the volume named MacPartition. Installing the file on MacPartition assures that the server will use EtherTalk rather than switching to LocalTalk each time you restart the server.

CORRECTIONS TO MANUAL PAGES

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A few commands are incorrect as they appear onscreen in the manual pages. The corrections are as follows.

"newconfig" manual page

If you're adding support to your system for an Ethernet card, these are the modules you need to specify in the "newconfig" command:

ao - Built-in interface for Apple Ethernet.
as - Apple Ethernet NB Card (a half-length card).
ae6 - Apple EtherTalk NB Card (a full-length card).
ac - Apple Ethernet NB Twisted-Pair Card.

An error appears in the last paragraph of the Descriptions section: "bnet_dr" should be "bnet".

"NETADDRS" manual page

The value of interface_id is as follows:

ao0 - for built-in interface for Apple Ethernet (which is found in the
AWS 95)
ae0 through ae5 - for Apple EtherTalk NB Cards
as0 through as5 - for Apple Ethernet NB Cards
ac0 through ac5 - for Apple Ethernet NB Twisted Pair Cards

BUG FIXES

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A/UX Kernel

- AppleShare Pro servers will now appear correctly in the Chooser on client machines.
- AWS 95 no longer crashes if NFS clients have more than eight active supplementary groups. The server can recognize the first eight group IDs only.
- Heavy use of the UNIX file system no longer causes system or process deadlock/panics.

A/UX Macintosh Environment

- The Finder now maintains information properly on file systems containing more than 160,000 items.
- The File Manager allows you to change the case of a filename containing a slash character ('/').
- Text files that contain both CR's and LF's are no longer interpreted as UNIX binary files. They are now interpreted as DOS TEXT files.
- The Finder no longer terminates after rebuilding the desktop.

- Aliases to UNIX symbolic links resolve to the target file, not the sym-link.
- You can subscribe to a publisher that has a slash character ('/') in its name.

Retrospect

- The Macintosh environment no longer hangs because of loss of communication with a Retrospect Remote client.
- Scheduled backups now occur at the correct time.

Compatibility With Other Applications

- Think C now runs under A/UX.
- Adobe Photoshop no longer crashes with a disk error when it creates files bigger than the available free space on the volume.

UNIX Utilities

- The "catsearchd" utility is now set to "respawn" instead of "once" in "/etc/inittab."
- fsck
The "fsck" utility no longer ignores the -y option when the -p option is also specified.
By default, both the "A/UX Startup" application and the A/UX system startup script "/etc/bcheckrc" invoke "fsck" with both of these options.

For

Developers

- The Printer Access Protocol (PAP) server library is included in the software. The PAP server library is contained in the file "/usr/lib/libpaps.a". For information on the PAP Server Library, see the Tech Notes for the AWS 95 which are available through AppleLink.
- The "popen(3)" subroutine now supports 128 files, the maximum number of files supported by the standard I/O library routines. In the previous release this support was limited to 20 files.
- Float and double support were fixed in the RPC library routines (libc).
- When the current directory is a mount-point and a symbolic link is in the same directory, the "getwd(3)" routine returns the target file instead of the symbolic link as it did before.

FILES CHANGED OR ADDED BY THE UPGRADE =====

Files Changed or Added on the / Volume

Applications/Apple DocViewer/Apple DocViewer
Applications/Apple DocViewer /Apple DocViewer Guide
Applications/Apple DocViewer /Apple DocViewer Guide.idx
Applications/Apple DocViewer /Read Me - DocViewer 1.1

Applications/Apple HD SC Setup
Applications/AppleShare Pro Admin
Applications/AppleShare Pro File Server
Applications/Retrospect/Retrospect Intl A/UX
Applications/Retrospect/Read Me
Applications/Retrospect/Remote WorkStation/Read Me
Applications/Retrospect/Remote WorkStation/°Remote
Applications/Retrospect/Remote WorkStation/Workbook
Applications/Retrospect/Remote WorkStation/For 6.0.x/Read Me - 6.0.x
Applications/Retrospect/Remote WorkStation/For Mac Plus/Read Me - MacPlus
Applications/Retrospect/Retrospect Extras A:UX/Retrospect Help
Applications/Retrospect/Retrospect Extras A:UX/Update from 1.3
Applications/TextEdit
bin/cp
bin/cpio
bin/csh
bin/date
bin/df
bin/ls
bin/make
bin/mt
bin/mv
bin/passwd
bin/pstat
bin/remlogin
bin/rm
bin/rmdir
bin/rsh
bin/sh
bin/su
bin/sync
Documentation/AWS 95 Documentation
Documentation/Tuning Server Performance
Documentation/Tuning Server Performance.idx
Documentation/Upgrade ReadMe
etc/bcheckrc
etc/config.d/newunix
etc/catsearchd
etc/disktab
etc/etheraddr
etc/fidd
etc/fs/svfs/restore
etc/fs/svfs/rrestore
etc/fs/ufs/fsck
etc/fs/ufs/dump.bsd
etc/fs/ufs/mkfs
etc/fs/ufs/newfs
etc/fs/ufs/rdump
etc/fs/ufs/restore
etc/fs/ufs/rrestore
etc/fs/ufs/tunefs
etc/fsck
etc/init

```
etc/install.d/bnet
etc/install.d/boot.d/ac
etc/install.d/boot.d/adsp
etc/install.d/boot.d/ae6
etc/install.d/boot.d/ao
etc/install.d/boot.d/as
etc/install.d/boot.d/at_atp
etc/install.d/boot.d/bnet
etc/install.d/boot.d/ddp
etc/install.d/boot.d/elap
etc/install.d/boot.d/nfs
etc/install.d/boot.d/svfs
etc/install.d/boot.d/tc
etc/install.d/boot.d/toolbox
etc/install.d/boot.d/ufs
etc/install.d/init.d/devvscsi
etc/install.d/master.d/ac
etc/install.d/startup.d/ac
etc/install.d/startup.d/ae6
etc/install.d/startup.d/ao
etc/install.d/startup.d/as
etc/macgetty
etc/mount
etc/powerdown
etc/reboot
etc/settimezone
etc/shutdown
etc/telinit
etc/uninstall.d/bnet
etc/RELEASE_ID
lib/libc.a
lib/libc_s.a
lib/libdb.a
lib/libposix.a
lib/libp/libc.a
mac/bin/launch
mac/bin/setfile
mac/lib/Patches/Patch.0178
mac/lib/Patches/Patch.067C
mac/lib/SystemFiles/private/System
mac/lib/SystemFiles/private/Extensions/LaserWriter
mac/lib/SystemFiles/private/Extensions/StyleWriter II
mac/lib/SystemFiles/shared/Apple Menu Items/Chooser
mac/lib/SystemFiles/shared/Control Panels/Memory
mac/lib/SystemFiles/shared/Extensions/AppleIco
mac/lib/SystemFiles/shared/Extensions/AppleIcoTwo
mac/lib/SystemFiles/shared/Extensions/AppleShare
mac/lib/SystemFiles/shared/Extensions/System 7 Tuner
mac/sys/Login System Folder/%Login
mac/sys/Startup System Folder/System
newunix
shlib/libc1_s
usr/bin/rcp
```

usr/catman/a_man/man1/sendmail.1m.Z
usr/catman/u_man/man3/btree.3.Z
usr/catman/u_man/man3/dbopen.3.Z
usr/catman/u_man/man3/hash.3.Z
usr/catman/u_man/man3/mpool.3.Z
usr/catman/u_man/man3/recno.3.Z
usr/catman/u_man/man4/Autologin.4.Z
usr/etc/rpc.rstatd
usr/etc/config_server
usr/include/compat.h
usr/include/db.h
usr/include/limits.h
usr/include/mpool.h
usr/include/ndbm-db.h
usr/include/string.h
usr/include/at/at_atp.h
usr/include/sys/buf.h
usr/include/sys/cdefs.h
usr/include/sys/gdkernel.h
usr/include/sys/mtio.h
usr/include/sys/nvram.h
usr/include/sys/param.h
usr/include/sys/proc.h
usr/include/sys/scsireq.h
usr/include/sys/ss_scan.h
usr/include/sys/time.h
usr/include/sys/uinter.h
usr/include/sys/user.h
usr/include/sys/vfs.h
usr/lib/libat.a
usr/lib/libpaps.a
usr/lib/sendmail
usr/lib/sendmail.cf
usr/lib/sendmail.st
usr/lib/sendmail.hf
usr/lib/sendmail.conf
usr/lib/sendmail.conf/README
usr/lib/sendmail.conf/cf
usr/lib/sendmail.conf/cf/Makefile
usr/lib/sendmail.conf/cf/aux.mc
usr/lib/sendmail.conf/cf/alpha.mc
usr/lib/sendmail.conf/cf/auspex.mc
usr/lib/sendmail.conf/cf/chez.mc
usr/lib/sendmail.conf/cf/clientproto.mc
usr/lib/sendmail.conf/cf/cogsci.mc
usr/lib/sendmail.conf/cf/cs-exposed.mc
usr/lib/sendmail.conf/cf/cs-hidden.mc
usr/lib/sendmail.conf/cf/hpux-cs-exposed.mc
usr/lib/sendmail.conf/cf/hpux-cs-hidden.mc
usr/lib/sendmail.conf/cf/knecht.mc
usr/lib/sendmail.conf/cf/mail.cs.mc
usr/lib/sendmail.conf/cf/mail.eecs.mc
usr/lib/sendmail.conf/cf/osf1-cs-exposed.mc

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usr/lib/sendmail.conf/cf/osf1-cs-hidden.mc
usr/lib/sendmail.conf/cf/python.mc
usr/lib/sendmail.conf/cf/s2k.mc
usr/lib/sendmail.conf/cf/sunos3.5-cs-exposed.mc
usr/lib/sendmail.conf/cf/sunos3.5-cs-hidden.mc
usr/lib/sendmail.conf/cf/tcpproto.mc
usr/lib/sendmail.conf/cf/sunos4.1-cs-exposed.mc
usr/lib/sendmail.conf/cf/sunos4.1-cs-hidden.mc
usr/lib/sendmail.conf/cf/ucbarpa.mc
usr/lib/sendmail.conf/cf/ucbvax.mc
usr/lib/sendmail.conf/cf/udb.mc
usr/lib/sendmail.conf/cf/ultrix4.1-cs-exposed.mc
usr/lib/sendmail.conf/cf/ultrix4.1-cs-hidden.mc
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usr/lib/sendmail.conf/cf/obj
usr/lib/sendmail.conf/cf/obj/alpha.cf
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usr/lib/sendmail.conf/cf/obj/chez.cf
usr/lib/sendmail.conf/cf/obj/cogsci.cf
usr/lib/sendmail.conf/cf/obj/cs-exposed.cf
usr/lib/sendmail.conf/cf/obj/cs-hidden.cf
usr/lib/sendmail.conf/cf/obj/knecht.cf
usr/lib/sendmail.conf/cf/obj/mail.cs.cf
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usr/lib/sendmail.conf/cf/obj/python.cf
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usr/lib/sendmail.conf/cf/obj/tcpproto.cf
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usr/lib/sendmail.conf/cf/obj/ultrix4.1-cs-exposed.cf
usr/lib/sendmail.conf/cf/obj/ultrix4.1-cs-hidden.cf
usr/lib/sendmail.conf/cf/obj/uucpproto.cf
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usr/lib/sendmail.conf/cf/aux_uucp.mc
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usr/lib/sendmail.conf/cf/ucbvax.cf
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usr/lib/sendmail.conf/cf/cogsci.cf
usr/lib/sendmail.conf/cf/alpha.cf
usr/lib/sendmail.conf/cf/s2k.cf
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usr/lib/sendmail.conf/cf/python.cf
usr/lib/sendmail.conf/cf/clientproto.cf
usr/lib/sendmail.conf/cf/tcpproto.cf
usr/lib/sendmail.conf/cf/uucpproto.cf
usr/lib/sendmail.conf/domain
usr/lib/sendmail.conf/domain/Berkeley.m4
usr/lib/sendmail.conf/domain/cs.exposed.m4
usr/lib/sendmail.conf/domain/cs.hidden.m4
usr/lib/sendmail.conf/domain/eecs.hidden.m4
usr/lib/sendmail.conf/domain/s2k.m4
usr/lib/sendmail.conf/domain/apple-aux.m4
usr/lib/sendmail.conf/domain/Apple.m4
usr/lib/sendmail.conf/feature
usr/lib/sendmail.conf/feature/allmasquerade.m4
usr/lib/sendmail.conf/feature/always_add_domain.m4
usr/lib/sendmail.conf/feature/bitdomain.m4
usr/lib/sendmail.conf/feature/domaintable.m4
usr/lib/sendmail.conf/feature/mailertable.m4
usr/lib/sendmail.conf/feature/nocanonify.m4
usr/lib/sendmail.conf/feature/nodns.m4
usr/lib/sendmail.conf/feature/notsticky.m4
usr/lib/sendmail.conf/feature/nouucp.m4
usr/lib/sendmail.conf/feature/nullclient.m4
usr/lib/sendmail.conf/feature/redirect.m4
usr/lib/sendmail.conf/feature/use_cw_file.m4
usr/lib/sendmail.conf/feature/uucpdomain.m4
usr/lib/sendmail.conf/hack
usr/lib/sendmail.conf/hack/cssubdomain.m4
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usr/lib/sendmail.conf/siteconfig/uucp.old.arpa.m4
usr/lib/sendmail.conf/siteconfig/uucp.ucbarpa.m4
usr/lib/sendmail.conf/siteconfig/uucp.ucbvax.m4
usr/spool/ftp/shlib/libc1_s
usr/ucb/mailstats
usr/ucb/mailq
usr/ucb/newaliases
usr/ucb/rdist
usr/ucb/tip

Files Changed or Added in the Active A/UX System Folder

Extensions:LaserWriter
Extensions:StyleWriter II
Apple Menu Items:Chooser
Extensions:File Server Extension
System

Files Changed or Added in MacPartition

A/UX Startup
bin:fsck
bin:ufs:fsck
System Folder:Control Panels:Date & Time
System Folder:Extensions:Hardware System Update
System Folder:System Enabler 040

Support Information Services

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Tech Info Library Article Number:18370



Tech Info Library

Apple Telecom 2.x and Batch Faxing or Broadcast Faxing (8/95)

Revised: 8/14/95
Security: Everyone

Apple Telecom 2.x and Batch Faxing or Broadcast Faxing (8/95)

Article Created: 14 August 1995

TOPIC -----

What is batch faxing and broadcast faxing? Does the software included with the Apple GeoPort Telecom Adapter, Apple Telecom 2.x, support these features?

DISCUSSION -----

Neither broadcast faxing, nor batch faxing are supported by Apple Telecom 2.x software.

Below is a brief description of the broadcast faxing process:

In a typical fax, the common body is rasterized and compressed only once. The prepared material is then transmitted multiple times - one copy to each different recipient specified. The mechanism used to send a fax containing a document to multiple addresses is called a Distribution List. Broadcast transmissions are not broken into multiple calls.

Although the Apple Telecom 2.x software will allow multiple destinations to be selected in the Fax Sender dialog box, the document will be rasterized and compressed for each destination chosen. For example, if 20 destinations are chosen, the document being faxed will be rasterized and compressed 20 times.

Below is a brief description of the batch faxing process:

The process of batch faxing creates an envelope containing several different rasterized images or documents into one master file. For example, an envelope could be a report containing a cover letter, spreadsheet, chart, and graphics created within separate applications. The envelope containing these separate documents can then be faxed as one transmission.

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Tech Info Library Article Number:18371



Tech Info Library

Netscape Communications Corporation (8/94)

Revised: 8/14/95
Security: Everyone

Netscape Communications Corporation (8/94)

=====

Article Created: 14 August 1995

Netscape Communications Corporation

501 East Middlefield Road
Mountain View, CA 94043

415-254-1900

415-254-2601 FAX

Company Profile:
Server and client software for exploring the World Wide Web (WWW).

Support Information Services

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Tech Info Library Article Number:18372



Tech Info Library

A/UX: MacTCP Services Unsupported (8/95)

Revised: 8/14/95
Security: Everyone

A/UX: MacTCP Services Unsupported (8/95)

=====

Article Created: 14 August 1995

TOPIC -----

Do TCP/IP network services that run on MacTCP run in the Mac32 process of A/UX?

I've tried ftpd, mailshare, and Webstar, and none of them ever accept connections.

DISCUSSION -----

A/UX does support MacTCP calls in Mac32, which allows Mac OS programs to make outgoing connections. However, A/UX does not have any support for incoming sessions to connect to software that is listening as a server in MacTCP.

A/UX, being a form of UNIX, already has facilities to route incoming connections to UNIX processes (such as ftpd, telnetd, and sendmail), but does not provide any support for handing off connections to programs that use MacTCP.

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Tech Info Library Article Number:18373



Tech Info Library

LaserWriter Pro 810: UNIX Printing Outline (8/95)

Revised: 8/14/95
Security: Everyone

LaserWriter Pro 810: UNIX Printing Outline (8/95)

Article Created: 14 August 1995

TOPIC -----

I have an UNIX environment that is a collection of many vendors UNIX workstations. What systems and configurations are supported with the LaserWriter Pro 810.

DISCUSSION -----

The LaserWriter Pro 810 is supported for printing via TCP/IP using two methods:

lpr - Berkeley Line Printing

Using lpr is the fastest and simplest way for UNIX printing. LPR configuration is supported for any system that has lpr and a printcap file.

Systems known to support lpr include: A/UX, SunOS, and NeXTStep. This list is not comprehensive. If you do not know if your system supports lpr, consult your documentation or type "man lpr".

Follow the instructions in Network Installation and Configuration Manual:

Rev A Part 2, Section 4.1-2, (p 4-1 to 4-3)

Rev B Part 3, Section 4.1-2, (p 4-1 to 4-3)

For more details on lpr configuration, consult the article, "LaserWriter Pro 810: Postscript using lpr from Unix".

Systems emulating lpr (such as Solaris) are not officially supported for LPR, although there maybe TIL articles that describe their configuration. Many systems which are System V printing (lp) based retain support or emulation for lpr. Consult your system documentation for further assistance.

apprint - Apple Supplemental Printing Utilities

Apprint is supported for: AIX, AT&T Sys V386, NCR Sys V 386, SCO Unix, Solaris

2.x, SunOS 4.1.x, DEC ULTRIX.

Apple provides pre-compiled binaries for these systems in:

ftp.support.apple.com:/pub/apple_sw_updates/US/Unix/Printing Software for Unix

Follow the instructions in Network Installation and Configuration Manual:

Rev A, Part 2 "Software Installation Guide for UNIX-based Load Hosts"

Rev B, Part 3 "Software Installation Guide for UNIX-based Load Hosts"

The utility set, apprint, shipped as C code and an installation shell script. Although Apple does not support other UNIX systems and apprint, customers may have success compiling the apprint software on other systems.

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Tech Info Library Article Number:18374



Tech Info Library

System 7.5: Unable to Drag Items from Find File Window (8/95)

Revised: 8/14/95
Security: Everyone

System 7.5: Unable to Drag Items from Find File Window (8/95)

=====

Article Created: 14 August 1995

TOPIC -----

I am running System 7.5.1 on my Macintosh computer. I noticed I am no longer able to drag items from the top half of the Items Found window when I use Find File to search my hard drive. I used to be able to do this. What is wrong?

DISCUSSION -----

The Find File application uses AppleScript to execute some of its functions. It also requires an extension called the Finder Scripting extension to perform these functions.

You should make sure the Finder Scripting Extension is in the Extensions folder of your System Folder and that it has not been disabled in the Extensions Manager control panel.

If you cannot locate the Finder Scripting extension on your hard drive, you will need to reinstall it by reinstalling your system software.

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Tech Info Library Article Number:18375



Tech Info Library

MAE: Installing Chinese or Japanese Language Kits (8/95)

Revised: 8/14/95
Security: Everyone

MAE: Installing Chinese or Japanese Language Kits (8/95)

=====

Article Created: 14 August 1995

TOPIC -----

When trying to install either the Chinese, or Japanese Language Kit version 1.0 (version 1.1.1 is not compatible because it requires System 7.5), the following error appears:

"The installer cannot update the version of Performa system software on the disk '/'. Please read the file 'Read Me' on the disk 'Install 1' for more information."

What needs to be done?

DISCUSSION -----

To properly install the Chinese or Japanese Language Kits (CLK or JLK), remove the Launcher from the user's System Folder or use the Extension Manager to deselect the Launcher. After restarting, the installer should work properly.

Support Information Services

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Tech Info Library

MAE: Installing Microsoft Office (8/95)

Revised: 8/15/95
Security: Everyone

MAE: Installing Microsoft Office (8/95)

Article Created: 14 August 1995

TOPIC -----

What is the best way to install Microsoft (MS) Office 4.2.x onto my workstation to use with MAE?

DISCUSSION -----

There are several options to installing Microsoft Office on MAE.

If using the Microsoft CD

Mount the CD-ROM within MAE, launch the Microsoft Setup program, and proceed with the installation. When it asks for a destination directory for the install, locate a directory that has sufficient disk space and which the user has write-access to; then create a new folder called Microsoft Office to be the destination folder. Following the installation, if you choose to move the Microsoft Office package to a new location, do so keeping in mind the permissions of the folder.

Create a Net Install from another Macintosh

Using AppleShare with MAE 2.0, you can mount the folder and begin the install. Locate a directory with sufficient space and where the user has write-access, and create a new folder called Microsoft Office that will be the destination folder.

If you are running MAE 1.0

If you are running MAE 1.0, or you are not sure of the amount of disk space, and it is not possible to install with the CD or floppy; use Fetch on a Macintosh to copy the programs to your workstation.

NOTE: After you install Microsoft Office and if you installed it into your HOME

directory, be sure to remove the Microsoft Office control panel from the MAE System Folder. The Microsoft Office control panel is not compatible with MAE.

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Tech Info Library Article Number:18377



Tech Info Library

Plaintalk 1.4.1: ReadMe File (8/95)

Revised: 8/14/95
Security: Everyone

Plaintalk 1.4.1: ReadMe File (8/95)

=====

Article Created: 14 August 1995

TOPIC -----

This article contains the Read Me file included with the Plaintalk 1.4.1 software package.

DISCUSSION -----

PlainTalk is a collection of software that enables your Macintosh to speak written text and respond to spoken commands. PlainTalk 1.4.1 includes three components, each with its own installer: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

This document describes each of these three software packages, and discusses the differences between PlainTalk 1.4.1 and earlier versions of PlainTalk.

English Text-to-Speech

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. To install the English Text-to-Speech software, you need the following software and hardware:

- any Macintosh or Power Macintosh computer
- version 6.0.7 or later of system software
- at least 300 kilobytes (K) of RAM in addition to what the rest of your system software requires
- at least 5 megabytes (MB) of space available on your hard disk

For more information about the English Text-to-Speech software, see the Using English Text-to-Speech document or the About English Text-to-Speech document in the English Text-to-Speech folder.

Mexican Spanish Text-to-Speech

With the Mexican Spanish text-to-speech software installed, many Macintosh programs can read Spanish text out loud. To install the Mexican Spanish text-to-speech software, you need the following hardware and software:

- a Power Macintosh computer or a Macintosh computer with a 68020, 68030, or 68040 processor
- version 7.0 or later of system software
- at least 1.3 MB of RAM in addition to what the rest of your system software requires
- at least 2 MB of space available on your hard disk

For more information about the Mexican Spanish Text-to-Speech software, see the Using Mexican Spanish TTS document in the Mexican Spanish Text-to-Speech folder.

English Speech Recognition

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The English Speech Recognition package includes the Speech Recognition system extension, the Speech control panel, and a utility called Speakable Items. With Speakable Items, whenever you say the name of an item inside the Speakable Items folder (which is inside the Apple Menu Items folder), the computer acts as if you double-clicked the item.

You can turn Speakable Items on and off using the Speech control panel. You can also use the Speech control panel to set several preferences for how Macintosh Speech Recognition programs listen and respond. For example, you can set the Listening options in the Speech control panel so that the recognizer only listens while you hold down a key of your choice. When you use this option recognition accuracy is improved and misfires (when the computer thinks you spoke a command but you didn't) are eliminated.

To install and use the English Speech Recognition software, including the Speakable Items software, you need the following hardware and software:

- a Power Macintosh computer
- system software version 7.5 or later
- a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audiovisual displays.

For more information about the English Speech Recognition software and the Speakable Items utility, see the Using Speech Recognition document in the English Speech Recognition folder.

Differences between PlainTalk 1.4.1 and PlainTalk 1.4

PlainTalk 1.4.1 is a minor update to PlainTalk 1.4. It includes a few bug fixes, including the following:

- English Speech Recognition 1.4.1 works better than 1.4 worked with microphones

built into Apple AudioVision 14 displays.

- Version 1.4.1 of the Speech control panel (which is installed by version 1.4.1 of English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition) contains a fix to incompatibilities that version 1.4 of the Speech control panel had with HyperCard 2.3's popup menus when running on PowerMacintosh computers.
- Version 1.4 of the Speech control panel failed to run on some 68000 Macintosh computers (including Macintosh SE computers). Version 1.4.1 of the Speech control panel runs on all Macintosh computers with system software version 7.1 or later.

Differences between PlainTalk 1.4.1 and PlainTalk 1.3

Version 1.3 and earlier versions of the PlainTalk software had a single installer program that installed both text-to-speech and speech recognition. This version (1.4.1) contains three different installers to make it easier to install just the parts that are appropriate for your needs: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

You don't have to install them all. However, if you are going to install version 1.4.1 of English Speech Recognition or Mexican Spanish Text-to-Speech then you should first install version 1.4.1 of English Text-to-Speech, even if you already have an older version of English Text-to-Speech installed.

Deciding whether to upgrade to version 1.4.1

Version 1.4.1 of PlainTalk is a minor update to version 1.4. It fixes a few bugs discussed above in the section titled "Differences between version PlainTalk 1.4.1 and PlainTalk 1.4". If you are using version 1.4 and are experiencing any of those bugs, then you should update to version 1.4.1.

In general, version 1.4.1 offers a more robust and flexible set of features than version 1.3 or earlier versions. However, some people in special circumstances may do better with version 1.3.

- If you have a Macintosh AV computer that has a 68040 processor and you use PlainTalk 1.3's speech recognition capabilities, Apple recommends that you continue using version 1.3 of the PlainTalk software. Though the new text-to-speech software works with these computers, the new speech recognition software does not (because it runs on Power Macintosh computers only). It is not recommended that you mix versions, using the old recognition software with the new text-to-speech software. (Note: all the new software works with Power Macintosh AV computers.)
- If you make extensive use of PlainTalk 1.3's Speech Macros, the Speech Macro Editor, or the ability to speak menu commands, then you might want to continue using version 1.3. As part of the effort to make the software more robust, version 1.4.1 of English Speech Recognition supports Apple's standard AppleScript ScriptEditor instead of the Speech Macro Editor, and it does not support the ability to speak menu items. This is discussed more below.

What's new in English Text-to-Speech

English text-to-speech software version 1.4.1 is a minor update to version 1.4, as discussed above. English text-to-speech software version 1.4.1 is also very similar to version 1.3 and earlier versions. The main differences are:

- English Text-to-Speech 1.4.1 has its own installer.
- English Text-to-Speech 1.4.1 includes a Speech control panel that lets you select a system-wide default voice and rate, which is used by many text-to-speech programs, including SimpleText and the Speakable Items utility.

What's new in Mexican Spanish Text-to-Speech

Mexican Spanish text-to-speech software version 1.4.1 is a minor update to version 1.4, as discussed above. PlainTalk 1.4 was the first version of PlainTalk to include support for Mexican Spanish text-to-speech.

What's new in English Speech Recognition

English speech recognition software version 1.4.1 is a minor update to version 1.4, as discussed above. The most notable improvement from version 1.4 is that version 1.4.1 of English speech recognition works better than version 1.4 did with microphones built into Apple AudioVision 14 displays.

English Speech Recognition version 1.4.1 has some significant differences from the speech recognition software in version 1.3 and earlier versions of PlainTalk. Some features have been eliminated to simplify speech recognition and make it more robust and usable. Other options have been added to increase accuracy and eliminate misfires.

- Version 1.4.1 offers a new listening option in the Speech control panel, "Listen only while key(s) are pressed," that lets you leave Speakable Items on all the time without worrying about misfires. It also improves the accuracy of recognition.
- Version 1.4.1 works in a wider range of environments thanks to its greatly improved adaption to room acoustics.
- Version 1.4.1 does not include or support Speech Macros, the Speech Macro Editor, or Speech Rules. It still supports speaking dialog buttons and the Speakable Items folder. Any item you place inside the folder becomes speakable—saying the name of the item launches or opens the item. You can use the AppleScript ScriptEditor to create scripts that are launched by speaking a command: just save the scripts inside the Speakable Items folder. To see examples, look inside the Speakable Items folder.
- Version 1.4.1 runs on Power Macintosh computers only, and does not support Macintosh AV computers with 68040 processors. You can continue to use PlainTalk 1.3 on 68040 Macintosh AV computers.
- Version 1.4.1 does not include automatic support for recognizing the spoken names of menu commands. You can still manipulate scriptable programs, such as

the Finder, using AppleScript commands. To see examples, look inside the Speakable Items folder.

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Updated June 21, 1995

Support Information Services

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Tech Info Library Article Number:18378



Tech Info Library

MAE: Macintosh Viruses Within MAE (8/95)

Revised: 8/14/95
Security: Everyone

MAE: Macintosh Viruses Within MAE (8/95)

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Article Created: 14 August 1995

TOPIC -----

Is there any concern for computer viruses within Macintosh Application Environment (MAE)? Will a Macintosh computer virus affect only my Macintosh files, or could it also harm the UNIX files as well? What application can be used to check for viruses?

DISCUSSION -----

Macintosh viruses can damage UNIX files that the user has permissions to. Normally, a Macintosh virus attacks the resource fork which does not exist for UNIX files. However, there may be the possibility of damage if the virus attacks the data file.

MAE includes Disinfectant 2.5, located in ./apple/tools/shareware. Using the selected scan option (hold down the Option key) in Disinfectant should scan for any virus affected files.

Using products like SAM Intercept may work, however, SAM Intercept has not been fully tested. Also Norton Utilities has not been tested, because of certain hardware and disk assumptions that will not match with UNIX workstations.

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Tech Info Library Article Number:18379



Tech Info Library

GeoPort 2.2 Telecom Adapter ReadMe (5/96)

Revised: 5/27/96
Security: Everyone

GeoPort 2.2 Telecom Adapter ReadMe (5/96)

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Article Created: 14 August 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the GeoPort Telecom Adapter 2.2 Read Me file.

DISCUSSION -----

Software included in the GeoPort Telecom Adapter Kit
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Apple Telecom Software 2.2

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 7200 series, 7500/100, 8100 series, 8500/120, and 9500 series.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.x software on Macintosh systems equipped with an Express Modem card.

NOTE: For Power Macintosh 7200 series, 7500/100, 8500/120, and 9500 series, version 2.1 or higher of Apple Telecom Software is required. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any devices attached to the printer port (except serial printers, which can remain attached).

IMPORTANT: If you select "Sleep" from the Special Menu available on some Power Macintosh models while there is an active GeoPort connection, the GeoPort

Telecom Adapter will automatically disconnect the call without warning. When a Power Macintosh 7200 series model is in the low-power mode, the GeoPort Telecom Adapter will wake up the machine if the telephone rings and the machine is awaiting an incoming call. The monitor will remain in the low-power mode. While a connection is open via a GeoPort Telecom Adapter, your Power Macintosh will not enter the low-power mode, but the monitor will dim the screen.

MegaPhone (for United States, Canada, and Japan only)

This is a screen-based telephone application that delivers full support of the telephony capabilities of the Apple Telecom 2.x software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information, and voice-mail functions.

The GeoPort Telecom Adapter Kit also includes a free 30-day trial of call logging, MegaDial dialing manager, intelligent synchronization with directory information (saving telephone numbers to a PowerTalk catalog, for example), and other extended capabilities.

See also: the MegaPhone electronic manual included on Disk 3 (Telecom Applications).

NOTE: MegaPhone is not installed by the Apple Telecom Installer program. You must install it separately.

SITcomm SE/GTA (for United States and Canada only)

This is a terminal emulator application. With SITcomm SE/GTA (Special Edition for GeoPort Telecom Adapter), your Macintosh can communicate with a variety of other computers, linked by serial cables or by telephone lines.

With SITcomm you can exchange information with

- A colleague who is using another computer with similar communications software.
- Text-based information and electronic mail services, such as CompuServe or MCI Mail.
- Your company or school's remote minicomputer or mainframe.

See also: the SITcomm SE electronic manual included on Disk 4 (Telecom Applications).

NOTE: SITcomm is not installed by the Apple Telecom Installer program. You must install it separately.

NOTE: SITcomm (Disk 4) is not included with free upgrades. You can order the full upgrade, including SITcomm SE and the Apple Telecom User's Guide manual, by calling the Apple Order Center. Ask for the Apple Telecom software version 2.x upgrade for use with your GeoPort Telecom Adapter.

Upgrading from previous releases of GeoPort Telecom Adapter software

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If you are installing this version of the software over an older version, you

should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

NOTE: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version; you may delete them.

Connection (CCL) scripts for Apple Remote Access

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)
ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center.

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select it in the Apple Remote Access Setup control panel.

NOTE: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Remote Access Dial Back

If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX with QuickDraw GX 1.1

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The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex greyscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

NOTE: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

NOTE: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

NOTE: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature

only works with PostScript® printers.

Troubleshooting

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Connecting to Online Services That Do Not Support Data Compression or Error Correction.

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication Settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying Incoming Calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone), we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing Fax Storage Folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Using a Centris 660av or Quadra 660av/840av

If you are using a Centris 660av or Quadra 660av/840av and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with the GeoPort Telecom Adapter. To change this setting, open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a Blacklisting Error Message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

Clicking sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660av/840av). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

What Goes Where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter ReadMe
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- Modem AT Command Set

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)
- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)

- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

26 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18380



Tech Info Library

CLW 12/600 PS & LW 16/600 PS: Window 95/NT Drivers (1/97)

Revised: 1/24/97
Security: Everyone

CLW 12/600 PS & LW 16/600 PS: Window 95/NT Drivers (1/97)

Article Created: 15 August 1995
Article Reviewed/Updated: 24 January 1997

TOPIC -----

What drivers for the Color LaserWriter 12/600 PS and the LaserWriter 16/600 PS printers are available to support Windows 95 and Windows NT?

DISCUSSION -----

As of January, 1997 there are two separate disk sets now available for the Color LaserWriter12/600 PS and LaserWriter 16/600 PS printers. These disk sets can be found on Apple Computer's Software Update online services. Look for these files (the file names may not be exactly as shown below, they may differ slightly depending on which online service you use):

LW Win3.1 3.0.8
LW Win3.1 3.0.8-1of2.sea
LW Win3.1 3.0.8-2of2.sea
LW31_308.TXT
LW31_308.ZIP

LW Win95 4.2
LW Win95 4.2-1of3.sea
LW Win95 4.2-2of3.sea
LW Win95 4.2-3of3.sea
LW95_42.TXT
LW95_42.ZIP

One disk set is for Windows 3.1x and the other for Windows 95. If you need to install this printer software on Windows NT 3.5 or later, then use the Windows 3.1x disk set.

Microsoft wrote the AppleTalk stack for Windows NT, and they support network printing to these printers (not Apple). If you are using Windows NT for network printing, you should be aware there are problems with Windows NT's AppleTalk

stack prior to version 3.5. Apple Computer, Inc. does support and maintain parallel printing on Windows NT.

The installation procedure for these printers on Windows NT and Windows 95 can be found in the read me files on the installation disk set.

Note:

The instructions for installing this software in Windows NT 4.0 are different than the instructions for installing this software in Windows NT 3.5x. Please consult the read me files for correct installation instructions.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

24 Jan 1997 - Updated with current information.

14 Oct 1996 - Added NT 4.0 information.

01 Apr 1996 - Changed disk part names.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18382



Tech Info Library

Color LW 12/600 PS: Photoconductor LED Turns On Early (4/96)

Revised: 4/2/96
Security: Everyone

Color LW 12/600 PS: Photoconductor LED Turns On Early (4/96)

Article Created: 15 August 1995
Article Reviewed/Updated: 1 April 1996

TOPIC -----

The photoconductor LED (error light) on my Color LaserWriter 12/600 PS turned on after printing only 3,000 pages even though the print quality looks fine. Do I need to replace the photoconductor as directed by the user's manual?

DISCUSSION -----

Apple recommends replacing the photoconductor (OPC -- Organic Photoconductor) only when there is a noticeable degradation of print quality. To assist in monitoring the print quality keep the startup and demonstration pages that print when a new photoconductor is installed in the printer. These pages represent the print quality that can be expected with a new photoconductor. Periodically printing the startup and demonstration pages allows the print quality to be compared with the pages generated when the photoconductor was new. If the print quality has degraded to an unacceptable level (ie. overexposed, lack of contrast, scratches, or spots) then the photoconductor should be replaced. Under normal circumstances the life of the photoconductor can be in excess of 6,500 pages depending on the type of printing being done.

The photoconductor LED on the status panel is activated by an internal counter after 3,000 color pages have been printed. The Color LaserWriter controller uses a photosensitive drum thickness circuit to determine when a new photoconductor has been installed so that the photoconductor LED can be turned off for another 3,000 pages. The thickness detection is performed every 100 printed pages, at power on, and whenever the front door is opened and closed. Removing and reinstalling the original photoconductor will not reset the LED because the printer engine controller compares the current drum thickness data with the drum thickness data stored on the DC controller to determine whether a new photoconductor has been installed.

Article Change History:

01 Apr 1996 - Added additional phrases for searching.

27 Sep 1995 - Replaced discussion to include additional details.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18383



Tech Info Library

MAE 2.0: Is AppleScript Supported (1/96)

Revised: 1/30/96
Security: Everyone

MAE 2.0: Is AppleScript Supported (1/96)

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Article Created: 14 August 1995
Article Reviewed/Updated: 30 January 1996

TOPIC -----

Is AppleScript supported in MAE 2.0?

DISCUSSION -----

AppleScript is not supported in MAE, and there is no plan for it to be in the near future.

Article Change History:
30 Jan 1996 - Revised article to show no support.

Support Information Services

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Tech Info Library Article Number:18384



Tech Info Library

MAE 2.0: The license_binder Program (8/95)

Revised: 8/15/95
Security: Everyone

MAE 2.0: The license_binder Program (8/95)

Article Created: 15 August 1995

TOPIC -----

This article describes license_binder, a program used with MAE 2.0.

DISCUSSION -----

The purpose of license_binder is to create a license file to help Administrators keep track of MAE licenses. The location of license_binder is, ./<apple_dir>/bin, where <apple_dir> is the location the user installed MAE. After installing MAE, follow the steps below to properly set up MAE licensing.

Step 1

Execute ./<apple_dir>/bin/license_binder

Step 2

Input the serial number found on the inside cover of the MAE package or on the CD cover.

Step 3

Depending on the license, input the "user" or "display" that are licensed to use MAE.

If you license the user, then that user can logon to any display and use MAE. If you license the display (by host name or IP Address), any user that resides on that display can use MAE.

Step 4

After using all licenses per serial number, the license_binder will exit. A directory called ./<apple_dir>/license_dir will now have the license file with the user and/or display information.

Central Administration of Licenses

System Administrators can choose where the license file resides. This lets large installations have a centrally maintained license_dir directory that is shared among all MAE users. When MAE is installed, by default, the license_binder data files are stored in ./<apple dir>/license_dir. To place the license_binder data files in a central location (whether the central location is local to the users or out on the network), follow these steps:

Step 1

Install MAE in the machine that is to contain the centrally located license_binder data files, and execute the license_binder program. Export the ./license_dir directory via NFS. Be sure that all users have access to the location of the exported license_dir.

Step 2

On systems that will have MAE running, create a directory called license_dir in the <apple dir> and then mount via NFS the exported license_dir to the license_dir mount point.

If the license files are to be located elsewhere in the file system, set the MAE_LICENSES environment variable to the location at which the data files are to be placed.

NOTE: Setting the MAE_LICENSES environment variable to a pathname causes MAE to create a new directory if needed, and places the data files in that directory if license_binder is run after setting MAE_LICENSES. Be sure that all users set and export MAE_LICENSES on their workstations to the appropriate location.

Support Information Services

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Tech Info Library Article Number:18385



Tech Info Library

DOS Compatibility Card: Less RAM Than Set In PC Setup (10/95)

Revised: 10/9/95
Security: Everyone

DOS Compatibility Card: Less RAM Than Set In PC Setup (10/95)

Article Created: 15 August 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

I have 40 MB of RAM in my Macintosh, and I have selected 16 MB for my DOS Compatibility Card in the PC Setup control panel. However, my DOS Compatibility Card will only access 8 MB of RAM. I thought I could access half of the RAM. Why does this happen?

DISCUSSION -----

Yes, it is true that you can allocate half of the total physical RAM to the DOS Compatibility Card using shared memory. However, the only choices are the ones in the menu of the PC Setup control which are: 2, 4, 8, 16, 32. There are choices for 1 and 64 but none of these are ever available, even with a full load of RAM. Since you have 40 MB RAM, the closest number to 20 (half of 40) is 16. Therefore, you can, at most, share 16 MB RAM with the DOS Compatibility Card.

You cannot share virtual memory (VM) to the DOS Compatibility Card. If the system only has 16 MB RAM and you set VM to 32 MB, you can still only share a maximum of 8 MB RAM.

There are two situations that must be kept in mind when sharing RAM between a Macintosh and DOS Compatibility Card. Both can affect the DOS Compatibility Card, they are as follows:

- When changing the RAM allocation in the PC Setup control panel, you must restart the Macintosh before the RAM change will take effect.
- During startup, if you have several extensions or control panels load before PC Setup, a reduced amount of RAM will be available for the DOS Compatibility Card. For example, having a large RAM Disk mount at startup may allocate enough memory before PC Setup loads forcing it to reduce its memory allocation below the control panel setting. If this happens, you must evaluate whether all of your extensions and/or control panels are necessary, and turn those off which

are not.

This article was published in the "Information Alley":
Volume II, Issue 12, Page 13

Article Change History:

09 Oct 1995 - Added Info Alley information; updated article.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18386



Tech Info Library

Express Modem Read Me: Apple Telecom 2.3.2 (11/96)

Revised: 11/7/96
Security: Everyone

Express Modem Read Me: Apple Telecom 2.3.2 (11/96)

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Article Created: 16 August 1995
Article Reviewed/Updated: 7 November 1996

TOPIC -----

This article is the Express Modem Read Me file that comes with the Apple Telecom 2.3.2 software posted online.

DISCUSSION -----

Express Modem Read Me

Apple Telecom Software
=====

This software runs on the following machines with their respective Express Modem internal modems:

- PowerBook 160, 165, 165c, 180, 180c, using an internal Apple PowerBook 14.4 Modem Card.
- PowerBook Duo 210, 230, 250, 270c, 280, 280c, 2300c, using an internal Apple PowerBook Duo 14.4 Modem.
- PowerBook 520, 520c, 540, 540c (with or without PowerPC processor upgrade), using an internal Apple PowerBook Express Modem II Card.*

* Note: The Express Modem II is only offered internationally.
It is not available in the U.S.A. The original Read Me file
did not note that this modem is only available outside the U.S.A.

- LC 575, Macintosh Quadra, LC, Performa 630, using an internal Macintosh Express Fax/Modem (for the United States and Japan only).

Compatibility with At Ease

..TIL18388-Express_Modem_Read_Me-Apple_Telecom_2-3-2_11-96.pdf

Apple Telecom Software v2.3.1 is now compatible with At Ease. You will be able to access the Express Modem control panel when At Ease is the user interface.

Installing over an older version of the software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

Note: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

Preferred CCL scripts for Apple Remote Access

ARA 1.0: Express Modem ARA 1.x (in Extensions folder in System Folder)
ARA 2.0: Express Modem ARA 2.x (in Extensions folder in System Folder)

Note: These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide.

Two additional, optional connection (CCL) files, named Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG, are installed as well. When you use them, the Express Modem transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as a GeoPort Telecom Adapter), you should select one of these connection files in the Apple Remote Access Setup control panel.

Note: The Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex greyscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

Note: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality

from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

Auto-answer setting

If Fax Terminal is set to Auto-answer, the Manual Receive is disabled.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript® printers.

Troubleshooting

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Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the Express Modem to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying incoming calls

When answering your phone line, the Express Modem will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application, we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

Removing fax storage folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the

BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

What goes where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- Express Modem Read Me
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- Modem AT Command Set
- Express Modem ARA 1.x/CNG (optional, transmits data calling tone)
- Express Modem ARA 2.x/CNG (optional, transmits data calling tone)

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- Express Modem ARA 1.x (Apple Remote Access 1.0 CCL)
- Express Modem ARA 2.x (Apple Remote Access 2.0 CCL)

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)

- Electronic Telephone (sound resource)

Article Change History:

07 Nov 1996 - Added info about Express Modem II availability.

10 Jan 1996 - Updated with latest Read Me.

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Tech Info Library Article Number:18388



Tech Info Library

Open Transport: Not Compatible With AppleTalk Phase 1 (8/95)

Revised: 8/16/95
Security: Everyone

Open Transport: Not Compatible With AppleTalk Phase 1 (8/95)

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Article Created: 16 August 1995

TOPIC -----

Is Open Transport compatible with AppleTalk Phase 1 networks?

DISCUSSION -----

No. Open Transport will not work with AppleTalk Phase 1 networks, or with the AppleTalk Phase 2 Upgrade Utility. Customers using AppleTalk Phase 1 will have to upgrade to AppleTalk Phase 2.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18389



Tech Info Library

Color LW 12/600 PS: Don't Bypass PageMaker Driver (8/95)

Revised: 8/22/95
Security: Everyone

Color LW 12/600 PS: Don't Bypass PageMaker Driver (8/95)

=====

Article Created: 08 August 1995
Article Reviewed/Updated: 22 August 1995

TOPIC -----

When I bypass the PageMaker print driver, using Option-Print, PageMaker does not seem to send the correct black color information to the color LaserWriter 12/600 PS printer. However, I get the correct black color information using the PageMaker print driver; Print from the File menu.

Because the PageMaker driver often causes problems, I sometimes try printing with Apple's LaserWriter driver using Option-Print. Is there a way to get the correct colors from PageMaker using the Apple LaserWriter printer driver?

DISCUSSION -----

You don't get dark blacks from PageMaker using the Option-Print because of the way Adobe sends the information to the Apple Printer Driver. Adobe technical support is aware of the problem, but state that using the OPT-PRINT is NOT a supported solution. If you are encountering problems printing using PageMaker's print command, you should contact Adobe technical support. Instead of using Opt-Print, Adobe Technical Support will assist you in determining your printing problem.

Article Change History:
22 Aug 1995 - Clarified the problem and solution.
18 Aug 1995 - Edited for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18390



Tech Info Library

Open Transport: TCP/IP Control Panel Simplified (7/96)

Revised: 7/3/96
Security: Everyone

Open Transport: TCP/IP Control Panel Simplified (7/96)

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Article Created: 16 August 1995
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article provides a simplified explanation of the elements of the Open Transport TCP/IP control panel settings.

DISCUSSION -----

Question: What does the TCP/IP control panel let me do?

Answer: The Transmission Control Program/Internet Protocol (TCP/IP) control panel lets your Macintosh speak the protocol or "language" of the Internet. The Mac OS uses AppleTalk, the protocol of Apple Macintosh computers and LaserWriter printers. But the Internet uses the TCP/IP protocol suite, which is the "language" of UNIX systems.

Question: What is an IP address?

Answer: Each machine or "host" connected to the Internet must have a unique IP address in order to communicate with other hosts. It is like a telephone number. An IP address is a 32-bit number, usually expressed in dotted decimals, for example: 128.1.1.24

Question: What is the significance of the dotted decimals in an IP address?

Answer: Similar to the way a telephone number is divided into area code, exchange, and individual phone number, an IP address is also subdivided into octets (each "octet" is 8 bits, 8 bits X 4 octets = 32 bits) that designate network, subnetwork, and node. The network is like the area code; it describes a certain piece of the Internet where your Macintosh is connected. A subnetwork is similar to an exchange; it further breaks down the network into smaller chunks, and each subnetwork can have its own range of nodes, like the individual phone numbers on that exchange.

Note that not all networks use subnetting to further divide their network.

Question: What is the subnet mask?

Answer: This mask is what is used to indicate which bits of your 32-bit IP address designate the "network", and which bits designate the "node". Remember that the dotted decimal format is just an easy way of expressing the 32-bit address. If you were to write out the example address, 128.1.1.24, in binary numbers, it would look like this:

10000000.00000001.00000001.00011000

The subnet mask is also a 32-bit number; when superimposed over the IP address, every bit that matched a "1" would be part of the "network", and every bit that matched a "0" would be part of the node. For example, a subnet mask of 255.255.0.0 would look like this:

11111111.11111111.00000000.00000000

This would indicate that the first two octets of the IP address (128.1) indicated the network. The last two octets (1.24) are the node on the network 128.1.0.0.

There are three main classes of IP addresses and each class has a default subnet mask. The class is determined by the first few bits of the 32-bit IP address, as indicated below. For example, because the first bit of a class A address must be 0, when expressed in decimal numbers, the first octet will be 127 (01111111) or lower, because 128 in binary numbers starts with a "1": 10000000.

Begin_Table

Class	Identified by 1st Octet	Default Subnet Mask
A	First bit = 0 (0-127)	255.0.0.0
B	First two bits =10 (128-191)	255.255.0.0
C	First three bits = 110 (192-223)	255.255.255.0

End_Table

Each organization can use the bits for their nodes to define subnets at their routers. For example, a class A address has the first 8 bits defining the network. An organization might decide to take the two middle octets – 16 bits – to define subnets, and then the final 8 bits would define a node on the subnet on the network.

This information is used by routers to determine how to route the IP packets to the network you are attached to.

Question: What are the different ways I can connect to the Internet?

Answer: If you are connected to a LAN that has access to the Internet, you simply use that LAN connection for your Internet communications. If you are on an Ethernet or Token Ring LAN, you can select either Ethernet or Token Ring,

respectively, in the connect via field of the TCP/IP control panel. These types of networks support different protocols, so you can direct AppleTalk and TCP/IP, as well as other protocols such as IPX, over these networks at the same time.

If you are on a LocalTalk LAN, or connecting via Apple Remote Access, then you are limited to using AppleTalk protocols. However, TCP/IP packets can be encapsulated in AppleTalk packets for transmission over these connections. This is referred to as "MacIP". To use MacIP, you need a MacIP server, which sits on both an AppleTalk and a TCP/IP network, and acts as a middleman between you and the Internet. You send your AppleTalk encapsulated IP packet to the MacIP server using AppleTalk protocols; it strips off the AppleTalk encapsulation, and places the IP packet out on the Internet. When packets are destined to you from the Internet, it does the reverse.

If you are not on a LAN that has connections to the Internet, then you can gain access through Internet Service Providers (ISPs). SLIP (Serial Line IP) or PPP (Point-to-Point Protocol) connections give you access to the Internet, using your modem and phone lines.

Question: Where do I get an IP address and a subnet mask?

Answer: This information must come from the person who is in charge of the network you are physically connecting to. If you are connected to a LAN that has a connection to the Internet, talk to your network administrator. If you are using a SLIP or PPP connection, talk to your Internet Service Provider (ISP).

The network administrator or ISP will also tell you the manner in which you can obtain your IP address (whether you are assigned one that you have to enter manually, or whether you get one from a server), in addition to the other information you need to configure TCP/IP.

Question: What are BOOTP, RARP, and DHCP?

Answer: These terms stand for Bootstrap Protocol, Reverse Address Resolution Protocol, and Dynamic Host Configuration Protocol. These protocols let a computer obtain its IP address (and sometimes other information, such as subnet mask) from a server. In the simplest terms, when a machine needs an IP address (on a Macintosh, this might be when you first attempt to launch an application that uses TCP/IP protocols), it asks the server for an IP address. Depending on the type of server, you are either assigned an address that has been set aside especially for your machine, or you are given one from a pool of available addresses.

These protocols are used to make administration of large networks easier.

Question: What is a domain name and a domain name server?

Answer: Because it is difficult for humans to remember a series of somewhat meaningless numbers, we assign names to them. Apple Computer's domain is apple.com; it also has lots of subdomains, such as corp.apple.com, and austin.apple.com. The subdomains simply define smaller areas within the apple

domain. A machine called max on the subdomain info.apple.com would have a fully qualified domain name of max.info.apple.com, and its IP address might be 204.16.92.4. A domain name server in each domain is in charge of keeping a table of the machines in its network and their IP addresses. If you want to talk to max you can address it with either its IP Address or with its name. If you use its name, you need to resolve the name by asking a domain name server for that machine's IP address. This is all done behind the scenes.

Question: How does domain name resolution work?

Answer: Your network administrator or ISP should give you the IP addresses of one or more domain name servers. You list these in the field called Name server addr: in the TCP/IP control panel.

Here is an example which shows how a name is resolved. Assume that Sue's TCP/IP control panel is configured with a domain name of drc.corp.apple.com. Her admin domain is apple.com. Also in her search domain names, she has entered info.apple.com.

She has listed three different IP addresses in the Name server addr field.

When Sue attempts to connect to a machine using its domain name, max.austin.apple.com., her Macintosh computer contacts the first domain name server in the list to see if it can resolve the name (if it can give her the machine's actual IP address). If it cannot do so, the other name servers are tried, in the order Sue has listed them.

Note that max.info.apple.com. is a "fully-qualified" domain name; the period at the end indicates this. Using simply max is possible, but because max is not fully qualified (and this is clear because it does not contain a single "."), a domain name must be appended to it before a domain name server can resolve it.

First, Sue's own domain is tried: max.drc.corp.apple.com. If a search on this name fails, other attempts to resolve the name are made by dropping off one subdomain at a time, until she reaches her admin domain. For example, the searches are conducted on the following names, in the order given:

max.drc.corp.apple.com
max.corp.apple.com
max.apple.com

If the name is not found, it attempts to resolve the name using the domain name in the Search domain names field, in this case:

max.info.apple.com

Question: What is the host file?

Answer: A host file is a text file that resides at the root level of your System Folder, and contains a table of domain names and IP addresses. This table can also be used for domain name resolution, but domain name servers are more

commonly used, because they are easier to manage and maintain. If your network administrator gives you a host file to use, simply place it within your System Folder.

This article was published in the "Information Alley":
Volume II, Issue 12, Page 7

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

20 Nov 1995 - Added new keyword.

09 Oct 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18391



Tech Info Library

Power Macintosh 5300/100 LC:Technical Specifications (3/96)

Revised: 3/5/96
Security: Everyone

Power Macintosh 5300/100 LC:Technical Specifications (3/96)

=====

Article Created: 5 September 1995
Article Reviewed/Updated: 5 March 1996

TOPIC -----

This article contains a list of technical specifications for the Power Macintosh 5300/100 LC computer.

NOTE: This computer is only available through educational channels.

DISCUSSION -----

Microprocessor

-
- 100-MHz PowerPC 603e
 - 256K Level 2 Cache

Memory

-
- 16 MB of RAM, expandable to 64 MB (Two 72-pin, 70ns DRAM SIMM slots, no RAM soldered on-board). Usually ships with one 16 MB SIMM in one slot.

Storage

-
- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
 - Internal 1.2 GB IDE hard disk drive

Expansion Slots

-
- One 114-pin LC 030 PDS slot
 - One 112-pin Communications slot for modem or Ethernet card supporting these Apple Ethernet cards:
 - Apple Ethernet CS Twisted Pair Card
 - Apple Ethernet CS Thin Coax Card

- Apple Ethernet CS AAUI Card
- One 60-pin video input slot for realtime video display

Ports

- One Video output port
- One Mono sound input port
- One Stereo sound output port (16-bit)
- One Apple Desktop Bus (ADB) port
- Two serial (RS-422) ports (do not support GeoPort)
- One SCSI port for connecting as many as six external devices (including CD-ROM)

Video

- Video Modes: 640x480 @ 16-bit, 800x600 @ 8-bit (and 832x624 @ 8-bit with no video-in support)
- Video mirror output for second monitor
- TV Tuner
- One Video capture card

Sound

- 16-bit on-board stereo sound output and mono sound in (16-bit CD and video)

Article Change History:

- 05 Mar 1996 - Expanded info about expansion slots.
- 15 Jan 1996 - Corrected minor typo.
- 29 Nov 1995 - Corrected video-out information.

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Tech Info Library Article Number:18392



Tech Info Library

Power Macintosh 7200: Maximum Color Depths (1/96)

Revised: 1/10/96
Security: Everyone

Power Macintosh 7200: Maximum Color Depths (1/96)

=====

Article Created: 16 August 1995
Article Reviewed/Updated: 10 January 1996

TOPIC -----

The Power Macintosh 7200 series computers come with 1 MB of VRAM on the logic board, expandable to 2 MB or 4 MB. The 7200 has 3 VRAM DIMM slots. The article below describes the number of colors available based on the amount of VRAM installed.

DISCUSSION -----

The Power Macintosh 7200 series computers comes with 1 MB of VRAM on the main logic board. You can increase VRAM to 2 MB by installing one 1 MB DIMM in the first VRAM slot, or to 4 MB by filling all three VRAM slots with 1 MB DIMMS. A VRAM upgrade can be accomplished with third party 1 MB VRAM DIMMS.

The Power Macintosh 7200 has a 64-bit data path to VRAM (with 2 MB or 4 MB of VRAM). It will support display resolutions of up to 1280x1024 pixels and 24-bit color (millions of colors) of up to 1024x768 pixel resolution.

IMPORTANT:

The VRAM DIMMs must be 112-pin fast-paged mode, with 70ns RAM access time or faster. Do not use 256K VRAM SIMMs.

The following table defines the maximum color depths available for a given resolution and memory size. Lower color depths are supported down to 8 bit or 256 colors. This is the same information that is reproduced in the technical specification guide that comes with the computer.

NOTE:

The maximum visible number of colors is millions. In the past, Apple has also labeled millions as 24 bit color. On AV and Power Macintosh computers, 24 bit or 32 bit can be used interchangeably to mean support for millions of colors. In some literature, you may see 32 bit shown in place of 24 bit or millions. Think of this as 24 plus 8: 24 bit for displaying millions of colors plus 8 bit for

special uses, such as alpha channel support (transparency, masking, opaque and tranlucient information) and chroma key support.

Begin_Table

Monitor	VIS*	Resolution	Maximum Color**/VRAM			Refresh rates	
			1 MB	2 MB	4 MB	(Hz)	(kHz)
12" RGB	N/A	512x384	mil	mil	mil	60	24.48
12" Mono-chrome	N/A	640x480	thous	mil	mil	67	34.971
13" RGB Hi-Res	N/A	640x480	thous	mil	mil	67	34.971
14" RGB Hi-Res	11.5"	640x480	thous	mil	mil	67	34.971
VESA Standard	***	640x480	thous	mil	mil	60	31.505
		800x600	thous	mil	mil	60	37.921
		800x600	thous	mil	mil	72	48.1
		800x600	thous	mil	mil	75	46.9
		1024x768	256	thous	mil	60	48.4
		1024x768	256	thous	mil	72	60.0
		1024x768	256	thous	mil	75	80.0
		1280x1024	NA	256	thous	75	79.976
Full-page Monochrome	N/A	640x870	256	256	256	75	68.9
Full-page RGB	***	640x870	thous	thous	mil	75	68.9
14" Audio-Vision	11.5"	640x480	thous	mil	mil	67	35
16" color	14.8"	832x624	thous	mil	mil	75	49.670
19" color	***	1024x768	256	thous	mil	75	60.060
Two-page Monochrome	N/A	1152x870	256	256	256	75	68.476
Two-page RGB	11.5"	1152x870	256	thous	thous	75	68.476
Multiple Scan 15	13.3"	640x480	thous	mil	mil	67	34.971
		832x624	thous	mil	mil	75	49.670
Multiple	16.1"	640x480	thous	mil	mil	67	34.971

Scan 17		832x624	thous	mil	mil	75	49.670
		1024x768	256	thous	mil	75	60.060
-----	-----	-----	-----	-----	-----	-----	-----
Multiple	19.1"	640x480	thous	mil	mil	67	34.971
Scan 20		832x624	thous	mil	mil	75	49.670
		1024x768	256	thous	mil	75	60.060
		1152x870	256	thous	thous	75	68.476
		1280x1024	N/A	256	thous	75	79.964
-----	-----	-----	-----	-----	-----	-----	-----
21" Color	***	1152x870	256	thous	thous	75	68.7
-----	-----	-----	-----	-----	-----	-----	-----
NTSC		512x384	thous	mil	mil	60	15.7
(underscan)							
NTSC		640x480	thous	mil	mil	60	15.7
(overscan)							
-----	-----	-----	-----	-----	-----	-----	-----
PAL		640x480	thous	mil	mil	50	15.625
(underscan)							
NTSC		768x576	thous	mil	mil	50	15.625
(overscan)							
-----	-----	-----	-----	-----	-----	-----	-----

* Viewable Image Size

** 256=image depth of 8 bits (bpp), thousands=image depth of 16 bits (bpp), millions=image depth of 32 bits (bpp).

*** Refer to the manual that came with your monitor to determine VIS.

N/A not available

End_Table

Article Change History:

10 Jan 1996 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18393



Tech Info Library

Apple Multiple Scan 14 Display: Macintosh Video Support (6/96)

Revised: 6/21/96
Security: Everyone

Apple Multiple Scan 14 Display: Macintosh Video Support (6/96)

Article Created: 17 August 1995
Article Reviewed/Updated: 20 June 1996

TOPIC -----

This article gives the video modes supported on each Macintosh computer with the Apple Multiple Scan 14 Display, and which computers require display adapters. This display supports resolutions of 640x480 to 800x600.

DISCUSSION -----

Begin_Table

Apple Multiple Scan 14 * Macintosh Video Support			
Product Family	Model	Resolution Supported	
		640x480	800x600 (1)
Power Macintosh	6100, 7100, 7200, 7500, 8100, 8500, 9500	Yes	No
Quadra/Centris	605, 610, 630, 650, 700, 800, 900, 950	Yes	Yes
	660AV, 840AV	Yes	Yes
Macintosh II	IIci	Yes (2)	Yes (2)
	IIsi	Yes (3)	Yes (3)
	IIvi, IIvx	Yes (4)	Yes (2)
	II, IIx, IIcx, IIfx	Yes (2)	Yes (2)

Macintosh LC	LC 475, LC 630	Yes	Yes
	LC 520, LC 575	No	No
	LC, LC II	Yes (4)	No
	LC III	Yes	No
	LC 5200	Yes (5)	Yes (5)
Macintosh TV	Macintosh TV	No	No
Performa	400, 405, 410, 430	Yes (4)	No
	450, 460, 466, 467	Yes	No
	475, 476	Yes	Yes
	550, 560, 575, 577, 578,	No	No
	600, 600CD	Yes (4)	Yes (2)
	630 series	Yes	Yes
	5200	No	No
	6100 series	Yes	No
	6200 series	Yes	No
PowerBook	160, 165, 165c, 180, 180c	Yes	No
	100, 140, 145, 170	No	No
	190, 190cs	No	No
	190, 190cs with video out upgrade kit installed	Yes	Yes
	520, 520c, 540, 540c	Yes	Yes
	5300, 5300cs, 5300c, 5300ce	Yes	Yes
PowerBook Duo	210, 230, 250, 270c, 2300c	No	No
	MiniDock, Duo Dock, Duo Dock II	Yes	Yes (2)
Apple Display Cards	24AC	Yes	Yes
	8•24, 8•24 GC 4•8	Yes	No

	-----	-----	-----
	Mac II video card	No	No
	2-Page MoN video card		
	Mac II MoN video card		
	Mac II Portrait video card		
	Mac II HiRes video card		
	Mac II Ext HiRes video card		
-----	-----	-----	-----

Notes:

- (1) - Non-Macintosh "hidden" resolutions, such as 800x600 and 640x400 are not available with System 7.5.1 and higher
- (2) - Requires compatible display card or display adapter.
- (3) - Requires compatible display card and Macintosh IIsi NuBus Adapter card or display adapter.
- (4) - Requires a display adapter.
- (5) - Requires the Apple External Video Connector (p/n M4099LL/A). Only supports video mirroring. When using video mirroring, the image on the second monitor is the same as that on the built-in monitor.

End_Table

Display Adapters

=====

The adapters, available through Apple resellers and the third-party companies, contain a sense code that tricks the Macintosh into believing that the display is fixed frequency display. Without the adapter, the display will be fixed at a 640x480 resolution. The display adapter also provides the proper sync signal from some computers built-in video to the Multiple Scan 14 Display.

Display adapters are available from several third-pary companies such as Enhanced Cable Technology, Griffin Technology, and MacAdapt.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

- 18 Jun 1996 - Added more display adapter information.
31 May 1996 - Added note about 800x600 availability on System 7.5.1 and higher.
09 Feb 1996 - Added additional display adapter information.

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Tech Info Library Article Number:18395



Tech Info Library

Apple Personal Diagnostics: Which Models Supported (1/97)

Revised: 1/28/97
Security: Everyone

Apple Personal Diagnostics: Which Models Supported (1/97)

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Article Created: 16 August 1995
Article Reviewed/Updated: 28 January 1997

TOPIC -----

Which Macintosh models do the various versions of Apple Personal Diagnostics (APD) support?

DISCUSSION -----

Version 1.0 of APD did not support Power Macintosh computers. Version 1.1.1 added support for some Power Macintosh models. Version 1.1.3 is the most current version of APD.

Apple has not announced plans to update Apple Personal Diagnostics to support future computer releases. Below is a comprehensive list of Macintosh computers supported by APD 1.1.3, spanning over 140 different models from the Macintosh Plus up through the Power Macintosh 9500/132, excluding the 7200, 7500, and 8500 series.

List of Apple Computers Supported by Apple Personal Diagnostics Version 1.1.3:

=====
Apple Workgroup Server 60
Apple Workgroup Server 80
Apple Workgroup Server 95
Workgroup Server 6150
Workgroup Server 6150/66
Workgroup Server 8150
Workgroup Server 8150/110
Workgroup Server 9150
Workgroup Server 9150/120

Macintosh Plus
Macintosh Portable

Macintosh SE
Macintosh SE/FDHD
Macintosh SE/30
Macintosh Classic
Macintosh Classic II
Macintosh Color Classic
Macintosh Color Classic II
Macintosh TV

Macintosh II
Macintosh IIX
Macintosh IIfx
Macintosh IIci
Macintosh IICx
Macintosh IIsi
Macintosh IIvi
Macintosh IIvx
Macintosh IIvm

Macintosh LC
Macintosh LC II
Macintosh LC III
Macintosh LC 475
Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh LC 630

Macintosh Centris 610
Macintosh Centris 650
Macintosh Centris 660AV

Macintosh Performa 200
Macintosh Performa 250
Macintosh Performa 275
Macintosh Performa 400
Macintosh Performa 405
Macintosh Performa 410
Macintosh Performa 430
Macintosh Performa 450
Macintosh Performa 460 Series
Macintosh Performa 475
Macintosh Performa 476
Macintosh Performa 520
Macintosh Performa 550
Macintosh Performa 560
Macintosh Performa 570 Series
Macintosh Performa 580 Series
Macintosh Performa 600 Series
Macintosh Performa 630 Series
Macintosh Performa 640 Series
Macintosh Performa 5200 Series
Macintosh Performa 6100 Series

Macintosh Performa 6200 Series

Macintosh PowerBook 100
Macintosh PowerBook 140
Macintosh PowerBook 145
Macintosh PowerBook 145B
Macintosh PowerBook 150
Macintosh PowerBook 160
Macintosh PowerBook 165
Macintosh PowerBook 165c
Macintosh PowerBook 170
Macintosh PowerBook 180
Macintosh PowerBook 180c
Macintosh PowerBook 500 Series
Macintosh PowerBook Duo 200 Series

Macintosh Quadra 605
Macintosh Quadra 610
Macintosh Quadra 610 DOS Compatible
Macintosh Quadra 630
Macintosh Quadra 650
Macintosh Quadra 660AV
Macintosh Quadra 700
Macintosh Quadra 800
Macintosh Quadra 840AV
Macintosh Quadra 900
Macintosh Quadra 950

Power Macintosh 5200 LC/75
Power Macintosh 6100 Series
Power Macintosh 7100 Series
Power Macintosh 8100 Series
Power Macintosh 9500 Series

Note: APD also tests the Power Macintosh Upgrade and Macintosh Processor Upgrade cards. APD does not test the DOS Compatible Card or DOS Compatibility Upgrade Card.

Article Change History:

28 Jan 1997 - Combined with TECHINFO-0014899
06 Feb 1996 - Updated compatibility information.
29 Nov 1995 - Updated compatibility information.

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Tech Info Library Article Number:18396



Tech Info Library

MegaPhone: Frequently Asked Questions (5/96)

Revised: 5/9/96
Security: Everyone

MegaPhone: Frequently Asked Questions (5/96)

=====

Article Created: 16 August 1995
Article Reviewed/Updated: 9 May 1996

TOPIC -----

This article contains frequently asked questions (FAQ) on the Megaphone software that ships with Apple Telecom 2.x.

Questions in this FAQ:
=====

- 1) Is MegaPhone compatible with Power Macintosh computers and all AV equipped Macintosh computers?
- 2) Is MegaPhone compatible with PowerBook computers?
- 3) Why is there a 5 second lag after a caller hangs up and MegaPhone stops recording?
- 4) Can MegaPhone answer the phone if it is not running?
- 5) Can MegaPhone launch itself when a call comes in?
- 6) How do I set the number of rings to answer on?
- 7) If I answer a call from another phone in the house and it is a fax call, how can I receive it?
- 8) If someone is leaving a message, can I still talk to them?
- 9) Can I still use Call Waiting?
- 10) Where are saved messages kept?
- 11) Can I get a voice message back after I delete it?

- 12) The messages people are leaving are too loud or too soft. Can I adjust for this?
- 13) People are getting cut off when they are leaving messages. Can I adjust for this?
- 14) People leaving messages are saying they hear two beeps to start recording.
- 15) Can I use MegaPhone with Call ID?
- 16) Is MegaPhone Apple Scriptable?
- 17) Is MegaPhone Recordable?
- 18) People I am talking to complain of hearing an echo. Can I adjust for this?
- 19) When I make or receive calls the other party cannot hear me.
- 20) What modems are supported by MegaPhone?
- 21) What Apple bundles include MegaPhone?
- 22) What do these version numbers mean?
- 23) Where do I get support for MegaPhone?
- 24) When I try to make a call I don't get a dial tone and incoming calls are not getting answered. I'm sure my phone line is working and connected properly because I can use data communications applications. Is there something wrong with my modem or my computer?
- 25) Is a specific version of Apple Telecom software required to used MegaPhone with a GeoPort Telecom Adapter?
- 26) Is a specific version of GlobalFax software required to used MegaPhone with Global Village modems?
- 27) When should I use the Internal Modem Sound extension and when should I use the Audio Volume extension?
- 28) Can MegaPhone answer a call if the CPU has been put to sleep?
- 29) What is the relation between the volume control in MegaPhone and the Sound control panel?
- 30) Can I listen to an audio CD and use MegaPhone at the same time?

DISCUSSION -----

1) Question: Is MegaPhone compatible with Power Macintosh computers and all AV equipped Macintosh computers?

Answer: Yes. Note that earlier versions of MegaPhone are not supported on newer

CPUs. For example, versions prior to MegaPhone 1.0.2 are not supported on the Power Macintosh 7200, 7500, 8500, and 9500. Cypress Research and Apple both strongly recommend always using the latest version of both software packages on all CPUs.

2) Question: Is MegaPhone compatible with PowerBook computers?

Answer: Not yet. Contact Cypress Research for more information on this.

3) Question: Why is there a 5 second lag after a caller hangs up and MegaPhone stops recording?

Answer: MegaPhone is detecting the silence or dial tone on the line and needs to ensure the line is really silent before hanging up. Otherwise it might prematurely hang up on your callers. You can tell your callers to press # after their message if you want to minimize this delay.

4) Question: Can MegaPhone answer the phone if it is not running?

Answer: No. However, it can answer the phone if it is running in the background.

5) Question: Can MegaPhone launch itself when a call comes in?

Answer: No. However, it can answer the phone if it is running in the background.

6) Question: How do I set the number of rings to answer on?

Answer: In the Telephone Setup or Express Modem control panel in the general settings. This sets the number of rings for MegaPhone, Fax Software, and any other telephone software.

7) Question: If I answer a call from another phone in the house and it is a fax call, how can I receive it?

Answer: The best way to do this is to go to your computer and force a manual receive.

8) Question: If someone is leaving a message, can I still talk to them?

Answer: The GeoPort Telecom Adapter will allow switching between speaker phone and answering machine but due to the Comm Slot architecture, the Global Village modems must either answer the call or record a message.

9) Question: Can I still use Call Waiting?

Answer: Yes. When you hear the audible tone indicating you have another call, click on the Flash button or type "!". You will then switch to the other call. Click the flash button to switch back to the original call. There may be up to a five second delay before the line switches to the other call.

10) Question: Where are saved messages kept?

Answer: Saved messages are kept in a folder on your hard drive. Messages which you have already heard but not deleted can be found by following this path:

System Folder -> Preferences folder -> Cypress folder -> MegaPhone folder -> Messages folder.

You can double-click the messages to hear them again.

11) Question: Can I get a voice message back after I delete it?

Answer: No.

12) Question: The messages people are leaving are too loud or too soft. Can I adjust for this?

Answer: If you are using MegaPhone with a Global Village Teleport Gold IIv or Teleport Platinum V you can adjust the recording level. Go to the "Record/Playback" pane of the Telephone Setup control panel and adjust the mic gain level. Version 1.0.3P of MegaPhone slightly increased the recording volume. See the appendix in the MegaPhone for Performa manual for more details.

If you are using a GeoPort Telecom Adapter there are no user definable settings. The GeoPort software adjusts the recording level automatically.

13) Question: People are getting cut off when they are leaving messages. Can I adjust for this?

Answer: MegaPhone assumes a call has been terminated if it detects 5 seconds of silence or a fast busy tone.

If you are using MegaPhone with a Global Village TelePort Gold IIv or TelePort Platinum V you can adjust the silence threshold. Go to the "General" pane of the Telephone Setup control panel and adjust the silence threshold level. See the appendix in the MegaPhone for Performa manual for more details.

If you are using a GeoPort Telecom Adapter there are no user definable settings. The GeoPort software adjusts the silence threshold automatically.

14) Question: People leaving messages are saying they hear two beeps to start

recording.

Answer: The "Use recording beeps" feature is turned on in the Telephone Setup control panel. This feature should not be on because MegaPhone emits its own beeps.

Note: This does not apply when using a GeoPort Telecom Adapter since there is no Telephone Setup control panel.

15) Question: Can I use MegaPhone with Call ID?

Answer: Not yet because the modem hardware does not support it.

16) Question: Is MegaPhone Apple Scriptable?

Answer: Yes. It supports the standard suite of Telephony Apple Events such as make call, dial digits, and answer.

17) Question: Is MegaPhone Recordable?

Answer: No, not at this time. Contact Cypress Research about future product plans for this.

18) Question: People I am talking to complain of hearing an echo. Can I adjust for this?

Answer: Yes, if you have a separate microphone, speakers, or both. Usually adjusting the relative positioning of these changes the echo characteristic. This can particularly be a problem in an acoustically hot room.

19) Question: When I make or receive calls the other party cannot hear me.

Answer: It is likely that you have the input device in the Sound control panel set to some device other than the microphone. If you have verified that you have selected the microphone as your input device in the Sound control panel and you are able to input sound through the microphone in other programs, then use the search string "megaphone and performa" to locate the TIL article "Megaphone for Performa: I Hear Caller, They Cannot Hear Me" for more troubleshooting information. A frequent cause of this problem is the incorrect use of the External CD Sound extension.

20) Question: What modems are supported by MegaPhone?

Answer: At this time the only supported modems are the GeoPort Telecom Adapter from Apple, the TelePort Gold IIv and the TelePort Platinum V from Global Village.

..TIL18397-MegaPhone-Frequently_Asked_Questions_5-96_(TA34269).pdf

Note 1: The TelePort Gold IIv is installed internally in the Comm Slot. In the past, Apple has bundled the TelePort Gold II which is an external modem and does not have voice capability.

Note 2: The TelePort Gold IIv and Platinum V are sold only by Apple as part of a Performa bundle. Global Village does not sell these modems anywhere else. Apple is responsible for supporting these modems, not Global Village.

21) Question: What Apple bundles include MegaPhone?

Answer: MegaPhone 1.0.x is bundled with all GeoPort Telecom Adapters, MegaPhone 1.0.xSP is bundled with the Power Macintosh 7200, 7500, 8500, and 9500 computers, and MegaPhone 1.0.xP is bundled with several Performa bundles. See related TIL article: MegaPhone Version History.

22) Question: What do these version numbers mean?

Answer: The version numbers can be interpreted in the following way:

x.y.zL

x = major version number; increases with major feature set changes

y = minor version number; increases with minor feature set changes

z = bug fix version number; increases when a new release is made for bug fixes only

L = configuration modifier which can have the following values

P = Performa

SP = Power Macintosh 7200, 7500, 8500, and 9500

N = no security

J = localized for Japanese

All releases with the same x.y.z values are from the same set of code and therefore would have the same fixes and the same bugs. Every time a version is released, one of the x, y, or z numbers is increased even if not all configurations (L value) are released. Therefore, it is possible to have a 1.0.1P but no 1.0.1 out in customers' hands.

The feature sets for each configuration (L value) can differ. Briefly, the version without an L value has all features enabled for thirty days, at the end of thirty days it reverts to the Basic mode. The full feature set can be permanently activated by entering a code provided by Cypress upon payment of the upgrade fee. The SP configuration contains the Basic feature set only, and the P configuration falls somewhere between the Basic and full feature set. For more details please see related article: MegaPhone Version History.

23) Question: Where do I get support for MegaPhone?

Answer: Apple supports all versions of MegaPhone that are bundled with Apple products. Apple posts the MegaPhone software to many online services and is responsible for supporting those customers as long as they are using a supported

configuration (e.g. Neither Apple or Cypress would support MegaPhone on a Quadra 800). A customer that has purchased the full upgrade from Cypress is entitled to technical support from Cypress. Apple is not responsible for supporting the following versions: 1.0.xN and 1.0.xJ. See related TIL article: MegaPhone Version History.

24) Question: When I try to make a call I don't get a dial tone and incoming calls are not getting answered. I'm sure my phone line is working and connected properly because I can use data communications applications. Is there something wrong with my modem or my computer?

Answer: It is very unlikely something is wrong with your modem. Go to the MegaPhone General Preferences in the File Menu and make sure that you have the proper hardware selected. The Telephone Setup control panel may have the proper tool selected but unless the right tool is selected within the MegaPhone Preferences the application may not function. When you are using a Global Village modem, make sure you can send or receive a fax. Many data applications access the modem directly and do not use the Global Village software. By using the fax capabilities you can verify that the Global Village software is correctly installed. If the Global Village software is installed and you are unable to send a fax, then there may be something wrong with the modem.

The DemoDialer Telephone Tool is selected by default if an error is encountered or another tool is not available. The DemoDialer Telephone Tool will generate dialing tones that can be used to dial a phone by holding the receiver up to the computer's speaker.

The correct tool for the Global Village modems is the CRC TelePort TelTool. The correct tool for the Geoport Telecom Adapter is the GeoPort Telephone Tool.

25) Question: Is a specific version of Apple Telecom software required to used MegaPhone with a GeoPort Telecom Adapter?

Answer: MegaPhone 1.0 does not work with Apple Telecom 2.1 or later. MegaPhone 1.0.2 and later work with all versions of Apple Telecom 2.x. In general, both Apple and Cypress strongly recommend using the latest version of both MegaPhone and Apple Telecom.

26) Question: Is a specific version of GlobalFax software required to used MegaPhone with Global Village modems?

Answer: GlobalFax 2.5.4 or later should be used for the TelePort Gold IIv modem and GlobalFax 2.5.5 or later should be used for the TelePort Platinum V modem.

27) Question: When should I use the Internal Modem Sound extension and when should I use the Audio Volume extension?

Answer: The Audio Volume extension fixes some problems with "scratchy" sound on the 5200, 6200, 5300, and 6300 (see the TIL article "Performa 5200, 5300, 6200,

6300: Static Sound"). Apple recommends using the Audio Volume extension.

28) Question: Can MegaPhone answer a call if the CPU has been put to sleep?

Answer: Yes, for the Power Macintosh CPUs that support the sleep function (7200, 7500, 8500, 9500) the GeoPort will wake the CPU up when it receives an incoming call. Note: MegaPhone must be running at the time the CPU is put to sleep and you will hear more rings before the phone is answered due to the time it takes the CPU to wake up.

29) Question: What is the relation between the volume control in MegaPhone and the Sound control panel?

Answer: The volume slider in the MegaPhone application controls the volume for speaker phone functions independently of the settings in the Sound control panel.

30) Question: Can I listen to an audio CD and use MegaPhone at the same time?

Answer: If you are using a GeoPort, the audio program will be silent while MegaPhone is in use. If you are using a Global Village modem the audio from the CD will be mixed with the MegaPhone audio. It is recommended that you pause your CD while using MegaPhone in this situation.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

09 May 1996 - Updated with call waiting delay information

09 Jan 1996 - Updated with latest information from Cypress Research.

03 Jan 1996 - Made minor technical update.

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Tech Info Library Article Number:18397



Tech Info Library

Performa: Installers for QuickDraw GX and PowerTalk (8/95)

Revised: 8/16/95
Security: Everyone

Performa: Installers for QuickDraw GX and PowerTalk (8/95)

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Article Created: 16 August 1995

TOPIC -----

Where can I find the QuickDraw GX and PowerTalk installers on my Macintosh Performa computer?

DISCUSSION -----

If you have a Macintosh Performa 5200 or 6200 series computer, the installers are located on your Macintosh Performa CD. Follow the path:

System Software Files -> Apple Extras Files

If you have any other Macintosh Performa computer bundled with System 7.5, the installers will be on your hard disk. Follow the path:

Apple Extras -> System Software Extras

Support Information Services

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Tech Info Library Article Number:18398



Tech Info Library

MacTCP: Routing Information Gateway Address (8/95)

Revised: 8/16/95
Security: Everyone

MacTCP: Routing Information Gateway Address (8/95)

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Article Created: 16 August 1995

TOPIC -----

What is the function of the "Routing Information: Gateway address" in the MacTCP control panel? What should I enter if I have multiple routers on the subnet? Why do I have trouble connecting even when I've entered this information correctly?

DISCUSSION -----

The Routing Information Gateway Address should be filled with the default router. Your network administrator will be able to give you that information based on the configuration of your network.

If you have multiple routers on a subnet, you should enter the router that is designated as the default router by the network administrator. If the network is not designed with a preference, have the administrator pick the router you should use.

Although MacTCP uses the default router for connecting to remote addresses that are not on the local subnet, MacTCP will obey any extra router information transmitted via RIP (Routing Information Protocol) broadcasts.

RIP response packets contain information on router addresses and the networks they route to. MacTCP stores RIP response packets as they arrive and uses any routing information provided.

Occasionally users find that MacTCP does not connect to hosts on remote networks. One possible cause is, a network with have routers that advertise incorrect RIP information, which causes MacTCP to use other, non-default routers. Restarting the Macintosh will temporarily clear the information, however, RIP broadcasts are usually sent every 30 seconds, and this is only a short term solution. The long term remedy is to have the network administrator properly configure any devices advertising RIP responses.

Support Information Services

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Tech Info Library Article Number:18400



Tech Info Library

Apple Telecom 2.2 Fixes AudioTuneUp In Apple Telecom 2.1 (8/95)

Revised: 8/31/95
Security: Everyone

Apple Telecom 2.2 Fixes AudioTuneUp In Apple Telecom 2.1 (8/95)

Article Created: 17 August 1995
Article Reviewed/Updated: 31 August 1995

TOPIC -----

This article describes an issue with Internationally localized Apple Telecom 2.1 and AudioTuneUp which is installed on PCI-based Power Macintosh computers.

DISCUSSION -----

Below are the symptoms of a problem in AudioTuneUp installed by Apple Telecom 2.1, that were fixed by AudioTuneUp 1.0.1 in Apple Telecom 2.2. Anyone who has installed a localized version of Apple Telecom 2.1 should replace AudioTuneUp with version 1.0.1 which is included as part of Apple Telecom 2.2

The Sound control panel functions do not work as follows:

- Alert sounds:
 - The add button does not function.
 - A beep is not output when the alert volume slider is dragged up and down.
- Sound In: There is no sound source.
- Sound Out: Rate, Size, and Use are dimmed.
- Volumes:
 - The headphone volume scales disappear.
 - Mute doesn't work.
 - The volume's slider is fixed at MAX.

Article Change History:
31 Aug 1995 - Grammar correction.
21 Aug 1995 - Made minor correction.

Support Information Services

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Tech Info Library Article Number:18401



Tech Info Library

Internet Server For WWW: About WebSTAR (8/95)

Revised: 8/17/95
Security: Everyone

Internet Server For WWW: About WebSTAR (8/95)

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Article Created: 17 August 1995

TOPIC -----

This article provides information about WebSTAR a product of StarNine Technologies which is included on the Apple Internet Server For WWW.

DISCUSSION -----

WebSTAR is an HTTP server that lets you publish hypertext and multimedia documents to millions of World Wide Web (WWW) users around the world, right from your Macintosh computer. You can use WebSTAR to put any Macintosh file on the Web, including GIF and JPG images and even QuickTime' movies.

WebSTAR is completely compatible with all WWW clients, on any platform, including Mosaic', which started the Web revolution, and Netscape Navigator', the most popular Web client available today. WebSTAR is also fully compatible with any HTML (HyperText Markup Language) files you may have already developed. Just copy them onto your WebSTAR server Macintosh and you're set.

Through the power of AppleScript' and Apple events, WebSTAR can communicate with other applications on your Macintosh to publish any information contained in those programs. For example, if your company information is in a FileMaker" Pro database, Web client users can query it via HTML forms to get the data using the FileMaker CGI (Common Gateway Interface) for WebSTAR. It's powerful and easy to use.

StarNine also offers several add-on products for WebSTAR, including the Security Toolkit and the Commerce Toolkit. The Security Toolkit provides authentication and encryption capabilities for the WebSTAR server using the Secure Sockets Layer protocol to ensure that connections between Web clients and WebSTAR are completely private. The Commerce Toolkit adds support for commercial transactions via the First Virtual Internet Payment System'. Internet customers simply connect to the server and fill in an online order form. First Virtual automatically verifies the buyer and then notifies WebSTAR to complete the transaction. It's completely secure and reliable, and requires no additional

hardware or software. Other Internet payment schemes, including credit card transaction processing, will be supported in future releases.

WebSTAR comes with everything you need to create a killer Web site on any Macintosh. The WebSTAR CD-ROM Pack includes FTP and Gopher servers for sharing files across the Internet as well as a free evaluation copy of StarNine's ListSTAR, a companion product to WebSTAR that lets you create automated mailing lists (Listservers) and Email-On-Demand systems on the Internet. Sample AppleScripts and CGIs to connect WebSTAR with external applications are also included, and we've provided an online copy of WebMaster Macintosh, by Bob Levitus and Jeff Evans, the definitive reference for Macintosh Web site developers.

Some History

WebSTAR started out as MacHTTP, which has been widely used on the Web for several years. WebSTAR includes these long-standing features, which will be familiar to users of MacHTTP:

- Allows you to serve information to all WWW clients that support the HTTP/1.0 standard.
- Handles URL requests for text and binary documents, for example, for HTML (HyperText Markup Language) documents as well as GIF, JPEG, and other binary format files.
- Can execute AppleScripts and CGI applications, and can link to other external applications (such as FileMaker Pro, AppleSearch, or HyperCard") and return results to clients.
- Allows you to control access to the server by clients' domain name or IP address.
- Supports complete user name/password security for all files it serves.
- PowerPC native server.

Additional Information Resources

- To access the WebSTAR Home Page

The WebSTAR Home Page provides information about tools that work with WebSTAR, additional examples, product update information, and the latest versions of WebSTAR. To access the WebSTAR Home Page, use a WWW client to connect to the following URL:

<http://www.starnine.com/webstar.html>

- For MacTCP configuration

If you need to configure MacTCP, see the MacTCP Administrator's Guide. This document is included on the WebSTAR CD-ROM. Or, to access it on the World Wide Web, see the WebSTAR Home Page.

- For a complete reference on creating your Web site

See WebMaster Macintosh, by Bob Levitus and Jeff Evans, for a detailed information about creating your Web site. This document is included on the WebSTAR CD-ROM. Or, to access it on the World Wide Web, see the WebSTAR Home Page.

- For information about URLs

See the URL Primer, available from at this Web site:

<http://www.ncsa.uiuc.edu/demoweb/url-primer.html>

- For information about writing HTML documents

See the HTML Primer, available at this site:

<http://www.ncsa.uiuc.edu/demoweb/html-primer.html>

- For details about the Common Gateway Interface Standard

See the CGI overview, available at this site:

<http://hoohoo.ncsa.uiuc.edu/cgi/overview.html>

- For AppleScript tutorials

For information about writing AppleScripts and CGI applications for WebSTAR, see the Tutorials folder. This folder is included on the WebSTAR CD-ROM. Or, to access it on the World Wide Web, see the WebSTAR Home Page.

- For an ongoing discussion of WebSTAR issues

See the WebSTAR Home Page for details about how to subscribe to the following very active mailing list, which is dedicated to WebSTAR:

machttp

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18403



Tech Info Library

Apple Media Tool: Cross-Platform Issues W/ Corrupt Desktop 8/95

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Cross-Platform Issues W/ Corrupt Desktop 8/95

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Article Created: 17 August 1995

TOPIC -----

I am having two problems with the Apple Media Tool. First, when I drop media onto the Cross-Platform Check applet, the icon does not highlight.

The second problem I am having is that the Cross-Platform Check session log reports errors that are not applicable to the type of media I am using. For example, the session log reports that a PICT file needs a .MOV file extension and it is in the wrong format.

DISCUSSION -----

Both problems are caused by corrupt desktop files. You need to disable Macintosh Easy Open and rebuild your desktop file. Apple Media Tool is incompatible with Macintosh Easy Open, so do not use them together.

Support Information Services

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Tech Info Library Article Number:18404



Tech Info Library

Apple Media Tool: Dissolve Effects Require 256 colors (8/95)

Revised: 8/24/95
Security: Everyone

Apple Media Tool: Dissolve Effects Require 256 colors (8/95)

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Article Created: 17 August 1995
Article Reviewed/Updated: 24 August 1995

TOPIC -----

When working in an Apple Media Tool project, I cannot get the dissolve effect to work. Why?

DISCUSSION -----

In order to use the dissolve effect you must set both the project and your monitor to 256 colors. If you set the project to 256 colors, but your monitor is set to thousands or millions of colors, your projects work, but without the dissolve effects.

A 256-color project runs correctly after being compiled as a runtime because the runtime automatically switches the monitor to the correct settings. Runtime projects created with thousands or millions of colors will not display dissolve effects.

Changing Color Depth On A New Project

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Apple Media Tool

To change your project to a different color depth

- 1) Choose Preferences from the File menu
- 2) From the hierarchical menu choose Screen

Monitors Control Panel

To change your monitor to a different color depth

- 1) Open your Monitors control panel

- 2) Select the number of colors or grays you want
- 3) Close the Monitors control panel

Changing Color Depth On An Existing Project

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- 1) Create a New Project by choosing New from the File menu.
- 2) Set the preferences to the required settings
 - a) Choose Preferences from the File menu
 - b) From the hierachical menu choose Screen
- 3) Open the original project and choose Select All from the Edit menu
- 4) Choose Copy from the Edit menu
- 5) Switch to the Map window of the new project and Choose Paste from the Edit menu.

Article Change History:

24 Aug 1995 - Added how to change color depth on an existing project.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18405



Tech Info Library

Apple Media Tool: Project Won't Run on PowerBook (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Project Won't Run on PowerBook (8/95)

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Article Created: 17 August 1995

TOPIC -----

I created a project in Apple Media Tool to run on a PowerBook 540c. The screen preferences are set to 640x400 pixels, and the PowerBook is set to thousands of colors, but when I run the projects I get an error message saying that I need a larger monitor, or a monitor that supports thousands of colors.

DISCUSSION -----

Some PowerBooks actually have a vertical resolution of only 399 pixels instead of 400. In these cases, a 640x400 project will not run. To correct this, the project must be created or altered for a vertical resolution of 399 pixels.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18406



Tech Info Library

Apple Media Tool: ISO 9660 Format CD Won't Play Runtime (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: ISO 9660 Format CD Won't Play Runtime (8/95)

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Article Created: 17 August 1995

TOPIC -----

I have a project created in Apple Media Tool, that works properly on the Macintosh, but after placing it on an ISO 9660 formatted Compact Disc, the project reports that it cannot locate certain files. All files are present and appear in the Media folder when viewed in the Finder.

DISCUSSION -----

The ISO 9660 file specification requires files to have a name of eight characters or less, plus a three-letter file extension. If you omit the file extension, the ISO 9660 requirement is not met and the Apple Media Tool runtime will not be able to locate the files.

Support Information Services

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Tech Info Library Article Number:18407



Tech Info Library

Apple Media Tool: Runtime Maker Fails To Compile (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Runtime Maker Fails To Compile (8/95)

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Article Created: 17 August 1995

TOPIC -----

I created a project in the Apple Media Tool and tried to compile it for both the Macintosh and MS Windows by clicking the appropriate checkboxes in the Runtime Maker. In some cases, the Runtime Maker fails to compile. In other cases, the finished runtime does not work. Why?

DISCUSSION -----

You should not compile a runtime for both the Macintosh and MS Windows at the same time. Create a runtime for one platform, then create the runtime for the other platform.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18408



Tech Info Library

Apple Media Tool: Runtime Doesn't Reset Display Depth (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Runtime Doesn't Reset Display Depth (8/95)

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Article Created: 17 August 1995

TOPIC -----

The display settings have changed after running a program created with the Apple Media Tool. Is there a way to have the display settings switched back their original state?

DISCUSSION -----

Runtime applications created by the Apple Media Tool automatically switch monitor settings to the color depth specified in the runtime. However, it does not switch them back to the original settings after quitting the runtime, so you must switch them back manually.

Support Information Services

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Tech Info Library Article Number:18409



Tech Info Library

Apple Media Tool: Project Fails to Compile or Run (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Project Fails to Compile or Run (8/95)

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Article Created: 17 August 1995

TOPIC -----

I am having two problems with the Apple Media Tool. First, a project created in Apple Media Tool and saved as text will not compile using the runtime maker. Various errors occur, usually indicating an out-of-memory condition. Other times, a project created in Apple Media Tool and compiled with the Runtime Maker will not run. It quits immediately after opening.

DISCUSSION -----

The project may be too large to compile without the use of the Apple Media Tool Programming Environment. First try standard troubleshooting techniques, including:

- 1) Turn off all extensions except for QuickTime (and QuickTime Power Plug if using a Power Macintosh)
- 2) Remove, then reinstall the Apple Media Tool and Runtime Maker.
- 3) Allocate more memory to the Runtime Maker Application. It is not recommended to use virtual memory.

If none of the above methods correct the problem, check how many screens and media elements are contained in the project. If there are more than 200 screens and/or more than 1000 media elements, your project may be too large for the Runtime Maker to compile. These numbers are not "fixed", and may vary depending on the individual project.

The workaround is to decrease the number of screens or media elements used in the project.

The Apple Media Tool Programming Environment provides the ability to compile larger projects. The Apple Media Tool Programming Environment is available from APDA.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18411



Tech Info Library

Apple Media Tool: Tips for Reducing Project Sizes (8/95)

Revised: 8/17/95
Security: Everyone

Apple Media Tool: Tips for Reducing Project Sizes (8/95)

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Article Created: 17 August 1995

TOPIC -----

This article provides tips for reducing the size of Apple Media Tool project sizes. It also provides information that helps decrease the problems you may experience during compiling because of the number of screens or media elements in a project.

DISCUSSION -----

To reduce the number of screens, you should try combining the contents of two screens onto one. You can then use the Hide and Show commands to control which objects are visible and which are hidden.

Examples

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To reduce two screens to one, select the contents of the second screen, copy them to the clipboard, then paste them onto the first screen.

Use the Hide Itself command under the Before Display action to hide all of the second screen objects.

Change the action that previously linked to the second screen to instead show the "second screen" contents while simultaneously hiding the "first screen" contents.

Here is what the original two screen project might look like.

Begin_Table

Screen	Object	Action	Command/Link
-----	-----	-----	-----
1	Picture1.PIC	Before Display	Disable Itself Show Itself

	Button.PIC	Before Display	Enable Itself Show Itself
		Mouse Up	Go to Screen 2
2	Picture2.PIC	Before Display	Disable Itself Show Itself

Here is what the combined screen project might look like.

Screen	Object	Action	Command/Link
-----	-----	-----	-----
1	Picture1.PIC	Before Display	Disable Itself Show Itself
	Picture2.PIC	Before Display	Disable Itself Hide Itself
	Button.PIC	Before Display Mouse Up	Enable Itself Show Itself Show Picture2.PIC Hide Picture1.PIC Hide Itself

End_Table

To reduce the number of media elements, you may want to try combining two PICT files of the same size into one two-frame QuickTime movie. The two frames can be addressed individually by using the "Go To Beginning" and "Go To End" commands.

Here is what the original two-PICT screen might look like.

Begin_Table

Object	Action	Command/Link
-----	-----	-----
Picture1.PIC	Before Display	Disable Itself Show Itself
Picture2.PIC	Before Display	Disable Itself Hide Itself
Button.PIC	Before Display Mouse Up	Enable Itself Show Itself Show Picture2.PIC Hide Picture1.PIC

Here is what the same screen might look like after combining the two PICT files into a two-frame QuickTime movie.

Object	Action	Command/Link
-----	-----	-----

Movie.MOV	Before Display	Disable Itself
		Go To Beginning of Itself
		Show Itself
Button.PIC	Before Display	Enable Itself
		Show Itself
	Mouse Up	Go To End of Movie.MOV

End_Table

NOTE: When consolidating screens, it is important to remember that increasing the number of media elements on a screen slows the overall performance of a project, so it is recommended that no more than two screens be combined into one.

By combining these two techniques, you can potentially reduce the number of screens and PICT media elements by as much as one half.

Support Information Services

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Tech Info Library Article Number:18412



Tech Info Library

Sound Manager 3.1: Improves Power Macintosh Sound (1/96)

Revised: 1/26/96
Security: Everyone

Sound Manager 3.1: Improves Power Macintosh Sound (1/96)

Article Created: 17 August 1995
Article Reviewed/Updated: 26 January 1996

TOPIC -----

Will I notice any improvement in the sound performance on my Power Macintosh computer after upgrading to Sound Manager v3.1?

DISCUSSION -----

The following table shows the real time usage of the central processor on a Power Macintosh 6100/60 computer under various test cases playing a single sound. The percentage refers to how much of the processor's time is spent executing the code to play the sound in the given case. This compares the emulated 68040 processor code of the previous Sound Manager with the new fully native PowerPC code of Sound Manager 3.1 software.

You can expect the new Sound Manager to perform 4-6 times faster on your Power Macintosh computer. The sound input interrupt handler was also optimized, and you can expect it to be 7-9 times faster.

Begin_Table

PowerMac 6100/60 -----	Emulated 68k -----	Native PowerPC* -----
8bit, mono	5%	1.6%
8bit, mono, w/sample rate conversion	12%	2.2%
16bit, stereo	13%	1.9%
16bit, stereo, w/sample rate conversion	26%	2.3%
16bit, stereo, w/sample rate conversion, IMA	41%	6.6%

* Overall performance may be affected by other extensions or control panels.

End_Table

Article Change History:

..TIL18413-Sound_Manager_3-1-Improves_Power_Macintosh_Sound_1-96_(TA34285).pdf

26 Jan 1996 - Clarified what the percentages are indicating.

04 Jan 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18413



Tech Info Library

At Ease 3.0: Shut Down from Login Panel Hangs (2/96)

Revised: 2/27/96
Security: Everyone

At Ease 3.0: Shut Down from Login Panel Hangs (2/96)

=====

Article Created: 18 August 1995
Article Reviewed/Updated: 5 January 1996

TOPIC -----

I am experiencing a problem with my At Ease for Workgroups 3.0 lab. When I click the Shut Down button in the At Ease login panel, the pane disappears and the only items on my screen are the spinning cursor and menu bar. The spinning cursor continues until I either turn the power to the computer off or disconnect the workstation from the AppleShare 4.1 server.

This problem occurs on any workstation that is the first to try to shut down from this login panel. While the cursor is spinning, all other computers on the At Ease 3.0 network can shutdown from this panel without any problem. If I interrupt the spinning cursor, the next machine that I try to shut down from the login pane exhibits the same thing.

I can shut down from the Finder or the At Ease panels without any problems.

DISCUSSION -----

If you click the Shut Down button on the At Ease login pane while there is an active connection to the file server, the computer hangs with a spinning cursor. If you are disconnected from the server, the At Ease machine completes its shutdown. This occurs on both LocalTalk and Ethernet networks.

This problem only occurs when AppleShare Workstation (client) version 3.6 or 3.6.1 is installed on the client At Ease 3.0 computer.

This problem has been fixed in At Ease for Workgroups 3.0.1. The At Ease for Workgroups Updater 3.0.1 is available from online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple

software updates.

- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

27 Feb 1996 - Minor typographical corrections.

05 Jan 1996 - Added fix availability information.

28 Nov 1995 - Added AppleShare Workstation 3.6.1 information.

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Tech Info Library Article Number:18416



Tech Info Library

Plaintalk 1.4.1: AppleScript for Universal Quit (8/95)

Revised: 8/29/95
Security: Everyone

Plaintalk 1.4.1: AppleScript for "Universal Quit" (8/95)

Article Created: 18 August 1995
Article Reviewed/Updated: 29 August 1995

TOPIC -----

Is it possible to create a universal "Quit" (like Close Window) for any application?

DISCUSSION -----

A first attempt at an AppleScript to quit an application is as simple as the following:

```
tell application "Finder"
    set AppName to name of every process whose frontmost is true
end tell
tell application AppName to quit
```

Call it "Quit Application", since speech recognition seems to be able to better discern things that are more than one syllable.

This worked fine for most cases. Other cases to handle are desk accessories (not scriptable at all), old applications that do not support the core AppleEvents and the Finder itself. This involved more checking and trapping of errors. Instead of putting up dialogs to display error messages, these additional lines of code will cause the Macintosh to speak the error messages in response to a spoken command.

Begin_Table

By adding more error checking, the script evolved into:

```
property SpeakErrs : true -- false => display dialog

try
```

```
set AppScriptable to false
set AppName to "the current process" -- initialize from leftover values
tell application "Finder"
set ProcName to every process whose frontmost is true
if ProcName is not {} then --something other than Finder
set AppName to the name of every process whose frontmost is true
--kinds are "application program", "desk accessory"
set ProcKind to kind of file of every process whose frontmost is true
with timeout of 5 seconds -- sluggish section for unresponsive applications
if ProcKind is "application program" then
set AppScriptable to ¬
    the scriptable of file of every process whose frontmost is true
else
set Msg to "Sorry, cannot quit " & ProcKind & AppName & ¬
    ". It does not support scripting."
end if
end timeout
else
set AppName to "Finder"
set Msg to "You should not quit the Finder."
end if
end tell

-- note: this section operates in the context of the frontmost application
-- in case dialogs are displayed
if AppScriptable then
with timeout of 3 seconds
tell application AppName to quit
end timeout
else
GiveError(Msg)
end if

on error ErrMsg number ErrNmbr
-- - 903 = no PPC port; i.e. not scriptable
-- -2704 = application not scriptable
if ErrNmbr = -903 or ErrNmbr = -2704 then
set Msg to AppName & ¬
    " is not scriptable or does not support the quit AppleEvent."
GiveError(Msg)
else
log ("Error " & ErrNmbr & ": " & ErrMsg)
display dialog "Error " & ErrNmbr & ": " & ErrMsg
end if
end try

on GiveError(TheMsg)
if SpeakErrs then
say TheMsg
else
display dialog TheMsg buttons {"OK"} default button 1
end if
end GiveError
```

End_Table

Article Change History:

29 Aug 1995 - Corrected unclear language.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18417



Tech Info Library

Plaintalk 1.4.1: Speakable Items Application Creation (8/95)

Revised: 8/18/95
Security: Everyone

Plaintalk 1.4.1: Speakable Items Application Creation (8/95)

=====

Article Created: 18 August 1995

TOPIC -----

How are the standalone applications in the Speakable Items folder, with the diamond & ear icon, created? Can I create these?

DISCUSSION -----

The little speakable applications with an ear on the icon are custom applications designed for PlainTalk on PowerMac only. They have no code resource that you would find on a 680x0 application. If launched on a 68K machine, they produce a -192 error (resource not found). You could write similar applications in C, C++, or Pascal that make general toolbox calls or send AppleEvents to perform actions.

The "What time is it?" and "What day is it?" applications perform actions that were similar to the QuicKeys functions supplied with previous versions of PlainTalk using the Speech Macro Editor. You could write similar Applets in AppleScript to perform these functions.

The "Tell me a joke" application picks one of 22 different Knock Knock jokes stored internally. A custom application performs faster than a corresponding AppleScript could, doing the same function.

The "Close window" application operates for any application environment, whether the application is scriptable or not. This function could not be performed across all applications using AppleScript.

The "open Speech Introduction" application simply opens the Guide file and could also be performed in AppleScript using the AGStart Scripting addition.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18418



Tech Info Library

The Learning Company (12/96)

Revised: 12/9/96
Security: Everyone

The Learning Company (12/96)

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Article Created: 22 August 1995
Article Reviewed/Updated: 9 December 1996

The Learning Company

One Athenaeum St.
Cambridge, MA 02142
Phone: (423) 670-2020
e-mail: support@learningco.com
web site: <http://www.learningco.com/>

Company Profile:
Software company specializing in educationally oriented children's software like
The Writing Center.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18420



Tech Info Library

Macintosh PowerBook 5300/100: Description (Discontinued)

Revised: 4/28/97
Security: Everyone

Macintosh PowerBook 5300/100: Description (Discontinued)

Article Created: 17 August 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 5300/100 computer.

DISCUSSION -----

Overview
=====

The Macintosh PowerBook 5300/100 provides the high performance of PowerPC processor technology and long battery life at a great price. It is the ideal mobile system for handling word processing, spreadsheets, and communications.

Featuring an advanced 100-megahertz PowerPC 603e processor, the PowerBook 5300/100 lets mobile users experience the true power of desktop computing—all in a system that weighs less than 6 pounds. It provides 16-bit, CD-quality stereo sound, and its full-page-width, passive-matrix display offers high contrast and 16 levels of gray. It also comes with 8-bit color video-out to support external displays. And the power of its RISC processor not only lets the PowerBook 5300/100 handle the most complex tasks easily, but also enables it to run Insignia Solutions SoftWindows emulation software for DOS and Windows compatibility.

Already powerful, the PowerBook 5300/100 is designed to make expansion easy. You can expand the memory to 64 megabytes, or opt for a larger, 10.4-inch active-matrix color display. The PowerBook 5300/100 also features two PC Card slots as well as an expansion bay for third-party solutions—the floppy disk drive can be removed and replaced with an additional hard disk drive, magneto-optical storage device, or internal AC adapter.

Because communication is so vital to mobile users, the PowerBook 5300/100 offers a range of networking and communications capabilities. It features built-in

..TIL18421-Macintosh_PowerBook_5300-100-Description_Discontinued.pdf

infrared technology for easy file sharing without cable connections or time-consuming set-up. Through its PC Card slots, you can add a wired or wireless modem, storage, or Ethernet networking capability.

With its combination of high performance, expandability, and affordability, the PowerBook 5300/100 is the ideal choice.

Features

=====

High Performance

- Uses a 100-MHz PowerPC 603e processor
- Includes a high-capacity internal 500 MB hard disk drive
- Runs thousands of Mac OS applications and hundreds of applications optimized for Power Macintosh Innovative design
- Provides a 9.5-inch (diagonal), backlit, passive-matrix, gray-scale display with 16 levels of gray
- Features PC Card slots and an expansion bay, for flexibility and expandability
- Comes with an integrated Apple trackpad, full-size keyboard, and integrated palm rest
- Uses a long-lasting Nickel-Metal-Hydrate (NiMH) battery

Easy And Versatile Communications Capabilities

- Provides built-in infrared technology for easy file sharing -- no cables necessary
- Lets you add a wired or wireless modem or Ethernet networking capabilities through PC Card slots
- Comes with a range of communications software to keep you connected

Multimedia Support

- Comes with 8-bit color video-out, upgradable to greater bit depths
- Provides built-in speaker; 16-bit, CD-quality stereo line input and sound output; and an integrated microphone
- Includes expansion bay for removable, rewritable media such as a magneto-optical drive
- Includes QuickTime software

Preinstalled Software

- Comes with System 7.5.2
- Provides active assistance in learning new features through Apple Guide
- Comes with the PowerBook Mobility Bundle, software designed to enhance mobile computing

Bundled Software

Each configuration comes with the PowerBook Mobility Bundle. The Bundle includes the following components:

- PowerTalk 1.0
- Macintosh PC Exchange
- Macintosh Easy Open
- Apple Remote Access
- PowerBook Control Strip
- Floppy Disk Maker
- Disk Image Mounter
- Password Protection Software
- Eric's Ultimate Solitaire Sample
- Spin Doctor
- Super Maze Wars
- PowerBook Demo

What's In The Box

The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 5300 computer
- Macintosh PowerBook 5300 User's Guide
- Macintosh PowerBook 5300 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Expansion Bay PC Card Storage Module
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog

Ordering Information

=====

Macintosh PowerBook 5300/100 8/500

- PowerBook 5300/100 computer with 8 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 500 MB hard disk drive, NiMH battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
- Order No. M3135LL/A

Macintosh PowerBook Power Adapter

- Order No. M3747LL/A

Macintosh PowerBook 8 MB RAM Expansion Card

-
- Order No. M3750LL/A

Macintosh PowerBook 10.4" Active-Matrix Color Display Upgrade Kit

-
- Order No. M3746LL/A

PowerBook Video Adapter Cable

-
- Order No. M3927LL/A

Apple HDI-30 SCSI Disk Adapter

-
- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

-
- Order No. M2538LL/A

Apple Color StyleWriter 2200

-
- Order No. M3474LL/A

Article Change History:

09 Apr 1997 - Removed out dated on line references.

26 Aug 1996 - Changed title.

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Tech Info Library Article Number:18421



Tech Info Library

Macintosh PowerBook 5300/100:Technical Specs (Discontinued)

Revised: 8/26/96
Security: Everyone

Macintosh PowerBook 5300/100:Technical Specs (Discontinued)

=====

Article Created: 18 August 1995
Article Reviewed/Updated: 26 August 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 5300/100 computer.

DISCUSSION -----

Microprocessor

- 100-MHz PowerPC 603e

Memory

- 8 MB of RAM, expandable to 64 MB
(Note: The 8 MB from Apple is soldered onto the logic board. There is one RAM card expansion slot for expanding memory.)

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 500 MB hard disk drive
- Expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive (PC Card storage tray included in box may be inserted into this bay to reduce weight by 0.4 lb.)

Display

- 9.5-in. (diagonal) backlit, passive-matrix display
- Resolution: 640 by 480 pixels with 16 levels of gray

Battery

- Nickel-Metal-Hydride battery provides 2.5 to 4.5 hours of use before recharge
- Battery recharges in 2 hours while computer is shut down or in sleep mode; 4 hours while running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard PC Cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities Expansion bay
- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices (including CD-ROM)
- One power adapter port
- Stereo sound input port
- Stereo sound output port
- Video output port

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in stereo sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone
- Digital-to-analog conversion sampled at 44.1, 22.05, or 11.025 kHz
- 16 bit, audio line-in for recording

Video output

- 8-bit video output port to support external color displays—compatible with most Apple, VGA, and SVGA monitors (upgradable to greater bit depths through third-party solutions)

Security

- Includes a security slot that secures the system, battery, and expansion

bay (requires a third- party accessory)

- Includes password protection software

Keyboard and Apple trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest
- Power button on keyboard
- Solid-state Apple trackpad provides precise cursor control in response to the movement of the user's fingertip over its surface; sensing of movement and acceleration is easily adjustable through a control panel

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

ADB power requirements

- Maximum current draw for all ADB devices: 200 mA

Environmental requirements

- Operating temperature: 41 degrees to 95 degrees F (5 degrees to 35 degrees C)
- Storage temperature: -13 degrees to 140 degrees F (-25 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size and weight

- Height: 2.0 in. (5.1 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 5.9 lb. (2.7 kg)

Article Change History:

26 Aug 1996 - Changed title.

01 Aug 1996 - Added keyword.

04 Oct 1995 - Updated battery information.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18422



Tech Info Library

Retrospect: How To Backup All Duplicate Files (8/95)

Revised: 8/18/95
Security: Everyone

Retrospect: How To Backup All Duplicate Files (8/95)

=====

Article Created: 18 August 1995

TOPIC -----

Customer wants to back up entire drive every day, even if the files are unchanged. Using a "Full" backup works, but it does so by deleting the previous backups that occurred in the storage set.

DISCUSSION -----

The method you want, is to use a single storage set with specific options selected. You should configure Retrospect to do a normal backup to the same storage set every time. Also you should not choose the "Don't match duplicates" option (this is selected by default, be sure to deselect it).

Here are the steps used in an example:

Step 1

Create new script for backing up one file.

Step 2

Run backup the first time. Check the log, the file was backed up.

Step 3

Immediately run backup again and check the log. Since there are no changes, the file was not backed up.

Step 4

Edit the script's options. Select, More Options. Select, Matching. Turn off Don't add duplicates to storage set.

Step 5

Immediately run backup again. Notice the file was backed up, even though no changes were made to the file.

Below is a sample log file:

Begin_Table

```
*      Retrospect version Apple Servers 2.0Ci A/UX
      launch at 7/11/95 6:19 PM

+      Normal Backup using <support> duplicate backup at 7/11/95 6:51 PM
      To StorageSet <support>...

-      7/11/95 6:51:01 PM: Copying Guest
      7/11/95 6:51:10 PM: Comparing Guest
      7/11/95 6:51:11 PM: Execution completed successfully
      Completed: 6 files, 7 KB
      Performance: 0.1 MB/minute (0.1 copy, 0.4 compare)
      Duration: 00:00:10

+      Normal Backup using <support> duplicate backup at 7/11/95 6:51 PM
      To StorageSet <support>...

-      7/11/95 6:51:28 PM: Copying Guest
      7/11/95 6:51:28 PM: no files need to be copied
      7/11/95 6:51:36 PM: Execution completed successfully
      Duration: 00:00:07

+      Normal Backup using <support> duplicate backup at 7/11/95 6:52 PM
      To StorageSet <support>...

-      7/11/95 6:52:27 PM: Copying Guest
      7/11/95 6:52:35 PM: Comparing Guest
      7/11/95 6:52:36 PM: Execution completed successfully
      Completed: 6 files, 7 KB
      Performance: 0.1 MB/minute (0.1 copy, 0.4 compare)
      Duration: 00:00:09
```

End_Table

Support Information Services

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Tech Info Library Article Number:18423



Tech Info Library

Macintosh PowerBook 5300c/100: Description (9/97)

Revised: 4/28/97
Security: Everyone

Macintosh PowerBook 5300c/100: Description (9/97)

Article Created: 17 August 1995
Article Reviewed/Updated: 19 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 5300c/100 computer.

DISCUSSION -----

Overview
=====

The Macintosh PowerBook 5300c/100 provides the high performance of PowerPC processor technology and long battery life in the highest-quality color PowerBook. Its advanced color display makes it ideal for work with graphics or presentations.

Featuring an advanced 100-mega-hertz PowerPC 603e processor, the PowerBook 5300c/100 lets mobile users experience the true power of desktop computing—all in a system that weighs only 6.2 pounds. It provides 16-bit, CD-quality stereo sound and a full-page-width, active-matrix display. The PowerBook 5300c/100 comes in two configurations: one with 512 kilobytes of VRAM, supporting 256 colors; the other with 1 megabyte of VRAM, supporting thousands of colors. It also comes with 8-bit color video-out to support external displays. And the power of its RISC processor not only lets the PowerBook 5300c/100 handle the most complex tasks easily, but also enables it to run Insignia Solutions SoftWindows emulation software for DOS and Windows compatibility.

Already powerful, the PowerBook 5300c/100 is designed to make expansion easy. You can expand the memory to 64 megabytes. The PowerBook 5300c/100 also features two PC Card slots as well as an expansion bay for third-party solutions—the floppy disk drive can be removed and replaced with an additional hard disk drive, magneto-optical storage device, or internal AC adapter.

Because communication is so vital to mobile users, the PowerBook 5300c/100

..TIL18424-Macintosh_PowerBook_5300c-100-Description_9-97.pdf

offers a range of networking and communications capabilities. It features built-in infrared technology for easy file sharing without cable connections or time-consuming setup. Through its PC Card slots, you can add a wired or wireless modem, storage, or Ethernet networking capability.

With its power, expandability, and high-quality color display, the PowerBook 5300c/100 is a portable computer that truly does not compromise on quality.

Features

=====

High Performance

- Uses a 100-MHz 603e processor
- Includes a high-capacity internal 500 MB or 750 MB hard disk drive
- Runs thousands of Mac OS applications and hundreds of applications optimized for Power Macintosh

Innovative Design

- Provides a 10.4-inch (diagonal), backlit, active-matrix, color display with 256 or thousands of colors
- Features PC Card slots and an expansion bay, for flexibility and expandability
- Comes with an integrated Apple trackpad, full-size keyboard, and integrated palm rest
- Uses a long-lasting lithium-ion battery

Easy And Versatile Communications Capabilities

- Provides built-in infrared technology for easy file sharing—no cables necessary
- Lets you add a wired or wireless modem or Ethernet networking capabilities through PC Card slots
- Comes with a range of communications software to keep you connected
- Comes with 8-bit color video-out, upgradable to greater bit depths
- Provides built-in speaker; 16-bit, CD-quality stereo line input and sound output; and an integrated microphone
- Includes expansion bay for removable, rewritable media such as a magneto-optical drive
- Includes QuickTime software

Preinstalled Software

- Comes with System 7.5.2
- Provides active assistance in learning new features through Apple Guide
- Comes with the PowerBook Mobility Bundle, software designed to enhance mobile computing

Bundled Software

Each configuration comes with the PowerBook Mobility Bundle. The Bundle includes

the following components:

- PowerTalk 1.0
- Macintosh PC Exchange
- Macintosh Easy Open
- Apple Remote Access
- PowerBook Control Strip
- Floppy Disk Maker
- Disk Image Mounter
- Password Protection Software
- Eric's Ultimate Solitaire Sample
- Spin Doctor
- Super Maze Wars
- PowerBook Demo

What's In The Box

The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 5300 computer
- Macintosh PowerBook 5300 User's Guide
- Macintosh PowerBook 5300 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Expansion Bay PC Card Storage Module
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog

Ordering Information

=====

PowerBook 5300c/100 8/500 (this configuration was discontinued in 9/96)

- PowerBook 5300c/100 computer with 8 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 500 MB hard disk drive, 512K of VRAM; supports 256 colors, Nickel-Metal-Hydride battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
- Order No. M3133LL/A

PowerBook 5300c/100 16/750

..TIL18424-Macintosh_PowerBook_5300c-100-Description_9-97.pdf

- PowerBook 5300c/100 computer with 16 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 750 MB hard disk drive, 1 MB of VRAM; supports thousands of colors, Nickel-Metal-Hydride battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
- Order No. M4488LL/A

Macintosh PowerBook Power Adapter

- Order No. M3747LL/A

Macintosh PowerBook 8 MB RAM Expansion Card

- Order No. M3750LL/A

PowerBook Video Adapter Cable

- Order No. M3927LL/A

Apple HDI-30 SCSI Disk Adapter

- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

- Order No. M2538LL/A

Apple Color StyleWriter 2200

- Order No. M3474LL/A

Article Change History:

09 Apr 1997 - Removed out dated on line references.

11 Sep 1996 - Added configuration was discontinued information.

04 Oct 1995 - Updated battery information.

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Tech Info Library Article Number:18424



Tech Info Library

A/UX or AWS 95: Starting From Install CD-ROM (8/95)

Revised: 8/18/95
Security: Everyone

A/UX or AWS 95: Starting From Install CD-ROM (8/95)

=====

A/UX or AWS 95: Starting From Install CD-ROM (8/95)
Article Created: 18 August 1995

TOPIC -----

What files and information are needed to boot from the Installation CD-ROM? I would like to configure my MacPartition to boot my installer CD-ROM if necessary. I also want to know how to properly configure my floppy drive.

DISCUSSION -----

The boot floppy used to startup from the CD-ROM is different from your MacPartition in three ways:

- The extensions folder of the system folder contains a file "CD hack"
- The disk level contains a A/UX startup document called "boot_CD"
- The Preferences Booting dialog box in A/UX startup are configured:
 - Automatically boot at startup, is selected.
 - Autorecovery is set for "boot_cd -d" as custom command.
 - Autolaunch is set for shutdown.

NOTE: The A/UX installer startup is slightly different than the A/UX startup application, however, A/UX startup does support booting from CD-ROM.

Support Information Services

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Tech Info Library Article Number:18425



Tech Info Library

PowerTalk: Frequently Asked Questions (11/95)

Revised: 2/13/96
Security: Everyone

PowerTalk: Frequently Asked Questions (11/95)

Article Created: 18 August 1995
Article Reviewed/Updated: 9 November 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about PowerTalk.

Questions in this FAQ

- I just did a Clean Install. What files should be dragged over from the old system to the new one to retain the PowerTalk settings, passwords, and Mail?
- Either through the Key Chain, or initially setting up PowerTalk, I select to search for a PowerShare server where I have an account setup, but it tells me that there are no PowerShare services. I know that the server is up. What is going on?
- There are items in my Out Tray whose status show as "waiting." I need these mailed immediately. What's wrong?
- I forgot my Access Code (keychain password). How can I reset it?
- I cannot find the Mailbox or the Catalogs icon, they are gone. What happened?
- My AppleTalk or PowerShare catalogs are dimmed in the Catalogs window. What is wrong?
- I get a message that the system can no longer access a server on my network. In some cases a Resolve button appears in the notification dialog box. What do I do?
- When I try to open mail or delete mail from the In Tray, a message comes up "The Command can't be completed because it cannot be Found." What is happening?
- How do I recover missing mail?

- How do I use PowerTalk to retrieve mail from other services (Internet, fax, other mail applications)?

DISCUSSION -----

Question: I just did a Clean Install. What files should be dragged over from the old system to the new one to retain the PowerTalk settings, passwords, and Mail?

Answer: Be sure that PowerTalk has been installed on the new System Folder. Drag the PowerTalk Data Folder from the root level of the System Folder, and the PowerTalk Setup and PowerTalk Startup preferences from the Preferences folder to the new System Folder.

Question: Either through the Key Chain, or initially setting up PowerTalk, I select to search for a PowerShare server where I have an account setup, but it tells me that there are no PowerShare services. I know that the server is up. What is going on?

Answer:

- Check to make sure that they are in fact connected to the network.
- Check Network control panel and make sure the Chooser does see at least a LaserWriter Printer or other servers.
- Check that your Date & Time Control Panel is correct (PowerTalk services will not work if your date is reset to 1904)

Question: There are items in my Out Tray whose status show as "waiting." I need these mailed immediately. What's wrong?

Answer: See Question #2 above. When there are problems with the Out Tray, a Problem Alert box will sometimes appear in the upper right corner of the In Tray and or Out Tray window. Selecting the button will bring up the "MailBox Problems" window, describing the problem and also some solutions. There is also a button called Resolve that will attempt to correct the issue.

Question: I forgot my Access Code (keychain password). How can I reset it?

Answer: Follow these steps to reset your password:

Step 1

Turn off collaboration services in the PowerTalk control panel.

Step 2

Throw the two PowerTalk Setup Preferences files in the Preferences folder away.

Step 3

Restart the computer.

Step 4

Double-click on the mailbox to re-define PowerTalk services.

WARNING: All key chain information is lost when you delete the PowerTalk Setup Preferences.

Question: I cannot find the Mailbox or the Catalogs icon, they are gone. What happened?

Answer: PowerTalk may be turned off or the PowerTalk extensions may have been removed from the system folder. Try troubleshooting with the following suggestions:

- Check to see that the PowerTalk Extension and PowerTalk Manager are present in the Extensions Folder.
- Check to see if Extension Manager was used to deactivate the PowerTalk Extension and PowerTalk Manager.
- Go to the PowerTalk Setup Control Panel and make sure it is active.

Question: My AppleTalk or PowerShare catalogs are dimmed in the Catalogs window. What is wrong?

Answer: AppleTalk is inactive. Go to the Chooser and activate AppleTalk.

Question: I get a message that the system can no longer access a server on my network. In some cases a Resolve button appears in the notification dialog box. What do I do?

Answer:

- Click the button to reconnect.
- Check the cable connection on the back of your computer.
- Check that your Date & Time Control Panel is correct (PowerTalk services will not work if your date is reset to 1904)

Question: When I try to open mail or delete mail from the In Tray, the following message appeared, "The Command can't be completed because it cannot be Found." What is happening?

Answer: You have an account on a PowerShare Server, and have two PowerTalk-equipped systems accessing the same account. The mail has been removed

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from the In Tray on one system, yet the In Tray of the other system shows the mail. Two solutions:

- Click "OK" when throwing away the item to remove it from the system.
- See "How to recover missing mail" (question 10) for details. Basically, drag the blank icon(s) from the IPM Bin folder on top of the AppleMail application, and AppleMail will launch and either show the document, or enclose the item that was mailed.

Question: How do I recover missing mail?

Answer: There are two ways to recover the missing mail:

- Look in System Folder:PowerTalk Data:IPM Bin folder path. All of the messages are still there with blank icons and 8-digit file names. You can simply drag the files over the AppleMail application and they will launch and display your messages, attachments included. You can also open the files within AppleMail, and do a Save As to restore the original type and creator so the files are double-click able AppleMail documents again. Although untested, this procedure should apply to messages created by other PowerTalk applications.
- Change the file type and creator of the files with the 8-digit file names found in System Folder:PowerTalk Data:IPM Bin using a file utility such as FileType, Disk Top or ResEdit. Original type: ltr and creator:lap2. Then move the files out of "IPM Bin", and open them with AppleMail (or appropriate mail application). NOTE: Disk and resource editors are not supported by Ask Apple or 800-SOS-APPL.

Question: How do I use PowerTalk to retrieve mail from other services (Internet, fax, other mail applications)?

Answer: You need a PSAM. PSAM stands for Personal Message Access Module. These are extensions that offer connections to other mail services, such as QuickMail and Internet gateways. To the PowerTalk user, the MailBox metaphor remains the same but data is seamlessly passed to other services. Two examples of PSAMs would be StarNine's Mail*Link for PowerTalk/QM and Mail*Link for PowerTalk/MS

Article Change History:

09 Nov 1995 - Change article title.

Support Information Services

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Tech Info Library Article Number:18426



Tech Info Library

AppleCD 600i: Compatible Macintosh Models (6/96)

Revised: 6/27/96
Security: Everyone

AppleCD 600i: Compatible Macintosh Models (6/96)

Article Created: 18 August 1995
Article Reviewed/Updated: 27 June 1996

TOPIC -----

Which computers can use the AppleCD 600 CD-ROM drive?

DISCUSSION -----

Apple has tested the AppleCD 600 quad-speed drive with all Macintosh computers currently shipping and many older Macintosh computers. Apple is supporting the AppleCD 600 CD-ROM drives on Macintosh computers with 25 MHz 68030 processors or faster, with the exception of the Macintosh IIfx.* Slower computers may still work with the AppleCD 600, but are not supported based on our current information.

Several Macintosh computers ship with the AppleCD 600i already installed, including:

- Power Macintosh 5400/120
- Power Macintosh 7200 series
- Power Macintosh 7500 series
- Power Macintosh 7600 series
- Power Macintosh 8500 series
- Power Macintosh 9500 series
- Power Macintosh 5300/100 LC
- Macintosh Performa 5300
- Macintosh 5200 series**
- Macintosh Performa 6200 series**
- Macintosh Performa 6300, 6290, 6320

The AppleCD 600i internal upgrade kit (M4070LL/A) is available and can be installed using the same mounting brackets as the AppleCD 300i.

*NOTE: This computer listing does not include these Macintosh models: 128k, 512k, 512ke, Plus, SE, SE FDHD, Classic, Classic II, Mac II, IIfx, IIfx, SE/30, LC, LC II, IIsi, Portable, Portable Backlit, PowerBook 100, PowerBook 140, Color

Classic.

****Note:**The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

Article Change History:

27 Jun 1996 - Added additional computers.

08 Jan 1996 - Updated information.

22 Aug 1995 - Updated for grammatical changes

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Tech Info Library Article Number:18427



Tech Info Library

Macintosh PowerBook 5300c/100:Technical Specifications (9/96)

Revised: 9/11/96
Security: Everyone

Macintosh PowerBook 5300c/100:Technical Specifications (9/96)

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Article Created: 18 August 1995
Article Reviewed/Updated: 11 September 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 5300c/100 computer.

DISCUSSION -----

Microprocessor

- 100-MHz PowerPC 603e

Memory

- 8 MB* or 16 MB of RAM, expandable to 64 MB
[Note: The 8 MB or 16 MB (depending on the model) from Apple is soldered onto the logic board. There is one RAM card expansion slot for expanding memory.]

NOTE:

- * The PowerBook 5300c/8/500 configuration was discontinued in 9/96.

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 500 MB** or 750 MB hard disk drive
- Expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive (PC Card storage tray included in box may be inserted into this bay to reduce weight by 0.4 lb.)

NOTE:

- ** The PowerBook 5300c/8/500 configuration was discontinued in 9/96.

Display

- 10.4-in. (diagonal), backlit, active-matrix, color display
- Resolution: 640 by 480 pixels
- Comes in two configurations: one with 512K of VRAM, supporting 256 colors; the other with 1 MB of VRAM, supporting thousands of colors
- Black matrix screen reduces glare, clearly defines colors, and improves contrast

Battery

- Nickel-Metal-Hydride battery provides 2.5 - 4 hours of use before recharge
- Battery recharges in 2 hours while computer is shut down or in sleep mode; 4 hours while running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities Expansion bay
- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices (including CD-ROM)
- One power adapter port
- Stereo sound input port
- Stereo sound output port
- Video output port

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in Stereo Sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone
- Digital-to-analog conversion sampled at 44.1, 22.05, or 11.025 kHz
- 16 bit, audio line-in for recording

Video Output

- 8-bit video output port to support external color displays—compatible with most Apple, VGA, and SVGA monitors (upgradable to greater bit depths through third-party solutions)

Security

- Includes a security slot that secures the system, battery, and expansion bay (requires a third-party accessory)
- Includes password protection software

Keyboard and Apple trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest
- Power button on keyboard
- Solid-state Apple trackpad provides precise cursor control in response to the movement of the user's fingertip over its surface; sensing of movement and acceleration is easily adjustable through a control panel

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

ADB power requirements

- Maximum current draw for all ADB devices: 200 mA

Environmental requirements

- Operating temperature: 41 degrees to 95 degrees F (5 degrees to 35 degrees C)
- Storage temperature: -13 degrees to 140 degrees F (-25 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size and weight

- Height: 2.2 in. (5.3 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 6.2 lb. (2.8 kg)

Article Change History:

01 Aug 1996 - Added keyword.

04 Oct 1995 - Updated battery information.

25 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18428



Tech Info Library

Color LaserWriter 12/600 PS: How to Clean Up Fuser Oil (10/96)

Revised: 10/23/96
Security: Everyone

Color LaserWriter 12/600 PS: How to Clean Up Fuser Oil (10/96)

Article Created: 18 August 1995
Article Reviewed/Updated: 28 June 1996

TOPIC -----

What should I use to clean fuser oil that has spilled onto my Color LaserWriter 12/600 PS?

DISCUSSION -----

The Color Laserwriter 12/600 PS and Color LaserWriter 12/660 PS printers uses a silicone based oil that can easily be cleaned up from the exterior plastic case using a lint free cloth and a mild non-abrasive household cleaner/degreaser such as Fantastik™ or 409™. Spray a small amount of the cleaner onto the cloth and wipe the plastic case. Do not allow any cleaning solution to enter into the printer.

Oil that has spilled onto the photoconductor, transfer drum, or paper feed rollers can be cleaned by printing on lint free paper until all of the oil is absorbed. Usually anywhere from 5-50 sheets of paper will remove the oil. Do not use ammonia-based or alcohol based cleaners on or near the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printers.

To prevent damage to the photoconductor, do not touch or use any cleaning materials on the delicate gray roller that is the photoconducting surface. The photoconductor may be damaged from scratches or contamination due to oil or fingerprints. Image quality defects in the printed output may result with areas of light print, scratches or banding that repeat vertically down the page every 5.07" (129mm). The defects are typically visible in areas that have toner applied to them.

For other issues concerning fuser oil used on the Color LaserWriter 12/600 PS, refer to "Color LaserWriter 12/600 PS: Fuser Oil Pump Error" and "Color LaserWriter 12/600 PS: Reducing Oil on Paper."

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS information.

28 Jun 1996 - Revised cleaning instructions.

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Tech Info Library Article Number:18430



Tech Info Library

Color LaserWriter 12/600: No Support for Envelopes (8/95)

Revised: 8/18/95
Security: Everyone

Color LaserWriter 12/600: No Support for Envelopes (8/95)

Article Created: 18 August 1995

TOPIC -----

Can I print envelopes on my Color LaserWriter 12/600 PS printer?

DISCUSSION -----

Apple does not support the printing of envelopes or labels on the Color LaserWriter 12/600 PS printer. On page 203 of the Color LaserWriter 12/600 PS User's Guide, it states that doing so could cause damage to the printer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18431



Tech Info Library

Printing Envelopes with Laserwriters (8/95)

Revised: 8/18/95
Security: Everyone

Printing Envelopes with Laserwriters (8/95)

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Article Created: 18 August 1995

TOPIC -----

The following article discusses the printing of envelopes on Apple's LaserWriter printers.

DISCUSSION -----

LaserWriter and LaserWriter Plus

Place the long, top edge of the envelope face up against the right side of the manual feed guide.

Personal LaserWriter 300, 320, 4/600 PS

Align the envelope along the left edge of the manual feed tray. Insert the envelope lengthwise, face up.

Personal LaserWriter NT, NTR, NTX, LS, SC

When using the cassette, move paper guide in from the 8-1/2 x 11 inch position. The cassette can handle up to 15 envelopes. Insert the envelopes face up. When using the manual feed, adjust the guide on the manual feed tray so the envelope will feed on the right side of tray. Insert the paper lengthwise, face up.

LaserWriter II

For all LaserWriter II printers, use the manual feed guides to adjust to the size of the envelope. The guides will center envelopes in the manual feed tray. Insert the envelope lengthwise, face up. An optional envelope feeder is available.

LaserWriter Selects

Use the guides to center the envelope on the manual feed tray. Insert envelope

lengthwise, face down.

LaserWriter Pro 600, 630

Adjust guide on the multipurpose tray to fit the envelope. Insert the envelope lengthwise, face up. The envelope will feed on the left side of the tray. An optional envelope feeder is available.

LaserWriter Pro 810

Adjust guides on multipurpose tray (located on the back of the printer) to fit the envelope. Insert paper lengthwise, face up. A Power Feeder, which can feed envelopes, is available.

LaserWriter 16/600PS

Adjust guide on the multipurpose tray to fit envelope. Insert envelope lengthwise, face up. The envelope will feed on the left side of tray. An optional envelope feeder is available.

Color LaserWriter 12/600PS

Use of envelopes are not supported on this printer.

Support Information Services

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Tech Info Library Article Number:18432



Tech Info Library

Macintosh PowerBook 5300ce/117: Description (4/97)

Revised: 5/2/97
Security: Everyone

Macintosh PowerBook 5300ce/117: Description (4/97)

Article Created: 21 August 1995
Article Reviewed/Updated: 2 May 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 5300ce/117 computer.

DISCUSSION -----

Overview
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The Macintosh PowerBook 5300ce/117 provides the high performance of PowerPC processor technology and long battery life in the highest-quality, highest-resolution, color PowerBook system available. Its exceptional power, 32 megabytes of memory, high-capacity 1.1-gigabyte, hard disk drive, and advanced SVGA display capability make it the ultimate PowerBook.

Featuring an advanced 117-megahertz PowerPC 603e processor, this PowerBook lets mobile users experience the true power of desktop computing—all in a system that weighs only 6.2 pounds. It provides 16-bit, CD-quality stereo sound, and its large, active-matrix, SVGA display supports thousands of bright, vivid colors and provides 800 by 600 resolution—a larger viewing area than that of standard displays. And the power of its RISC processor not only lets the PowerBook 5300ce/117 handle the most complex tasks easily, but also enables it to run Insignia Solutions SoftWindows emulation software for DOS and Windows compatibility.

Already powerful, the PowerBook 5300ce/117 is designed to make expansion easy. You can expand the memory to 64 megabytes. The PowerBook 5300ce/117 also features two PC Card slots for additional functionality as well as an expansion bay for third-party solutions -- the floppy disk drive can be removed and replaced with an additional hard disk drive, magneto-optical storage device, or internal AC adapter.

Because communication is so vital to mobile users, the PowerBook 5300ce/117 offers a range of networking and communications options. It features built-in infrared technology for easy file sharing without cable connections or time-consuming setup. Through its PC Card slots, you can add a wired or wireless modem, storage, or Ethernet networking capability.

With its unprecedented power, advanced features, advanced SVGA display, and expandability, the PowerBook 5300ce/117 is truly the answer for mobile users who require high performance for complex tasks and brilliant graphics in a system that can accompany them wherever they go.

Features

=====

Performance

- Uses a 117-MHz PowerPC 603e processor
- Includes a high-capacity internal 1.1 GB hard disk drive
- Runs thousands of Mac OS applications and hundreds of applications optimized for Power Macintosh

Innovative Design

- Provides a 10.4-inch (diagonal), backlit, active-matrix, SVGA color display with thousands of colors
- Features PC Card slots and an expansion bay, for flexibility and expandability
- Comes with an integrated Apple trackpad, full-size keyboard, and integrated palm rest
- Uses a long-lasting Nickel-Metal-Hydrate battery

Easy And Versatile Communications Capabilities

- Provides built-in infrared technology for easy file sharing—no cables necessary
- Lets you add a wired or wireless modem or Ethernet networking capabilities through PC Card slots
- Comes with a range of communications software to keep you connected

Multimedia Support

- Comes with 8-bit color video-out, upgradable to greater bit depths
- Provides a built-in speaker; 16-bit, CD-quality stereo line input and sound output; and an integrated microphone
- Includes an expansion bay for removable, rewritable media such as a magneto-optical drive
- Includes QuickTime software

Preinstalled Software

- Comes with System 7.5
- Provides active assistance in learning new features through Apple Guide

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- Comes with the PowerBook Mobility Bundle, software designed to enhance mobile computing

Bundled Software

Each configuration comes with the PowerBook Mobility Bundle. The Bundle includes the following components:

- PowerTalk 1.0
- Macintosh PC Exchange
- Macintosh Easy Open
- Apple Remote Access
- PowerBook Control Strip
- Floppy Disk Maker
- Disk Image Mounter
- Password Protection Software
- Eric's Ultimate Solitaire Sample
- Spin Doctor
- Super Maze Wars
- PowerBook Demo

What's In The Box

The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 5300 computer
- Macintosh PowerBook 5300 User's Guide
- Macintosh PowerBook 5300 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Expansion Bay PC Card Storage Module
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog

Ordering Information

=====

PowerBook 5300ce/117 32 MB/1.1 GB

• PowerBook 5300ce/117 computer with 32 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 1.1 GB hard disk drive, Nickel-Metal-Hydride battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook

Mobility Bundle, complete setup, learning, and reference documentation, Limited warranty,

- Order No. M3828LL/A

Macintosh PowerBook Power Adapter

- Order No. M3747LL/A

Macintosh PowerBook 8 MB RAM Expansion Card

- Order No. M3750LL/A

PowerBook Video Adapter Cable

- Order No. M3927LL/A

Apple HDI-30 SCSI Disk Adapter

- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

- Order No. M2538LL/A

Apple Color StyleWriter 2200

- Order No. M3474LL/A

Article Change History:

02 May 1997 - Removed out dated on line references.

01 Aug 1996 - Added keyword.

04 Oct 1995 - Updated battery information.

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Tech Info Library Article Number:18433



Tech Info Library

Macintosh PowerBook 5300ce/117:Technical Specifications (8/96)

Revised: 8/1/96
Security: Everyone

Macintosh PowerBook 5300ce/117:Technical Specifications (8/96)

Article Created: 21 August 1995
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 5300ce/117 computer.

DISCUSSION -----

Microprocessor

- 117-MHz PowerPC 603e

Memory

- 32 MB of RAM, expandable to 64 MB
(Note: 16 MB is soldered to the logic board. The other 16 MB is in the one RAM card expansion slot.)

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 1.1 GB hard disk drive
- Expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive (PC Card storage tray included in box may be inserted into this bay to reduce weight by 0.4 lb.)

Display

- 10.4-in. (diagonal), backlit, active-matrix, SVGA color display
- Resolution: 800 by 600 pixels with thousands of colors; 800 by 600 resolution (SVGA) provides a larger viewing area than standard 640 by 480 displays. This means you see more spreadsheet columns, text, and

graphics

- Black matrix screen reduces glare, clearly defines colors, and improves contrast

Battery

- Nickel-Metal-Hydride battery provides 2.5 - 4 hours of use before recharge
- Battery recharges in 2 hours while computer is shut down or in sleep mode; 4 hours while running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities

Expansion bay

- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices (including CD-ROM)
- One power adapter port
- Stereo sound input port
- Stereo sound output port
- Video output port

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in Stereo Sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone
- Digital-to-analog conversion sampled at 44.1, 22.05, or 11.025 kHz
- 16 bit, audio line-in for recording

Video Output

- 8-bit video output port to support external color displays—compatible with most Apple, VGA, and SVGA monitors (upgradable to greater bit depths through third-party solutions)

Security

- Includes a security slot that secures the system, battery, and expansion bay (requires a third- party accessory)
- Includes password protection software

Keyboard and Apple trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest
- Power button on keyboard
- Solid-state Apple trackpad provides precise cursor control in response to the movement of the user's fingertip over its surface; sensing of movement and acceleration is easily adjustable through a control panel

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

ADB power requirements

- Maximum current draw for all ADB devices: 200 mA

Environmental requirements

- Operating temperature: 41 degrees to 95 degrees F (5 degrees to 35 degrees C)
- Storage temperature: -13 degrees to 140 degrees F (-25 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size and weight

- Height: 2.2 in. (5.3 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 6.2 lb. (2.8 kg)

Article Change History:

01 Aug 1996 - Added keyword.

04 Oct 1995 - Updated battery information.

25 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18434



Tech Info Library

Macintosh PowerBook 5300cs/100: Tech Specs (Discontinued)

Revised: 8/1/96
Security: Everyone

Macintosh PowerBook 5300cs/100: Tech Specs (Discontinued)

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Article Created: 21 August 1995
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 5300cs/100 computer.

DISCUSSION -----

Microprocessor

- 100-MHz PowerPC 603e

Memory

- 8 MB or 16 MB of RAM, expandable to 64 MB
[Note: The 8 MB or 16 MB (depending on the model) from Apple is soldered onto the logic board. There is one RAM card expansion slot for expanding memory.]

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 500MB or 750MB hard disk drive
- Expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive (PC Card storage tray included in box may be inserted into this bay to reduce weight by 0.4 lb.)

Display

- 10.4-in. (diagonal) backlit, dual-scan, color display
- Resolution: 640 by 480 pixels with 256 colors

Battery

- Nickel-Metal-Hydride battery provides 2.5 - 4 hours of use before recharge
- Battery recharges in 2 hours while computer is shut down or in sleep mode; 4 hours while running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities

Expansion bay

- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices (including CD-ROM)
- One power adapter port
- Stereo sound input port
- Stereo sound output port
- Video output port

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in Stereo Sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone
- Digital-to-analog conversion sampled at 44.1, 22.05, or 11.025 kHz
- 16 bit, audio line-in for recording

Video Output

- 8-bit video output port to support external color displays—compatible with most Apple, VGA, and SVGA monitors (upgradable to greater bit depths through third-party solutions)

Security

- Includes a security slot that secures the system, battery, and expansion bay (requires a third- party accessory)
- Includes password protection software

Keyboard and Apple trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest
- Power button on keyboard
- Solid-state Apple trackpad provides precise cursor control in response to the movement of the user's fingertip over its surface; sensing of movement and acceleration is easily adjustable through a control panel

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical requirements

- Line voltage: 100 to 240 volts AC
- Frequency: 50 to 60 Hz

ADB power requirements

- Maximum current draw for all ADB devices: 200 mA

Environmental requirements

- Operating temperature: 41 degrees to 95 degrees F (5 degrees to 35 degrees C)
- Storage temperature: -13 degrees to 140 degrees F (-25 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size and weight

- Height: 2.2 in. (5.3 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 6.2 lb. (2.8 kg)

Article Change History:

01 Aug 1996 - Changed title to include Discontinued.
16 May 1996 - Updated RAM information
04 Oct 1995 - Updated battery information.

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Tech Info Library Article Number:18435



Tech Info Library

Macintosh PowerBook 5300cs/100: Description (Discontinued)

Revised: 4/29/97
Security: Everyone

Macintosh PowerBook 5300cs/100: Description (Discontinued)

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Article Created: 21 August 1995
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 5300cs/100 computer.

DISCUSSION -----

Overview
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The Macintosh PowerBook 5300cs/100 provides the performance of PowerPC technology and long battery life in an affordable color notebook system. It is a versatile system, suitable for everything from word processing to desktop publishing.

Featuring an advanced 100-megahertz PowerPC 603e processor, the PowerBook 5300cs/100 lets mobile users experience the true power of desktop computing—all in a system that weighs only 6.2 pounds. It provides 16-bit, CD-quality stereo sound, and its full-page-width, dual-scan display supports 256 bright, vivid colors. It also comes with 8-bit color video-out to support external displays. And the power of its RISC processor not only lets the PowerBook 5300cs/100 handle the most complex tasks easily, but also enables it to run Insignia Solutions SoftWindows emulation software for DOS and Windows compatibility.

Already powerful, the PowerBook 5300cs/100 is designed to make expansion easy. You can expand the memory to 64 megabytes, or opt for an active-matrix display. The PowerBook 5300cs/100 also features two PC Card slots as well as an expansion bay for third-party solutions—the floppy disk drive can be removed and replaced with an additional hard disk drive, magneto-optical storage device, or internal AC adapter.

Because communication is so vital to mobile users, the PowerBook 5300cs/100 offers a range of networking and communications options. It features built-in

infrared technology for easy file sharing without cable connections or time-consuming set-up. Through its PC Card slots, you can add a wired or wireless modem, storage, or Ethernet networking capability.

So if you are looking for an affordable color notebook system with power to spare, look no further than the PowerBook 5300cs/100.

Features

=====

High Performance

- Uses a 100-MHz PowerPC 603e processor
- Includes a high-capacity internal 500 MB or 750 MB hard disk drive
- Runs thousands of Mac OS applications and hundreds of applications optimized for Power Macintosh

Innovative Design

- Provides a 10.4-inch (diagonal), backlit, dual-scan, color display with 256 colors
- Features PC Card slots and an expansion bay, for flexibility and expandability
- Comes with an integrated Apple trackpad, full-size keyboard, and integrated palm rest
- Uses a long-lasting lithium-ion battery

Easy And Versatile Communications Capabilities

- Provides built-in infrared technology for easy file sharing—no cables necessary
- Lets you add a wired or wireless modem or Ethernet networking capabilities through PC Card slots
- Comes with a range of communications software to keep you connected

Multimedia Support

- Comes with 8-bit color video-out, upgradable to greater bit depths
- Provides built-in speaker; 16-bit, CD-quality stereo line input and sound output; and an integrated microphone
- Includes expansion bay for removable, rewritable media such as a magneto-optical drive
- Includes QuickTime software

Preinstalled Software

- Comes with System 7.5
- Provides active assistance in learning new features through Apple Guide
- Comes with the PowerBook Mobility Bundle, software designed to enhance mobile computing

Bundled Software

Each configuration comes with the PowerBook Mobility Bundle. The Bundle includes the following components:

- PowerTalk 1.0
- Macintosh PC Exchange
- Macintosh Easy Open
- Apple Remote Access
- PowerBook Control Strip
- Floppy Disk Maker
- Disk Image Mounter
- Password Protection Software
- Eric's Ultimate Solitaire Sample
- Spin Doctor
- Super Maze Wars
- PowerBook Demo

What's In The Box

The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 5300 computer
- Macintosh PowerBook 5300 User's Guide
- Macintosh PowerBook 5300 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Expansion Bay PC Card Storage Module
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog

Ordering Information

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PowerBook 5300cs/100 8/500

- PowerBook 5300cs/100 computer with 8 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 500 MB hard disk drive, Nickel-Metal-Hydride battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook Mobility Bundle, complete setup, learning, and reference documentation, Limited warranty
- Order No. M3825LL/A

PowerBook 5300cs/100 16/750

- PowerBook 5300cs/100 computer with 16 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 750 MB hard disk drive, Nickel-Metal-Hydride battery and AC adapter, PC Card storage tray, System software version 7.5.2, PowerBook Mobility Bundle, complete setup, learning, and reference documentation, Limited warranty
- Order No. M3824LL/A

Macintosh PowerBook Power Adapter

- Order No. M3747LL/A

Macintosh PowerBook 8 MB RAM Expansion Card

- Order No. M3750LL/A

PowerBook Video Adapter Cable

- Order No. M3927LL/A

Apple HDI-30 SCSI Disk Adapter

- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

- Order No. M2538LL/A

Apple Color StyleWriter 2200

- Order No. M3474LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

- 28 Apr 1997 - Removed out of date on line reference.
- 01 Aug 1996 - Changed title to include Discontinued.
- 05 Oct 1995 - Updated battery information.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18436



Tech Info Library

Power Computing Corporation

Revised: 4/8/97
Security: Everyone

Power Computing Corporation

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Article Created: 21 August 1995
Article Reviewed/Updated: 8 April 1997

Power Computing Corporation

12337 Technology Blvd.
Austin, TX 78727

800-404-7693 (Sales)

512-258-1350 (Main Number)

800-708-6227 (Technical Support)

512-250-3390 (Fax)

Internet email: info@powercc.com

Worldwide Web site (URL): <http://www.powercc.com/>

Company Profile:

Hardware, specializing primarily in computer systems running the licensed MacOS.

Article Change History:

24 Aug 1995 - Added more phone numbers.

Support Information Services

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18437



Tech Info Library

PowerBook PowerPC Upgrades: Descriptions & Specifications (1/96)

Revised: 10/1/96
Security: Everyone

PowerBook PowerPC Upgrades: Descriptions & Specifications (1/96)

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Article Created: 21 August 1995
Article Reviewed/Updated: 30 January 1996

TOPIC -----

This article contains descriptions and technical specifications for the Macintosh PowerBook PowerPC upgrades.

DISCUSSION -----

Overview
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If you're a Macintosh PowerBook owner who wants the advanced capabilities of RISC-based PowerPC processor technology, without sacrificing your previous PowerBook investments, you can upgrade to PowerPC performance. Upgrade kits are now available for many PowerBook and all PowerBook Duo systems. These kits provide the high performance of today's PowerPC processor-based PowerBook computers.

The Macintosh PowerBook Processor Card Upgrade Kit for PowerBook 500 series computers includes 8 megabytes of memory and the advanced PowerPC 603e processor running at 100-megahertz.

For the PowerBook Duo systems as well as for the PowerBook 190 series, the path to PowerPC performance is a complete logic board upgrade. This upgrade also includes 8 megabytes of memory and the advanced PowerPC 603e processor running at 100-megahertz.

These PowerPC upgrades give your computer processor performance equivalent to that of the PowerBook Duo 2300c/100 or the PowerBook 5300c/100.

Installation of either upgrade must be performed by an authorized Apple service provider. Your upgraded computer will retain your existing display, hard disk drive, modem, and memory expansion cards. In addition, the most recent version of the Mac OS—the Macintosh operating system—will be installed on your

computer's hard disk drive.

No matter which upgrade is appropriate for you, your system can continue to use existing accessories such as power adapters, modems, batteries, memory expansion, and docking products. Along with hardware compatibility, you'll also have complete software compatibility: the high performance of the PowerPC processor will enable you to run your existing Macintosh applications, applications optimized for Power Macintosh, and with Insignia Solutions SoftWindows emulation software, even applications for DOS and Windows.

The entire family of upgrades gives you PowerPC processor-based capabilities designed for the future, built on the foundation of the investment you have in your PowerBook today.

PowerPC Upgrade Features

=====

Power And Speed

- Includes PowerPC 603e processor with floating-point coprocessor
- Enables your PowerBook computer to run from two to four times faster than previous PowerBook systems

Compatibility

- Runs hundreds of applications optimized for Power Macintosh
- Runs thousands of existing Mac OS applications
- Runs DOS and Windows applications using Insignia Solutions SoftWindows software

Memory

- Retains existing RAM upgrade cards

Models Upgradable Through Logic Board

- PowerBook 190/66 and 190cs/66
- PowerBook Duo 210, 230, 250, 270c, 280, 280c (all PowerBook Duo systems)

Models Upgradable Through Processor Card

- PowerBook 520, 520c, 540, and 540c

Technical Specifications

=====

PowerBook Duo 200 Series

Macintosh PowerBook Logic Board Upgrade Kit with PowerPC 603e for PowerBook Duo 200 series

- Microprocessor: 100-MHz PowerPC 603e
- Memory: 8 MB of RAM, expandable to 56 MB (existing RAM cards are compatible)
- ROM: 4 MB of ROM (includes emulator)
- ASIC: Bus ASIC from 603e bus to 68030 bus
- Type of upgrade: Logic board
- Installation: Must be installed by an authorized Apple service provider

PowerBook 190 Series

Macintosh PowerBook Logic Board Upgrade Kit with PowerPC 603e for PowerBook 190 series

- Microprocessor: 100-MHz PowerPC 603e
- Memory: 8 MB of RAM, expandable to 40 MB (existing RAM cards are compatible)
- ROM: 4 MB of ROM (includes emulator)
- ASIC: Bus ASIC from 603e bus to 68030 bus
- Type of upgrade: Logic board
- Installation: Must be installed by an authorized Apple service provider

PowerBook 500 Series

Macintosh PowerBook Processor Card Upgrade Kit with PowerPC 603e for PowerBook 500 series

- Microprocessor: 100-MHz PowerPC 603e
- Memory: 8 MB of RAM, expandable to 40 MB (existing RAM cards are compatible)
- ROM: 4 MB of ROM (includes emulator)
- ASIC: Bus ASIC from 603e bus to 68030 bus
- Type of upgrade: Processor card
- Installation: Must be installed by an authorized Apple service provider

(Note: Your PowerPC upgraded PowerBook, for any of the upgrades mentioned here, will retain its original display and hard disk drive.)

Ordering Information

=====

PowerBook Duo 200 series

Macintosh PowerBook Logic Board Upgrade Kit with PowerPC 603e for PowerBook Duo 200 series

- Logic board with 100-MHz PowerPC 603e, 8 MB of RAM, 4 MB of ROM, bus ASIC, and System 7.5.2 installed on the hard disk drive
- Order No. M3171LL/A

PowerBook 190 series

Macintosh PowerBook Logic Board Upgrade Kit with PowerPC 603e for PowerBook 190 series

- Logic board with 100-MHz PowerPC 603e, 8 MB of RAM, 4 MB of ROM, bus ASIC, and System 7.5.2 installed on the hard disk drive
- Order No. M3881LL/A

PowerBook 500 series

Macintosh PowerBook Processor Card Upgrade Kit with PowerPC 603e for PowerBook 500 series

- Processor card with 100-MHz PowerPC 603e, 8 MB of RAM, 4 MB of ROM, bus ASIC, and System 7.5.2 installed on the hard disk drive
- Order No. M3081LL/A

Article Change History:

30 Jan 1996 - Corrected maximum RAM info for PowerBook 500 series upgrade.

25 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18438



Tech Info Library

Apple MessagePad: Password Reset or Removal (8/95)

Revised: 8/21/95
Security: Everyone

Apple MessagePad: Password Reset or Removal (8/95)

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Article Created: 21 August 1995

TOPIC -----

I forgot my Newton password. Is there a way to reset or remove the password?

DISCUSSION -----

The user's guide for earlier versions of the Apple MessagePad stated that the MessagePad could be sent in for service to have the password removed. That is incorrect. There is no supported method for removing or resetting the password and preserving the data and user settings on Apple MessagePads.

The following method, called a hard reset, will remove the password, but will also result in the loss of all user's data and settings:

Step 1

Press and hold down the power switch.

Step 2

Press the reset switch inside the battery compartment.

Step 3

When a warning dialog is presented on the screen, release the power switch.

Step 4

Follow instructions presented by the warning dialog.

All data and user settings, including the password, will be erased. Any System Update installed is NOT erased.

..TIL18439-Apple_MessagePad-Password_Reset_or_Removal_8-95.pdf

For more information, on other reset procedures see "Apple MessagePad: Different Types of Reset" and "Apple MessagePad: How to Reset."

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18439



Tech Info Library

Macintosh PowerBook 190/66: Description (04/97)

Revised: 4/3/97
Security: Everyone

Macintosh PowerBook 190/66: Description (04/97)

Article Created: 21 August 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 190/66 computer.

DISCUSSION -----

Overview
=====

The Macintosh PowerBook 190/66 is the most affordable PowerBook computer, combining the performance of the Motorola 68LC040 processor with the convenience of a compact, light-weight notebook computer. It offers a host of enhanced features, including PC Card slots, an expansion bay, a full-size keyboard, an improved Apple trackpad for increased functionality, and a number of upgrade options.

Featuring an innovative design, the PowerBook 190/66 is both expandable and flexible. It provides an expansion bay for third-party peripherals—the floppy disk drive can be removed and replaced with an additional storage device or an internal AC adapter. Through its PC Card slots, you can add a wired or wireless modem, storage, Ethernet networking, or any of a host of capabilities.

To get you started working right away, the PowerBook 190/66 comes bundled with ClarisWorks integrated productivity software. ClarisWorks combines word processing, spreadsheet, database, graphics, and communications capabilities. In addition, with your PowerBook 190/66, you will receive the PowerBook Mobility Bundle, a preinstalled collection of software that meets the needs of mobile users in the areas of communications, compatibility, power management, security, file transfer, and even entertainment.

Already a powerful and complete system, the PowerBook 190/66 is designed to grow in capabilities as your needs change. If your tasks demand higher performance, you can upgrade your system to PowerPC RISC technology. You can improve the

display capability by upgrading to an active-matrix screen (requires PowerPC upgrade). And you can opt to add infrared technology for easy file sharing, as well as color video-out.

So if you want an affordable, highly capable notebook computer that can take you into the future, the PowerBook 190/66 is the perfect choice.

Features

=====

Innovative New Design

- Uses a 66/33-MHz 68LC040 processor
- Provides a 9.5-in. (diagonal), backlit, passive-matrix, gray-scale display with 16 levels of gray
- Includes a high-capacity internal 500 MB hard disk drive
- Offers stereo sound output capable of driving headphones or external speakers
- Comes with built-in serial and SCSI ports
- Features an improved Apple trackpad for increased functionality, full-size keyboard and integrated palm rest

Expandability

- Includes PC Card slots for two Type I or II PC Cards or one Type III PC Card
- Features an expansion bay for third-party solutions, such as a second hard disk drive, magneto-optical drive, or internal AC adapter

A Complete Solution

- Includes everything you need to be productive -- right out of the box
- Comes with ClarisWorks productivity software
- Includes the PowerBook Mobility Bundle, software designed to enhance mobile computing
- Comes with System 7.5
- Provides active assistance in learning new features through Apple Guide
- Can be upgraded to take advantage of PowerPC processor technology
- Can be upgraded to feature an active-matrix display (requires PowerPC upgrade)
- Can be upgraded to provide easy file sharing through infrared technology
- Can be upgraded to include color video-out capabilities

Bundled Software

=====

The Macintosh PowerBook 190 models ship with Macintosh System Software 7.5.2. Each configuration also comes with the PowerBook Mobility Bundle. The Bundle includes the following components:

PowerBook Mobility Bundle

- PowerTalk 1.0
- Macintosh PC Exchange
- Macintosh Easy Open
- Apple Remote Access
- PowerBook Control Strip
- Floppy Disk Maker
- Disk Image Mounter
- Password Protection Software
- Eric's Ultimate Solitaire Sample
- Spin Doctor
- Super Maze Wars
- PowerBook Demo

Other Third-Party Software

Macintosh PowerBook 190 computers also ship with ClarisWorks 4.0.

What's In The Box

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The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 190 computer
- Macintosh PowerBook 190 User's Guide
- Macintosh PowerBook 190 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog
- ClarisWorks 4 Manual

Ordering Information

=====

PowerBook 190/66 4/500

- PowerBook 190/66 computer with 4MB of RAM, built-in 1.4MB Apple SuperDrive, and internal 500MB hard disk drive, Nickel-Metal-Hydride Battery and AC adapter, System software version 7.5.2, ClarisWorks 4.0 software and

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documentation, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty

- Order No. M3530LL/A

PowerBook 190/66

-
- PowerBook 190/66 computer with 8 MB of RAM, built-in 1.4MB Apple SuperDrive, and internal 500MB hard disk drive, Nickel-Metal-Hydride Battery and AC adapter, System software version 7.5.2, ClarisWorks 4.0 software and documentation, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
 - Order No. M3531LL/A

Macintosh PowerBook Logic Board Upgrade Kit

-
- Order No. M3881LL/A

Macintosh PowerBook 10.4" Active- Matrix Color Display Upgrade Kit

-
- Order No. M3746LL/A

Macintosh PowerBook Infrared Upgrade Kit

-
- Order No. M4071LL/A

Macintosh PowerBook 8-Bit Color Video-Out Upgrade Kit

-
- Order No. M3743LL/A

Macintosh PowerBook Power Adapter

-
- Order No. M3747LL/C

Macintosh PowerBook 8MB RAM Expansion Card

-
- Order No. M3750LL/A

PowerBook Video Adapter Cable

-
- Order No. M3927LL/A

Apple HD-30 SCSI Disk Adapter

-
- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

-
- Order No. M2538LL/A

Article Change History:

02 Apr 1997 - Removed reference to specific online service.
05 Oct 1995 - Updated battery information.

..TIL18440-Macintosh_PowerBook_190-66-Description_04-97.pdf

25 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18440



Tech Info Library

Macintosh: Cross-Platform Client/Server Solutions (1 of 2) 4/97

Revised: 4/3/97
Security: Everyone

Macintosh: Cross-Platform Client/Server Solutions (1 of 2) 4/97

Article Created: 21 August 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contains the Apple World-Wide Market Development Position Paper titled "Cross-Platform Development Tools and Client/Server Solutions Update for Apple Computer's Macintosh." This is part 1 of 2, of version 2.51 of the document.

DISCUSSION -----

Purpose of this Position Paper

This is a working document and it is designed to:

- update Apple Computer's technical field and corporate personnel on the Market Development team's continuing efforts to evangelize important Macintosh-based development tools,
- provide summary information about some of the most frequently asked for tools and solutions, and
- wrap this information in an easily deliverable context; i.e., provide compelling marketing information that helps our customers understand the importance we place on application development technologies.

Because this document provides a summary and assumes a technical audience, no background information is included in each specific section. Rather, the goal of this paper is to update an individual's selected knowledge of a particular technology, tool, or solution. To that end, delivery dates, contact names, and pointers to additional information are provided.

Lastly, this paper does not describe Apple's development tools strategy; rather, its main purpose is to provide information about Apple's actions (successes and pursuits) with regard to development tools. AppleSoft's core tools group has

completed the necessary business planning and discussion in crafting its "Tools Strategy". For more information on the overall tools strategy, contact AppleSoft Developer Tools Product Marketing.

For additional background and information about related client/server and application development tools and topics, consult the following documents:

"Guide to Macintosh Development Tools" Apple Computer, Inc. 1995

Available from:

Apple's World Wide Web Server at: <http://www.info.apple.com/dev>

"Strategy Mosaic: The Future of Development Tools Apple's New Strategy"

by Gregg Williams, Apple Directions Staff Apple Computer, Inc. Aug. 1994

Available from:

Apple Directions from APDA (Contact APDA at 1-800-282-2732)

Developer CD Series (September '94)

"The Macintosh Client/Server Database Development Summary" by Liam Breck

Available from:

World Wide Web at:

<http://www.astro.nwu.edu/lentz/mac/software/csdb-summary.html>

email request to: maccsdb@external.umass.edu

Acknowledgements

=====

Apple WW (World-Wide) Market Development gratefully acknowledges the input and information provided by many areas of Apple, including AppleSoft, Apple Business Systems, and Personal Interactive Electronics in the crafting of this document. Additionally, all of the software providers listed here have delivered product information and input to help position products correctly.

Apple® is absolutely committed to both building its own cross-platform development tools as well as encouraging and supporting third-parties that endeavor to create (Macintosh-based) cross-platform tools. This commitment is supported by five major actions within Apple's product (AppleSoft & Apple Business Systems) and marketing divisions (Apple USA Market Development). These five actions are each discussed separately.

1) A commitment to industry standard APIs & technologies

=====

ODBC v2.1

Apple supports the ODBC client access API as part of its system software offering. Apple has built the Macintosh ODBC client component (driver-manager)

in cooperation with Microsoft and Visigenic. The result of this arrangement is direct Macintosh application access of SQL-based data using the ODBC API. ODBC 2.0 was created for Apple Computer by Visigenic Software, Inc. and features full ODBC 2.1 compatibility, native Power Macintosh performance, and other features such as a cursor library for easier application programming. Any application which utilizes ODBC access may include Apple's driver manager to enable a connectivity solution. The complete ODBC SDK is available via Apple's World Wide Web Server (at apple.com) and on Apple's Mac OS SDK. Re-distribution of the ODBC driver manager is royalty-free. Alternatively, Intersolv provides an ODBC solution for the Macintosh (as well as Windows, OS/2, Unix, and Win NT) that delivers a common cross-platform implementation of this data access API.

DAL

Apple's DAL technology has been licensed to Independence Technologies, Inc. ITI has capably updated, maintained, and improved both the DAL client software as well as many DAL servers. Further, ITI has moved this middleware API to the Windows world - with full support for a Windows client. With a large number of back-end host environments supported, DAL has the strength to serve enterprise customers. ITI is shipping ODBC support for the Mac / DAL client (with its DAL v1.5 product).

MAPI and Microsoft Information Exchange

Apple will support Microsoft's Messaging API through its PowerTalk client and PowerShare server software for Macintosh. Further, an agreement with Microsoft will provide Macintosh messaging and directory service support for Microsoft's Information Exchange. The resulting solution will provide PowerTalk (mail) access to Microsoft mail directories and clients as well as mail-enabled (MAPI) Macintosh applications. MAPI and MIE support for PowerTalk/ PowerShare will be available shortly after Microsoft releases its Information Exchange product.

OLE 2.0 & OpenDoc

Apple's support of the cross-platform component software model, called OpenDoc, enables complete interoperability with Microsoft's OLE 2.0. As part of its commitment to Component Integration Laboratories (the owners of OpenDoc), Apple will deliver OpenDoc functionality for the Macintosh, while WordPerfect will provide OpenDoc for Windows and IBM will deliver OpenDoc for OS/2 and A/IX. Also, major Unix vendors are interested in providing OpenDoc support for their respective environments. Such broad cross-platform support will provide an open standard while delivering a functional superset of OLE 2.0 on the Macintosh.

Further, OpenDoc will enable a new breed of cross-platform software, called components or parts. OpenDoc parts that are created on a Macintosh can be used on a Windows, OS/2 or Unix platform (and vice versa). Also, OpenDoc parts can be shared and mixed with OLE parts. This fundamental layer of cross-platform code is vital to Apple's on-going enterprise strategy.

Status: Apple, WordPerfect, and IBM have each shipped several early SDKs (to developers) for their respective environments (Macintosh, Windows, and OS/2).

IBM's CICS

Apple's alliance with IBM has yielded many products during the last several years. IBM's Transaction Systems group is currently shipping Mac CICS - a client API set for Macintosh that enables Mac application support of host-based CICS applications. Using this API, CICS access will be delivered from within an application or solution. CICS is currently being "repositioned" by IBM as significant technology for developing and deploying truly distributed computing applications. The Mac version of CICS support will propel the Macintosh further into mission-critical client/server applications in the enterprise.

OSF's DCE (Distributed Computing Environment)

Apple is committed to ensuring availability of DCE functionality on the Macintosh platform. By adhering to this (emerging) industry standard API set, Apple expects increased consideration in many markets, especially those that emphasize open systems standards. Apple is currently establishing the necessary partnerships (with appropriate third-party developers) to provide a complete and native DCE Macintosh client offering. Through such relationships, the Macintosh can act as a robust platform for collaborative computing in needing enterprises.

Novell's Tuxedo

A prevalent transaction handler for Unix-based applications, Novell's Tuxedo API is currently shipping for Macintosh. Application developers, then, may access this transaction processing facility from within a Macintosh-based application. For more information on Novell's Tuxedo, contact Novell at 1-800-277-2717.

2) Active Evangelism of Third-Party, Cross-Platform Tools Suppliers

=====

Apple has been and continues to be very successful in its evangelism of industry-leading, cross-platform application development tools providers. Many strong tools are either shipping or about to ship in every major category. Many representative (i.e., most frequently asked for) tools are listed below, although this is not an exhaustive list in each category.

Legend:

Status Term	Meaning
-----	-----
In Development	The ISV has committed to Mac version; code is being actively ported and / or developed. Average development timeframe = 15 - 18 mos.
Negotiation	Both Apple and the ISV have agreed that a Macintosh version is of some priority; the two entities are currently discussing funding, resources, project timelines, market implications, and so on.
Investigation	Both Apple and the ISV have agreed to discuss the

development of a Mac version; however, insufficient progress has been made to form a commitment to development, timeline, and so on.

Note:

Any references to ship date are expressed in Apple fiscal quarters.

Overview

=====

This section lists, by category, many cross-platform application development tools that are hosted on Apple Computer's Macintosh. All tools support at least the 32-bit Macintosh API and the Windows API (some only support Win16 today - but they are migrating to Win32). Many tools also provide support for OS/2 and some provide support for various Unix environments (such as Motif) and (where appropriate) mainstream character cell terminal sessions. In order to determine the details of which client platforms are supported by a specific tool, we recommend contacting the appropriate vendors directly.

The languages supported varies by category; therefore, we've taken the time to define and overview each category to provide a context and technical orientation for the reader. For example, most workgroup-level client/server tools are interpreted (or p-code-based) 4GLs; therefore, they do not support C or C++ natively. Rather, they may support 3GL extension mechanisms (such as dynamic libraries), but do not reduce to a compiled language (3GL) environment.

Also, the DBMS support (or RDBMS) varies by category and tool. Each tool supports at least one native RPC-based SQL access mechanism (Oracle's SQL*Net and Sybase OpenClient in particular) and ODBC. Many tools offer a fairly broad array of connection mechanisms - from standard SQL tools to transaction-based middleware (e.g., Novell's Tuxedo) and DCE-like RPCs. Because the primary focus of this tools listing is client/server data access, Oracle and Sybase DBMS (at least) and ODBC support is presumed.

Lastly, this is not an exhaustive list of available Mac-based tools; instead, it is representative of the types of industry-leading tools in each category. The goal of this document is to suggest that the Macintosh supports (essentially) all leading tools by leading tools vendors. In fact, the best of breed tools offer cross-platform Macintosh support (or they will in the very near future).

WorkGroup Client/Server

Definition: tools that are highly visually-oriented, 4GL-based, and most capable of creating application logic that resides on the client computer. Workgroup level tools are optimal for creating workgroup (or departmental) applications that access and utilize structured (relational) data using structured query language (SQL). Most commonly, workgroup tools are used in a two-tier design - although this is changing as these tools mature. Many of these tools, for instance Powersoft, Gupta, and Oracle have significant features that nearly place them in the "enterprise c/s" category (next). In the future, the tool leaders from this category will, ultimately, scale their tools up to this new level; consequently, some tools/products are transcending the two categories.

Company Name -----	Status -----	Contact / Phone # -----
Powersoft's PowerBuilder	Shipping Fall '95	508-287-1900
Blyth's Omnis 73	Shipping	Lisa Borreani / 415-286-3541
Uniface Five	Shipping	510-748-6145
Gupta SQL Windows for Mac	In Development	Berman.D / X4-2285
Oracle Forms & Report	Shipping (v 3.X)	800-ORACLE1
ACI 4D Passport *	Shipping	408-252-4444

* ACI will release a Windows version of Passport in mid '95

Enterprise Client/Server or Client/Server "OLTP"

Definition: these tools provide highly scalable, transaction-oriented application development. Further, enterprise-class tools support advanced software engineering concepts such as: object repositories, team building capabilities, version/change management, integrated transaction processing handlers (either built-in or via partnership with middleware providers), model-driven construction, and application (logic) partitioning. Such advanced features result in applications that are (potentially) highly scalable and a development environment that is commercial quality (professional). For constructing true, multi-tier, transaction-based applications, these environments are superior to other categories. Also, many of these tools compile into a standard 3GL (such as C or C++) for final execution, which provides additional refinement and control.

Company Name -----	Status -----	Contact / Phone # -----
Forté Development Environment	Shipping	ed@forte.com/ 510-869-3400
JYACC's JAM6 (68K & PPC)	Shipping	Berman.D/X4-2285
Dynasty *	Shipping	708-355-8300
Neuron Data Inc.'s C/S Elements*	Shipping	800-876-4900
Informix's NewEra	Investigation	800-331-1763
Open Environment Corp Entera	Shipping	800-826-1047
SAS Institute's SAS/AF	Shipping	919-677-8166
Uniface Six (Power Mac native)	Ship Q4 '95	510-748-6145
Oracle Developer/2000 (Forms v4.5)	Ship Q4 '95	Berman.D / X4-2285
Vision by Unify **	Shipping	800-248-6439

Notes:

*Dynasty includes Neuron's tools with its offering

** Unify's product is currently capable of generating Macintosh client code, but the Power Mac-based development environment will ship during late Summer '95.

Visual Programming & Rapid Application Development*

Definition: these tools could easily be placed in the Workgroup client/server category - but we've separated them into this category because their distinguishing feature is the highly visual metaphor on which they are based. With these tools, the developer almost literally "paints" the application through a visual, forms-based metaphor. Such an elegant tool typically has some high level language at its core. For instance, Oracle Power Objects is based on the BASIC syntax and is (in many ways) compatible with Microsoft's Visual Basic. Each of these tools is likely to support the OpenDoc component software architecture standard by mid calendar 1996.

Company Name	Status	Contact / Phone #
Oracle Power Objects	Ship Q4 '95	Berman.D/X4-2285
Pictorious Peregrine **	Shipping (APDA)	902-455-4446/ 800-927-4847
Novell's AppWare v1.2	Shipping	800-277-2717

Notes:

* Each of these tool sets provide SQL data access in addition to a robust, visual environment

** Formerly Prograph, Pictorious is targeting its Windows version for mid-1995

Object-Oriented Frameworks - C & C++

Definition: A framework is a set of closely related class libraries and predefined methods for working with the class libraries. These commercial quality C & C++ frameworks are commonly used for commercial application development. Because of their (relative) cross-platform maturity, some (XVT, for instance) have also found favor in the in-house developer and SI/VAR communities. More recently, these tool providers have improved the development environment (visually-oriented now) on top of these abstracted class libraries. Although different in their cross-platform approach, both XVT and Visix have strong followings and impressive capabilities.

Company Name	Status	Contact / Phone #
Visix Galaxy (68K Shipping)	PPC Ship Q4'95	703-758-2707
XVT	Shipping (APDA)	303-443-4223 / 800-678-7988
ICE, Inc. OM++	Shipping	415-931-9400

Object Oriented Frameworks - SmallTalk

Overview: A framework is a set of closely related class libraries and predefined methods for working with the class libraries. The dominant SmallTalk vendors, Digitalk and Parc Place, have recently begun merger (during Summer '95). The result is tremendous consolidation of the tightly controlled SmallTalk marketplace. The cross-platform nature of this dynamic language environment, though, is both proven and mature. Arguably, Parc Place has the most complete Macintosh implementation (of the two major vendors) with Power Mac-native support. However, Quasar Knowledge Systems (QKS) has a very strong framework environment, technically, with its SmallTalk Agents.

Company Name	Status	Contact / Phone #
-----	-----	-----
Digitalk's SmallTalk	Shipping (APDA)	714-513-3000
ParcPlace's VisualWorks (68K & PPC)	Shipping	Curtis Muir / 415-691-6700
QKS - SmallTalk Agents	Shipping	301-530-4853

Integrated CASE tools

Overview: Integrated (sometimes called "Enterprise CASE") CASE tools offer at least some large percentage of the software design engineering life cycle: from business rule development and application modeling to coding and code generation, documentation, version control, and maintenance. These tools offer much of the capability of some earlier described tools (such as workgroup client/server), plus some percentage of the "enterprise CASE life cycle.

Company Name	Status	Contact / Phone #
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Texas Instrument's Composer - IEF	Negotiation	Berman.D / X4-2285
Oracle Designer/2000*	In Development	Berman.D / X4-2285
Sybase (DEFT)	Shipping	800-8SYBASE
Computer Sys Advisers' Silverrun	Shipping	202-391-6500
Software AG's Natural Architect	Shipping	703-391-6576
Iconix PowerTools	Shipping	310-458-0092
Excel's MacAnalyst&MacDesigner	Shipping	515-752-5359

Notes:

* Oracle's CASE product will be capable of generating Macintosh client code (i.e., Oracle Forms v4.5 code), although the development environment is not hosted on Macintosh.

CASE "Bridge" Tools

(for TI IEF repository access from other development tools)

Overview: For developers who are interested in Texas Instruments IEF (for Composer) support, Apple recommends these two "bridge" tools. These "bridge" products provide IEF object (code) repository access from within a native Macintosh C/S tool (Powersoft PowerBuilder support from MidCore and Uniface support from Office Information Systems). Obviously, MidCore's tool will be most useful once Powersoft ships PowerBuilder for Macintosh (see the category description of Workgroup level tools for more info on Powersoft and Uniface). The goal of these bridge tools is to make productive use of the objects and class code (generated by the TI's CASE facility) in a Macintosh-based development environment.

Company Name	Status	Contact / Phone #
-----	-----	-----
MidCore Software - PowerBuilder	Ship Q4 '95	Joe Vernale / 203-759-0906
Office Information Systems -Uniface Shipping		TI @ 800-336-5236

Decision Support Systems/Business Intelligence Tools

Overview: These are commonly referred to as tools for Business Intelligence, Executive Information Systems, On-Line Analytical Processing (OLAP), and so on. These techniques, essentially, describe a "hypercube" process where production data is moved into a data warehouse that is flexible and multi-dimensional (thus the term "hypercube"). The various tools, then, are used to construct managerial decision support applications that view, model, report, and pivot the data in new and interesting ways.

Company Name	Status	Contact / Phone #
-----	-----	-----
Planning Sciences, Inc.'s Gentium	Shipping	415-788-7651
Holistic Systems, Inc.'s Holos	Near shipping	303-790-7939
Andyne's Pablo	Shipping	613-548-4355
SAS Institute's JMP	Shipping	919-677-8166
SAS Institute's "SAS System v6.10"	Shipping	919-677-8166
Cognos PowerPlay	Shipping	613-738-1338

Host Program "Front-Ending" (with client/server capability)

Overview: This category, commonly called "screen scraping", represents tools that fall into the 1st generation client/server category - and has been a

natural addition to traditional character-based terminal emulation. The tools listed here have matured significantly during the last several years. Now, several of these tools can generate sufficient client application logic to effectively improve a legacy application's user-oriented behavior. Further, in situations where one of these tools is appropriate (mature, stable, and unchanging host application construction), certain amounts of mainframe MIPS can be saved by providing some local processing capability (instead of shipping everything back to the mainframe - for instance - mainframe application control characters can often be acted upon locally, without host intervention). Further, many of these tools (BlackSmith, Mozart, 5PM Pro, and Vicom) are native for Power Macintosh.

Company Name -----	Status -----	Contact / Phone # -----
Client Soft's ClientBuilder (formerly Both)	Shipping	914-631-5365
Mitem's MitemView	Shipping	415-323-6164
CEL Software's BlackSmith	Shipping (APDA)	403-463-9090
Mozart Systems	Shipping	415-340-1588
About Software 5 PM Pro	Shipping (APDA)	408-864-0694
Vicom Pro	Shipping	800-818-4266

Ad Hoc Query & Browse Tools -----

Definition/Overview: These tools are inherently end-user oriented, but may require some "set-up" by an MIS-type staff person. Such tools provide graphical representation of relational database tables for more simple query generation. Once done, the end user has (typically) data warehouse access, through a simple point-and-click interface, to vital corporate data (structured, relational). Various access techniques include views (on-screen), reports, and "canned" queries. Many of these tools are very mature and quite capable.

Company Name -----	Status -----	Contact / Phone # -----
Andyne's GQL	Shipping	613-548-4355
Business Objects	Shipping	408-973-9300
Brossco System's Voyant	Shipping	Dirk Gilson / 408-461-1416
Brio's Data Pivot / Prism	Shipping (APDA)	415-961-4110
Software AG's Esperant	Ship early 96	Joe Gentry / 703-391-8311
Blyth's TrueAccess	Shipping	Michael Williams / 415-286-7183
Cognos Impromptu	In Development	613-738-1338

Other Programming Tools

Company Name	Status	Contact / Phone #
-----	-----	-----
Micro Focus COBOL	Shipping	D. Berman/X4-2285
Taligent CommonPoint	CY '96	
Mac O/S (Copland) Version		

Object-Oriented Database Environments

Company Name	Status	Contact / Phone #
-----	-----	-----
Versant (both C++ & SmallTalk)	Shipping	D. Berman/X4-2285

Client/Server "Solutions" / Applications & Groupware (Lotus Notes)

Overview: Additionally, Apple WorldWide Marketing's evangelism efforts include the growing number of client/server packaged solution providers. Such companies specialize in "horizontal" client/server markets, such as Human Resources / Financials / Manufacturing. Examples of shipping (or near shipping) solutions in these areas include:

Company Name	Status	Contact / Phone #
-----	-----	-----
SAP (America, Inc.) (68K & PPC)	Shipping	Dickens2 / X4-5510 800-USA-1SAP Ext.100
Cyborg Systems (HRMS)	Shipping	312-454-1865
Walker Interactive (Financials)	Near Shipping	415-495-8811
Ross Systems (HR/Payroll)	In Development	404-851-1872
Dun & Bradstreet	In Development	Dickens2 / X4-5510
Oracle	In Development	Dickens2 / X4-5510
PeopleSoft (H/R,Fin.)	In Development	Dickens2 / X4-551
Lotus Notes v3.2 (client)	Shipping	800-346-1305
Lotus Notes v4.0 (client)	Ship Q4 '95	Dickens2/X4-5510

Article Change History:

02 April 1997 - Removed expired eMail references.

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Tech Info Library Article Number:18441



Tech Info Library

Macintosh: Cross-Platform Client/Server Solutions (2 of 2) 8/95

Revised: 8/21/95
Security: Everyone

Macintosh: Cross-Platform Client/Server Solutions (2 of 2) 8/95

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Article Created: 21 August 1995

TOPIC -----

This article contains the Apple World-Wide Market Development Position Paper titled "Cross-Platform Development Tools and Client/Server Solutions Update for Apple Computer's Macintosh." This is part 2 of 2, of version 2.51 of the document.

DISCUSSION -----

3) Apple Internal Efforts to Deliver Cross-Platform Tools

=====

Apple's (i.e., AppleSoft's) dedication to the cross-platform development tools arena has lead to two specific tactics:

- The re-sale of certain "best of breed" tools through Apple's Programmer & Developer Association (APDA) Catalog.
 - This ensures more widespread knowledge and use of some important tools
 - For more information, consult the APDA catalog or call APDA at 1-800-282-2732
- The funding of internal projects (within AppleSoft) to deliver (or help deliver) development tools of exceptional quality. Some primary examples include:

Dylan

A dynamic language and tool for object-oriented programming and development, Dylan's position in Apple's tool line is currently being recast to incorporate some important market-oriented features. Dylan is designed to create an environment that provides breakthrough improvement in object-oriented programming. The Dylan language is intended to co-exist with other object languages (such as C++), while providing an effective alternative. Cross-platform functionality is seen as an important capability for this tool.

Denali

This joint Apple-IBM project will deliver a high-level, cross-platform tool for solutions development and in-house programming. The environment will generate cross-platform OpenDoc parts (for Windows and Macintosh). Some planned features include a visual programming paradigm, HyperCard stack support, support for key middleware APIs (such as ODBC), some level of compatibility with Microsoft's Visual Basic (VBXs), user extensibility, and a scripting capability.

OpenDoc Development Framework (ODF)

Apple is combining the Bedrock and OpenDoc technologies to create the OpenDoc Development Framework (ODF), which will allow the creation of commercial-quality OpenDoc parts for both Macintosh and Windows with one development effort. Apple strongly recommends the use of the OpenDoc Development Framework for future development because it provides the increased productivity of a framework, full entry into the world of OpenDoc software, and cross-platform development capabilities. A developer release version of the OpenDoc Development Framework was given to attendees of the 1995 WWDC, and completed versions will be distributed through standard developer programs in late 1995.

Novell AppWare

Novell AppWare provides a visual programming interface to create applications based on existing AppWare Loadable Modules (ALMs) and v1.2 is currently shipping for Windows and the Macintosh. Novell plans to include full OpenDoc support in future versions of AppWare to allow the graphical creation of OpenDoc parts and containers. For more information on AppWare, contact Novell at 800-277-2717.

MacApp 3.5

Due in late 1995, this new version of MacApp will support OpenDoc (container support), PowerTalk mailers, and scripting. This version update underscores Apple's commitment to this long-preferred Macintosh development framework. The intent with v 3.5 is to extend the life of today's C++ MacApp source code while allowing developers to take the first step toward full support of component software technology (i.e., OpenDoc). MacApp 3.5 delivers a partial OpenDoc solution by creating a container that will support the embedding of commercially available OpenDoc parts. For full OpenDoc support, Apple recommends that, when it becomes available, OpenDoc Development Framework be used because it provides a truly cross-platform solution.

Apple Media Tool / Apple Media Tool Programming Environment

Through its visual programming language, this offering is well-suited to large-scale, multi-person development efforts (even with non-programmers). This tool is already being used by third-parties to create commercial CD-ROMs to generate both Macintosh and Windows products from the same project..

Script X

The first product of a joint (Apple & IBM) venture, Kaleida Laboratories, Script

X seeks to deliver a completely cross-platform media player and deployment vehicle for multimedia-based applications. Such a cross-platform tool should hasten the arrival and delivery of many cross-platform titles. Other companies will deliver the development environments within which Script X applications will be created.

Taligent CommonPoint
(formerly Taligent Application Environment or Tal A)

Apple plans to package Taligent technology with its own to provide customers with solutions that meet their needs. With its Copland operating system release, Apple will deploy the CommonPoint system on PowerPC-based computers. This will allow the CommonPoint system to run Macintosh and Taligent applications side-by-side. Also with Copland, Apple's first microkernel-based operating system, the ability to host Taligent Object Services on the microkernel exists. Additionally, Apple will begin to incorporate Taligent technologies into the Macintosh operating system, offering customers a choice of using the Taligent People, Places, and Things human interface along with the Macintosh user environment. Finally, Apple is actively working with Taligent to ensure interoperability between OpenDoc and Taligent technologies.

4) Dedicated Personnel to Improve Apple's On-Going Development Tools Position

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Several divisions of Apple Computer have active "evangelism" efforts, to help ensure the Macintosh platform is well-represented with development tools and client/server solutions providers:

These groups engage in a cross-divisional business planning process. Such planning will help ensure Apple derives maximum exposure and benefit from its overall evangelism efforts. Most importantly to Apple's enterprise customers, the Apple WorldWide Marketing team specifically tracks enterprise market requirements as the basis for its evangelism efforts. To that end, all field and customer input is welcome (in fact solicited) to ensure it is on the right track in its evangelism efforts. All customer feedback should be channeled through the customer's assigned Apple Account Executive.

5) Apple's Commitment to VITAL

=====

The IS (Information Services) community needs a truly open, vendor-independent architecture that allows customers to interconnect best-of-breed products in various categories to provide the greatest functionality and highest performance at the lowest possible cost. In addition to being open, the ideal IS architecture allows incremental deployment of new systems, enables rapid assimilation of new technology, and accommodates existing systems.

VITAL is an architecture for understanding, building, and implementing information systems. VITAL is open and vendor-neutral. VITAL addresses both new and legacy systems from microcomputer to mainframe. VITAL aims to provide

systems solutions that are based on client/server methods. Rather than specifying products, VITAL describes building blocks and associated functionality that can be implemented by means of hardware and software products that adhere to open systems standards. VITAL does not specify standards, but instead categorizes and indexes the functional characteristics that the standards implement. For example, VITAL describes types of middleware and when to use them, while standards specify OSF DCE or Novell Netware as implementations of middleware.

The VITAL framework is a conceptual model of client/server business computing described in terms easily understood by technicians, users, and executives. The objectives of the framework are to help IS organizations design systems that preserve legacy investments, provide access to operational data, balance system workloads, and reduce the cost of implementing systems.

For more information on VITAL, refer to the brochure entitled, A Technical Introduction to VITAL, An Architecture for Open Information Systems and/or the complete VITAL Technical Architecture Guideline (TAG) Documents. The TAG Documents are available through Apple's Programmer and Developer Association (APDA) at 1-800-282-APDA.

Apple's intent with VITAL includes:

- An internal commitment to the VITAL architecture as the mechanism in which it deploys client/server information systems,
- A commitment to linking its customers with highly knowledgeable and responsive consultants who can advise on the implementation of VITAL-ized systems. Such consultants can be found via the VITAL Consultant's Network. Information on VITAL-certified consultants can be found on the July 1994 APPLE CD-ROM.
- a commitment to disseminating solution / success stories of the VITAL architecture. MacIS will act as one focal point for disseminating the acceptance of VITAL.

Support Information Services

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Tech Info Library Article Number:18442



Tech Info Library

Macintosh PowerBook 190/66:Technical Specifications (1/96)

Revised: 1/18/96
Security: Everyone

Macintosh PowerBook 190/66:Technical Specifications (1/96)

Article Created: 21 August 1995
Article Reviewed/Updated: 18 January 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 190/66 computer.

DISCUSSION -----

Microprocessor

- 66/33-MHz Motorola 68LC040

Memory

- 4 MB or 8 MB of RAM, expandable to 36 MB or 40 MB
[Note: The 4 MB or 8 MB (depending on the model) from Apple is soldered to the logic board. There is one RAM card expansion slot.]

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 500 MB hard disk drive
- Expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive

Display

- 9.5-in. (diagonal) backlit, passive-matrix display
- Resolution: 640 by 480 pixels with 16 levels of gray

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard PC Cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities

Expansion Bay

- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Battery

- Nickel-metal-hydride battery provides 2.5 to 4 hours of use before recharge
- Nickel-metal-hydride battery recharges in 2.5 hours while computer is shut down, in sleep mode, or running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices
- One power adapter port
- Stereo sound output port
- Video output port (optional)

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Optional infrared technology allows for ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in Stereo Sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone

Security

- Includes a security slot that secures the system, battery, and expansion bay (requires a third-party accessory)
- Includes password protection software

Keyboard And Improved Apple Trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest

- Power button on keyboard
- Solid-state improved Apple trackpad lets you use the trackpad to select, open or close, and drag without using the trackpad button

Upgrades

- 100-MHz PowerPC 603e
- 10.4-in. active-matrix, color display (requires PowerPC upgrade)
- Infrared technology for easy file sharing
- Video-out to support external displays— compatible with most Apple, VGA, and SVGA monitors (Apple 8-bit solution available; third-party solution for greater bit depths)

Disability Access

- System software includes CloseView, and Easy Access, and provides the ability to substitute visual cue for beep

Electrical Requirements

- Line voltage: 100 to 220 volts AC
- Frequency: 50 to 60 Hz

Environmental Requirements

- Operating temperature: 41 degrees to 95 degrees F
(5 degrees to 35 degrees C)
- Storage temperature: 14 degrees to 140 degrees F
(-10 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size And Weight

- Height: 2.0 in. (5.1 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 6.0 lb. (2.7 kg)

Article Change History:

18 Jan 1996 - Corrected info about sound output port.

05 Oct 1995 - Updated battery information.

25 Aug 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18443



Tech Info Library

Sound & Displays Control Panel: Requires AppleScript 11/95

Revised: 11/9/95
Security: Everyone

Sound & Displays Control Panel: Requires AppleScript 11/95

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Article Created: 21 August 1995
Article Reviewed/Updated: 9 November 1995

TOPIC -----

When I try to open the Sound & Displays control panel on my Power Macintosh 7500 or 8500 computer, I get the message "Sorry... Sound & Displays cannot operate correctly on this Macintosh. Please consult your Sound & Displays documentation for a description of what your Macintosh needs for Sound & Displays. (Quit)". This came with my computer and it used to work. How can I resolve this?

DISCUSSION -----

The Sound & Displays control panel that comes with Power Macintosh 7500 and 8500 computers requires AppleScript in order to operate properly. The Sound & Display control panel will not launch and will report this error message if AppleScript is missing, damaged, or disabled.

Make sure AppleScript has not been disabled by opening the Extensions Manager in your Control Panels folder under your Apple Menu. If there is not a check to the left of the AppleScript Extension, click on the extension to put a check there, close the Extensions Manager, and restart you computer.

If the Sound & Displays control panel still fails to launch, you should reinstall AppleScript using the custom install feature of your Power Macintosh disc.

Article Change History:
09 Nov 1995 - Changed title to better reflect article content.

Support Information Services

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Tech Info Library Article Number:18444



Tech Info Library

Launcher: -39 Error (8/95)

Revised: 8/21/95
Security: Everyone

Launcher: -39 Error (8/95)

=====

Article Created: 21 August 1995

TOPIC -----

I get a -39 error when I try to open my Launcher. What does this mean and how can I fix it?

DISCUSSION -----

A -39 error is an end of file error. This error usually occurs when a file becomes damaged. If you are getting a -39 error when you try to open your Launcher, you should drag the Launcher out of the Control Panels folder and put it in the Trash. You can then reinstall the Launcher control panel from your backup disks, your Macintosh Performa CD, or your original System 7.5 CD or floppy disks.

Support Information Services

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Tech Info Library Article Number:18445



Tech Info Library

Macintosh PowerBook 190cs/66: Description (04/97)

Revised: 4/3/97
Security: Everyone

Macintosh PowerBook 190cs/66: Description (04/97)

Article Created: 21 August 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 190cs/66 computer.

DISCUSSION -----

Overview
=====

The Macintosh PowerBook 190cs/66 is the most affordable color PowerBook computer, combining the performance of the Motorola 68LC040 processor with the convenience of a compact, lightweight notebook computer. It offers a host of enhanced features, including a 10.4-inch dual-scan color display, PC Card slots, an expansion bay, a full-size keyboard, an improved Apple trackpad for increased functionality, and a number of upgrade options.

Featuring an innovative design, the PowerBook 190cs/66 is both expandable and flexible. It provides an expansion bay for third-party peripherals—the floppy disk drive can be removed and be replaced with an additional storage device or an internal AC adapter. Through its PC Card slots, you can add a wired or wireless modem, storage, Ethernet networking, or any of a host of capabilities.

To get you started working right away, the PowerBook 190cs/66 comes bundled with ClarisWorks integrated productivity software. ClarisWorks combines word processing, spreadsheet, database, graphics, and communications capabilities. In addition, with your PowerBook 190cs/66.

Already a powerful and complete system, the PowerBook 190cs/66 is designed to grow in capabilities as your needs change. If your tasks demand higher performance, you can upgrade your system to PowerPC RISC technology. You can improve the display capability by upgrading to an active-matrix screen (requires PowerPC upgrade). And you can opt to add infrared technology for easy file

sharing, as well as color video-out.

So if you need a color display and want an affordable, highly capable notebook computer that can take you into the future, the PowerBook 190cs/66 is the perfect choice.

Features

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Innovative New Design

- Uses a 66/33-MHz 68LC040 processor
- Provides a 10.4-in. (diagonal), backlit, dual-scan, color display with 256 colors
- Includes a high-capacity internal 500 MB hard disk drive
- Offers stereo sound output capable of driving headphones or external speakers
- Comes with built-in serial and SCSI ports
- Features an improved Apple trackpad for increased functionality, full-size keyboard and integrated palm rest

Expandability

- Includes PC Card slots for two Type I or II PC Cards or one Type III PC Card
- Features an expansion bay for third-party solutions, such as a second hard disk drive, magneto-optical drive, or internal AC adapter

A Complete Solution

- Includes everything you need to be productive—right out of the box
- Comes with ClarisWorks productivity software
- Includes the PowerBook Mobility Bundle, software designed to enhance mobile computing
- Comes with System 7.5
- Provides active assistance in learning new features through Apple Guide
- Can be upgraded to take advantage of PowerPC processor technology
- Can be upgraded to feature an active-matrix display (requires PowerPC upgrade)
- Can be upgraded to provide easy file sharing through infrared technology
- Can be upgraded to include color video-out capabilities

Bundled Software

=====

The Macintosh PowerBook 190 models ship with Macintosh System Software 7.5.2. Each configuration also comes with the PowerBook Mobility Bundle. The Bundle includes the following components:

PowerBook Mobility Bundle

-
- PowerTalk 1.0
 - Macintosh PC Exchange
 - Macintosh Easy Open
 - Apple Remote Access
 - PowerBook Control Strip
 - Floppy Disk Maker
 - Disk Image Mounter
 - Password Protection Software
 - Eric's Ultimate Solitaire Sample
 - Spin Doctor
 - Super Maze Wars
 - PowerBook Demo

Other Third-Party Software

Macintosh PowerBook 190 computers also ship with ClarisWorks 4.0.

What's In The Box

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The following components are expected to be included in the box with all Macintosh PowerBook 5300 computers:

- Macintosh PowerBook 190 computer
- Macintosh PowerBook 190 User's Guide
- Macintosh PowerBook 190 Technical Specifications sheet
- ARA Client User's Guide
- ARA Promotion Flyer
- Registration card
- Packing List
- Disk Tools diskette
- Power Cord
- AC adapter
- Protective Battery Cap/Cover
- Resource Guide including
 - Warranty
 - Software License Agreements
 - Apple logo decals
 - Citibank VISA Brochure and Application
 - Tote Bag Catalog
- ClarisWorks 4 Manual

Ordering Information

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PowerBook 190cs/66 4/500

- PowerBook 190cs/66 computer with 4 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 500 MB hard disk drive, Nickel-Metal-Hydride battery and AC adapter, System software version 7.5.2, ClarisWorks 4.0 software and documentation, PowerBook Mobility Bundle, Complete setup, learning, and

reference documentation, Limited warranty

- Order No. M4072LL/A

PowerBook 190cs/66 8/500 (this configuration was discontinued in 9/96)

-
- PowerBook 190cs/66 computer with 8 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 500 MB hard disk drive, Nickel-Metal-Hydride battery and AC adapter, System software version 7.5.2, ClarisWorks 4.0 software and documentation, PowerBook Mobility Bundle, Complete setup, learning, and reference documentation, Limited warranty
 - Order No. M4073LL/A

Macintosh PowerBook Logic Board Upgrade Kit

-
- Order No. M3881LL/A

Macintosh PowerBook 10.4" Active- Matrix Color Display Upgrade Kit

-
- Order No. M3746LL/A

Macintosh PowerBook Infrared Upgrade Kit

-
- Order No. M4071LL/A

Macintosh PowerBook 8-Bit Color Video-Out Upgrade Kit

-
- Order No. M3743LL/A

Macintosh PowerBook Power Adapter

-
- Order No. M3747LL/C

Macintosh PowerBook 8 MB RAM Expansion Card

-
- Order No. M3750LL/A

PowerBook Video Adapter Cable

-
- Order No. M3927LL/A

Apple HD-30 SCSI Disk Adapter

-
- Order No. M2539LL/A

Apple HDI-30 SCSI System Cable

-
- Order No. M2538LL/A

Article Change History:

02 Apr 1997 - Removed reference to specific on line service
11 Sep 1996 - Added discontinued information.
05 Oct 1995 - Updated battery information.

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Tech Info Library Article Number:18446



Tech Info Library

Macintosh PowerBook 190cs/66:Technical Specifications (9/96)

Revised: 9/11/96
Security: Everyone

Macintosh PowerBook 190cs/66:Technical Specifications (9/96)

=====

Article Created: 21 August 1995
Article Reviewed/Updated: 11 September 1996

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 190cs/66 computer.

DISCUSSION -----

Microprocessor

- 66/33-MHz Motorola 68LC040

Memory

- 4 MB or 8 MB* of RAM, expandable to 36 MB or 40 MB
[Note: The 4 MB or 8 MB (depending on the model) from Apple is soldered to the logic board. There is one RAM card expansion slot.]

NOTE:

- * The PowerBook 190cs/8/500 configuration was discontinued in 9/96.

Storage

- Built-in removable Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 500 MB hard disk drive
- One expansion bay for third-party solutions such as an additional hard disk drive or magneto-optical drive

Display

- 10.4-in. (diagonal) backlit, dual-scan, color display
- Resolution: 640 by 480 pixels with 256 colors

PC Card slots (PCMCIA)

- Two PC Card slots that can accommodate two Type I or II PC Cards or one Type III PC Card
- Lets you add industry-standard PC Cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities

Expansion bay

- IDE connector for third-party solutions such as an additional hard drive, a magneto-optical drive, and other devices
- Power lines for connection of an internal AC adapter and other third-party solutions

Battery

- Nickel-metal-hydride battery provides 2.5 to 4.5 hours of use before recharge
- Nickel-metal-hydride battery recharges in 2.5 hours while computer is shut down, in sleep mode, or running
- PowerBook Control Strip lets you monitor time remaining, charge status, and battery usage

Ports

- One Apple Desktop Bus (ADB) port
- One serial (RS-422) port
- One SCSI port for connecting as many as six external devices
- One power adapter port
- Stereo sound output port
- Video output port (optional)

Networking

- Serial/LocalTalk port for AppleTalk connections to networks and printers
- Ethernet networking through PC Cards
- Optional infrared technology allows for ultra-easy file sharing through infrared technology—without cable connections or time-consuming setup; supports AppleTalk protocol

Built-in stereo sound

- 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- Built-in speaker and integrated microphone

Security

- Includes a security slot that secures the system, battery, and expansion bay (requires a third-party accessory)
- Includes password protection software

Keyboard and improved Apple trackpad

- Built-in, full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and integrated palm rest
- Power button on keyboard
- Solid-state improved Apple trackpad lets you use the trackpad to select, open or close, and drag without using the trackpad button

Upgrades

- 100-MHz PowerPC 603e
- 10.4-in. active-matrix, color display (requires PowerPC upgrade)
- Infrared technology for easy file sharing
- Video-out to support external displays—compatible with most Apple VGA, and SVGA monitors (Apple 8-bit solution available; third-party solution for greater bit depths)

Disability Access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep

Electrical Requirements

- Line voltage: 100 to 220 volts AC
- Frequency: 50 to 60 Hz

Environmental Requirements

- Operating temperature: 41 degrees to 95 degrees F (5 degrees to 35 degrees C)
- Storage temperature: 14 degrees to 140 degrees F (-10 degrees to 60 degrees C)
- Relative humidity: 20% to 80% noncondensing
- Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- Maximum storage altitude: 15,000 ft. (4,722 m)

Size And Weight

- Height: 2.2 in. (5.3 cm)
- Width: 11.5 in. (29.2 cm)
- Depth: 8.5 in. (21.6 cm)
- Weight: 6.3 lb. (2.9 kg)

Article Change History:

- 11 Sep 1996 - Added information about discontinued configuration.
- 05 Oct 1995 - Updated battery information.
- 25 Aug 1995 - Reviewed for technical accuracy.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18447



Tech Info Library

Open Transport 1.0.7: Read Me (5/96)

Revised: 5/27/96
Security: Everyone

Open Transport 1.0.7: Read Me (5/96)

Article Created: 22 August 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the Open Transport ReadMe file.

DISCUSSION -----

Name: Open Transport 1.0.7 Patch
Version: n/a
Released: August 21, 1995
Description: This application updates Open Transport from version 1.0.6 to version 1.0.7. Please see below for further information.

The enclosed file is a self-extracting archive. To use, download, double-click the downloaded file (this decompresses it).

From the "Open Transport 1.0.7 Patch Read Me"
=====

What is this patch?

The Open Transport 1.0.7 patch consists of a patching application called "Open Tpt 1.0.6 -> 1.0.7 Patcher", a new TCP/IP Control Panel, and this Read Me file.

"Open Tpt 1.0.6 -> 1.0.7 Patcher" is a self-contained application that provides an update to the Open Transport software already installed on your system. To use this update application you must have Mac OS version 7.5.2 installed on your computer, and you must have Open Transport version 1.0.6 already installed on your system.

When successfully completed, the Open Transport Internet Library and the TCP/IP control panel will have been updated to Open Transport version 1.0.7. All other components of Open Transport will remain at version 1.0.6.

Who needs this patch?

This update is recommended for all Power Macintosh systems with the PCI bus, including the Power Macintosh 7200, 7500, 8500, and 9500. It will be especially valuable if you use SLIP or PPP to access the Internet or other TCP/IP resources.

This update CANNOT be used with any beta or test versions of Open Transport, or on the Power Macintosh 6100, 7100, 8100, or 680x0-based Macintosh computers.

How do I use this patch?

-
- 1) Copy "Open Tpt 1.0.6 -> 1.0.7 Patcher" and the TCP/IP control panel to your desktop.
 - 2) Choose Restart from the Special menu. While your computer starts up, hold down the Shift key (to turn off any extensions).
 - 3) Drag the TCP/IP control panel to the icon of your System Folder (not to the open System Folder window). In the dialog box that appears, click OK. Another dialog box opens, asking if you want to replace the older version of the control panel. Click OK to copy the new TCP/IP control panel to the Control Panels folder inside your System Folder.
 - 4) Double-click the "Open Tpt 1.0.6 -> 1.0.7 Patcher" icon to open it.
 - 5) Read the information in the dialog box that appears.
 - 6) Click the Patch button.
 - 7) In the dialog box that appears, select your Open Tpt Internet Library in your Extensions folder (inside the System Folder on your startup disk). Then click the Patch button.
 - 8) A message appears telling you the patch was successful.
 - 9) Choose Restart from the Special menu. Allow your computer to start up normally, without holding down the Shift key.
 - 10) Drag the "Open Tpt 1.0.6 -> 1.0.7 Patcher" from the desktop to the trash and empty it.

What are the differences between Open Transport 1.0.6 and 1.0.7

=====

- Slip/PPP Configuration Change

When using SLIP or PPP over Open Transport 1.0.7, either with Manual or BOOTP configuration mode, you are no longer required to configure a Router address or a Subnet Mask. When these are not manually configured, they will be generated automatically based on the IP address assigned by the SLIP/PPP server or by the

BOOTP server.

In general, it is recommended that these fields be left blank when using SLIP or PPP unless your network manager has specified otherwise. If you do manually configure these items, you must enter a Subnet Mask that places your Router's IP address and your own assigned IP address on the same subnet. If these two addresses are on different subnets, you won't be able to send data to remote hosts.

- Improved SLIP or PPP Performance

SLIP or PPP throughput performance has been improved by changing the interrupt level at which inbound SLIP or PPP data is processed.

- Networks with more than 256 zones

The TCP/IP control panel now works correctly with networks having more than 256 zones. Previous versions of the control panel sometimes crashed when selecting a zone on a network with more than 256 zones.

Question:

I have a Power Mac 9500 with an earlier version of Open Transport software. How do I get a copy of Open Transport version 1.0.6 so that I can use this patch?

Answer:

Users who previously bought a Power Macintosh 9500 can get an upgrade to the new software by calling the Apple Order Center. This update is strongly recommended for all Power Macintosh 9500 users.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

26 May 1996 - Updated for technical accuracy.

20 Nov 1995 - Added new keyword.

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Tech Info Library Article Number:18448



Tech Info Library

ARA: How Do Remote Systems Get Assigned Node Addresses (8/95)

Revised: 8/22/95
Security: Everyone

ARA: How Do Remote Systems Get Assigned Node Addresses (8/95)

=====

Article Created: 22 August 1995

TOPIC -----

How does a remote system get assigned an AppleTalk node address when dialing in through Apple Remote Access (ARA)? Is the AppleTalk address dynamically assigned at connection, or does the ARA MultiPort (MP) Server assign the node address?

DISCUSSION -----

AppleTalk node address allocation occurs when an ARA MP Server's ports are configured at startup. When a port is turned on, the ARA MP Server goes on the network to see what node addresses are available and allocates one per port based on that availability, in other words, dynamic address allocation. That is why configuring the ports takes some time.

A port will retain this same node address for all calls made to that port, even if someone dials in, disconnects, and then dials back to the same port. The same node address will be used. If the port is turned off, the node address may get used by another computer on the network. When you turn the port back on, the process mentioned above is repeated.

So, to answer the question, the node address is "static" as long as the port is on.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18449



Tech Info Library

Color LaserWriter 12/600 PS: Lines Per Inch (1/97)

Revised: 1/31/97
Security: Everyone

Color LaserWriter 12/600 PS: Lines Per Inch (1/97)

Article Created: 22 August 1995
Article Reviewed/Updated: 31 January 1997

TOPIC -----

What is the line screen (lpi) capability of the Color LaserWriter 12/600 PS? Can you change it with programs that can edit the linescreen?

DISCUSSION -----

The default line screen, on the Color LaserWriter 12/600 PS and the Color LaserWriter 12/660 PS printers, is 200 lpi. At that line screen, the printer can image "122 levels of gray." However, Color Photograde changes the line screen based on the type of image and actually gives you more levels of gray (or color to be more precise) and much better image quality through Apple's proprietary technology.

Lighter areas of a file are imaged at a lower line screen (141 lpi) which produce more shades of color, but have a lower image resolution. Darker areas are imaged at a higher line screen which produces fewer shades of color but a higher resolution.

The line screen angle (the angle at which the actual dots are placed) is also changed to try and minimize an effect called "white dropout " which comes up with very light colors and the "white gap" effect that comes up with darker color plates next to each other.

This is done when the image is processed by the ROM of the printer. A file is separated into four color plates and analyzed for image quality. The line screen and angle change so that lighter areas are printed with some color visible, since our eye can see color at low percentages but can not see the actual edges of the colored objects. In darker areas, our eyes can see the edges of objects very well, but have trouble seeing the differences between darker shades of color.

Although the September 1995 "MacUser" article infers that you can change the

line screens, Color Photograde overrides any of these settings to produce it's patterns. You may be able to incorporate a line screen into the actual file when you scan it or edit it.

For more information on lpi and dpi see "Printing Differences: Lines Per Inch and Dots Per Inch" and "Apple LaserWriters: Screen Frequency and Gray Levels."

Article Change History:

31 Jan 1997 - Added Color LaserWriter 12/660 PS to article.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18451



Tech Info Library

LW 16/600 PS: Input/Output Processor (IOP) ROM Upgrade (1/96)

Revised: 1/12/96
Security: Everyone

LW 16/600 PS: Input/Output Processor (IOP) ROM Upgrade (1/96)

Article Created: 22 August 1995
Article Reviewed/Updated: 12 January 1996

TOPIC -----

Several LaserWriter 16/600 PS network issues are addressed by version 2.0 of the Input/Output Processor (IOP) ROM (service part number 922-1856). Please read the following symptoms to determine whether a customer will benefit by updating their LaserWriter 16/600 printer's IOP ROM.

DISCUSSION -----

NOTE:
PostScript ROMs are unaffected by this IOP upgrade. The PostScript ROMs in the LaserWriter 16/600 printer are unchanged; the current version is version 1.0, which is the same version that originally shipped with the printer.

Printer Not Available in Chooser

=====

The Apple LaserWriter 16/600 PS does not respond to Ethernet traffic. It can not be seen in the Chooser.

Restarting the printer temporarily resolves this problem. There are presently two shipping LaserWriter 16/600 PS IOP ROM versions, version 1.0 and 2.0. Recommend customers upgrade their LaserWriter 16/600 PS printer's IOP to v2.0. These ROM revisions are printed on the startup page, vertically on the right margin.

You can also use the Apple Printer Utility to check what version of the IOP ROM the LaserWriter has installed:

Step 1

Launch the Apple Printer Utility, select the zone in which the LaserWriter 16/600 is located, click to select the printer, click Open Printer.

Step 2

Click the arrow to the left of Printer Information, and note the version of the PostScript and IOP ROMs listed under ROM Revision. The I/O ROM should be 2.0.

Printer Available in Chooser

=====

The Apple LaserWriter 16/600 PS can be seen in the Chooser, but you cannot print to it.

Restarting the printer may temporarily resolve this issue, as will updating to v2.0 IOP ROM.

NOTE:

The printer may require another solution instead, as similar symptoms may be caused by some versions of printer drivers or routers. Follow the workarounds below if the two suggestions above do not address the symptoms.

* The symptom may be caused by earlier versions of the LaserWriter 8.x drivers. Upgrade to LaserWriter 8.2.2 or later driver software.

* Similar symptoms are caused by a Name Binding Protocol (NBP) gleaning problem in some routers, including Cisco routers and the Apple Internet Router 3.0. To work around this problem with Cisco routers, upgrade the Cisco software to v10.2 or later or turn NBP gleaning off. To work around this problem with an Apple Internet Router, update the Ethernet driver with Network Software Installer 1.5 or later. Both these routers induce the symptoms only under specific circumstances.

NOTE:

LaserWriter driver or gleaning problems are not specific to the LaserWriter 16/600 PS printer. Other printers or devices may also be affected.

Symptoms Occurring with Dayna PathFinder Routers

=====

The LaserWriter 16/600 PS is not visible on networks routed by Dayna PathFinder Routers.

This symptom is caused by the LaserWriter 16/600 PS booting with a source network of 1 and the PathFinder not asserting itself to tell the printer what network range it should be in (most likely a number other than 1). In turn, the PathFinder does not respond to the printer's request for zone information, resulting in devices not being able to locate the printer.

Other symptoms may occur when multiple routers exist in addition to the Dayna PathFinder (including not being able to locate the printer in the Chooser, not being able to open a connection with the Chooser, and receiving PostScript errors when printing). A network trace may reveal that the PathFinder is not responding to the printer's Zone Information Protocol/Get Net Info (ZIP GNIs).

These symptoms are addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

Slow Printing

=====

The LaserWriter 16/600 PS is slow when using Farallon PhoneNET Star Controllers.

When a LaserWriter 16/600 PS is connected to a Farallon PhoneNET StarController, print jobs sent to the printer take a long time to print (typical) or may fail (rare) with PostScript errors. The reason for this symptom is that the LaserWriter 16/600 PS begins transmitting prematurely after receiving the StarController's LocalTalk Link Access Protocol (LLAP) packet.

This symptom is addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

IOP Does Not Close Jobs Correctly

=====

The IOP does not close jobs correctly (that is, when a PostScript error is encountered) without an End of File (EOF) message; a second job following the first gets flushed by the PostScript interpreter (to the second job's EOF), so neither the first job having the error nor the second job prints. A third job will print fine.

This symptom is addressed in the v2.0 IOP ROM. Service Providers should replace the ROM.

LED Continues to Blink

=====

The Ready/In Use LED continues to blink for five minutes when spooling jobs from an AppleShare print server.

The LaserWriter 16/600 PS printer's Ready/In Use light will blink for five minutes following a print job spooled to it from an AppleShare Print Server, until the "wait timeout" timer actually times out. If the printer is released from within the print server, the blinking stops immediately. If jobs are sent directly to the printer, the printer stops blinking as soon as the job is printed. This symptom does not interfere with printing.

This cosmetic symptom is resolved by updating to the v2.0 IOP ROM.

Symptoms Not Associated with IOP ROM

=====

The following issue is unrelated to the IOP ROM: The LaserWriter 16/600 PS returns to the default zone after being turned on.

The configuration switch on the LaserWriter 16/600 PS must be in the up position if you want zone changes made with the Apple Printer Utility to be persistent

across power cycles.

NOTE:

The version v2.0 IOP ROM addresses only the symptoms listed in previous sections. If the LaserWriter 16/600 PS printer is experiencing other symptoms, follow standard troubleshooting procedures outlined on the Service Source CD-ROM (Path: Laser Printers, LaserWriter 16/600 PS, Troubleshooting). Service Source is only available to Apple Service Providers.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

12 Jan 1996 - Added information on how to check ROM version.

02 Oct 1995 - Reviewed for accuracy. Made minor grammatical corrections.

Support Information Services

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Tech Info Library Article Number:18452



Tech Info Library

Open Transport: Brief File Description (7/96)

Revised: 7/15/96
Security: Everyone

Open Transport: Brief File Description (7/96)

=====

Article Created: 22 August 1995
Article Reviewed/Updated: 15 July 1996

TOPIC -----

This article provides a brief description of Open Transport files and their functions. The following files are covered:

Open Tpt AppleTalk Library
Open Tpt ATalk 68K Library
Open Tpt Internet Library
Open Tpt Inet 68K Library
Open Transport Library
Open Transport 68K Library
OpenTptAppleTalkLib
OpenTptInternetLib
OpenTransportLib

Ethernet (built-in)
Serial (built-in)

AppleTalk
TCP/IP

AppleTalk Preferences
TCP/IP Preferences

Shared Library Manager
Shared Library Manager PPC

DISCUSSION -----

The following files contain code resources for Open Transport:

Open Tpt AppleTalk Library
Open Tpt ATalk 68K Library

Open Tpt Internet Library
Open Tpt Inet 68K Library
Open Transport Library
Open Transport 68K Library
OpenTptAppleTalkLib
OpenTptInternetLib
OpenTransportLib

The files with names that contain the word "AppleTalk" have code resources specific to AppleTalk. The files with names that contain the word "Internet" have code resources specific to TCP/IP. The files with names that do not contain the words "AppleTalk" or "Internet" contain code resources for Open Transport in general. If you do not want to run AppleTalk on a system, all you have to do is remove all the files with the word "AppleTalk" in the file name. If you do not want to run TCP/IP on a system, all you have to do is remove all the files with the word "Internet" in the file name.

OpenTransportLib and Open Transport Library are shared libraries that implement core Open Transport services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

OpenTptAppleTalkLib and Open Tpt AppleTalk Library are shared libraries that implement Open Transport AppleTalk protocols and services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

OpenTptInternetLib and Open Tpt Internet Library are shared libraries that implement Open Transport TCP/IP protocols and services on PowerPC Mac OS systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

Open Transport 68K Library is a shared library that implements core Open Transport on 680x0 systems.

Open Tpt ATalk 68K Library is a shared library that implements Open Transport AppleTalk protocols and services on 680x0 Mac OS systems.

Open Tpt Inet 68K Library is a shared library that implements Open Transport TCP/IP protocols and services on 680x0 Mac OS systems.

The "Ethernet (built-in)" and "Serial (built-in)" are files that contain code to make it possible to access the respective ports with Open Transport. If you do not want to use the built-in Ethernet port with Open Transport, you could remove the "Ethernet (built-in)" file. The same is true if you do not want to use the built-in serial ports with Open Transport; you would remove the "Serial (built-in)" file.

AppleTalk is the control panel application replacing the classic Network control panel.

TCP/IP is the control panel application replacing the classic MacTCP and

AdminTCP control panels.

The "AppleTalk Preferences" and "TCP/IP Preferences" contain the preferences for the AppleTalk and TCP/IP control panels.

Shared Library Manager and Shared Library Manager PPC are extensions that implement the Apple Shared Library Manager for 680x0 and PowerPC, respectively.

Article Change History:

15 Jul 1996 - Updated to reflect additional files in Open Transport 1.1

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Tech Info Library Article Number:18454



Tech Info Library

HyperStudio: Version and Support Information (2/96)

Revised: 2/27/96
Security: Everyone

HyperStudio: Version and Support Information (2/96)

=====
Article Created: 22 August 1995
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article contains version information for HyperStudio, and who to contact for technical support.

DISCUSSION -----

HyperStudio, is a HyperCard-based multimedia stack for the Macintosh, by Roger Wagner Publishing, which is included in certain Apple Education Bundles.

HyperStudio Versions
=====

- Version 1.0: Because this version is older, it may not be compatible with newer Macintosh computers. You should contact Roger Wagner Publishing for upgrade information.
- Version 2.0: The most recent 2.0 version of Hyperstudio is version 2.097. Version 2.092 is bundled with the Elementary and Secondary Reference Bundles in the Apple Education Series. This version will not run on computers connected to a network (localtalk or ethernet). Customers running earlier versions of 2.0 can upgrade to 2.097 by contacting Roger Wagner Publishing.
- Version 3.0: As of 26 February 1996, version 3.0 is the most recent version of Hyperstudio. It is bundled with Apple's Multimedia Learning Tools Bundle (for the Power Macintosh 5200 LC and Power Macintosh 5300 LC) in the Apple Education Series. 3.0 will not work on older Macintosh computers, including the Macintosh Classic, Macintosh Plus, Macintosh SE, or any other Macintosh computer (including Performa models) with a monochrome display.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for

additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

26 Feb 1996 - Added version information to discussion.

28 Sep 1995 - Added search help information.

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Tech Info Library Article Number:18456



Tech Info Library

Power Macintosh 9500: MacroMedia FreeHand 5.0 Needs Update 8/95

Revised: 8/22/95
Security: Everyone

Power Macintosh 9500: MacroMedia FreeHand 5.0 Needs Update 8/95

=====

Article Created: 22 August 1995

TOPIC -----

When I run MacroMedia FreeHand 5.0 on my Power Macintosh 9500, the Xtras do not load. How can I get these to run?

DISCUSSION -----

You need to update to version FreeHand 5.0.2, which specifically addresses this issue. MacroMedia has separate updaters from 5.0 to 5.0.1, and from 5.0.1 to 5.0.2, so you need to update FreeHand 5.0 with both. Contact MacroMedia for update information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18459



Tech Info Library

Open Transport Patch 1.0.1/1.0.7: Which File Is Updated (10/95)

Revised: 10/3/95
Security: Everyone

Open Transport Patch 1.0.1/1.0.7: Which File Is Updated (10/95)

=====

Article Created: 22 August 1995
Article Reviewed/Updated: 3 October 1995

TOPIC -----

After applying either the Open Transport (OT) Patch 1.0.1, or Patch 1.0.7, the info dialog box on selected Open Transport files will not be updated from Open Transport 1.0 or 1.0.6. Why hasn't the version number changed and how can I tell which version I have?

DISCUSSION -----

Open Transport 1.0.1 Patch

The Open Transport Patch 1.0.1 patches the Open Tpt Internet Library file located in the System Extensions folder, and does not update the version of either the AppleTalk, or TCP/IP control panel. To see if the patch has been applied, single click on the Open Tpt Internet Library file and select the Get Info command from the File menu.

Open Transport 1.0.7 Patch

The Open Transport 1.0.7 Patch Read Me file states: "When successfully completed, the Open Transport Internet Library and the TCP/IP Control Panel will have been updated to Open Transport version 1.0.7. All other components of Open Transport will remain at version 1.0.6."

After applying the Open Transport 1.0.7 Patch, selecting the Get Info command from the File menu on the files below will report the this version information:

- TCP/IP control panel reports: Open Transport 1.0.6, TCP/IP 1.0.7
- Open Tpt Internet Library reports: version 1.0.7

Open Transport stays at version 1.0.6, only the versions of the TCP/IP control panel and the Open Tpt Internet Library change to version 1.0.7.

Article Change History:

03 Oct 1995 - Added Open Transport 1.0.7.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18460



Tech Info Library

PowerBook 5300 Series: Read Me File (4/97)

Revised: 4/29/97
Security: Everyone

PowerBook 5300 Series: Read Me File (4/97)

=====

Article Created: 23 August 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

The following is the ReadMe file for the PowerBook 5300 Series computers.

DISCUSSION -----

Important Information About Your Macintosh PowerBook 5300 Series Computer

Congratulations on purchasing your Macintosh PowerBook 5300 series computer. This document adds to and updates the information in the manuals that came with your computer. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

Contents
=====

Tips

- Charging your battery
- Using the Battery Monitor in the Control Strip
- Using the trackpad
- Using a modem
- Using expansion bay modules
- Using PC Cards
- Using a DOS-formatted PC Card
- Using your PowerBook in SCSI disk mode
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Troubleshooting

- Problems starting your PowerBook
- Resetting the parameter RAM (PRAM)
- Using Drive Setup
- Using Acrobat Reader after installing QuickDraw GX
- Using Apple Remote Access
- Incorrect Guide File Balloons
- Using a DigiSign Signature Card with PowerTalk
- AppleShare Displays Incorrect Information for Large Drives
- AppleShare Server Software Version 4.1
- Application Programs Using Sound
- Using QuickDraw GX with a Fax Modem
- Using PowerTalk and PowerTalk Direct Dialup Mail
- Using the Japanese or Chinese Language Kit

Important Information About Virtual Memory

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Tips

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Charging your battery

=====

You should connect the power adapter to your computer and let the battery charge overnight when you first unpack your computer. (The battery may have been depleted between the time it was charged at the factory and the time you purchased the computer.)

Using the Battery Monitor in the Control Strip

=====

- The estimated time remaining that is displayed in the Battery Monitor portion of the Control Strip depends on the charge remaining and the battery consumption rate. The battery consumption rate depends on the software and hardware features you are using.
- The battery icon in the Battery Monitor portion of the Control Strip may show the battery as charging even after the PowerBook has been plugged in for a while. This is normal for Lithium Ion (Li+) batteries.

Using the trackpad

=====

If the trackpad seems unresponsive, try the following in the order listed:

Step 1

Put your PowerBook to sleep (by closing the display) and then wake it up (by pressing any key on the keyboard).

Step 2

Press the reset button on the back of the computer.

Step 3

Reset the parameter RAM (PRAM) (see the section in Troubleshooting below for instructions).

Step 4

Attach an external mouse.

Using a modem

=====

- To improve modem performance, turn off LocalTalk in the Network control panel.
- Modem connection files for various PC Card modems that will work with Apple Remote Access (ARA) are included on your computer's hard disk. If a file for your modem is not included, please contact your communications software manufacturer to see if your modem is supported. See the user's manual that came with your computer for more information on using PC Card modems.
- When accessing the Internet using the InterSLIP protocol, use the 14.4K baud rate rather than the 28.8K baud rate for better performance. The actual throughput at 14.4K baud is higher than at 28.8K baud.

Using expansion bay modules

=====

Never remove a floppy disk from the expansion bay module while the PowerBook is in sleep. You may damage the disk or lose data.

Using PC Cards

=====

- For best results, purchase only cards that have been qualified for use on a Macintosh computer. If you are in the United States, you can receive a faxed list of currently available PC Cards by calling 1-800-462-4396 and requesting document 10307. You can call this number anytime. In Canada, call 1-800-263-3394 and request document 10307. Outside the United States and Canada, please consult your Apple-authorized dealer.
- Don't use an SRAM storage card as a startup disk on your PowerBook. Use SRAM cards for extra storage only.
- If you are using a mass storage PC Card, you can only eject the card using the eject buttons when the computer is shut down. The eject buttons will not work with storage PC Cards when the computer is turned on.
- Never eject a PC Card manually (with a paper clip) while the PowerBook is in sleep. You may damage the card or lose data.

Using a DOS-formatted PC Card

=====

If your PowerBook has the Macintosh PC Exchange control panel installed and PC

Exchange is turned on, you can use a PC Card that has been pre-formatted in a DOS format in your PowerBook. However, you cannot start up your computer using the DOS-formatted PC Card; you can only start up your computer using a Mac OS-formatted PC Card. If you want to reformat your DOS-formatted PC Card as a Mac OS-formatted PC Card, you need to turn PC Exchange off, and then format the card as you would any non-Mac OS-formatted disk. Follow these steps:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Open the PC Exchange control panel.

Step 3

Click the Off button and close the PC Exchange control panel.

Step 4

Insert your PC Card. A window appears asking if you want to initialize (format) the disk.

Step 5

Click Initialize to format the PC Card. Once the PC Card is reformatted, you can turn Macintosh PC Exchange back on in the PC Exchange control panel.

You cannot reformat a Mac OS-formatted PC Card as a DOS-formatted PC Card with PC Exchange. To do so, you need to use a DOS/Windows computer with PC Card capabilities.

Using your PowerBook in SCSI disk mode

=====

- Using Norton Utilities Speed Disk or Disk Doctor from a desktop computer on your PowerBook while it is in SCSI disk mode may cause the desktop computer to crash or freeze. To avoid this problem, create an emergency startup floppy disk using Norton Utilities and then use that disk to startup your PowerBook.
- You cannot use password protection on your PowerBook while the PowerBook is in SCSI disk mode. Turn off password protection in the Password Security control panel before connecting your PowerBook in SCSI disk mode.

Using Apple IR File Exchange

=====

Apple IR File Exchange provides a very simple way to exchange files with another IR-equipped Macintosh user.

- If you use Apple IR File Exchange with a computer that is equipped with a third-party IR device and is also connected to a wired network (for example, a LocalTalk or Ethernet network), you may see other Apple IR File Exchange users that are beyond your local IR network. If you want to prevent this from

happening, select IRTalk in the Network control panel on the computer that is connected to the wired network. (This will have the effect of disconnecting that computer from the wired network. See the manufacturer's manual for more details.)

- If you see a dialog box telling you there is a broken connection, make sure that both you and the other Apple IR File Exchange user select the same option (either "break connection" or "continue"). If the other user breaks the connection and you try to continue, your computer may appear to hang for 2 minutes while it tries unsuccessfully to reestablish the connection.
- When you select IRTalk in the Network control panel, your computer chooses a random network address. Occasionally, you may come within range of another computer using the same network address and experience difficulty communicating with it.

When this occurs, you'll see a dialog box telling you that a duplicate AppleTalk address has been detected. Click OK in the dialog box, then open the Network control panel and select IRTalk again. This will give your computer a new network address and will correct the problem. (Alternately, you can activate and inactivate AppleTalk from the Control Strip or the Chooser.)

Using the Password Security Control Panel

=====

The Password Security control panel provides security for information stored on your hard disk. To use this feature, you must enter a password and turn it on. If you forget or lose your password, you will not be able to access your hard disk. Should you lose your password, you may be charged for assistance.

You cannot use your PowerBook in SCSI disk mode with password protection turned on in the Password Security control panel. You must turn it off before using your PowerBook in SCSI disk mode.

Information stored on PC Cards is not protected by password security. Password security is designed to prevent casual access to your hard drive. It does not provide encryption.

Printing

=====

If you are printing on a network printer, make sure you have the same version of printer software as others on the network. If you are using a StyleWriter II on a network, make sure you use the StyleWriter 2.0 printer driver. (Printer drivers are found in the Extensions folder).

=====

Troubleshooting

=====

Problems starting your PowerBook

=====

If you have problems starting your PowerBook immediately after you shut it down

(for instance, you see the "Sad Mac" icon on the screen), wait several seconds after shutting down, and then press the Power key to turn the computer on again.

Resetting the parameter RAM (PRAM)

=====

When you need to reset (or "zap") your PowerBook's PRAM, follow the steps below. Note that resetting the PRAM erases the contents of your RAM disk, if you have one. Resetting the PRAM also restores the default settings in most control panels. After you reset the PRAM, be sure to check any custom settings you made for the desktop pattern, memory, network, AppleTalk, trackpad, power conservation, and so forth. Resetting the PRAM also resets the power manager. Follow these steps to reset the PRAM:

Step 1

Locate the keys Command, Option, P, and R.

Step 2

Make sure the Caps Lock key is not down.

Step 3

Restart your Macintosh. Immediately after hearing the startup sound, press the Command, Option, P, and R keys simultaneously. If you don't hold down the key combination within 5-10 seconds after you restart, you may need to repeat steps 1-3.

Step 4

Hold down the keys until you hear the startup sound. Then release the keys.

Step 5

If the computer shuts itself off, press the Reset key on the back of your computer to turn it back on. 6. When the computer has finished starting up, you may need to restore control panel settings as well as network and printer settings in the Chooser.

Using Drive Setup

=====

Make sure you only use the Drive Setup application program that comes with your PowerBook to update and partition hard disks. If you use an earlier version of Drive Setup (called HDSC Setup) you could damage your computer.

Using Acrobat Reader after installing QuickDraw GX

=====

Once you install QuickDraw GX, you need to reinstall Acrobat Reader on your computer in order to use it. Double-click the Acrobat Reader Installer icon in the Adobe Acrobat Reader folder (inside the Applications folder).

Using Apple Remote Access

=====

Make sure you use only Apple Remote Access Client version 2.0.1 on your PowerBook. Earlier versions will not work.

Incorrect Guide File Balloons

=====

Your system software includes Apple Guide documents which provide on-screen instructions and other information to help you use your computer. However, if you turn on Balloon Help (by choosing Show Balloons from the Guide menu) and point to a Guide file icon on the hard disk, the balloon may give you the wrong information about where the file belongs or what you can do with it. To avoid being misled by incorrect balloons, follow the guidelines below:

- Leave Guide files where they are. Some Guide files (for example, the Guide file named "Macintosh Guide") belong in the Extensions folder. Others will not work if they are put into the Extensions folder.
- Keep application programs that have Guide files in the same folder as the Guide file. For example, keep the file named "File Assistant Guide" in the same folder as the File Assistant program. If you move a Guide file that belongs with an application program, you won't be able to get help while using the program.

Using a DigiSign Signature Card with PowerTalk

=====

To use the Apple DigiSign Utility with PowerTalk, follow these steps:

Step 1

Turn off processor cycling in the PowerBook control panel. To see the option for processor cycling, hold down the option key while you select Custom in the PowerBook control panel.

Step 2

Follow the steps for creating a Signer file. If you need help, select "How do I obtain a valid Signer file?" in the Digital Signatures topic of the PowerTalk Guide.

Step 3

Turn processor cycling back on in the PowerBook control panel.

AppleShare displays incorrect information for large drives

=====

If you use file sharing to connect to a disk attached to another computer, and the shared disk is larger than 2 gigabytes (GB), the Get Info box for that disk shows an incorrect size. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

AppleShare Server software version 4.1

=====

If you purchase AppleShare server software version 4.1, make sure to choose Custom Install (instead of Easy Install) when you install it.

NOTE: This note is not part of the original Read Me, it is being added to correct information presented here. AppleShare 4.1 or later is not sold separately and is available when purchasing a Workgroup Server. Also AppleShare v 4.1 or 4.2 is not supported on these computers.

Application programs using sound

=====

If you have application programs that make extensive use of sound, you should turn off virtual memory while using those programs. When virtual memory is turned on, it can compromise the programs' sound quality.

Some older versions of programs, especially games, may generate sounds that seem too slow or too fast. For best results with these programs, open the Sound control panel, choose Sound Out from the pop-up menu, and set the sample rate to 22.050 kHz.

Using QuickDraw GX with a fax modem

=====

If you installed QuickDraw GX and you have a fax modem, you need a QuickDraw GX modem driver in order to send faxes. Contact the fax software manufacturer to obtain the QuickDraw GX driver.

If you have installed QuickDraw GX and do not yet have the QuickDraw GX modem driver, you can temporarily turn off QuickDraw GX and use your previous fax modem driver. To turn off QuickDraw GX:

Step 1

Hold down the Space bar while you choose Restart from the Special menu to restart your PowerBook. Continue to hold down the Space bar until the Extensions Manager appears on the screen.

Step 2

Click the QuickDraw GX extension to remove the check beside it. This prevents the QuickDraw GX software from loading.

Step 3

Click the close box in the Extensions Manager window to resume startup. Your fax modem should work normally. You won't be able to use any QuickDraw GX features until you turn the extension back on again.

Using PowerTalk and PowerTalk Direct Dialup Mail

=====

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Using the Japanese or Chinese Language Kit

=====

Before you install the Japanese or Chinese Language Kit software, you need to install World Script. Follow these steps:

Step 1

Double-click the Apple Extras folder to open it.

Step 2

Double-click the World Script Install folder to open it.

Step 3

Double-click the World Script Installer icon. Follow the instructions on the screen.

Step 4

Follow the instructions that came with the language kit to install the language kit software.

=====

Important Information About Virtual Memory

=====

Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory may help you avoid running out of memory.

Your computer comes with virtual memory turned on. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems using certain programs, you may want to turn off virtual memory. You may also want to turn virtual memory off from time to time to extend work time while using the battery. You can turn virtual memory on and off in the Memory control panel. For specific information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. Then click "How do I use hard disk space as memory?" and "How do I manage Power Macintosh memory?"

For best performance, try setting virtual memory to no more than 150% of the amount of physical memory (RAM), or no more than 50% of your currently available hard disk space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory

to a maximum of 24 MB (150% of 16, which is less than 50% of 50).

Note: You cannot set virtual memory to more than 1024 MB, even if you have 1 gigabyte or more available space on your hard disk.

To improve performance, you can also add physical memory (RAM) to your computer. See the user's manual that came with your computer for more information.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

18 Dec 1995 - Added correction to AppleShare section.

25 Aug 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18461



Tech Info Library

Plaintalk 1.4.1: Can't Install Recognition on 8-bit Mac (9/95)

Revised: 9/1/95
Security: Everyone

Plaintalk 1.4.1: Can't Install Recognition on 8-bit Mac (9/95)

=====

Article Created: 23 August 1995
Article Review/Updated: 1 September 1995

TOPIC -----

When I try to install English Speech Recognition (ESR) on my Performa 5200 or Performa 6200 series computer, I get an error message stating that "English Speech Recognition requires 16-bit sound input. It cannot be used on this Macintosh."

DISCUSSION -----

First, make sure that your computer supports 16-bit sound input:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is grayed out, you only have 8-bit input, and English Speech Recognition will not work.

If 16-bit is not grayed out, make sure there is a dot in the radio button next to it.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

Now you can follow these steps to override the error message and install the ESR software:

Step 1

Restart your Macintosh computer, hold down the shift key on the keyboard until you get the message "Welcome to Macintosh, Extensions Off" screen.

Step 2

Open the ESR 1.4.1 installer either from the floppy disk or the folder you downloaded, ignore the error message you saw before.

Step 3

Select "Custom Install" from the "Easy Install" pull down menu. Make sure the check-box next to "English Speech Recognition Software" has an X in it, then click on the Install button in the bottom right hand side of the window.

Step 4

Restart your Macintosh computer. Plaintalk is ready to use.

Step 5

Under the Apple Menu, choose Control Panels. Click on the button with the question mark on the yellow background to go through an Introduction to Speech Recognition.

Article Change History:

01 Sep 1995 - Modified to include Performa 5200 series.

Support Information Services

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Tech Info Library Article Number:18463



Tech Info Library

AppleShare 4.1 and Apple Internet Router 3.0.1 Issue (8/95)

Revised: 8/23/95
Security: Everyone

AppleShare 4.1 and Apple Internet Router 3.0.1 Issue (8/95)

=====

Article Created: 23 August 1995

TOPIC -----

Since installing Apple Internet Router 3.0.1 software on an Apple Workgroup Server, AppleShare 4.1 fails to launch with the this error message, "coprocessor not installed error".

DISCUSSION -----

AppleShare 4.1 uses a more recent version of the Apple Shared Library Manager (ASLM) than what is installed by the Internet Router.

Apple Internet Router 3.0.1 installs Shared Library Manager 1.0. While AppleShare 4.1 needs Shared Library Manager 1.1.2 or higher.

The issue can be resolved by performing a custom install of AppleShare 4.1 and selecting Shared Library Manager.

Support Information Services

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Tech Info Library Article Number:18464



Tech Info Library

Open Transport 1.0.6: MacPPP 2.2.0 & SLIP/PPP Products (10/95)

Revised: 2/13/96
Security: Everyone

Open Transport 1.0.6: MacPPP 2.2.0 & SLIP/PPP Products (10/95)

Article Created: 24 August 1995
Article Reviewed/Updated: 5 October 1995

TOPIC -----

I've installed MacPPP 2.2.0 on my Power Macintosh which came with Open Transport 1.0.6 installed, but MacPPP 2.2.0 does not work. Are there other SLIP or PPP products that work with Open Transport 1.0.6? If there are products, please provide a list of those that do work.

DISCUSSION -----

Open Transport 1.0.7 supports the following MacTCP Link Access Modules (mdevs), with these known caveats.

InterSLIP

Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.

InterPPP

Use version 1.2.9 or more recent; may crash when receiving a large graphic file via HTML readers.

InterPPP II

Use the most current version.

MacSLIP

Use version 2.0.6 or more recent. "Connect at System Startup" does not work.

MacPPP

Use version 2.1.1SD or 2.1.2SD. The MacPPP "Open" button does not work; open a

connection by opening a TCP/IP application. Due to technical differences between the Open Transport and "classic" networking architectures, existing mdevs used with Open Transport cannot auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application; manual connections are supported. Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different SLIP or PPP mdev requires restarting the Macintosh. Power Macintosh 9500 users are strongly encouraged to update older versions of Open Transport to v1.0.7 for improved compatibility. Apple is working with developers to better support existing mdevs. Contact the third party developer of interest for the most recent information on compatibility.

FreePPP

Is a derivative of MacPPP 2.0.1 which provides enhanced support for Open Transport. FreePPP is not an official Merit release, and its name has been changed to avoid confusion with all MacPPP derivatives. It requires System 7.1 or later and a Macintosh that supports Color QuickDraw.

Due to technical differences between the Open Transport and "classic" networking architectures, existing mdevs used with Open Transport cannot auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application; manual connections are supported. Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different SLIP or PPP mdev requires restarting the Macintosh.

Power Macintosh 9500 users are strongly encouraged to update older versions of Open Transport to v1.0.6 for improved compatibility. Apple is working with developers to better support existing mdevs. Contact the third-party developer of interest for the most recent information on compatibility.

Applying the Open Transport 1.0.6 to 1.0.7 patch changes this information somewhat. With MacPPP 2.1.2SD, it is now possible to use the "Open" button to start a connection. MacPPP 2.1.2SD is the version we recommend using at this time. We do not recommend using any of the MacPPP 2.2.0x versions.

Here is an excerpt from the "Open Tpt 1.0.7 Patch Read Me":

- SLIP/PPP Configuration Change

When using SLIP or PPP over Open Transport 1.0.7, either with Manual or BOOTP configuration mode, you are no longer required to configure a Router address or a Subnet Mask. When these are not manually configured, they will be generated automatically based on the IP address assigned by the SLIP/PPP server or by the BOOTP server.

In general, it is recommended that these fields be left blank when using SLIP or PPP unless your network manager has specified otherwise. If you do manually configure these items, you must enter a Subnet Mask that places your Router's IP address and your own assigned IP address on the same subnet. If these two addresses are on different subnets, you won't be able to send data to remote hosts.

- Improved SLIP/PPP Performance

SLIP/PPP throughput performance has been improved by changing the interrupt level at which inbound SLIP/PPP data is processed.

- Networks with more than 256 Zones

The TCP/IP control panel now works correctly with networks having more than 256 zones. Previous versions of the control panel sometimes crashed when selecting a zone on a network with more than 256 zones.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

These articles can help you locate the Open Transport 1.0.6 to 1.0.7 patch mentioned in this article:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

05 Oct 1995 - Updated article with new information, and added FreePPP.

Support Information Services

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Tech Info Library Article Number:18467



Tech Info Library

Universal Network Access Disk (8/95)

Revised: 8/24/95
Security: Everyone

Universal Network Access Disk (8/95)

Article Created: 24 August 1995

TOPIC -----

Is there an updated Universal Network Startup disk that will start up a Power Macintosh 7100/80? Is it technically possible and if so, will we see one anytime soon?

DISCUSSION -----

With the advent of System 7.1, it became impossible to build a start up floppy disk with System 7.1 for any machine, because of the enablers for every new machine. If you wanted something like AppleShare client and Ethernet capability on the floppy, you might be able to build one for a single machine, depending on the size of the enabler for that one machine.

System 7.5 unified all the commonality of every enabler and integrated the functionality into the System file itself. Thus, when System 7.5 was released it became possible to build, through the installer, an enabler-less, start up floppy. Squeezing the associated AppleShare and Ethernet files onto the disk was still a problem.

At that time engineering created the Network Access Disk, 7.5NAD. This was done by some custom trimming of the System file to remove as many resources as possible and compressing some remaining resources. This trimming left the System file still over 1 MB in size, but it freed space for four key files -- the Network control panel, Ethernet driver, Chooser, and AppleShare client -- with just 10 KB to spare.

With the release of the Power Macintosh 7100/80, 8100/100, and 8100/110 computers the first enablers, for System 7.5, appeared to support these systems. PCI-based Power Macintosh computers brought yet again, another enabler to support these systems. We are again heading to where we were before, with System 7.1, the need for enablers. System 7.5.x will have a growth in the number of enablers as more computers are released. The enabler for new computers will not fit on the 7.5NAD floppy based system.

When there is another unifying Mac OS release, the enabler functionality may be reincorporated into the System file again. Then it will take another effort to customize the minimum resources in the System file to allow the key network and sharing access files to also fit on a floppy disk.

Looking at the direction of the Mac OS with Open Transport, the key pieces needed to fit on the floppy now start to include Apple Shared Library Manager and associated files plus new control panels. The task, of a Network Access Disk to support Open Transport, now starts to look pretty daunting.

We may never see another universal floppy disk to start up the entire Macintosh product line. To support both 680x0 Macintosh and Power Macintosh, with NuBus or PCI, may involve a compromise using a couple disks or more, with each disk being one that addresses a subset of all Macintosh computers.

The existing Network Access Disk now supports the first generation Power Macintosh and earlier systems. Later systems (those requiring system enablers) have no comparable choice as of this writing. The best suggestion for starting up an "emergency" system on these later systems, with networking and AppleShare access, is the start up CD-ROM that comes with each system.

Support Information Services

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Tech Info Library Article Number:18468



Tech Info Library

AppleVision 1710 Display: Only Resolution is 640x480 (1/97)

Revised: 1/29/97
Security: Everyone

AppleVision 1710 Display: Only Resolution is 640x480 (1/97)

=====

Article Created: 24 August 1995
Article Reviewed/Updated: 28 January 1997

TOPIC -----

I have connected my AppleVision 1710 display to the onboard video on my Power Macintosh 7500/100. The only available resolution is 640x480. In addition, the sound controls do not seem to work. I can adjust the volume and tone, but I do not see the changes represented on the control strip modules. The speaker and microphone cables from the monitor are connected to the corresponding ports on the Power Macintosh. I am not using the ADB connector for the monitor because I wanted to connect the keyboard directly to my Macintosh computer.

DISCUSSION -----

The AppleVision Display software uses the ADB cable to sense what kind of monitor is connected to the computer. If the integrated ADB/video cable is not used, then as you have mentioned, the only resolution available is 640x480 and the speaker controls on the front of the monitor will not bring up their corresponding control strip modules. The volume and tone buttons work, but you do not see the levels on your monitor control strip.

If the AppleVision 1710AV Display, or AppleVision 1710 Display is connected without the ADB connector to a Macintosh previously using a display at a resolution higher than 640x480, the monitor displays the higher resolution during the startup process. However, when the desktop displays the resolution resets to 640x480 and does not offer you the ability to change the resolution. To correct this, use the integrated ADB/video cable and restart your Macintosh.

If you are still only getting the 640 x 480 resolution, follow the troubleshooting steps below.

Troubleshooting Steps
=====

Step 1

Verify that all cables are securely connected.

Step 2

Verify the AppleVision extension is installed and loading at startup.

Step 3

Delete the preferences for the Finder and one or more of the following;

- Sounds & Displays prefs
- Monitors & Sound prefs
- Monitors
- Sound Preferences

Depending on the computer and version of Mac OS installed you will find one or more of these preference files in your Preference folder, which is located inside your System folder).

Step 4

Remove the existing AudioVision software and reinstall it.

Article Change History:

- 29 Jan 1997 - Added AppleVision to discussion, and revised pref files.
- 04 Jan 1996 - Added additional troubleshooting steps.
- 21 Dec 1995 - Changed the title to match the monitor name.

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Tech Info Library Article Number:18469



Tech Info Library

Modem Initialization Strings for MacPPP Access (10/96)

Revised: 4/21/97
Security: Everyone

Modem Initialization Strings for MacPPP Access (10/96)

Article Created: 24 August 1995
Article Reviewed/Updated: 2 October 1996

TOPIC -----

This article lists some modem initialization strings for MacPPP using point-to-point protocol (PPP) access. This article does not have initialization strings for every modem, only those which the modem vendor provided to Apple.

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

DISCUSSION -----

MacPPP ships with Apple Internet Connection Kit (AICK) and requires you to know your modem's initialization string. Many initialization strings are listed in the AICK setup, however, if your modem is not listed, you should consult your modem manual, or contact your modem vendor, or check with your Internet Service Provider.

Begin_Table

Name of Modem -----	Flow Control	Speed -----
Accex 1414 v.32bis AT&F&D0\N3\Q3	CTS&RTS (DTR)	14400
Apple Express Modem (PowerBook) AT&F\N3	CTS&RTS (DTR)	14400
AT%C1\N3	CTS&RTS (DTR)	14400
AT&F\N3&K3		
AT\G1\X1		

Apple GeoPort Modem

AT&F\N3

Applied Engineering Datalink 14

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&C1&K0

AT&T DataPort 14.4

AT\N7%C1&C1&D0\Q3

CTS&RTS (DTR) 14400

AT&F&D0

AT&F&D0\Q0%C0

AT&T DataPort 14.4

AT\N7%C1&C1&D0\Q3

CTS&RTS (DTR) 14400

AT&F&C1&D0

AT&F&C1&D0\Q0%C0

Best Data Smart One 14.4

AT&Q5%C1&D0&K0

CTS&RTS (DTR) 14400

AT&F&C1

AT&F&D0&K3

Boca 14.4Kbps v.32bis

AT&F&C1\N3

CTS&RTS (DTR) 14400

AT&F&D0&K3

Boca 288MV28K Series

AT&F&C1\N3

CTS&RTS (DTR) 57600

AT&F\N3

Boca Research V.32bis

AT&Q5%C1&C1&D0&K3

Cardinal 14.4

AT&F&C1&D0&Q5

CTS&RTS (DTR) 14400

AT&F&C1&D0&K0&Q5%C0

None

Cardinal 28.8

AT&F&C1&D0&Q5

CTS&RTS (DTR) 57600

AT&F&C1&D0&K0&Q5%C0

None

Compudyne 1442F

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&C0

CPC Turbo Modem+

AT\N6%C1&C1&D0\Q3\V1

Data Race Apex V.32/V.32bis

AT\N7%C1&C1&D0\Q3

Data Race APL 1496

..TIL18470-Modem_Initialization_Strings_for_MacPPP_Access_10-96.pdf

AT\N7%C1&C1&D0\Q3

Digicom Eagle 9600/Scout

AT&F&D0	None	9600
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AT&F

Digicom Eagle 9600/Scout

AT&F&D0	None	9600
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AT&F*F3&D0

Focus 14.4

AT&Q5%C1&C1&D0&K3S36=7	CTS&RTS (DTR)	14400
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AT&F&D0	CTS&RTS (DTR)	14400
---------	---------------	-------

Global Village PowerPort Gold/Silver

AT&F1\Q3	CTS&RTS (DTR)	14400
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AT&F1&C1&D0	CTS&RTS (DTR)	14400
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AT&F&D0\Q3

Global Village PowerPort Mercury

AT\F1	None	9600
-------	------	------

AT&F\N3	None	9600
---------	------	------

AT&F&D0\N1

Global Village PowerPort/Teleport

AT&F1%C1&K3	CTS&RTS (DTR)	57600
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AT&F1S95=1	CTS&RTS (DTR)	57600
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AT&F&D0\N3&K3&Q5

Global Village PowerPort Gold/Silver

AT&F1\Q3	CTS&RTS (DTR)	14400
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AT&F1&C1&D0\N3%C0	CTS&RTS (DTR)	14400
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AT&F&D0\Q3

Global Village PowerPort/Teleport Gold

AT&F1%C1W1	CTS&RTS (DTR)	14400
------------	---------------	-------

AT&F&K3\N3\Q3	CTS&RTS (DTR)	14400
---------------	---------------	-------

AT&F&D0&K3

Global Village PowerPort/Teleport Gold IIv

AT&F1&K3	CTS&RTS (DTR)	14400
----------	---------------	-------

AT&F&C1	CTS&RTS (DTR)	14400
---------	---------------	-------

AT&F&K3&D0\N0

Global Village PowerPort/Teleport Silver

AT&F1&K3	None	9600
----------	------	------

AT&F1\Q0%C0	None	9600
-------------	------	------

AT&F&D0&K3

Global Village PowerPort/Teleport Platinum

AT&F1%C1&K3	CTS&RTS (DTR)	28800
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AT&F1W1S95=44	CTS Only	28800
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AT&F&D0\N3&K3&Q5

Global Village Bronze

AT&F&D0 ? 6/27/95

GVC 14.4 v.32bis

AT&F&D0\N3

CTS&RTS (DTR) 14400

AT&F&D0%C0\Q0\N3

AT\N6%C1X4&C1&D0\G0\J0\Q3\V1

GVC 288 Fax Modem

AT&F&D0

CTS&RTS (DTR) 57600

AT&F&D0%C0\Q0

Hayes Accura 144

AT&F

None 9600

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&D0&K3&Q5S48=7S36=7

Hayes Accura 28.8

AT&F&C1

CTS&RTS (DTR) 28800

AT&F&C1&K0

Hayes Optima 14400 v.32bis

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&&D0&C1

AT&F&D0&K3&Q5S48=7S36=7

Hayes Optima 28800

AT&F&D0

CTS&RTS (DTR) 57600

AT&F&C1

CTS&RTS (DTR) 57600

AT&F&D0

Hayes V-Series Ultra 9600

AT&Q5S36=7&C1&D0&K3

CTS&RTS (DTR) 14400

AT&F&D0

CTS&RTS (DTR) 14400

Intel 14.4 EX

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0\Q3

AT\N3%C1&C1&D0\Q3

Intel 96EX

AT\N3%C1&C1&D0\Q3

Line Link 14.4E

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&C1\N3

CTS&RTS (DTR) 14400

AT&F&C1&D0

Macintosh Express Modem (comm slot)

AT&F\N3&D3&Q5

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Macronix

ATS36=7&Q5%C1&C1&D0&K3

Macronix MaxLite 14.4

AT&F&C1&Q9\N3

CTS&RTS (DTR) 14400

AT&F&Q9\N3

Magic 14.4 V.32bis

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&D0&C1

Magnum 14.4

AT&F0

None 14400

Magnum 288 Fax/Modem

AT&F0

CTS&RTS (DTR) 57600

AT&F&D0&K3

Megahertz 14400/P2144

AT&F&C1&D0

None 9600

AT&F&D0&K3

Megahertz A2144

AT&F&C1&D0\N3

None 14400

AT&F&D0&K0%C0\N3

MegaHertz V.32bis

ATS36=7&Q5%C1&C1&D0&K3

Microcom Desk Porte

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0&K3

CTS&RTS (DTR) 14400

Microcom Deskporte 28.8

AT&F&C1&D0

CTS&RTS (DTR) 28800

AT&F&D0\Q3

Microcom Deskporte 288 EP

AT&F&D0

CTS&RTS (DTR) 28800

Microcom Desk Porte/QX/4232 bis

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0\Q3

Microcom QX/V.32c

AT&Q5%C3&C1&D0\J0\Q3

Microcom Travelporte 288 Fast

AT&F&D0

CTS&RTS (DTR) 28800

Motorola UDS CELlect 14.4

AT&F&C1\N3\Q3

RTS (DTR)Only 14400

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Motorola UDS Codex 3260 AT&F&C1*FL3	None	9600
Motorola UDS Codex 3261 AT&F&C1*FL3	None	9600
Motorola UDS Codex 3265 AT&F&C1*FL3	None	9600
Motorola UDS Fastalk V.32 bx/V.3225 AT&F&C1\N3\Q3 AT\N3%C1&C1&D0\G0\J0\V1\Q3	CTS&RTS (DTR)	14400
Motorola UDS V.3225L/3229L AT&F&C1\Q3 AT&F&D0\Q3 AT&F&D0&C1\Q3	CTS&RTS (DTR)	28800
Multitech MT 932 series AT&F&D0&E4	None	9600
Multitech MT1432 Series AT&F&D0&Q1&E11 AT&F&D0&E11 AT&F&D0&E4&E13	CTS&RTS (DTR) CTS&RTS (DTR)	14400 14400
Multitech MT1432 ZDX AT&F&D0 AT&F&D0&E4&E13	CTS&RTS (DTR)	14400
Multitech MT2834 Series AT&F0 AT&F&D0&E11 AT&F&D0&E3&E14	CTS&RTS (DTR) CTS&RTS (DTR)	57600 57600
Multitech Multimodem 2 Series AT&E1&E15&C1&D0&E4\$BA0 AT&F&D0&E4 AT&F&D0&E14&E3	CTS&RTS (DTR) CTS&RTS (DTR)	14400 14400
MultiTech Multimodem 224E/V.32 AT&E1&E15&C1&D0&E4\$BA0		
NEC 9635 E AT&F&C1\Q3 AT&F&C1\Q0%C0	CTS&RTS (DTR)	14400
Phoebe V.34 AT&F1		
PowerUser 14.4E AT&F&C1 AT&F%C0&K0\N3	CTS&RTS (DTR)	14400

Practical Peripheral MC144MT II		
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&D0&K0		
Practical Peripherals 14400FXMT		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&D0&K3		
Practical Peripherals 14400FXSA		
AT&F&C1S37=9N0	None	9600
AT&F&C1	None	9600
AT&F&C1&K0		
Practical Peripherals 9600SA		
AT&F&C1	None	9600
AT&F&C1&K0		
ATS36=7&Q5&C1&D&K3		
Practical Peripherals MC28		
AT&K3&D0&C1	CTS&RTS (DTR)	57600
AT&F1&D0		
Practical Peripherals MC288MT		
AT&F3	CTS&RTS (DTR)	57600
AT&F1&D0		
Practical Peripherals PM288MT		
AT&F3	CTS&RTS (DTR)	57600
AT&F1&D0		
Prometheus Home Office 14.4		
AT\N3%C1&C1&D0\J0\V1\Q3	CTS&RTS (DTR)	14400
AT&C1&D0*E1*F3*S1		
Prometheus Pro Modem Ultima		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&D0&K0%C0		
Prometheus Promodem 144		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&C1\N3	CTS&RTS (DTR)	57600
Prometheus Ultima/Home Office		
AT\N3%C1&C1&D0\J0\V1\Q3		
Prometheus Ultima/Home Office		
AT\N3%C1&C1&D0\J0\V1\Q3		
PSI Comstation V		
AT&F&C1&D0&K3&Q5\N3	None	9600
AT&F	None	9600

..TIL18470-Modem_Initialization_Strings_for_MacPPP_Access_10-96.pdf

PSI Power Modem II/IV		
AT&Q5%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3&Q5\N3		
Quicktel Xeba 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C1&D0	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3		
Racal ALM 3223		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&C1&D0		
Racal ALM 3226 V.32 bis		
AT&F&C1	CTS&RTS (DTR)	57600
AT&F&D0&K3		
Spectra Pocket Modem 14.4		
AT&F	CTS&RTS (DTR)	14400
AT&Q3S36=7%C1&C1&D0&K3		
Supra 14.4 LC		
AT&F1	CTS&RTS (DTR)	14400
AT&F1&D0		
Supra 2400 V.42bis		
AT&Q5S36=7%C1&C1&D0&K3		
Supra Fax 288 modem		
AT&F1	RTS (DTR) Only	57600
AT&F1&C1	RTS (DTR) Only	57600
AT&F&D0&Q5&K3\N3		
SupraFAXModem V.32bis		
AT&F1	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&K4%C0		
SupraFAXModem V.32/V.32bis		
AT&F1&Q5S36=7%C1&C1&D0&K3		
SupraFAXModem V.34		
AT&F1 (probably. 7/18/95)		
Telebit 3000	None	9600
ATS180=2S190=1S51=252S58=2S68=2	None	9600
AT&F&C1S58=2		
Telebit Fastblazer 8840		
AT&F&C1&E1	None	9600
Telebit QBlazer		

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ATS180=2S51=252S58=2S68=2	None	9600
AT&FS58=2	None	9600
AT&FS58=2S180=1S190=0		
Telebit QBlazer/T1600/T3000		
ATS180=2S190=1S51=252S58=2S68=2		
Telebit T1600		
ATS180=2S190=1S51=252S58=2S68=2	None	9600
AT&FS58=0S190=0		
Telebit T2500		
AT&FS58=2	None	9600
Telebit Worldblazer		
AT&F9X2	CTS&RTS (DTR)	14400
AT&F&C1S58=2		
AT&F&D0S58=2		
U.S. Robotics ??		
AT&M4&K1B0&A3&B1&D0&H1&I0&N0&R2		
U.S. Robotics Courier HST Dual		
AT&F&C1&D0	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Courier V.32 bis/as		
AT&F&D0&H1&K2	CTS&RTS (DTR)	14400
AT&F1&D0		
U.S. Robotics Courier V.34		
AT&F1&K3&D0		
U.S. Robotics Mac & Fax 14.4		
AT&F&D0&H1&R2		
USRobotics Mac & Fax 28.8 V.34		
AT&F1		
U.S. Robotics Sportster 14.4		
AT&F&H1&C1&D0X4	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&H1&C1&D0X4		
AT&F&H1&C1&D0		
U.S. Robotics Sportster 28.8		
AT&F1	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Sportster 14.4		
AT&F&H1&C1&D0X4	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&H1&C1&D0X4		

..TIL18470-Modem_Initialization_Strings_for_MacPPP_Access_10-96.pdf

U.S. Robotics Sportster 28.8		
AT&F1	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Sportster 9600		
AT&F&H1	CTS&RTS (DTR)	9600
ATZ		
U.S. Robotics Worldport 14.4 Fax		
ATZ	CTS&RTS (DTR)	14400
ATZ&F&A1&B1&M4&H1&R2Q0E0V1X4		
Viva 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C1&D0		
Viva 9642 e		
AT&F&C1	None	9600
AT&F&C1&K0%C0		
Wang 14.4		
AT&F&C1&D0	CTS&RTS (DTR)	14400
Zoltrix 14.4		
AT&F&C1&D0	CTS&RTS (DTR)	14400
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3		
Zoom 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3		
Zoom 14.4 V.32/V.32bis		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138		
Zoom 14.4 V.32/V.32bis		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138		
Zoom 2400 v.42bis		
AT&Q5%C1W1&C1&D0S36=7&K3		
Zoom 28.8 V.32/V32bis		
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	57600
AT&F&C1&K3	CTS&RTS (DTR)	57600
Zoom VFX v.32 bis		
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138	CTS&RTS (DTR)	14400

Zyxel U-1496		
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&D0&H0	None	9600
Zyxel U-1496 plus		
AT&F&D0&H0	None	9600
Zyxel U-1496B		
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&D0&H0		
Zyxel U-1496B plus		
AT&F&D0	None	9600
AT&F&D0&H0		
Zyxel U-1496E		
AT&F&D0	None	9600
Zyxel U-1496E plus		
AT&F&D0	None	9600
Zyxel V.32bis		
AT&C1&D0&H3&K4&N0		
End_Table		

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02 Oct 1996 - Made correction for accuracy.
20 May 1996 - Added more modems and multiple strings.
26 Jan 1996 - Added Global Village TelePort Gold IIv modem and string.

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Tech Info Library

Modem Initialization Strings for MacPPP Access (5/96)

Revised: 9/23/96
Security: Everyone

Modem Initialization Strings for MacPPP Access (5/96)

Article Created: 24 August 1995
Article Reviewed/Updated: 20 May 1996

TOPIC -----

This article lists some modem initialization strings for MacPPP using point-to-point protocol (PPP) access. This article does not have initialization strings for every modem, only those which the modem vendor provided to Apple.

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

DISCUSSION -----

MacPPP ships with Apple Internet Connection Kit (AICK) and requires you to know your modem's initialization string. Many initialization strings are listed in the AICK setup, however, if your modem is not listed, you should consult your modem manual, or contact your modem vendor, or check with your Internet Service Provider.

Begin_Table

Name of Modem -----	Flow Control -----	Speed -----
Accex 1414 v.32bis AT&F&D0\N3\Q3	CTS&RTS (DTR)	14400
Apple Express Modem (PowerBook) AT&F\N3	CTS&RTS (DTR)	14400
AT%C1\N3	CTS&RTS (DTR)	14400
AT&F\N3&K3		
AT\G1\X1		

Apple GeoPort Modem
AT&F\N3

Applied Engineering Datalink 14
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&C1&K0

AT&T DataPort 14.4
AT\N7%C1&C1&D0\Q3 CTS&RTS (DTR) 14400
AT&F&D0
AT&F&D0\Q0%C0

AT&T DataPort 14.4
AT\N7%C1&C1&D0\Q3 CTS&RTS (DTR) 14400
AT&F&C1&D0
AT&F&C1&D0\Q0%C0

Best Data Smart One 14.4
AT&Q5%C1&D0&K0 CTS&RTS (DTR) 14400
AT&F&C1
AT&F&D0&K3

Boca 14.4Kbps v.32bis
AT&F&C1\N3 CTS&RTS (DTR) 14400
AT&F&D0&K3

Boca 288MV28K Series
AT&F&C1\N3 CTS&RTS (DTR) 57600
AT&F\N3

Boca Research V.32bis
AT&Q5%C1&C1&D0&K3

Cardinal 14.4
AT&F&C1&D0&Q5 CTS&RTS (DTR) 14400
AT&F&C1&D0&K0&Q5%C0 None

Cardinal 28.8
AT&F&C1&D0&Q5 CTS&RTS (DTR) 57600
AT&F&C1&D0&K0&Q5%C0 None

Compudyne 1442F
AT&F&C1 CTS&RTS (DTR) 14400
AT&F&C0

CPC Turbo Modem+
AT\N6%C1&C1&D0\Q3\V1

Data Race Apex V.32/V.32bis
AT\N7%C1&C1&D0\Q3

Data Race APL 1496

AT\N7%C1&C1&D0\Q3

Digicom Eagle 9600/Scout

AT&F&D0	None	9600
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AT&F

Digicom Eagle 9600/Scout

AT&F&D0	None	9600
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AT&F*F3&D0

Focus 14.4

AT&Q5%C1&C1&D0&K3S36=7	CTS&RTS (DTR)	14400
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AT&F&D0	CTS&RTS (DTR)	14400
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Global Village PowerPort Gold/Silver

AT&F1\Q3	CTS&RTS (DTR)	14400
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AT&F1&C1&D0	CTS&RTS (DTR)	14400
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AT&F&D0\Q3

Global Village PowerPort Mercury

AT\F1	None	9600
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AT&F\N3	None	9600
---------	------	------

AT&F&D0\N1

Global Village PowerPort/Teleport

AT&F1%C1&K3	CTS&RTS (DTR)	57600
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AT&F1S95=1	CTS&RTS (DTR)	57600
------------	---------------	-------

AT&F&D0\N3&K3&Q5

Global Village PowerPort Gold/Silver

AT&F1\Q3	CTS&RTS (DTR)	14400
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AT&F1&C1&D0\N3%C0	CTS&RTS (DTR)	14400
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AT&F&D0\Q3

Global Village PowerPort/Teleport Gold

AT&F1%C1W1	CTS&RTS (DTR)	14400
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AT&F&K3\N3\Q3	CTS&RTS (DTR)	14400
---------------	---------------	-------

AT&F&D0&K3

Global Village PowerPort/Teleport Gold

AT&F1&K3	CTS&RTS (DTR)	14400
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AT&F&C1	CTS&RTS (DTR)	14400
---------	---------------	-------

AT&F&K3&D0\N0

Global Village PowerPort/Teleport Silver

AT&F1&K3	None	9600
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AT&F1\Q0%C0	None	9600
-------------	------	------

AT&F&D0&K3

Global Village PowerPort/Teleport Platinum

AT&F1%C1&K3	CTS&RTS (DTR)	28800
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AT&F1W1S95=44	CTS Only	28800
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AT&F&D0\N3&K3&Q5

Global Village Bronze

AT&F&D0 ? 6/27/95

GVC 14.4 v.32bis

AT&F&D0\N3

CTS&RTS (DTR) 14400

AT&F&D0%C0\Q0\N3

AT\N6%C1X4&C1&D0\G0\J0\Q3\V1

GVC 288 Fax Modem

AT&F&D0

CTS&RTS (DTR) 57600

AT&F&D0%C0\Q0

Hayes Accura 144

AT&F

None 9600

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&D0&K3&Q5S48=7S36=7

Hayes Accura 28.8

AT&F&C1

CTS&RTS (DTR) 28800

AT&F&C1&K0

Hayes Optima 14400 v.32bis

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&&D0&C1

AT&F&D0&K3&Q5S48=7S36=7

Hayes Optima 28800

AT&F&D0

CTS&RTS (DTR) 57600

AT&F&C1

CTS&RTS (DTR) 57600

AT&F&D0

Hayes V-Series Ultra 9600

AT&Q5S36=7&C1&D0&K3

CTS&RTS (DTR) 14400

AT&F&D0

CTS&RTS (DTR) 14400

Intel 14.4 EX

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0\Q3

AT\N3%C1&C1&D0\Q3

Intel 96EX

AT\N3%C1&C1&D0\Q3

Line Link 14.4E

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&C1\N3

CTS&RTS (DTR) 14400

AT&F&C1&D0

Macintosh Express Modem (comm slot)

AT&F\N3&D3&Q5

Macronix

ATS36=7&Q5%C1&C1&D0&K3

Macronix MaxLite 14.4

AT&F&C1&Q9\N3

CTS&RTS (DTR) 14400

AT&F&Q9\N3

Magic 14.4 V.32bis

AT&F&C1

CTS&RTS (DTR) 14400

AT&F&D0&C1

Magnum 14.4

AT&F0

None 14400

Magnum 288 Fax/Modem

AT&F0

CTS&RTS (DTR) 57600

AT&F&D0&K3

Megahertz 14400/P2144

AT&F&C1&D0

None 9600

AT&F&D0&K3

Megahertz A2144

AT&F&C1&D0\N3

None 14400

AT&F&D0&K0%C0\N3

MegaHertz V.32bis

ATS36=7&Q5%C1&C1&D0&K3

Microcom Desk Porte

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0&K3

CTS&RTS (DTR) 14400

Microcom Deskporte 28.8

AT&F&C1&D0

CTS&RTS (DTR) 28800

AT&F&D0\Q3

Microcom Deskporte 288 EP

AT&F&D0

CTS&RTS (DTR) 28800

Microcom Desk Porte/QX/4232 bis

AT&F&D0

CTS&RTS (DTR) 14400

AT&F&D0\Q3

Microcom QX/V.32c

AT&Q5%C3&C1&D0\J0\Q3

Microcom Travelporte 288 Fast

AT&F&D0

CTS&RTS (DTR) 28800

Motorola UDS CELlect 14.4

AT&F&C1\N3\Q3

RTS (DTR)Only 14400

Motorola UDS Codex 3260 AT&F&C1*FL3	None	9600
Motorola UDS Codex 3261 AT&F&C1*FL3	None	9600
Motorola UDS Codex 3265 AT&F&C1*FL3	None	9600
Motorola UDS Fastalk V.32 bx/V.3225 AT&F&C1\N3\Q3 AT\N3%C1&C1&D0\G0\J0\V1\Q3	CTS&RTS (DTR)	14400
Motorola UDS V.3225L/3229L AT&F&C1\Q3 AT&F&D0\Q3 AT&F&D0&C1\Q3	CTS&RTS (DTR)	28800
Multitech MT 932 series AT&F&D0&E4	None	9600
Multitech MT1432 Series AT&F&D0&Q1&E11 AT&F&D0&E11 AT&F&D0&E4&E13	CTS&RTS (DTR) CTS&RTS (DTR)	14400 14400
Multitech MT1432 ZDX AT&F&D0 AT&F&D0&E4&E13	CTS&RTS (DTR)	14400
Multitech MT2834 Series AT&F0 AT&F&D0&E11 AT&F&D0&E3&E14	CTS&RTS (DTR) CTS&RTS (DTR)	57600 57600
Multitech Multimodem 2 Series AT&E1&E15&C1&D0&E4\$BA0 AT&F&D0&E4 AT&F&D0&E14&E3	CTS&RTS (DTR) CTS&RTS (DTR)	14400 14400
MultiTech Multimodem 224E/V.32 AT&E1&E15&C1&D0&E4\$BA0		
NEC 9635 E AT&F&C1\Q3 AT&F&C1\Q0%C0	CTS&RTS (DTR)	14400
Phoebe V.34 AT&F1		
PowerUser 14.4E AT&F&C1 AT&F%C0&K0\N3	CTS&RTS (DTR)	14400

Practical Peripheral MC144MT II		
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&D0&K0		
Practical Peripherals 14400FXMT		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&D0&K3		
Practical Peripherals 14400FXSA		
AT&F&C1S37=9N0	None	9600
AT&F&C1	None	9600
AT&F&C1&K0		
Practical Peripherals 9600SA		
AT&F&C1	None	9600
AT&F&C1&K0		
ATS36=7&Q5&C1&D&K3		
Practical Peripherals MC28		
AT&K3&D0&C1	CTS&RTS (DTR)	57600
AT&F1&D0		
Practical Peripherals MC288MT		
AT&F3	CTS&RTS (DTR)	57600
AT&F1&D0		
Practical Peripherals PM288MT		
AT&F3	CTS&RTS (DTR)	57600
AT&F1&D0		
Prometheus Home Office 14.4		
AT\N3%C1&C1&D0\J0\V1\Q3	CTS&RTS (DTR)	14400
AT&C1&D0*E1*F3*S1		
Prometheus Pro Modem Ultima		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&D0&K0%C0		
Prometheus Promodem 144		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&C1\N3	CTS&RTS (DTR)	57600
Prometheus Ultima/Home Office		
AT\N3%C1&C1&D0\J0\V1\Q3		
Prometheus Ultima/Home Office		
AT\N3%C1&C1&D0\J0\V1\Q3		
PSI Comstation V		
AT&F&C1&D0&K3&Q5\N3	None	9600
AT&F	None	9600

PSI Power Modem II/IV		
AT&Q5%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3&Q5\N3		
Quicktel Xeba 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C1&D0	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3		
Racal ALM 3223		
AT&F&D0	CTS&RTS (DTR)	57600
AT&F&C1&D0		
Racal ALM 3226 V.32 bis		
AT&F&C1	CTS&RTS (DTR)	57600
AT&F&D0&K3		
Spectra Pocket Modem 14.4		
AT&F	CTS&RTS (DTR)	14400
AT&Q3S36=7%C1&C1&D0&K3		
Supra 14.4 LC		
AT&F1	CTS&RTS (DTR)	14400
AT&F1&D0		
Supra 2400 V.42bis		
AT&Q5S36=7%C1&C1&D0&K3		
Supra Fax 288 modem		
AT&F1	RTS (DTR) Only	57600
AT&F1&C1	RTS (DTR) Only	57600
AT&F&D0&Q5&K3\N3		
SupraFAXModem V.32bis		
AT&F1	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&K4%C0		
SupraFAXModem V.32/V.32bis		
AT&F1&Q5S36=7%C1&C1&D0&K3		
SupraFAXModem V.34		
AT&F1 (probably. 7/18/95)		
Telebit 3000	None	9600
ATS180=2S190=1S51=252S58=2S68=2	None	9600
AT&F&C1S58=2		
Telebit Fastblazer 8840		
AT&F&C1&E1	None	9600
Telebit QBlazer		

..TIL18470-Modem_Initialization_Strings_for_MacPPP_Access_5-96.pdf

ATS180=2S51=252S58=2S68=2	None	9600
AT&FS58=2	None	9600
AT&FS58=2S180=1S190=0		
Telebit QBlazer/T1600/T3000		
ATS180=2S190=1S51=252S58=2S68=2		
Telebit T1600		
ATS180=2S190=1S51=252S58=2S68=2	None	9600
AT&FS58=0S190=0		
Telebit T2500		
AT&FS58=2	None	9600
Telebit Worldblazer		
AT&F9X2	CTS&RTS (DTR)	14400
AT&F&C1S58=2		
AT&F&D0S58=2		
U.S. Robotics ??		
AT&M4&K1B0&A3&B1&D0&H1&I0&N0&R2		
U.S. Robotics Courier HST Dual		
AT&F&C1&D0	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Courier V.32 bis/as		
AT&F&D0&H1&K2	CTS&RTS (DTR)	14400
AT&F1&D0		
U.S. Robotics Courier V.34		
AT&F1&K3&D0		
U.S. Robotics Mac & Fax 14.4		
AT&F&D0&H1&R2		
USRobotics Mac & Fax 28.8 V.34		
AT&F1		
U.S. Robotics Sportster 14.4		
AT&F&H1&C1&D0X4	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&H1&C1&D0X4		
AT&F&H1&C1&D0		
U.S. Robotics Sportster 28.8		
AT&F1	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Sportster 14.4		
AT&F&H1&C1&D0X4	CTS&RTS (DTR)	14400
AT&F1&D0	CTS&RTS (DTR)	14400
AT&F1&H1&C1&D0X4		

U.S. Robotics Sportster 28.8		
AT&F1	CTS&RTS (DTR)	57600
AT&F1&D0		
U.S. Robotics Sportster 9600		
AT&F&H1	CTS&RTS (DTR)	9600
ATZ		
U.S. Robotics Worldport 14.4 Fax		
ATZ	CTS&RTS (DTR)	14400
ATZ&F&A1&B1&M4&H1&R2Q0E0V1X4		
Viva 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&F&C1&D0		
Viva 9642 e		
AT&F&C1	None	9600
AT&F&C1&K0%C0		
Wang 14.4		
AT&F&C1&D0	CTS&RTS (DTR)	14400
Zoltrix 14.4		
AT&F&C1&D0	CTS&RTS (DTR)	14400
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&C1&D0&K3		
Zoom 14.4		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3		
Zoom 14.4 V.32/V.32bis		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138		
Zoom 14.4 V.32/V.32bis		
AT&F&C1	CTS&RTS (DTR)	14400
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	14400
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138		
Zoom 2400 v.42bis		
AT&Q5%C1W1&C1&D0S36=7&K3		
Zoom 28.8 V.32/V32bis		
AT&Q5S36=7%C1&C1&D0&K3	CTS&RTS (DTR)	57600
AT&F&C1&K3	CTS&RTS (DTR)	57600
Zoom VFX v.32 bis		
AT&F&C1&D3&K3&Q5%C3\N3S7=60S36=7S46=138	CTS&RTS (DTR)	14400

Zyxel U-1496		
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&D0&H0	None	9600
Zyxel U-1496 plus		
AT&F&D0&H0	None	9600
Zyxel U-1496B		
AT&F&D0	CTS&RTS (DTR)	14400
AT&F&D0&H0		
Zyxel U-1496B plus		
AT&F&D0	None	9600
AT&F&D0&H0		
Zyxel U-1496E		
AT&F&D0	None	9600
Zyxel U-1496E plus		
AT&F&D0	None	9600
Zyxel V.32bis		
AT&C1&D0&H3&K4&N0		
End_Table		

This article was published in the "Information Alley":
Volume II, Issue 12, Page 14

Article Change History:

20 May 1996 - Added more modems and multiple strings.
26 Jan 1996 - Added Global Village TelePort Gold IIv modem and string.
04 Jan 1996 - Added keyword.

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Tech Info Library Article Number:18470



Tech Info Library

Open Transport: Brief Review of Releases and Updates (5/96)

Revised: 5/27/96
Security: Everyone

Open Transport: Brief Review of Releases and Updates (5/96)

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Article Created: 24 August 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

This document outlines Open Transport releases and updates.

DISCUSSION -----

Version 1.0 was the initial release of Open Transport and was included with early Power Macintosh 9500 computers.

The Open Transport 1.0.1 patch provides improved compatibility with PPP and SLIP software and other fixes, but it is strongly recommended that all Power Macintosh 9500 customers upgrade to version 1.0.6.

Version 1.0.6 is included with all new PCI-based Power Macintosh computers. Customers who previously bought a Power Macintosh 9500 can get an upgrade to the new software by calling the Apple Order Center.

The Open Transport 1.0.7 patch provides improved compatibility with PPP and SLIP software and other fixes.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the patch software updates mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18471



Tech Info Library

MacTCP & Open Transport: Maximum Simultaneous Connections-8/95

Revised: 8/24/95
Security: Everyone

MacTCP & Open Transport: Maximum Simultaneous Connections-8/95

Article Created: 24 August 1995

TOPIC -----

How many simultaneous IP connections can MacTCP handle? How many simultaneous IP connections can Open Transport handle?

DISCUSSION -----

MacTCP has a limit of 64 sockets. Simultaneous IP connections under Open Transport will be limited by installed memory and processor power. The following paragraph is from the Open Transport press release, dated 6/20/95:

"Version 1.0 of Open Transport offers backward compatibility with existing networking client applications and significantly upgrades the feature set and performance of TCP/IP on the Mac OS. With the overwhelming acceptance of TCP/IP protocols in the marketplace, and the tremendous excitement and visibility of the Internet, Apple has elected to bring a workstation-class implementation of TCP/IP protocols to the Mac OS. Support such as Dynamic Host Configuration Protocol (DHCP), for centralized IP address management; IP multicast, for participation as an MBone client; and simultaneous TCP connections limited only by installed memory and processor power, for increased functionality as an Internet or other TCP/IP network server are just a few of the new features. The architecture that supports Open Transport/TCP is itself based on a direct port of the Unix System V R4 STREAMS environment--a proven, robust and scaleable OS networking technology."

Support Information Services

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Tech Info Library Article Number:18472



Tech Info Library

Power Macintosh 8500: TV Video Option Does Not Disappear (8/95)

Revised: 10/14/96
Security: Everyone

Power Macintosh 8500: TV Video Option Does Not Disappear (8/95)

=====

Article Created: 24 August 1995
Article Reviewed/Updated: 28 August 1995

TOPIC -----

On a Power Macintosh 8500, without a television connected to the Video Out, the option to output to television in the Sound and Displays control panel still appears. Because of this, the color options for higher resolutions such as 1152x870 do not provide a choice for millions of colors.

Why is the TV option available when no TV device is connected?

DISCUSSION -----

On the Power Macintosh 8500, the video out circuitry detects the presence of a television and the Mac OS determines the choices available for television output in the control panel. If a television is available, the Mac OS allocates some Video RAM (VRAM) for the TV output device and either mirrors the computer's main display or uses the television as a second monitor.

If the television or other video output device is not attached, but the TV option is available in Sound and Displays control panel, you need to open the unit to check the cable connection.

WARNING:

These directions are provided primarily for Apple Service providers. If you attempt to perform upgrades or repairs yourself, any damage you may cause to your equipment will NOT be covered by your warranty.

IMPORTANT:

Your computer contains electrically sensitive parts. To avoid damaging your computer, discharge static electricity that may be on your clothes or body by touching the power supply case before working with the assembly.

Examine the internal AV ribbon cable and make sure it is attached between the logic board and the external RCA video/sound connectors on the back panel of the

computer. The internal ribbon connector must be attached to the logic board for the detection circuitry to operate properly. If the cable is not connected properly to the logic board, the computer assumes a television is available. If the cable is not connected properly, reconnect the internal cable to correct this problem.

Article Change History:

28 Aug 1995 - Added Warning information and clarified the disscussion.

Support Information Services

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Tech Info Library Article Number:18473



Tech Info Library

PowerShare Admin: Cannot Delete Inverse Group Name Alias (8/95)

Revised: 8/24/95
Security: Everyone

PowerShare Admin: Cannot Delete Inverse Group Name Alias (8/95)

=====

Article Created: 24 August 1995

TOPIC -----

I'm experiencing aliases with inverse group names in my PowerTalk catalog which I cannot be deleted from PowerTalk, and I cannot see (inverse alias names) in PowerShare. For example, the group address "Shipping & Receiving", I see an alias "Receiving, Shipping &" in the PowerTalk catalog. I do not, however, see this inverse group alias when using the PowerShare Admin application. How do I delete them?

DISCUSSION -----

Apple has been able to duplicate what you describe. After changing the name of an existing group address, PowerShare will generate an alias like it does with a personal address.

The workaround is to hold down the option key while clicking on Group in the pertinent catalog window. This will display all of the records and their aliases for that catalog folder, letting you select the errant alias and delete it by using the Delete Selected Objects command in the Edit menu.

Support Information Services

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Tech Info Library Article Number:18474



Tech Info Library

Quadra/Centris 605/610/650/700:Frequently Asked Questions 11/95

Revised: 2/17/97
Security: Everyone

Quadra/Centris 605/610/650/700:Frequently Asked Questions 11/95

Article Created: 24 August 1995
Article Reviewed/Updated: 7 November 1995

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) on mid-range Quadra computers, including the Macintosh Quadra 605 and 700, and Macintosh Quadra/Centris 610 and 650.

Questions in this FAQ:
=====

- 1) What is an enabler and why do I need one?
- 2) What are the expansion options for the mid-range Macintosh Quadra computers?
- 3) How do I upgrade the memory on my Macintosh Quadra 605, 610, 650 and 700?
- 4) What is an FPU and does my computer have one?
- 5) What is 32-bit addressing and when does it need to be active?
- 6) What is "resetting the PRAM"? Do I need to do this often?
- 7) Rebuilding the desktop file: what is it and why would I need to do it?

DISCUSSION -----

- 1) Question: What is an enabler and why do I need one?

Answer: Rather than create a new version of the system software each time a new machine is released, Apple created system enablers. These enablers contain system software code specific to a particular Macintosh computer. Enablers provide older system software with the information necessary to run properly on a newly released Macintosh.

The Macintosh Quadra 605, 610, 650, and 700 computers do not require an enabler when using System 7.5 or later.

If you are using System 7.1 on these machines, you will need the following enablers:

Macintosh Quadra 605: System Enabler 065
Macintosh Quadra 610: System Enabler 040
Macintosh Quadra 650: System Enabler 040
Macintosh Quadra 700: no enabler

2) Question: What are the expansion options for the mid-range Macintosh Quadra computers?

Answer: On the mid-range Macintosh Quadra computers, Apple provided several expansion options. One type of expansion slot on all these computers is the processor-direct slot (PDS).

The PDS allows expansion cards to have direct access to the processor. Video, network and accelerator cards, among others, have been created for the PDS slots in Macintosh Quadra models.

Note: Because different Macintosh computers use different processors, there are several implementations of the processor-direct slot; not all PDS cards are compatible with the different PDS types. To ensure compatibility, contact the manufacturer of any PDS card you plan to use.

An additional NuBus expansion slot is present in the Macintosh Quadra/Centris 650 and Macintosh Quadra 700 computers. NuBus is a standard designed by Texas Instruments. It features self-configuration and bus-mastering on a 32 data-bit card. Bus-mastering means a card can take control of the bus, which allows for multi-processor computing. The card self-configures using on-board ROM (Read Only Memory).

The NuBus slot is a one-piece socket (female) connector with two rows of pins. The card has a plug (male) connector that plugs into the socket. This slot type is not compatible with any other slot standard.

Here are the expansion slots available on all mid-range Macintosh Quadra computers:

Macintosh Quadra 605: LC III compatible PDS
Macintosh Quadra 610: PDS or 7-inch NuBus card (requires adaptor)
Macintosh Quadra 650: one 68040 PDS and three NuBus expansion slots
Macintosh Quadra 700: one 68040 PDS and two NuBus expansion slots

3) Question: How do I upgrade the memory on my Macintosh Quadra 605, 610, 650 and 700?

Answer:

Begin_Table

System	RAM Soldered on Board	Number of SIMM Slots	Possible SIMM Sizes	Physical RAM Configs(MB)	Speed	Notes
Quadra 605	4	1	1MB,2MB,4MB 8MB,16MB, 32MB	4,5,6,8,12, 20,36	80ns	1,2,5
Quadra 610	4	2	4MB,8MB,16MB, 32MB	4,8,12,20,28, 36,40,44,52,68	80ns	1,2,4
Quadra 650	8	4	4MB,8MB,16MB, 32MB	8,12,16,20, 24,28,32,36,40, 44,48,52,56,60, 64,68,72,76,80, 84,88,92,96,104, 108,112,120,136	80ns	1,2,3, 4
Quadra 700	4	4	1MB,4MB	4,8,20	80ns	1

End_Table

NOTES:

1. These systems have 32-bit-clean ROMs. Computers with 32-bit-clean ROMs can take advantage of more than 8MB of physical RAM under System 7.

2. These systems use 32-bit wide, 72-pin SIMMs (fast-paged mode) not previously used in Macintosh computers.

3. The Centris 650, and Quadra 800 use "memory interleaving" which occurs when SIMM pairs are used (for example: two 8MB SIMMs). This allows the memory subsystem to perform certain operations faster. Basically, it allows the memory subsystem to write to the same memory address in different banks of memory before incrementing the address. Depending on how memory intensive the application, this can improve performance 5 to 10%.

4. The Centris/Quadra 610, Centris/Quadra 650, and Quadra 800 have flexible memory systems, meaning that any supported SIMM size can go into any SIMM socket in any order, and these computers can run with partially populated banks. They don't support 1MB, 2MB, or 64MB 72 pin SIMMs.

5. The Macintosh LC 475, Performa 475/476 and Quadra 605 are functionally similar and have the same RAM specifications.

4) Question: What is an FPU, and does my computer have one?

Answer: Floating-point Units (FPUs or math coprocessors), such as the 68881/68882, offer the greatest benefit in applications that tend to be very

floating-point (arithmetic) intensive. The specific types of applications that benefit most from an FPU are those that process large amounts of floating-point instructions for precision, and will utilize an FPU extensively. Examples are CAD/CAM, 3-D modeling, scientific applications, and financial applications.

Below is a listing of which Macintosh Centris & Quadra products have a Math Coprocessor (FPU) and which do NOT:

Quadra 605 (NONE of the configurations have an FPU)

Macintosh Centris 610 (NONE of the below configurations have an FPU)

M1345LL/A Macintosh Centris 610 4 MB Hard Disk 80 CPU (no Ethernet)
M1392LL/A Macintosh Centris 610 4 MB Hard Disk 80 CPU
M1397LL/A Macintosh Centris 610 8 MB Hard Disk 230 CPU
M1398LL/A Macintosh Centris 610 8 MB (1 MB VRAM) Hard Disk 230 CPU w/CD-ROM

Macintosh Quadra 610 (first two configurations below HAVE an FPU)

M2098LL/A Macintosh Quadra 610 (512K VRAM) 8 MB Hard Disk 230
M2099LL/A Macintosh Quadra 610 8 MB Hard Disk 230 w/CD-ROM

M2319LL/A Macintosh Quadra 610 (512K VRAM) 8 MB Hard Disk 160 (NO FPU)

Macintosh Centris 650 (first four configurations have an FPU)

M1613LL/A Macintosh Centris 650 8 MB Hard Disk 80 CPU
M1337LL/A Macintosh Centris 650 8 MB Hard Disk 230 CPU
M1279LL/A Macintosh Centris 650 8 MB (1 MB VRAM) Hard Disk 230 CPU w/CD-ROM
M1209LL/A Macintosh Centris 650 8 MB Hard Disk 500 CPU

M1276LL/A Macintosh Centris 650 4 MB Hard Disk 80 CPU (NO Ethernet or FPU)

Macintosh Quadra 650 (ALL configurations have an FPU)

Macintosh Quadra 700 (ALL configurations have an FPU)

If your Quadra 610 has no FPU and you wish to upgrade, you need to purchase a third-party upgrade kit, as Apple does not offer this upgrade.

5) Question: What is 32-bit addressing and when does it need to be active?

Answer: With 32-bit addressing, you can install and access more than 8MB of physical RAM in the Macintosh. This means you can work with very large data files, very large applications, or many applications concurrently. 32-bit addressing is most attractive to Macintosh users working with large memory-intensive programs. While virtually anyone can benefit from the large amount of memory offered by 32-bit addressing, it will immediately benefit database users, color-graphic users, CAD/CAM users, and programmers.

More technically speaking, 32-bit addressing lets most recent Macintosh models access the entire memory range of the microprocessor.

32-bit addressing is fully implemented in the Macintosh Quadra series. If more than 8 MB of memory (RAM) is installed, the 32-bit addressing option should be turned on in the Memory control panel. If, for example, 16 MB is installed on a Macintosh Quadra 650 and 32-bit addressing is off in the Memory control panel, the system software will appear to take up most of the available memory. The solution to this situation is to activate 32-bit addressing in the Memory control panel and restart.

6) Question: What is "resetting the PRAM"? Do I need to do this often?

Answer: The parameter RAM (PRAM) is used to keep many settings for the Macintosh. The PRAM keeps track of the date, time, status of serial ports, which printer has been chosen in the Chooser and numerous other settings.

Occasionally, a corrupt setting in the PRAM can adversely affect the operation of the computer. Resetting the PRAM can sometimes return the computer to its normal state.

There is no need to reset the PRAM on a regular, scheduled basis.

To reset the PRAM, restart the computer with the following keys held down at the same time: Command, Option, P and R. Continue holding these keys down until you hear the computer restart (or the screen image flash) at least three times. Let go of all the keys and allow the computer to start up.

7) Question: Rebuilding the desktop file; what is it and why would I need to do it?

Answer: The Desktop file is an invisible file found in the main level of your hard drive. It is the file that keeps track of all the documents and applications that are on your hard drive.

The file name is Desktop for versions of System 6 and earlier. System 7.0 and later versions use the invisible files named Desktop DB and Desktop DF.

Occasionally your Desktop file may become too large or may be damaged.

One symptom of a damaged Desktop file is the icons on your desktop appear as "generic" rather than "custom" icons. The Desktop file manages all icons on a particular hard drive or floppy disk. When you insert a new or customized icon, the Desktop file may not load it or may load a previous version of the icon. To have the special icon appear on the desktop, the Desktop file must be rebuilt to update the Desktop file and register the icon.

Icons change to generic document (blank page with a corner turned down) or application (diamond with a hand) icons for several reasons, including the following:

- * Utilities such as compression or security software can alter icons.
- * Custom icons become damaged or deleted.
- * The Desktop file has been damaged.

- * Applications that create files may not assign icons to the files.
- * An application that created a file and assigned an icon may no longer be available.
- * A file may have lost the bit that indicates a custom icon (this is known as the bundle bit).

If the Desktop file becomes too large, the computer may have difficulty reading it efficiently and speedily. This can cause the Finder to access files more slowly. Rebuilding the Desktop file can clean up old information and speed up Finder access.

You can also make a file-by-file backup of the drive, re-initialize the drive, and then restore the files. This re-groups all the files, defragments them, and increases the efficiency of the drive.

To rebuild the desktop using System 7.0 through System 7.1.2, follow these steps:

Step 1

Hold the Shift key down while starting up the computer.

Step 2

As soon as you see "Welcome to Macintosh Extensions Off", release the Shift key and hold down the Command and Option keys.

Step 3

Continue pressing the Command and Option keys until you see the dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click OK.

Step 4

Let go of the keys and click on the OK button.

After the desktop has been rebuilt, restart the computer, and all extensions and control panels will be active again.

To rebuild the desktop using System 7.5 or above, follow these steps:

Step 1

Before you rebuild your desktop, use the Extensions Manager to save a record of the extensions that are currently turned on.

- Open the Extensions Manager.
- Open the Sets pop-up menu, and choose Save Set.
- When the Save Set dialog box opens, type a name for your currently selected extensions (for example, 'My Extensions'). When you close the dialog box, the name of your set is added to the Sets pop-up menu.

Step 2

Open the Sets pop-up menu again and choose All Off.

Step 3

Find Macintosh Easy Open in the list of Control Panels and click it to put a checkmark beside it. Close the Extensions Manager.

Step 4

Restart your computer while holding down the Command and Option keys.

Step 5

When you see the dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click OK.

Step 6

When the desktop is rebuilt, open the Apple menu and choose Control Panels.

Step 7

Open the Extensions Manager control panel.

Step 8

Open the Sets pop-up menu and choose the name you gave your set of extensions in step 1 (for example, 'My Extensions').

Step 9

Restart your computer to activate the extensions.

Article Change History:

07 Nov 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18477



Tech Info Library

ColorSync 2.0: Missing/Incompatible Profiles on MS 15 (8/95)

Revised: 8/24/95
Security: Everyone

ColorSync 2.0: Missing/Incompatible Profiles on MS 15 (8/95)

=====

Article Created: 24 August 1995

TOPIC -----

A version of the ColorSync 2.0 Profile for the Multiple Scan 15 Display has been reported to be incompatible with some applications or it may be missing from the system software that comes with your computer. The following article describes the solution.

DISCUSSION -----

- Some customers may experience problems with the use of an early version of the ColorSync 2.0 Profile for the Multiple Scan 15 Display. These customers are reporting that within some applications (such as Photoshop), an error message is being produced which reports the monitor's settings are invalid. In these same configurations, other profiles are working fine and other applications are not having errors with this same ColorSync 2.0 Profile.

- Some Apple computers, including the Power Macintosh 7200, 7500, 8500, and 9500 series computers, did not ship with the ColorSync 2.0 Profiles installed for the Apple Multiple Scan 15 display.

In both of these situations customers may call asking about obtaining a new ColorSync Profile for the Multiple Scan 15 Display. This profile has been updated and rolled into the version of the currently posted version of ColorSync 2.0 Rev. The "Apple Multiple Scan 15" profile has a modification date of May 31, 1995 while all other ColorSync profiles have a modification date of Mar 23, 1995.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple

support information, and a subset of the Apple Tech. Info. Library.

Support Information Services

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Tech Info Library Article Number:18480



Tech Info Library

Color LW 12/600 PS: Print Longevity (8/95)

Revised: 8/24/95
Security: Everyone

Color LW 12/600 PS: Print Longevity (8/95)

=====

Article Created: 24 August 1995

TOPIC -----

How sensitive to light is the toner in the Color LaserWriter 12/600? Is it rated as "archival materials" or "light fast"? What other information is available about storing these prints?

DISCUSSION -----

The following information about light sensitivity and proper storage environment was obtained from the vendor that supplies the toner products for the Color LaserWriter 12/600 PS.

- The color fades very slightly under normal room light. But if you plan to keep the color printouts for a long period (more than 2 years), put them in a binder. (Sometimes the color appears to change when in fact it is a color change in the paper itself.)
- Do not store color printouts together with PVC (polyvinyl chloride) materials such as a clear holder. The toner may melt, causing the paper and the PVC materials to stick together.
- Use only non-solvent glues to glue color printouts together.
- Solvents will dissolve the toner. Before using a glue, test it on unwanted printouts.
- Before inserting any color printout between printed pages, make sure the pages are completely dry; otherwise the ink on those printed pages may cause the toner to melt.
- Store color printouts flat. If they are folded or wrinkled, the toner may come off.
- Store color printouts in at room temperature. High temperature will cause the toner to melt and colors to mix.

NOTE:

The longevity of printed materials can be affected not only by the environment (light, temperature and chemical exposure), but also by the quality and makeup of the paper supporting the image. The above applies only to the color toners.

Understand that there will be archival differences in the color toners (yellow, magenta, cyan and black); the color layers will probably fade at the different rates. While manufacturers can provide rough estimates on the longevity of their products, they must base such numbers on accelerated tests that may not have an accurate correlation to the real-world storage conditions.

Support Information Services

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Tech Info Library Article Number:18481



Tech Info Library

Performa 630CD:Freezes At Start Up Due To Wrong SIMM Type (8/95)

Revised: 8/24/95
Security: Everyone

Performa 630CD:Freezes At Start Up Due To Wrong SIMM Type (8/95)

=====

Article Created: 24 August 1995

TOPIC -----

I have a Macintosh Performa 636CD computer. Since I installed a RAM upgrade, the machine boots to a frozen gray screen. I put the same kind of double banked SIMMs in both slots. What is wrong?

DISCUSSION -----

The second SIMM socket can only accept single banked SIMMs, that is, 1MB, 4 MB, and 16 MB. You cannot use double banked SIMMs in the second slot. You can only use double banked SIMMs in the first slot. To fix the problem remove the double banked SIMM from the second slot and restart the computer.

Support Information Services

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Tech Info Library Article Number:18484



Tech Info Library

Apple Remote Access: Extending Default Time Out Limit (8/95)

Revised: 8/25/95
Security: Everyone

Apple Remote Access: Extending Default Time Out Limit (8/95)

=====

Article Created: 25 August 1995

TOPIC -----

I'm trying to make an Apple Remote Access (ARA) connection to a ARA MultiPort (MP) Server that takes a very long time to respond. After about 50 seconds, which seems to be the ARA default time out, I get a message that the connection attempt has failed. Is there any way to extend the 50 second time out limit?

DISCUSSION -----

The time that ARA will wait to establish a connection is set in the CCL (command control language) script for a particular modem. The CCL script can be modified to change that limit, and CCL script editing tools are available from APDA.

Another way to change the time limit is by including some commas to the end of the dialing string. Every comma attached to the end of the number will add approximately 2 seconds to the amount of time ARA will wait before it assumes the connection will not establish itself. Below is an example:

Number: 5551234,,,,,,,,,

This dialing string will add approximately 20 seconds to the default time, which is usually 50 seconds.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the APDA address and phone number.

Support Information Services

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Tech Info Library Article Number:18485



Tech Info Library

Power Macintosh 9500 Series: Video Card Scan Rates (1/97)

Revised: 1/7/97
Security: Everyone

Power Macintosh 9500 Series: Video Card Scan Rates (1/97)

Article Created: 25 August 1995
Article Reviewed/Updated: 7 January 1997

TOPIC -----

This article describes the video scan rates for the Apple Accelerated Graphics card that ships with the Power Macintosh 9500 Series computers.

DISCUSSION -----

The Power Macintosh 9500 Series computers include the Apple Accelerated Graphics Card, based on the mach64 Graphics Accelerator card from ATI Technologies, Inc. The card normally includes 2MB of VRAM (expandable to 4MB via a 2MB VRAM daughter board) and supports resolutions from 512 x 384 to 1,280 x 1,024. The Monitors control panel reads the display sense codes and may not show every scan rate listed below.

Following are the video scan rates supported by the Apple Accelerated Graphics card in the Macintosh 9500/120:

Begin_Table

Mode	Resolution	Vertical	Horizontal
----	-----	-----	-----
VGA	512 x 384	60 Hz	24.4 KHz
VGA	640 x 480	60 Hz	31.5 KHz
Mac	640 x 480	66.7 Hz	35 KHz
Mac	640 x 870	75 Hz	68.8 KHz
SVGA	800 x 600	56 Hz	35 KHz
VESA	800 x 600	60 Hz	37.9 KHz
VESA	800 x 600	72 Hz	48 KHz
VESA	800 x 600	75 Hz	46.8 KHz
Mac	832 x 624	74.5 Hz	49.7 KHz
VESA	1024 x 768	60 Hz	48.4 KHz
Mac	1024 x 768	74.9 Hz	60.2 KHz

VESA	1024 x 768	70 Hz	56.5 KHz
VESA	1024 x 768	75 Hz	60 KHz
Mac	1152 x 870	75 Hz	68.7 KHz
VESA	1280 x 960	75 Hz	75 KHz
VESA	1280 x 1024	60 Hz	65.6 KHz
VESA	1280 x 1024	75 Hz	80 KHz

End_Table

Note:

The Power Macintosh 9500/132 computer does not ship with the Apple Accelerated Graphics Card. The Power Macintosh 9500/132 requires a third-party (non-Apple) graphics accelerator for display support.

Article Change History:

07 Jan 1997 - Revised discussion with current 9500 models.

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Tech Info Library Article Number:18486



Tech Info Library

Intelligent Battery Recondition Software: Read Me (8/95)

Revised: 8/30/95
Security: Everyone

Intelligent Battery Recondition Software: Read Me (8/95)

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Article Created: 28 August 1995
Article Reviewed/Updated: 30 August 1995

TOPIC -----

The following article is the ReadMe file for the Intelligent Battery Recondition Software.

DISCUSSION -----

This document provides information about the Intelligent Battery Recondition software. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook is connected to a printer, choose Print from the File menu to print a copy of this Read Me. When you are finished reading and printing this Read Me, choose Quit from the File menu to quit the SimpleText application program.

What is the Intelligent Battery Recondition software?

=====

The batteries of the PowerBook 500 series computers are "intelligent", which means they have a small microprocessor in them that monitors the battery's status. The system software communicates with the microprocessor and uses the information stored inside it to tell you how much time is left, if the battery is charging, etc. Under certain conditions, the information stored in the battery can become corrupted and cause the system software to incorrectly report the battery status. The Intelligent Battery Recondition software updates this information in the battery and restores normal operation. This software only works on the PowerBook 500 series computers.

Installing the Intelligent Battery Recondition software

The Intelligent Battery Recondition software consists of two parts:
a system extension ("Intelligent Battery")
an application ("Intelligent Battery Recondition").

To install the Intelligent Battery extension, follow these steps:

Step 1

Drag the extension to the Extensions folder (in the System folder) on your PowerBook's hard disk.

Step 2

Restart your PowerBook.

To install the Intelligent Battery Recondition application, do this:

- Drag the Intelligent Battery Recondition application to your PowerBook. You can copy the application anywhere on your PowerBook's hard disk.

When should I use the Intelligent Battery Recondition application?

You should use the Intelligent Battery Recondition application if your PowerBook fails to recognize an installed battery or when a battery will not charge. You can tell if the PowerBook recognizes an installed battery by looking at the battery monitor module in the Control Strip.

If one of these situations occurs, then you need to run the Intelligent Battery Recondition application:

- A battery is installed in the right battery bay and you see something like the following in the battery monitor module:
- A battery is installed in the left battery bay and you see something like the following in the battery monitor module:
- At least one battery installed and you see something like the following in the battery monitor module:

Using the Intelligent Battery Recondition application

To use the Intelligent Battery Recondition application, do this:

Step 1

Make sure the battery you want to update is in the right hand battery bay.

Step 2

Double-click the Intelligent Battery Recondition application icon and follow the on screen instructions. You'll be instructed to insert batteries into the right

hand battery bay.

It takes from 7 to 12 minutes to complete the update process. Do not interrupt the application while it is running. Watch for dialogs that require action on your part. Progress messages appear in the Intelligent Battery Recondition application window.

A message appears on the screen telling you when the update process is finished. Click OK to finish the process and automatically quit the application.

IMPORTANT You can quit the application at any time, but quitting before the update process is complete may cause the battery to behave unpredictably.

The application can only update the battery in the right hand battery bay, so if your PowerBook has a battery in the left battery bay, or you have extra batteries for your PowerBook, follow the steps above for each battery.

Getting help

If you find that your batteries aren't performing correctly after using the Intelligent Battery Recondition software, contact your Apple-authorized service provider or call the Apple Assistance Center at 1-800-SOS-APPL.

Article Change History:

30 Aug 1995 - Made changes to keywords.

Support Information Services

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Tech Info Library Article Number:18489



Tech Info Library

Megaphone: -17 Error Message (9/96)

Revised: 9/10/96
Security: Everyone

Megaphone: -17 Error Message (9/96)

=====

Article Created: 28 August 1995
Article Reviewed/Updated: 10 September 1996

TOPIC -----

When I try to open the Megaphone telephony application, I get an error message that says "An error occurred opening the sound recording driver; an unexpected error has occurred (-17)". Megaphone quits and I go back to the Finder. What should I do?

DISCUSSION -----

Cypress Technologies, the makers of Megaphone, recommend the following to fix this issue caused by one or more corrupted files:

Step 1

Open the System Folder on your hard drive.

Step 2

* Global Village Teleport Platinum V Modems:

Open the Preferences folder. Drag the following items to the Trash:

- Cypress Folder

NOTE:

If you wish to retain your contacts, open the Cypress folder and the MegaPhone folder and move the CONTACTS file to the desktop. After restarting the computer, drag the Contacts file back to the System - Preferences - Cypress - MegaPhone folder and replace the new file.

Also, if you want to keep your recorded inbound calls, you should move Voice Mail Sounds out of your System Folder completely and store it some place else on

your hard drive. Voice Mail Sounds contains previously recorded calls. If you trash the file, you will lose recorded calls.

- Sound Preferences

* Global Village Telport Gold IIV Modems:

Open the Preferences folder. Drag the following items to the Trash:

- Cypress Folder

NOTE:

If you wish to retain your contacts, open the Cypress folder and the MegaPhone folder and move the CONTACTS file to the desktop. After restarting the computer, drag the Contacts file back to the System - Preferences - Cypress - MegaPhone folder and replace the new file.

Also, if you want to keep your recorded inbound calls, you should move Voice Mail Sounds out of your System Folder completely and store it some place else on your hard drive. Voice Mail Sounds contains previously recorded calls. If you trash the file, you will lose recorded calls.

- Sound Preferences

- Telport Gold Tool Prefs

Step 3

Close the Preferences folder.

Step 4

Open the Extensions folder (within the System Folder).

Step 5

* Global Village Teleport Platinum V Modems:

Drag the CRC Teleport Teltool file to the Trash.

* Global Village Telport Gold IIV Modems:

Drag the Telport Gold IIV Teltool to the Trash

Step 6

Close any open windows and insert the Performa system software CD-ROM disc.

Step 7

From the System Folder on the Performa CD, open the Extensions folder.

Step 8

Drag the CRC Telport Teltool file (Platinum V modems) or Telport Gold IIv Teltool file (Gold IIv modems) from the Extensions folder on the Performa CD to the Hard Disk icon.

Step 9

Close all open windows except for the Hard Disk.

Step 10

Drag the CRC Teleport Teltool file (Platinum V modems) or Telport Gold IIv Teltool file (Gold IIv modems) to the System Folder. You will get a message stating that Extension files belong in the Extensions folder. Click OK.

Step 11

Close all windows and choose Restart from the Special menu. When the computer has restarted Megaphone is ready to use.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 15

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Cypress Technology's address and phone number.

Article Change History:

10 Sep 1996 - Updated information.

01 Apr 1996 - Removed keyword.

29 Jan 1996 - Added Information Alley information.

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Tech Info Library Article Number:18490



Tech Info Library

Macintosh Performa 6100 Series: Low Sound Volume (8/95)

Revised: 8/28/95
Security: Everyone

Macintosh Performa 6100 Series: Low Sound Volume (8/95)

Article Created: 28 August 1995

TOPIC -----

The sound level from the internal speaker seems low on my Macintosh Performa 6100 series computer. What is causing this and what can I do to get higher volume?

DISCUSSION -----

You should first check the volume levels in the Sound control panel. Open the Sound control panel and adjust the volume in both the Alert sounds and Volumes options.

The internal speaker is located directly underneath the computer. Make sure that your computer is on a flat surface with no obstructions. Paper or other material directly under the computer can dampen the sound.

Another way to get louder sound is to connect external speakers. Many monitors have speakers that can be connected to the audio-out port of your computer.

The following computers are in the Macintosh Performa 6100 series: Performa 6110, Performa 6112, Performa 6115, Performa 6117, and Performa 6118.

Support Information Services

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Tech Info Library Article Number:18491



Tech Info Library

Power Macintosh 8500: Logic Board Upgrades (8/95)

Revised: 2/13/96
Security: Everyone

Power Macintosh 8500: Logic Board Upgrades (8/95)

Article Created: 28 August 1995

TOPIC -----

Which Macintosh computers can be upgraded to the Power Macintosh 8500/120?

DISCUSSION -----

The following table lists the Macintosh computers that can be upgraded to the Power Macintosh 8500/120 via a logic board upgrade:

Begin_Table

Quadra 800
Quadra 840AV
Workgroup Server 80
Workgroup Server 8150
Power Macintosh 8100/80
Power Macintosh 8100/100
Power Macintosh 8100/110

End_Table

Order No. M3807LL/A

NOTE: This upgrade will not be available until 2 months after the introduction date of the Power Macintosh 8500 series computers.

Article Change History:

30 Aug 1995 - Made minor corrections to model numbers.

Support Information Services

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Tech Info Library Article Number:18492



Tech Info Library

QuickTime 2.0.x: 8-Bit Movies Play Poorly In 24-Bit Mode (8/95)

Revised: 8/29/95
Security: Everyone

QuickTime 2.0.x: 8-Bit Movies Play Poorly In 24-Bit Mode (8/95)

=====

Article Created: 28 August 1995

TOPIC -----

I am having problems playing back 8-bit (256 color) QuickTime movies with QuickTime 2.0 using Millions of colors (24-bit). All of the QuickTime movies were created using QuickTime 1.5 or 1.6. If I switch back to QuickTime 1.6, the movies play back properly. I have installed the Apple Multimedia Tuner, but this did not help.

DISCUSSION -----

There is a known problem with QuickTime 2.0 and Power Macintosh computers using 24-bit display depths when playing back 8-bit movies.

This problem has been fixed in QuickTime 2.1, you need to use QuickTime 2.1 to correctly play 8-bit movies on a 24-bit display.

Support Information Services

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Tech Info Library Article Number:18493



Tech Info Library

DOS Compatibility Card: Video Signal Brighter In Windows (8/95)

Revised: 9/29/95
Security: Everyone

DOS Compatibility Card: Video Signal Brighter In Windows (8/95)

=====

Article Created: 25 August 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

I am using a DOS Compatibility Card with a Multiple Scan 17 Display. Everything seems to work okay in the Macintosh and DOS environments, but when in the Windows environment, all lines are distorted. In particular, vertical lines tend to "bleed" to pink and then white. Only black shows up properly.

DISCUSSION -----

Here is some background that explains the nature of the problem and provide a reasonable workaround

Background
=====

The video signal for the DOS/Windows image is actually brighter than the Macintosh image to compensate for the dark image quality that Windows has. The poor image quality of Windows was confirmed by original beta testers for the DOS Compatibility Card. The beta users complained about Windows not being as bright and "crisp" as the Macintosh image. To compensate, the DOS video signal has actually been adjusted so it is brighter (greater signal strength) than the Macintosh video image.

In some cases though, the adjusted difference in brightness can be seen and the Windows video can slightly overdrive the display. The increased video signal strength may create streaks or ghosts of color around icons and other objects in the Windows video image.

Workaround
=====

In configurations where there is ghosting, color streaks or outlines in the Windows video image: switch to Windows; adjust the contrast control of the

display down to minimize contrast (this should remove the ghosting or streaks);
increase or adjust the brightness for an acceptable display image brightness.

This adjustment should provide an acceptable display for both Macintosh and
Windows images.

Support Information Services

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Tech Info Library Article Number:18495



Tech Info Library

RAM: Difference between 2x32 and 2x36 SIMMs (8/95)

Revised: 8/29/95
Security: Everyone

RAM: Difference between 2x32 and 2x36 SIMMs (8/95)

=====

Article Created: 29 August 1995

TOPIC -----

I want to upgrade the random-access memory (RAM) in my Macintosh. I know I need to buy a 72-pin Single Inline Memory Module (SIMM), 80 nanoseconds (ns) or faster. While shopping for memory I have found two different types of SIMMs — those composed of a 2x32 chip set and those composed of a 2x36 chip set. What type of SIMM should I use in my Macintosh computer?

DISCUSSION -----

SIMMs composed of a 2x32 chip set have two chips representing 32 bits each. This totals 64 bits, which, divided by 8, results in 8 planar levels. This is the type of memory for which your computer is designed.

SIMMs composed of a 2x36 chip set have two chips representing 36 bits each. This totals 72 bits, which, divided by 8, results in 9 planar levels, indicating that the chip is a parity SIMM. This type of SIMM may also be used in your computer, but the extra bit offers no advantages.

Some older computers used the extra bit to verify the integrity of data transfer. This type of error checking is no longer widely used. The last Macintosh computer to use any type of parity memory was the Macintosh IIfx.

If you use parity RAM, your computer does not perform any differently. Your computer ignores the ninth bit.

Support Information Services

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Tech Info Library Article Number:18497



Tech Info Library

MAE 2.0: Error Code 1 on HP Installing STREAMS (8/95)

Revised: 8/29/95
Security: Everyone

MAE 2.0: Error Code 1 on HP Installing STREAMS (8/95)

Article Created: 29 August 1995

TOPIC -----

I get an error code 1 on my Hewlett Packard (HP) workstation when trying to build the kernel while installing STREAMS for MAE. Here is what is happening:

```
/bin/ld: Unsatisfied Symbols
hp_dlpi_intr_plabel (data)
hp_dlpi_wakeup)plabel (data)
error code 1.
```

DISCUSSION -----

Your workstation has an early version of HP-UX. When you upgraded to a newer version of HP-UX, you updated, rather than do a complete installation. There are two different versions of the liblan.a library that needed to exist in early HP-UX 9.0. This was due to dlpi being released as part of STREAMS and STREAMS was an ISU in 9.0.

The workaround, for STREAMS, is to break into a temporary shell during the 9.0 update, use vi on the dfile file to delete the "dlpi" line, and exit the temporary shell to continue the update. At this point, the kernel should build properly.

To get dlpi back into your system, you need to re-install the STREAMS-DLPI files from the STREAMS' product tape. However, re-installation the whole STREAMS product set would be beneficial.

NOTE: There is no way to break into a temporary shell to assist in updating the AppleTalk Kernel Modules. There is no workaround, other than completely installing a later version of HP-UX.

If you have additional questions, please contact Hewlett Packard directly. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18498



Tech Info Library

What is Binhex & Where To Obtain It (9/95)

Revised: 9/26/95
Security: Everyone

What is Binhex & Where To Obtain It (9/95)

Article Created: 29 August 1995
Article Reviewed/Updated: 26 September 1995

TOPIC -----

This article describes what Binhex is and where to obtain it.

DISCUSSION -----

Binhex is both a set of application utilities and storage protocols developed by Yves Lempereur in 1984 and 1985. You can find Binhex at the following ftp sites:

ftp.bio.indiana.edu
/util/mac/binhex.bin
(F binhex.bin 7k)

ftp.cc.utexas.edu
/depts/AI_ATTIC/HelpDownloading/MacCompactors/BinHex/binhex.bin
(F binhex.bin 7k)

Why Binhex

The basic idea behind Binhex is to translate a binary representation of data -- which could be an application program, graphical image, sound, and so on -- into an encrypted text representation of that file.

There are two reasons for doing this:

- Many mail programs used on the Internet cannot handle binary transmissions. They were designed for use with text data. So, an application is "binhexed" and included as the text component of the message.
- Many mail programs and gateways have size limitations, often less than 50K, and it is sometimes necessary to use an editor to split or combine such files. Since mail header information makes the automatic joining of files difficult;

Binhex allows common text editors to be used to join and manipulate such files.

How can you tell if it's a Binhex file

Binhex 4.0 files have a suffix of ".hqx". Binhex 2.0 files have a suffix of ".hex". Binhex 4.0 has been out since 1985, and it is very rare to see any ".hex" files anymore.

A Binhex file can be identified by the first line of the file:

(This file must be converted with Binhex 4.0)

This line is followed by one blank line, followed by the start of the data:

:%0bBA0SG(0d,Qe`CbdI0\$Bi!%e348GY69"(!*!\$",!!N!92!J!!!E-2!,35rrr

The data block begins and ends with a colon.

What are the versions of Binhex

Both versions of Binhex are freeware.

Binhex 4.0 simply converts files into Binhex encoded files and back to the file format it was before.

Binhex 5.0 is a bit more complicated because it deals with "MacBinary" documents. It does not deal with Binhex 4.0-encoded files.

What is a MacBinary document

Macintosh files have two components, a data fork and a resource fork. In addition, they have header information specific to the file system, plus additional information which is stored in the Desktop database. Binhex 4.0 documents take all of this into account, when transferring data from system to system.

But suppose you wish to upload a file to a non-Macintosh computer? Binhex files tend to be larger than the equivalent Macintosh file. In addition, when you manipulate them, you have to go through the encryption and decryption process on each end (upload and download) which can be time consuming, especially if you download many files. The solution is to originally upload the file as a "MacBinary" file, it would be stored online as a simple binary file.

Once it is downloaded, if your communications software supports MacBinary, the file would automatically be re-assembled into a Macintosh file or application. However, if you did not have this kind of communications program -- for example, you download the file to a PC, and then transfer the file to a Macintosh using PC Exchange -- you will have a generic binary document which SimpleText may try to open and produce nonsense.

Binhex 5.0 is intended to address this issue. It converts binary documents back into Macintosh applications or files. It does not translate Binhex 4.0 files. There is, therefore, no advantage to using Binhex 5.0 unless you are facing this

unique transfer problem.

Since most online services and communications software will automatically perform MacBinary transmissions (or at least allow the user to select that as an option), it is not generally not necessary to use Binhex 5.0.

UUencode and UUdecode

UUencode and UUdecode were derived in the UNIX environment, and perform a similar function to Binhex 4.0 encryption; they convert raw binary into an alternate text representation. This format is generally not suitable for transferring Macintosh applications, because it does not address differences between resource and data forks, or Desktop issues. In effect, you will only be dealing with information in the data fork.

UUencode and UUdecode are, however, widely used on both UNIX and PC systems, and they are standards. It is likely a user will deal with this format to process data which only has a data fork.

Article Change History:

26 Sep 1995 - Add where to obtain Binhex.

07 Sep 1995 - Corrected typographical error.

Support Information Services

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Tech Info Library Article Number:18499



Tech Info Library

Apple Guide: Wrong Recording Sound Guide on 7500/8500 (8/95)

Revised: 8/29/95
Security: Everyone

Apple Guide: Wrong Recording Sound Guide on 7500/8500 (8/95)

=====

Article Created: 29 August 1995

TOPIC -----

I have a Power Macintosh 7500 computer and I was using Apple Guide to show me how to record a sound. Several steps into the process it asks me to locate the Sound control panel. When I tell it to help me, Apple Guide reports that the Sound control panel does not exist and I should install it from my Macintosh CD. I have been unable to find the Sound control panel anywhere on the compact disc that came with my computer.

DISCUSSION -----

The Apple Guide file that shipped on the Power Macintosh 7500 and 8500 computers has information on how to use the Sound control panel used on earlier System 7 Macintosh computers. The Power Macintosh 7500 and 8500 computers have replaced both the Sound and Monitors control panels with the single Sound & Display control panel. You selected "How do I...record a sound" in the Macintosh Guide window.

You can access the correct Macintosh Guide instruction set by following these steps:

Step 1

Click on the black question mark (?) on the yellow button in upper right corner of your screen and choose Macintosh Guide.

Step 2

Click the Look For button in the upper right corner of the Macintosh Guide window.

Step 3

Type "sound" in the text entry field on the left side of the Macintosh Guide

window, press return to start searching.

Step 4

Double-click the "How do I...install or remove an alert sound" phrase.

Macintosh Guide will now walk you through the correct procedures for using the SimpleSound application (in your Apple Menu) and the Sound & Displays control panel to work with sound on your Macintosh.

Support Information Services

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Tech Info Library Article Number:18501



Tech Info Library

MegaPhone for Performa: Telephone Manager Required Message 8/95

Revised: 8/29/95
Security: Everyone

MegaPhone for Performa: Telephone Manager Required Message 8/95

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Article Created: 29 August 1995

TOPIC -----

I have a Macintosh Performa 6200 computer. When I try to open MegaPhone, I get an error message that states: "Telephone Manager 2.0 (or later) is required. Please install the software before launching Megaphone." However, the Telephone Manager Extension is present in the Extensions folder and has not been disabled by the Extensions Manager. What should I do next?

DISCUSSION -----

When the MegaPhone software is installed in your System Folder it places additional invisible resources inside the System suitcase in order to support the Telephone Manager on Performa 5200 and 6200 computers. If you have reinstalled system software using the Restore System Software feature of your Performa CD or a standard System 7.5 upgrade kit, you will no longer have these resources in your system suitcase. When an unaltered System 7.5 system suitcase is present, you will get this error message when you open MegaPhone.

To resolve this issue, you have two options:

Option 1

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Replace the System suitcase in your System folder with the System suitcase from your Macintosh Performa CD:

Step 1

Insert the Performa CD-ROM disc.

Step 2

Under Special, choose Shut Down.

Step 3

Hold down the "c" key (lower-case C; if you have a keyboard with a physical latch for the Caps Lock key, make sure the Caps Lock key is in the "up" position).

Step 4

Startup your computer.

Step 5

Hold down the "c" key until you see Welcome to Macintosh.

The computer will take longer than normal to start up. When it is finished starting up, the Trash icon will appear on the screen.

The Performa CD icon will appear in the upper right hand corner of the screen. Your hard disk or Macintosh HD icon should be right below the CD icon.

Step 6

Double-click the Hard Disk Files folder on your Performa CD.

Double-click the System Folder Files folder in the Hard Disk Files folder.

Step 7

Drag the System Suitcase from the System Folder Files folder on your Performa CD to the System Folder on your hard drive. When asked if you want to replace the item that already exists, click OK. Make sure the System suitcase is loose in the System folder and that you have not dragged it into another folder in the System folder.

Step 8

Restart your Macintosh, hold the eject button on your CD-ROM Drive to eject the Performa CD. MegaPhone is now ready to use.

Option 2

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Restore your system software by selecting the "Restore All Software" option from your Macintosh Performa CD, following the instructions in your Macintosh Performa User's Guide.

Be sure not to choose the "Restore System Software" option. This will install a regular version of the System suitcase; this version will not include the necessary extra Telephone Manager resources.

Note: Before replacing your System suitcase by using either method, double-click on it to see whether you have recorded any alert sounds. If you have, be sure to move them out of the System suitcase before trashing or replacing the suitcase. After you have finished restoring, you can move them into the new suitcase.

Support Information Services

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Tech Info Library Article Number:18502



Tech Info Library

Disk Manager 4.0.3: Incompatible With System 7.5.2 (8/95)

Revised: 8/29/95
Security: Everyone

Disk Manager 4.0.3: Incompatible With System 7.5.2 (8/95)

=====

Article Created: 29 August 1995

TOPIC -----

I'm having problems installing System 7.5.2 on a third party hard drive. I'm using Disk Manager Mac 4.0.3 to format the hard drive. What am I doing wrong?

DISCUSSION -----

Ontrack Computer Systems, Inc. (the manufacturer of Disk Manager Mac) reports that Disk Manager Mac is not compatible with System Software version 7.5.2.

No additional information is available at this time.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18503



Tech Info Library

At Ease 2.0.3: ReadMe File (8/95)

Revised: 8/29/95
Security: Everyone

At Ease 2.0.3: ReadMe File (8/95)

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Article Created: 29 August 1995

TOPIC -----

This article contains the Read Me file that shipped with At Ease 2.0.3.

DISCUSSION -----

USING AT EASE 2.0.3

This update lists important changes in version 2.0.3 of At Ease and adds information about new features. The update addresses the following topics:

- Installing and upgrading At Ease 2.0.3
- New features
- Using At Ease 2.0.3 with System 7.5
- Using At Ease 2.0.3 for Workgroups
- Tips for using At Ease 2.0.3

For additional information, consult the At Ease 2.0 Owner's Guide or the At Ease 2.0 for Workgroups Administrator's Guide.

INSTALLING AND UPGRADING AT EASE 2.0.3

The following sections give you important information about installing At Ease 2.0.3 and upgrading to At Ease 2.0.3.

Do you have the original At Ease disks?

If you have the original disks for At Ease 2.0.3 or At Ease 2.0.3 for Workgroups, use the Installer program that came with the software to place At Ease and Mouse Practice on your hard disk. See the At Ease 2.0 Owner's Guide or the At Ease 2.0 for Workgroups Administrator's Guide for installation instructions.

If you have problems installing At Ease on 2-megabyte (MB) systems, you can make

more memory available by temporarily turning off all extensions. To do so, restart your computer and hold down the Shift key while it is starting up.

Do you have the At Ease 2.0.3 Updater disk?

If you have the At Ease 2.0.3 Updater disk for At Ease 2.0.3 and At Ease 2.0.3 for Workgroups, use the Updater program on that disk to update your earlier version of At Ease to At Ease 2.0.3 or At Ease 2.0.3 for Workgroups.

Upgrading from At Ease 1.0 to At Ease 2.0.3

If you have At Ease version 1.0, you must first obtain and install At Ease version 2.0 or 2.0.1 before you can install and use At Ease 2.0.3 using the At Ease 2.0.3 Updater disk. Once you have installed version 2.0 or 2.0.1, open the At Ease Setup program. If you created a password in At Ease 1.0, you are asked to enter it as the administrator's password when you open the program. If you have At Ease for Workgroups, a new setup called "At Ease 1.0" appears in the setup list, along with a new user also called "At Ease 1.0." You can rename the user or the setup if you wish. Then turn on At Ease and restart your Macintosh.

When you restart with At Ease turned on, all items that appeared on the At Ease 1.0 Items panel appear on the At Ease 2.0 or 2.0.1 Items panel. You can use the At Ease Setup program to remove items. Initially, the user panel is empty; as users create new items, buttons for these items will appear on the panel.

Now that you have installed At Ease version 2.0 or 2.0.1 on your system, follow the instructions in the next section, "Upgrading from At Ease 2.0 or 2.0.1 to At Ease 2.0.3."

Upgrading from At Ease 2.0 or 2.0.1 to At Ease 2.0.3

If you have At Ease version 2.0 or 2.0.1 on your hard disk, it is automatically upgraded to At Ease 2.0.3 when you use the Updater program that came with version 2.0.3.

To update to At Ease 2.0.3:

1. Turn on your Macintosh.
2. Insert the At Ease 2.0.3 Updater disk.
3. Double-click the Updater icon.
After a few moments, the Updater screen appears.

4. Click Begin.
Some At Ease files are automatically updated.

5. A screen then appears asking you to locate At Ease Setup. Select the At Ease Setup program, then click Update.

After a few moments, updating is complete. You are now ready to use At Ease 2.0.3 or At Ease 2.0.3 for Workgroups.

Note: You cannot use an earlier version of At Ease once you've updated to At Ease 2.0.3. The earlier version won't be able to read the preferences file created by At Ease 2.0.3. If you attempt to install and then use an earlier version after installing At Ease 2.0.3, a window appears telling you to contact the administrator, and then your computer shuts down. In order to use At Ease, you must install the At Ease 2.0.3 program again.

Removing At Ease permanently from your hard disk

To remove At Ease from your hard disk, use the Installer program that came with the At Ease software. Follow the instructions for removing At Ease in the At Ease 2.0 Owner's Guide or the At Ease 2.0 for Workgroups Administrator's Guide.

Do not remove At Ease by dragging the files to the Trash; if you do, you may not be able to restart your Macintosh.

NEW FEATURES

Creating buttons for file servers

The administrator can create At Ease buttons for file servers so that individual users or particular setups can have direct access to file servers. If you have At Ease 2.0.3, a button is created for an individual user. If you have At Ease 2.0.3 for Workgroups, a button is created for a particular setup. The administrator must connect to the file server before he or she can create a button for it in At Ease.

Once the administrator creates the button, a user or a particular setup is able to use that server. In most cases, a user must be registered to use a server and is required to enter his or her name and password after connecting to the file server (by clicking the server button). However, some servers do allow guest access.

To create an At Ease button for a file server you are connected to:

1. Open the At Ease Setup program.
 - If At Ease is already open, choose Go To At Ease Setup from the Special menu.
 - If you are in the Finder, double-click the At Ease Setup program to open it.
2. Type the administrator password and click OK.
3. If you have At Ease 2.0.3 for Workgroups:
 - Select a setup and click Open.
 - Then go to step 5.
4. If you have At Ease 2.0.3:
 - Select a user and click Open.
 - Then click Next.

5. Click the Find Items button.

The Find Items screen appears.

6. Type all or part of the name of the file server in the upper box.

7. Click the Find button.

A list of items appears on the left, showing all items whose names contain the text you typed, including any file servers you are connected to.

8. Click the file server and click the Add button.

The selected file server now appears on the right. To select more than one item in the list, hold down the Shift key while you click the names of the items.

9. When you have finished searching and adding items, click OK.

10. If you have At Ease 2.0.3 for Workgroups, click OK. Then go to step 12.

11. If you have At Ease 2.0.3:

- Click Next.
- Click Next once more, then click Done.

12. Choose Quit from the File menu to leave the At Ease Setup program.

Choosing application preferences

Some application programs need to access special files that come with the application. Sometimes these files may not be available to a user or setup, because of file or folder restrictions placed on a user or setup.

For example, The Writing Center comes with a set of pictures that are in the Pictures Folder. To use these pictures, The Writing Center application program must have access to that folder. A setup or user may not have access to that folder, however, and therefore would not be able to see or use these pictures because of security features within the At Ease program.

The administrator can now allow an application to bypass a setup or a user's folder and open and save these special files anywhere, such as in the application's folder or in the System Folder. In most cases, this enables programs to run more smoothly.

This feature is normally turned on. The administrator may want to turn it off for a particular application if it is not running properly with this feature turned on.

To change the application preferences:

1. Choose Go To At Ease Setup from the Special menu.
2. Type the administrator password and click OK.
3. Choose Application Preferences from the Options menu.
The Set Application Preferences window appears.
4. Click the desired application.

Information appears in the Application Preferences window at the bottom.

5. If you wish, click the checkboxes to change the settings.
For most applications, the default setting is for both checkboxes to be active (marked with an X).

6. Repeat steps 4 and 5 for each desired application. When you are finished setting application preferences, click OK.

7. Choose Quit from the File menu to leave the At Ease Setup program.

Changing the administrator's password

The administrator now must type his or her old password before changing the administrator password. The administrator is the only user who can change this password.

1. Choose Go To At Ease Setup from the Special menu.

2. Choose Administrator Password from the Options menu.
The Administrator Password screen appears.

3. Type your old password in the upper box. Then type your new password in the middle and lower boxes.
You can type up to 15 characters. As you type, dots (•••) appear in place of the text so that anyone nearby will be unable to see what password you have typed. Be sure to choose a password that only you would know.

4. If you wish, click inside the lower box and type a clue that will help you remember your new password.
You can type up to 63 characters. The clue will appear each time you are asked to provide the administrator password. As with the password itself, be sure to choose a clue that only you will recognize.

5. Click OK.
In the future you will need to provide the administrator password before you can use the At Ease Setup program. You can change the password at any time—but only after entering the original password.

6. Choose Quit from the File menu to leave the At Ease Setup program.

Sharing files while using the computer for other work

You can share files on your computer in At Ease while you are doing other work, such as writing a document. If file sharing is turned on, it starts when the computer starts up and stops when the computer is shut down.

Using ClarisWorks

A printing problem in versions 2.0 and 2.0.1 of At Ease has been fixed. You can now print and view entire pages of ClarisWorks™ documents in At Ease 2.0.3 and At Ease 2.0.3 for Workgroups.

USING AT EASE 2.0.3 WITH SYSTEM 7.5

At Ease 2.0.3 and At Ease 2.0.3 for Workgroups are compatible with System 7.5. However, some control panels and other features of System 7.5 may work differently while At Ease is running. This section provides information on these differences. Please refer to the Macintosh Guide, available in the Guide menu (marked with a question mark icon on the right of the menu bar), for more information on these topics.

AppleScript

Scripts written using AppleScript can be launched by At Ease. However, scripts that require the Finder will not run properly.

Extensions Manager

You cannot change the settings in this control panel while At Ease 2.0.3 is running.

Find File

When At Ease 2.0.3 or At Ease 2.0.3 for Workgroups is open, Find File does not allow you to open or print items that are found.

General Controls control panel

Documents

This option can control where the Documents folder is created on your computer. At Ease always tries to open or save a document in the user's folder, within the At Ease Documents folder, regardless of the settings in the Documents option.

If At Ease is running and you have not changed the Documents option, At Ease creates the Documents folder on the startup disk. If At Ease is not running and you select the Documents folder radio button, the Documents folder is created on the desktop.

Launcher

The Launcher does not work with At Ease 2.0.3 and if it is set to open at startup, it will not do so.

Macintosh Easy Open (version 1.1 or later)

If you attempt to open a document without the application program that created it and Macintosh Easy Open is active, a dialog box asks if you want to open the document with another program. The only programs displayed are those made available to the user in the At Ease Setup program.

PowerTalk

You can now receive PowerTalk mail in the background while you are in At Ease. However, to read or write mail, you must be in the Finder.

QuickDraw GX

At Ease now supports printing from QuickDraw GX. However, once you start a print job you cannot log out of At Ease or go to the Finder until the printing is completed. If QuickDraw GX is installed, print jobs that are stopped cannot be restarted within At Ease. The user or the administrator must go to the Finder

to restart a print job.

Printer menu

When the user has access to the Chooser and QuickDraw GX is active, a new menu appears in At Ease called "Printer." This menu contains all desktop printers that have been created, with a checkmark next to the currently selected printer. To select a different printer, simply choose its name.

Printer Status command

To view the status of the currently selected printer, choose Printer Status from the Printer menu. Print jobs started by your computer are displayed. A pop-up menu allows you to view the status of other printers.

Shutdown Items folder

The Shutdown Items folder is located within the System Folder. All items in this folder are started when you choose the Shut Down command from the Special menu to shut down your computer.

USING AT EASE 2.0.3 FOR WORKGROUPS

Security in At Ease for Workgroups

Several new security options are included with At Ease 2.0.3 for Workgroups. These include the ability to prevent users from disconnecting from file servers and the option of remembering the file servers that a user is connected to at login. The Lock Startup Volume option has also changed.

In addition, changes have been made in At Ease 2.0.3 and At Ease 2.0.3 for Workgroups to better ensure that the administrator's password cannot be easily obtained. These new and changed features are described next.

Preventing users from disconnecting from AppleShare volumes

When this option is active (marked with an X), the administrator's password is required to disconnect from file servers. This allows the administrator to decide whether a file server should be disconnected and prevents unauthorized users from disconnecting file servers. This option also ensures that connected file servers are always available.

Remembering user's AppleShare volumes at login

When this option is active (marked with an X), if you connect to a file server while in At Ease, you are reconnected to that file server when you log in to At Ease again.

When this option is not active (the checkbox is blank), file servers that are set in the Chooser to open at start up will now be available to all users. If you connected to a file server while in At Ease, and then quit At Ease, the next time you log in to At Ease, you are not automatically reconnected to the file server you were connected to earlier.

Locking the startup disk

When you choose this option, At Ease locks your startup disk by installing security software on it. This security software cannot be installed on hard disks that have been initialized by driver software that is not compatible with At Ease 2.0.3 for Workgroups.

If At Ease detects an incompatible hard disk, the Lock Startup Volume checkbox is dimmed. Contact the publisher of the driver software to see if a compatible version is available. The At Ease security software cannot be installed on any hard disk partitioned with A/UX.

- Updating disk drivers

If you need to update the driver software for a locked disk, first choose Security from the Options menu in the Setup program and click the Lock Startup Volume checkbox to remove the X.

- Changing the startup disk

If you lock the startup volume, do not change the startup disk selected in the Startup Disk control panel. If you change the startup disk, your At Ease startup volume will not appear on the desktop when you restart the computer, and you will not be able to reselect it from within the Startup Disk control panel.

- Virtual memory

If you have more than one hard disk, the Lock Startup Volume security feature may not protect the startup disk when virtual memory is turned on. Turn off virtual memory on your startup disk if you want to use this security feature.

For more information on security features, see Chapter 5 of the At Ease 2.0 For Workgroups Administrator's Guide.

To change the security options:

1. Choose Go To At Ease Setup for Workgroups from the Special menu.
2. Type the administrator password and click OK.
3. Choose Security from the Options menu.
The Security window appears.
4. Click the checkboxes to change preferences.
5. When you are finished changing the settings, click OK.
6. Choose Quit from the File menu to leave the At Ease Setup for Workgroups program.

If you forget the administrator password

If you forget the At Ease administrator password, follow the instructions below instead of those in the manual.

Note: If your startup disk is locked, you'll first need to run the Unlock program on the At Ease 2.0.3 Utilities disk to unlock the startup disk. Consult the At Ease 2.0 for Workgroups Administrator's Guide for information about the

Unlock program.

1. Start up your computer from another startup disk.
You can use any disk that has system software on it. (See the manual that came with your computer for instructions on choosing a startup disk.) If your computer came with a floppy disk called Disk Tools, you can use this disk.
2. Open the System Folder of your usual startup disk.
3. Open the At Ease Items folder inside your System Folder.
4. Drag the At Ease Preferences file to the Trash.
5. Hold down the Option key while you choose Empty Trash from the Special menu.
6. Restart from your usual startup disk.
7. Open the At Ease Setup for Workgroups application.
If you are using an AppleShare file server as the At Ease disk, your setups may not appear until you reset the At Ease disk to this file server.
8. If necessary, reconnect to the file server and use the At Ease Disk command to reselect the server.
Make sure you use the information on the server instead of replacing it with the information on the startup disk.
9. Choose Administrator Password from the Options menu.
10. In the middle and lower boxes, type a new password. Then click OK.
You can type up to 15 characters. As you type, dots (•••) appear in place of the text so that anyone nearby will be unable to see what password you have typed.
Be sure to choose a password that only you would know.
11. If you wish, click inside the lower box and type a clue that will help you remember your new password.
You can type up to 63 characters. The clue will appear each time you are asked to provide the administrator password. As with the password itself, be sure to choose a clue that only you will recognize.
12. Click OK.
In the future you will need to provide the administrator password before you can use the At Ease Setup program. You can change the password at any time—but only after entering the original password.
13. Choose Security from the Options menu.
14. If you wish, turn on the following options. Then click OK.
 - Allow remote administration
 - Lock startup volume
15. Turn At Ease back on by clicking the On button.

16. Choose Quit from the File menu to leave the At Ease for Workgroups program.

Using At Ease with a file server

If you have an AppleTalk network of At Ease computers, you can set up an At Ease disk on an AppleShare file server. This allows you to make changes in one place for all connected At Ease computers, and allows users to store documents on the file server so they can access them from any computer on the network.

To set up an At Ease disk on a file server, follow these steps:

1. Install At Ease on all the networked computers but not on the file server. Don't install At Ease on the file server itself. You must use the Finder on this Macintosh.
2. Set up the At Ease disk on the server as described in Chapter 4 of the At Ease 2.0 for Workgroups Administrator's Guide.
3. Perform the Update Computers procedure as described in Chapter 6 of the At Ease 2.0 for Workgroups Administrator's Guide.
You need to update computers only once. All future changes made to At Ease will automatically be seen by any At Ease Macintosh configured to use this server. (The update does not take effect on a remote computer until the computer is restarted or returned to the Login screen.)
4. When you use At Ease for Workgroups, keep in mind the following cautions:
 - There can be no more than 1000 total users for all setups.
 - Every At Ease computer is set up using the same AppleShare account. That account must be permitted to read and write to the Documents folder on the At Ease disk.
 - You cannot run the At Ease Setup program from more than one Macintosh concurrently.

TIPS FOR USING AT EASE 2.0.3

- Do not move the Finder from your System Folder. (At Ease may not work properly if the Finder is not present.)
- Application programs that you install are not automatically placed on the At Ease Items panel. Use the At Ease Setup program to give users access to these programs.
- When adding items for a setup, the Add Applications button does not add any Apple II application programs. Use the Find Items button to add these application programs.
- If an At Ease user saves a document in a folder other than his or her own user folder (or floppy disk), the document will not appear on the user's panel.
- When using the Copy To Floppy or Copy From Floppy command, clicking Stop does not interrupt copying of the file in progress, but stops copying after it

has been completed. If additional files were selected, they are not copied.

- Do not run an installer program for another program from within At Ease. To use an installer, first turn At Ease off and return to the Finder.
- Make sure that virtual memory is turned off when you are using the Speak Button Names option.
- Turn on Balloon Help to get more information about items in At Ease or At Ease Setup. (For instructions on turning on Balloon Help, see the At Ease 2.0 Quick Reference Card or the At Ease 2.0 for Workgroups Quick Reference Card.)
- If you are using A/UX, make sure that all At Ease users share the same A/UX login user name.
- If you are running At Ease 2.0.3 for Workgroups and you use Adobe Type Manager (ATM), turn it off on the computers you are updating. Then restart these computers before using the Update Computers feature of the At Ease Setup program. Turn ATM back on after you finish updating the computers, then restart the computers.

IMPORTANT:

When you are finished viewing and/or printing this file, choose Quit from the File menu.

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Support Information Services

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Tech Info Library Article Number:18504



Tech Info Library

PC Exchange: Will it Recognize Windows 95 File Names? (8/95)

Revised: 8/30/95
Security: Everyone

PC Exchange: Will it Recognize Windows 95 File Names? (8/95)

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Article Created: 30 August 1995

TOPIC -----

Will PC Exchange recognize beyond the 8.3 naming convention when extended files names are created on a DOS disk under Windows 95?

DISCUSSION -----

File names longer than 11 characters can be used in Windows 95, but that same file also has the customary 8+3 character name when you exit Windows 95 and return to DOS. PC Exchange supports the DOS naming convention, and therefore does not recognize the extended file names implemented with Windows 95. PC Exchange will display the file's 8+3 character file name that is presented in DOS.

Support Information Services

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Tech Info Library Article Number:18505



Tech Info Library

TelePort Gold IIv Modem: Call Arbitration (9/95)

Revised: 9/7/95
Security: Everyone

TelePort Gold IIv Modem: Call Arbitration (9/95)

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Article Created: 30 August 1995
Article Reviewed/Updated: 7 September 1995

TOPIC -----

Is the Global Village TelePort Gold IIv internal modem, bundled with the Performa 5200 and 6200 family of computers capable of determining whether an incoming call is a fax or voice call?

DISCUSSION -----

The internal modem bundled with these computers automatically handles arbitration between the GlobalFax and MegaPhone software. To setup the software, so the modem will arbitrate your calls, open the Telephone Setup control panel and select the "Auto-answer incoming calls after 4 rings" option. This selection will direct the incoming call to the appropriate software, whether the call is either voice, or fax.

Use the search string 'megaphone and record' to locate the TIL article "MegaPhone: How to Record Outgoing Message" for additional information on setting up your computer as an answering machine.

Article Change History:
07 Sep 1995 - Added TIL cross-reference.

Support Information Services

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Tech Info Library Article Number:18506



Tech Info Library

QuickTime for Windows 2.0.3: Key Features (8/95)

Revised: 8/30/95
Security: Everyone

QuickTime for Windows 2.0.3: Key Features (8/95)

Article Created: 30 August 1995

TOPIC -----

This article provides a list of key features found in QuickTime for Windows 2.0.3.

DISCUSSION -----

KEY FEATURES IN QUICKTIME FOR WINDOWS 2.0.3

- New single file QuickTime installer for more reliable installs.
- Support for text tracks.
- Support for MPEG tracks with Sigma Designs Reel Magic Board.
- Support for MPEG file playback via Sigma Designs Reel Magic Board.
- Support for MPEG decompressor Components.
- Support for MIDI Music tracks.
- Support for IMA4 compressed audio.
- Support for Video Hardware frame buffer access Components.
- Player application can copy selected portions of text track and current visuals to clipboard.
- Support for P9000 Graphics accelerator.
- Support for the Cirrus Logic CL-GD54xx GUI accelerator.
- Support for the WD 90C33 Graphics accelerator.
- OLE 1.0 (Object Linking & Embedding). The Movie Player is an OLE server, enabling QuickTime movies to be placed and played in Microsoft Excel 4.0, Word for Windows 2.0, Write, and Word Perfect 5.2 using QuickTime's human interface
- MCI (Media Control Interface) provides media integration in applications like Windows Media Player, AimTech Icon Author, and Asymetrix Multimedia Toolbook.
- Visual Basic 2.0 is supported with a .VBX file for integration of QuickTime Movies into multimedia applications created with Visual Basic 2.0.
- QuickTime for Windows 2.0.3 supports custom add-in decompressors, such

as Intel's Indeo.

- Support for more audio and video card configurations. See PC VIDEO CARD COMPATIBILITY and PC AUDIO CARD COMPATIBILITY for a listing of the audio and video cards which have been tested with QuickTime for Window 2.0.3.

Support Information Services

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Tech Info Library Article Number:18508



Tech Info Library

QuickTime For Windows 2.0.3: ReadMe (4/97)

Revised: 4/3/97
Security: Everyone

QuickTime For Windows 2.0.3: ReadMe (4/97)

Article Created: 30 August 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contain the QuickTime for Windows 2.0.3 Read Me file.

DISCUSSION -----

QuickTime for Windows
version 2.0.3
Release Notes 13 June 1995

QuickTime for Windows 2.0.3 must be licensed for distribution. If you have received QuickTime for Windows as part of an Apple or third-party product, you are licensed to install and use QuickTime for Windows on your computer. You MAY NOT redistribute QuickTime for Windows in any form without a distribution license from Apple Computer. See TO LICENSE FOR DISTRIBUTION in this document for more information.

IMPORTANT INFORMATION
=====

To play on Windows, a QuickTime Movie created on a Macintosh must be saved as Self-contained and Playable on non-Apple platforms. See MAKING MOVIES PLAYABLE ON BOTH MACINTOSH AND WINDOWS for more information.

Sound and video card compatibility is listed under PC VIDEO CARD COMPATIBILITY and PC AUDIO CARD COMPATIBILITY

Not all OLE client applications are supported by QuickTime for Windows 2.0.3

See OLE 1.0 SUPPORT for more information.

Intel Indeo decompressor is bundled. Support for the Indeo codec is provided by Intel Customer Support at 1-800-468-3548. See INTEL INDEO DECOMPRESSOR IS BUNDLED for more information.

WHAT'S IN THIS DOCUMENT

=====

- New features in 2.0.3
- Making movies playable on both Macintosh and Windows
- Product submissions encouraged
- OLE 1.0 support
- Intel Indeo decompressor is bundled
- Macintosh features that are not currently supported
- Minimum PC configuration
- Components of QuickTime for Windows 2.0.3
- To license for distribution
- Where to get QuickTime for Windows today
- Recommended for development
- PC Audio card compatibility
- PC Video card compatibility
- Modifying QTW.INI for compatibility

KEY FEATURES IN QUICKTIME FOR WINDOWS 2.0.3

=====

- New single file QuickTime installer for more reliable installs.
- Support for text tracks.
- Support for MPEG tracks with Sigma Designs Reel Magic Board.
- Support for MPEG file playback via Sigma Designs Reel Magic Board.
- Support for MPEG decompressor Components.
- Support for MIDI Music tracks.
- Support for IMA4 compressed audio.
- Support for Video Hardware frame buffer access Components.
- Player application can copy selected portions of text track and current visuals to clipboard.
- Support for P9000 Graphics accelerator.
- Support for the Cirrus Logic CL-GD54xx GUI accelerator.
- Support for the WD 90C33 Graphics accelerator.
- OLE 1.0 (Object Linking & Embedding). The Movie Player is an OLE server, enabling QuickTime movies to be placed and played in Microsoft Excel 4.0, Word for Windows 2.0, Write, and Word Perfect 5.2 using QuickTime's human interface
- MCI (Media Control Interface) provides media integration in applications like Windows Media Player, AimTech Icon Author, and Asymetrix Multimedia Toolbook.
- Visual Basic 2.0 is supported with a .VBX file for integration of QuickTime Movies into multimedia applications created with Visual Basic 2.0.
- QuickTime for Windows 2.0.3 supports custom add-in decompressors, such as Intel's Indeo.
- Support for more audio and video card configurations. See PC VIDEO CARD COMPATIBILITY and PC AUDIO CARD COMPATIBILITY for a listing of the audio and video cards which have been tested with QuickTime for Window 2.0.3.

MAKING MOVIES PLAYABLE ON BOTH MACINTOSH AND WINDOWS

=====

To make a movie playable on a PC, on a Macintosh open a movie file using the Movie Converter utility (part of the QuickTime Starter Kit 1.0) and choose Save As (File menu). In the resulting dialog box, click the radio button labeled Make movie self-contained which tells the utility to sever any links to other movies after incorporating the relevant video into this movie. Also select the checkbox labeled Playable on non-Apple computers. This causes the movie to be saved as a single forked movie. The resulting movie is cross-platform and is still in the QuickTime file format.

Once you save the movie, it will be playable on both Macs and PCs without further translation or file conversion. Before you transfer the movie to a PC, remember to give it a filename thats no longer than 8 characters, plus the extension .MOV for example, MYMOVIE.MOV.

PRODUCT SUBMISSIONS ENCOURAGED

=====

Apple Computer encourages developers of current and intended commercial products which use QuickTime for Windows to send us evaluation copies. For example, products such as CD-ROM titles, Movie clip libraries, applications and utilities are often considered for future co-marketing opportunities. Two copies are requested, one for marketing evaluation and one for technical evaluation. These products will be used to ensure full compatability with future versions of QuickTime for Windows. Please submit with appropriate product and company information to:

QuickTime for Windows Product Submission
Apple Computer, Inc.
1 Infinite Loop, MS: 302-3KS
Cupertino, CA 95014

OLE 1.0 SUPPORT

=====

The QuickTime for Windows 2.0.3 Movie Player is an OLE 1.0 Server. Due to a lack of standards in OLE 1.0 implementation, it is difficult to guarantee support of QuickTime for Windows with all OLE -supporting Client applications. The following products have been tested and compatibility verified. Support for other OLE Client applications cannot be guaranteed.

- Microsoft Windows 3.1 Write
- WordPerfect 5.2
- Microsoft Word for Windows 2.0
- Microsoft Excel 4.0
- Microsoft Multimedia Works for Windows

INTEL INDEO DECOMPRESSOR IS BUNDLED

=====

Intel's first release of its Indeo decompressor is bundled with this product. Please contact Intel for support and for future updated releases of Indeo. Intel Customer Support is at 1-800-468-3548.

MACINTOSH FEATURES THAT ARE NOT CURRENTLY SUPPORTED

=====

Capture
Compression
PhotoCD
SMPTE Time codes
Data references

NOTE:

When producing QuickTime Movies, you are encouraged to use advanced features on the Macintosh release of QuickTime. It is likely that features currently unique to the Macintosh will be supported in subsequent releases of QuickTime for Windows.

MINIMUM PC CONFIGURATION

=====

- 386SX at 20 Mhz
- 4 MB RAM
- 80 MB hard disk
- VGA or better display card
- QuickTime provides best quality and performance on cards displaying 32,768 color or more. See the end of this document for a list of tested compatible audio and video cards.
- A Sound card for playback of Movies with sound
- Windows 3.1 or later
- DOS 5.0. MS-DOS 6.0 and 6.2 with and without double space is supported.

COMPONENTS OF QUICKTIME FOR WINDOWS 2.0.3

=====

- DLLs
- Movie Player application and OLE 1.0 server
- Picture Viewer application
- On-line help

TO LICENSE QUICKTIME FOR WINDOWS FOR DISTRIBUTION

=====

Contact:

Apple Software Licensing
20525 Mariani
MS: 38-I
Cupertino, CA 95014
408-974-4667
fax: 408-862-5106
eMail: SW.LICENSE

Please provide the following information to receive a license agreement:

- Contact person
- Mailing address
- Phone number
- Fax
- Provide a proposal that includes a complete description of the product, how QuickTime for Windows is used in the product, and the distribution plans for the product.

You will receive a QuickTime for Windows License Kit containing the Apple License Agreement and license information.

WHERE TO GET QUICKTIME FOR WINDOWS TODAY

=====

QuickTime for Windows is bundled with various 3rd party products that support QuickTime for Windows such as Movie clip libraries, software applications and CD-ROM titles. Look for the QuickTime for Windows logo on the packaging of products such as these:

- Adobe Premiere 4.0 for Windows
- Macromedia Action 2.5 for Windows
- Macromedia Authorware Pro 2.0 for Windows
- The QuickTime for Windows Development Kit (APDA, #R0453LL/B), provides you with an ISO format CD-ROM that contains the DLLs, sample applications and source code, movie files, on-line documentation, help files and the QuickTime for Windows programmers manual. Six (6) DOS-based disks containing a subset of CD-ROM contents are also available for those without a CD-ROM drive.
- Look for other QuickTime for Windows retail products in 1995.

RECOMMENDED FOR DEVELOPMENT

=====

In addition to the QuickTime for Windows Development Kit, the following is useful in the development of cross-platform QuickTime support.

- QuickTime for Macintosh Development Kit (APDA)
- QuickTime Movie Exchange Toolkit (APDA #R0190LL/A)
- Convert multimedia data created on other workstation platforms to QuickTime Movies playable on a Macintosh.

For development kits contact:

APDA

Apple Computer, Inc.

P.O. Box 319

Buffalo, NY 14207-0319

USA (800) 282-2732

Canada (800) 637-0029

Intl (716) 871-6555

eMail: APDA@apple.com

Compuserve: 76666,2405

America OnLine: APDA

Internet: APDA@apple.com

QuickTime for Windows 2.0.3 Hardware Compatibility List

=====

This document is meant to be an aid to developers who are working with and distributing QuickTime for Windows per their license agreement. The list is by no means comprehensive but has grown substantially over the past year. The Video and Audio Hardware adapters are divided into three basic classifications Supported, Compatible and In-Compatible.

- Supported hardware/driver combinations are those that have been tested as part of the QTW development plan and are considered benchmarks to the product.
- Compatible hardware/drivers are those combinations that have been tested but not as thoroughly as Supported items but appear to function adequately.
- In-Compatible hardware/driver combinations are those recognized as having significant problems in appearance or behavior with QTW.

Another category that we've added to our report is Optimized.

Optimized video hardware/driver combination allows QTW to write directly to the video memory speeding up video performance significantly.

Whenever possible the name of the manufacture, product name, driver date or version when known, and depth in the case of video drivers is listed.

Supported Video

=====

Begin_Table

Adapter	Driver	Depth	Resolution	Optimized?
-----	-----	-----	-----	-----
Standard VGA	Windows VGA	4	640x350	No
Standard EGA	Windows EGA	4	640x480	No
IBM 8514	Windows	8	1024x768	No
IBM XGA	07/27/92	4	640x480	No

IBM XGA*	07/27/92	16	1024x768	No
ATI VGA XL	04/09/92	4	800x600	Yes
ATI VGA XL	04/10/92	8	1024x768	Yes
ATI VGA XL	04/20/92	16	800x600	Yes
ATI ULTRA	04/22/92	8	1024x768	No
ATI ULTRA	OEM	16	640x480	No
ATI Mach 32	01/05/93	8	640x480	Yes
ATI Mach 32	01/05/93	16	1024x768	Yes
Orchid Iis	03/01/92	8	800x600	Yes
Orchid Iis	03/01/92	16	800x600	Yes
Video 7 VRAM2 ERGO	03/10/92	8	800x600	Yes
Orchid Fahrenheit VA	02/19/93	8	640x480	Yes
Orchid Fahrenheit 1280	08/10/92	8	640x480	Yes
Orchid Fahrenheit 1280	08/10/92	16	800x600	Yes
Diamond Stealth	09/25/92	8	640x480	Yes
Diamond Stealth	09/25/92	16	640x480	Yes
Diamond SpeedStar 24x	04/28/92	8	1024x768	Yes
Diamond SpeedStar 24x	04/28/92	16	800x600	Yes
Diamond SpeedStar 24x	04/28/92	24	640x480	Yes

End_Table

* NOTE:

Only XGA20 supports 16-bit color. Do NOT use the drivers supplied with Windows 3.1. Instead, use the drivers supplied by IBM

Supported Audio

=====

Begin_Table

Adapter	Driver	Date	Notes
-----	-----	-----	-----
Creative Labs SoundBlaster Pro	SBPSND.DRV	05/15/92	(1)
Creative Labs SoundBlaster Pro	SBPSND.DRV	02/05/92	(2)
Creative Labs SoundBlaster Pro 16	SB16SND.DRV	04/14/93	
Creative Labs ThunderBoard	SNDBLST2.DRV	03/10/92	
Creative Labs ThunderBoard	SNDBLST2.DRV	05/13/92	
Media Vision ProAudio Spectrum	MVPROAUD.DRV	02/03/93	1.3
Media Vision ProAudio Spectrum Plus	MVPROAUD.DRV	02/03/93	1.3 (3)
Media Vision ProAudio Spectrum 16	MVPROAUD.DRV	02/03/92	
Media Vision Audio Port	MVAPORT.DRV	04/14/92	(4)
Microsoft Sound System	SNDSYS.DRV	09/21/92	1.0
Cardinal Technologies Sound Studio	TAPIGSS1.DRV	12/28/92	
Orchid Sound Producer Pro.	PRODUCER.DRV	01/13/93	
Orchid Sound Producer Pro.	PRODUCER.DRV	10/01/92	
Turtle Beach MultiSound	MULTISND.DRV	08/27/92	1.1
ATI Stereo F/X	SFX.DRV	05/04/92	

End_Table

Notes:

(1) - This driver has a know bug that effects all Windows applications that use sound where at times a portion of the sound will be repeated several times.

(2) - This driver some times 'sticks' on a sound.

(3) - Make the following modifications to the QTW.INI file.

[Sound]

RequestedRate=22095

ActualRate=22536

(4) - Does not support sound sampled at above 11khz. Make the following modifications to the QTW.INI file.

[Sound]

RequestedRate=11025

ActualRate=11025

Compatible Video

=====

Begin_Table

Adapter	Driver Date	Depth	Resolution	Optimized
-----	-----	-----	-----	-----
Actix Graphics Engine				
Ultra Plus	03/25/93	16	1024x768	No
	03/25/93	8	1024x768	No
	03/25/93	16	800x600	No
	03/25/93	8	800x600	No
	03/26/93	24	640x480	No
	03/25/93	16	640x480	No
	03/25/93	8	640x480	No
ATI VGA XL	08/14/92 1.42	16	640x480	No
	04/20/92	8	800x600	Yes
	04/10/92	16	640x480	Yes
	04/20/92	8	640x480	Yes
	06/25/92	8	1024x768	Yes
	06/25/92	8	800x600	Yes
	07/28/92	16	640x480	Yes
	06/25/92	8	640x480	Yes
ATI VGAWONDER XL24	06/25/92	8	1024x768	Yes
	07/28/92	16	800x600	Yes
	06/25/92	8	800x600	Yes
	07/28/92	16	640x480	Yes
	06/25/92	8	640x480	Yes
ATI Graphics Ultra	08/14/92	4	800x600	No
	08/14/92	4	640x480	No
	06/25/92	8	640x480	No
ATI Graphics Ultra Pro	03/10/92	8	8514/a	No
	03/13/93	8	1280x1024	Yes

	03/13/93	16	1024x768	Yes
	03/13/93	8	1024x768	Yes
	03/13/93	24	800x600	No
	03/13/93	16	800x600	No
	03/13/93	8	800x600	Yes
	03/13/93	16	640x480	No
	03/19/93	24	640x480	No
	03/19/93	16	640x480	No
	03/19/93	8	640x480	Yes
ATI Graphics/Pro	11/27/92	8	1024x768	No
	11/27/92	16	640x480	No
Dell 466/M S3	09/04/92(1.2)	4	1280x1024	Yes
	09/04/92(1.2)	8	1024x768	Yes
	09/04/92(1.2)	8	800x600	Yes
	09/04/92(1.2)	4	800x600	Yes
	09/04/92(1.2)	15	640x480	Yes
	09/04/92(1.2)	8	640x480	Yes
Diamond Stealth Pro	12/07/92	8	1280x968	No
	12/07/92	8	1280x1024	No
	12/16/92	16	1024x768	No
	01/06/93	8	1024x768	No
	12/18/92	16	800x600	No
	01/06/93	8	800x600	No
	02/23/93	24	640x480	No
	01/06/93	16	640x480	No
	01/06/93	8	640x480	No
Diamond SpeedStar 24	04/14/92	8	1024x768	Yes
	04/14/92	15	800x600	No
	04/14/92	8	800x600	Yes
	04/14/92	15	640x480	No
	04/14/92	8	640x480	Yes
Diamond Viper VLB	04/27/93	8	1152x900	Yes
	04/27/93	16	1024x768	Yes
	04/27/93	8	1024x768	Yes
	04/27/93	24	800x600	No
	04/27/93	16	800x600	Yes
	04/27/93	8	800x600	Yes
	04/27/93	24	640x480	No
	04/27/93	16	640x480	Yes
Support for the P9000 was added in QTW 1.1.1.				
Genoa Windows VGA 8500	02/16/93	8	1024x768	Yes
	10/23/92(turbo)	16	800x600	Yes
	08/24/92	16	800x600	Yes
	10/28/92	8	800x600	Yes
	12/01/92(turbo)	24	640x480	No
	10/14/92	24	640x480	No

11/11/92(turbo)	16	640x480	Yes
08/24/92	16	640x480	Yes
10/28/92	8	640x480	Yes

Support for thge Cirrus Logic CL-GD5426 GUI was added in QTW 1.1.1.

IBM XGA2	07/27/92	8	640x480	No
	07/27/92	16	640x480	No
	07/27/92	8	800x600	No
	07/27/92	16	800x600	No

QTW supports IBM XGA2 starting with version 1.1.

Orchid Fahrenheit VA	02/19/93 10:00	16	1024x768	Yes
	02/19/93 10:00	24	640x480	Yes

Orchird VLB (Local Bus)	02/19/93	16	800x600	Yes
	02/19/93	15	800x600	Yes
	02/19/93	8	800x600	Yes
	02/19/93	24*	640x480	No
	02/19/93	16	640x480	Yes
	02/19/93	15	640x480	Yes
	02/19/93	8	640x480	Yes

* Note:

Movies shifted to the left, a few pixels in 24 bit mode. Rebooting fixes the problem.

Orchid Fahrenheit 1280	08/10/92 10:00	15	800x600	No
	08/10/92 10:00	8	800x600	Yes
	08/10/92 10:00	16	640x480	No
	08/10/92 10:00	15	640x480	No

Orchid Pro designer IIs/D 1.1	04/7/92	15	800x600	No
	04/7/92	8	800x600	Yes
	04/7/92	8	640x480	Yes

Orchid Pro II	03/01/92	8	1024x768	Yes
	03/01/92	15	800x600	No
	03/01/92	8	800x600	Yes
	03/01/92	15	640x480	No
	03/01/92	8	1024x768	Yes

Sigma Legend GX	04/01/92(1.13)	8	1024x768	No
	04/01/92(1.13)	8	800x600	No
	03/31/92(1.13)	8	640x480	No
	04/01/92(1.13)	8	640x480	No

Sigma Legend 24X	11/13/92	8	1024x768	No
	11/13/92	16	800x600	No
	11/13/92	8	800x600	No
	11/14/92	24	640x480	No
	11/13/92	16	640x480	No
	11/13/92	8	640x480	No

Matrox 1024	08/21/92 2.07	24	1024x768	No
MiroCrystal 8S	04/13/93	8	1024x768	No
	04/13/93	16	800x600	No
	04/13/93	8	800x600	Yes
	04/15/93	16	640x480	

End_Table

Compatible Audio

=====

Begin_Table

Adapter	Driver	Driver Date
-----	-----	-----
Creative Labs ThunderBoard	SNDBLST2.DRV	03/10/92
Creative Labs ThunderBoard	SNDBLST2.DRV	05/13/92
Creative Labs Sound Blaster 2.0(1)		02/16/93
Digispeech PortAble Sound Plus	PRTSND.DRV	04/14/93
IBM M/Audio (2)	ACPA.DRV	0/29/92 11:38
IBM M/Audio (3)	ACPA.DRV	8/28/92
MediaVision Thunder & Lightning (4)	TLWAVE.DRV	08/25/92

End_Table

Notes:

(1) Sound 'Sticks' with this driver.

(2) Adjusting the volume from the Movie Controller may cause the volume to be muted. To restore the volume, stop and restart the movie. Sound may skip when resizing window. Sound is played at 44khz by doubling the samples.

(3) Limited volume control from keyboard.

(4) Make the following modifications to the QTW.INI file.

[Sound]

RequestedRate=22222

In-Compatible Video

=====

Begin_Table

Video Card	Driver	Bit-Depth	Resolution	Optimized	Notes
-----	-----	-----	-----	-----	-----
ATI VGAWONDER XL24	07/29/92	24	640x480	Yes	(1)

ATG CatsEye/X					(2)
Compaq Q-Vision					(3)
Diamond SpeedStar 24	04/14/92	24	640x480	Yes	(4)
MediaVision					(5)
OmiCorp Texan					(6)
PackardBell					(7)
Sigma WindStorm	08/21/92	8	1024x768	No	(8)
	08/21/92	16	800x600	No	
	08/21/92	8	800x600	No	
	08/21/92	24	640x480	No	
	08/21/92	16	640x480	No	
	08/21/92	8	640x480	No	
Video 7 SPEA 7	OEM				(9)

End_Table

Notes:

- (1) - In the 24 bit mode (16 Million Colors) Reds and Blues seem to be reversed .
- (2) - Field reports of systems hanging when movies are played with is board.
- (3) - We have field reports that QTW does not work with is card.
- (4) - Movies render as a thin line at the top of the screen in 24-bit mode. All other functions are normal.
- (5) - We have a field report that QTW does not work with the orginal MediaVision video display adapter. The report indicates that the movies sound is played but the movie can not be seen. Problem persists when Optimize is set to driver
- (6) - We have field reports of sound but no movie (video) with this card.
- (7) - We have several field reports dealing with a Packard Bell. Reports of a "shutters" type effect on local bus systems have been noted. The shutters effect is where a few lines of movie can be seen, then a few lines of background, then a few lines of movie, and so on. The reports also state that the image is also shifted down and to the right about 10 pels. Further reports tell of a lack of Movie image when running on Local Bus Packard Bell Machines.
- (8) - QTW has very poor performance with is adapter.
- (9) - We have field reports that the Optimize = Driver must added to the QTW.INI before the movie will appear in the movie window frame. Audio and all other actions seems to be OK with out the change

In-Compatible Audio

=====

Media Vision Thunder and Lighting: QTW has very poor throughput with this card.

Media Vision CDPC: QTW does not work well with is system with movies over 10 seconds in length.

Media Vision CDPC II: QTW does not work well with is system with movies over 10 seconds in length.

Sigma Design WinStorm 8/21/92: Very poor QTW performance when running audio and video together.

Tandy 'Gold Card': Only one unconfirmed report on this line of cards. A developer states that he has a Tandy "Gold Card" and QTW crashed whenever he trys to play a movie. Removing the card seems to fix the problem.

MODIFYING QTW.INI FOR COMPATIBILITY

=====

NOTE: Modification of the QTW.INI file should be done at your own risk. Typically one does not need to make any modifications to this file. For some compatibility issues, modifying the file will make video or audio cards work properly, but with reduced performance. Be sure to make a backup of the QTW.INI file before modifying it.

The most common modification to the QTW.INI is to change the [Video] setting to Optimize = Driver. This may resolve severe compatibility problems with a specific video card but will also reduce the performance of Movie playback. Once again, modify at your own risk.

[Video] (in order of priority)
Optimize = Hardware (default)
Driver
BMP
RAW
DIB

[Video Optimize]
This is not used

[Override] // group
DREF = no or yes {NO forces QTW to use the file as self referencing,
useful for QT 1.0 files}

[Data Handler]
CDROM Xfer Rate* = [integer] ranges from 100 to 600, where number is in K, default is 328.
CDROM Seek TTime* [integer from 0 to X] where x is 100 to 350 in ms for average seek, default is 200.
CDROM Block Size = [integer, expressed in K] default is 8, range is 1 to 64.
Max Open Files =[integer] default is 64.
Max Consumers = [integer] usually same as Max Open Files. You can have multiple consumers per file.
Max Cache Size = [integer] expressed in K, default is 128, ranges from

64 to 512.

Disk Xfer Rate = [integer] same as CDROM Xfer Rate, default is 300.

Disk Seek TIme [integer] expressed in millisecon s per average seek,
default is 35.

Disk Block Size = [integer, expressed in K] default is 16, range is 1 to
64.

Network Xfer Rate = [integer] same as CDROM Xfer Rate, defalut is 250

Network Seek TIme [integer] expressed in millisecon s per average seek,
default is 40.

Network Block Size = [integer, expressed in K] default is 16, range is 1 to 64.

Floppy Xfer Rate = [integer] same as CDROM Xfer Rate, default is 18.

Floppy Seek TIme [integer] expressed in millisecon s per average seek,
default is 100.

Floppy Block Size = [integer, expressed in K] default is 2, range is 1
to 64.

[Sound]

Requested Rate = [integer] ranging from 5000 to 44000 (has to be exact
rate for MPC cards)

Actual Rate = same possible rates as requested

* Note: Set dynamically by QuickTime for Windows, based on what it
senses as the CD-ROM speed.

Article Change History:

02 April 1997 - Update eMail addresses

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Tech Info Library Article Number:18509



Tech Info Library

PowerBook 5300: PC Card Modem Connection Files ReadMe File 5/97

Revised: 5/2/97
Security: Everyone

PowerBook 5300: PC Card Modem Connection Files ReadMe File 5/97

Article Created: 30 August 1995
Article Reviewed/Created: 1 May 1997

TOPIC -----

This article contains the Read Me file included with the PC Card Modem Connection Files on the PowerBook 5300 computers.

DISCUSSION -----

About PC Card Modem Files

The PC Card Modem Files folder contains modem connection files for various PC Card modems that will work with several application programs. If your modem file is not included, please contact your communications software manufacturer to see if your modem is supported.

Using eWorld with a PC Card modem

Follow these steps as a guideline for setting up communications programs to use the Communications Toolbox.

Note: The files listed below were designed to work with the United States phone system. These files may or may not work properly outside of the United States.

To select the correct modem file for your PC Card modem, follow these steps:

Step 1

Insert your PC Card modem.

Step 2

Click the Edit Local Setup button.

Step 3

Select the port that your PC Card modem is in. You should see either upper or lower PC Card slot listed. If you don't, make sure your modem is properly inserted. The upper and lower PC Card slots will appear in the dialog box only when a PC Card modem is inserted.

Step 4

Choose your modem from the Modem Type pop-up menu. If your PC Card modem is not listed, try Generic PC Card Modem or Hayes Basic. If that doesn't work, you may need to create a new modem type.

Using Apple Remote Access with a PC Card modem

=====

Apple Remote Access (ARA) uses modem files (sometimes called connection scripts or CCLs) to get the best performance from some modems. Follow these steps to select your modem file:

Step 1

Insert your PC Card modem.

Step 2

Open the ARA application program.

Step 3

Open Remote Access Setup.

Step 4

Choose your modem from the Modem pop-up menu. If your PC Card modem is not listed, check in the ARA Connection Files folder. If the file for your modem appears, drag it to the Extensions folder (inside the System Folder). If the file for your modem is not listed, try using an existing modem file from the pop-up menu (such as a different model from the same manufacturer). If this doesn't help, you may need to get a connection script from your PC Card manufacturer.

Step 5

Choose the port that your PC Card modem is in. You should see either upper or lower PC Card slot listed. If you don't, make sure your modem is properly inserted. If you insert the PC Card modem in the other slot, you need to reselect the modem port before you can use ARA.

Using AppleLink with a PC Card modem

=====

To use AppleLink with a PC Card modem, follow these steps after you have installed the AppleLink software:

Step 1

Insert your PC Card modem.

Step 2

Open the AppleLink Connection Files folder (inside the PC Card Modem Files folder in the Apple Extras folder on your hard disk).

Step 3

Drag the icon for the PC Card Modem (USA) file to the Connection Files folder (inside the AppleLink folder). If a dialog box appears advising you that older files with the same name already exist, click OK.

Step 4

Open the AppleLink application program.

Step 5

Choose Set Up Connection from the Network menu.

Step 6

Choose CommToolbox from the Connection Port pop-up menu.

Step 7

Choose Serial Tool from the Method pop-up menu.

Step 8

Select the Upper Slot or Lower Slot icon in the Current Port window. The modem must be inserted to display its icon in the window. You must always insert the modem in the same slot, or you'll need to set up the modem again for the other slot.

Step 9

Choose PC Card Modem (USA) from the Connection File pop-up menu.

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Article Change History:

01 May 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18510



Tech Info Library

PowerBook 190 & 5300: Service & Support ReadMe File (4/97)

Revised: 4/29/97
Security: Everyone

PowerBook 190 & 5300: Service & Support ReadMe File (4/97)

Article Created: 30 August 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article contains the Service and Support Read Me file that shipped on the PowerBook 190 and 5300 series computers.

DISCUSSION -----

Thank you for purchasing a Macintosh PowerBook computer. You have joined the ranks of millions of people around the world who enjoy using a Macintosh computer.

We at Apple Computer take great pride in building the easiest-to-use computer in the industry. However, if you have questions about your computer, or you need service, there are many helpful resources available to you. A booklet called the "Apple Resource Guide" came in the box with your computer. It describes in detail your computer's warranty as well as resources for service and support.

If you have questions as you work with your computer, you will find answers in the manuals or in the Apple Guide online help that came with your computer.

Other Resources Include
=====

Apple User Groups

Joining a user group lets you learn about using your computer from people who use their Apple computers in all kinds of interesting ways. To contact a user group in your area, call 800-538-9696, ext. 500.

Apple-Authorized Training Providers

These providers offer training courses (from basic to advanced levels) designed to help people get the most from their computers. For more information, call

800-732-3131, ext. 400.

Apple's Worldwide Disability Solutions Staff

This group is committed to making computer resources available to people with special needs. Call 408-974-7910 or 408-974-7911 (TDD).

Service and Support

If you think your computer might require service or have problems with system software, please consult the troubleshooting section of the manual that came with your computer or call 800-SOS-APPL (800-767-2775).

Third-party Software Support Phone Numbers

=====

This is a listing of customer support phone numbers for the companies which produce the software included with your Macintosh. If you experience problems with the software, please contact the software developer directly, rather than Apple Computer. This will greatly speed resolution to your question.

Begin_Table

Software Application	Publisher	Customer Assistance Number
-----	-----	-----
MacLink Plus/Easy Open Translators	DataViz	(203) 268-0030
Super Maze Wars or Spin Doctors	Callisto	(508) 655-0707
Eric's Ultimate Solitaire Sampler	Delta Tao	(408) 730-9336
Adobe Acrobat	Adobe	(206) 628-2757
ClarisWorks (PowerBook 190 only)	Claris	(408) 727-9054

End_Table

Article Change History:

28 Apr 1997 - Removed out dated on line references.

20 May 1996 - Added PowerBook 190. Added keywords. Revised article format.

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Tech Info Library Article Number:18511



Tech Info Library

Disk Image Mounter: ReadMe File (8/95)

Revised: 8/30/95
Security: Everyone

Disk Image Mounter: ReadMe File (8/95)

=====

Article Created: 30 August 1995

TOPIC -----

This article contains the Read Me file included with the Disk Image Mounter Utility that shipped with the new PowerBook 5300 and 2300 computers.

This utility makes it possible to mount the disk images included with these PowerBooks and complete a floppyless installation of software.

DISCUSSION -----

Using Disk Image Mounter

What is a disk image?

A disk image is a discrete electronic representation of an individual disk. The Disk Images folder in the Floppy Disk Maker folder on your hard disk contains the disk images you need to create installer disks for both your system software and the other software that comes on the hard disk.

Using disk images to install software

When you use Floppy Disk Maker, it copies the disk images onto floppy disks. You use these disks to reinstall the software that comes on your computer. If you don't have the floppy disks you made with Floppy Disk Maker and you still have the disk images that came on your hard disk, you can use Disk Image Mounter. Disk Image Mounter is an application program that mounts disk images on your desktop. Once mounted, you can install software from the disk images.

To install software from disk images, follow these steps:

1. Double-click the Installer file for the application program you want to install.

2. Follow the instructions on the screen.

As long as you did not delete the disk images from your PowerBook's hard disk, Disk Image Mounter will mount the necessary disk images on the desktop and install the software from the images. If you quit in the middle of the installation process, the disk images may still be mounted on the desktop. To unmount a disk image, drag it to the Trash.

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Support Information Services

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Tech Info Library Article Number:18512



Tech Info Library

Workgroup Server 9150/120: Logic Board Upgrades (5/96)

Revised: 5/17/96
Security: Everyone

Workgroup Server 9150/120: Logic Board Upgrades (5/96)

Article Created: 30 August 1995
Article Reviewed/Updated: 17 May 1996

TOPIC -----

Which Macintosh computers can be upgraded to the Workgroup Server 9150/120? What is the supported method for performing this upgrade?

DISCUSSION -----

The following computers can be upgraded to a Workgroup Server 9150/120:

Quadra 900
Quadra 950
Workgroup Server 9150/80

Customers wishing to upgrade a Quadra 900, 950, or Workgroup Server 9150/80 to a Workgroup Server 9150/120 must order the Workgroup Server 9150/120 Logic Board Upgrade (M4047LL/A). This upgrade includes all necessary parts and software. The Workgroup Server 9150/120 Logic Board Upgrade also includes:

- 8MB DRAM (additional DRAM may be required)
- 1 MB level-2 cache
- System Software 7.5.1
- Apple RAID Software
- AppleShare 4.1 update kit

NOTE:
This product requires installation by an Apple-authorized service provider.

UNSUPPORTED UPGRADES
=====

Some customers have obtained Workgroup Server 9150/120 logic boards (service part: 661-0210) in order to upgrade their systems. This is NOT a supported solution, and permanent hardware damage is likely. The 9150/120 Logic Board

..TIL18513-Workgroup_Server_9150-120-Logic_Board_Upgrades_5-96.pdf

Upgrade (M4047LL/A) and logic board (p/n 661-0210) are not equivalent either in terms of the software, or hardware. Systems upgraded using the service part are not covered under warranty in the event of logic board failure, and customers are not entitled to software updates.

Article Change History:

17 May 1996 - Made typographical correction.

08 Sep 1995 - Updated article with part numbers.

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Tech Info Library Article Number:18513



Tech Info Library

Multiple Scan Displays: Why use them? (10/95)

Revised: 10/10/95
Security: Everyone

Multiple Scan Displays: Why use them? (10/95)

Article Created: 31 August 1995
Article Reviewed/Updated: 10 October 1995

TOPIC -----

What is the purpose of the Multiple Scan Displays, such as the Multiple Scan 15 Display, Multiple Scan 17 Display, and Multiple Scan 20 Display?

DISCUSSION -----

Multiple scan monitors, such as the Apple Multiple Scan 15, 17, and 20 Displays, have the advantage of using different lines of resolution. The Apple Multiple Scan 15 Display has the option of displaying an image at 640x480 or 832x624 lines of resolution. This means you can switch the number of lines being drawn. The first number refers to the number of vertical lines going down the screen from left to right, while the second refers to horizontal lines going across the screen from top to bottom. Having more lines gives you a larger display area in the same space. While the images may look smaller on your monitor at the higher resolution, you can actually see more of an image. For example, at 640x480 you may be able to see about half the page of a word processing document, but if you switch to 832x624 resolution, you can see more of the document, closer to two-thirds of the page. Larger monitors such as the Apple Multiple Scan 17 or 20 Displays will give you even more resolutions to choose from. Switching resolutions gives you the choice of how much of an image you want to display on the same size monitor.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18514



Tech Info Library

LaserWriter 3.0 for Windows: Drivers supported (8/95)

Revised: 8/31/95
Security: Everyone

LaserWriter 3.0 for Windows: Drivers supported (8/95)

=====

Article Created: 31 August 1995

TOPIC -----

What printers are installed with the LaserWriter Printer software 3.0 for Windows?

DISCUSSION -----

The LaserWriter Printer Software 3.0 for Windows installation disks ship with the Color LaserWriter 12/600 PS. You can also download the LaserWriter Printer Software from online services. The three disk set includes the latest Adobe PostScript driver and some Apple PPDs. The following printers are part of the installation:

Adobe Default Printer
Apple Color LaserWriter 12/600
Apple LaserWriter 16/600 PS
Apple LaserWriter Pro 600
Apple LaserWriter Pro 630
Apple LaserWriter Select 360

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18518



Tech Info Library

PlainTalk Microphone: Don't Use To Connect Other Devices (8/95)

Revised: 8/31/95
Security: Everyone

PlainTalk Microphone: Don't Use To Connect Other Devices (8/95)

=====

Article Created: 31 August 1995

TOPIC -----

I'm having trouble finding an adapter to connect my line-level home stereo equipment to my Power Macintosh 6100. Can I cut the microphone off my PlainTalk microphone and use the cable to connect my line-level equipment?

DISCUSSION -----

Using the cable from a PlainTalk microphone to connect another recording device is unsupported, voids your warranty, and can cause irreparable damage to the logic board on some Macintosh computers.

The microphone port on all Macintosh Computers that use the PlainTalk microphone is a standard stereo 3.5mm stereo plug. The PlainTalk microphone has an extra 1/4 inch on the tip to get +5 volt power from the logic board. It is also a mono plug, so the rubber rings on it do not match a stereo plug. The microphone plug has 2 separators. The one near the end is used to isolate the power at the tip. This can be confusing to those who think that our port is longer and has non-standard spacing for the left and right channels.

To connect an RCA equipped line-level device such as a VCR or home audio equipment to your Macintosh, a standard RCA to 3.5mm stereo adapter cable can be used. An example of this is a 6 foot stereo mini to RCA cable available from most electronic suppliers.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18519



Tech Info Library

PhotoFlash 2.0: Type 11 Errors on PCI-based Power Macs (9/96)

Revised: 9/19/96
Security: Everyone

PhotoFlash 2.0: Type 11 Errors on PCI-based Power Macs (9/96)

=====

Article Created: 31 August 1995
Article Reviewed/Updated: 19 September 1996

TOPIC -----

Whenever I click on the Enhance menu in PhotoFlash 2.0 on my Power Macintosh 9500, I get a Type 11 error. What is wrong?

DISCUSSION -----

This error may occur on any PCI-based Power Macintosh including the Power Macintosh 5400/7200/7500/7600/8500/9500, and Performa 6400 computers.

This problem is resolved in the PhotoFlash 2.0.1 update, which is available from online services.

NOTE:

The QuickTake 150 software v.2.0.1 installs PhotoFlash 2.0. The version of PhotoFlash must be 2.0.1 to work properly with PCI-based Power Macintosh computers. Use the Get Info from the file menu to determine the version of PhotoFlash you have installed.

What is Included in the Update

The update is a self-extracting archive containing an installer application. When you double-click the installer icon, a dialog prompts you to find the PhotoFlash application. You need to highlight the PhotoFlash application, then click continue.

These articles can help you locate the PhotoFlash software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.

- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

19 Sep 1996 - Added information on QuickTake 150 and Update.

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Tech Info Library Article Number:18521



Tech Info Library

Macintosh 5200 Series: VRAM not expandable (8/95)

Revised: 8/31/95
Security: Everyone

Macintosh 5200 Series: VRAM not expandable (8/95)

=====

Article Created: 31 August 1995

TOPIC -----

Can I expand the VRAM on my Macintosh Performa 5200?

DISCUSSION -----

The Performa 5200 series and the Power Macintosh 5200/75 do not implement VRAM. These systems store video data in a 1 megabyte (MB) DRAM frame buffer (separate from RAM) and no further video memory expansion is supported.

If you need a display with more VRAM, you can install a third-party video card in the processor-direct slot (PDS).

The following computers are in the Macintosh Performa 5200 series: Performa 5200 and Performa 5215.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18522



Tech Info Library

Apple Video, Video/TV, and Presentation Systems (2/97)

Revised: 2/17/97
Security: Everyone

Apple Video, Video/TV, and Presentation Systems (2/97)

Article Created: 31 August 1995
Article Reviewed/Updated: 17 February 1997

TOPIC -----

This article describes the Apple Video System, the Apple Video/TV System, Apple TV/FM Radio System, and the Apple Presentation System.

DISCUSSION -----

The following table lists the Macintosh Computers that can take advantage of the Apple Video System, the Apple Video/TV System, Apple TV/FM Radio System, and the Apple Presentation System:

Begin_Table

Computer	Systems
-----	-----
Power Macintosh 5200/75 LC	All
Macintosh Performa 580	All except Video/TV
Macintosh Performa 630 series	All
Macintosh Performa 640CD DOS Compatible	All
Macintosh Performa 5200 series*	All
Macintosh Performa 6200 series	All
Macintosh Quadra 630	All except TV/FM
Macintosh LC 630	All except TV/FM
Macintosh LC 580	All except Video/TV and TV/FM

End_Table

* Note:

The Macintosh Performa 5200 series requires the Apple External Video Connector (M4099LL/A) in order to use the Apple Video System, the Apple Video/TV System, and the Apple Presentation System.

Apple Video System (M2894LL/D**)

This multimedia solution comes with a user-installable video card and software that lets you easily add still video images to the documents and presentations you create on your Macintosh computer. The video card allows you to connect a VCR, camcorder, laserdisc player, or other video source to your computer with a single cable.

Compatible Computers:

Quadra 630

LC 580, 630

Power Macintosh 5200, 5300, 6200, 5400, and 6300 series

Performa 580, 630 series, 640 CD DOS Compatible, 5200 series, 6200 series, 6300CD, 6320CD.

** Apple has revised its video-in card (and the part number) to make the card more compatible with Power Macintosh computers. Earlier video-in card kits (with part numbers ending in /A, /B, or /C) are not recommended for use with Power Macintosh and/or Macintosh Performa 5200 series computers.

Apple Video/TV System (M2896LL/C)

The Apple Video/TV System gives your computer the capabilities of the Apple Video System, and more--it also allows you to watch television programs in a window on your Macintosh, and work on documents simultaneously. The Apple TV/Video System comes with a video card, TV Tuner card, remote control, and software.

Compatible Computers:

Quadra 630

LC 630

Power Macintosh 5200/75LC, 5260/100, 5260/120

Performa 630 series, 640 CD DOS Compatible, 5200 series*, 6200 series, 6300CD, 6320CD.

Apple Presentation System (M2895LL/A)

The Apple Presentation System makes it easy for you to create a presentation on your Macintosh, then display it to an audience on a larger television screen exactly as it appears on your Macintosh display. You can also connect your Macintosh to a VCR and record your presentation on videotape for easy and inexpensive distribution. The Apple Presentation System comes with software, cables, and video converter box. Unlike the Apple Video and Apple Video/TV systems, the Apple Presentation System can be used with any Macintosh that has a VGA or Apple 13/14-inch RGB output. This list includes, but is not limited to, any PowerBook with VGA or Apple 13/14-inch RGB output, Macintosh LC, Performa 400-600 models, Centris, Quadra, or other Macintosh systems with VGA video out.

Apple TV/FM Radio System (M4586LL/A)

The Apple TV/FM Radio System consists of a plug-in card with TV and FM radio tuners, plus easy-to-use control software. Connectors on the back of the tuner card let you attach cable TV or antenna feedlines. An FM antenna is included. The Apple TV/FM Radio System works with the Apple Video System*** to help you perform powerful multimedia tasks easily. Just click to capture and save still frames, video clips, or audio. Then simply paste the saved items into presentations, reports, and letters to make them really come alive. Audio and video can be played back with any application that supports Apple's QuickTime multimedia technology.

*** The Apple TV/FM Radio System requires a Macintosh Performa or Power Macintosh computer with a video-in card. While some Macintosh Performa and Power Macintosh computers come with a video-in card pre-installed -- like, for example, the Power Macintosh 5400/120 -- most will require the purchase of the Apple Video System (M2894LL/D).

Compatible Computers:

Performa 5400/160, 6360/160, 6400/180, 6400/200
Power Macintosh 5260/120, 5400/120, 5400/180

Article Change History:

17 Feb 1997 - Added new part numbers.
10 Jan 1997 - Added TV/FM information.
04 Jan 1996 - Removed keyword.

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Tech Info Library Article Number:18523



Tech Info Library

Performa 640 DOS Compatible: Adding Memory (8/95)

Revised: 8/31/95
Security: Everyone

Performa 640 DOS Compatible: Adding Memory (8/95)

=====

Article Created: 31 August 1995

TOPIC -----

I would like to upgrade the memory in my Performa 640 DOS Compatible computer, for the computer itself and the DOS card. How do I do this?

DISCUSSION -----

Different RAM Expansion Slots

The Performa 640 DOS Compatible computer ships with 8 MB of on-board memory and is expandable to 52 MB (for 68040 mode). This is achieved by installing one 32 MB SIMM in the double-sided slot and 16 MB in the single-sided slot. (The dimensions for each slot are printed on the logic board.)

It is possible to have other configurations greater than 8 MB and less than 52 MB. One must remember however, that the single-sided slot must always be half the value of the double-sided slot. For instance, a 16 MB SIMM can be inserted in the double-sided slot and an 8 MB SIMM in the single-sided slot.

DOS Card Memory

The plug-in DOS card ships with 4 MB of RAM and is expandable to 32 MB. The DOS Card contains 1 SIMM slot. The upgrade is achieved by removing the 4 MB SIMM and installing (at the largest) a 32 MB SIMM.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18524



Tech Info Library

Launcher: Can I Change the Colors? (8/95)

Revised: 8/31/95
Security: Everyone

Launcher: Can I Change the Colors? (8/95)

=====

Article Created: 29 August 1995

TOPIC -----

How can I change the background and button colors in the Launcher control panel?

DISCUSSION -----

You cannot change the colors. The colors are preassigned to the buttons in alphabetical order of button title. The colors will appear in the following order: light blue, pink, light green, orange, blue, dark green, yellow, and red.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18525



Tech Info Library

Performa 6214CD: Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Performa 6214CD: Specifications (4/97)

Article Created: 31 August 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 6214 CD computer (B2414LL/A). This computer is based on the previously-released Macintosh Performa 6216, but it comes without a modem and with no telephony or fax software.

This computer is only being made available to campus resellers in Higher Education markets. It is not available to any other customers via any other channel.

DISCUSSION -----

Microprocessor

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus

Memory

- 8 MB RAM
 - Expandable up to 64 MB (32 MB x 2 slots)
 - Two 72-pin SIMM slots, 80 ns or faster
 - Expandable one SIMM at a time
 - 32-bit memory bus
- 4 MB ROM on 64-bit PPC bus

Storage

- 1.4 MB Apple SuperDrive disk drive - read and write MS-DOS disks
- 1 GB IDE hard drive, 1/3 height
- AppleCD 600i CD-ROM drive (Quad Speed)

Expansion & Ports

- LC processor direct slot
- Video-in slot for optional video capture card
- TV tuner slot
- Communications slot
- SCSI interface for connecting up to five external devices
- One serial (RS-232/RS-422) printer port
- ADB port
- Sound-in (PlainTalk compatible)
- Sound-out

Video

- 1 MB DRAM video frame buffer
- 16-bit color at 640x480, 8-bit color at 800x600, 832x624
- Supports Video In with optional card

Sound

- 16-bit CD audio
- 16-bit sound out and internal*
- PlainTalk (or line level) microphone required

Ergonomic Features

- Front controls for volume and contrast
- Front headphone jack
- Infrared remote control
- Power on/off from keyboard

Keyboard

- Includes AppleDesign Keyboard
- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Apple Desktop Mouse 11

Clock/Calendar

- CMOS customer chip and battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.
- Third-party options provide alternative input and output devices

Electrical Requirements

- 110 - 240v, 50 - 60 Hz
- Power consumption 45 watts max (excluding monitor)

- EPA Energy Star compliant

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32 cm)
- Depth: 16.5 in. (41.95 cm)
- Weight: 19 lb. (8.6 kg)

Operating Environment

- 10°C to 40° C (50°F to 104°F)

System Software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party Software

=====

Preinstalled Software

ClarisWorks

American Heritage Dictionary

Quicken

MacLink Plus/Easy Open Translators

MacGallery Clip Art Treasure Pack

Click Art Performa Collection

At Ease

WealthBuilder

Espresso

Virex

Mangia

Widget Workshop

Power Pete

EPIE's Guide to MAC Home Learning

CD-Rom Titles

TIME Almanac Reference Edition

Microsoft Bookshelf

The Family Doctor

Smithsonian's America

MusicNet CDROM

Trivial Pursuit

1995 Grolier Encyclopedia

Configurations

=====

Macintosh Performa 6214CD 8/1 GB, includes Apple Multiple Scan 15 Display
Order No. B2414LL/A

Notes:

*The Macintosh User's Guide for Macintosh Performa 6200CD computers incorrectly states that these computers have 8-bit sound.

Product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.
02 Jul 1996 - Changed distribution status.
06 Sep 1995 - Changed wording for better searchability.

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Tech Info Library Article Number:18526



Tech Info Library

Power Macintosh: Memory Sizing Algorithm (8/95)

Revised: 8/31/95
Security: Everyone

Power Macintosh: Memory Sizing Algorithm (8/95)

Article Created: 31 August 1995

TOPIC -----

I have a brand Power Macintosh 8100/80 computer. I used to have to have a Macintosh Quadra 840AV computer. I have put the RAM from my Quadra into my new Power Macintosh computer. I have 40 MB of RAM (two 16 MB SIMMs and two 4 meg SIMMs), but the computer is stating that he has 72 megs of RAM. Also it sometimes crashes with an Error Type 11. I do not have RAM Doubler software installed. What is going wrong?

DISCUSSION -----

You need to check the installation of your RAM. If you do not install the RAM in the correct pairs, the system will think you have more RAM than you actually do. In this case, you have two 16 MB SIMMs and two 4 meg SIMMs, which would normally give you 48 megs of RAM. However, if you insert these as 16, 4, and 16, 4, the system will think it has 32 + 32 + 8, or 72 MB of RAM total. Improper installation of the RAM can cause various system errors such as you are experiencing.

The Power Macintosh memory sizing algorithm looks at the highest capacity memory the SIMM bank can handle. It then assumes that both SIMMs are the same size. If one is not correctly (equally) sized, then the computer will present you with a system error as soon as your system and application memory usage goes beyond the 8 MB memory that is on the logic board.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18527



Tech Info Library

DOS Compatibility Card: Windows 95 is Compatible (9/95)

Revised: 9/23/96
Security: Everyone

DOS Compatibility Card: Windows 95 is Compatible (9/95)

Article Created: 1 September 1995
Article Reviewed/Updated: 29 September 1995

TOPIC -----

Does DOS Compatability Card support Windows 95?

DISCUSSION -----

Apple's Software Quality Assurance team has determined that, based on test results from running Microsoft's official Windows 95 System Compatibility Tests, the following cross-platform Macintosh systems are compatible with Windows 95 when configured with a minimum of 8MB of RAM for the Windows 95 environment:

- Power Macintosh 6100/66 DOS Compatible
- Macintosh LC 630 DOS Compatible
- Macintosh Performa 640CD DOS Compatible
- DOS Compatibility Card for Power Macintosh 6100 and Performa 6100 Series

In addition, customers have had the ability to create separate drive containers on Apple's cross-platform Macintosh systems from the beginning. This feature provides additional value today for those customers who want the option of retaining their current Windows 3.1 environment in one drive container, while installing Windows 95 in another one, allowing them to easily select either drive container as the boot drive using the PC Setup control panel--all on a single personal computer.

By providing compatibility with software developed for the Mac OS, MS-DOS 6.22, Windows 3.1, or Windows 95, Apple's cross-platform Macintosh systems "stand out by fitting in"--enabling customers to run more applications on a Macintosh than on any other mainstream personal computer.

DOS Compatibility Card Questions and Answers

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Question: Are Apple's cross-platform Macintosh systems compatible with Windows 95?

Answer: Yes, based on test results from running Microsoft's official Windows 95 System Compatibility Tests, Apple's Software Quality Assurance team has determined that Apple's cross-platform Macintosh systems are compatible with Windows 95.

Question: Are Apple's cross-platform Macintosh systems compatible with the "Plug-and- Play" specification?

Answer: Like any legacy PC system that shipped prior to the availability of a Plug-and-Play BIOS, the above systems do not pass those specific Windows 95 System Compatibility Tests that require conformance to the "Plug-and-Play" specification. However, unlike other legacy PCs, Macintosh personal computers have delivered full plug and play capabilities for years. In addition, Apple's cross-platform Macintosh systems come preconfigured with features that often require users to plug in a separate card, frequently with configuration problems, on a PC, such as Sound Blaster 16-bit sound capabilities.

Question: Are Apple's cross-platform Macintosh systems compatible with Windows for WorkGroups 3.11?

Answer: Yes, Apple's cross-platform Macintosh systems are compatible with Windows for WorkGroups 3.11. Apple continues to support network client software via the Open Data-Link Interface, or ODI (used in Novell Netware 3.x/4.x, TCP/IP client software). While native NDIS support is not supported today, Apple expects to provide this capability in the future. Many customers are successfully using ODI-to-NDIS shims today, even though, as with any software translation layer, performance is not optimized.

Question: Can I use shared memory (allocating a portion of Macintosh motherboard memory in the PC Setup control panel) when running Windows 95?

Answer: Yes, and given the system requirements of Windows 95, Apple recommends a minimum of 8 MB of RAM. Of course, installing at least 8 MB of RAM directly on the DOS Compatibility Card will provide even better performance when running MS-DOS and Windows applications.

Question: How should I configure Windows 95 for printing on Apple's cross-platform Macintosh systems?

Answer: Since Apple's current cross-platform Macintosh systems do not have a physical PC parallel port, and therefore do not support bi-directional parallel port functionality, Apple recommends that users configure Windows 95 for printing as follows:

Step 1

Open My Computer, open Printers, and add a printer.

Step 2

Open the printer that has been added by double clicking on the icon from the Printers folder.

Step 3

From the Printer menu, choose the item called Properties.

Step 4

In the Properties window, select Details, and then select Spool Settings.

Step 5

In Spool Settings, disable the bi-directional port.

Question: What about networking support on Apple's cross-platform Macintosh systems?

Answer: Apple continues to support network client software via the Open Data-Link Interface, or ODI (Novell Netware 3.x/4.x, TCP/IP client software). While native NDIS support is not supported today, Apple expects to provide this capability in the future. Many customers are successfully using ODI-to-NDIS shims today, even though, as with any software translation layer, performance is not optimized.

Question: Since Windows 95 makes more use of 2-button mouse functionality, is that supported on Apple's cross-platform Macintosh systems?

Answer: Yes, Apple's cross-platform Macintosh systems let users mimic the functionality of the right mouse button by hitting the "=" key on the numeric keypad. For those users who want to use a real ADB multi-button mouse with Windows 95, several products are available from third-party companies such as Logitech (Logitech MouseMan ADB) and Kensington (Kensington Turbo Mouse 4.0 or Kensington Thinking Mouse ADB).

Question: When I installed Windows 95, the copy-and-paste functionality between the Mac OS and Windows environments stopped working. Is there a workaround?

Answer: Windows 95 made changes that negated the ability to copy-and-paste data between applications running in the Mac OS and Windows 95 environments. While Apple expects to provide the capability to copy-and-paste between the Mac OS and Windows 95 environments in the future, there are a couple of workarounds today. First, Macintosh PC Exchange and Macintosh Easy Open continue to make it easy for customers to identify, and automatically launch, Mac OS applications to open documents saved in the most popular PC formats. Second, users can create separate drive containers--one with the Windows 3.1 environment and one with the

Windows 95 environment--and work within the Windows 3.1 environment when they need to copy-and-paste data between the Mac OS and Windows environments.

Question: My Windows 3.1 configuration files (AUTOEXEC.BAT and CONFIG.SYS) assume Microsoft's CD-ROM driver, MSCDEX, is in the C:\DOS directory. Where is MSCDEX located when I install Windows 95?

Answer: In Windows 95, MSCDEX is located in the Windows:Commands directory.

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29 Sep 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18528



Tech Info Library

RAM Disk: With Virtual Memory or RAM Doubling Software (9/95)

Revised: 9/1/95
Security: Everyone

RAM Disk: With Virtual Memory or RAM Doubling Software (9/95)

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Article Created: 01 September 1995

TOPIC -----

I have 8mb of physical RAM installed and would like to have a 12mb RAM disk. Is it possible to use virtual memory or RAM doubler to "increase" my available RAM to 24mb and then use a 12mb RAM disk?

DISCUSSION -----

Virtual memory as well as RAM "doubled" programs like RAM Doubler can not be allocated for use as a RAM disk. The RAM disk option only addresses built-in physical RAM and will simply ignore any RAM that is virtual memory or created by software.

Support Information Services

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Tech Info Library Article Number:18530



Tech Info Library

Newton Connection: Multiple Sync Folders (9/95)

Revised: 9/1/95
Security: Everyone

Newton Connection: Multiple Sync Folders (9/95)

Article Created: 01 September 1995

TOPIC -----

I synchronize my MessagePad 120 every couple of days, with my computer using the Newton Connection Kit 2.0. I noticed that in the Newton Connection folder, I have three folders "My Name's Newton", "My Name 1's Newton" and "My Name 2's Newton". I can tell by the last modification date that the "My Name 2's Newton" folder contains the most current files, but why do I have three folders?

DISCUSSION -----

You are correct in assuming that "My Name 2's Newton" contains the most current synchronization files. Another way to find the most current set of sync files is to check the creation date on the folder. The most recently created folder has the most recent creation date. The folder should also have the highest "user name x's" number.

The MessagePad has a unique identification code that is not apparent to the user. This identification code is used by the Newton Connection Kit to ensure synchronization occurs between the MessagePad and the appropriate files which have matching identification numbers.

If the MessagePad is erased, a new identification number is created on the MessagePad. The next time the Newton Connection Kit synchronizes, the identification code on the MessagePad does not match the identification code on the previous synchronization files, so a new set of files, with the same name and a numerical suffix added, are created.

Before throwing away the older synchronization files, you may want to copy the information out of the old Archive files, and paste it into the new Archive file. This is not necessary if you do not want to keep track of the data that has been removed from the MessagePad.

Once you have removed the previous synchronization files, you can delete the number 2 from the name of the current synchronization files to avoid any

confusion.

Support Information Services

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Tech Info Library Article Number:18531



Tech Info Library

LaserWriter Select 300: LEDs Don't Indicate Out of Paper (9/95)

Revised: 9/1/95
Security: Everyone

LaserWriter Select 300: LEDs Don't Indicate Out of Paper (9/95)

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Article Created: 01 September 1995

TOPIC -----

On a LaserWriter Select 300, the LEDs do not light when the paper is out or when there is a paper jam. It will return the error through the driver to the computer when an error is detected. The error light can be manually tripped so the hardware is working correctly. Is this a function of the driver?

DISCUSSION -----

This is correct. The LED functions of the LaserWriter Select 300 are controlled by the software driver. Under normal operating conditions, the LED will not report an error of this sort. The error will only be reported via the software driver. It sounds as if the customers printer is functioning normally.

Replacement of parts would be futile in attempts to resolve this as it is considered normal operation.

Support Information Services

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Tech Info Library Article Number:18532



Tech Info Library

Newton Connection: Sync Files with Same Dates (9/95)

Revised: 1/4/96
Security: Everyone

Newton Connection: Sync Files with Same Dates (9/95)

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Article Created: 01 September 1995

TOPIC -----

I have three folders "My Name's Newton", "My Name 1's Newton" and "My Name 2's Newton" in my Newton Connection folder. I understand how these folders get created when the unique identification code on the MessagePad gets changed. What I have noticed is that some of the files even within the older synchroniation folders have had there modification dates changed to concide to the most recent synchronization.

Evidently, the Newton Connection Kit is not just searching for the highest numbered folder. Are these older files actually being changed? I thought they were safe. Does the Newton Connection search the whole hard drive? Why does this happen anyway?

DISCUSSION -----

The Newton Connection will only search through folders that recide within its folder. It looks for folders whose name contains the user name in the MessagePad. It will not search the whole hard drive or ask the user to locate the sync file. If the folder is moved or renamed, NCK will create a new one.

When the Newton Connection finds a folder whose name contains the user name, it opens the "user name's Newton" file. This is done to compare the ID number stored in the file to ID number in the MessagePad. This changes the modification date of the file. If the numbers are the same, NCK uses this file.

Newton Connection continues the above process until it has found the correct synchronization file or runs out of folders. If it can not find the correct sync file, it creates a new folder and sync files.

The only files where the modification dates are the same are the Newton files. The archive, backup and card files are not touched so their modification dates are different and can be used to find the latest sync files.

Another way to find the most current sync files is to check the creation date on the folder. The most recently created folder has the most recent creation date. The folder should also have the highest "user name x's" number.

Support Information Services

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Tech Info Library Article Number:18533



Tech Info Library

Apple II: Transferring Files To a Macintosh (9/95)

Revised: 9/6/95
Security: Everyone

Apple II: Transferring Files To a Macintosh (9/95)

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Article Created: 6 September 1995

TOPIC -----

This article provides instruction on converting Apple II files to MacWrite files using Bank Street Writer.

DISCUSSION -----

To convert Apple II Bank Street Writer word processor files into Macintosh MacWrite files follow these steps.

Step 1

Use the System Utility option within Bank Street writer to convert the binary Bank Street Writer documents to ProDOS 3.3 ASCII text files. This must be done for each file that you intend to transfer to the Macintosh.

NOTE:

Make sure that the names of the files contain only the letters (A-Z), no numbers or other marks.

Step 2

Use the ProDOS System Utilities Diskette to copy the DOS 3.3 ASCII text files that you have created to a ProDOS formatted disk. (You will need your original DOS 3.3 disk, and a new disk that has been formatted with ProDOS.)

Step 3

Use an Apple II computer that is equipped with both a 5 1/4" disk drive and a 3 1/2" disk drive. Again, use the ProDOS System Utilities disk to copy the files from the 5 1/4" disk to a ProDOS formatted 3 1/2" disk.

Step 4

Use a Macintosh computer equipped with a FDHD (high density) disk drive (Macintosh SE/30 or later) and PC Exchange 1.1 or later.

Step 5

Insert the disk into your Macintosh and use MacWrite or your favorite word processor to open each file. Once you have verified that everything is intact, choose "Save as..." from the file menu and save the file.

Support Information Services

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Tech Info Library Article Number:18534



Tech Info Library

Pippin: Questions and Answers (Part 1 of 2) (1/96)

Revised: 1/9/96
Security: Everyone

Pippin: Questions and Answers (Part 1 of 2) (1/96)

Article Created: 01 September 1995
Article Reviewed/Updated: 09 January 1996

TOPIC -----

This article is part one of answers to questions concerning the Apple Pippin.

DISCUSSION -----

Question: What is Pippin?

Answer: Pippin is a multimedia player platform derived from Apple's second generation Power Macintosh hardware and system software. It is designed as a playback tool for multimedia CD-ROMs initially created for the Macintosh and/or IBM compatible PC and at a low cost.

Pippin is directed to the home market (and probably schools) as an integral part of the consumer AV stereo and TV environment. Its primary display will be a TV screen. It uses one of the most advanced RISC microprocessor architectures in the industry today, PowerPC. It is derived from both the hardware and software architectures of the Macintosh. It will provide developers with an easy way to take their investment in personal computer CD-ROM content and make it available to a wider audience in a more natural environment associated with entertainment and fun.

Question: What events led to the introduction of Pippin?

Answer: The percentage of personal computers having CD-ROM drives, is rapidly approaching 100% for the Macintosh. In 1994, for the first time, the worldwide sales of personal computers (from all manufacturers) into the home exceeded 10M. It was also the first year in which more personal computers sold into the home went those already having a personal computer.

More than 60% of the households in the U.S. have combined gross income less than \$40,000 per year. While most of these homes have one or more television sets, it

is expected that even by 1997 the number of homes in this category with a personal computer will be well below 10%. The high barrier price of personal computers is limiting its penetration into homes around the world. Multimedia hardware and content sales will be limited in the years to come, just as many new title publishers are entering the industry. It is essential to the long-term health of the CD-ROM title industry that the growth it is experiencing now, continue into the future.

Apple realized that for multimedia technology to reach the home, the entry price must be reduced substantially. A low entry price is still not enough. The platform must be distributed by many companies which collectively can reach a much larger audience than one company alone. Apple has chosen to make the Pippin platform available under license to manufacturers interested in building and selling their own version.

Question: How will Pippin be positioned in the market?

Answer: If all a family wants is the least expensive video game player and does not want to be able to use their purchase for other uses they will probably be better off buying the upcoming new platforms being introduced by the video game giants Nintendo and Sega. Other new platforms such as Atari Jaguar, Sony Playstation and 3DO are all video game players and cannot be useful for much else. It remains to be seen how these platforms will hold up against the two mainstay players, Nintendo and Sega.

Apple believes that families are looking for more than video game players today. Certainly they want to be able to play their favorite games, but they also want to communicate, learn, play interactive music, access information and much more. Pippin provides them this capability. In addition it provides them a high level of compatibility with a mainstream personal computer technology. This will provide them the knowledge that their investment in CD-ROM titles and experience will not go to waste.

Question: What is the difference between a Macintosh and Pippin?

Answer: Pippin is derived from the second generation of Power Macintosh computers. Much of its system software code, integrated circuit cells and integrated circuits come directly from the Macintosh world. Pippin is being designed for optimal playback. It operates from a run-time version of the MacOS on less memory with more dedicated functions. While it is possible to add mass storage devices in the aftermarket, Pippin will ship with only a readable CD-ROM mechanism as a mass storage device.

Question: If there is no hard disk, how is the system software distributed?

Answer: The system software will be incorporated into the hardware separate from the CD-ROM player. Different Pippin system software releases will be available from which the developer to choose. Each will support a different functionality set. The end customer will not know or care which version of the operating system is bundled with their CD-ROM title. The Pippin title will support successive generations of titles always improving in performance and

functionality.

Question: Why is Apple doing this?

Answer: This is a logical extension of our existing technology. It capitalizes on Apple's expertise in multimedia, RISC and ease-of-use....using resources and technology that are already in place today, not an entirely new product or market concept. The architecture and business model for Pippin are designed to provide this wealth of content with a means for reaching an audience substantially larger than that which exists today. For Apple this is a strategic thrust to expand its business beyond the sales of personal computers and at the same time put the multimedia industry, currently in its infancy, into high gear. This is part of Apple's on-going strategy to expand the reach of Macintosh technology into new markets.

Question: Why now?

Answer: There were two key elements missing that prevented Apple from launching Pippin earlier. The first is technology. QuickTime has progressed as an industry standard and has developed increasingly in sophistication to the point now that it is an extremely compelling technology. In addition, Apple had to make the transition to RISC microprocessor technology. To reach the performance necessary for game and multimedia playback RISC technology is a must. Apple has successfully made the transition to RISC.

The second major reason why Apple has waited until now is market maturity. The year 1994 will be known within the industry as the year in which Multimedia became mainstream. CD-ROM titles are being reviewed in the New York Times Book Review section. Hit titles such as Myst, Rebel Assault, Star Trek Interactive Manual, Doom, etc. are hitting distribution volumes ranging between 200,000 and 1,000,000 units. The momentum for creating the content is now in place. Pippin is designed to take this momentum of content on the personal computer and distribute in much greater volumes throughout the world.

Question: How did Apple choose the name Pippin?

Answer: Pippin is a type of apple. It is smaller than a mcintosh apple. Apple chose this name because it would be easily associated with Apple, Computer Inc. Moreover, Apple believes that over time Pippin will take many forms including home telecommunication devices, game players and much more. Hence, Apple did not want to choose a name that would be specific for a certain market space as it will certainly appeal to many types of consumers and be shipped in a variety of forms from many manufacturers.

Question: What type of CD-ROM titles will work on Pippin?

Answer: Apple is integrating hardware technologies which improve the "on-screen" appearance of text on a TV screen. While the text will never be as clear as that on a computer monitor it is substantially better than anything in the video game

industry today. This was done because Apple intends to encourage a wide diversity of titles to be available on Pippin, including reference titles which contain a great deal of textual information. We expect action games, adventure games, simulation, role-playing games, puzzles, reference, education, learning, interactive music and more.

Pippin is not expected to be strong in document creation or modification. Computer applications are not well suited to systems without a lot of memory. Simple word processors, simple spread sheets, tax preparation programs, financial management tools, and children's authoring tools should work well on a Pippin as long as there is a rewritable mass storage device that can store data files.

Customers

Question: What is in this for the customer?

Answer: For the first time, the customer will be able to "buy-in" to the era of multimedia and cyberspace at a low entry ticket price. The customer will be able to expand the entry system through aftermarket add-ons, accessing some personal computing capabilities if they choose. They will be able to buy the unit from a variety of companies in different configurations in a multitude of distribution channels. Their Pippins will integrate within their audio-visual consumer electronics world. In addition, it will be able to communicate and transfer files with their personal computers should they have them in their home. Finally, the Pippins with the addition of a GeoPort adapter or external modem will permit the customers to communicate over cyberspace.

Question: Will Pippin reduce the system configuration problems faced in the personal computer market?

Answer: Pippin is designed to behave like an audio CD Player. The customer inserts the CD-ROM into the player and it automatically boots off the CD. There are no files to configure and no drivers to conflict over system resources.

Question: Can customers upgrade their Pippins?

Answer: Pippin is the most expandable device in its category. The consumer can add system memory easily using plastic DRAM memory cards. In addition, through the PCI-like expansion, manufacturers will be able to add other devices, including mass storage devices, graphics accelerators, compression decoders and more. Thus, by purchasing easy to add/configure add-ons, the customers will be able to retain their investment into the future.

Question: Will customers upgrade Pippin to a Macintosh?

Answer: Pippin cannot be made into a Macintosh. Without the availability of a high speed read/write mass storage device customers will find it difficult (at

best) to utilize current "standard" personal computer applications. It would not be unfair to say, however, that Apple would like Pippin customers to also be Macintosh customers. The advantage for the customer is that their investment in titles can be played on both machines.

Question: Wouldn't customers rather view their titles on a computer screen?

Answer: This actually depends upon the customer and the title. The vast majority of the worldwide market doesn't own a computer monitor and is unlikely to own one any time soon. This permits a larger number of people to interact with the screen simultaneously. This also enables customers to integrate their Pippin with their home entertainment environment.

If customers prefer, they will be able to attach a 640x480 VGA monitor to Pippin.

For additional information on the Pippin, see "Pippin: Questions and Answers (Part 2 of 2)" and "Pippin: Technical Specifications."

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Tech Info Library Article Number:18535



Tech Info Library

Pippin: Questions and Answers (Part 2 of 2) (9/95)

Revised: 9/5/95
Security: Everyone

Pippin: Questions and Answers (Part 2 of 2) (9/95)

Article Created: 01 September 1995

TOPIC -----

This article is part two of answers to questions concerning the Apple Pippin.

DISCUSSION -----

Pippin Manufacturers

Question: Will Apple ship a Pippin under its own brand?

Answer: Apple does not plan on shipping a Pippin under its own brand. One of Apple's primary goals is to see Pippin devices penetrate into as many homes worldwide as possible. For this to happen Apple will focus its energies on assisting other companies in reaching these channels as they differ from Apple Computer's existing computer reseller channels.

Question: Will Apple be the only hardware/software supplier for the platform?

Answer: No! Pippin is an open platform. Apple intends to encourage other companies to create not only differentiated Pippin systems, but also third-party aftermarket add-ons. Other companies can be expected to build upon Apple's reference design and add their own value through either cost reductions or feature innovation.

Question: How many companies will be shipping Pippins?

Answer: The only publicly announced company at the time this document is being distributed is Bandai Company Ltd., a major toy manufacturer and CD-ROM game title publisher in Japan. Since Apple announced the platform in Tokyo on December 13, 1994, there have been many inquiries from companies interested in taking a license around the world. As contracts are signed and companies choose

to announce their intents, the developer community will be among the first to know.

Over time, nothing will limit the number of companies that will be shipping Pippin devices. Apple believes that there is sufficient demand in the US, Japan, Asia and Europe.

Technical Issues

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Question: Will Pippin titles play on a Macintosh?

Answer: Yes, Pippin titles will play on Macintosh computers. If the titles are 68k based they will play on both Power Macintosh and 68k based Macintosh computers. If the titles are written in native PowerPC code they might also play on both platforms depending upon whether or not the developer chose to code in fat binaries or not.

Question: Will Macintosh Titles play on a Pippin?

Answer: Yes, if the title is restamped with the Pippin system software. For some titles other modifications may be required, see below.

Question: Will DOS/Windows Titles play on a Pippin?

Answer: Yes, but with much more modification and recompilation as compared to Macintosh titles.

Question: Can Pippin be turned into a Macintosh?

Answer: No. While customers will be able to expand it through the addition of mass storage devices, codecs, video inputs, etc. it will remain a run time environment fundamentally more limited than a Macintosh.

Question: Can a keyboard, monitor or mouse be added?

Answer: Yes, and so easily a child could do it!

Question: What exactly will be included with a Pippin?

Answer: This will be specific to each manufacturer. The features that, at a minimum, will be common to each version of Pippin is listed separately.

Question: What kind of input device will be standard?

Answer: Input devices will vary between Pippin Manufacturer. Apple has been

conducting global focus group studies on this issue. Obviously developers need to know which buttons, knobs, etc. will be consistent between machines. Apple will be specifying this to both the manufacturers and developers by May at the latest.

Question: What add-on accessories will be available for Pippin at introduction? At a later date?

Answer: At introduction, there will be an external floppy, keyboard, mouse, external ink jet printer and a GeoPort telecom adapter for analog phone lines. The base Pippin units will ship with an accessory kit that will include a single input controller device. Other add-on devices including hard disks, PCMCIA slots, MPEG2 codecs, etc. will be available later in time. Apple will not make commitments as to when they would be available as many of these will be supplied by third parties.

For additional information on the Pippin, see "Pippin: Questions and Answers (Part 1 of 2)" and "Pippin: Technical Specifications."

Support Information Services

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Tech Info Library Article Number:18536



Tech Info Library

Pippin: Technical Specifications (9/95)

Revised: 9/5/95
Security: Everyone

Pippin: Technical Specifications (9/95)

Article Created: 01 September 1995

TOPIC -----

This article defines the technical specifications for the Apple Pippin.

DISCUSSION -----

Technical Details

Hardware

66MHz PowerPC 603 RISC Microprocessor

- Superscaler, 3 instructions per clock cycle,
- 8 kByte data and 8 kByte instruction caches
- IEEE standard Single & Double Precision Floating Point Unit

6 MB combined System & Video Memory, advanced architecture

4X CD-ROM drive

Aftermarket easy memory expansion cards

- 2, 4 and 8 MB increments

64 kbyte SRAM Store/Restore Backup

Video

- 8 bit and 16 bit video support
- Dual Frame Buffers for superior frame to frame animation
- Support for NTSC & PAL composite, S-Video and VGA (640x480) monitors
- Up to 16.7M colors

Audio

- Stereo 16 bit 44 kHz sampled output

- Stereo 16 bit 44 kHz sampled input

Telephony

- GeoPort ready

Controllers

- Supports up to 4 simultaneous players over Apple Desktop Bus, ADB
- Will support standard ADB keyboards and mice with connector adapters

Data I/O

- 1 standard Serial Communications port

Aftermarket Expansion

• "PCI like" expansion for adding floppy drive, hard disk drive, graphics accelerators, codecs, etc. (Not available at introduction!)

Software

Run time environment derived from MacOS

- Integrates QuickTime 2.0 and PPC native version of QuickDraw
- Reduced system memory footprint - (computer specific features removed)

Disk resident system stamped on CD with title

- System boots off CD
- Pippin system software upgrades released through CD-ROM stamping operations
- Developers free to choose from menu of system software upgrades

ROMs

- 68k emulator
- Macintosh Tool Box intact
- Localized bit mapped fonts
- Reduced Macintosh System ROM footprint

CD Formats Supported

- Standard audio CD
- other formats in market studies

For additional information on the Pippin, see "Pippin: Questions and Answers (Part 1 of 2)" and "Pippin: Questions and Answers (Part 2 of 2)."

Support Information Services

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Tech Info Library Article Number:18537



Tech Info Library

PCI-Based Power Macintosh: Get Ethernet Address (10/96)

Revised: 11/7/96
Security: Everyone

PCI-Based Power Macintosh: Get Ethernet Address (10/96)

Article Created: 1 September 1995
Article Reviewed/Updated: 7 November 1996

TOPIC -----

I have a Power Macintosh 9500 and I am unable to use GetMyAddress to determine the Ethernet address of the built-in Ethernet on my Power Macintosh 9500. How can I get the address?

DISCUSSION -----

Current versions of GetMyAddress and other network utilities may not work with System 7.5.2 that came on some PCI-based Power Macintosh computers like the 7200, 7500, 8500, and 9500. You have a number of options.

If you have a Power Macintosh 9500 computer with version 1.0 of the System Enabler 701, you should update to System 7.5.3 or later with Open Transport 1.1 or later. You can then find the hardware Ethernet address by opening the AppleTalk control panel and clicking the Info button in either the Advanced, or Administrator mode.

You can also use one of the following to find the Ethernet address:

Apple LAN Utility 1.0b4e1

Obtain a copy of the Apple LAN Utility, version 1.0b4e1. This utility can locate the physical Ethernet address on a Power Macintosh 7200, 7500, 8500, and 9500 computers. Look for this updated utility on Apple's online software update locations.

IMPORTANT: The Apple LAN Utility, version 1.0b4e1 is not an officially supported solution, but has worked for other users in the past. Please refer to the Apple LAN Utility 1.0b4e1 ReadMe file by searching for the Technical Information Library article titled, "Apple LAN Utility 1.0b4e1: Read Me File."

The Apple LAN Utility is provided to perform the following tasks:

- Obtain the burned-in address without connecting to a network.
- Override the burned-in address with a locally-administered address (this may be required for SNA, DECNet, and other environments).
- Set the speed for Token Ring interfaces that are software selectable.

The utility is intended to handle all Apple Ethernet and Token Ring interfaces, whether built-in or on cards. When run, the utility opens one window per network interface present in the computer, describing what its configuration will be the next time that interface is activated. This utility makes no attempt to alter the current operation of an active interface.

Standard UNIX Tools

Many system administrators may require Ethernet hardware addresses for bootpd and rarpd configurations. If you are using a UNIX host for these network configuration services, you can use standard UNIX tools to determine the hardware address. Follow these steps:

- 1) Configure TCP/IP to the desired IP address
- 2) Ping the Power Macintosh with Open Transport from a UNIX workstation.
- 3) Use arp to display address resolution table. For example, in A/UX the command would be "arp -a".

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the Apple LAN Utility 1.0b4e1 software update mentioned here:

"Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.

"Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

- 07 Nov 1996 - Added mode information on the AppleTalk control panel.
- 23 Aug 1996 - Added AppleTalk control panel solution.
- 27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18539



Tech Info Library

Color LW 12/600 PS: Competitive Questions and Answers (9/95)

Revised: 1/21/97
Security: Everyone

Color LW 12/600 PS: Competitive Questions and Answers (9/95)

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Article Created: 01 September 1995

TOPIC -----

This article provides the answers to questions about the LaserWriter 12/600 PS.

DISCUSSION -----

Question: Why is Apple later to market a color laser printer than its competitors?

Answer: Apple believes that it is much more important to get the printer out right rather than to be simply first. The Color LaserWriter leapfrogs the competition in a number of important and highly valued areas. Our experience with PowerBooks has shown us that completely addressing customer needs is much more important than getting a compromised product out somewhat sooner.

Question: Why is color laser better than other technologies?

Answer: Color laser has four major advantages over competing technologies:

- Print quality. Only color laser can provide near photographic quality color and superior 600 dpi black text on standard office paper. Dye sublimation can print high quality images but its text is low-resolution and prints only on special media.
- Speed. Color laser provides not only fast color pages but fast monochrome pages as well. For this reason only color laser can be used as a shared black and color printer.
- Cost/page. Color laser is more economical for black and color printing than thermal transfer and dye sublimation printers.
- Plain paper. Color laser supports excellent quality and print permanence on standard office paper. Unlike inkjet and thermal transfer, laser can print well

on a variety of papers without smearing or flaking.

Question:

What does Apple think about first generation color laser printers on the market?

Answer: The first generation products force too many compromises on the users.

- The existing color lasers either try to promote inkjet level quality as "business quality" or decent quality only at a very high price. The 300 dpi quality that some are offering just doesn't meet the needs of professionals preparing information for external use. Most businesses don't want to look like they print their documents on a \$500 inkjet printer.
- These printers also have a large number of complex and messy consumables that require much more interaction and sophistication to operate successfully. Customers don't want to worry about 13 replaceable items that can get their clothes messy when they are changed.
- The first generation printers are generally stripped down to the point of being unusable in their base configuration. When purchased, the users have to also buy network cards, PostScript, RAM, and optional paper trays to get a usable shared system. All of these options increase the real cost of the printer and make it more difficult to buy and setup. The bottom line is that we believe the existing color lasers printers don't adequately meet the needs of most of the customers in the market.

Question: Why would anyone pay 10x the price of a color inkjet for Color Laser?

Answer: The primary reasons are productivity, quality, share-ability, and reliability.

- Quality. Apple's Color LaserWriter will offer significantly better print quality than inkjets and it will do so on standard office paper. This quality is acceptable for both internal and external documents.
- Productivity. Color lasers are much faster than inkjet printers. Instead of printing at a few minutes per page they print at a few pages per minute. This added performance means that people can print presentations and reports at the last minute rather than overnight.
- Share-ability. Apple's Color LaserWriter is fast enough and comes standard with PostScript and built-in networking which enables it to be shared in a cross platform workgroup. Low-cost inkjets are typically designed for a single user.
- Reliability. Apple's Color LaserWriter is designed to print 300K pages. This means that a group of users can use it as their only printer.

Question: Who do you think will buy and use color laser printers?

Answer: Initially, we believe there are three primary users for the Color LaserWriter.

- Design/publishing. Design/publishing professionals who want quick, convenient, and inexpensive comps for letter size documents.
- Business communications. There are a large number of people involved in selling and communicating within an organization. This can be in the form of a presentation, report, proposal, etc. The Color LaserWriter offers no compromise quality for black and color.
- Scientific/technical. There are a variety of technical markets that use color but don't have a fast and simple way of printing. The Color LaserWriter provides the quality necessary for applications that vary from satellite imagery to plastic mold flow analysis.

Question: Why are color lasers so much more expensive than monochrome lasers?

Answer: The reason is that they are much more complex than monochrome laser printers. There are significant challenges associated with accurately and consistently putting up to four layers of toner on a piece of paper. The Color LaserWriter is revolutionary because it offers much of the printing functionality of a \$50K 350lb color copier yet reduces both the complexity and the cost.

Question: What does Contone mean?

Answer: Contone stands for continuous tone and means that the printer is capable of printing 256 shades at each pixel for each color toner. Some competitors claim contone printing capabilities but do not meet this criteria because they offer only a couple of shades for each pixel.

Question: What does "true 600 dpi mean"?

Answer: True 600 dpi means that the entire printer is designed for 600 dpi printing. There are four key elements that need to be optimized for 600 dpi.

- Horizontal and vertical addressable resolution. This means that the laser scanner can put a dot down in the horizontal direction at 600 dpi intervals and the engine moves the paper through at 600 dpi intervals. Some printers are not designed for 600 dpi so they must slow down to print at the higher resolution .
- Laser spot size. This refers to the size of the dot that the laser makes on the drum. Some printers actually use a 300 dpi laser spot size to reduce cost but this reduces the quality because large dots are placed very close together with lots of overlap.
- Toner particle size. Smaller toner particles mean that the dots can be more consistent with the smaller spot sizes that provides more gray levels and more detail.

- Controller memory. To offer true resolution, the controller must have sufficient memory to contain the image in the printer.

Question: Why is laser superior to other color technologies?

Answer: There are essentially five high-end color technologies today:

- liquid inkjet
- solid inkjet
- thermal wax
- dye sublimation
- laser

Apple believes that laser and liquid inkjet are the best technologies for mainstream color. Liquid inkjet offers good quality, performance, and simple user interaction at a low cost. Laser offers excellent performance/quality, at a higher price. The other technologies have one or two strong points but are not mainstream and will be relegated to niches.

Question: Will color cannibalize monochrome printers?

Answer: Because research has consistently shown that color output is highly desired in a printer, we do expect that color laser printers will at some point impact high-end monochrome sales. Just as with inkjet, it may take some time for color laser to make a large impact on monochrome sales. This impact will be felt more as the prices of color comes down over time.

Question: Why is Apple's cost/page more expensive than Hewlett Packard (HP)?

Answer: Apple's cost/page is more expensive than HP but less expensive than other competitors. There are two reasons why cost/page is more expensive on the Color LaserWriter.

- Print quality required by professionals and it is more expensive to provide this level of quality.
- Simple setup and use. The enclosed cartridge mono-component system makes it simple to operate compared to HP but does add cost. The cartridge system on monochrome laser printers are not the most cost effective, but they became the standard because they were much easier to use and were clean compared to the alternatives. Apple believes that the cost/page is appropriate when compared to the difficulty of installing and maintaining the 13 consumables in the HP printer.

Question: Why doesn't the printer support PCL?

Answer: PostScript Level 2 is the standard for color printing because the applications and drivers are already available and the results are superior.

PostScript is also the cross-platform standard with drivers available for PC, Unix and Macintosh platforms.

Question: Why doesn't the printer support Token Ring?

Answer: Ethernet is the most important network topology in the Macintosh, PC and workstation world. Token Ring is a lower priority. The printer can be connected to a Token Ring network via Ethernet to Token Ring router.

Question: Why does the printer slow down when printing transparencies?

Answer: The printer prints at up to 1.1 pages/minute when feeding transparencies to ensure that the toner is fused so transparencies project well on an overhead projector. The slower speed allows the toner to be melted into a transparent layer on the film.

Question: What is Apple's Contone Compression Technology, and why is it better than the competition?

Answer: Apple Contone Compression Technology dramatically reduce the RAM requirements for the printer while maintaining superior quality. Because of Apple Contone Compression Technology, the Color LaserWriter can ship with only 12 MB of RAM while supporting full quality, networking, and memory to process complex jobs. Without such compression, the Color LaserWriter would require around 130 MB of memory. Competitive printers either support lower quality or more memory or both . For example, the Tektronix Phaser 540 requires 36 MB of memory to support 600 dpi "contone quality", which is actually lower quality than what the Color LaserWriter provides in only 12 MB.

Question: How does the performance on the Color LaserWriter compare to the competition?

Answer: For most customers it doesn't matter how fast a document prints if the print page doesn't offer acceptable print quality. Thus while a true Apples to Apples comparison isn't possible because the competition don't offer the quality of the Color LaserWriter, in terms of raw performance the Color LaserWriter is quite competitive.

Apple testing indicates that over a wide range of documents the Color LaserWriter is only 24% slower than the competition with only 12 MB of RAM. With 28 MB of RAM the Color LaserWriter is within 5% of the competitive average. On word processing documents, spreadsheets, images, and multiple copies the Color LaserWriter often outperforms the competition.

There are some types of documents that are slower on the Color LaserWriter -- mostly complex illustrations. On these documents, offering superior 600 dpi near photographic quality doesn't come free... each page inside the Color LaserWriter is 128 MB of compressed data -- 32 times the data as a 300 dpi printer and 16 times a 600 dpi bi-level printer. The fact that the Color LaserWriter can be

competitive on both price and performance with printers offering significantly lower quality is a testament to Apple's innovative controller & software design.

Question: What is Color PhotoGrade and why is it better than the competition?

Answer: Color PhotoGrade is Apple's print quality enhancement technology that provides superior quality images, colored text, and filled areas. It utilizes the engine's ability to provide several shades of each of the four (cyan, magenta, yellow, and black) toner. Color PhotoGrade provides very small halftone cells (colored dots) AND lots of colors resulting in fine detail, smooth transitions, and vibrant colors. It is superior to the competition in three ways:

- It offers near photographic quality images, filled areas, and text
- It offers vibrant and consistent color
- It offers superior quality even on low resolution such as those off a digital camera or a video capture board.

Question: Who supplies the print engine and does Apple have an exclusive on this engine?

Answer: It is a Canon engine. We don't expect to be the only vendor using the engine, but we expect to be first and believe our implementation using the engine will be superior because of the value Apple has added in the controller and software.

Question: Does the printer support Windows 95?

Answer: Yes. The printer will be compatible with the Windows PostScript Level 2 driver that comes with Windows 95. The enhanced print manager support for Windows 3.1 will not be available for Windows 95 so some of the queue functionality available in 3.1 will not be supported in Windows 95.

Question: Why isn't Apple using a PowerPC processor in the printer?

Answer: Apple chooses the best processor for the job. While the PowerPC is a great chip, it wasn't appropriate for the Color LaserWriter given the development cycle and cost goals.

Question: Why doesn't the printer support GX?

Answer: It will. Apple will be shipping a GX driver for the Color LaserWriter.

Question: Why is Contone quality important to normal business users?

Answer: Business users want professional looking output using a variety of

object types including B&W text, color text, color filled areas, and photographs. Even if a user never intends to print photographs, continuous tone makes a significant difference in the quality of output. Colors that are anything but primaries or secondaries are significantly more readable and of higher quality on a continuous tone printer than on a standard printer.

Question: Will the Apple software features be available on competitive products?

Answer: Most will only be available on Apple's printers. Our approach is to an increasing value to Apple printers via software differentiation in the printer, driver and utilities. Many of these features will only be available on Apple printers. We may chose to make certain Macintosh driver features available where we believe they are critical for the Apple platform.

Support Information Services

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Tech Info Library Article Number:18541



Tech Info Library

DOS Compatibility Card: MS-DOS MIDI Support (10/96)

Revised: 10/8/96
Security: Everyone

DOS Compatibility Card: MS-DOS MIDI Support (10/96)

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Article Created: 5 September 1995
Article Reviewed/Updated: 8 October 1996

TOPIC -----

Does the Power Macintosh 6100 DOS Compatible support MIDI output to the serial port while running MS-DOS or Windows?

DISCUSSION -----

The PCI-based PC Compatibility Cards are the only cards that support MIDI devices. Since the Power Macintosh 6100 is NOT a PCI-based Macintosh, you cannot send or receive MIDI data from the serial port using the DOS Compatibility Card. MIDI data travels internally with MS-DOS/Windows, but the data cannot be transferred from the serial port to a MIDI instrument. However, MIDI transfers are fully supported under the Mac OS.

The PCI-Based DOS Compatibility Cards allow you to use the joystick port to transfer MIDI data. Using a proper MIDI adapter, both the MIDI OUT and the MIDI IN channels will be available. This MIDI adapter is the same standard Sound Blaster-compatible Joystick-to-MIDI adapter that you can find at any MS-DOS/Windows computer store. Apple does not sell this adapter.

Article Change History:
08 Oct 1996 - Reworded for clarity.
17 May 1996 - Added additional information on MIDI adapter.
27 Apr 1996 - Added PCI DOS Compatibility Card information.

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Tech Info Library Article Number:18542



Tech Info Library

AudioVision Display: AudioVision Software 1.0.2 ReadMe (9/95)

Revised: 9/5/95
Security: Everyone

AudioVision Display: AudioVision Software 1.0.2 ReadMe (9/95)

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Article Created: 5 September 1995

TOPIC -----

This article contains the Read Me file included with the AudioVision 14" Display software version 1.0.2

DISCUSSION -----

AudioVision 14 Display

This document contains the latest information about your AudioVision 14 Display. Read this file in addition to the AudioVision 14 Display User's Guide.

Installing the AudioVision Software

If you use the AudioVision 14 Display with other input devices that include software, such as as the Apple Adjustable Keyboard or certain non-Apple keyboards and pointing devices, install the AudioVision software last. If you don't, software for some other devices may overwrite the AudioVision software.

For example, if you install software for the Apple Adjustable Keyboard after installing the AudioVision software, the keyboard's Sound control panel replaces the monitor's Sound control panel, which contains additional sound controls for your monitor.

IMPORTANT If you have the Apple Adjustable Keyboard: After you install the AudioVision software, restart the computer. Then shut down and turn off the computer and the monitor, wait 30 seconds, and turn them back on. Otherwise, the computer will not recognize the monitor.

Removing the AudioVision Software

The AudioVision software replaces your computer's Sound control panel with a larger Sound control panel. If you remove the AudioVision software, you'll need to add a Sound control panel to your computer either by dragging one to the

System Folder (with the System Folder closed), or by reinstalling your system software. See the manuals that came with your computer for information on reinstalling system software.

Note: If you drag a Sound control panel to your System Folder, you'll be asked if you want it placed in the Control Panels folder, which is inside the System Folder. Click Yes—all control panels belong in the Control Panels folder.

Energy Saver

Energy Saver is a control panel that lets you save energy by choosing to automatically dim your screen when the screen is not being used. You specify how long you want Energy Saver to wait (up to an hour) before turning off the screen. The computer is not turned off, so it only takes a few seconds after you start using your keyboard or mouse for the screen to become fully active.

If your model of Macintosh can support Energy Saver, then it is automatically installed when you install the AudioVision software.

What models support Energy Saver?

You can use Energy Saver if you have the following:

- a Power Macintosh computer, or a Macintosh Quadra, Centris, or LC III computer
- 2 MB of available RAM
- system software version 7.1 or later

IMPORTANT The AudioVision 14 Display complies with Energy Star guidelines. A monitor that does not comply with Energy Star guidelines, or one that is plugged into an expansion card, will not be harmed by the Energy Saver control panel but will not save energy (even if the screen goes black). In some cases, you will not be able to open and use the Energy Saver control panel if your monitor does not comply with Energy Star guidelines.

Setting Up the AudioVision 14 Display for Speech Recognition on the Macintosh Quadra 840AV and Macintosh Centris 660AV

If you use the AudioVision 14 Display with the Quadra 840AV or Centris 660AV for speech recognition, follow these steps when you set up your AudioVision display:

1. When connecting the AudioVision adapter cable, connect the sound-in plug to the external sound input port on the back of the computer.
2. Make sure the AudioVision monitor's built-in microphone is turned on.

Alert and Beep Sound Problems

Missing alert sound

If you turn the AudioVision monitor's speakers all the way down, you may accidentally turn off your computer's alert sound (the beep you hear when the system needs to get your attention). There are three ways to turn the speakers completely down:

- dragging the AudioVision Speakers slider all the way down in the Volumes portion of the Sound control panel
- turning the volume all the way down on the monitor itself (using the monitor's Volume key)
- turning on the monitor's Mute option

If you have the Apple Adjustable keyboard, there is a fourth way to turn the sound down:

- using the keyboard's volume key

If you use any of these methods to turn the sound all the way down, any adjustments you make to the Alert slider in the Sound control panel will have no effect. You will hear no alert sounds. If the Alert slider is also turned all the way down, the system will alert you by flashing the menu bar. If, however, the Alert slider is turned up, but the speakers are turned all the way down, your system will not recognize that the alert sound cannot be heard, and won't flash the menu bar.

Inaudible startup beep

If you use the AudioVision 14 Display with the Macintosh IIfx, IIfx, IIfx, Quadra 700, 800, 900, or 950, you may not hear the startup ("boot") beep when you turn on the computer. To hear the startup beep, plug the monitor into a wall outlet (not into the computer) and turn on the monitor before turning on the computer.

If you have a Power Macintosh computer, plug the AudioVision Display into the back of the computer, not into a wall outlet.

Recording With External Microphones

The Apple Microphone does not work with the AudioVision 14 Display. If you wish to use an external microphone, use the Apple PlainTalk microphone.

Video Slider Behavior With Keypad Control Combinations

Pressing the Volume key, Mute button, or Microphone-On button in combination with the Brightness key or the Contrast key makes the slider behave erratically. For example, if you press and hold the top of the Contrast key to move the slider control upward and press the Mute button at the same time, the slider control continues upward to the end—even after you release the keys.

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Tech Info Library Article Number:18544



Tech Info Library

PCI Cards: How To Tell If They Are Macintosh Compatible (9/95)

Revised: 9/6/95
Security: Everyone

PCI Cards: How To Tell If They Are Macintosh Compatible (9/95)

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Article Created: 5 September 1995

TOPIC -----

How can I tell if a particular PCI expansion card is compatible with my Power Macintosh 8500?

DISCUSSION -----

PCI expansion cards that are compatible with your Macintosh have a blue sticker on the box indicating that the card is "Designed for Macintosh computers with PCI." The shape of the sticker is similar to those used for Power Macintosh native applications and Macintosh computers that are upgradeable to PowerPC.

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Tech Info Library Article Number:18545



Tech Info Library

Power Macintosh 7200, 7500, 8500, 9500: Pinouts (6/96)

Revised: 6/27/96
Security: Everyone

Power Macintosh 7200, 7500, 8500, 9500: Pinouts (6/96)

Article Created: 6 September 1995
Article Review/Updated: 27 June 1996

TOPIC -----

This article presents the pinouts for Power Macintosh 7200, 7500, 7600, 8500, and 9500 series computers. These pinouts include: PCI connector, video connector, serial port (GeoPort), SCSI, ADB, Ethernet, SCSI, Ram DIMM connector, Level 2 cache, DAV connector, S-video input, and S-video output.

DISCUSSION -----

PCI connector

Begin_Table

Pin	Side B	Side A
---	-----	-----
1	-12V	TRST#
2	TCK	+12V
3	Ground	TMS
4	TDO	TDI
5	+5V	+5V
6	+5V	INTA#
7	INTB#	INTC#
8	INTD#	+5V
9	PRSNT1#	Reserved
10	Reserved	+5V
11	PRSNT2#	Reserved
12	Ground	Ground
13	Ground	Ground
14	Reserved	Reserved
15	Ground	RST#
16	CLK	+5V

17	Ground	GNT#
18	REQ#	Ground
19	+5V (I/O)	Reserved
20	AD[31]	AD[30]
21	AD[29]	+3.3V
22	Ground	AD[28]
23	AD[27]	AD[26]
24	AD[25]	Ground
25	+3.3V	AD[24]
26	C/BE[3]#	IDSEL
27	AD[23]	+3.3V
28	Ground	AD[22]
29	AD[21]	AD[20]
30	AD[19]	Ground
31	+3.3V	AD[18]
32	AD[17]	AD[16]
33	C/BE[2]#	+3.3V
34	Ground	FRAME#
35	IRDY#	Ground
36	+3.3V	TRDY#
37	DEVSEL#	Ground
38	Ground	STOP#
39	LOCK#	+3.3V
40	PERR#	SDONE
41	+3.3V	SBO#
42	SERR#	Ground
43	+3.3V	PAR
44	C/BE[1]#	AD[15]
45	AD[14]	+3.3V
46	Ground	AD[13]
47	AD[12]	AD[11]
48	AD[10]	Ground
49	Ground	AD[09]
50	Connector Key	
51	Connector Key	
52	AD[08]	C/BE[0]#
53	AD[07]	+3.3V
54	+3.3V	AD[06]
55	AD[05]	AD[04]
56	AD[03]	Ground
57	Ground	AD[02]
58	AD[01]	AD[00]
59	+5V (I/O)	+5V (I/O)
60	ACK64#	REQ64#
61	+5V	+5V
62	+5V	+5V

End_Table

Video connector (All models except the Power Macintosh 9500)

Begin_Table

Pin	Signal name	Description
---	-----	-----
1	RED.GND	Red video ground
2	RED.VID	Red video signal
3	/CSYNC	Composite synchronization signal
4	SENSE0	Monitor sense signal 0
5	GRN.VID	Green video signal
6	GRN.GND	Green video ground
7	SENSE1	Monitor sense signal 1
8	+12V 12-	volt power from computer
9	BLU.VID	Blue video signal
10	SENSE2	Monitor sense signal 2
11	GND	CSYNC and VSYNC ground
12	/VSYNC	Vertical synchronization signal
13	BLU.GND	Blue video ground
14	HSYNC.GND	HSYNC ground
15	/HSYNC	Horizontal synchronization signal
Shell	SGND	Shield ground

End_Table

Apple Accelerated Graphics Card (Power Macintosh 9500/120)

Begin_Table

Pin	Description	Pin	Description
---	-----	---	-----
1	Red ground	9	Blue video signal
2	Red video signal	10	Monitor sense 2
3	Composite synchronization	11	Synchronization ground
4	Monitor sense 0	12	Vertical synchronization
5	Green video signal	13	Blue ground
6	Green ground	14	Horizontal synchronization ground
7	Monitor sense 1	15	Horizontal synchronization
8	No connection		

End_Table

Serial port connector (Geoport)

Begin_Table

Pin	Name	Function
---	-----	-----
1	HSKo	Handshake output
2	HSKi	Handshake input or external clock
3	TxD-	Transmit data -
4	Gnd	Ground
5	RxD-	Receive data -
6	TxD+	Transmit data +

7	GPi	General-purpose input (wake up CPU or DMA handshake)
8	RxD+	Receive data +
9	+5V	Power to external device (100 mA maximum)

End_Table

ADB connector

Begin_Table

Pin	Name	Description
---	----	-----
1	ADB	Bidirectional data bus
2	PSW	Power-on signal
3	+5V	+5 volts
4	GND	Ground

End_Table

AAUI-15 Ethernet connector

Begin_Table

Pin	Description	Pin	Description
---	-----	---	-----
1	+5 V	8	+5 V
2	DI+	9	DO+
3	DI-	10	DO-
4	Ground	11	Ground
5	CI+	12	No connection
6	CI-	13	No connection
7	+5 V	14	+5 V

End_Table

10BASE-T Connector (RJ-45 Connector)

Begin_Table

Contact	Signal
-----	-----
1	TD+
2	TD-
3	RD+
4	Not Used by 10BASE-T
5	Not Used by 10BASE-T
6	RD-
7	Not Used by 10BASE-T
8	Not Used by 10BASE-T

End_Table

SCSI connectors

Begin_Table

Pin number (internal 50-pin)	Pin number (external 25-pin)	Signal name	Signal description
2	8	/DB0	Bit 0 of SCSI data bus
4	21	/DB1	Bit 1 of SCSI data bus
6	22	/DB2	Bit 2 of SCSI data bus
8	10	/DB3	Bit 3 of SCSI data bus
10	23	/DB4	Bit 4 of SCSI data bus
12	11	/DB5	Bit 5 of SCSI data bus
14	12	/DB6	Bit 6 of SCSI data bus
16	13	/DB7	Bit 7 of SCSI data bus
18	20	/DBP	Parity bit of SCSI data bus
25 -	n.c.		Not connected
26	25	TPWR	+5 V terminator power
32	17	/ATN	Attention
36	6	/BSY	Bus busy
38	5	/ACK	Handshake acknowledge
40	4	/RST	Bus reset
42	2	/MSG	Message phase
44	19	/SEL	Select
46	15	/C/D	Control or data
48	1	/REQ	Handshake request
50	3	/I/O	Input or output

20, 22, 24, 28, 30, 34, and all odd pins except pin 25, 7, 9, 14, 16, 18, and 24
GND Ground

End_Table

Floppy disk connector

Begin_Table

Pin	Signal name	Signal description
1	GND	Ground
2	PH0	Phase 0: state control line
3	GND	Ground
4	PH1	Phase 1: state control line
5	GND	Ground
6	PH2	Phase 2: state control line
7	GND	Ground
8	PH3	Phase 3: register write strobe
9	n.c.	Not connected
10	/WRREQ	Write data request

11	+5V	+5 volts
12	SEL	Head select
13	+12V	+12 volts
14	/ENBL	Drive enable
15	+12V	+12 volts
16	RD	Read data
17	+12V	+12 volts
18	WR	Write data
19	+12V	+12 volts
20	n.c.	Not connected

End_Table

RAM DIMM connectors

Begin_Table

Pin	Signal name	Pin	Signal name
---	-----	---	-----
1	VSS	85	VSS
2	DQ(0)	86	DQ(32)
3	DQ(1)	87	DQ(33)
5	DQ(3)	89	DQ(35)
6	VCC	90	VCC
7	DQ(4)	91	DQ(36)
8	DQ(5)	92	DQ(37)
9	DQ(6)	93	DQ(38)
10	DQ(7)	94	DQ(39)
11	Reserved	95	Reserved
12	VSS	96	VSS
13	DQ(8)	97	DQ(40)
14	DQ(9)	98	DQ(41)
15	DQ(10)	99	DQ(42)
16	DQ(11)	100	DQ(43)
17	DQ(12)	101	DQ(44)
18	VCC	102	VCC
19	DQ(13)	103	DQ(45)
20	DQ(14)	104	DQ(46)
21	DQ(15)	105	DQ(47)
22	Reserved	106	Reserved
23	VSS	107	VSS
24	Reserved	108	Reserved
25	Reserved	109	Reserved
26	VCC	110	VCC
27	/WE(0)	111	Reserved
28	/CAS(0)	112	/CAS(1)
29	/CAS(2)	113	/CAS(3)
30	/RAS(0)	114	Reserved
31	/OE(0)	115	Reserved
32	VSS	116	VSS
33	A(0)	117	A(1)
34	A(2)	118	A(3)

35	A(4)	119	A(5)
36	A(6)	120	A(7)
37	A(8)	121	A(9)
38	A(10)	122	A(11)
39	A(12)	123	A(13)
40	VCC	124	VCC
41	Reserved	125	Reserved
42	Reserved	126	B(0)
43	VSS	127	VSS
44	/OE(2)	128	Reserved
45	/RAS(2)	129	Reserved
46	/CAS(4)	130	/CAS(5)
47	/CAS(6)	131	/CAS(7)
48	/WE(2)	132	/PDE
49	VCC	133	VCC
50	Reserved	134	Reserved
51	Reserved	135	Reserved
52	DQ(16)	136	DQ(48)
53	DQ(17)	137	DQ(49)
54	VSS	138	VSS
55	DQ(18)	139	DQ(50)
56	DQ(19)	140	DQ(51)
57	DQ(20)	141	DQ(52)
58	DQ(21)	142	DQ(53)
59	VCC	143	VCC
60	DQ(22)	144	DQ(54)
61	Reserved	145	Reserved
62	Reserved	146	Reserved
63	Reserved	147	Reserved
64	Reserved	148	Reserved
65	DQ(23)	149	DQ(55)
66	Reserved	150	Reserved
67	DQ(24)	151	DQ(56)
68	VSS	152	VSS
69	DQ(25)	153	DQ(57)
70	DQ(26)	154	DQ(58)
71	DQ(27)	155	DQ(59)
72	DQ(28)	156	DQ(60)
73	VCC	157	VCC
74	DQ(29)	158	DQ(61)
75	DQ(30)	159	DQ(62)
76	DQ(31)	160	DQ(63)
77	Reserved	161	Reserved
78	VSS	162	VSS
79	PD(1)	163	PD(2)
80	PD(3)	164	PD(4)
81	PD(5)	165	PD(6)
82	PD(7)	166	PD(8)
83	ID(0)	167	ID(1)
84	VCC	168	VCC

End_Table

L2 cache SIMM connector

Begin_table

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	+5 V	41	/TOEN	81	+3.3 V	121	/DOEN
2	GND	42	/TWEN	82	GND	122	/DWEN
3	D0	43	/ADV	83	D1	123	/ADSC
4	D2	44	A12	84	D3	124	/CSIZ(2)
5	D4	45	CSIZ(1)	85	D5	125	GND
6	D6	46	A14	86	D7	126	A13
7	GND	47	A16	87	GND	127	A15
8	D8	48	A18	88	D9	128	A17
9	D10	49	A20	89	D11	129	A19
10	D12	50	GND	90	D13	130	GND
11	D14	51	A22	91	D15	131	A21
12	GND	52	A24	92	GND	132	A23
13	+5 V	53	A26	93	+3.3 V	133	A25
14	GND	54	A28	94	GND	134	A27
15	D16	55	GND	95	D17	135	GND
16	D18	56	+5 V	96	D19	136	+3.3 V
17	D20	57	GND	97	D21	137	D33
18	D22	58	D32	98	D23	138	D35
19	GND	59	D34	99	GND	139	D35
20	D24	60	D36	100	D25	140	D37
21	D26	61	D38	101	D27	141	D39
22	D28	62	GND	102	D29	142	GND
23	D30	63	D40	103	D31	143	D41
24	GND	64	D42	104	GND	144	D43
25	+5 V	65	D44	105	+3.3 V	145	D45
26	GND	66	D46	106	GND	146	D47
27	T0	67	GND	107	T1	147	GND
28	T2	68	+5 V	108	T3	148	+3.3 V
29	T4	69	GND	109	T5	149	GND
30	T6	70	D48	110	T7	150	D49
31	GND	71	D50	111	GND	151	D51
32	T8	72	D52	112	T9	152	D53
33	T10	73	D54	113	T11	153	D55
34	T12	74	GND	114	T13	154	GND
35	T14	75	D56	115	T15	155	D57
36	GND	76	D58	116	GND	156	D59
37	+5 V	77	D60	117	+3.3 V	157	D61
38	GND	78	D62	118	GND	158	D63
39	CLK	79	GND	119	CPRES	159	GND
40	GND	80	+5 V	120	A11	160	+3.3 V

End_Table

DAV connector

Begin_Table

Pin	Signal description	Pin	Signal description
---	-----	---	-----
1	Ground	31	Ground
2	Reserved	32	Vertical sync
3	Ground	33	Ground
4	Reserved	34	Reserved
5	Ground	35	Ground
6	Reserved	36	HRef
7	Ground	37	Ground
8	Reserved	38	DIR *
9	Ground	39	IIC Data †
10	Reserved	40	IIC Clock
11	UV bit 7	41	Ground
12	UV bit 6	42	Analog audio input left
13	UV bit 5	43	Analog audio input common
14	UV bit 4	44	Analog audio input right
15	UV bit 3	45	Ground
16	UV bit 2	46	Digital audio input
17	UV bit 1	47	Ground
18	UV bit 0	48	Digital audio output
19	Y bit 7	49	Ground
20	Y bit 6	50	Digital audio clock
21	Y bit 5	51	Ground
22	Y bit 4	52	Digital audio sync
23	Y bit 3	53	Ground
24	Y bit 2	54	S video input C component
25	Y bit 1	55	Video input ground
26	Y bit 0	56	S video input Y component
27	Ground	57	Video input ground
28	Line-locked clock	58	Reserved
29	Ground	59	Reserved
30	Clock reference qualifier	60	Reserved

End_Table

S-video input and output connectors

Begin_Table

Pin	S-video input connector	S-video output connector
---	-----	-----
1	Analog GND	Analog GND
2	Analog GND	Analog GND
3	Video Y (luminance)	Video Y (luminance)
4	Video C (chroma)	Video C (chroma)
5	I 2 C clock(Philips serial bus)	—
6	+12 V at 250 mA maximum *	—
7	I 2 C data (Philips serial bus)	—

End_Table

Article Change History:

27 Jun 1996 - Added additional computer.

14 Sep 1995 - Added PCI connector.

13 Sep 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:18547



Tech Info Library

Power Mac 7200: Command/Option Keys Stuck At Wake Up (12/95)

Revised: 12/19/95
Security: Everyone

Power Mac 7200: Command/Option Keys Stuck At Wake Up (12/95)

Article Created: 6 September 1995
Article Review/Updated: 19 December 1995

TOPIC -----

I use the keyboard shortcut Command-Option-Power to force my Power Macintosh 7200 computer to go to sleep. However, when the computer wakes up, the Command and Options keys are still pressed down. Is there any way to avoid this?

DISCUSSION -----

There are three workarounds for this situation:

- 1) Choose Sleep from the Special menu instead of using the Option-Command-Power keyboard shortcut.
- 2) Press the Power button. This brings up the Shut Down dialog box. Sleep is an option within the Shut Down Dialog box.
- 3) Press the Option-Command-Power keys to force the system to shut down. After waking the computer up, press the Command and Option keys to bring them keys back to their up position.

This symptom will be fixed in the next system software update.

Article Change History:
19 Dec 1995 - Added additional information.
20 Sep 1995 - Reviewed article.

Support Information Services

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Tech Info Library Article Number:18548



Tech Info Library

ColorSync: Which Profile Should I Use for My PowerBook? (10/95)

Revised: 10/9/95
Security: Everyone

ColorSync: Which Profile Should I Use for My PowerBook? (10/95)

Article Created: 6 September 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

Which ColorSync System Profile should I select in the ColorSync System Profile control panel for my PowerBook?

DISCUSSION -----

Begin_Table

If you have this PowerBook	Select this profile
-----	-----
180c, 540c, 5300c, 5300ce	PowerBook 180c Standard
165c, 520c, 5300cs	PowerBook 165c Standard
270c, 280c, 2300c	PowerBook 270c Standard

End_Table

Non-color PowerBooks do not use ColorSync.

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Article Change History:
09 Oct 1995 - Added Info Alley information; updated article.

Support Information Services

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Tech Info Library Article Number:18549



Tech Info Library

Power Macintosh: How To Display Less Than 256 Colors (9/95)

Revised: 9/7/95
Security: Everyone

Power Macintosh: How To Display Less Than 256 Colors (9/95)

=====

Article created: 7 September 1995

TOPIC -----

I have attached a monitor to the DB-15 video port on the back of my Power Macintosh 7100/80. Why can't I display less than 256 colors?

DISCUSSION -----

Monitors attached to the High Performance Video (HPV) card on Power Macintosh 7100 and 8100 series computers cannot display less than 256 colors.

To display less than 256 colors, you must connect your monitor to the HDI-45 video port. Using this port allows your monitor to access the built-in DRAM to display images. A video adapter cable (Part #M2681LL/A)* is needed to connect a monitor with a DB-15 connector to the HDI-45 video port.

The Power Macintosh AV Card also has the ability to display less than 256 colors.

*NOTE:

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

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Tech Info Library Article Number:18550



Tech Info Library

QuickTime: Playback Speeds Up With the Step Button Down (9/95)

Revised: 9/7/95
Security: Everyone

QuickTime: Playback Speeds Up With the Step Button Down (9/95)

=====

Article Created: 7 September 1995

TOPIC -----

I notice that QuickTime movies run smoother and faster if I click and hold the step forward button than if I just let the movie play. I also discovered that movies run much smoother if I click and hold the play button. Once I let go of the play button, the movie starts to play a bit jerkier. Why is this occurring?

DISCUSSION -----

When you click once on the step forward, it advances a single frame. When you hold it down, it advances through the frames as fast as it can draw them while ignoring the sound track.

This is a good way to find out how close a movie is to the limit of what your given computer can play. If holding down the button speeds it up a small amount, you are near the limit of your computer's playback performance. If it doubles in speed, your particular computer can handle movies with higher frame rates, screen size, or sound depth.

Support Information Services

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Tech Info Library Article Number:18551



Tech Info Library

MegaPhone: How to Record Outgoing Message (10/95)

Revised: 10/9/95
Security: Everyone

MegaPhone: How to Record Outgoing Message (10/95)

=====

Article Created: 7 September 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

Do I have to leave my computer on in order for MegaPhone to answer a telephone call?

I am unable to get MegaPhone to record an outgoing message. How do I set this up properly?

DISCUSSION -----

To use your Macintosh as an answering machine, your computer must be on and the MegaPhone application running. Megaphone can be running in the background when the call comes in. Your Global Village internal modem automatically handles arbitration between the GlobalFax and MegaPhone software.

To setup the software so the modem will determine what type of call is coming in, open the Telephone Setup control panel and select the "Auto-answer incoming calls after 4 rings" option. This selection will direct the incoming call to the appropriate software, whether the call is either voice, or fax.

Follow these steps to record the outgoing greeting your callers will hear:

Step 1

Launch MegaPhone.

Step 2

You can reach the area to record an outgoing message by two routes:

A. Pull down the File menu and choose Preferences.
Select Voice Messaging from the Topic pull down menu.

or

B. From the Windows menu select "Voice Messages" and click the Setup button in the top right corner of the Voice Messages window.

You are now in the Voice Messaging Preference window.

Step 3

Make sure you have placed an "X" next to "Use MegaPhone Voice Messaging" otherwise, you will not be able to record your greeting.

Step 4

Check if there is a greeting already recorded by clicking the Play button in the Outgoing Message area of the window. You will hear the original MegaPhone greeting if you have not recorded a previous one. If you do not hear it, check the volume level of your computer in the Sound control panel, or if you have a computer with volume control buttons, press the volume up button to make sure you hear your system sounds.

Step 4

If you do not hear the greeting or you do not hear any system sounds, make sure that your microphone is not connected to the speaker port, as this will not allow sounds to play or be recorded. Make sure your microphone is plugged into the port with the microphone icon.

Step 5

In the Outgoing Message area, click the Record button. You should hear MegaPhone speak and your computer say "Record your new greeting at the tone," followed by a short tone. If you do not hear MegaPhone tell you to record your greeting, we would suggest following Step 6 below to remove the "Voice Mail Sounds" file. Afterwards, test it again.

Record your announcement and then click the Stop button. Click the Play button to hear your recording. You should hear your message.

If you hear nothing, check your sound input in the Sound control panel:

- 1) Under the Apple Menu, choose control panels.
- 2) Double-click the Sound Control Panel.
- 3) Choose the Sound In option from the pull down menu in the control panel window.
- 4) Click the Options button.
- 5) Change the input source to microphone.
- 6) Click OK.
- 7) Choose the Alert Sounds option from the pull down menu in the control panel window.
- 8) Click Add.
- 9) Tap your microphone and look for the sound waves coming from the speaker icon to confirm it is receiving input.

Step 6

MegaPhone comes with its own prerecorded greeting that states "Hello, thank you for calling. Please leave your message at the tone." This message will be erased as soon as you record your own new greeting.

If you would like to go back to this original greeting, quit MegaPhone and delete the file "Voice Mail Sounds" from your computer. The file is located at the following path: Hard Disk -> System Folder -> Preferences -> Cypress -> MegaPhone -> Voice Mail Sounds. Move it to the Trash, empty the Trash, and then relaunch MegaPhone. A new Voice Mail Sounds file will be created automatically. Please note that this will erase any outgoing message you recorded.

If you are still unable to record a greeting, reinstall MegaPhone from your Macintosh Performa CD. Use the search string "performa and restore" to locate the TIL article "Performa: Backing Up and Restoring" for additional information.

NOTE:

MegaPhone comes bundled on the following systems:
Performa 6200CD, 6216CD, 6218CD, 6220CD, 6230CD
Performa 5215CD

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Volume II, Issue 12, Page 11

Article Change History:

09 Oct 1995 - Added Info Alley information; updated article.
14 Sep 1995 - Reformatted procedure for clarity.

Support Information Services

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Tech Info Library Article Number:18552



Tech Info Library

Open Transport 1.1: Should Be Used (4/96)

Revised: 4/15/96
Security: Everyone

Open Transport 1.1: Should Be Used (4/96)

Article Created: 7 September 1995
Article Reviewed/Updated: 15 April 1996

TOPIC -----

This article recommends using Open Transport 1.1 on Power Macintosh 7200, 7500, 8500, and 9500 computers which have a PCI bus.

DISCUSSION -----

Open Transport 1.1 or the latest version is recommended for all Power Macintosh computers with a PCI bus, including the Power Macintosh 7200, 7500, 8500, and 9500. It will be especially valuable if you use SLIP or PPP to access the Internet, or other TCP/IP resources.

The first release of System 7.5.2 which shipped with the first Power Macintosh 9500 computers did not include a piece of code called the ".enet shim", or in other words, an .enet Compatibility Module. This shim is required for applications such as MacIPX, SoftPC networking, DECnet and others to interact with Open Transport.

The .enet shim is no longer needed for compatibility after upgrading to Open Transport 1.1.

Article Change History:
15 Apr 1996 - Updated to Open Transport 1.1.
21 Nov 1995 - Updated to Open Transport 1.0.8.

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Tech Info Library Article Number:18553



Tech Info Library

Apple Presentation System: Won't Work w/DOS Compat Card (9/95)

Revised: 9/7/95
Security: Everyone

Apple Presentation System: Won't Work w/DOS Compat Card (9/95)

=====

Article Created: 7 September 1995

TOPIC -----

I want to use the Apple Presentation System with my DOS Compatibility Card, but I cannot get it to work. Is there a way to do this?

DISCUSSION -----

These two systems cannot work together. The DOS Compatibility Card changes the characteristics of the video signal when displaying a MS-DOS/Windows screen image. These changes may vary based on the monitor that is attached, and the settings in the PC Setup control panel.

The Apple Presentation System is not be able to handle the differences in the video signal. The Apple Presentation System expects a 640x480 67-Hz Macintosh signal, but it is receiving a 640x480 60-Hz VGA signal when using MS-DOS or Windows.

Support Information Services

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Tech Info Library Article Number:18555



Tech Info Library

Global Village: Red 'X' at Startup (9/95)

Revised: 9/8/95
Security: Everyone

Global Village: Red 'X' at Startup (9/95)

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Article Created: 8 September 1995

TOPIC -----

I have a Global Village modem and there is a red 'X' across the modem icon on startup. What should I do?

DISCUSSION -----

A red 'X' across the modem icon indicates that the modem software did not load properly. This could be due to a corrupt preference file, damaged modem software, or even a duplicate versions of the modem extensions in the System Folder. Follow the steps listed below to resolve this issue.

Step 1

Open the System Folder and the Global Village Personal folder. Move the files Queue Temp and GlobalFax Preferences to the Trash and restart your computer. This will essentially recreate these files on startup incase one of the files was accidentally damaged. Empty the Trash once you restart the computer to delete the old files.

Step 2

Check your System Folder for duplicate Global Village modem extensions. If you accidentally moved some of the modem extensions to the System Folder then reinstalled the system software you may have duplicate extensions. Delete the duplicate items to prevent the red 'X' from appearing on the modem extension. The following extensions should only be installed once in your Extensions folder:

Global Village Toolbox
GlobalFax

Step 3

If the above troubleshooting steps fail to resolve your issue, then reinstall the Global Village software from your Performa CD or set of software backup disks to ensure that you have all the necessary files.

Support Information Services

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Tech Info Library Article Number:18557



Tech Info Library

AV Digitizer Options: Read Me (9/95)

Revised: 9/14/95
Security: Everyone

AV Digitizer Options: Read Me (9/95)

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Article Created: 8 September 1995

TOPIC -----

The following article is the ReadMe file for the AV Digitizer Options extension.

DISCUSSION -----

AV Digitizer Options Notes

Notice: This software is copyrighted by Apple Computer, Inc. You may freely distribute this software as long as you do not charge for it and as long as this notice accompanies the AV Digitizer Options file. This software is distributed as is and is not supported by Apple.

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Description:

The "AV Digitizer Options" extension is a "video panel component" for use with the Macintosh Quadra 840AV, Quadra 660AV and the Centris 660AV. It provides access to several capabilities of the AV video hardware that are not easily accessed otherwise:

1. It allows the user to switch the color space of the live video window from 16bpp color to 8bpp grayscale. Note that in monitors with a resolution higher than 832 x 624, video will only be displayed in 8bpp grayscale. This is a hardware limitation.
2. It allows the user to select 1 of 7 different levels of transparency for the live video. This means that when you superimpose a graphics window in front of the live video window, the live video can "blend" with the graphics at 7

different levels: (% Graphics / % Video) 100%/0%, 75%/25%, 62%/38%, 50%/50%, 38%/62%, 25%/75%, and 0%/100%. Please note, that this feature is only available when the graphics is in 256 colors or grays.

3. It allows the user to bypass the Inverse Gamma lookup table in the Digital Video Scaler. When the lookup table is bypassed the video data written to VRAM will not be modified. Note that there is another lookup table in the output end that only affects the displayed data (Not the captured video data). This lookup table has the same Gamma correction as that of the displayed graphics. In order to bypass that table, go to the Options dialog of the monitors control panel, while holding the option key. Select the "Uncorrected Gamma" as the gamma table.

Installation:

Drag the file into the Extensions folder of your system and reboot the machine. You can access the features through the "Video Settings..." menu item of any QuickTime 1.5 or higher aware application.

Extra Notes:

Presently, most video applications will stop live video playthrough when they are switched into the background. This is because if they don't, the video will blast through any windows that are in the front. However, the AV hardware has a dual frame buffer architecture that avoids the need for stopping the video. Thus transparency will not work in these applications. The only shipping application that I know that allows video-playthrough while in the background is Video Monitor, from Apple.

Bug reports, comments to: Fernando Urbina, Apple Computer. (Internet: nano@apple.com, Applelink: NANO).

Support Information Services

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Tech Info Library Article Number:18558



Tech Info Library

Power Macintosh 8500: Unable To Display Video On TV (10/95)

Revised: 10/14/96
Security: Everyone

Power Macintosh 8500: Unable To Display Video On TV (10/95)

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Article Created: 8 September 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

I have a Power Macintosh 8500. In addition to my computer monitor, I have attached a television to the correct ports on the back of the computer, but I cannot seem to get the video to display on the television. I get video on my computer monitor, but my television is black. What am I doing wrong?

DISCUSSION -----

The Power Macintosh 8500 can be configured with either 2 or 4 megabytes (MB) of video random-access memory (VRAM). Troubleshooting the problem depends on how much VRAM is installed in your computer.

2 MB of VRAM
=====

If your Power Macintosh 8500 is equipped with 2 MB of VRAM, you can display video on either a computer monitor or a television, but not both at the same time. The computer detects what type of display device is attached when starting up and makes the proper adjustments. The computer defaults to the monitor when both a monitor and television are attached, hence the television screen will be black. Follow these directions to display video on a television from your computer:

Step 1

Make sure that your computer and television are both turned off.

Step 2

Disconnect your computer monitor from the video port on the back of the computer.

Step 3

Connect the television to the composite or S-video out connectors on the back of the computer.

Step 4

Turn on the television.

Step 5

Start up your computer.

Step 6

The video now appears on your television.

If, after following these steps, there is still no image on the television, you need to make sure that the VRAM Dual Inline Memory Modules (DIMMs) are installed in the slots labelled "1" on the logic board. If the VRAM DIMMs are installed in the slots labelled "2", the video out feature does not work.

If you want to use both the television and monitor at the same time, you need to add an additional 2 MB of VRAM to your computer. If you install additional VRAM you can also use a larger desktop, or use video mirroring for presentations and recording.

4 MB of VRAM

=====

If your Power Macintosh 8500 is equipped with 4MB of VRAM, you can view the desktop on both the monitor and the television. If no image appears on the television, you need to open the unit and check the video cable connections.

Troubleshooting

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WARNING: Your computer contains electrically sensitive parts. To avoid damaging your computer, discharge static electricity that may be on your clothes or body by touching the power supply case before working with the assembly.

The following troubleshooting directions are provided primarily for Apple Service providers. If you attempt to perform upgrades or repairs yourself, any damage you may cause to your equipment will NOT be covered by your warranty.

Examine the internal AV ribbon cable and make sure it is attached between the logic board and the external composite and S-video connectors on the back panel of the computer. The internal ribbon connector must be attached to the logic board for the detection circuitry to operate properly. If the cable is not connected properly, reconnect the internal cable to correct this problem.

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Article Change History:
29 Sep 1995 - Added Info Alley Information; updated article.

Support Information Services

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Tech Info Library Article Number:18559



Tech Info Library

ADB Mouse: Sticking In The Down Position (9/95)

Revised: 9/15/95
Security: Everyone

ADB Mouse: Sticking In The Down Position (9/95)

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Article Created: 8 September 1995
Article Reviewed/Updated: 15 September 1995

TOPIC -----

Sometimes my mouse seems to stick in the down position. For instance, I can click the scroll arrow in a window, and the window keeps scrolling until I click the mouse again. How can I correct this problem?

DISCUSSION -----

The symptoms you are describing could be caused by either hardware or software problems. Attempt to eliminate software first, then troubleshoot your hardware.

Try these steps in the order presented. If a step fails to correct the problem, proceed to the next one.

Step 1

Restart your computer. Many times simply restarting fixes the problem.

Step 2

Restart and turn off all extensions. If the problem goes away, troubleshoot your extensions.

Step 3

Shut down your computer, but leave the power supply to the computer turned on. Switch off any SCSI devices and completely disconnect all Apple Desktop Bus (ADB) cables and devices attached to your computer. Wait at least 10 seconds, reattach the ADB cables and devices, and restart your computer.

WARNING:

Do not disconnect ADB devices while the computer is turned on.

Step 4

Zap (reset) the PRAM (Parameter RAM) by holding down the Command-Option-P-R keys at startup.

Step 5

Replace the ADB cables and devices.

Article Change History:

15 Sep 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:18560



Tech Info Library

Apple Video Player: ReadMe File (9/95)

Revised: 9/8/95
Security: Everyone

Apple Video Player: ReadMe File (9/95)

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Article Created: 8 September 1995

TOPIC -----

This article contains the Read Me file included with the Video SW
Installer 1.3.2

DISCUSSION -----

Important Information About Apple Video Player

This document provides important information about the Apple Video Player software. You may want to print this document and keep it with your manuals. Most of this information is not in the documentation. If you have questions that are not answered in this document, refer to the manuals that came with your computer.

After you finish reading this document, you can close it by clicking the small box at the upper left of the document window, by typing Command-Q, or by selecting Quit from the File menu.

Video Quality

Video viewing and video capture is supported in window sizes of up to 640x480 pixels. For the highest-quality video and TV viewing, use the standard video window sizes (Smallest, Normal, or Largest) in Apple Video Player's Windows menu. If you choose to customize the window size (by choosing Other in the Windows menu), the image's resolution may decrease.

In addition, video resolution is optimized when you view the Apple Video Player video window on the monitor connected to the monitor port on your Macintosh. You can drag the video window to a secondary monitor (connected to an expansion card), but the image resolution will decrease.

Hot Key and MacroMedia Director

The Apple Video Player application program allows you to use a keyboard shortcut, called a "hot key," to open and quit the program, and to switch between Apple Video Player and any other open programs. However, due to a minor incompatibility problem with MacroMedia Director, the Apple Video Player hot key does not work when MacroMedia Director is open.

If you are installing Apple Video Player for the first time, no hot key is defined. You can set one using the Hot Key item in the Setup Menu. If you are replacing a previous version of Apple Video Player, the hot key setting is retained in the Apple Video Player Preferences file.

Closed Captioning

If you have a TV tuner card, the Apple Video Player application program can display closed captions for TV channels that provide them. However, in order for closed captions to be visible, the video window size must be set to Normal Size or greater. Also, for best results, networking or printing should not be active when close captioning is selected.

Capturing Movies

Likewise, for best results, networking or printing should not be active when you are recording video from either television or an alternate video source. Virtual memory should also be turned off when capturing video for best results.

Movies are captured at the current volume setting. Set the volume to the desired level before recording a movie. Movies recorded when the sound is muted will not have any sound.

Forgetting Your Password

If you cannot remember your password, you may reset the password by removing the Apple Video Player Prefs file. To remove the Apple Video Player Prefs file, quit Apple Video Player and move the Apple Video Player Prefs file to the Trash. The Apple Video Player Prefs file is located in the Preferences folder, which is in the System Folder.

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Tech Info Library Article Number:18561



Tech Info Library

QuickTime 2.1: About QuickTime 2.1 ReadMe File (9/95)

Revised: 9/12/95
Security: Everyone

QuickTime 2.1: About QuickTime 2.1 ReadMe File (9/95)

=====

Article Created: 12 September 1995

TOPIC -----

This article contains the Read Me file included with QuickTime 2.1 available on online services.

DISCUSSION -----

Welcome to QuickTime 2.1

The QuickTime system software extension enables you to integrate video, graphics, sound, sprites, text, music, and animation into documents. By providing a standard way for all Macintosh programs to control these multimedia elements, QuickTime makes them easier to use. QuickTime 2.1 includes support for smoother video, sprite animation, CD-ROM AutoStart, 16-bit audio compression, and MPEG. It also includes the capabilities of the Apple Multimedia Tuner.

You do not interact directly with the QuickTime extension. It works behind the scenes as part of your system software, providing new features to application programs that support QuickTime, such as MoviePlayer and SimpleText. The specific features of QuickTime and how they are presented depend on the applications you use.

The QuickTime 2.1 release includes:

- the QuickTime extension
- the QuickTime PowerPlug extension for Power Macintosh
- the QuickTime Musical Instruments extension

To Install QuickTime 2.1:

=====

Step 1

Locate the System Folder on your hard disk. Open the System Folder by double

clicking on its icon.

Step 2

Locate the Extensions folder inside your System Folder. Open the Extensions folder by double clicking on its icon.

Step 3

If there is a copy of the QuickTime extension in the Extensions folder, drag it to the Trash. Note: do not empty the trash until you restart your Macintosh.

Step 4

If there is a copy of the Apple Multimedia Tuner extension in the Extensions folder, drag it to the Trash.

Step 5

Close the Extensions folder. Close the System Folder.

Step 6

Drag the QuickTime, QuickTime PowerPlug, and QuickTime Musical Instruments icons to your hard disk's System Folder icon (not into the open folder).

Step 7

Click OK in the dialog box that appears.

Step 8

Restart your Macintosh.

Visit the QuickTime site on the World Wide Web:

=====

More information on QuickTime can be found on Apple Computer's QuickTime site on the World Wide Web. The address is: <http://quicktime.apple.com>.

For Software Developers:

The QuickTime 2.1 Developer Kit, available in the Fall of 1995, includes tools for creating and editing movies, compressing audio, and creating sprite movies. It also includes sample movies such as music movies, MPEG movies, sprite movies, and technical documentation. It is available from the Apple Programmers and Developers Association (APDA) for \$195.

APDA:

1-800-282-2732 in the U.S

1-800-637-0029 in Canada

1-716-871-6555 for other countries

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Updated August 4, 1995

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Tech Info Library Article Number:18562



Tech Info Library

No Shell Command to Eject CD-ROM Discs (9/95)

Revised: 9/14/95
Security: Everyone

No Shell Command to Eject CD-ROM Discs (9/95)

=====

Article Created: 13 September 1995

TOPIC -----

Can I use a UNIX line command to eject a CD-ROM disc?

DISCUSSION -----

There is no shell command that will eject a CD-ROM disc under A/UX. The only way to eject a CD-ROM disc under A/UX is by dragging its icon to the Trash.

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Tech Info Library Article Number:18563



Tech Info Library

PCI Connector Pinouts (9/95)

Revised: 9/14/95
Security: Everyone

PCI Connector Pinouts (9/95)

Article Created: 13 September 1995
Article Review/Updated: 14 September 1995

TOPIC -----

What are the pinouts for the Peripheral Component Interconnect (PCI) Connector used in the Power Macintosh 7200, 7500, 8500, and 9500 series computers?

DISCUSSION -----

Begin_Table

Pin	Side B	Side A
---	-----	-----
1	-12V	TRST#
2	TCK	+12V
3	Ground	TMS
4	TDO	TDI
5	+5V	+5V
6	+5V	INTA#
7	INTB#	INTC#
8	INTD#	+5V
9	PRSNT1#	Reserved
10	Reserved	+5V
11	PRSNT2#	Reserved
12	Ground	Ground
13	Ground	Ground
14	Reserved	Reserved
15	Ground	RST#
16	CLK	+5V
17	Ground	GNT#
18	REQ#	Ground
19	+5V (I/O)	Reserved
20	AD[31]	AD[30]
21	AD[29]	+3.3V

22	Ground	AD[28]
23	AD[27]	AD[26]
24	AD[25]	Ground
25	+3.3V	AD[24]
26	C/BE[3]#	IDSEL
27	AD[23]	+3.3V
28	Ground	AD[22]
29	AD[21]	AD[20]
30	AD[19]	Ground
31	+3.3V	AD[18]
32	AD[17]	AD[16]
33	C/BE[2]#	+3.3V
34	Ground	FRAME#
35	IRDY#	Ground
36	+3.3V	TRDY#
37	DEVSEL#	Ground
38	Ground	STOP#
39	LOCK#	+3.3V
40	PERR#	SDONE
41	+3.3V	SBO#
42	SERR#	Ground
43	+3.3V	PAR
44	C/BE[1]#	AD[15]
45	AD[14]	+3.3V
46	Ground	AD[13]
47	AD[12]	AD[11]
48	AD[10]	Ground
49	Ground	AD[09]
50	Connector Key	
51	Connector Key	
52	AD[08]	C/BE[0]#
53	AD[07]	+3.3V
54	+3.3V	AD[06]
55	AD[05]	AD[04]
56	AD[03]	Ground
57	Ground	AD[02]
58	AD[01]	AD[00]
59	+5V (I/O)	+5V (I/O)
60	ACK64#	REQ64#
61	+5V	+5V
62	+5V	+5V

End_Table

Article Change History:

14 Sep 1995 - Made minor changes.

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Tech Info Library Article Number:18564



Tech Info Library

Power Macintosh: Networking Options (9/95)

Revised: 9/13/95
Security: Everyone

Power Macintosh: Networking Options (9/95)

Article Created: 8 September 1995

TOPIC -----

I would like to network two Power Macintosh computers together. These computers are located a few houses away from each other. Can we use the built-in networking features of the Macintosh to connect these two computers? What about connecting them via the phone lines?

DISCUSSION -----

You can use the built-in networking capabilities of your Power Macintosh computers to communicate but there are some limits to how far one can run network cabling. You can use Apple's Remote Access (ARA) software to connect your two Macintosh computers via modems.

There are three methods you can use to have your Macintosh computers communicate:

- LocalTalk - directly networking the two computers using LocalTalk via unshielded RJ-11 cabling
- Ethernet - directly networking the two computers using shielded, 10-base-2 (thin coax) Ethernet cabling
- ARA - using Apple's Remote Access software to connect the two computers by modem.

You need to consider required network performance, distance between computers, difficulty in running cabling, and how much money you are willing to spend when choosing which method works best in your situation.

Additional Hardware Needed

=====

LocalTalk

The first networking method would require you to purchase a LocalTalk RJ-11 Connector Kit (M1657Z/A) for each computer. This kit is manufactured by Apple

but there are solutions available from third parties.

Ethernet

There are several different Ethernet networking schemes, including 10-Base-T (twisted pair), 10-Base-2 (thin coax), and 10-Base-5 (thick coax). Each have their advantages and disadvantages, but thin coax allows the longest cable length and does not require an additional hardware hub or router making it a good choice for a low cost solution.

To use thin coax, you need to purchase one Apple Ethernet Thin Coax Transceiver (M0329Z/B) for each computer.

You can attach the transceiver directly to the built-in Ethernet port on your Power Macintosh computer. However, if the computer you are connecting to does not have an Ethernet port (all Power Macintosh computers and most Macintosh Quadra computers have an Ethernet port), your neighbor will either need to add Ethernet functionality to his computer (with an Ethernet card) or you will have to use either the LocalTalk or Modem networking scheme instead.

ARA

If you want to use Apple's Remote Access software and existing telephone lines, each computer would require a modem. Although any Macintosh compatible modem will work, modems capable of 14.4 kilobytes per second (kbps) or greater data transfer rates are preferred. You also need to purchase one copy of Apple Remote Access Personal Server software v2.0.1 (M2726Z/B). This software package includes license for one client to log on to your computer. If you want to allow additional users to access your computer, you need to purchase one copy of Apple Remote Access Client v2.0.1 (M5227Z/B) for each user.

Cabling

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Depending on which method you choose, you will need specific cabling.

LocalTalk

LocalTalk uses unshielded, RJ-11 cable. This type of cable is similar to regular phone cable. However, it would be best to purchase this cable from a computer cable shop as one continuous cable without any extending connectors.

The problem you may encounter with this method is that RJ-11 cable is usually unshielded against external interference. This means the two computers may have difficulty communicating with one another due to outside interference, such as nearby broadcasting transmitters or high-voltage power lines. However, you may be able to locate shielded RJ-11 cabling for greater reliability. The maximum limit on cable length using this method is approximately 1000 feet. Repeaters can also be used if distances are greater, or if you are experiencing weak signals. The longer your cabling, the more likely you are to encounter interference.

Ethernet

Ethernet is considerably faster than LocalTalk. Thin coax Ethernet uses shielded coax cable, similar to cable used by most cable television installers. Be sure to use RG-58 Ethernet cabling, not the RG-62 used by most cable TV installers. RG-58 cable is less susceptible to interference. The overall cable length of this type of network is approximately 600 feet.

ARA

No additional cabling is necessary since you are using modems and existing phone lines.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Support Information Services

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Tech Info Library Article Number:18565



Tech Info Library

PowerTalk and PowerShare: Error Code Listing (9/95)

Revised: 9/13/95
Security: Everyone

PowerTalk and PowerShare: Error Code Listing (9/95)

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Article Created: 13 September 1995

TOPIC -----

This article provides the error codes on PowerTalk and PowerShare, which is also know as AOCE (Apple Open Collaborative Environment).

DISCUSSION -----

Begin_Table

Allocated ranges

AOCE General Errors	-1500 to -1539
AOCE Authentication Errors	-1540 to -1609
AOCE Directory Errors	-1610 to -1680

AOCE Standard Mail Errors	-1900 to -1949
AOCE Standard Directory Errors	-1950 to -1969
AOCE Digital Signature Errors	-1970 to -1999

AOCE Directory Templates Errors	-15000 to -15039
AOCE Mail Errors	-15040 to -15089
AOCE Messaging Errors	-15090 to -15169
Reserved for future	-15170 to -15199

AOCE General Errors (-1500 to -1521)

-1500	toolbox not open; perhaps it's closing	= kOCEToolboxNotOpen
-1501	request code passed to trap call invalid	= kOCEInvalidCommand
-1502	reference to object obsolete/invalid	= kOCEInvalidRef
-1503	buffer supplied too small for task	= kOCEBufferTooSmall
-1504	some manner of software version mismatch	= kOCEVersionErr
-1505	op tried synchronously; may only be done async, or vice versa	= kOCESyncAsyncErr

-1506 OCE toolbox has an internal error = kOCEInternalErr
-1507 operation can only be done by object's owner = kOCENotAnOwner
-1508 feature not implemented = kOCENotImplemented
-1509 user must be authenticated = kOCENotAuthenticated
-1510 object being added already exists = kOCEAlreadyExists
-1511 object being referenced doesn't exist or cannot be found =
kOCEDoesntExist
-1512 unable to open or maintain network transport = kOCEConnectionErr
-1513 connect has closed = kOCEConnectionClosed
-1514 invalid recipient/address for command = kOCEInvalidRecipient
-1515 invalid index (out of range) = kOCEInvalidIndex
-1516 object references being closed, cannot complete command =
kOCERefIsClosing
-1517 kOCEHasPendingMsgs
-1518 kOCEInvalidConfiguration
-1519 kOCERequiredServicesNotAvailable
-1520 kOCEServerInactive
-1521 inadequate disk space to safely complete operation =
kOCEMoreDiskSpaceNeeded
paramErr invalid parameter passed to toolbox = kOCEParamErr

AOCE Authentication Errors (-1540 to -1571)

-1540 kOCEReadAccessDenied
-1541 kOCEWriteAccessDenied
-1542 stream needs to be authenticated, or not authorized, or someone
other than agent trying to TPFC, or problem in server-to-server
authentication = kOCEAccessRightsInsufficient
-1543 don't know how to read version of credentials =
kOCEUnsupportedCredentialsVersion
-1544 couldn't successfully decrypt credentials = kOCECredentialsProblem
-1545 current time < first valid time = kOCECredentialsImmature
-1546 current time > expiry time = kOCECredentialsExpired
-1547 current time < proxy start time = kOCEProxyImmature
-1548 current time > proxy expiry time = kOCEProxyExpired
-1549 recipient not specified in proxy = kOCEDisallowedRecipient
-1550 found no key for entity in question = kOCENoKeyFound
-1551 couldn't decode proxy because principal has no key =
kOCEPrincipalKeyNotFound
-1552 recipient has no key = kOCERecipientKeyNotFound
-1553 in TPFC, agent has no key = kOCEAgentKeyNotFound
-1554 entity already has a key = kOCEKeyAlreadyRegistered
-1555 key is of an unknown encryption method, or key doesn't match
password = kOCEMalformedKey
-1556 password too short, key too simple, or trying to change cluster key
to the same value = kOCEUndesirableKey
-1557 in CheckIdentity, name doesn't exist or key is wrong =
kOCEWrongIdentityOrKey
-1558 either we couldn't find the initiator's key or we found it but
couldn't successfully decrypt instructions or proxy =
kOCEInitiatorKeyProblem
-1559 specified encryption method is not supported =

```

    KOCEBadEncryptionMethod
-1560 LocalIdentity has to be setup = kOCELocalIdentityDoesNotExist
-1561 LocalIdentity Login has to be done for this operation =
    kOCELocalAuthenticationFail
-1562 LocalIdentity setup exists, use change instead of setup =
    kOCELocalIdentitySetupExists
-1563 DirectoryIdentity setup exists, use change instead of setup =
    kOCEDirectoryIdentitySetupExists
-1564 DirectoryIdentity setup does not exist =
    kOCEDirectoryIdentitySetupDoesNotExist
-1565 use LocalIdentity calls instead! = kOCENotLocalIdentity
-1566 identity table is full = kOCENoMoreIDs
-1567 identity passed is not valid = kOCEUnknownID
-1568 LocalID operation denied = kOCEOperationDenied
-1569 ambiguous matches found in resolving CIDs (more than 1 CID) =
    kOCEAmbiguousMatches
-1570 No ASDSP workspace passed for Open Secure Stream =
    kOCENoASDSPWorkSpace
-1571 generic authentication problem = kOCEAuthenticationTrouble
```

AOCE Catalog Errors (-1610 to -1646)

```

-----
-1610 server does not serve requested dNode = kOCENotLocal
-1611 server cannot complete call at this time = kOCETooBusy
-1612 disk full = kOCEDatabaseFull
-1613 catalog server not responding = kOCETargetDirectoryInaccessible
-1614 args not formatted correctly on wire = kOCEBogusArgs
-1615 requested dNode does not exist = kOCENoSuchDNode
-1616 could not find any servers that serve requested dNode =
    kOCEDNodeUnavailable
-1617 invalid RecordID (usually name and/or type don't match cid) =
    kOCEBadRecordID
-1618 specified record does not exist = kOCENoSuchRecord
-1619 attribute value that was passed does not exist =
    kOCENoSuchAttributeValue
-1620 specified pseudonym does not exist = kOCENoSuchPseudonym
-1621 self-explanatory = kOCEAttributeValueTooBig
-1622 type already exists in record = kOCETypeExists
-1623 only a warning - buffer not big enough = kOCENoMoreData
-1624 RefNum is not valid = kOCERefNumBad
-1625 problem creating stream = kOCEStreamCreationErr
-1626 the specified catalog does not support operation =
    kOCEOperationNotSupported
-1627 specified Personal Catalog is not open to make the operation =
    kOCEPABNotOpen
-1628 specified CSAM could not be installed = kOCEDSAMInstallErr
-1629 catalog list is full, try removing an entry = kOCEDirListFullErr
-1630 catalog was not found in the list = kOCEDirectoryNotFoundErr
-1631 this call cannot be aborted = kOCEAbortNotSupportedForThisCall
-1632 this call was aborted = kOCEAborted
-1633 LocalIdentity Setup is required = kOCEOCESetupRequired
-1634 CSAM Record not found = kOCEDSAMRecordNotFound
```

-1635 CSAM is not instantiated = kOCEDSAMNotInstantiated
-1636 CSAM record already exists = kOCEDSAMRecordExists
-1637 supplied buffer was too small = kOCELengthError
-1638 Lookup starting record is not within range = kOCERBadStartingRecord
-1639 Lookup starting attribute is not within range =
kOCERBadStartingAttribute
-1640 attribute value could not fit into buffer (even though it was the
only value) = kOCERMoreAttrValue
-1641 kOCENoDupAllowed
-1642 kOCENoSuchAttributeType
-1643 some other error = kOCERMiscError
-1644 no matching icon from GetDirectoryIcon = kOCENoSuchIcon
-1645 RLIs do not match in lookup = kOCERLIsDontMatch
-1646 Serious disk fill corruption problem = kOCEDirectoryCorrupt

AOCE Standard Mail Errors (-1900 to -1928)

-1900 kSMPNotEnoughMemoryForAllRecips
-1901 kSMPCopyInProgress
-1902 kSMPMailerNotInitialized
-1903 kSMPShouldNotAddContent
-1904 kSMPMailboxNotFound
-1905 kSMPNoNextLetter
-1906 kSMPHasOpenAttachments
-1907 kSMPPfinderNotRunning
-1908 kSMPCCommandDisabled
-1909 kSMPNoMailerInWindow
-1910 kSMPNoSuchAddress
-1911 kSMPMailerAlreadyInWindow
-1912 kSMPMailerUneditable
-1913 kSMPNoMatchingBegin
-1914 kSMPCannotSendReceivedLetter
-1915 kSMPIllegalForDraftLetter
-1916 kSMPMailerCannotExpandOrContract
-1917 kSMPMailerAlreadyExpandedOrContracted
-1918 kSMPIllegalComponent
-1919 kSMPMailerAlreadyNotTarget
-1920 kSMPCComponentIsAlreadyTarget
-1921 kSMPRecordDoesNotContainAddress
-1922 kSMPAddressAlreadyInList
-1923 kSMPIllegalSendFormats
-1924 kSMPInvalidAddressString
-1925 kSMPSubjectTooBig
-1926 enclosure count !=1, while sendEnclosure Only=true. =
kSMPPParamCountErr
-1927 Exceeding the image page limit. = kSMPTooManyPages
-1928 kSMPTooManyEnclosures

AOCE Standard Directory Errors (-1950 to -1953)

-1950 kSDPNoSearchText

-1951 kSDPTooManyLoginAttempts
-1952 kSDPNoSelection
-1953 kSDPPersonalDirectoryRepairFailed

AOCE Digital Signature Errors (-1970 to -1983)

-1970 context in use for different type of operation =
kSIGOperationIncompatibleErr
-1971 can't query certificates with this context =
kSIGCertificateQueryDenied
-1972 verification failed = kSIGVerifyFailedErr
-1973 verified OK but credential out of date, either pending or expired =
kSIGInvalidCredentialErr
-1974 the index given is outside range of allowable values = kSIGIndexErr
-1975 problem with signer or signature = kSIGSignerErr
-1976 password incorrect = kSIGPasswordErr
-1977 internal error occurred like a bad digest, context or signature =
kSIGInternalsErr
-1978 for client services (ie servers) to report back - not returned by
the TB = kSIGToolboxNotPresentErr
-1979 context either prepared with VerifyPrepare, SignPrepare or
DigestPrepare already or has been corrupted = kSIGContextPrepareErr
-1980 no digest in signature = kSIGNoDigestErr
-1981 unabl'd to convert attribute to Mac format = kSIGConversionErr
-1982 signer has either expired or is pending and can not sign =
kSIGSignerNotValidErr
-1983 standard file signature not found = kSIGNoSignature

AOCE Directory Templates Errors (-15000 to -15020)

-15000 could not locate aspect by name = kDETInvalidTargetAspectName
-15001 item number target invalid (out of range 1..<number of children>) =
kDETInvalidTargetItemNumber
-15002 target selection relative to non-aspect object which requires an
aspect = kDETInvalidTargetFromNonAspect
-15003 target DSSpec could not be resolved = kDETInvalidTargetDSSpec
-15004 unknown selector type for target specification =
kDETUnknownTargetSelector
-15005 target specification was invalid (for reasons other than those
above) = kDETInvalidTarget
-15006 specified target object was not an aspect = kDETTargetNotAnAspect
-15007 command item number invalid (out of range 1..<number of items in
selection>) = kDETInvalidCommandItemNumber
-15008 unable to retrieve item specification (internal error, possibly out
of memory) = kDETUnableToGetCommandItemSpec
-15009 command item could not be represented in the form requested =
kDETRequestedTypeUnavailable
-15010 could not resolve DSSpec (other than in target; see error above for
targets) = kDETInvalidDSSpec
-15011 property could not be found and/or created =
kDETUnableToAccessProperty

-15012 info-page not open; request requires an open info-page =
kDETInfoPageNotOpen
-15013 no view found with specified property number = kDETNoSuchView
-15014 could not add item to dynamic menu = kDETCouldNotAddMenuItem
-15015 could not remove item from dynamic menu =
kDETCouldNotRemoveMenuItem
-15016 could not find menu item = kDETCouldNotFindMenuItem
-15017 could not find custom view in info-page =
kDETCouldNotFindCustomView
-15018 invalid call-back request function = kDETInvalidReqFunction
-15019 invalid call-back (for reasons other than those above) =
kDETInvalidCallBack
-15020 edit is open on the property being set = kDETPropertyBusy

AOCE Mail Errors (-15040 to -15068)

-15040 this object has already been written to and cannot be written
again, handle non-zero offsets for now = kMailInvalidOrder
-15041 invalid letter sequence refers to an non-existent letter =
kMailInvalidSeqNum
-15042 attribute does not exist in letter header = kMailAttrNotInHdr
-15043 required attribute not written into letter header =
kMailHdrAttrMissing
-15044 incorrect number of bytes has been written after memForm of
PutEnclosure = kMailBadEnclLengthErr
-15045 cannot putAttr for report, putRcptReport for letter =
kMailInvalidRequest
-15046 cannot create new postit with this version =
kMailInvalidPostItVersion
-15047 queueID does not refer to a slot's incoming queue =
kMailNotASlotInQ
-15048 letter is not open, probably not cached in inQ = kMailLtrNotOpen
-15049 trying to create message in inq, with no postIt =
kMailMissingMailCat
-15050 cannot update a mail catentry = kMailCannotWriteMailCat
-15051 cannot add more than kMaxTagsPerLetter tags =
kMailTooManyTagsPerLetter
-15052 MSAM died = kMailGwyDead
-15053 ePPC message was ignored = kMailIgnoredErr
-15054 ePPC message did not complete = kMailLengthErr
-15055 too many requests outstanding = kMailTooManyErr
-15056 no MSAMs found in mailbox! or for command = kMailNoMSAMErr
-15057 kMailCancelled
-15058 kMailSlotSuspended
-15059 kMailMSAMSuspended
-15060 kMailBadSlotInfo
-15061 a mailed structure is malformed = kMailMalformedContent
-15062 no such slot = kMailNoSuchSlot
-15063 bad info there, can't change = kMailBadLtrInfo
-15064 could not set letter info = kMailSetFailed
-15065 MSAM has bad config info = kMailBadConfig
-15066 bad MSAM: not usable=reason unspec = kMailBadMSAM

-15067 cannot lookup adas for server mail slots =
kMailCannotLkupServerSlots
-15068 state specified is not in any of defined = kMailBadState

AOCE Messaging Errors (-15090 to -15149)

-15090 kIPMCantCreateIPMCatEntry
-15091 bad msg hint = kIPMInvalidMsgType
-15092 bad proc hint = kIPMInvalidProcHint
-15093 bad offset for read/write = kIPMInvalidOffset
-15094 kIPMUpdateCatFailed
-15095 kIPMMsgTypeReserved
-15096 kIPMNotInABlock
-15097 kIPMNestedMsgOpened
-15098 kIPMA1HdrCorrupt
-15099 kIPMCorruptDataStructures
-15100 kIPMAbortOfNestedMsg
-15101 kIPMBlockIsNotNestedMsg
-15102 kIPMCacheFillError
-15103 kIPMInvalidSender
-15104 kIPMNoRecipientsYet
-15105 kIPMInvalidFilter
-15106 kIPMAttrNotInHdr
-15107 kIPMBlkNotFound
-15108 Error on stream (should this ever go out?) = kIPMStreamErr
-15109 Port closed (should this ever go out?) = kIPMPortClosed
-15110 kIPMBinBusy
-15111 kIPMCorruptedBin
-15112 kIPMBadQName
-15113 kIPMEndOfBin
-15114 kIPMBinNeedsConversion
-15115 kIPMMgrInternalErr
-15116 kIPMEltBusy
-15117 kIPMEltClosedNotDeleted
-15118 kIPMBadContext
-15119 kIPMContextIsClosing
-15120 kIPMeoQ
-15121 kIPMQOutOfSpace
-15122 kIPMEltNotFound
-15123 kIPMBinOutOfSpace
-15124 kIPMeoCatEntry
-15125 kIPMeoElt
-15126 kIPMQBusy
-15127 kIPMNotSameBin
-15128 kIPMNoMoreServices
-15129 attribute in lookup is too big = kIPMLookupAttrTooBig
-15130 kIPMUnknownUAM
-15131 kIPMUnsupportedLogin
-15132 kIPMLogInUnknown
-15133 kIPMNoMoreFilters
-15134 kIPMCouldNotReadInfoReply
-15135 kIPMInvalidUser

```
-15136  kIPMNoMoreSessions
-15137  kIPMNilUserProc
-15138  kIPMBadCatSize
-15139  kIPMIncompleteMsg
-15140  kIPMNoResponsibleTunnel
-15141  kIPMAccessDenied
-15142  too few reply parameters  = kIPMReplyParamUnderrun
-15143  too many reply parameters = kIPMReplyParamOverrun
-15144  Too few request parameters = kIPMRequestParamUnderrun
-15145  protocol sync. error      = kIPMOutOfSync
-15146  couldn't find any attrs in lookup = kIPMNoAttrsFound
-15147  wrong attr tag in adas lookup  = kIPMWrongAttrTag
-15148  null cid in enumerate         = kIPMNullCID
-15149  invalid mailslot attr value   = kIPMBadMailSlotAttrVal
```

End_Table

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Tech Info Library Article Number:18566



Tech Info Library

MegaPhone Rings For No Reason (9/95)

Revised: 9/13/95
Security: Everyone

MegaPhone Rings For No Reason (9/95)

=====

Article Created: 13 September 1995

TOPIC -----

Occasionally, while using MegaPhone on a Macintosh Performa 6200CD series computer, MegaPhone will make a ring noise when there is no incoming call or while I am already using it to take a call. It will still ring properly when an actual call is being received. What could be happening to cause this?

DISCUSSION -----

This may be a perception issue, but we will give as many possible solutions as we can. Make sure that it is actually MegaPhone which is causing the ring and not your Macintosh computer giving you an error message accompanied by the sound of the phone ringing. Are any of the occasions accompanied by a dialog box? For example, when your computer needs to give you a message, it will also play the alert sound which is selected in the Sound control panel.

Open your Sound control panel and see which alert is selected. If one of the MegaPhone sounds, such as "Bell Telephone", "Electronic Telephone", or "Melodic Ring", is selected, then that is the sound an alert on your Macintosh computer will play. Select another alert sound to avoid confusion. You may also choose a different ring sound for an incoming call for MegaPhone by opening the Telephone Setup control panel and changing the Ring Sound option.

A good way to test for this would be to start your computer and then let it sit idle. Listen to see if it makes the ringing sound. If it does not, it is likely you are just hearing an alert sound while you are working.

If the alert sound selected is not one of the MegaPhone sounds or if MegaPhone is really playing the ring sound when there is no incoming call, open the System Folder and then open the Preferences folder. Open the Cypress folder and then open the MegaPhone folder. Drag the MegaPhone Prefs file to the Trash. Restart your computer and test it again. A new preferences file will be created the next time you use MegaPhone.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18567



Tech Info Library

MAE: asdtool Utility Converts Macintosh File Formats (9/95)

Revised: 9/13/95
Security: Everyone

MAE: asdtool Utility Converts Macintosh File Formats (9/95)

Article Created: 13 September 1995

TOPIC -----

This article provides information on asdtool a new Macintosh Application Environment (MAE) utility.

DISCUSSION -----

Apple is pleased to announce the availability of a new utility for use with Macintosh Application Environment, 'asdtool'.

asdtool converts AppleSingle file format to AppleDouble and vice-versa. It can optionally translate carriage returns to linefeeds and handle double-byte characters, such as Kanji. asdtool determines the file format and, following conversion, adds a suffix of _sgl or _sbl as appropriate. For complete information, please read the man page supplied in the tar distribution.

asdtool is covered under the 'APPLE SOFTWARE LICENSE AGREEMENT' which is supplied with MAE.

asdtool and other utilities are available from 'support.apple.com' using FTP. The asdtool can be found in the directory /pub/mae/utilities. For more information, please see the README contained in the same directory.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18568



Tech Info Library

PhotoFlash 2.0: White Images Instead of Pictures (9/95)

Revised: 9/13/95
Security: Everyone

PhotoFlash 2.0: White Images Instead of Pictures (9/95)

=====

Article Created: 13 September 1995

TOPIC -----

This article contains information on a problem with PhotoFlash 2.0 after QuickTime 2.1 is installed on a Macintosh computer.

DISCUSSION -----

After installing QuickTime 2.1, PhotoFlash 2.0 displays blank white images instead of pictures. To correct this you must reinstall PhotoFlash 2.0, then install the PhotoFlash patcher, then re-start.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18569



Tech Info Library

System 7.5.2: Which Software Updates Do I Need? (6/96)

Revised: 6/3/96
Security: Everyone

System 7.5.2: Which Software Updates Do I Need? (6/96)

Article Created: 13 September 1995
Article Reviewed/Updated: 3 June 1996

TOPIC -----

Are the Apple Menu Options 1.0.2 control panel and Sound Manager 3.1 extension compatible with System 7.5.2? My Macintosh computers running System 7.5.2 have older versions of these system resources, but I am unable to determine if these later software releases are compatible. Will they work?

What other updates do I need?

DISCUSSION -----

These updates will work on all the computers that shipped with System 7.5.2, however, each computer series needs to have different updates installed.

Apple recommends you install the System 7.5 Update 2.0 software which includes each of these updates and will install over the original 1.0 version of the System Enabler 7.0.1 on the Power Macintosh 9500 computers. The System 7.5 Update 2.0 can be obtained from the Apple Order Center.

Some of these updates are integrated into other parts of the system software. Review the "System 7.5 Update 2.0: What's New in This Update" files installed by the update for more information.

The following are included in the System 7.5 Update 2.0:

- Power Macintosh 9500 systems running version 1.0 of System Enabler 701 should use System 7.5 Update 2.0. This CD includes Open Transport 1.1, Apple Menu Options 1.1.2, and many other updates.
- Apple Menu Options 1.1.2 is updated and available in this update.
- Power Macintosh 7200 and 9500 customers no longer need to add Sound Manager

3.1 separately. This extension is built into the update and does not need to be installed separately on these computers.

- All computers with System 7.5.2 and Open Transport should update to Open Transport 1.1 available as part of this update.
- The System 7.5.2 Printing Update version 1.1 addresses a printing problem that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2. Without this fix, your computer may freeze if you attempt to print on a network-based printer that is already busy. The update is comprised of 7.5.2 Printing Fix, LaserWriter 8.3.2, and SerialDMA. All three components are incorporated in this update.
- If your computer is using a built-in Ethernet port to connect to your network, you should install this update. The update incorporates the Built-in Ethernet extension and fixes an issue that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers when transferring large files to AFP servers. The symptom is the transfer fails with a -1072 error and the computer disappears from the network.
- If you use Desktop Printing Software on your Power Macintosh 7200, 7500, 8500, or 9500 series computer, you should use this update.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

03 Jun 1996 - Updated for technical accuracy.

27 May 1996 - Updated for technical accuracy.

20 May 1996 - Added reference to updates in System 7.5 Update 2.0.

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Tech Info Library Article Number:18570



Tech Info Library

Find File: in the Finder Selection Dimmed (9/95)

Revised: 9/13/95
Security: Everyone

Find File: "in the Finder Selection" Dimmed (9/95)

=====

Article Created: 13 September 1995

TOPIC -----

I am using a Macintosh computer with System 7.5. When I use the Find File application, the "in the Finder Selection" item in the "Find Items" pop-up menu is dimmed. I would like to use that option so I can constrain my searches to specific folders or disks. What should I do?

DISCUSSION -----

First, you must have a Finder item selected before that option will appear in the Find File pop-up menu. If you have made sure that either a volume, folder, or floppy disk is selected (dark or highlighted) and you still do not see the option of "in the Finder Selection" then you should make sure the Finder Scripting Extension is loaded in your system software.

If you have moved your Finder Scripting Extension out of your Extensions folder, or disabled it using the Extensions Manager, the "in Finder Selection" option will be dimmed. To resolve this issue:

Step 1

Use the Find File application to find the Finder Scripting Extension.

If the Finder Scripting Extension has been deleted from your computer, you should restore your system software from your System 7.5 installation disks, Performa CD, or Apple Backup disks.

Step 2

Make sure the Finder Scripting Extension is inside your Extensions folder. If it is anywhere else on your hard drive, drag it to your closed System Folder, click OK when asked if you want it placed where it belongs.

Step 3

Restart your Macintosh, hold down the spacebar on the keyboard until the Extensions Manager window opens. If there is not a checkmark to the left of the Finder Scripting Extension, click on the words Finder Scripting Extension to put one there.

Step 4

Close the Extensions Manager by clicking on the box in the upper left corner.

Support Information Services

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Tech Info Library Article Number:18571



Tech Info Library

Performa: Power Pete Out Of Memory (9/95)

Revised: 9/15/95
Security: Everyone

Performa: Power Pete Out Of Memory (9/95)

Article Created: 14 September 1995
Article Review/Updated: 15 September 1995

TOPIC -----

I have a Performa computer that came bundled with the Power Pete program. Sometimes I can successfully launch Power Pete, at other times I get a message telling me I need more memory. Why is this happening, and what can I do to prevent it from happening again?

DISCUSSION -----

The Power Pete program comes preset to request 5113K of Random Access Memory (RAM), an amount that may sometimes exceed the memory your computer has available for programs. If you have less than 5113K of available memory, you cannot launch Power Pete. You can check the available memory in the Largest Unused Block area of the About This Macintosh dialog box under the Apple menu. The amount of memory used by your system software varies depending on a number of factors.

Workarounds

Restart your computer

Simply restarting your computer clears the memory and resets the system software back to its original size. Check the Largest Unused Block area of the About This Macintosh dialog box under the Apple menu to make sure you have at least 5113K available.

Disable extensions

Disabling some of your extensions using the Extensions Manager control panel also reduces the amount of memory used by your system software. Remove the check mark next to any extensions you do not need. Power Pete does not require any extensions to run, but some of your other programs may require certain extensions. Once you have turned off some extensions, you can save the set by

selecting "Save set..." from the pop-up Sets menu in the Extensions Manager control panel. You may then choose the set you want to enable, and restart your computer. Check the About This Macintosh dialog box again to see if you have at least 5113K available.

Restart with all extensions off

Since Power Pete requires no extensions, another option is to restart your computer with all extensions turned off. To do this, restart your computer and hold down the Shift key until you see the message "Extensions off" appear at the "Welcome to Macintosh" screen. Disabling all extensions greatly reduces the memory used by your system software, so you have much more RAM available for programs. Again, check the About This Macintosh dialog box to see if you have at least 5113K available.

Allocate less memory to Power Pete

Another option is to allocate less memory to the Power Pete program. Decrease both the Preferred and Minimum memory requirements to 4500. You may see a message warning you that the program may crash. Keep in mind that not all the game's features may work correctly when configured in this manner. For example, the game may not be able to play all of its sounds. While this is not necessarily the best solution, it will at least allow you to play the game.

Install more RAM

The best solution is to install more memory.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

Article Change History:

15 Sep 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:18573



Tech Info Library

MAE: asdtool For AppleSingle & AppleDouble Conversion (9/95)

Revised: 9/14/95
Security: Everyone

MAE: asdtool For AppleSingle & AppleDouble Conversion (9/95)

=====

Article Created: 14 September 1995

TOPIC -----

I would like to edit a file that was saved in MAE with a UNIX application, however, I am unable to work with the file. I understand that MAE uses AppleSingle format to save files to the UNIX file system. How can I work with these files (like PICT, JPEG, and text) in UNIX without always starting up MAE with the -filedouble option?

DISCUSSION -----

UNIX programs, like vi, do not expect the Macintosh file header, or resource fork, used in the AppleSingle file format. Converting an AppleSingle file to an AppleDouble format file will let UNIX programs read it by separating the resource fork from the data fork.

Apple provides a utility called asdtool to convert AppleSingle format files to AppleDouble format files and vice versa, with the option of translating a carriage return to a linefeed, and handling wide chars like Kanji. This utility is available on:

<ftp.support.apple.com:/pub/mae/utilities/asdtool.tar>

Follow the steps below to use the asdtool utility:

Step 1

Perform the following command to un-tar the utility:

```
tar xovf asdtool.tar
```

Place the appropriate file (asdtool.hp or asdtool.sun) in the /apple/bin directory. (You can place this file anyplace, but /apple/bin/asdtool would be a logical place. Also, you can rename the file to asdtool from asdtool.hp or asdtool.sun.)

Step 2

If you desire, add the man page for asdtool (asdtool.1).

- Solaris:

```
cp ./asdtool.1 /usr/share/man/man1/asdtool.1
catman 1
```

- HP (Hewlett Packard)

```
cp ./asdtool.1 /usr/man/man1/asdtool.1
catman 1
```

Step 3

To convert an AppleSingle format file to an AppleDouble format file, issue the following command:

```
asdtool 'filename'
```

From within UNIX, you will find that there are now two files associated with the original, for example, filename_dbl and %filename_dbl.

NOTE: The original AppleSingle format file will be left unchanged.

Step 4

From a UNIX program, like vi, you can now edit the filename_dbl. (The %filename_dbl file is the resource fork.)

Step 5

To convert an AppleDouble format file to an AppleSingle format file, issue the same command (asdtool 'filename' -- as shown in Step 3). The new file created will be named, filename_sgl.

NOTE: The filename to use for Step 5, should NOT be the AppleDouble file that begins with '%' (percent), because asdtool will improperly create the AppleSingle file from that file.

Step 6

The asdtool can deduce the source file format and convert to the other file format, placing the suffix _sgl or _dbl to distinguish the type.

Step 7

The two options are as follows for asdtool:

-t Specifies translation of carriage returns to linefeeds.

-w Specifies source files use wide characters such as Kanji.

Support Information Services

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Tech Info Library Article Number:18574



Tech Info Library

Guest Entry on PowerTalk Keychain (9/95)

Revised: 9/14/95
Security: Everyone

Guest Entry on PowerTalk Keychain (9/95)

Article Created: 14 September 1995

TOPIC -----

I want to receive mail on the computer acting as my PowerShare server, but it does not appear that I can add a PowerShare service to the server's keychain.

DISCUSSION -----

The PowerTalk keychain on a PowerShare server has a Guest entry, for the PowerShare system, that gets created automatically. The Guest entry gets created if the PowerShare Mail Server or the PowerShare Admin application is launched, and there is no pre-existing keychain entry for that PowerShare system.

To successfully add a keychain entry on the computer acting as the server, follow these steps:

Step 1

Make sure that neither the PowerShare Mail Server, nor the PowerShare Admin application launch at startup (check to make sure these applications are not in the Startup Items folder).

Step 2

Open the PowerTalk keychain and remove the Guest PowerShare entry. This will require that you restart of the computer.

Step 3

After the computer restarts, launch the PowerShare Catalog Server application.

Step 4

Open the PowerTalk keychain and add a PowerShare service for the user name which will receive mail on this computer (that is Administrator). Note: This user must

already exist in the PowerShare catalog.

Step 5

Launch the PowerShare Mail Server application.

Step 6

Launch the PowerShare Admin application and verify that the user's Mailbox is on a valid mail server (that is not set to None).

Support Information Services

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Tech Info Library Article Number:18575



Tech Info Library

Performa 631CD: RAM Configurations (9/95)

Revised: 9/15/95
Security: Everyone

Performa 631CD: RAM Configurations (9/95)

Article Created: 14 September 1995
Article Review/Updated: 15 September 1995

TOPIC -----

I have some questions about expanding the Random Access Memory (RAM) on my Performa 631CD. How many memory expansion slots are on my computer? What is the maximum amount of RAM that I can install? Do I have to install Single Inline Memory Modules (SIMMs) in pairs of the same size?

DISCUSSION -----

There are two SIMM expansion slots on the Performa 631CD. The computer ships with 4 megabytes (MB) of RAM soldered on the logic board and 4MB of RAM installed in the expansion slot. The maximum amount of RAM that can be installed is 52MB.

The inside SIMM expansion slot can accommodate a single-banked SIMM in 1, 4, or 16MB sizes. The outside slot can accept a double-banked SIMM in 1, 2, 4, 8, 16, or 32 MB sizes. SIMMs do not have to be installed in same size pairs.

Article Change History:
15 Sep 1995 - Made minor corrections.

Support Information Services

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Tech Info Library Article Number:18576



Tech Info Library

PowerShare SMTP Gateway: Launch With -1625 Error (9/95)

Revised: 9/14/95
Security: Everyone

PowerShare SMTP Gateway: Launch With -1625 Error (9/95)

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Article Created: 14 September 1995

TOPIC -----

When attempting to launch an SMTP Gateway on a PowerShare server, we encounter an error, -1625. How can this be resolved?

DISCUSSION -----

The AOCE (Apple Open Collaborative Environment) error being reported, -1625 (kOCEStreamCreationErr), indicates the SMTP Gateway was unable to open a communication stream with the Catalog server. To resolve, first make sure the Catalog server is running and processing requests through PowerShare Admin. Restart the Catalog Server if necessary.

If the Catalog server exhibits no problems, check for the existence of a "Guest" entry in the PowerTalk keychain on the computer with the SMTP server. If such an entry exists it would prevent the creation of an "authenticated" communication session with the PowerShare Catalog Server even if it is on the same computer.

The occurrence of a "Guest" entry is not unusual because it gets created if the PowerShare Mail Server or the PowerShare Admin application is launched on a computer with no pre-existing keychain entry for its associated PowerShare system.

The steps to remove "Guest" from the keychain and to prevent its recurrence follow:

Step 1

Make sure that neither the PowerShare Mail Server, nor the PowerShare Admin application launch at startup (check to make sure these applications are not in the Startup Items folder).

Step 2

Open the PowerTalk keychain and remove the "Guest" PowerShare entry. This will require a restart of the computer.

Step 3

After the computer restarts, launch the PowerShare Catalog Server application.

Step 4

Open the PowerTalk keychain and add a PowerShare service for a valid user name (that is "Administrator"). Note: This user must already exist in the PowerShare catalog.

If a valid user entry exists in the PowerTalk keychain and the -1625 error still occurs, there is a problem with the PowerShare permissions for that user. In such a case either that user would need to be granted wider permissions or the keychain entry would need to be replaced with a user already possessing wider permissions.

Support Information Services

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Tech Info Library Article Number:18577



Tech Info Library

DOS Compatibility Card: Problem W/ Reflections for Windows 9/95

Revised: 9/14/95
Security: Everyone

DOS Compatibility Card: Problem W/ Reflections for Windows 9/95

Article Created: 14 September 1995

TOPIC-----

I am using Reflections with a DOS Compatibility Card, and sometimes when I click outside the Reflections window the pointer begins to jump around the screen and randomly click. What can I do to correct this problem?

DISCUSSION-----

After some discussion with Walker Richer & Quinn, Inc. who produces the software, the following situations were discovered.

Reflections 4.21, DOS Compatibility Software 1.0.3 and Windows 3.11:

The mouse begins to jump around and click. The only way to resolve the problem is to use keyboard equivalents to save work and exit Windows. When Windows is restarted, the mouse returns to normal.

Reflections 4.21, DOS Compatibility Software 1.0.7 and Windows 3.11:

Same as above.

Reflections 5.0, DOS Compatibility Software 1.0.7 and Windows 3.11:

The mouse begins to jump around and click, but returns to normal if left alone for a few seconds.

Reflections 5.0, DOS Compatibility Software 1.0.7 and Windows 95:

No problems.

Based on these findings, you should upgrade to at least DOS Compatibility Software version 1.0.7 and Reflections for Windows 5.0. Upgrading to Windows 95 is also recommended.

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Support Information Services

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Tech Info Library Article Number:18578



Tech Info Library

Pwr Mac DOS Compat Card: CONFIG.SYS & AUTOEXEC.BAT Files

Revised: 5/23/96
Security: Everyone

Pwr Mac DOS Compat Card: CONFIG.SYS & AUTOEXEC.BAT Files (6/96)

Article Created: 14 September 1995
Article Reviewed/Updated: 23 May 1996

TOPIC -----

This document lists the contents of CONFIG.SYS and AUTOEXEC.BAT for the Power Macintosh 6100 DOS Compatible (and DOS Compatibility Card for the Power Macintosh) as they appear from the factory.

DISCUSSION -----

If you have lost or changed your CONFIG.SYS or AUTOEXEC.BAT files and want to restore them to their original conditions, edit them to match the following information.

NOTE:

You can also mount your MS-DOS/Windows container and open these files from within the MacOS. However the application you use to edit these files must be able to save hard carriage returns as carriage return and line feed. The MacOS normally uses ONLY carriage returns, but MS-DOS requires both carriage returns and line feeds.

CONFIG.SYS

```
DEVICE=C:\DOS\SETVER.EXE
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
```

```
REM If you are using PC Setup 1.0.7, the lines are:
REM DEVICE=C:\DOS\EMM386.EXE NOEMS X=C800-CFFF RAM=D000-EFFF
REM or
REM DEVICE=C:\DOS\EMM386.EXE X=C800-CFFF RAM=D000-EFFF
```

```
REM For PC Setup 1.5, the command lines are:
REM DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
REM or
```

```
REM DEVICE=C:\DOS\EMM386.EXE I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF

REM  No EMS memory configuration
DEVICE=C:\DOS\EMM386.EXE NOEMS I=CA00-CBFF X=CC00-CFFF RAM=D000-EFFF
```

```
DOS=HIGH,UMB
FILES=40
STACKS=9,256
LASTDRIVE=M
```

```
DEVICE=C:\Apple\CDROM.SYS /D:CDDVR
```

```
AUTOEXEC.BAT
```

```
-----
```

```
@ECHO OFF
C:\DOS\SMARTDRV.EXE /X
PROMPT $p$g
PATH C:\WINDOWS;C:\DOS
SET TEMP=C:\DOS
SET SOUND=C:\SB16
SET BLASTER=A220 I5 D1 H1 T6
LH C:\SB16\MIXERSET /P /Q
```

```
LH C:\Apple\ApplePC
LH C:\Apple\MacShare
LH C:\DOS\MSCDEX /D:CDDVR /L:E
LH C:\Apple\DOSClip
set tmp=C:\Temp
```

```
rem WIN
```

```
Article Change History:
23 May 1996 - Added PC Setup 1.0.7 CONFIG.SYS information.
```

```
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```

```
Tech Info Library Article Number:18579
```



Tech Info Library

Quadra 610 DOS: CONFIG.SYS & AUTOEXEC.BAT Files (6/96)

Revised: 6/4/96
Security: Everyone

Quadra 610 DOS: CONFIG.SYS & AUTOEXEC.BAT Files (6/96)

Article Created: 14 September 1995
Article Reviewed/Updated: 4 June 1996

TOPIC -----

This document lists the contents of CONFIG.SYS and AUTOEXEC.BAT for the Quadra 610 DOS Compatible computer (and DOS Compatibility Card for Centris and Quadra 610) as they appear from the factory. As of 4 June 1996, the only version of PC Setup Apple Computer, Inc. fully supports with the Macintosh Quadra 610 DOS Compatibility Card is version 1.0.2. Later versions of this software may work properly, however Apple has not fully tested them with the Quadra 610 DOS Compatibility Card.

DISCUSSION -----

If you have lost or changed your CONFIG.SYS or AUTOEXEC.BAT files and want to restore them to their original conditions, edit them to match the following information.

NOTE:

You can also mount your MS-DOS/Windows container and open these files from within the Mac OS. However the application you use to edit these files must be able to save hard carriage returns as carriage return and line feed. The Mac OS normally uses ONLY carriage returns, but MS-DOS requires both carriage returns and line feeds.

CONFIG.SYS

DEVICE=C:\DOS\SETVER.EXE
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
DEVICE=C:\DOS\EMM386.EXE RAM=D000-EFFF FRAME=D000
DOS=HIGH,UMB
FILES=30
LASTDRIVE=M
DEVICE=C:\APPLE\CDROM.SYS /D:CDDVR

AUTOEXEC.BAT

C:\DOS\SMARTDRV.EXE /X

@ECHO OFF

PROMPT \$p\$g

PATH C:\DOS

SET TEMP=C:\DOS

LH C:\APPLE\MACSHARE

LH C:\DOS\MSCDEX /D:CDDRV /L:E

LH C:\APPLE\DOSCLIP

SET TMP=C:\TEMP

Article Change History:

04 Jun 1996 - Removed the PC Setup 1.0.7 info, added version information.

23 May 1996 - Added new PC Setup 1.0.7 CONFIG.SYS information.

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Tech Info Library Article Number:18580



Tech Info Library

Apple Printers: LaserWriter Support Under Windows 95 (12/95)

Revised: 12/5/95
Security: Everyone

Apple Printers: LaserWriter Support Under Windows 95 (12/95)

Article Created: 14 September 1995
Article Reviewed/Updated: 5 December 1995

TOPIC -----

What Apple LaserWriters are supported under Microsoft Windows 95?

DISCUSSION -----

Microsoft Windows 95 ships with PostScript PPD files for most Apple LaserWriters including:

Apple LaserWriter
Apple LaserWriter Personal NT
Apple LaserWriter II NTX
Apple LaserWriter IIx
Apple LaserWriter IIfx
Apple LaserWriter IIg
Apple LaserWriter Plus
Apple LaserWriter Pro 600
Apple LaserWriter Pro 630
Apple LaserWriter Pro 810
Apple LaserWriter Select 360
Apple Personal LaserWriter NTR

These PPD files were created and are supported by Microsoft.

Apple has released, to online services, Windows 95 PPD files for the following LaserWriter printers:

Color LaserWriter 12/600 PS
LaserWriter 16/600 PS

Apple has not created a PPD for the LaserWriter Select 310. However, other PPD files could easily be substituted.

These articles can help you locate the PPD software for the Color LaserWriter 12/600 PS and LaserWriter 16/600 PS mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

05 Dec 1995 - Included Apple released PPD files and where to get them.

25 Sep 1995 - Added information on Microsoft support.

Support Information Services

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Tech Info Library Article Number:18581



Tech Info Library

Power Macintosh 5200/5300:Multimedia Learning Tools Bundle(9/95)

Revised: 5/7/96
Security: Everyone

Power Macintosh 5200/5300:Multimedia Learning Tools Bundle(9/95)

=====

Article Created: 14 September 1995

TOPIC -----

This article describes the Multimedia Learning Tools Bundle for the Apple Education Series. The Apple Education Series (AES) is a series of products specifically intended for the effective use of technology in education. This bundle is only available in the Apple Education market, not in any other reseller channels.

DISCUSSION -----

Overview

=====

The Apple Education Series (AES) Multimedia Learning Tools bundle is the latest in the AES series for K12 institutions. Multimedia Learning Tools is intended to enable students and teachers to easily create multimedia projects using text, video, pictures, animation, and sounds. Bundled software includes authoring tools, design tools, and content ready for students and teachers to paste right into their projects.

Features

=====

High quality software

Saves time in reviewing software for purchase because Apple reviewed the products for you.

Multimedia resources

Includes a variety of text, photographs, clip art, movies, backgrounds, charts, graphs, music, sound effects, and historical information which students can paste into their projects.

Multimedia projects

Developed by teachers, these projects walk teachers and students through the creation of exciting multimedia projects while focusing on interdisciplinary and collaborative learning techniques.

Textbooks

Provide step-by-step instructions for beginning authoring, and information on what teachers are doing with multimedia.

Bundled Items

=====
The following software is bundled with the AES Multimedia Learning Tools bundle in the accessory kit:

Apple Software

Apple Multimedia Learning Tools Master CD includes the following Apple software:

- Apple Font Pack**
- Hypercard 2.3.3 w/ AddMotion & Multimedia Utilities (Intellimation version)**
- Virtus VR with Archaeology Scenes
- ColorIt!
- RAM Doubler
- QuickTime Extras (Musical Instruments and Movie Player)**

Third Party Software (on CD unless noted otherwise)

-
- HyperStudio CD (3.0.62f w/ the HyperStudio Media Library) by Roger Wagner Publishing, Inc.
 - Kid Pix Studio CD (1.0.1) by Broderbund Software, Inc.
 - Avid Videoshop CD (3.01) by Avid Technology, Inc.
 - ClarisImpact CD (1.0 v4) by Claris Corporation
 - ColorIt! by MicroFrontier**
 - Virtus VR with Archaeology Scenes by Virtus Corporation**
 - Microsoft Bookshelf CD (1.0) by Microsoft Corporation
 - Time Almanac 1995 CD (1.0) by Compact Publishing, Inc.
 - MacGallery CD (1.1) by DreamMaker Software
 - Famous Faces CD (6-18-93) by Jasmine Multimedia Publishing
 - MediaClips 1 CD (1.0): Animals/Rainforest/Deep Voyage by SoftKey Multimedia Inc.
 - MediaClips 2 CD (1.0): American View/Space Odyssey/World View by SoftKey Multimedia Inc.
 - MultiWare Multi-Media Collection by BeachWare
 - RAM Doubler by Connectix**

**NOTE: These items are included on the Apple Multimedia Learning Tools Master CD.

Other Bundled Items

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Manuals

- Teacher's Manual, includes: Product Overview, Introduction to Multimedia, 12 Multimedia Projects
- Avid VideoShop user manual
- Kid Pix Studio user manual
- Virtus VR. user manual
- HyperStudio manual
- HyperCard Reference Guide
- ClarisImpact Reference Guide
- ClarisImpact Quick Start Card
- ClarisImpact Getting Started Guide

Textbooks

- Multimedia Flying Solo by Thomson Learning
- Multimedia and Learning by National School Board Assoc.

Other

- Kodak Single-Use Camera and Photo CD Mailer
- Multimedia Learning Tools Poster

Usage Requirements

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The Multimedia Learning Tools bundle includes the required hardware and software to successfully use the bundle. It is only supported on the Power Macintosh 5200 and 5300 systems with which it ships.

Configurations

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The bundle is available with either of the two following Power Macintosh systems:

- Power Macintosh 5200/75 LC CD 8 MB RAM, 500 MB hard drive*
- Power Macintosh 5300/100 LC CD AV 16 MB RAM, 1 GB hard drive*

* For technical information about the Power Macintosh 5200 computer, use the search string: power macintosh 5200 and specifications to find the article "Power Macintosh 5200/75 LC: Technical Specifications". Use the search string: power macintosh 5300 and specifications to find the article "Power Macintosh 5300/100 LC: Technical Specifications".

Support Information Services

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Tech Info Library Article Number:18584



Tech Info Library

Apple Computer, Inc.Trademark/Service mark List 2 of 2 (10/96)

Revised: 10/17/96
Security: Everyone

Apple Computer, Inc.Trademark/Service mark List 2 of 2 (10/96)

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This list includes updates as of September 30, 1996.

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Tech Info Library Article Number:18585



Tech Info Library

Power Macintosh 9500: CD 2.0 Contents (4/97)

Revised: 4/29/97
Security: Everyone

Power Macintosh 9500: CD 2.0 Contents (4/97)

Article Created: 14 September 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

From August 8 to November 15, 1995, customers who purchased either a Power Macintosh 9500/120 or a 9500/132 and received CD Version 1.0 are eligible to contact the Apple Order Center to order the most recent version of the Power Macintosh 9500 CD—CD Version 2.0.

DISCUSSION -----

The new CD offers over two dozen new and updated files (see chart, below) and provides fixes to some known problems. Among other things, the CD provides owners of the Power Macintosh 9500 with software they can use with the GeoPort Telecom Adapter: Apple Telecom 2.1 and Megaphone 1.0.2. It also provides drivers for the LaserWriter 300 and StyleWriter1200. Of particular interest to customers on networks, the new CD provides Open Transport (OT) 1.0.6, a new version of Open Transport that will fix a number of problems reported with OT 1.0, the version that shipped on the original CD.

The following chart offers a comparison between the software included on the CD initially distributed with the Power Macintosh 9500 and the CD available at the Apple Order Center:

Begin_Table

COMPONENT -----	CD 1.0 -----	CD 2.0 -----	COMMENTS -----
System software components			
Finder	7.5.2	7.5.3	New version.
System Enabler 701	1.0	1.1	New version offers improved PCI card compatibility.
AppleCD Audio Player	2.0	2.1	New version.
Apple Menu Options	1.0.1	1.0.2	New version.

Extensions Manager	3.0	3.0.2	New version.
Memory	7.5.3	7.5.4	New version.
Monitors	7.5.2	7.5.3	New version.
Mouse	7.3	7.3.1	New version.
PC Exchange	2.0.4	2.0.5	New version.
EM Extension	3.0	3.0.2	New version.
Open Transport	1.0	1.0.6	New version offers improved stability & compatibility.
Apple CD-ROM	5.0.4	5.1.1	New version.
Apple Guide	1.2.5	1.2.7	New version.
9500 Guide Additions	n/a	1.0	Replaces 9500 Guide Additions on 9500.
EtherNet (Built-In)	1.0	1.0.1	New version.
Serial (Built-In)	1.0	1.0.2	New version.
StyleWriter I/II	2.0	n/a	SW 1200 2.1 supports SWI/II
Color SW 2400	1.6.1	2.1	New version.
LaserWriter 300	n/a	1.2	Added to 9500.
StyleWriter 1200	n/a	2.1	Added to 9500.
Extras, utilities, read me			
PM9500 ReadMe	n/a	new	Replaces 9500 ReadMe on 9500.
Drive Setup	1.0	1.0.2	New version.
Apple Telecom 2.1	n/a	2.1	Added to 9500.
Megaphone	n/a	1.0.2	Added to 9500.
Unique to PM9500			
Graphics Accelerator	1.0	1.0	For ATI card shipping with 9500/120.

End_Table

Customers will receive the following items with their order:

- Power Macintosh CD v2.0
- Software License Agreement

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

28 Apr 1997 - Removed out dated on line references.
27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:18586



Tech Info Library

QuickDraw GX 1.1.3: ReadMe File (4/97)

Revised: 4/29/97
Security: Everyone

QuickDraw GX 1.1.3: ReadMe File (4/97)

Article Created: 14 September 1995
Article Reveiwed/Updated: 29 April 1997

TOPIC -----

This article contains the Read Me file included with QuickDraw GX 1.1.3 posted to online services.

DISCUSSION -----

QuickDraw GX 1.1.3--Read Me

What Changed in QuickDraw GX 1.1.3

QuickDraw GX 1.1.3 fixes several problems found since the release of the previous version.

Color StyleWriter Pro GX

This version of QuickDraw GX is fully compatible with the Color StyleWriter Pro GX driver. This driver is available separately on on-line services and Apple Computer's FTP and World Wide Web sites.

CompuServe: GO APLSUP
America OnLine: keyword ftp, then connect to ftp.info.apple.com
FTP: ftp.info.apple.com
Web: http://www.info.apple.com

Moving Desktop Printers

Desktop printers now stay in the correct location after rebooting.

Adobe Type Manager 3.8.3

ATM 3.8.3 is included with QuickDraw GX 1.1.3. This new version is fully

compatible with OpenDoc.

What Changed in QuickDraw GX 1.1.2

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Installation Over Previous Versions

There is no longer a need to delete the Finder Preferences file when installing over a previous version of QuickDraw GX.

Finder Out of Memory Alerts

Some users were encountering multiple Finder out of memory alerts while printing with QuickDraw GX 1.1.1. This problem is fixed in QuickDraw GX 1.1.2.

Crash When Canceling Printing From Power Macintoshes to Networked PostScript Printers

Some users were encountering problems when canceling a print job to a networked PostScript printer. This problem is fixed in QuickDraw GX 1.1.2.

Unable to Print to Tektronix and Hewlett-Packard PostScript Printers

Some users were unable to print to Tektronix and Hewlett-Packard PostScript printers with QuickDraw GX 1.1.1. This problem is fixed in QuickDraw GX 1.1.2.

What Changed in QuickDraw GX 1.1.1

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QuickDraw GX 1.1.1 provided performance improvements, a user interface change, and new features.

Performance Improvements

- no "lock out" when downloading fonts to PostScript printers
- font downloading progress shows in the desktop printer window
- prints large character sets, such as Japanese, on printers that do not have these fonts built in
- prints large character sets faster than GX 1.0.2 or the non-GX LaserWriter 8.2 printer driver
- printing dialogs for non-QuickDraw GX applications display more quickly

User Interface Change

When a desktop printer queue is empty (i.e., after the last job has printed) the page icon goes away rather than turning into the dog-eared page icon.

New Features

- Manual Feed Alerts

To turn off the alerts for manual feed printing on PostScript printers, open the Printing menu and choose Disable Manual Feed Alerts.

- LaserWriter GX Features

In the PostScript printing dialog box for non-QuickDraw GX applications, two new menus allow you to choose paper types. Use the "First Page On" menu to choose a paper type for the first page. Use the "Remaining Pages On" menu to choose a paper type for the rest of the document.

- N-Up Printing Options

The N-Up Printing extension (in your Extensions folder) lets you print up to 16 pages on a single sheet of paper. You can also put an optional border around each page drawn on a sheet.

- To set pages-per-sheet and border defaults for a desktop printer, click the printer icon to select it then choose N-Up Printing Options from the Printing menu.

- To select pages-per-sheet and border options when you print a document created in a QuickDraw GX-aware application, click the N-Up printing extension icon in the Print dialog box.

- To select pages-per-sheet and border options for a document created in an application that does not support QuickDraw GX, choose Page Setup in the File menu.

- PostScript File Options

EPSExtension (in your Extensions folder) lets you configure the PostScript file that is created whenever you print using the LaserWriter GX printer driver.

- You can use the saved file as Encapsulated PostScript for importing graphics into applications that do not support QuickDraw GX, such as Aldus PageMaker, QuarkXPress, and Adobe Illustrator.

- To set EPS options, choose PostScript File Options from the Printing menu.

- EPSExtension is not installed by Easy Install. To get it, you must open the QuickDraw GX Installer and choose Custom Install from pop-up menu. Click the arrow next to QuickDraw GX Utilities to see the list of utilities, and click the checkbox next to EPSExtension to select it. Then click the Install button.

- Paper Types

QuickDraw GX 1.1.1 include 3 new paper types for use in configuring the paper tray selections for desktop printers: Letterhead, Stationery, and 3-Hole Punch.

- The new paper types are installed by Easy Install For more information on editing the new papers types or creating your own paper type, you must install the PaperType Editor.

- The PaperType Editor is not installed by Easy Install. To install it, open the QuickDraw GX Installer and choose Custom Install from pop-up menu. Click the arrow next to QuickDraw GX Utilities to see the list of utilities, and click the checkbox next to PaperType Editor to select it. Then click the Install button.

Tips

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Envelope Paper Types and the LaserWriter GX Driver

The LaserWriter GX printer driver handles three types of No. 10 envelopes. However, each of the three types is designed for a different type of LaserWriter printer. Your choice of envelope should be based on how your printer feeds envelopes from the paper input tray:

- "Envelope - Center Fed" is for printers that feed the envelope in the center of the paper input tray.
- "Envelope - Edge Fed" is for printers that feed the envelope on the left edge of the paper input tray.
- "No. 10 Envelope" is for certain new printers (e.g., the LaserWriter 16/1600PS) that use a different method of determining paper size.

Restoring Type 1 Fonts to Their Original State

If you remove QuickDraw GX from your system, you need to restore your Type 1 fonts. To restore Type 1 fonts, follow these steps:

1. Open the System Folder.
2. Open the Fonts folder.
3. Drag any suitcases that have been enabled to the Trash.
4. Open the •Archived Type 1 Fonts• folder.
5. Move the contents of the •Archived Type 1 Fonts• folder to the Fonts folder.
6. Drag the •Archived Type 1 Fonts• folder to the Trash.

Tekton Plus RegularSC Prints as Courier From Some Applications

In application programs which do not take advantage of QuickDraw GX, Tekton Plus appears as two fonts: Tekton Plus Regular and Tekton Plus RegularSC. Applications such as Adobe Illustrator, QuarkXPress, and Aldus PageMaker print characters from Tekton Plus RegularSC as Courier on PostScript printers.

Troubleshooting

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QuickDraw GX and Memory

- On a Macintosh with 8 MB of available memory with Macintosh system software version 7.5, QuickDraw GX, and PowerTalk, you can enable only a limited number of printing extensions and desktop printers. More than 7 of each at the same time may cause a low-memory alert to appear. If you want to have more than 7 desktop printers, removing a printing extension will help alleviate memory difficulties and vice-versa. If a low-memory alert does appear, try deactivating printing extensions or removing desktop printers. For more information about desktop printers and printing extensions, see the Macintosh System 7.5 Upgrade Guide.

QuickDraw GX and Application Programs

- If possible, do not use the QuickDraw GX Helper (to turn off desktop printing) with WordPerfect versions 3.0 and earlier. In WordPerfect, when you turn desktop printing off, the third item on the Apple Menu (which corresponds to the first alphabetic item in the Apple Items folder) opens. WordPerfect versions 3.1 and later are compatible with QuickDraw GX.

- In PageMaker version 5.0, documents containing PICTs will print without the PICTs and an extra blank page may be printed at the end of some documents. To print correctly, hold down the Option key when you choose Print from the File menu.

- To print on a PostScript printer using Insignia Solutions' SoftPC and SoftWindows versions earlier than 1.0.2a, you must turn off desktop printing or use the Epson LQ-2500 output option. To turn off desktop printing, use the QuickDraw GX Helper (one of the QuickDraw GX Utilities). To install the QuickDraw GX Utilities, see the instructions in Chapter 3 ("Installing QuickDraw GX") of the Macintosh System 7.5 Upgrade Guide. SoftWindows versions 1.0.2a and later are compatible with QuickDraw GX.

- Adobe Acrobat Reader versions earlier than 2.0.1 and all versions of Adobe Acrobat Exchange are incompatible with QuickDraw GX 1.1.3. Please contact Adobe Systems for upgrade information.

- The substitution fonts included with Adobe Illustrator 5.5 and SuperATM are not compatible with QuickDraw GX 1.1.3. If you install QuickDraw GX 1.1.3 on a Macintosh where these substitution fonts have already been installed, you will see a dialog box which says "The substitution fonts necessary for Acrobat and SuperATM are missing. Please re-install either software package." QuickDraw GX-compatible versions of these fonts are available as part of the Adobe Acrobat Reader 2.0.1 package. Please contact Adobe Systems for more information.

- You should print documents that use the Al-Nashir Al-Sahafi font (Arabic Design Studio) on raster (non-PostScript) printers. If you try to print an Al-Nashir Al-Sahafi document on a PostScript printers, no document will print.

Installing QuickDraw GX with the Power Macintosh Upgrade Card

When you install QuickDraw GX on a Macintosh with the Power Macintosh Upgrade Card, make sure that the upgrade card is enabled before installing QuickDraw GX.

Manual Feed and the LaserWriter IISC GX driver

When you print a manual feed job to a printer using the LaserWriter IISC GX driver, wait for the manual feed alert to appear before inserting the next page. If you insert the page before the alert appears, your printer will print the first page twice and then stop printing. Opening and closing the cover on your printer will clear it.

QuickDraw GX with the Vector Imaging System on the Power Macintosh

There is a problem with the Vector Imaging System and Power Macintosh. If you

have problems plotting, turn off Modern Memory in the Memory control panel.

8/23/95

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Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18587



Tech Info Library

Color StyleWriter Pro: GX Driver ReadMe File (9/95)

Revised: 9/14/95
Security: Everyone

Color StyleWriter Pro: GX Driver ReadMe File (9/95)

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Article Created: 14 September 1995

TOPIC -----

This article contains the Read Me file included with the QuickDraw GX software upgrade for the Color StyleWriter Pro printer available from online services.

DISCUSSION -----

QuickDraw GX Upgrade
for the Color StyleWriter Pro printer

This upgrade gives you the ability to use the Color StyleWriter Pro printer with QuickDraw GX.

The instructions in this document tell you how to install and use the software.

Installation

=====

IMPORTANT: To use this upgrade with your Color StyleWriter Pro printer you must have QuickDraw GX software version 1.1.3 or later installed on your system. QuickDraw GX version software is also available online.

This upgrade includes two system files:

- Color SW Pro GX
- Apple Color SW Pro CMM

Step 1

Drag these two files to the Extensions folder inside your System Folder.

Step 2

Restart your computer.

Step 3

Select the Chooser from the Apple (🍏) menu.

Step 4

Click the Color SW Pro GX icon in the Chooser.

Step 5

Make choices in the Chooser, depending on whether the printer is connected directly to your computer:

- If the printer is connected directly to your computer, choose Serial from the "Connect via" pop-up menu, then click the Modem Port or Printer Port icon to indicate which port the printer cable is plugged into.
- If the printer is connected to another computer as a shared printer, choose Servers from the "Connect via" pop-up menu. If your network has zones, click the AppleTalk zone containing the printer and then click the name of the printer you want to use.

Step 6

Click the Create button. A printer icon appears on your desktop.

Step 7

Close the Chooser by clicking its close box. If you close the Chooser without creating at least one desktop printer, a message appears. If you select a printer but don't click Create, the Chooser ignores the selection.

Using the Color StyleWriter Pro with QuickDraw GX

=====

For the most part you use the QuickDraw GX Color StyleWriter Pro software just as you would the current non-GX version of the software. You have all the same options plus a few extras. When you use GX-savvy programs, the appearance of the Print and Page Setup dialog boxes changes, as described below.

Page Setup dialog box. The Page Setup dialog box comes in a basic version and an expanded version. Though it has a different appearance in GX-savvy programs, all the settings in the old Page Setup dialog box are also in the GX-savvy Page Setup dialog box, and it works the same way.

Print dialog box. GX-savvy programs have a Print dialog box with a very different look. The Print dialog box comes in a basic version and an expanded version. You can switch between them by clicking the More Choices and Fewer Choices buttons. The expanded version is broken up into panels, each of which controls a different set of print functions. You can switch between panels by clicking the icons on the left side of the expanded dialog box.

Where to find familiar Color StyleWriter Pro features

=====

Most features in the Print dialog box from your current Color StyleWriter Pro software are also present in the GX-savvy versions of that dialog box, though they might not be in the same places. Here's where to find them:

- Most of the settings from the old Print dialog box are in the General panel of the expanded GX-savvy Print dialog box. The Paper Type and Image options are in the Quality panel.
- Most of the options from the old Color Options dialog box are in the Quality panel of the expanded GX-savvy Print dialog box.
- All the options in the old Utilities dialog box are in the Utilities panel of the expanded GX-savvy Print dialog box.

New features

You can use the panels of this upgrade to take advantage of standard QuickDraw GX features with the Color StyleWriter Pro.

- You can use desktop printer icons to monitor and manipulate your print requests and to print a document from the Finder.
- You can print a number of minipages on each sheet of paper. Use the N-up panel of the expanded Print dialog box.
- You can schedule when documents should print. Use the Print panel of the expanded Print dialog box.

Turning off QuickDraw GX for programs that aren't GX-savvy

If you experience incompatibilities while using the QuickDraw GX software with a specific program that isn't GX-savvy, you can temporarily print with GX off. In order to do that you need two things:

- The file QuickDraw GX Helper:
This can be installed using the QuickDraw GX installer. Select Custom Install, then select QuickDraw GX Utilities and then select QuickDraw GX Helper.
- The software from the Color SW Pro disk set.
Select Easy Install in the Color SW Pro installer

Once both the QuickDraw GX Helper and the Color SW Pro SW are installed, follow these steps to turn QuickDraw GX off temporarily:

Step 1

Open the non-GX-savvy program that's giving you problems.

Step 2

Choose Turn Desktop Printing Off from the Apple (🍏) menu. A message appears asking if it's OK to use the "Color SW Pro" software. Click OK. (If the message doesn't mention the Color SW Pro , you may need to reinstall your printer software from the disks that came with your printer.)

Step 3

Click OK. Now your Color StyleWriter Pro will use the regular QuickDraw printing software for this program. If you want to go back to using the QuickDraw GX printing software, repeat this process, but in step 2 choose Turn Desktop Printing On.

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Support Information Services

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Tech Info Library Article Number:18588



Tech Info Library

Power Mac 7200, 7500, 8500, 9500: Reset/Interrupt Switch (9/95)

Revised: 9/15/95
Security: Everyone

Power Mac 7200, 7500, 8500, 9500: Reset/Interrupt Switch (9/95)

=====

Article Created: 15 September 1995

TOPIC -----

My Power Macintosh 7200 has locked up (the screen is frozen), and it appears that the only way to reset the computer is to disconnect the power cable from the back of the computer. Do I have any alternatives?

DISCUSSION -----

There are several methods for interrupting or resetting your computer.

Interrupting your computer
=====

Interrupts are used by Macintosh software programmers when writing applications and debugging them. An interrupt produces a blank dialog box on the Macintosh screen. Programmers can then type codes to obtain the response or information they require from the Macintosh.

You can interrupt your computer by pressing the keyboard shortcut Command-Power.

Resetting your computer
=====

Resetting the computer is the same as disconnecting and reconnecting the power from the back of the computer.

You can reset your computer in one of two ways:

Keyboard shortcut

Pressing the keyboard shortcut Command-Control-Power restarts your computer.

Power button

Pressing the Power button on the front panel of your computer shuts your computer down.

If you press the Power button during startup, before all the extensions and the Finder load, your computer will shut down immediately. If you press the Power button after the desktop appears, the computer shuts down by first closing any open applications and then performing a shutdown. This is the same as choosing "Shutdown" from the Special menu.

When these steps do not work

=====

If these steps fail, it may be necessary to disconnect the power from your Macintosh. You can turn off the power to your computer at your surge suppressor, power strip, or by removing the power cable from the back of your computer or at the outlet.

Support Information Services

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Tech Info Library Article Number:18589



Tech Info Library

Power Macintosh: PowerPC 604 Rendering Performance (9/95)

Revised: 9/15/95
Security: Everyone

Power Macintosh: PowerPC 604 Rendering Performance (9/95)

Article Created: 15 September 1995

TOPIC -----

I hear that some high end rendering applications run slowly on the new PowerPC 604-based Power Macintosh computers. Is this a bug?

DISCUSSION -----

No. The PowerPC 604 RISC microprocessor and the new Power Macintosh computers with the Peripheral Component Interconnect (PCI) bus are, on the whole, significantly faster than the PowerPC 601 and original Power Macintosh computers. However, some types of operations – intensive rendering is an example – stress memory access times rather than microprocessor or bus speed.

The memory speed the new Power Macintosh computers is roughly the same as the original Power Macintosh computers. The decision to use similar speed memory was made to ensure easy access to DRAM components. The use of DIMMs and interleaving allows the new memory architecture to be roughly 20-30% faster than the original Power Macintosh computers. In rendering applications that saturate the memory bandwidth, you see a performance increase roughly equivalent to the increase in memory speed. At bottom, even though the PowerPC 604 can render up to two times faster than a PowerPC 601, memory speed poses a bottleneck.

The new Power Macintosh computers based on the PowerPC 604 RISC microprocessor and PCI bus are significantly faster than the original Power Macintosh computers when performing most tasks. When performing other tasks in rendering applications, such as modeling, screen redraw, and animation playback, the Power Macintosh 8500 and 9500 can be as much as two times faster than the Power Macintosh 8100.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18590



Tech Info Library

PowerBook 200 Series: No Power On From External Keyboard (9/95)

Revised: 9/15/95
Security: Everyone

PowerBook 200 Series: No Power On From External Keyboard (9/95)

=====

Article Created: 15 September 1995

TOPIC -----

When inserted in a Duo Dock, my PowerBook Duo 270c does not turn on from the Power key on an external keyboard. I have tried several Duo Dock docking devices and keyboards. The PowerBook turns on from the Power button in the back of the Duo Dock and from the Power On key on the PowerBook itself when out of the Duo Dock. What is causing this?

DISCUSSION -----

An improperly seated Random Access Memory (RAM) or modem card can cause a key on the PowerBook 200 series keyboard to touch the display housing when the PowerBook is in the Duo Dock. This prevents the PowerBook from turning on from an external keyboard.

To test for this condition, use the following procedure:

Step 1

Remove any equipment from the top of the Duo Dock and remove the Duo Dock cover.

Step 2

Insert the PowerBook into the Duo Dock. Verify that the external monitor cable is attached.

Step 3

Open the PowerBook display.

Step 4

Turn on the PowerBook with the Power key on the external keyboard.

NOTE:

In this configuration, video only appears on the external monitor, not on the PowerBook display.

If the Power key on the external keyboard functions correctly, and the PowerBook turns on, a key on the PowerBook keyboard is pressing against the display housing. This can be caused by an improperly seated modem or RAM card raising the keyboard on the right side. Have an Apple-authorized Service Provider check the RAM or modem installation.

Support Information Services

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Tech Info Library Article Number:18591



Tech Info Library

Performa & TelePort Gold II: Slow With PPP or SLIP (2/97)

Revised: 4/21/97
Security: Everyone

Performa & TelePort Gold II: Slow With PPP or SLIP (2/97)

Article Created: 18 September 1995
Article Reviewed/Updated: 6 February 1997

TOPIC -----

My modem appears to be slow when using a PPP or SLIP connection. Is there anything I can do to improve this?

DISCUSSION -----

Yes. Make sure that you have selected "CTS Only" from the communications settings dialog of your communications package. This turns on a form of unidirectional handshaking.

If you do not see this as an option, you may be running version 2.1.2 or earlier of the Global Village TelePort software. You should upgrade to 2.5.2 or later to acquire this feature. The communications software you are using may also need to be upgraded to support this feature.

Upgrades for Global Village products are administered directly by Global Village. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Check for system- and CPU-intensive activity. The Global Village TelePort Gold II modem (but not the IIv modem) uses software-based error correction and data compression, so performance may be affected by system activity. Operating with virtual memory on may also affect communication performance.

Next, make sure that you are not using a data compression protocol such as MNP5. You can check your modem's default protocol by opening the TelePort control panel (must be TelePort v2.5 or later software) and inspecting the port status. If you have data compression turned on, the modem attempts to compress data that may already be compressed, which could have the effect of slowing down your data transmission. You should either use V.42-bis, or no data compression or error correction.

The last thing you should check within your communications package is to see whether Xon/Xoff error checking is enabled. If Xon/Xoff is enabled, it can conflict with either automatic error correction, or the algorithmic processes which are normally used by your communications software.

Article Change History:

06 Feb 1997 - Minor typographical corrections.

30 Jan 1997 - Updated with software-based error correction information.

08 Dec 1995 - Updated article with additional information.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18593



Tech Info Library

Open Transport: IPX Is Not Used For Internet Connections (9/95)

Revised: 9/18/95
Security: Everyone

Open Transport: IPX Is Not Used For Internet Connections (9/95)

=====

Article Created: 18 September 1995

TOPIC -----

Does Open Transport send IPX packets when communicating through Internet connections such as an Internet Service Provider?

DISCUSSION -----

No. Open Transport uses TCP/IP for Internet communication and does not use the IPX protocol Internet connections, the IPX protocol is used with Novell Netware servers. As of September 1995, there is no Open Transport IPX driver from Apple Computer. For more information on IPX and Open Transport search the Technical Information Library for the following articles:

Open Transport: Unable To Get Ethernet Address (8/95)

Open Transport 1.0.7: Should Be Used (9/95)

Support Information Services

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Tech Info Library Article Number:18594



Tech Info Library

Color LaserWriter 12/600 PS: Page Count Keeps Resetting (9/95)

Revised: 9/18/95
Security: Everyone

Color LaserWriter 12/600 PS: Page Count Keeps Resetting (9/95)

=====

Article Created: 18 September 1995

TOPIC -----

The page count on my Color LaserWriter 12/600 PS resets every time I turn the printer off. How can I make sure that the page count information is retained when the printer is turned off?

DISCUSSION -----

The Color LaserWriter 12/600 PS uses a 3.6 volt lithium battery at location BT1 on the I/O controller to retain the page count and other parameters when the printer is powered off. If the battery voltage drops, or it is removed from the I/O controller, then the page count information will no longer be retained. Service Source contains additional information on battery testing and replacement procedures.

Replacement batteries are available as a service part using part number 742-0011.

Support Information Services

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Tech Info Library Article Number:18595



Tech Info Library

DOS Compatibility Card: Time Set Only At Startup (9/95)

Revised: 9/19/95
Security: Everyone

DOS Compatibility Card: Time Set Only At Startup (9/95)

=====

Article Created: 18 September 1995

TOPIC -----

On my DOS Compatibility Card, if I switch back to the Mac OS and change the time, change back into Windows, the time has not changed. Why?

DISCUSSION -----

The time and date information for the DOS Compatibility Card are set at startup. The MS-DOS/Windows clock reads the Macintosh clock once at startup, then runs on its own. This means that you must restart the DOS Compatibility Card in order for any time or date changes to take affect.

Support Information Services

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Tech Info Library Article Number:18596



Tech Info Library

At Ease 3.0: Use Desktop Printing 1.0.3 (1/96)

Revised: 1/8/96
Security: Everyone

At Ease 3.0: Use Desktop Printing 1.0.3 (1/96)

Article Created: 18 September 1995
Article Reviewed/Updated: 8 January 1996

TOPIC -----

I have an At Ease 3.0 Setup which puts my users in the Restricted Finder. Whenever a user tries to drag a file to a desktop printer, the computer freezes or locks up. Can I use desktop printing with At Ease?

DISCUSSION -----

If you want to allow users to drag documents from their Restricted Items folder in At Ease to a desktop printer, you should update to Desktop Printing Software version 1.0.3 available from online services.

Desktop Printing Software v1.0.3 is also included with the At Ease for WorkGroups 3.0.1 Updater available from online services.

These articles can help you locate the software updates mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

08 Jan 1996 - Added Desktop Printing Software v1.0.3 information.
09 Nov 1995 - Changed title and added resolution.
26 Oct 1995 - Clarified discussion.

Support Information Services

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Tech Info Library Article Number:18597



Tech Info Library

PowerBook 150: Global Village Modem Software Update (10/95)

Revised: 10/4/95
Security: Everyone

PowerBook 150: Global Village Modem Software Update (10/95)

=====

Article Created: 18 September 1995
Article Reviewed/Updated: 3 October 1995

TOPIC -----

Since Apple doesn't make a modem for my PowerBook 150, I bought a Global Village internal modem which I was told would work with this model PowerBook. However, it doesn't seem to work quite right. I have heard that no modems work well with this PowerBook. Is that true? Is there something wrong with my system software or the modem itself?

DISCUSSION -----

You are correct in saying that the Macintosh PowerBook 150 does not support an Apple Express Modem. However, there are several third party internal modem options available to owners of these computers, including Global Village.

According to Global Village, their PowerPort family of modems (Bronze, Silver and Gold) are designed to work in the PowerBook 150. There is, however, a software update needed for the Macintosh PowerBook 150 computer users. You need to use the PowerPort 2.0.8a software, not the PowerPort 2.0.8 software which came with the modem. You will need to call Global Village to find out how to obtain the updated software.

NOTE: This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor (Global Village) for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
03 Oct 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18599



Tech Info Library

Lotus Notes Client: Macintosh & DOS/Windows Difference (9/95)

Revised: 9/19/95
Security: Everyone

Lotus Notes Client: Macintosh & DOS/Windows Difference (9/95)

=====

Article Created: 19 September 1995

TOPIC -----

I have a problem with Lotus Notes for Macintosh. I'm not actually getting an error, it's more of a missing feature that is annoying to Macintosh users. The problem deals with the default Macintosh window size when selecting a new form in the Compose menu. The default window created is small and must be expanded each time by clicking zoom box. The DOS and Windows version of Notes does not behave this way, that is, the last window size is remembered and used when you create a new form. Is this a Notes Macintosh client issue?

DISCUSSION -----

We spoke with Lotus and received confirmation that the difference in window size is due to the Macintosh Notes client. Lotus is aware of this situation, but has made no commitments as to when, or if, this will be changed in a future release of the Macintosh Notes client.

Support Information Services

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Tech Info Library Article Number:18601



Tech Info Library

Color LaserWriter 12/600: Postscript Errors (9/95)

Revised: 9/19/95
Security: Everyone

Color LaserWriter 12/600: Postscript Errors (9/95)

Article Created: 19 September 1995

TOPIC -----

When I print to my Color LaserWriter 12/600, I get an error message stating something to the effect: a "set limitcheck", "VM Storage", "Offending command...", or "Range Check" error has occurred. Sometimes the printer just blinks and does not print. These errors are intermittent and occur in different documents and applications

DISCUSSION -----

The problem may appear to be with the printer since you can see the files on the screen, but they do not print. Many programs use QuickDraw to edit the images visually, then use Postscript to print. These errors are typically not due to hardware and a "Clean Install" usually will not repair the problem.

These problems are usually due to corruption in one or more elements in the output Postscript file. This article relates to errors in the saved Postscript information. Follow these procedures to try to isolate and correct the problem:

Restart the printer to clear the buffer in the printer. Then try the following procedures:

Corruption in an imported graphic

=====

Step 1

Go into the original application that created the graphic.

Step 2

Select the elements of the graphic and copy them to the clipboard.

Note: it is important not to "select all" in the original file, sometimes

elements in a file may not have been deleted properly and the printer can not interpret them.

Step 3

Paste the elements into a new file and save.

Step 4

Try printing again. If it still fails go to Step 5.

Step 5

Import the working graphic into the selected program (PageMaker, Word) and try to print again.

Large graphic elements

=====

Check for large elements that have been reduced. These images still comprise a large number of elements, and to Postscript, their actual size does not matter. Eliminate or redraw them, save the file, and try to print again.

Output resolution too high

=====

Check for output resolution. It should not be above 150 DPI (PageMaker, Illustrator, Freehand). The 12/600 is a 600 DPI printer, the maximum resolution Contone Compression keeps is 150 DPI. It will image the file at 600, but reduce it to 150 to fit the file through the ROMs.

Postscript interpretation memory conflict

=====

Check "split long paths option" in Illustrator or Freehand. These are Bezier curve drafting programs, long paths or connected segments can crash a Postscript interpreter when it runs out of storage area.

Note: If you print the desktop for troubleshooting purposes be aware that the low resolution of the desktop file may cause the icons to print with a halo effect. This is normal. The best test of the printer is to make a new simple color document, type out a few words and try printing.

Support Information Services

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Tech Info Library Article Number:18604



Tech Info Library

Bootp and Open Transport Configuration (9/95)

Revised: 1/4/96
Security: Everyone

Bootp and Open Transport Configuration (9/95)

=====

Article Created: 19 September 1995

TOPIC -----

Open Transport TCP/IP is configured to use bootp. It seems that the Domain Name Server, router, and domain name is not being returned properly. What is the problem?

DISCUSSION -----

The most common issue with Open Transport TCP/IP configuration is, the bootp server has not been configured to return a domain name, and no domain name was specified in the Open Transport TCP/IP control panel.

In order to permit the resolution of partially qualified domain names, Open Transport TCP/IP requires a domain name to be configured, either in the control panel, or from your BOOTP/DHCP server. This corresponds to the default domain in MacTCP. In order to use the DNR at all, Open Transport TCP/IP also needs the address of at least one domain name server, but it can also be configured or returned from a server. This information was included in the Open Transport documentation, but did not get included in balloon help.

Solution

Either configure the bootp server to return a domain name, or enter a domain name in the TCP/IP control panel. You must be in Advanced user mode in the Open Transport TCP/IP control panel to do this.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18605



Tech Info Library

AppleShare Windows Client on Windows 95 Not Supported (9/95)

Revised: 10/16/96
Security: Everyone

AppleShare Windows Client on Windows 95 Not Supported (9/95)

=====

Article Created: 19 September 1995

TOPIC -----

I've seen notes that the DOS Compatible systems are compatible with Windows 95, but not AppleShare Client for Windows software. Is it officially supported?

DISCUSSION -----

AppleShare for Windows Client software is not supported on computers running Windows 95.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18606



Tech Info Library

AWS 95: A/UX Standalone Program Failure (9/95)

Revised: 9/19/95
Security: Everyone

AWS 95: A/UX Standalone Program Failure (9/95)

Article Created: 19 September 1995

TOPIC -----

When booting into the A/UX environment on my Apple Workgroup Server (AWS) 95 I get a message that it could not launch because of a "standalone program failure." It further indicates that the "standalone program space is too small" because "this is a memory sharing system or the system heap is too large."

DISCUSSION -----

This message results from the addition of extensions or control panels to the System Folder of the MacPartition. These extensions or control panels can modify the system heap to the point that it takes more space than expected for A/UX launch.

If you know what extension or control panel was added, you can remove it by starting up with extensions off (depress the shift key during startup) and then deleting the extensions or control panels.

If you are unsure what was added, a clean install of the A/UX Startup Files would be recommended. This can be accomplished by following the steps below:

Step 1

Startup with the Disk Tools diskette.

Step 2

Remove the System Folder from the MacPartition by moving it to the Trash and then selecting Empty Trash from the Special menu.

Step 3

Select Shut Down from the Special Menu.

Step 4

Insert the AWS 95 Installation Boot Disk and the AWS 95 System Software
Installer CD and restart the server.

Step 5

Select Custom Install.

Step 6

Select Step 2: Install Startup.

Step 7

Once the installation is complete, select Quit. Your server will then restart
with the new software.

NOTE: If your server is not on LocalTalk you will need to open the Network
control panel and select the appropriate network interface after it restarts.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18607



Tech Info Library

Macintosh Clients and Novell Frame Types (9/95)

Revised: 9/19/95
Security: Everyone

Macintosh Clients and Novell Frame Types (9/95)

=====

Article Created: 19 September 1995

TOPIC -----

What frame type is used by Macintosh computers interacting with a Novell Netware server using AppleTalk?

DISCUSSION -----

Novell Netware servers support four different frame types for Ethernet cards. These frame types and their associated protocols are as follows:

Begin_Table

Frame Type	Protocols
-----	-----
EtherNet_802.2	IPX/SPX, and FTAM
Ethernet_802.3	IPX/SPX
Ethernet_II	IPX/SPX, TCP/IP, and AppleTalk Phase I
Ethernet_SNAP	IPX/SPX, TCP/IP, and AppleTalk Phase II

End_Table

Except in rare cases where AppleTalk Phase I is still in use, Netware administrators will want to bind Ethernet_SNAP to the server's Ethernet card servicing Macintosh clients.

Support Information Services

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Tech Info Library Article Number:18608



Tech Info Library

Power Macintosh 7500/8500: Missing Automated Tasks (9/95)

Revised: 9/20/95
Security: Everyone

Power Macintosh 7500/8500: Missing Automated Tasks (9/95)

=====

Article Created: 20 September 1995

TOPIC -----

The "About Automated Tasks" Read Me file on the Power Macintosh 7500 and 8500 series computers refers to the following AppleScripts: "Turn on Filesharing," "Turn off Filesharing," "Sound On," and "Sound Off." Unfortunately, these AppleScripts are not included on the Apple Macintosh CD nor are they preinstalled on the hard drives of these computers.

DISCUSSION -----

There are two workarounds to provide the functionality of these AppleScripts:

Control strip modules

The functionality provided by all four of these Applescripts is available via the Control Strip software that ships with the Power Macintosh 7500 and 8500.

Install and create additional AppleScripts

The "Start File Sharing" and "Stop File Sharing" tasks are installed by the PlainTalk 1.4 English Speech Recognition software. After installing this software, these files can be found in the "Speakable Items" folder.

The "Turn Sound On" and "Turn Sound Off" files are not installed by PlainTalk 1.4 English Speech Recognition software. However, you can use the Script Editor to recreate these files. The script of the "Turn Sound Off" task is as follows:

```
on run
    tell application "Finder"
        set volume 0
        beep
```

```
        display dialog "Your system beep has been turned off." buttons {"OK"}
default
        button 1
    end tell
end run
```

The script of the "Turn Sound On" task is as follows:

```
on run
    tell application "Finder"
        set volume 5
        beep
        display dialog "Your system beep has been turned on." buttons {"OK"} default
            button 1
        end tell
    end run
```

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18609



Tech Info Library

Open Transport 1.0.x: Using Serial Printers (7/96)

Revised: 7/22/96
Security: Everyone

Open Transport 1.0.x: Using Serial Printers (7/96)

Article Created: 20 September 1995
Article Reviewed/Updated: 22 July 1996

TOPIC -----

I have a Power Macintosh 9500 and a LaserWriter Select 310. I cannot print to the LaserWriter Select 310 when connected using the printer port in the AppleTalk control panel. When I go into the Chooser and select the printer port, I get a message that says "Laserwriter Select 310 cannot be used on the Printer port while AppleTalk is active. Do you want to make AppleTalk inactive?" It makes no difference whether I click "OK" or "Cancel" in the dialog box. I get the same message again when I go back to select the printer port in the Chooser. What can I do to correct this?

DISCUSSION -----

This is a known issue with versions 1.0, 1.01, 1.06, and 1.07 of Open Transport on the Power Macintosh 7200, 7500, 8500, and 9500. This problem is caused by a delay when the printer port is released by the LocalTalk driver, and it can occur with other serial printers. The delay in releasing the printer port increases if you repeatedly click through the dialog boxes in the Chooser or repeat the procedure over and over.

This was fixed in version 1.1 and later of Open Transport. You should update to version 1.1, or later of Open Transport.

Article Change History:

22 Jul 1996 - Updated discussion to include information on 1.1 of OT.
11 Dec 1995 - Updated title.

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Tech Info Library Article Number:18610



Tech Info Library

System 7: Reblessing Old System Folder After Clean Install 2/97

Revised: 2/20/97
Security: Everyone

System 7: Reblessing Old System Folder After Clean Install 2/97

Article Created: 20 September 1995
Article Reviewed/Updated: 19 February 1997

TOPIC -----

I have performed a clean install of my system software. However, the clean install did NOT resolve the issue, nor did any of the follow-on troubleshooting. Is there any way I can reactivate my old System Folder, without having to reinstall the system software and all the other system resources I had?

DISCUSSION -----

Yes, if you have not already thrown away your original System Folder, you can "re-bless" it. Note that this process may not always work. If the steps listed below do not work, you will have to reinstall a System Folder one more time, then complete the steps listed in your clean install instructions.

Due to the wide variety of situations a clean restore can be used to troubleshoot, be sure to read the instructions below carefully, in order to determine whether your overall initial issue would benefit from this procedure. If you are troubleshooting SCSI issues in particular, make sure you have resolved those issues before proceeding. If you are not sure, do not follow these steps.

To rebless your System Folder, proceed as follows:

Step 1

Start the computer from an external floppy disk or a startup CD.

Step 2

Close all your windows, then open your hard disk.

Step 3

Choose "by Name" from the View menu. Verify that the System Folder has a small picture of an original Macintosh in the middle of its icon. This will resemble a picture of a monitor. This is the currently blessed system folder that is running your computer.

Step 4

Open this System Folder. Move the System suitcase into the Preferences folder. Close the System Folder.

Step 5

Verify that this System Folder no longer has the original Macintosh icon.

Step 6

Rename the System Folder "Clean System Folder".

Step 7

Rename the original System Folder (the one you wish to use again, not the one from Step 6) back to "System Folder".

A. If you used System 7.5's "Clean Install" option, open the System Folder, double-click on your System suitcase. Close the window which appears, then close the System Folder.

1) If a picture of an original Macintosh does not appear in the middle of this folder's icon, open the System Folder again.

2) Drag the System suitcase and the Finder to your hard disk icon.

3) Close the System Folder.

4) Open your hard drive and drag the System suitcase and the Finder on top of the System Folder icon. The original Macintosh icon should appear on the System folder immediately.

B. If you used another type of clean restore, you ordinarily would have had to separate the System suitcase and the Finder from each other. One of these files would have been placed in the Trash, or in your Preferences folder, or someplace other than loose in the System Folder. You need to find the System suitcase and the Finder, move them to your hard disk, close your System Folder, and drag them on top of your System Folder icon. The original Macintosh icon should appear on the System Folder icon immediately.

Step 8

Restart your computer. It should start up from the original System Folder. If it does not, repeat the original clean install steps.

Step 9

Put "Clean System Folder" into the Trash and empty the Trash. Note that you will lose all data in this System Folder, make sure that you have not installed any software in that System Folder except for the basic system software.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

19 Feb 1997 - Added Apple Fax information.

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Tech Info Library Article Number:18611



Tech Info Library

Macintosh Performa 6300CD: Description (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 6300CD: Description (4/97)

Article Created: 20 September 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 6300CD.

DISCUSSION -----

The most powerful and versatile Performa system ever created brings you increased system speed and enhanced communications performance.

The Apple Macintosh Performa 6300CD computer uses a state-of-the-art PowerPC 603e processor running at 100 megahertz to deliver up to 50 percent higher performance than previous 603-based systems.

The Performa 6300CD will meet your needs well into the future, not only with its leading-edge performance, but also with a 1.2 gigabyte hard drive – large enough to store applications and information for years to come.

This affordable system includes multimedia features that are expensive add-ons with other computers. A quadruple-speed CD-ROM drive accesses CD-based data quickly and plays audio and video segments smoothly. Stereo 16-bit sound provides high-quality audio playback, while an audio-input port lets you record your own sounds. Adding advanced multimedia options is easy. You can plug in a video-input card, a video-output interface box, an internal TV tuner, and other optional devices.

The Performa 6300CD also comes with special features for telephony. The high-speed (28.8 kilobits per second) modem works with the Apple PlainTalk microphone (included with the computer) and special software to let you use the computer as a speakerphone and an answering machine.

The 6300CD is a complete, ready-to-use multimedia system. Packed in one box are the computer (with Mac OS 7.5.1 software already loaded), a color display, a keyboard, a mouse, an internal modem, and a microphone. Also included are more

than a dozen home, education, and home-business programs, plus a collection of multimedia reference CDs.

Features

=====

Power and Speed

- PowerPC 603e processor running at 100 MHz
- Integrated floating-point unit
- 40 MHz, 64-bit bus
- 256K Level 2 cache
- 32K internal cache

Display

- 15" flat square shadow mask CRT
- .28 mm dot pitch
- Resolutions from 640x480 to 832x624

Video support

- Apple displays up to 15 inches through a 1MB DRAM video buffer (independent of system RAM)
- Wide range of VGA and SVGA displays from other vendors
- Offers 16-bit color for display of up to 32,768 colors on monitors using 640x480-pixel resolution
- Provides 8-bit color for display of 256 colors on monitors using 800x600-pixel or 832x624-pixel resolution

Memory

- Comes with 16MB of RAM
- Can be expandable to 64MB of RAM using two 32MB SIMMs
- Uses 72-pin, noncomposite, 80-nanosecond or faster DRAM SIMMs

Expansion

- Apple Desktop Bus port for mouse, keyboard, and other devices
- Monitor port (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- Serial port (RS-232/RS-422) for an AppleTalk network connection, other networking or communications equipment, or a printer
- SCSI interface port for connecting as many as five external SCSI devices, such as disk drives or CD-ROM drives
- LC processor-direct expansion slot
 - Compatible with most Macintosh Performa 400 and 500 series; Performa 630; Macintosh Quadra 605; and Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630 processor-direct cards
 - Can be used for an Apple MPEG Media System card or other specialized card
- Communications slot for a 28.8-kbps fax/data/voice modem (used by Global Village modem)

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- Video slot for optional Apple Video System (NTSC, PAL, and SECAM video input)
- Dedicated connector and infrared remote receiver for optional internal Apple TV/Video System (provides TV tuner and video input)

Audio System

- Stereo 16-bit sound
- Built-in speaker
- Sound-output port
- Sound-input port (can be used to connect the Apple PlainTalk microphone included with the computer)
- Front headphone jack and volume control

Bundled software

=====

System Software

- Mac OS 7.5.1 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, and Macintosh PC Exchange software

Pre-installed software

- At Ease
- ClarisWorks
- The American Heritage Dictionary
- ClickArt Performa Collection
- Espresso
- Lode Runner
- MacGallery Clip Art Treasure Pak
- MacLinkPlus/Easy Open Translators
- Mangia (special Performa edition)
- Power Pete
- Quicken
- Virex
- WealthBuilder
- The Writing Center
- Megaphone
- Megaphone Tour
- Adobe Acrobat
- Global Fax
- Global Fax Tour

CD-ROM titles

- 1995 Grolier Multimedia Encyclopedia
- TIME Almanac Reference Edition
- 3D Atlas
- The Family Doctor
- Smithsonian's America

- My First, Incredible, Amazing Dictionary
- Sesame Street Numbers
- Making Music by Voyager
- Club KidSoft CD

Configuration and Ordering Information

=====

Macintosh Performa 6300CD 16/1.2GB/4xCD/28.8

- Macintosh Performa 6300CD computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1.2 GB hard disk drive
- Global Village 28.8 Gold IIv modem
- Apple Multiple Scan 15" Display
- AppleDesign Keyboard
- Apple PlainTalk microphone
- Order number M4425LL/A

Optional Enhancements

- Apple MPEG Media System

Order No. M4243LL/A

- Apple Video System

Order No. M2894LL/C

- Apple TV/Video System

Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Apple Ethernet LC Thin Coax Connection

Order No. M33462Z/A

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

05 Mar 1996 - Corrected part number.

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Tech Info Library Article Number:18612



Tech Info Library

Macintosh Performa 6300CD: Specifications (4/97)

Revised: 4/29/97
Security: Everyone

Macintosh Performa 6300CD: Specifications (4/97)

Article Created: 20 September 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides technical specifications for the Macintosh Performa 6300CD.

DISCUSSION -----

Hardware
=====

Microprocessor

- PowerPC 603e processor running at 100 MHz
- Integrated floating-point unit
- 40 MHz, 64-bit bus
- 256K Level 2 cache
- 32K internal cache

Memory

- Comes with 16MB of RAM (uses one SIMM socket)
- Can be expandable to 64MB of RAM using two 32MB SIMMs
- Uses 72-pin, noncomposite, 80-nanosecond or faster DRAM SIMMs

Storage

- Internal 1.2GB hard disk drive
- Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal, quadruple-speed AppleCD 600i CD-ROM drive

Monitor (Apple Multiple Scan 15 Display)

- 15-inch diagonal RGB color display (13.3-inch diagonal viewable image size)
- Up to 832- by 624-pixel resolution at a scan frequency of 75 Hz
- 0.28-mm dot pitch
- Meets the strictest international magnetic-field emissions requirements (SWEDAC MPR2)

Display Support

- Apple displays up to 15 inches through a 1MB DRAM video buffer (independent of system RAM)
- Wide range of VGA and SVGA displays from other vendors

Colors and Resolutions

Begin_Table

Resolution	Max. Bit Depth	Max. Number of Colors
640 x 480	16	32,768
800 x 600	8	256
832 x 624	8	256

End_Table

Interfaces

- Apple Desktop Bus port for mouse, keyboard, and other devices
- Monitor port (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- Serial port (RS-232/RS-422) for an AppleTalk network connection, other networking or communications equipment, or a printer
- SCSI interface port for connecting as many as five external SCSI devices, such as disk drives or CD-ROM drives
- LC processor-direct expansion slot
 - Compatible with most Macintosh Performa 400 and 500 series; Performa 630; Macintosh Quadra 605; and Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630 processor-direct cards
 - Can be used for an Apple MPEG Media System card or other specialized card
- Communications slot for a 28.8-kbps fax/data/voice modem (used by Global Village modem)
- Video slot for optional Apple Video System (NTSC, PAL, and SECAM video input)
- Dedicated connector and infrared remote receiver for optional internal Apple TV/Video System (provides TV tuner and video input)

Sound

- Stereo 16-bit sound

- Built-in speaker
- Sound-output port
- Sound-input port (can be used to connect the Apple PlainTalk microphone included with the computer)
- Front headphone jack and volume control

Communications

- Global Village 28.8-kbps fax/data/voice/modem
- Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)
- Megaphone software lets users turn their Macintosh Performa 6300CD into a speakerphone and digital answering Machine; included fax software allows users to send and receive fax communications

Keyboard

- Provides adjustable keyboard slope
- Includes function keys, numeric keypad, cursor arrow keys, and special screen-editing keys

Mouse

- Round shape fits contour of the palm of the hand
- Large button allows easy clicking and dragging

Electrical Requirements

Main Unit

- Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- Frequency: 50 to 60 Hz
- Power: 55 W maximum

Monitor

- Line voltage: 90-132, 198-260 V
- Frequency: 47-63 Hz
- Power: 90 W maximum

Size and Weight

Main Unit

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32.0 cm)
- Depth: 16.5 in. (41.9 cm)
- Weight: 19 lb. (8.6 kg)

Monitor

- Height: 16.7 in. (42.4 cm)
- Width: 15.9 in. (40.5 cm)
- Depth: 17.8 in. (45.2 cm)
- Weight: 31.0 lb. (14 kg)

Operating Environment

=====

Main Unit

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95%, noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Monitor

- Operating temperature: 10 to 40 degrees C (50 to 104 degrees F)
- Storage temperature: 0 to 60 degrees C (32 to 140 degrees F)
- Relative humidity: 20% to 95%
- Maximum altitude: 10,000 ft. (3000 m)

Bundled Software

=====

System Software

- Mac OS 7.5.1 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, and Macintosh PC Exchange software

Disability Access

- CloseView software magnifies image up to 16 times
- Easy Access software for sequential combination keys, and cursor control from the numeric keypad
- "Visual beep" replaces audible system alerts

Pre-installed software

- At Ease
- ClarisWorks
- The American Heritage Dictionary
- ClickArt Performa Collection
- Espresso
- Lode Runner
- MacGallery Clip Art Treasure Pak
- MacLinkPlus/Easy Open Translators
- Mangia (special Performa edition)

- Power Pete
- Quicken
- Virex
- WealthBuilder
- The Writing Center
- Megaphone
- Megaphone Tour
- Adobe Acrobat
- Global Fax
- Global Fax Tour

CD-ROM titles

-
- 1995 Grolier Multimedia Encyclopedia
 - TIME Almanac Reference Edition
 - 3D Atlas
 - The Family Doctor
 - Smithsonian's America
 - My First, Incredible, Amazing Dictionary
 - Sesame Street Numbers
 - Making Music by Voyager
 - Club KidSoft CD

Article Change History:

28 Apr 1997 - Removed out dated on line references.

20 Dec 1995 - Added keyword.

16 Oct 1995 - Reviewed for technical accuracy.

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Tech Info Library Article Number:18613



Tech Info Library

Multiple Scan 1705 Display: Description (10/95)

Revised: 10/6/95
Security: Everyone

Multiple Scan 1705 Display: Description (10/95)

=====

Article Created: 20 September 1995
Article Reviewed/Updated: 6 October 1995

TOPIC -----

This article provides a description of the Multiple Scan 1705 Display.

DISCUSSION -----

Overview
=====

Apple's most affordable full-page display, the Apple Multiple Scan 1705 Display is a flexible, high-quality monitor that's perfect for business tasks such as creating presentations, word processing, and working with spreadsheets. It features a high-quality flat, square shadow mask CRT; offers a number of advanced features; and even comes with a PC video adapter, so you can easily use it with your MS-DOS and Windows software-based systems as well as with your Macintosh computers.

For flexibility, the Apple Multiple Scan 1705 Display uses multiple-scan technology, so you can adjust the resolution to suit the particular application in which you are working. For Macintosh users, it offers three different viewing modes: a page-layout mode that lets you view two full pages simultaneously; a publishing mode that provides 72-dot-per-inch resolution for everyday work; and a presentation mode that lets you use the display as if it were a 14-inch, 24-bit color monitor. And users of PC-compatible systems can enjoy a similar range of resolutions.

The Apple Multiple Scan 1705 Display is both simple to set up and enjoyable to use. It's easy to connect the display to your system; and it comes with a PC adapter for use with IBM PC compatibles, enabling plug-and-play connection no matter what kind of computer you use. To minimize distortion, the Apple Multiple Scan 1705 Display features an anti-reflection panel. And it's conveniently located digital controls let you adjust brightness, contrast, geometry, centering, and convergence for optimal viewing convenience.

With its combination of advanced features and low cost, the Apple Multiple Scan 1705 Display is an excellent choice for anyone looking to move up affordably to a full-page display.

Features

=====

Outstanding image quality

- Features a high-quality flat, square shadow mask CRT for clear, sharp pictures and vivid color
- Includes digital controls that let you adjust precisely for brightness, contrast, geometry, centering, and convergence
- Includes ColorSync profiles to support color accuracy

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes—up to 1,024 by 768 pixels
- Comes with mode-switching software to allow resolution changes without restarting

Ergonomic design

- Comes with a tilt-and-swivel base that allows you to position the monitor for optimal viewing comfort
- Provides the convenience of front-panel controls
- Features an antireflection and antistatic surface treatment, with a flicker-free 75-hertz refresh rate to minimize eyestrain
- Complies fully with MPR II standards for low electrical and magnetic emissions
- Complies with the EPA's Energy Star conservation guidelines by switching into low-power mode during idle periods

Compatibility and affordability

- Works with Power Macintosh, Macintosh Quadra, Macintosh Centris, Macintosh II, and PowerBook computers
- Includes a PC adapter for plug-and-play IBM PC compatibility
- Supports Windows 95 plug-and-play connection with alternate cable
- Provides advanced capabilities at an affordable price

Configuration and Ordering

=====

Apple Multiple Scan 1705 Display

Order No. M4434LL/A

- Apple Multiple Scan 1705 Display
- Apple Multiple Scan software
- PC adapter

- Video cable
- Power jumper cable
- User's guide
- Limited warranty

Support Information Services

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Tech Info Library Article Number:18614



Tech Info Library

Multiple Scan 1705: Specifications (1/96)

Revised: 1/3/96
Security: Everyone

Multiple Scan 1705: Specifications (1/96)

=====

Article Created: 20 September 1995
Article Reviewed/Updated: 3 January 1996

TOPIC -----

This article provides the technical specifications for the Apple Multiple Scan 1705 Multiple Scan Display.

DISCUSSION -----

Hardware
=====

Picture tube

- 17-in. (diagonal) flat, square shadow mask
- 15.8 in. (diagonal viewable image size)
- .28-mm dot pitch

Screen treatment

- Antistatic, antiglare coating

Digital controls

- Brightness
- Contrast
- Horizontal size and centering
- Vertical size and centering
- Pincushion
- Power switch
- Trapezoid
- Degauss

Connector

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- 15-pin DSub connector for Macintosh systems
- HD15-pin adapter for PCs

Degauss circuitry

- Front-panel control

Electrical requirements

- Line voltage: 90 to 132 V AC and 198 to 264 V AC
- Frequency: 47 to 63 Hz, single phase
- Power: 165 W (maximum) when operating; less than 11 W in standby mode; 0 W in suspend mode and when CPU is in energy-saver mode

Environmental requirements

- Temperature: 50 to 104 deg. F (10 to 40 deg. C)
- Humidity: 10% to 80%, noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

- Height: 17.2 in. (43.7 cm)
- Width: 16.5 in. (41.9 cm)
- Depth: 18.8 in. (47.8 cm)
- Weight: 45.2 lb. (20.3 kg)

Resolution/Screen refresh rate

Macintosh computers

- 832 by 624 pixels at 75 Hz—presentation view
- 640 by 480 pixels at 67 Hz—publishing view
- 1,024 by 768 pixels at 75 Hz—page-layout view

PC-compatible systems

- 640x480 pixels at 60 Hz (VGA)
- 800x600 pixels at 60 Hz (SVGA)
- 1,024x768 pixels at 60 Hz (SVGA)

Scanning rates

- 30 to 65 kHz (horizontal)
- 50 to 120 Hz (vertical)

Active Display Area

- Diagonal - 15.8 in.
- Width - 12.6 in.
- Height - 9.5 in.

Agency approvals

=====

- FCC Part 15 Class B
- CISPR 22 Class A (EN5008211) – complies with European EMC directive
- DOC Class B
- MPR II
- VCCI Class 2
- CE Mark
- EPA Energy Star compliant
- IEC 950
- UL1950
- CSA 950
- EN60950

System requirements

=====

- Power Macintosh, Macintosh Quadra, Macintosh Centris, Macintosh II (with video card), and PowerBook computers
- System software version 7.1 or later

Article Change History:

03 Jan 1996 - Minor technical correction.

Support Information Services

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Tech Info Library Article Number:18615



Tech Info Library

Macintosh 5xxx/6xxx: Microprocessor Issue (4/97)

Revised: 4/3/97
Security: Everyone

Macintosh 5xxx/6xxx: Microprocessor Issue (4/97)

Article Created: 21 September 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article covers two topics - 1) Running the 5xxx/6xxx Tester application when experiencing system freezing on selected Performa and Power Macintosh computers.

2) This article describes an issue with some PowerPC 603 microprocessors installed on a limited number of Macintosh and Performa 5200 and 6200 series computers. Previously, this required the use of the 52xx/62xx Diagnostic Utility, which has since been removed.

DISCUSSION -----

1) The 5xxx/6xxx Tester should be used to test for known component issues that may cause system freezing in ALL Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers, including the Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.) The 5xxx/6xxx Tester is available on America Online (keyword: applecomputer) CompuServe (GO APLSUP) and on the Internet at:

ftp://ftp.info.apple.com/Apple.Support.Area/Apple.Software.Updates/US/Macintosh/Utilities/5xxx-6xxx_Tester_1.0.sea.hqx

2) The 52xx/62xx Diagnostic Utility was made available to detect an issue with a small number of PowerPC 603 microprocessors used in ONLY Macintosh Performa 5200, 6200, and Power Macintosh 5200/75 LC computers. Only computers within a specific serial number range were potentially affected by this issue. The Diagnostic Utility was posted on the online services, but it has since been removed with the posting of the 5xxx/6xxx Tester. Below is some additional information on this original problem.

PowerPC 603 Microprocessor Statement

Apple and Motorola have recently found that a small number of PowerPC 603 microprocessors used in Macintosh Performa 5200, 6200, and Power Macintosh 5200/75 LC systems may have a problem. Fewer than 1 in 1000 of these systems may have a PowerPC 603 processor problem which was not detected in test procedures at the microprocessor design facility and at Apple. No customer has reported this issue to Apple that we are aware of.

Only Macintosh Performa and Power Macintosh LC models in the 5200 and 6200 series with serial numbers in the following ranges could be impacted:

5200 Series Computers

XB514xxxxxxx - XB529xxxxxxx
SO514xxxxxxx - SO529xxxxxxx
SG523xxx - SG527xxx
numbers less than CK533xxxxxxx

6200 Series Computers

XB528xxxxxxx - XB529xxxxxxx
SO528xxxxxxx - SO529xxxxxxx
SG510xxx - SG528xxx
numbers less than CK533xxxxxxx

Computers outside the above serial number ranges have been screened with additional test procedures and do not have this problem. No other Power Macintosh, Power Macintosh LC, Performa, or PowerBook computers experience this problem.

On September 21, 1995, Apple posted a diagnostic utility called "52xx/62xx Diagnostic Utility" that checks for this potential problem to a number of online services including the internet and CompuServe. This application was removed when the 5xxx/6xxxx Tester was posted.

Apple Service inventory has been tested and does not have this problem.

Below is a Q & A which may answer more of your questions.

.....

Question: How does this problem manifest itself?

Answer: Tests indicate it may affect the Graphing Calculator application, or other PowerPC native applications using specific mathematical operations in a specific sequence. In some cases it may cause an application to unexpectedly freeze.

Question: Does it impact spreadsheet applications?

Answer: Although we have not been able to duplicate this problem with these applications, it is possible.

Question: What are the serial numbers affected?

Answer:

5200 Series Computers

XB514xxxxxxx - XB529xxxxxxx

SO514xxxxxxx - SO529xxxxxxx

SG523xxx - SG527xxx

numbers less than CK533xxxxxxx

6200 Series Computers

XB528xxxxxxx - XB529xxxxxxx

SO528xxxxxxx - SO529xxxxxxx

SG510xxx - SG528xxx

numbers less than CK533xxxxxxx

Question: When will customers be alerted?

Answer: On September 21,1995, Apple will post the diagnostic utility on various online services along with this document.

Question: How will customers be alerted?

Answer: We are notifying our customers in a number of ways. Each company has posted a diagnostic test on various online services, including Apple and Motorola home pages on the World Wide Web, and CompuServe. Customers can download and run this diagnostic on their computer to determine if it is one of the few that may have a PowerPC 603 processor with a problem.

Customers in America or Canada without access to an online service can call Apple at 800-785-7371 (7:00am-7:00pm, Mountain Standard Time) to have the diskette with the diagnostic utility sent to them within two business days. International customers should contact their local Apple service center.

Question: What are the specific online paths to the diagnostic?

Answer: The diagnostic, along with a ReadMe and a Q & A document, are included in a file titled "52XX/62XX Diagnostic Util.SEA" posted to the following locations:

America Online:

keyword: applecomputer

CompuServe:

Apple Support Forum (GO APLSUP) contains all software and information libraries
Apple Most Popular files (GO APLNEW)

Internet:

World Wide Web: <<http://www.info.apple.com/swupdates>>
ftp: <<ftp://ftp.info.apple.com>>

Question: If customers determine their system contains the problematic PowerPC 603 processor, what should they do?

Answer: If the customer runs the diagnostic utility and it confirms that the system has a potentially problematic PowerPC 603 processor, and their computer has a serial number in the specified range, Apple will replace their logic board at no cost.

The customer may bring their computer to an Apple Authorized Service Provider or call 1-800-780-0957, before December 31, 1995, to schedule a service call. After that date, customers should call their service provider or 1-800-SOS-APPL for service.

International customers should contact their local Apple service center for replacement of their logic board, should it be necessary.

Question: Is this like the Pentium bug?

Answer: No it is not. The Pentium issue was inherent in the Pentium microprocessor design. Every Pentium had this problem before a modification to the design was made.

In this instance with the PowerPC 603 processor, there is no design flaw in the PowerPC 603 processor itself. Instead, a few problematic units that should have been rejected were not identified by the test procedures. Apple and Motorola reacted quickly to research and identify the problem. Both companies have instituted revised test procedures for the PowerPC 603 processor to ensure all current shipping systems are unaffected by this issue.

Question: What have you done since you discovered the problem?

Answer: Additional tests have been implemented at both the chip design and manufacturing facilities, and at Apple to catch this problem. Apple and Motorola are now extensively testing the PowerPC 603 processor to ensure all current shipping systems are unaffected by this issue.

Question: How many units could be affected?

Answer: We believe the total number of units worldwide to be well below 500.

Article Change History:

02 Apr 1997 - Removed reference to specific on line services

31 Jan 1997 - Major revision to article, adding info on current 5xxx/6xxx
Tester

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Tech Info Library Article Number:18616



Tech Info Library

Apple Internet Connection Kit: Product Details (9/95)

Revised: 9/21/95
Security: Everyone

Apple Internet Connection Kit: Product Details (9/95)

=====

Article Created: 21 September 1995

TOPIC -----

This article provides the product details of the Apple Internet Connection Kit (AICK).

DISCUSSION -----

Product Details

Apple Internet Dialer on-line Internet service registration software

- Offers a choice of qualified Internet service providers in your area
- Streamlines the process of registration for Internet service
- Configures the applications to run on your system

Netscape Navigator browser software

- Allows you to browse the World Wide Web

Claris EMailer Lite e-mail software

- Enables you to receive and send Internet e-mail messages via an intuitive drag-and-drop interface

Fetch FTP software

- Lets you access File Transfer Protocol (FTP) services to download specific files

Aladdin Stuffit Expander decompression software

- Automatically decompresses files that you download from the Internet

NewsWatcher browser software

- Allows access to Usenet newsgroup discussions

SLIP and PPP software

- Allows the use of MacTCP over your modem line, so your Macintosh and Internet applications can communicate with the protocols used by the

Internet (SLIP and PPP)

NCSA Telnet terminal emulation software

- Allows your Macintosh to emulate a terminal for connection to many libraries and catalogs

QuickTime VR Player

- Lets you view multimedia presentations and video clips over the Internet

Adobe Acrobat Reader

- Lets you view portable document format (PDF) files in their exact original format

RealAudio Player

- Enables you to hear programmed audio real-time over the Internet

Support

- "Getting started" guide helps you get acquainted with your new tools and the Internet and shows you how to navigate it

On-line help

- Includes Internet-specific Apple Guide on-line help
- Offers third-party documentation on CD
- Telephone support for installation and configuration

System requirements

- An Apple Macintosh, Power Macintosh, PowerBook, or other Mac OS-based computer
- At least 8MB of RAM
- Macintosh system software version 7.5 or later
- A 9,600-bps (or faster) modem (14,400 bps recommended) or a connection to a local area network that is already connected to the Internet
- A minimum of 10 MB of available hard disk space (15MB recommended)
- A high-density floppy disk drive or CD-ROM drive

Ordering Information

Apple Internet Connection Kit

Order No. M4276LL/A

- CD-ROM and floppy disks, each containing all of the Internet software and support (including electronic documents) described in Product Details

Order No. M4503LL/A

- 20-user version (CD-ROM and floppy disks)

For information regarding volume licensing, contact Apple Software Licensing at: vol.license@applelink.apple.com.

For more information about Apple's Internet products, visit us on the Internet at: <http://www.apple.com/>.

Support Information Services

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Tech Info Library Article Number:18620



Tech Info Library

Apple Internet Connection Kit: Product Description (9/95)

Revised: 9/21/95
Security: Everyone

Apple Internet Connection Kit: Product Description (9/95)

=====

Article Created: 21 September 1995

TOPIC -----

This article describes the Apple Internet Connection Kit (AICK).

DISCUSSION -----

The Apple Internet Connection Kit is an integrated collection of Apple and third-party software that allows a Macintosh computer user to connect directly to the Internet quickly and easily. It's the perfect solution for users who want direct Internet access today.

The popularity of the Internet continues to grow exponentially, as more and more people discover the amazing information and communication resources available on line. But navigating (or "surfing") the Internet requires more than just a desire to try it. You need a variety of software tools -- browsers, viewers, file-transfer programs, e-mail, and more -- as well as a qualified Internet service provider. In fact, setting up your computer for Internet connection can be a time consuming process.

Luckily, Macintosh users who want to connect to the Internet already have one big advantage: right out of the box, the Macintosh is the easiest-to-use computer available. Now Apple has made direct Internet connection for Macintosh owners easier than ever.

With the Apple Internet Connection Kit, you get high-quality, "best of class" software in all of the categories you need for successful Internet access and use. You also get the Apple Internet Dialer, which makes signing up with a qualified Internet service provider and getting connected to the Internet a matter of minutes rather than days. Just double-click the application and fill in the blanks, and the Apple Internet Dialer will call a service provider for you. Within minutes, you'll be connected to the Internet -- where you can send and receive e-mail, conduct research, plan your own travel itinerary, play games, shop, and much, much more.

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Because dealing with the Internet sometimes raises more questions than it answers, the Apple Internet Connection Kit includes a "getting started" manual and special Apple Guide on-line help, as well as third-party documentation.

The Apple Internet Connection Kit -- the easiest, fastest, most complete tool for connecting your Macintosh computer directly to the Internet.

Features

Quick, direct Internet access

- Features software that makes signing up with an Internet service provider a quick, on-line process
- Includes all of the software tools needed for direct Internet access
- Enables local area networks that are connected to the Internet to standardize on one set of Internet tools
- Gets you to all the Internet hot spots: the World Wide Web (WWW), newsgroups, and FTP servers

Ease of use

- Provides an all-in-one solution for Internet connection
- Installs easily; one-button install for all key applications
- Configures Internet applications for your system automatically
- Compatible with other Internet tools

Applications included

- Apple Internet Dialer, on-line Internet service registration and connection software
- Netscape Navigator
- Apple Guide
- Claris EMailer Lite
- Fetch
- Aladdin Stuffit Expander
- NewsWatcher
- NCSA Telnet
- QuickTime VR Player
- Adobe Acrobat Reader
- RealAudio Player

Technical support

- Includes a "getting started" guide
- Features on-line help via Apple Guide
- Provides third-party documentation

Support Information Services

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Tech Info Library Article Number:18622



Tech Info Library

Apple's Internet Products (4/97)

Revised: 4/28/97
Security: Everyone

Apple's Internet Products (4/97)

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Article Created: 21 September 1995
Article Reviewed/Updated: 19 April 1997

TOPIC -----

This article provides a brief description Apple Computer's internet products which include:

- Apple Internet Connection Kit
- K-12 Personal Internet Solution
- Apple Internet Server Solution for the World Wide Web
- QuickTime Products
- AppleSearch
- Apple Remote Access
- Apple Internet Router
- Apple IP Gateway

DISCUSSION -----

The Internet is a truly global resource, containing prodigious amounts of information on virtually every area of interest. It's no surprise that the Internet is being used by millions of people from all walks of life: business professionals who want to show the world their products and services, teachers who want to bring the world into their classrooms, and anyone who needs to keep in touch with others by e-mail.

It's also no surprise that Apple, the company most responsible for enhancing the personal computing experience, is at the forefront of making the Internet and its valuable resources more accessible. With the builtin communications technologies of the Mac OS and the products listed below, Apple has the solutions you need for accessing information, publishing, and authoring on the Internet.

Apple Internet Connection Kit (AICK)

The Apple Internet Connection Kit is an integrated collection of Apple and "best

of class" third-party software that allows a Macintosh computer user to connect directly to the Internet quickly and easily. Designed as an all-in-one solution for people who are very comfortable with their Macintosh and enjoy exploring on their own, the kit lets users sign up with a qualified Internet service provider, enabling them to establish an Internet connection within minutes. It includes a "getting started" guide, Apple Guide on-line support, third-party documentation, and the following Internet applications:

- Apple Internet Dialer software for quick, on-line registration with a qualified Internet service provider
- Netscape Navigator for browsing the World Wide Web
- Claris EMailer Lite
- Fetch FTP software for downloading files from FTP servers
- Alladin Stuffit Expander decompression software
- NewsWatcher Usenet news reader
- NCSA Telnet for connecting to UNIX-based libraries and catalogs
- QuickTime VR Player software
- Adobe Acrobat Reader
- RealAudio Player

K-12 Personal Internet Solution

Part of the Apple Education Series, the Personal Internet Solution Bundle is designed as the complete solution for the educator who needs an Internet connection. This solution provides an integrated set of Internet tools along with related materials to address educators' specific needs. Available with a Power Macintosh 5200/75 LC or a Macintosh LC 580 or as a stand-alone product, the solution includes:

- A modem for dial-up connection
- Netscape Navigator software
- Eudora by Qualcomm, e-mail software
- InterCon's InterSLIP dial-up connection software
- A discount connection offering through a national service provider
- A step-by-step guide describing how to set up the equipment, install the software, and connect to the Internet
- Four of the best-known reference CDs:
 - Earth Explorer from Apple
 - Electronic Arts 3D Atlas from Electronic Arts
 - Grolier Multimedia Encyclopedia from Mindscape
 - Time Almanac: Reference Edition from Compact Publishing

Apple Internet Server Solution for the World Wide Web

This WWW "server in a box" is an all-in-one solution that consists of a Workgroup Server 6150/66, 8150/110, 9150/120, 7250/120 or 8550/132, and a CD-ROM that contains the software needed to get established on the Web. The Apple Internet Server Solution is a multi-platform solution, enabling access by Mac OS, Windows, and UNIX clients on the WWW. This software includes:

- WebSTAR from StarNine allows a Workgroup Server to serve information on the WWW.
- Adobe PageMill, makes creating web pages an easy, graphical process.

- MacDNS from Apple maps an IP address to a recognizable web server name which enables web clients to find your server.
- NetCloak from Maxum Development, provides additional capabilities to HTML standards.
- ServerStat from Kitchen Sink Software, helps you manage your server efficiently by analyzing WebSTAR traffic reports.
- RealAudio Server from Progressive Networks lets you enhance your web pages with high-quality sound.
- HyperCard from Apple a popular software erector set that is easily customized to perform a variety of tasks, such as serving as a multimedia database, and includes HyperCard Common Gateway Interfaces (CGI).
- FileMaker from Claris* an easy-to-use, yet powerful flat-file database and includes FileMaker Pro CGI.
- EveryWare Tango and Butler SQL* a web database solutions which includes solutions for on-line conferencing, catalogs, registration, and classified ads.
- Netscape Navigator client lets you preview your web pages before you post them.
- BBEdit from Bare Bones Software a high-performance text editor for advanced HTML coding.
- Adobe Acrobat Pro creates and translates documents into portable document format (PDF), the cross-platform Internet document standard.
- Image Map software creates hotspots in GIF or PICT graphics to incorporate into web pages, and includes a CGI to serve the image map.
- Electronic Mail CGI gives e-mail capability to web browsers that do not have it.
- Sample web pages offer templates of web pages that you can easily customize to suit your needs, including home pages, a catalog page, and forms.
- AppleScript lets you take advantage of the power of scripting without requiring a knowledge of C programming.
- AppleSearch 1.5 enables you to index documents on local servers or in a database and search them by key words, includes AppleSearch CGI.

* Does not include complete application package.

QuickTime Products

QuickTime, Apple's interactive multimedia technology, has become the multimedia content delivery standard for the Internet. It is a system software extension that provides an interface for editing video, animation, music, text, and other time-based information. Because it is a cross-platform technology, QuickTime is ideal for Internet content delivery and creation. Publishers can use QuickTime to create compelling Internet content by using existing material and adding interactivity to produce new experiences. In addition, QuickTime makes electronic commerce more viable for consumers by letting them "pick up" items and examine them from all angles. QuickTime product extensions include:

- QuickTime Music Tool Kit, which allows users to interact with music just like they interact with graphics and text.
- QuickTime VR, which creates virtual- reality experiences by piecing together photos from a standard 35mm camera to produce panoramic views.

- QuickTime Conferencing, which allows users with a video camera to set up a multiparty conference over the Internet in real time.

AppleSearch

AppleSearch is easy-to-use yet sophisticated client/server software designed to be a knowledge navigator that finds information relevant to users' needs. Internet publishers can use AppleSearch to index volumes of text, images, or video on their WWW servers, so users can easily search for information. LAN managers can use AppleSearch to manage and use the growing stockpiles of electronic information by letting users on a network search for data stored on local servers as well as on the vast resources of the Internet -- from both Macintosh com-puters and PCs running Windows. AppleSearch:

- Allows search requests to be entered in the user's own words and provides immediate search results.
- Supports many clients through a single Internet connection to the server.
- Lets LAN managers choose WAIS servers that are useful to the workgroup.

Apple Remote Access Products

Apple Remote Access software is the dial-up solution favored by organizations that want to extend their Internet connection to remote or traveling users. Apple Remote Acces servers, used with Apple IP Gateway software, make it easy to connect authorized Macintosh or PowerBook computer users at a remote location to the Internet, as well as provide access to local information and resources. Apple Remote Access solutions are ideal for workgroups or entire organizations that want to enable employees to work productively and efficiently from any location -- whether they're at home, out of town, or even out of the country. Apple Remote Access:

- Offers the easiest-to-configure dial-up solution for the Internet.
- Allows MacTCP to work without additional software -- the same way it works on a Local Area network.

Apple Internet Router

Apple Internet Router software offers both local and wide area, AppleTalk protocol only, networking flexibility. Two or more local workgroups can be connected over industry standard network types, including LocalTalk, Ethernet, and Token Ring. If an Internet connection is already in place on a network with a DDP/IP gateway (like the Apple IP Gateway), Apple Internet Router software can provide Internet access for users on LocalTalk networks. And, as the network grows larger and more global, the Apple Internet Router lets users choose among several wide area options. They can link remote sites to the network through a dial-up connection over a standard modem, or they can add one of the Apple Internet Router Wide Area Extensions (available separately) to link AppleTalk networks using X.25 or TCP/IP -- the protocol of the Internet.

NOTE: Apple Internet Router software requires it being run on a computer using classic networking.

Apple IP Gateway

With the Apple IP Gateway, Macintosh users with Apple Remote Access, LocalTalk, or any other AppleTalk network connection can connect easily to an Ethernet-based TCP/IP network to use the full range of Internet Protocol (IP) services. These include the vast array of Internet services such as Telnet, File Transfer Protocol (FTP), Gopher, World Wide Web, and Wide Area Information Servers (WAIS). An Internet connection is required. The Apple IP Gateway:

- Allows a single MacTCP configuration for all IP users on the LAN, eliminating the need for individual IP addresses.
- Lets mobile, remote, and local AppleTalk network users access the Internet -- even if the users' AppleTalk network does not directly support IP services.
- In conjunction with Apple Internet Router software, provides IP access to any Macintosh computer that is part of the router's network.
- In conjunction with an Apple Remote Access server, provides IP access to remote or mobile users.

Article Change History:

09 Apr 1997 - Removed out dated on line references.
10 Sep 1996 - Updated the Apple Internet Router section.
22 Mar 1996 - Updated Internet Server Solution.

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Tech Info Library Article Number:18623



Tech Info Library

AppleShare 4.2: Product Description (10/95)

Revised: 10/13/95
Security: Everyone

AppleShare 4.2: Product Description (10/95)

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Article Created: 25 September 1995
Article Reviewed/Updated: 13 October 1995

TOPIC -----

This article describes AppleShare 4.2.

DISCUSSION -----

AppleShare is high performance, easy-to-use file and print sharing software that allows networked Macintosh and Microsoft Windows software-based computers to share files, applications, and printers.

With AppleShare file server software, organizations can store all of their shared files and applications in a single, central location, providing convenient, easy access to every user on the local area network. By allowing networked users to centralize all key files and applications for easy sharing, AppleShare improves everyone's productivity. It eliminates time spent looking for files, worrying about misplaced documents, and determining the file or application version.

AppleShare print server software offers all users queued access to up to five networked printers. This time saving function allows users to be more productive because they can use their computers to tackle other tasks instead of waiting for documents to print.

Now, all networked users can connect easily to an AppleShare server. AppleShare lets Macintosh users access shared resources via the Mac OS, and Windows software-based computers users via the Windows interface. AppleShare's network architecture coexists with other application programs and networking services such as Novell NetWare, Windows for Workgroups, and even the Internet.

Yet for all of its power and capabilities, AppleShare is extremely easy to set up, use, and maintain. It continues in the "plug and play" tradition established by the Macintosh more than a decade ago; most system administrators find that they can get an AppleShare server up and running within 15 minutes. And overall

maintenance -- including the addition and deletion of users -- is so simple that a dedicated, full-time administrator is not required. In fact, because AppleShare is so easy to install, maintain, reconfigure, and expand, it offers the lowest long-term cost of ownership of any product in its class.*

Whether your organization is a small or medium-size business, a classroom, or a department within a global enterprise, AppleShare improves collaboration and increases efficiency for all users.

*Based on a report by Business Research Group, Newton, Massachusetts

Features

Powerful file and print services

- Lets users store their files and applications in a single, central location
- Makes it easy and efficient to print documents to networked printers
- Provides comprehensive, easy-to-implement security

Ease of use

- Installs with a single click of the mouse
- Can be up and running in minutes
- Makes day-to-day management quick and easy
- Users can take advantage of file and print services from either Macintosh computers or Windows software-based PCs

Compatibility

- Includes full support for both Macintosh and Windows clients
- Server works with all Mac OS-compatible applications

Performance and scalability

- Supports up to 250 users
- Performs up to 10 times faster than built-in Mac OS file sharing
- Can be configured for use in an AppleTalk network of any size
- Is scalable from LocalTalk to Ethernet networks, and beyond
- Offers highest performance when running on PowerPC-based Workgroup Servers

Article Change History:

13 Oct 1995 - Made available to everyone.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18624



Tech Info Library

AppleShare 4.2: Product Details (10/95)

Revised: 10/13/95
Security: Everyone

AppleShare 4.2: Product Details (10/95)

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Article Created: 25 September 1995
Article Reviewed/Updated: 13 October 1995

TOPIC -----

This article provides the product details and order information for AppleShare 4.2.

DISCUSSION -----

Product Details
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Capabilities and services

- Includes file and print servers
- Supports Mac OS program linking and publish and subscribe
- Features an open environment that allows additional network services
- Macintosh client software built into every Macintosh; Windows client software sold separately

Sharing options

- On-line CD-ROM exchange
- Sharing of folders or entire disks
- Easy server selection through the Chooser
- Intuitive, consistent access to shared resources
- User-controlled access to information

Print spooling

- Provides spooling for up to five networked printers
- Offers centralized queue management
- Accepts simultaneous print requests
- Frees client workstations for use immediately
- Includes print log for up to 1,000 print jobs

Administrator control

- Administrator can set number of connected users

- Server messages can be broadcast or sent to selected users
- Administrator can set cache sizes to maximize performance

Security

- Minimum password length
- Password aging
- Password history to prevent immediate reuse
- Ability to disallow saved passwords
- Account disabled after specified number of password failures
- Adjustable time limit for temporary accounts
- Guest access allowed; turned off by default
- Copy-protection setting for documents
- "Lock" setting for folders
- Adjustable number of concurrent application launches
- Inherited folder privileges
- Administrator log-off of any user

Network requirements

- An AppleTalk network connection (via LocalTalk, Ethernet, Token Ring, or Apple Remote Access software):

AppleShare Product Family

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AppleShare software comes in three versions that are designed to accommodate a variety of workgroup sizes and performance needs.

AppleShare 3.0.1 is designed for smaller work-groups of Macintosh and Windows software-based computers that have outgrown the basic file-sharing capabilities of the Mac OS. It runs on 68030-based, or earlier, Macintosh computers.

AppleShare 4.0.2 offers significant performance improvements over AppleShare 3.0.1, and runs on 68040-based Macintosh computers. Like AppleShare 3.0.1, it's appropriate for smaller, cross-platform workgroups that want to move beyond simple Mac OS file sharing and is extremely easy to set up and administer.

AppleShare 4.2 is the highest-performance AppleShare version available. Optimized for Apple PowerPC processor-based Workgroup Servers, it offers higher performance and supports more users than previous versions, yet retains the ease of use shared by the other product offerings in the AppleShare family.

Begin_Table

Specifications	3.0.1	4.0.2	4.1	4.2	Pro 1.1
-----	-----	-----	----	----	-----
Concurrent logons	120	150	150	250	200
Open files	346	346	346	3,000	5,000
Users	8,192	8,192	8,192	8,192	8,192
Groups	8,192	8,192	8,192	8,192	8,192
Users in group	8,191	8,191	8,191	8,191	8,191
Groups per user	42	42	42	42	42
Locked ranges/user	20	20	20	20	20

Apple II logon	yes	yes	yes	yes	no
Apple II network startups	40	n/a	n/a	n/a	n/a
Minimum RAM	4MB	8MB	16MB	16MB	16MB
System software	7.0	7.1	7.5	7.5.1	A/UX 3.1

End_Table

Supported platforms

AppleShare Server

- AppleShare 3.0.1: 68030-based (or earlier) Macintosh computers
- AppleShare 4.0.2: 68040-based Macintosh computers*
- AppleShare 4.2: NuBus PowerPC processor-based Workgroup Servers**

AppleShare Client

Macintosh

- An Apple Macintosh computer with an internal hard disk drive and at least 4MB of RAM
- Mac OS software version 6.0.7 or later
- System 7.5.1 required for optimal performance of AppleShare 4.2

Windows

- Any IBM or 100 percent compatible computer running Intel processor 386 or greater; ISA, MicroChannel, VISA, and EISA internal buses; 4MB of RAM
- Windows 3.1, 3.11, or Windows for Workgroups 3.11 software
- MS-DOS 5.0 or later
- Ethernet network adapter card
- NDIS 3.0 or ODI network interface driver

* AppleShare 4.0.2 is not designed to run on the Macintosh Quadra 660AV and Macintosh Quadra 840AV computers.

** AppleShare 4.2 is not designed to run on PCI-Bus Power Macintosh computers.

Ordering and Licensing Information

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AppleShare 3.0.1

Order No. M0090LL/B

AppleShare 4.0.2

Order No. M3995Z/A

AppleShare 4.2

Available as an upgrade for AppleShare 4.x customers. Call the Apple network info hotline at (408) 862-3385 for details.

AppleShare Client for Windows

Order No. M3481Z/A

(Included in all Workgroup Server configurations; client network license is included and allows the installation of the client software on any Windows software-based PC on the network)

For more information about AppleShare, call the Apple Network Info Hotline (408)

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862-3385 or send electronic mail to: abs.netinfo@applelink.apple.com

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Oct 1995 - Made available to everyone.

03 Oct 1995 - Added comparisons of AppleShare 4.1 and Pro 1.1.

Support Information Services

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Tech Info Library Article Number:18625



Tech Info Library

Workgroup Server 9150/120: CD-ROM Setup 5.0.3 Issue (10/95)

Revised: 10/4/95
Security: Everyone

Workgroup Server 9150/120: CD-ROM Setup 5.0.3 Issue (10/95)

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Article Created: 4 October 1995

TOPIC -----

This article describes an issue with the Workgroup Server 9150/120 and CD-ROM Setup 5.0.3 found on the Workgroup Server 7.5.1 startup CD.

DISCUSSION -----

If you have either Apple RAID striped, or mirrored volumes on a Workgroup Server 9150/120 with an internal Panasonic (also known as MKE) CD-ROM drive, the server may freeze during startup from a bootable CD-ROM disc. This may happen even if you have installed Macintosh CD-ROM Setup 5.1.1 or later on a Workgroup Server 9150/120 and then try to startup from the startup CD disc that came with your server.

This is because the older CD-ROM driver, version 5.0.3, will be loaded from the startup CD disc, which may cause the server to freeze. Typically, if a Workgroup Server freezes during startup from the startup CD, a hardware problem might be suspected since the startup CD is considered a "clean" system. However, with the older CD-ROM drivers on the CD, a startup floppy disk should be made to let you startup the server in emergencies. A startup floppy disk can be made by following the following steps:

Step 1

Creating a disk tools floppy from the image on the Workgroup Server 7.5.1 CD.

Step 2

Throw the CD-ROM Setup 5.0.3 extension from the Extensions folder in the System Folder on the Disk Tools disk created in step 1 in the trash, and select the Empty Trash command in the Special menu.

Step 3

Drag the CD-ROM Setup 5.1.1 extension to Disk Tools floppy disk's Extensions folder in the System Folder.

Step 4

Keep this Disk Tools floppy for emergencies to startup the Workgroup Server 9150/120.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18626



Tech Info Library

MacX 1.5: Technical Specifications (1/97)

Revised: 1/17/97
Security: Everyone

MacX 1.5: Technical Specifications (1/97)

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Article Created: 21 September 1995
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article provides the product technical specifications and ordering information for MacX 1.5.

DISCUSSION -----

Technical Specifications

X Window features supported

- Full X11R5 specification
- Color and gray-scale X applications
- Font server through the X logical font description (XLFD) protocol
- xdm and xdmcp logins
- rsh and rexec logins
- ICCCM window management
- Rooted or rootless windows
- Automated host login and client startup

Supported network packages

- Apple TCP/IP Connection for Macintosh
- DEC PATHWORKS for Macintosh
- InterCon TCP/Connect II
- Novell LAN Workplace for Macintosh
- Wollongong PathWay Access

System requirements

- Apple Macintosh, Power Macintosh, PowerBook, or other Mac OS based computer
- 68030, 68040, or PowerPC processor
- Macintosh system software version 7.1 or later
- At least 5MB of RAM for 680x0-based computers (8MB recommended), and 8MB for PowerPC processor-based computers (16MB recommended)

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- Local or network access to a CD-ROM drive
- Access to a UNIX or VMS host via one of the following connections:
 - Direct Ethernet or Token Ring
 - LocalTalk bridged to Ethernet
 - Remote access via PPP, SLIP, or ARA

Ordering Information

MacX 1.5

Order No. M0108Z/E

- CD-ROM containing MacX for both 680x0-based and PowerPC processor based Macintosh systems and MacTCP, Apple DocViewer, SimpleText, and DiskCopy software
- MacX Getting Started guide

MacX 1.5 20-User Kit

Order No. M3780Z/A

MacX 1.5 Volume License Kit

In the U.S., order No. M4462LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

For more information about MacX, we encourage you to visit Apple's Web site at <<http://www.apple.com/>> or our FTP site at <<ftp://ftp.info.apple.com>>

Article Change History:

17 Jan 1997 - Updated Online Information

Support Information Services

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Tech Info Library Article Number:18627



Tech Info Library

PowerShare 1.1: Product Description (9/95)

Revised: 9/22/95
Security: Everyone

PowerShare 1.1: Product Description (9/95)

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Article Created: 21 September 1995

TOPIC -----

This article describes the Apple PowerShare 1.1 Collaboration Server.

DISCUSSION -----

PowerShare Collaboration Servers software from Apple provides easy-to-use e-mail, catalog, and privacy services for AppleTalk networks. It extends the capabilities of Apple's PowerTalk software to workgroups, enhancing the reliability, security, and manageability of collaborative communications.

PowerShare permits centralized administration of PowerTalk collaboration services and shifts some PowerTalk functions from individual client work-stations to powerful workgroup servers.

PowerShare Mail servers capture incoming mail even when the recipient's computer is not available. Users can retrieve their messages when they're working at a different computer; with Apple Remote Access software, they can dial in from anywhere. PowerShare administrators can import data from tab-delimited text files, including Internet addresses. There's also utility software for transferring e-mail and user account information from a Microsoft Mail for AppleTalk Networks server to a PowerShare server.

Optional server-based gateway software provides easy-to-manage, centralized communications, allowing all connected PowerTalk users to receive fax messages, Internet e-mail, and messages from other sources in their "universal mailbox."

PowerShare Catalog servers hold departmental and company-wide directories (including Internet addresses) for access by any PowerTalk user. Instead of each user having to maintain a separate personal catalog, a single administrator can ensure that everyone has up-to-date information. Shared catalogs can be replicated on multiple PowerShare servers to provide fast access from anywhere on the network.

PowerShare automatically encrypts data passing through its servers. It also authenticates users to make certain that sensitive information is seen only by those for whom it is intended.

PowerShare comes with Easy Setup software, which lets the network administrator configure mail and catalog servers in minutes. The administrator can then use the PowerShare Admin program from any Macintosh computer on the network to create user accounts and perform other management tasks.

Features

Server-based mail

- Enables users to retrieve their mail from any connected Mac OS-based computer (including dial-in connections using Apple Remote Access software)
- Supports centralized, easy-to-manage gateways that let PowerTalk users exchange mail with remote messaging systems
- Permits users of shared workstations to keep private mailboxes on the server
- Saves disk space on individual computers

Shared catalogs

- Makes vital information instantly accessible to everyone who needs it
- Permits centralized administration of shared information
- Lets administrators import text files containing Internet addresses

Enhanced network security

- Encrypts communications to protect confidentiality
- Authenticates users to ensure that sensitive information is seen only by the intended recipients

Easy installation and management

- Includes the Easy Setup utility to configure servers within minutes
- Allows an administrator to manage all PowerShare servers from any Mac OS-based computer on the network

Support Information Services

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Tech Info Library Article Number:18628



Tech Info Library

PowerShare 1.1 Collaboration Servers Tech Specifications (9/95)

Revised: 9/22/95
Security: Everyone

PowerShare 1.1 Collaboration Servers Tech Specifications (9/95)

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Article Created: 21 September 1995

TOPIC -----

This article provides the technical specifications and order information for PowerShare 1.1 Collaborative Servers software.

DISCUSSION -----

Technical Specifications

New features in PowerShare 1.1

- Improved server routing performance that gets messages to their destinations up to three times faster
- Ability to import tab delimited text files containing data such as Internet addresses and telephone listings
- Ability to store Internet addresses in a PowerShare catalog and manage them from within the PowerShare Admin application
- Apple Migration Tool for Microsoft Mail, for transferring e-mail and user account information from a Microsoft Mail for AppleTalk Networks server to a PowerShare server

PowerShare Mail server

- Provides server-based messaging services for PowerTalk users
- Stores PowerTalk messages to ensure delivery when user systems come online
- Saves disk space on client workstations

PowerShare Catalog server

- Stores collaborative information—such as group addresses, document templates, graphics, and sounds—in shared catalogs
- Authenticates users and encrypts their network traffic (including e-mail)
- Supports distributed systems of multiple servers
- Replicates and synchronizes catalogs across multiple servers for higher performance and greater reliability
- Enables multiple collaborative applications to share a single catalog

PowerShare Admin utility

- Lets administrators create user accounts and define groups
- Monitors mail and catalog servers to detect problems
- Provides system alerts to administrators
- Permits server management from any Macintosh system on the network

Easy Setup utility

- Lets administrators quickly configure a simple PowerShare system

System requirements

- One of the following systems:
 - An Apple Macintosh computer with a 68020 or later processor
 - A Power Macintosh computer
 - Any other similarly equipped Mac OS-based computer
- At least 8MB of RAM
- Macintosh System 7.5 or later with PowerTalk* installed
- A hard disk drive
- An AppleTalk connection
- Client computers: Macintosh, PowerBook, Power Macintosh, and/or other Mac OS-based client computers running Macintosh System 7.5 or later with PowerTalk* installed and an AppleTalk connection (direct or via Apple Remote Access software)

* The PowerTalk software included in Macintosh System 7.5 provides a single universal mailbox for all incoming messages from many sources, supports the use of collaborative applications to work together over a network, and lets users set up catalogs (directories) of personal information.

Ordering Information

PowerShare Collaboration Servers

Order No. M1907Z/D

- PowerShare version 1.1 server software, including PowerShare Mail server, Catalog server, Admin, and Easy Setup software
- Apple Migration Tool for Microsoft Mail, for transferring information from a Microsoft Mail for AppleTalk Networks server to a PowerShare server
- PowerShare System Administrator's Guide
- PowerTalk and PowerShare Solutions Guide

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18629



Tech Info Library

Macintosh 580 & 630: Disk Tools Disk Won't Mount CDs (10/95)

Revised: 10/16/95
Security: Everyone

Macintosh 580 & 630: Disk Tools Disk Won't Mount CDs (10/95)

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Article Created: 16 October 1995

TOPIC -----

I made a Disk Tools disk from the Disk Images folder on the Apple Macintosh CD that came with my Macintosh Performa 630 or 580 computer. When I started up the Macintosh with that Disk Tools disk, I could not recognize the CD-ROM drive.

DISCUSSION -----

The Disk Tools disk image included with these computers is not intended to be a fully functional system, it is an emergency boot volume to perform hard disk repair. The System Folder on the Disk Tools disk you created is missing the resources to mount a CD-ROM disc.

The recommended alternative is to startup from the Apple Macintosh or Performa CD by holding down the Option-Command-Shift-Delete keys, as detailed in the TIL article "Macintosh: Starting from Floppy or CD-ROM disc".

Support Information Services

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Tech Info Library Article Number:18630



Tech Info Library

Plaintalk 1.4.1: PostScript Error When Printing Read Me (10/95)

Revised: 10/9/95
Security: Everyone

Plaintalk 1.4.1: PostScript Error When Printing Read Me (10/95)

=====

Article Created: 20 September 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

I am unable to print the "Using Speech Recognition" ReadMe file included with the Plaintalk 1.4.1 software I downloaded. I have tried several different versions of the LaserWriter driver and different computers but I get a Postscript error in each case.

DISCUSSION -----

There was a problem with one of the graphics imbedded in the "Using Speech Recognition" ReadMe file that was posted to online services from August 17, 1995 through October 5, 1995. A corrected ReadMe File was posted October 5, 1995.

If you are unable to download the new corrected ReadMe file, you can open the old document with a word processing program other than SimpleText and it will print fine.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
09 Oct 1995 - Added information on the corrected file.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18631



Tech Info Library

RAM Doubler: Still Loads Even When Shift Key Held Down (9/95)

Revised: 9/21/95
Security: Everyone

RAM Doubler: Still Loads Even When Shift Key Held Down (9/95)

=====

Article Created: 21 September 1995

TOPIC -----

When I start my computer with the Shift key held down, RAM Doubler still loads.
Is my keyboard defective?

DISCUSSION -----

No, even with with extensions off, RAM Doubler will load. To temporarily disable RAM Doubler, during startup hold down the Tilde (~) key located to the left of the !/1 key on your keyboard. If you have System 7.5.x, during startup, you can hold down the space bar on your keyboard until the Extensions Manager opens and uncheck RAM Doubler to disable the product.

If conventional attempts to disable RAM Doubler fail, contact the makers of RAM Doubler, Connectix, for compatibility and configuration assistance with their product.

If you are troubleshooting a system software or extensions issue, you may wish to perform a clean install or clean restore of your system software. Use the search string "clean install" to locate the specific TIL article on a clean install or clean restore for your computer.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Connectix's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18632



Tech Info Library

Energy Saver Control Panel: Sleep and Power Management (5/96)

Revised: 5/17/96
Security: Everyone

Energy Saver Control Panel: Sleep and Power Management (5/96)

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Article Created: 22 September 1995
Article Reviewed/Updated: 16 May 1996

TOPIC -----

This article provides details about the "Sleep" and power management functions of the Energy Saver control panel shipping with the Power Macintosh 7200, 7500, and 8500 series computers.

Questions answered in this article:

- 1) Is the central processing unit (CPU) still responsive when the Energy Saver control panel spins down the hard drive in sleep mode?
- 2) Is it possible to spin down the hard drive, but not put the monitor into sleep mode?
- 3) Can the Energy Saver control panel spin down any hard drive attached to the SCSI bus, or only the startup disk?
- 4) When does the Energy Saver control panel begin the countdown before putting the computer to sleep or shutting down? Is there a specified delay, or does the countdown begin as soon as the computer is idle?
- 5) If my computer is in sleep mode, and a fax call comes in (assuming the fax software is set to receive faxes), does my computer wake up and receive the fax?

DISCUSSION -----

1) Question: Is the central processing unit (CPU) still responsive when the Energy Saver control panel spins down the hard drive in sleep mode?

Answer: While in sleep mode, the CPU responds to mouse, keyboard, and serial port activity. If an activity requires disk access, the hard drive is spun up.

2) Question: Is it possible to spin down the hard drive, but not put the monitor into sleep mode?

Answer: Yes, it is possible for the hard drive to spin down even though the monitor is not in sleep mode. When the hard drive is spun down, the arrow is unresponsive (as if the system is frozen), but hitting a key spins the hard drive back up. However, there is a delay before the drive spins back up, and there is no notification to the user that the drive is spinning back up.

3) Question: Can the Energy Saver control panel spin down any hard drive attached to the SCSI bus, or only the startup disk?

Answer: The Energy Saver control panel may or may not spin down all hard drives attached to the SCSI bus. Apple has not tested The ability to spin down a hard drive is dependent on the formatting software used on the hard drive. In limited testing, the Energy Saver control panel has spun down external drives formatted with Drive Setup.

4) Question: When does the Energy Saver control panel begin the countdown before putting the computer to sleep or shutting down? Is there a specified delay, or does the countdown begin as soon as the computer is idle?

Answer: The countdown to shutdown or sleep begins as soon as the computer is idle. Your computer is idle if when all of the following conditions are met:

- No Apple Desktop Bus (ADB) routines other than routine monitoring of the bus
- No Input/Output (I/O) calls to firmware (Read, Write, Control, Format, Status)
- No changes in the cursor (for example, the rotation of a hand in the clock icon)
- No post-event calls (for example, a call resulting from insertion of a disk)
- No communication through the serial port

5) Question: If my computer is in sleep mode, and a fax call comes in (assuming the fax software is set to receive faxes), does my computer wake up and receive the fax?

Answer: A modem that uses the serial port's 'wake on ring' pin setting, and that has software that reads it, can wake the CPU from sleep. The GeoPort Telecom Adapter from Apple features this capability. Depending on background activity, some fax software may keep the CPU busy and not allow the computer to enter "sleep" mode.

Article Change History:

16 May 1996 - Revised modem information.

08 Jan 1996 - Changed distribution status.

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Tech Info Library Article Number:18633



Tech Info Library

Macintosh Client Unrecognized Login Sequence to NetWare (10/95)

Revised: 10/17/95
Security: Everyone

Macintosh Client Unrecognized Login Sequence to NetWare (10/95)

Article Created: 25 September 1995
Article Reviewed/Updated: 17 October 1995

TOPIC -----

I just installed a NetWare 4.1 server on my network, but now my Macintosh clients receive this message, "This File server is not using a recognizable logon sequence," when trying to access the 4.1 server. My existing Novell servers did not cause this message. What can I do to resolve this?

DISCUSSION -----

First, the situation you describe is not an Apple Computer issue. For support with NetWare servers, you should either contact your network and/or NetWare administrator(s), or Novell support directly.

In summary, Novell has alternate methods of user login authentication which are not inherent to AppleShare. The error message you describe indicates that this server is employing an alternate authentication scheme. From information we have, this appears to be a NetWare 4.1 issue only. The error message will occur when you do not have the Novell Macintosh client software (Netware.UAM) installed which came with NetWare 4.1, and/or you have the default Macintosh security options set.

Here are two procedures to check which may resolve your issue. These are both Novell server and administration procedures that should be done by the support person who is responsible for the Novell server(s).

Install Novell Macintosh Client Software

The path to the Macintosh client software is /PUBLIC/Mac/English on the Novell 4.1 server SYS volume. The file you are looking for is MacNDS.sea, and launch this .sea (self-extracting archive) file. Then launch the extracted installer which will add nine items to the Extensions and Control Panels folders.

- Seven are extensions, they are: MacIPX Ethernet, MacIPX AppleTalk, MacIPX

Token Ring, AppleShare (3.5), NetWare Notify, ~NetWare Aliases, and NetWare UAM. Note that NetWare UAM is for the support of Novell's User Authentication Method

- Two are control panels, they are: MacIPX and MacNCP.

Also, please refer to the Novell client documentation which is either online, or in manual form.

Load ATCONFIG.NLM

From the Novell 4.1 file server load ATCONFIG.NLM by selecting the following menu options:

Configure File Services
 Detailed Configuration
 User Access Information

Under User Access Information the first option should read:

Allow Clear Text Passwords Login YES

The default setting for Allow Clear Text Passwords Login is NO. Setting this option to YES will let Macintosh clients login without Novell's Macintosh client software being installed. This procedure is less secure because this option does not necessitate encrypted passwords on the network's physical media, and a packet analyzer can read the passwords.

Article Change History:
17 Oct 1995 - Combined articles.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18637



Tech Info Library

Open Transport, Eudora, and PPP Connection Issue (10/96)

Revised: 10/24/96
Security: Everyone

Open Transport, Eudora, and PPP Connection Issue (10/96)

=====

Article Created: 25 September 1995
Article Reviewed/Updated: 24 October 1996

TOPIC -----

I have a Power Macintosh 7500 with Open Transport 1.0.7, MacPPP 2.1.1SD. I've gotten Netscape and Fetch to work. With Eudora, however, I have a problem of not being able to send mail. I can receive mail, but when attempting to send I get the dialog, "Euroda said 'data:' and server said "", with a sorry button.

I have tried three different versions of Eudora -- 1.5.1, 1.5.3, and 2.1.3 (Eudora Pro). I get the same errors with all of them. I have also called Eudora technical support, and received conflicting information, although the more senior person told me there were problems with 2.1.3.

My question is, does Eudora work with Open Transport? Your Read Me file indicates at least that Eudora 1.5.1 should work.

DISCUSSION -----

This issue has been taken care of with Open Transport 1.0.8 and later, so you should upgrade your version of Open Transport. Version 1.1 is part of System 7.5 Update 2.0, which is available from the online services where Apple posts software updates. Also, Qualcomm currently recommends using Eudora versions 1.5.3, 1.5.4, 2.1.3, 2.1.4 (or newer) with Open Transport.

If you do not have access to Open Transport 1.0.8 or later the workaround below may work.

Eudora 1.5.1 does work properly with Open Transport unless you are using a SLIP or PPP connection. In this case, Eudora has a issue sending small mail messages.

The workaround at this point is to make sure the mail message contains at least 1500 characters. This seems to allow the message to be sent every time. This workaround has not received extensive testing and is not guaranteed to work. In

fact, 1500 characters may be a bit of overkill but it seems to be reliable.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

24 Oct 1996 - Updated Eudora information.
09 Jul 1996 - Added information on Open Transport 1.1.
02 Jul 1996 - Added Fax Doc word

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Tech Info Library Article Number:18638



Tech Info Library

Cascading the Ethernet 10T/5 Workgroup Hub (9/95)

Revised: 9/25/95
Security: Everyone

Cascading the Ethernet 10T/5 Workgroup Hub (9/95)

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Article Created: 25 September 1995

TOPIC -----

This article describes cascading the Ethernet 10T/5 Workgroup Hub.

DISCUSSION -----

For proper operation when cascading the Ethernet 10T/5 Workgroup Hub, a port on the Workgroup Hub should be:

- Connected to the uplink port of the parent hub.
- Connected to a regular port using either a 10-baseT crossover cable, or with two 10-baseT cables joined with the Apple Expansion adapter (included with the hub).

NOTE: The cascade limits for 10-baseT demand that no packet on the network travel through more than four hubs or repeating devices. This specification must NOT be exceeded.

Support Information Services

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Tech Info Library Article Number:18640



Tech Info Library

Global Village PowerPort Gold: PPP Initialization String (9/95)

Revised: 4/21/97
Security: Everyone

Global Village PowerPort Gold: PPP Initialization String (9/95)

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Article Created: 26 September 1995

TOPIC -----

What initialization string should I enter for PPP access using a Global Village PowerPort Gold modem which came with my Performa?

DISCUSSION -----

The recommended initialization string for dialing into UNIX-based PPP servers would be:

AT&F1%C0\NO (NOTE: Use zeroes, not the letter "o")

This command string resets the modem to factory defaults and turns off hardware compression and error correction.

For other PPP servers, use the initialization string:

AT&F1

This command string resets the modem to factory defaults.

Support Information Services

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Tech Info Library Article Number:18642



Tech Info Library

What Is MacIPX and How To Obtain It (9/95)

Revised: 9/26/95
Security: Everyone

What Is MacIPX and How To Obtain It (9/95)

=====

Article Created: 26 September 1995

TOPIC -----

What is MacIPX and how do I get it?

DISCUSSION -----

MacIPX is a control panel that lets a Macintosh computer use IPX (internet packet exchange) services, a Novell defined protocol. MacIPX is not an Apple product, it is a Novell product. If a user needs support or upgrade information for MacIPX, they need to contact the vendor from whom they received MacIPX. For example, Claris has licensed MacIPX from Novell for use with some of its FileMaker database products; because Claris ships MacIPX then a user should contact Claris for MacIPX support related to FileMaker. Another example might be if a user gets MacIPX from Novell as part of NetWare file services, then they should contact Novell for support.

Support Information Services

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Tech Info Library Article Number:18643



Tech Info Library

AppleVision Software: Not Supported With Non-AV Monitors (9/95)

Revised: 9/26/95
Security: Everyone

AppleVision Software: Not Supported With Non-AV Monitors (9/95)

=====

Article Created: 22 September 1995

TOPIC -----

I recently installed the AppleVision software on my Macintosh. I wanted to get a version of the Control Strip that works on my Macintosh and take advantage of the Monitor BitDepth and Monitor Resolution Control Strip modules included with the AppleVision software. Although I do not have an AppleVision Monitor, the AppleVision software and Control Strip functions worked fine on my computer initially. However, when I restarted the computer recently, it froze when the "Display Enabler" extension appeared on the screen.

DISCUSSION -----

The AppleVision software is only intended for use with Macintosh and Power Macintosh computers that have an AppleVision or AudioVision Display connected. Even though it may work, the AppleVision software checks for display type through the ADB bus and therefore is not supported on Macintosh and Power Macintosh computers that have other displays.

Support Information Services

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Tech Info Library Article Number:18644



Tech Info Library

Desktop Printing Software v1.0.3: Read Me File (9/95)

Revised: 9/26/95
Security: Everyone

Desktop Printing Software v1.0.3: Read Me File (9/95)

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Article Created: 26 September 1995

TOPIC -----

This article contains the ReadMe file included with the Desktop Printing software version 1.0.3.

DISCUSSION -----

Information About Desktop Printing Software version 1.0.3

Desktop Printing Software v1.0.3 fixes memory related problems that occur on Power Macintosh computers that have Open Transport installed. If you have a Power Macintosh 9500, 8500, 7500, or 7200, you may have experienced system errors while printing to a desktop printer. This is especially likely if you have turned off Virtual Memory.

Desktop Printing Software v1.0.3 includes support for the Extensions Manager. All three components of the Desktop Printing Software now appear in the Extensions Manager control panel. These components include the Desktop Printer Extension, Desktop PrintMonitor, and Desktop Printer Spooler.

Upgrading to Desktop Printing Software v1.0.3

This version of Desktop Printing Software is intended only for Macintosh users who need to upgrade from an earlier version of Desktop Printing Software. Desktop Printing Software v1.0.3 may not function correctly on Macintosh computers that do not already have an earlier version of Desktop Printing Software installed.

An installer application is not available for this upgrade. To install this upgrade, you must follow these steps:

Step 1

Restart your Macintosh with the Shift key held down. This will temporarily disable your system extensions.

Step 2

Select the desktop printer icons located on your desktop and drag them to the Trash.

Step 3

Drag the three components of the Desktop Printing Software v1.0.3 to your System Folder icon. Your Macintosh will display a message asking if you want to place the software components in your Extensions folder. Click "OK". Your Macintosh will then display a message asking if you want to replace the old components of the Desktop Printing Software with the new ones. Click "OK".

Step 4

Restart your Macintosh.

After restarting, a desktop printer icon for the printer you most recently used will automatically be created. To create a desktop printer icon for another printer, select the printer using the Chooser. After you close the Chooser the new desktop printer icon will appear on your desktop.

Disabling the Desktop Printing Software

If you are using System 7.5 or later, you can disable the Desktop Printing Software by un-checking the Desktop Printing Extension, Desktop PrintMonitor, and Desktop Printer Spooler in the Extensions Manager control panel. The Desktop Printing Software will be disabled after you restart your Macintosh.

If you are using an earlier version of the Macintosh System software, you will need to manually drag the Desktop Printing Extension, Desktop PrintMonitor, and Desktop Printer Spooler from your Extensions folder to a location outside of your System Folder. The Desktop Printing Software will be disabled after you restart your Macintosh.

Using More Than Four Desktop Printers

If you are using a Power Macintosh, and want to have more than four desktop printers, you must increase the Desktop PrintMonitor memory allocation by 12K for each additional desktop printer. To do so, select the Desktop PrintMonitor's icon -- it's in the Extensions folder inside the System Folder -- choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

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Support Information Services

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Tech Info Library Article Number:18645



Tech Info Library

Apple MPEG Media System: Frequently Asked Questions (12/95)

Revised: 2/12/96
Security: Everyone

Apple MPEG Media System: Frequently Asked Questions (12/95)

=====

Article Created: 26 September 1995
Article Reviewed/Updated: 12 December 1995

TOPIC -----

This article contains frequently asked questions (FAQ) about the Apple MPEG Media System and related MPEG terminology.

DISCUSSION -----

Question:
What is MPEG-1?

Answer:
MPEG-1 is an ISO standard developed by the Moving Picture Experts Group for compressing and decompressing video and audio for playback on computers, gameplayers and CD-ROM discs. MPEG-1 is a compression and decompression standard which allows you to play full screen, full motion digital video on your computer.

By definition, MPEG-1 offers the following features:

- Playback from a standard CD-ROM drive
- 74 minutes of video per CD-ROM disc
- Full motion video (30 fps for NTSC; 25 fps for PAL; 24 fps for film playback)
- 24-bit video playback
- 16-bit audio

Question:
Is it really full screen digital video?

Answer:
By definition of MPEG-1, the screen size is 352x240, regardless of the type of computer it is used on. As a result, all computers, including Macintosh and PC compatible, require some sort of pixel doubling/pixel replication in order to

get to 640x480.

Question:

How does this differ from QuickTime?

Answer:

QuickTime provides a mechanism for playing back video sequences at anywhere from 10 to 24 frames per second in a 320x240 window. When viewing the video, it can be choppy and slow. MPEG video played back is smooth flowing full motion.

Question:

What about software based MPEG?

Answer:

Software MPEG, although inexpensive has many limitations. First, software-based MPEG requires at least a 90 MHz Pentium system, which is expensive. Software MPEG playback of non-interactive video titles requires approximately 80% of the computers cycles and does not provide full motion playback. As a result, the computer and user can not perform any tasks in the background while watching a video. More importantly, software MPEG will not have the bandwidth and capability to run interactive titles. Hardware based MPEG solutions on the other hand, require only approximately 20% of the machines cycles. As a result, users can perform tasks on their computer (such as working on a spreadsheet) while simultaneously playing an MPEG movie. In addition, a hardware based MPEG solution is required in order to run any interactive games and interactive education titles.

Question:

What is the Apple MPEG Media System?

Answer:

The Apple MPEG Media System is an MPEG-1 playback (decompression only) card for the Macintosh.

Question:

What computers does this work in?

Answer:

The Apple MPEG Media System works in Macintosh or Power Macintosh computers with an LC-PDS slot and a Video In Slot, such as the Macintosh 630 series of computers, the Power Macintosh 5200 and 6200 series, and the Macintosh LC 580.

The Apple MPEG Media System also requires the Apple Video System or the Apple TV/Video System.

The Apple MPEG Media System does not work in the Macintosh 630 DOS Compatible computer or the Performa 640 DOS Compatible because the MPEG card fits into the LC PDS slot, which is already occupied in the DOS Compatible computers. The Apple MPEG Media System also does not work in Macintosh 630 series computers,

which have a Processor Upgrade Card installed. The Processor Upgrade Card in these computers blocks the PDS slot, which the Apple MPEG Media System requires.

Question:

How much does the Apple MPEG Media System cost?

Answer:

Under \$300, and it includes several MPEG titles.

Question:

Can I play any MPEG titles on my Macintosh?

Answer:

There are a number of different playback standards that have been developed by various companies. Many are proprietary in nature, and as a result have limited playback capability. The different playback standards and their compatibility with the Apple MPEG Media System are as follow:

Digital Videos

This is a Philips proprietary standard. The Apple MPEG Media system can play back all non-interactive Digital Videos.

CDi

CDi and Digital Video are essentially the same. The Apple MPEG Media system can play back all non-interactive CD-i titles.

Video CD-ROM discs

The Apple MPEG Media system can play back all Video CD titles. The interactive Video CD titles simply have a graphical user interface as a front end for selecting and playing the movies on the CD-ROM disc. The Apple MPEG Media System already has a graphical, intuitive user interface to select movies in Apple Video Player.

Interactive titles

The first generations of interactive titles will specify whether they play on Windows or the Mac OS. Interactive titles developed on PC compatible computers will not work on Macintosh computer. However, the Apple MPEG Media System is tightly integrated with QuickTime 2.x. As a result, with QuickTime and QuickTime for Windows a developer could potentially develop a title that would work on both Macintosh and Windows systems.

Article Change History:

12 Dec 1995 - Added information on Processor Upgrade Card.

01 Dec 1995 - Change title and added keyword.

Support Information Services

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Tech Info Library Article Number:18646



Tech Info Library

Apple MPEG Media System: Specifications (3/96)

Revised: 3/4/96
Security: Everyone

Apple MPEG Media System: Specifications (3/96)

Article Created: 26 September 1995
Article Reviewed/Updated: 1 March 1996

TOPIC -----

This article describes the specifications for the Apple MPEG Media System.

DISCUSSION -----

Hardware Features

- Uses PDS slot and DAV connector
- 30 fps playback up to 24 bit*
- Display window up to 640x480 (pixel doubled)
- 16-bit CD quality audio*
- User Installable - No external cabling or power
- NTSC/PAL support

* Note:

The Apple MPEG Media System can playback at these audio rates and video resolutions. However, not all Macintosh computers playback at these rates and resolutions. Check the specifications of your Macintosh computer for information on audio rates and video resolutions.

Software Features

- Apple Video Player 1.3
 - Chapter navigation
 - Capture
 - Re-sizable window
- Supported by QuickTime 2.x

Hardware Specifications

- C-Cubed CL450 MPEG Video Decoder
 - 4 MB DRAM buffer

- NTSC video playback 30 fps
- Film playback 24 fps @ 320x240
- Plays existing MPEG data streams
- 44.1 Khz, 16-bit "CD Quality" audio
- PAL video playback 25 fps
- TI AV 110 MPEG Audio Decoder
 - 1 MB DRAM buffer

Configurations

- M3763LL/A Apple MPEG Starter Kit for Developers
 - Includes MPEG card and beta software
- M3763LL/B Apple MPEG Starter Kit for Developers
 - Same as above with final software
- M4242LL/A Apple MPEG Media System
 - Includes MPEG Card and education specific CD titles
- M4243LL/A Apple MPEG Media System
 - Retail package for consumer, higher-education, and business.
- M4244LL/A MPEG Multipack

Package for developers for creating custom solutions. Includes 10 MPEG cards and one software kit minutes of video to be contained on a single CD-ROM disc.

Hardware Requirements

- Macintosh or Power Macintosh computers with an LC-PDS slot AND a Video In Slot. This includes the Macintosh 630 series of computers, the Power Macintosh 5200 and 6200 series, and the Macintosh LC 580.
- The Apple MPEG Media System also requires the Apple Video System or the Apple TV/Video System.

Note:

The Apple MPEG Media System does not work in the Macintosh 630 DOS Compatible computer or the Performa 640 DOS Compatible because the MPEG card fits into the LC PDS slot, which is already occupied in the DOS Compatible computers. The Apple MPEG Media System also does not work in Macintosh 630 series computers, which have a PowerPC upgrade card installed. The PowerPC Upgrade card in these computers blocks the PDS slot, which the Apple MPEG Media System requires.

Article Change History:

- 01 Mar 1996 - Added note about video resolution and audio rates.
- 12 Dec 1995 - Added hardware requirements section.

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Tech Info Library Article Number:18647



Tech Info Library

QuickTime Conference: Presentations Window Sizes (9/95)

Revised: 9/26/95
Security: Everyone

QuickTime Conference: Presentations Window Sizes (9/95)

=====

Article Created: 26 September 1995

TOPIC -----

What are the window sizes of presentations using QuickTime Conferencing?

DISCUSSION -----

When using QuickTime Conferencing with AppleTalk or TCP/IP on a LAN or WAN, the window sizes are standard QuickTime formats:

- Half size = 80x60
- Normal size = 160x120
- Double size = 320x240

When using QTC with a H.320/ISDN card the window sizes are H.320 formats:

QCIF = 176x144
CIF = 352x288

Support Information Services

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Tech Info Library Article Number:18648



Tech Info Library

MAE 2.0: Unable to Format Unformatted Floppies on HP (9/95)

Revised: 9/26/95
Security: Everyone

MAE 2.0: Unable to Format Unformatted Floppies on HP (9/95)

=====

Article Created: 26 September 1995

TOPIC -----

I am not able to format floppies that have never been formatted from within MAE (Macintosh Application Environment) on my HP (Hewlett Packard) workstation. If a floppy has been previously formatted by either DOS, UNIX, or Mac OS, I am then able to format it in MAE.

DISCUSSION -----

To correct the problem, first run 'mediainit' from an hpterm. Once it has been formatted as a UNIX disk, MAE will then be able to format the floppy.

(example: mediainit /dev/rfloppy/c201d0s0)

This issue is being investigated by engineering, however, we do not know when or if this issue will be addressed.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18649



Tech Info Library

Color StyleWriter 2200: Universal Power Adapter Available (9/95)

Revised: 9/26/95
Security: Everyone

Color StyleWriter 2200: Universal Power Adapter Available (9/95)

=====

Article Created: 26 September 1995

TOPIC -----

I am going to do some international traveling with my Color StyleWriter 220. Will the power adapter that came with my printer work properly in countries outside the United States?

DISCUSSION -----

The Color StyleWriter 2200 ships with a power adapter designed to work in the country where it is sold. The following chart lists the specifications for the power adapters sold in the various regions.

Begin_Table

Country	Voltage	Frequency
=====	=====	=====
USA	120V + 10%/-15%	60 +/-2 Hz
Japan	100V +/- 10%	50 +/-2 Hz
Europe	220V +/-10%	50 +/-2 Hz
Australia	240V +/-10%	50 +/-2 Hz
UK	240V +/-10%	50 +/-2 Hz

End_Table

An optional universal power adapter which handles 100-240 volts at 50-60 Hz is available by ordering the M4133G/A Universal Power Adapter. The universal power adapter has a detachable power cord which provides flexibility because it accepts any standard Macintosh power cord, allowing you to easily adapt to the many different power plug configurations available worldwide.

Support Information Services

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Tech Info Library Article Number:18650



Tech Info Library

PowerShare Design & Planning Guide: Where To Find (9/95)

Revised: 9/27/95
Security: Everyone

PowerShare Design & Planning Guide: Where To Find (9/95)

=====

Article Created: 27 September 1995

TOPIC -----

This article tells you where to find "The Design & Planning of PowerShare Collaboration Server Systems" guide, and provides its table of contents.

DISCUSSION -----

You can find "The Design & Planning of PowerShare Collaboration Server Systems" guide in Acrobat pdf format at the following URL:

<http://www.info.apple.com/dev/evangelism/powertalk/guides.html>

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Tech Info Library Article Number:18652



Tech Info Library

Key Curriculum Press

Revised: 4/8/97
Security: Everyone

Key Curriculum Press

=====

Article Created: 27 September 1995
Reviewed/Updated: 8 April 1997

Key Curriculum Press

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Company Profile:

Software company specializing in software and books geared towards mathematics education like The Geometer's Sketchpad and The Graphing Calculator.

Support Information Services

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Tech Info Library Article Number:18653



Tech Info Library

PlainTalk: :Use PlainTalk Microphone Warning Message (9/95)

Revised: 9/27/95
Security: Everyone

PlainTalk: : "Use PlainTalk Microphone" Warning Message (9/95)

=====

Article Created: 27 September 1995

TOPIC -----

I have successfully installed the PlainTalk speech recognition software on my Macintosh Performa 5200CD series computer. At startup I am getting a message that warns me that voice recognition may not work well because I am using the built-in microphone. The software works fine, but is there any way to avoid this message?

DISCUSSION -----

The only way to avoid getting this error message is to use the PlainTalk microphone. The reason for the message is the internal microphone is susceptible to feedback and noise since it is located nearby and in the same housing as the built-in speakers. The software detects that you have chosen the built-in microphone in the Sound control panel and warns you accordingly.

An option for you is to purchase a PlainTalk microphone and select the external microphone as the input source in the Sound control panel. Open the Sound control panel, select Sound In from the pop-up menu, click Options, and choose the external microphone as your source.

Using the external PlainTalk microphone gives you better speech recognition.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18658



Tech Info Library

Macintosh CD-ROM: Using as a Jukebox (4/97)

Revised: 4/28/97
Security: Everyone

Macintosh CD-ROM: Using as a Jukebox (4/97)

Article Created: 28 September 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

If your Macintosh computer is equipped with a CD-ROM player, you probably already know about the thousands of CD-ROM titles on the market for conducting research, learning about dinosaurs, or trying new recipes. You have probably also learned to use your Macintosh to play audio compact discs while you work.

DISCUSSION -----

You can take the functionality of your Macintosh as a CD player much further. Along with being able to skip tracks, fast forward or reverse songs, you can set the AppleCD Audio Player to play your whole CD, repeat it continuously, play it in random order, or select and sort only some of the songs to play. This last feature, accessed by pressing the Program button, is very convenient because it lets you omit songs you don't like. And your Macintosh actually "remembers" which tracks not to play the next time you insert the CD. You can also drag and drop songs "on the fly" and rearrange their play order.

AppleCD Audio Player can tell you how long the given track or disc has been playing and how much time is remaining. If you use the program button to rearrange or omit tracks, the time window automatically recalculates to account for the changes you have made. To the right of the CD Title window, the total time for the selections you have chosen displays; this is a handy feature when making recordings from your Macintosh and trying to fit your music on a given length of audio tape.

The AppleCD Audio Player application lets you enter the titles and track list of all your CDs. It is a very simple process. If you need help, in System 7 or later, click on the balloon or "?" menu in the upper right corner of your screen and choose Show Balloons. As you move your mouse over the different areas of the AppleCD Audio Player window, Balloon Help describes each button's function and shows where to enter your CD titles.

Your Macintosh stores all CD specific information in a file called CD Remote Programs in the Preferences Folder of your System Folder. The entry in the CD Remote Programs file is cross-referenced against total time of audio, number of tracks, length of tracks, and various other unique characteristics of individual audio compact discs. This means each Audio CD release has a unique "signature" so if you have two copies of the same CD, the Macintosh recognizes either copy and displays its title and song list if only one of them has already been entered.

Your CD Remote Programs file can also be used on other Macintosh computers. This means you can copy this file to the Preferences Folder of other Macintosh computers and they too would recognize any previously entered CDs. There are other software programs that take this functionality even further.

The freeware program Audio CD Mover by Trygve Isaacson lets you open the CD Remote Programs file and view all your compact discs and their song lists. It also lets you merge your file with files from other computers. This way, you have a greater database of compact discs your Macintosh can recognize and list.

Another piece of freeware software, called CD Coyote by Esa Ristila, not only lets you merge and edit your CD Remote Programs files, but also lets you sort and export your listings for printing a permanent hard copy of your collection. If you get organized with your friends and neighbors in the Macintosh community, you can all share and merge your Audio CD databases and, theoretically, create one huge complete database of all the compact discs on the market! It is really cool to bring home a CD from the store and put it in your computer and have the Macintosh list for you the songs before you have even read the liner notes!

Using your CD-ROM equipped Macintosh, a few software programs, and your friends, you can have a Digital Jukebox that lists, organizes, and plays your favorite songs and even some that you have yet to discover! Do not forget to dress up your AppleCD Audio Player for your next party by personalizing its display colors in the Options menu!

Audio CD Mover and CD Coyote are freeware available on many online services.

This article was published in the "Information Alley":
Volume II, Issue 10, Page 4

Article Change History:
09 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18659



Tech Info Library

AWS 95: A/UX 3.1 and sar -d Not Implemented (9/95)

Revised: 9/29/95
Security: Everyone

AWS 95: A/UX 3.1 and sar -d Not Implemented (9/95)

Article Created: 29 September 1995

TOPIC -----

I have an Apple Workgroup Server (AWS) 95 with A/UX 3.1, and I'm trying to use the sar command with the -d option. However, the -d option does not work and I cannot find it in the man pages.

How do I use "sar -d", or if it's not available how do I monitor disk activity in a similar fashion?

DISCUSSION -----

The -d option, of the sar command, does not appear to have been implemented in A/UX 3.1.x on the AWS 95. Although the -d option did not generate any error messages, it returned nothing. For example, "sar -d 1 10" returned the time stamp every second 10 times.

You can try to use the -b and/or the -w option to monitor the block device buffering and swapping activities. For example,

```
sar -b 1 1000  
sar -w 1 1000
```

These two options are close to monitoring the disk activity you are looking for. For tuned performance, the system reports should be 100% of buffer caches and 0% for swapping activity.

Support Information Services

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Tech Info Library Article Number:18660



Tech Info Library

AplShare Windws Client & IBM PS Valuepoint Ethernet Card (9/95)

Revised: 9/29/95
Security: Everyone

AplShare Windws Client & IBM PS Valuepoint Ethernet Card (9/95)

=====

Article Created: 29 September 1995

TOPIC -----

This article describes an issue between AppleShare Client for Windows and the IBM PS Valuepoint Ethernet Card.

DISCUSSION -----

If the IBM PS Valuepoint ISA Ethernet card is being used with the AppleShare Client for Windows, the Windows PC will hang when attempting to login to an AFP file server. The solution is to update the F1ODISH.COM driver to one dated 30 April 1994 or later.

Support Information Services

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Tech Info Library Article Number:18662



Tech Info Library

ARA and Open Transport Issue (2/97)

Revised: 4/21/97
Security: Everyone

ARA and Open Transport Issue (2/97)

Article Created: 29 September 1995
Article Reviewed/Updated: 6 February 1997

TOPIC -----

I am using Apple Remote Access (ARA) Personal Server 2.0.1 with a Mac OS computer running an Open Transport version prior to 1.1.1. Each time I connect to the local network (either with LocalTalk, or Ethernet) and make an ARA connection, I lose the local network connection. I can see the remote servers in the Chooser, but not the local servers (AppleShare or Personal File Sharing). If a server is mounted and then an ARA connection is made, the server becomes dimmed.

I'm running Mac OS 7.5.2 with the Open Transport patch 1.0.7.

DISCUSSION -----

This issue has been fixed with Open Transport 1.1.1. If you are not using Open Transport 1.1.1 with ARA, you should update Open Transport. Open Transport 1.1.1 is available on Apple computer's online Software Update locations. Open Transport 1.1.1 is only supported as an update with Open Transport 1.1. Open Transport 1.1.1 is supported on System 7.1.x and System 7.5.3 and later.

NOTE: This issue is independent of whether you are using ARA 2.0.1 or 2.1.

Below is a description of tests which illustrate this Open Transport 1.0.7 and ARA 2.0.1 issue:

Let's say you have zone A and B that are local. The ARA client is in zone A. The ARA server is on a different internetwork in zone C. In addition, let's assume that you can't place the client in zone B via the AppleTalk control panel.

Test 1

If the client is connected to zone A with LocalTalk, then you lose all devices

in both zone A and B. All devices in zone C are available (as well as devices in other remote zones). This confirms what you reported in your escalation.

Test 2

If the client is connected to zone A with Ethernet, then devices in zone A and the remote zone C are available, but devices in zone B are not.

Article Change History:

06 Feb 1997 - Made changes for technical accuracy.

07 Jan 1997 - Corrected typographical error.

09 Dec 1996 - Changed distribution status.

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Tech Info Library Article Number:18666



Tech Info Library

Open Transport: ATalk Stays Off After Extensions Off Start 4/96

Revised: 4/18/96
Security: Everyone

Open Transport: ATalk Stays Off After Extensions Off Start 4/96

=====

Article Created: 29 September 1995
Article Reviewed/Updated: 18 April 1996

TOPIC -----

I notice when I restart my Power Macintosh 9500 computer after having started it with extensions off, AppleTalk remains turned off in the Chooser.

Is it possible to have AppleTalk default back on after an extensions off startup?

DISCUSSION -----

This issue has been corrected with System 7.5 Update 2.0. Updating your system is the fix for this issue.

Article Change History:
18 Apr 1996 - Updated article with the fix.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18670



Tech Info Library

Macintosh Print Pack: Does Not Support HP Printers (9/95)

Revised: 9/29/95
Security: Everyone

Macintosh Print Pack: Does Not Support HP Printers (9/95)

=====

Article Created: 29 September 1995

TOPIC -----

Is there a compatibility problem between the Hewlett-Packard Deskjet 500 series printers and the Macintosh when using the Macintosh Print Pack?

DISCUSSION -----

The Macintosh Print Pack does not support HP 500 series printers. The only drivers that the Print Pack supports are those that provide full Epson Emulation. The HP printers do not support Epson Emulation. There is a full list of printers supported in the Print Pack documentation.

If you need this functionality for HP products, GDT Softworks, supports some additional drivers including those for HP printers.

The Tech Info Library article titled "Locating Vendor Information" can help you search for GDT Softworks' address and phone number.

Support Information Services

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Tech Info Library Article Number:18671



Tech Info Library

SimpleText: Always Downloads Chicago Font (9/95)

Revised: 9/29/95
Security: Everyone

SimpleText: Always Downloads Chicago Font (9/95)

=====

Article Created: 29 September 1995

TOPIC -----

When printing from SimpleText to any LaserWriter, using the LaserWriter 8.x driver, I noticed it downloads Chicago during the printing process. It does not matter what fonts are included in the document, Chicago gets downloaded every time. This occurs on any version of SimpleText or LaserWriter 8 driver I have tried.

DISCUSSION -----

Chicago is the font used internally by the SimpleText for the page numbers at the bottom of each page. If the Chicago font is not already present in the printer's memory, it is downloaded to your printer with each print job.

Support Information Services

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Tech Info Library Article Number:18673



Tech Info Library

PlainTalk: Accessing the Speech Tutorial (9/95)

Revised: 9/29/95
Security: Everyone

PlainTalk: Accessing the Speech Tutorial (9/95)

=====

Article Created: 29 September 1995

TOPIC -----

The Speech Tutorial opened once after I installed PlainTalk 1.4.1, but now I cannot figure out how to reopen it.

DISCUSSION -----

The Speech tutorial appears the first time the Speech Control Panel is used to turn Speakable Items on. After the Speech Control Panel is closed, it creates a Speech Preferences file in the Preferences folder. When Speakable Items is turned on, the software looks in the Preferences folder for the existence of a Speech Preferences file, if there is one there, the tutorial is not opened. Therefore, if you do not turn on Speakable Items the first time you open the Control Panel, the tutorial will not appear the next time, even though it is the first time you enable speech recognition.

You can force the Speech Tutorial to launch by following these steps:

Step 1

Make sure Speakable Items is turned off in the Speech Control Panel.

Step 2

Remove the Speech Preferences file from the Preferences folder or drag it to the Trash.

Step 3

Open the Speech Control Panel and click "On" under Speakable Items to launch the Apple Guide tutorial. There are about 10 panels in the Speech tutorial.

If you want the tutorial to be accessed frequently, like in a classroom setting, you can use an AppleScript to open the Speech Guide file at any time. Copy and

..TIL18674-PlainTalk-Accessing_the_Speech_Tutorial_9-95_(TA34501).pdf

paste the following AppleScript into the Script Editor. It can be run directly from the Script Editor or saved as a stand alone application that you can double-click.

```
AGStart -- AGStart scripting addition is required to start Apple Guide
```

```
set ExtFolder to path to extensions folder as text  
copy ExtFolder & "Speech Intro Guide" to GuideFile  
copy ExtFolder & "Apple Guide" to AG
```

```
tell application AG to open alias GuideFile
```

Support Information Services

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Tech Info Library Article Number:18674



Tech Info Library

Internet Server Solution: Multiple Default HTML Pages (10/95)

Revised: 10/2/95
Security: Everyone

Internet Server Solution: Multiple Default HTML Pages (10/95)

Article Created: 2 October 1995

TOPIC -----

WebSTAR server and Netscape client software cannot support multiple domain names with multiple default HTML pages on a single IP address. Here is an example to illustrate:

Several Internet Server Solution for the World Wide Web users are acting as Web server providers. They setup the server, manage the internet connection, and publish content for other clients. For ease of use reasons, clients want their URL to contain only an FQDN and not a reference to the path of the HTML file.

For example, consult.com wants to advertise for customer.com. They have created DNS entries for consult.com and customer.com that refer to their server at IP address 1.2.3.4. They want to be able to advertise two URLs that contain only hostname information, individualized for the "site":

```
http://consult.com
http://customer.com
```

Rather than:

```
http://machine.consult.com/consult.HTML
http://machine.consult.com/customer.HTML
```

However, when they try to do this, they always end up on the same default page. They would like different URLs to deliver them to the appropriate home page.

DISCUSSION -----

There are WEB server implementations that allow you to determine which interface a query came from and therefore send you to an specific page for that interface. There are other implementations that allow you to have multiple IP addresses for one single interface. Depending on the address used, the HTTP server will present the client with the appropriate page for the domain requested.

Unfortunately, for the Macintosh servers, the only implementation available, as of October, 1995, is the one presented during WebEdge. This is the only information available right now.

IMPORTANT: Please remember this is NOT a solution supported by Apple Computer. We are providing this information as a service, and Apple Computer does not endorse or recommend any of the products or companies mentioned here.

From The WebEdge II Summary
=====

Multiple Home Pages/One Machine Name

At the conference a "hack" was developed for Webmasters wanting to run multiple "default" home pages from a single machine (for example, advertising agencies wishing to house their client's home pages/sites).

The ideal answer to this problem is to allow multiple IP numbers to be served by a single server. This capability lies in Open Transport's future. Until then, some of this functionality has been addressed by John O'Fallon of Maxum Development Corp. Maxum has in past produced commercial-grade cgi's such as NetCloak, and in fact John's hack requires the use of NetCloak.

For more information on this potential solution, see the Maxum web site at <http://maxum.catalogue.com/NetCloak/HomingHome.HTML> and direct questions to them.

From the Page at, <http://maxum.catalogue.com/NetCloak/HomingHome.HTML>

Serving Multiple Home Pages from Your Mac Server...

In many cases, we've heard of a WebMaster wanting to run several sites off of their Macintosh-based WebSTAR Web server. While it is not a problem to have multiple domains served by a single server (by configuring your DNS with multiple domain names pointing to the same IP address), it is difficult to give each domain its own page based strictly on a URL that is made up of just the domain name.

Presented here is a hack I did at WebEdge II that makes this feature fairly easy to implement using NetCloak 2.0 (currently in development, but publicly available and quite stable). It uses the referrer sent by the browser, along with a redirect (a "meta" tag for Netscape) to determine what domain is currently being requested and redirects the browser to the appropriate page. In a nutshell, here is how it works...

Browser: I'd like your server's home page please...

Server: OK, but you are coming from "Yahoo", and I don't know what that is, so go to the domain parsing page...

Browser: Fine, redirecting to the parsing page...

Server: Ah, now I see that the last page you accessed (the original home page from my site) was "www.foobar.com". If that's what you wanted, let me send you there...

Browser: OK, redirecting to the "foobar" page...

Server: A request for the foobar page. I can deal with that, here you go...

As you can see, the redirect and referrer features of HTTP play a big role, and only browsers that support both will correctly find the page they want. For other browsers, we simply display a list of choices and the user has to pick which home page they wanted.

Also note that Netscape 1.1N does not support the referrer when it is redirecting, which causes a problem. So, for Netscape users, we send the "meta" tag, which Netscape uses to load the "parsing" page instead of redirecting. The referrer is sent to the server by Netscape when directed by "meta".

Conditionally redirecting based on the referrer (and browser type) is something that the standard version of NetCloak 2.0 has done for some time. I found a nice fast way of doing this hack, but others get the credit for the idea and early implementation. In particular...

Everyone on the MacHTTP-Talk (now WebSTAR-Talk) listserv, and in particular, the individual who asked if this could be done (whose name I can't find, remind me if you know).

Brad Shrick, who filled me in on "meta" when I hit the wall trying to get Netscape to work (and who runs a great site of great sites).

Peter Storm at Silk Presence and Pierre Duchene also had the idea and implemented a version that handled the problem for Netscape (and possibly others, I don't know the whole history).

Download the NetCloak HTML Example From

<http://maxum.catalogue.com/downloads/CrossTown.sit.hqx>

This example file does not include the NetCloak demo package, which is available from the NetCloak 2.0 Page. If you have questions or problems, send me e-mail (john@maxum.com) and I'll add them (with answers) to this page to hopefully make this whole operation a piece of cake for anyone who wants to try it.

Last updated by John O'Fallon (john@maxum.com) on 8/25/95.

Support Information Services

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Tech Info Library Article Number:18675



Tech Info Library

StyleWriter printers: How to generate a test page (10/95)

Revised: 10/9/95
Security: Everyone

StyleWriter printers: How to generate a test page (10/95)

=====

Article Created: 2 October 1995
Article Reviewed/Updated: 9 October 1995

TOPIC -----

This article explains how to generate a test page with some of the StyleWriter family printers.

DISCUSSION -----

StyleWriter
=====

Step 1

Turn printer off.

Step 2

Press and hold the Form Feed button.

Step 3

Press the Power button and release both the Form Feed and Power buttons simultaneously.

Portable StyleWriter
=====

Step 1

Turn printer off.

Step 2

Press and hold FWD ADJ and REV ADJ buttons.

Step 3

Press and hold Power button. Wait for a single beep and release the power button.

Step 4

Wait for another beep and release the FWD ADJ and REV ADJ buttons.

Step 5

Immediately press the LF/FF button.

The Portable StyleWriter prints a small test pattern.

StyleWriter II
StyleWriter 1200
Color StyleWriter Pro
Color StyleWriter 2200
Color StyleWriter 2400
=====

Step 1

Turn printer off.

Step 2

Make sure the printer has paper loaded.

Step 3

Press and hold power button.

Step 4

Release power button when orange light turns off.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18677



Tech Info Library

SCSI Manager 4.3.1: Use Custom Install of 7.5.1 on LC 575 10/95

Revised: 10/2/95
Security: Everyone

SCSI Manager 4.3.1: Use Custom Install of 7.5.1 on LC 575 10/95

=====

Article Created: 2 October 1995

TOPIC -----

Why does SCSI Manager 4.3.1 not get installed on my Macintosh LC 575 by System 7.5 Update 1.0?

DISCUSSION -----

The Easy Install script of System 7.5 Update 1.0 will install SCSI Manager version 4.3.1 on the Macintosh LC 575 only if SCSI Manager 4.3 already exists in the System Folder you are updating. If SCSI Manager 4.3 is not already installed on your hard drive, use the custom install feature in System 7.5 Update 1.0 to install SCSI Manager version 4.3.1.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18679



Tech Info Library

Monitor Sleep: Third Party PCI Video Cards Supported? (10/95)

Revised: 10/2/95
Security: Everyone

Monitor Sleep: Third Party PCI Video Cards Supported? (10/95)

=====

Article Created: 2 October 1995

TOPIC -----

Do third party PCI Video Cards support sleep? Is this a feature the developer has to incorporate in their driver/hardware?

DISCUSSION -----

Third party PCI Video Cards can support sleep. Card developers are responsible for supporting the sleep features provided by the Power Manager.

In Apple's "Designing PCI cards and Drivers for Power Macintosh Computers" document, Apple sets guidelines for power management for specific classes of drivers. To be compatible with the Energy Saver control panel, graphics drivers should support the GetSync and SetSync status and control calls to implement the VESA Device Power Management Standard (DPMS) for power management. This allows the Display Manager to handle all interaction with the Power Manager on behalf of the driver.

Support Information Services

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Tech Info Library Article Number:18680



Tech Info Library

Battery Tools 2.0: Read Me File (10/95)

Revised: 10/2/95
Security: Everyone

Battery Tools 2.0: Read Me File (10/95)

=====

Article Created: 2 October 1995

TOPIC -----

This article contains the ReadMe file included with Battery Tools 2.0 software that ships with Type III batteries and is posted online.

DISCUSSION -----

Important Information about your Type III Battery

The PowerBook Duo 280 and 280c include support for the PowerBook Duo Type I, Type II and Type III batteries. No update is necessary. To use a Type III battery with an older PowerBook Duo, read this update.

Using a Type III battery with an older PowerBook Duo

=====

To use PowerBook Duo Type III NiMH batteries on a PowerBook Duo 210, 230, 250, or 270c follow these steps:

Step 1

Insert the Battery Tools disk into a floppy drive attached to your PowerBook Duo.

Step 2

Open the Battery Tools disk and drag the "Type III Battery" extension to your System Folder.

Step 3

Restart your PowerBook Duo with the power adapter attached to your computer.

Step 4

Remove your old battery and insert the Type III battery into your PowerBook Duo.

Step 5

Unplug the power adapter from your computer.

If your computer does not work after you insert the Type III, plug in the power adapter and restart your computer. Once you restart your computer, check to see that the "Type III Battery" extension is in the Extensions folder in your System Folder. If you see the "Duo Battery Patch" extension in the Extensions folder, you should drag it to the trash. The "Type III Battery" extension replaces the "Duo Battery Patch" extension.

A new Battery Reconditioning application program (version 1.1) is provided on the Battery Tools disk so you can recondition Type III batteries if you own a PowerBook Duo 270c. If you have a PowerBook 210, 230, or 250, you cannot use the Battery Reconditioning program.

Recharging Type III batteries in an external recharger

=====

If you have an external battery recharger, you may need to update it to be able to charge Type III batteries. Follow these steps:

Step 1

Shut down your PowerBook Duo.

Step 2

Plug one end of the power cord into the power adapter and the other end into a three-hole grounded outlet or power strip.

Step 3

Snap the recharger onto the power adapter (as shown in the Getting Started manual).

Step 4

Plug the power adapter cable into the power adapter port on the back panel of the computer.

Step 5

Turn on your PowerBook Duo.

The battery recharger is automatically updated, and should now charge Type III batteries. You only need to do this once. If you try to charge a Type III

battery after you have followed these steps, and a red light appears on the recharger when you insert the battery, call Apple or see an Apple-authorized dealer.

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Tech Info Library Article Number:18681



Tech Info Library

Apple Internet Mail Server (1/96)

Revised: 1/17/96
Security: Everyone

Apple Internet Mail Server (1/96)

=====

Article Created: 2 October 1995
Article Reviewed/Updated: 17 January 1996

TOPIC -----

This article describes the Apple Internet Mail Server, formerly known as MailShare, an unsupported freeware Simple Mail Transport Protocol (SMTP) and Post Office Protocol version 3 (POP3) mail server.

DISCUSSION -----

Apple Computer has acquired a server software package formerly known as MailShare, an easy-to-use, Macintosh-based electronic-mail server designed specifically for managing messages on the Internet. Apple plans to rename the product, Apple Internet Mail Server, and it is Apple's intention to continue making the current version of the software available as freeware on the Internet.

The server software, acquired from Internet software developer Glenn Anderson, supports SMTP and POP3, two mainstream standards for Internet e-mail. The software allows Internet users to send and receive e-mail over the Internet from any personal computer that supports the SMTP and POP3 standards, such as Eudora Pro and Eudora Lite for Macintosh and Windows, POPmail II, and the PowerTalk gateway available from Starnine Technologies, Inc.

Availability

Apple expects to continue to make the current freeware version of the Apple Internet Mail Server (formerly known as MailShare) available on the Internet. As is the nature of freeware software, Apple DOES NOT plan to provide support for the freeware version. It can be downloaded at:

<http://www.solutions.apple.com/AIMS/default.html>

Article Change History:

..TIL18682-Apple_Internet_Mail_Server_1-96.pdf

17 Jan 1996 - Corrected URL.

Support Information Services

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18682



Tech Info Library

Power Macintosh 7500 & 8500: Mac ODBC 2.1 Install Issue (10/95)

Revised: 10/2/95
Security: Everyone

Power Macintosh 7500 & 8500: Mac ODBC 2.1 Install Issue (10/95)

=====

Article Created: 2 October 1995

TOPIC -----

I have a Power Macintosh 7500 and 8500. I easily installed Mac ODBC version 2.1 from the Mac ODBC Developer's Kit and now I get an Error Type 10 during startup. What's wrong?

DISCUSSION -----

When you install the 680x0 processor-based version of Mac ODBC 2.1 on a Power Macintosh 7200, 7500, 8500, or 9500, an older version (1.1.2) of the Shared Library Manager is installed. Unfortunately, the install process deletes the newer Shared Library Manager 2.0 that is already present on these computers with Open Transport version 1.0.x. Power Macintosh 7200, 7500, 8500, or 9500 computers should be pre-installed with Shared Library Manager 2.0 and Shared Library Manager PPC 2.0 with System Software 7.5.2.

You can correct this by removing the old Shared Library Manager and reinstalling the newer version from the Power Macintosh 7500 or 8500 CD. This can be done by custom installing the Networking Software.

Support Information Services

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Tech Info Library Article Number:18683



Tech Info Library

QuickDraw GX Patch For Print Spoolers (10/95)

Revised: 10/3/95
Security: Everyone

QuickDraw GX Patch For Print Spoolers (10/95)

Article Created: 3 October 1995

TOPIC -----

I have a question about QuickDraw GX and AppleShare Print Server, and if what I describe below affects other print spoolers like Novell Netware.

I installed QuickDraw GX 1.1.1 on my Workgroup Server 6150, with System 7.5.1, and set up a queue for two captured printers. The behavior described below occurred on both captured printers which were a LaserWriter Pro 630 and LaserWriter 16/600 PS.

The desktop print queue can be created, but when attempting to print, the desktop printer will hang when it tries to check characteristics of the printer (I used an MS Word file). The queue then gives an error message that the job can't print because the connection to the printer was "closed unexpectedly". The print job never got to the spooler.

If I try printing a text file, it appears to reach the spooler, but then times out. The queue reports, "Apple Query for PatchP..." in the first entry in the queue, then "Timed Out" in the second.

DISCUSSION -----

There is a known problem when printing with QuickDraw GX to a printer captured by an AppleShare Print Server, as well as a Novell Netware server. This problem has been resolved with a "patcher" program available on several online services.

There are actually three patcher utilities, one for each version of QuickDraw GX currently in use (QuickDraw GX 1.1.1, 1.1.2, and 1.1.3). All you need to do is run the patcher program, and follow the instructions in the dialog that is displayed.

These articles can help you locate the software update mentioned here:

..TIL18684-QuickDraw_GX_Patch_For_Print_Spoolers_10-95_(TA34507).pdf

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18684



Tech Info Library

AppleShare Print Server 4.x and Pro: Specifications (10/95)

Revised: 10/3/95
Security: Everyone

AppleShare Print Server 4.x and Pro: Specifications (10/95)

Article Created: 3 October 1995

TOPIC -----

This article provides specifications on AppleShare Print Server 4.x and Pro.

DISCUSSION -----

The following specifications apply for AppleShare Print Server 4.x and Pro:

Begin_Table

Maximum number of captured printers	5
Maximum number of spooled sessions per printer	8
Maximum number of queued files	1000
Maximum number of log entries	1000

End_Table

NOTE: The AppleShare Print Server can capture printers which use LaserWriter, AppleTalk ImageWriter, or AppleTalk ImageWriter LQ printer drivers (chooser extensions). Third-party printers requiring custom printer drivers cannot be captured for spooling by the AppleShare Print Server.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18686



Tech Info Library

AppleVision: Use Sound & Displays Control Panel On 7500 (1/97)

Revised: 2/5/97
Security: Everyone

AppleVision: Use Sound & Displays Control Panel On 7500 (1/97)

Article Created: 3 October 1995
Article Reviewed/Updated: 5 February 1997

TOPIC -----

I have successfully installed the AppleVision software that came with my AppleVision 1710AV display, but I am unable to locate the AppleVision Setup control panel. I am using a Power Macintosh 8500. What do you recommend?

DISCUSSION -----

AppleVision Setup does not appear as a separate control panel on either the Power Macintosh 8500 or 7500 series computers. If you have installed the AppleVision software, the settings options found in the AppleVision Setup control panel are automatically incorporated into either the Sound and Displays control panel or Monitors & Sounds control panel, depending on which version of the Mac OS you are using.

To access the configuration options for your AppleVision 1710AV Display or AppleVision 1710 Display, follow these steps:

Step 1

Open the Sound and Displays (or Monitors & Sounds) control panel.

Step 2

Double-click the text "AppleVision 1710AV", which is in the lower right corner in the Displays option section.

Although the interface may be slightly different than described in your AppleVision manual, you can now access the same options mentioned in the documentation for the AppleVision Setup control panel.

Article Change History:

05 Feb 1997 - Added new control panel name.

23 Oct 1995 - Corrected minor typographical error.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18687



Tech Info Library

SoftWindows: Does Not Recognize PC Cards on PowerBooks (10/95)

Revised: 10/3/95
Security: Everyone

SoftWindows: Does Not Recognize PC Cards on PowerBooks (10/95)

=====

Article Created: 3 October 1995

TOPIC -----

I am running SoftWindows on my new PowerBook 5300. Will the SoftWindows emulation software communicate through my PC Card Modem or PC Card Ethernet?

DISCUSSION -----

Insignia's SoftWindows product currently does not recognize PC Cards when used on the PowerBook 5300 series. As a result, SoftWindows users will not be able to communicate via a PC Card modem or PC Card Ethernet. The reason for this is that SoftWindows communicates directly to the hardware and does not look for PC Cards that may be inserted into a PowerBook 5300.

Insignia is aware of the problem and is working on a solution.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18688



Tech Info Library

AWS 95: Increasing The Number of Mount Points (10/95)

Revised: 10/4/95
Security: Everyone

AWS 95: Increasing The Number of Mount Points (10/95)

=====

Article Created: 4 October 1995

TOPIC -----

How can the number of mount points, accessible by A/UX on an Apple Workgroup Server (AWS) 95, be increased?

DISCUSSION -----

The number of mount points, that can be addressed by A/UX, is determined by the kernel configuration parameter, NMOUNT. The default value on the AWS 95 File Server is set at 32. Changing this value can be accomplished as follows:

NOTE: This process requires being logged in as root and will involve restarting the computer.

Step 1

Open a command shell.

Step 2

Execute the command, "kconfig -n /unix".

Step 3

Enter "NMOUNT=value" followed by a carriage return. The "value" entry would be the decimal constant for the number of mount points desired. For example, "NMOUNT=40" provides a maximum of forty mount points.

Step 4

Type a Ctrl-D to exit kconfig.

Step 5

Execute "sync;sync;sync;reboot" to synchronize and reboot the system.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18689



Tech Info Library

PowerBook 5300 & 190: Identifying LiIon & NiMH Batteries (10/95)

Revised: 10/4/95
Security: Everyone

PowerBook 5300 & 190: Identifying LiIon & NiMH Batteries (10/95)

Article Created: 4 October 1995

TOPIC -----

How can I tell the difference between a Lithium Ion (LiIon) battery and a Nickel Metal Hydride (NiMH) battery?

DISCUSSION -----

LiIon

The Lithium Ion battery has a battery gauge (four LEDs) on the same side as the release mechanism. A button above four LEDs can be pressed to show the approximate charge level in the battery. Also, the top right corner of the battery's label indicates that the battery is Lithium Ion. (Li-Ion) is printed on the label.

NiMH

A Nickel Metal Hydride battery does not have any way of determining the charge level on the battery itself. There is no LED gauge. The label indicates that the battery is NiMH in the top right corner.

Note: If the battery is identified as LiIon, it should be returned to Apple immediately. For more information contact Technical Support at 800-SOS-APPL or Customer Support at 800-776-2333.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18690



Tech Info Library

System 7.5.2 Printing Fix: Read Me File (10/95)

Revised: 10/10/95
Security: Everyone

System 7.5.2 Printing Fix: Read Me File (10/95)

Article Created: 4 October 1995
Article Reviewed/Updated: 10 October 1995

TOPIC -----

This article contains the ReadMe file included with the System 7.5.2 Printing Fix 1.0.2 extension posted online.

DISCUSSION -----

Macintosh System 7.5.2 Printing Fix Read Me

What is the Macintosh System 7.5.2 Printing Fix?

This extension fixes a printing problem that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2. Without this fix, your computer may freeze if you attempt to print on a network-based printer that is already busy, and it may be necessary to restart your computer.

To install this extension follow these steps:

Step 1

Locate the System Folder on your computer's hard disk. Don't open the System Folder.

Step 2

Drag the file named "7.5.2 Printing Fix" to the System folder.

Step 3

A message appears asking if if you want the 7.5.2 Printing Fix to be put into the Extensions Folder. Click OK.

Step 4

Under the Special menu, choose Restart.

9/28/95

Article Change History:

10 Oct 1995 - Lowered security because software was reposted.

05 Oct 1995 - Raised security level because software was taken offline.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18691



Tech Info Library

At Ease for Workgroups 3.0: Accessing Floppy Only (10/95)

Revised: 10/4/95
Security: Everyone

At Ease for Workgroups 3.0: Accessing Floppy Only (10/95)

=====

Article Created: 4 October 1995

TOPIC -----

I am using At Ease 3.0 for Workgroups and I noticed some of my users are able to save files to the hard drive even though I have selected the store user documents on floppy disk in the Locations panel. When the user tries to save their file a dialog box appears asking them to insert a floppy disk. If the student clicks the Continue button without inserting a floppy disk, they can save anywhere on the hard drive. How can I fix this?

DISCUSSION -----

There are two panels that need to be set properly for At Ease to prevent the user from accessing the hard drive from the Open or Save dialog boxes. In this case the Security Panel is not set correctly. Follow these steps to allow users to only save and/or open documents from a floppy disk:

Locations Panel
=====

Step 1

Launch At Ease Setup, open the Setup in which this problem is occurring.

Step 2

Click the Disk Icon button to go to the Locations Panel.

Step 3

In the second section:

Store user documents on:

☐ Setup location volume

☐ Floppy Disk

Click the box to put an x in the Floppy Disk section to store the users documents on a floppy disk.

Security Panel =====

Step 1 -----

Click the Padlock button to go to the Security Panel.

Step 2 -----

In the first section:

For new documents, users are required to use their At Ease Documents folder to:

☐ Open

☐ Save

Click the box to put an x in the Open section if you want your users to only be able to open documents from a floppy disk. Click the box to put an x in the Save section if you want your users to only be able to save documents to a floppy disk.

Having both Open and Save selected are the default settings, so they must have been changed in order for the problem you were experiencing to have occurred.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18692



Tech Info Library

At Ease 3.0: Use Button Disabler To Prevent Sound Access (1/97)

Revised: 1/7/97
Security: Everyone

At Ease 3.0: Use Button Disabler To Prevent Sound Access (1/97)

Article Created: 4 October 1995
Article Reviewed/Updated: 7 January 1997

TOPIC -----

At Ease for WorkGroups 3.0 allows the administrator to keep students from opening control panels, specifically the Sound control panel. However, on the Macintosh Performa/LC 520, 550, 575, 580, 5200, 5300, and 5260 series of computers, there are volume controls on the front of the computer that still work even when the students do not have access to the control panels. How can I prevent students from using these buttons to defeat At Ease?

DISCUSSION -----

System 7.5 includes a Control Panel called Button Disabler that can be installed with a custom system software install. This control panel has a single check box that, when checked, deactivates the sound and brightness controls on the front of Macintosh computers with built-in controls.

Use the Custom Install feature of your Macintosh CD to install the Button Disabler control panel, restart your computer, and click to place an 'X' in the box to the left of "Disable Buttons".

Article Change History:

07 Jan 1997 - Removed the Performa 5400 from the article.
11 Sep 1996 - Added the Performa/LC 5260, and 5400 series computers.
23 Oct 1995 - Clarified Control Panel settings.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18693



Tech Info Library

Color LW 12/600 PS: Requires Special Transparencies (2/96)

Revised: 2/13/96
Security: Everyone

Color LW 12/600 PS: Requires Special Transparencies (2/96)

=====

Article Created: 5 October 1995
Article Reviewed/Updated: 13 February 1996

TOPIC -----

How does the Color LaserWriter 12/600 PS determines that a transparency is printing? Is it by software or hardware? When I try to print on a transparency I get a paper jam error.

DISCUSSION -----

In order to optimize the print quality when printing transparencies the Color LaserWriter 12/600 PS requires a special transparency material.

The Color LaserWriter uses a photosensor to detect the presence of the special transparencies by looking for a reflection from the white rectangle at the leading edge of the transparency. When the white rectangle is detected the printer enters into the transparency mode. If standard transparencies are used which do not contain the white rectangle, or the white tape strip at the leading edge then a paper jam error is displayed on the status panel.

When the Color LaserWriter 12/600 PS is in the transparency mode an extra transfer drum rotation is added to the end of the printing process during which the transfer drum and fuser rotational speed is cut in half to improve the toner fusing characteristics.

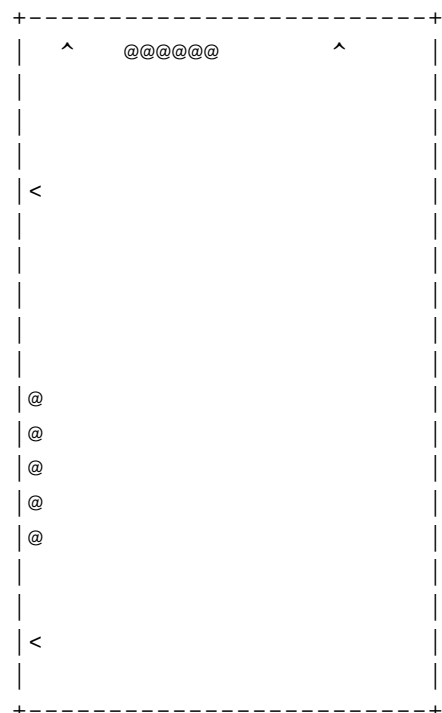
Before assuming that a hardware failure has occurred with the printer consult the Color LaserWriter 12/600 PS user's manual and review the following precautions to reduce jamming problems when printing on transparencies:

- Use only transparencies designed for use with the Color LaserWriter 12/600 PS (Apple part number M3876G/A). There are two different types of transparencies that have been shipped by Apple. See the diagram below to determine which type you have. Both types of transparencies offer the same features and functionality.

- Insert Color LaserWriter transparencies as shown in figure 1, other orientations will cause jams. When using transparency type #2 leave the tape side up when placing them in the multi-purpose tray.
- DO NOT print transparencies from the 250 sheet cassette, print only from the multipurpose tray

Begin_Graphic

Transparency Type #1



Transparency Type #2

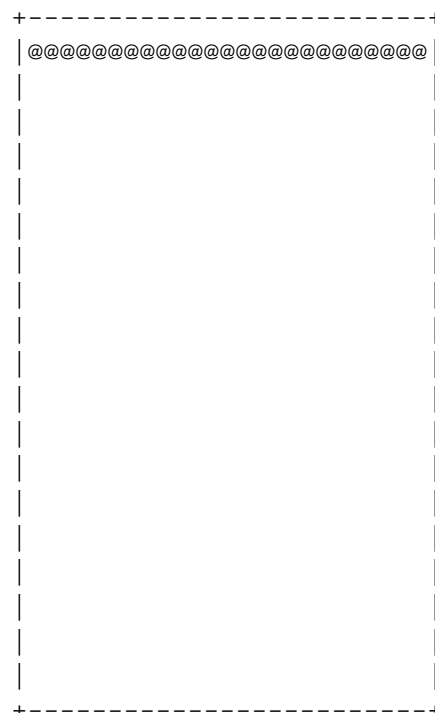


FIGURE 1- Correct transparency orientation

End_Graphic

Note: @@@@ represents areas filled with white

The white tape strip found on the type #2 transparencies can be removed after the transparency has passed through the fuser assembly.

When printing Transparencies, you should also select "Transparency" in the Print Options dialog box. This changes the halftoning structure to allow for a lighter image, and allows for a better "transparency" when viewed through an overhead projector.

Article Change History:

13 Feb 1996 - Added additional transparency type.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18694



Tech Info Library

PowerBook 190 & 5300: Battery Voltage Measurements (10/95)

Revised: 10/17/95
Security: Everyone

PowerBook 190 & 5300: Battery Voltage Measurements (10/95)

Article Created: 5 October 1995
Article Reviewed/Updated: 17 October 1995

TOPIC -----

What are the respective voltages of the Nickel-Metal-Hydride (NiMH) battery when it is: full, at first battery low warning, at the second battery low warning, and then at the final battery low/going to sleep warning?

DISCUSSION -----

The following is a list of the voltage measurements for the NiMH battery used in both the Macintosh PowerBook 190 and 5300 series computers:

Begin_Table

Full Voltage:	16.1 volts +/- 0.1v
First Battery Low Dialog:	14 volts
Second Battery Low Dialog:	Approx. 13.6v*
Third (Final) Battery Low Dialog:	Approx. 13.1v*

* This approximate reading is a result of an extrapolation.

End_Table

Note: Voltages shown here were measured on Fluke 77 Voltmeter on 10 batteries in the Apple Reliability Laboratory. Please keep in mind that you might not get exactly the same readings from your batteries, but they should be similar.

Article Change History:
17 Oct 1995 - Corrected minor typo.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18695



Tech Info Library

Color STW 2400 & StyleWriter 1200 Printing Underscore (10/95)

Revised: 10/5/95
Security: Everyone

Color STW 2400 & StyleWriter 1200 Printing Underscore (10/95)

=====

Article Created: 5 October 1995

TOPIC -----

When printing to the StyleWriter 1200 or StyleWriter 2400 consecutive "_" characters look like a solid line on the screen, but when printed they end up printing a dashes.

DISCUSSION -----

The problem only seems to occur if the Geneva font is used, Chicago, Courier, and Helvetica do not have this problem. This has been reported to engineering. There are three workarounds you can use instead.

Workarounds
=====

- 1) Use any other font except Geneva.
- 2) Select the underscore characters (_), and change only that selection to Chicago, Courier, or Helvetica.
- 3) Use spaces or tabs in place of the underscore characters (_), then select the option to underline.

Note:

If you want even underscore lines, you should use tabs. With the exception of the Monaco and Courier typefaces, which are monospace fonts, the typefaces in your Fonts folder are proportional. This means that not all letters take up the same amount of space. If you use a typeface such as Times, underscores that look aligned when printed, will not always be aligned.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18696



Tech Info Library

System 7.x: What Does Holding Shift Key at Startup Do? (10/95)

Revised: 10/6/95
Security: Everyone

System 7.x: What Does Holding Shift Key at Startup Do? (10/95)

=====

Article Created: 5 October 1995

TOPIC -----

What is disabled when the shift key is held down during startup?

DISCUSSION -----

Here is a list of items that get turned off by holding down the shift key during startup:

- MacsBug - however, MacsBug will load if the option key is also held down along with the shift key in System 7.5 and later.
- All extensions in the Extension folder, Control Panels folder, and System Folder.
- A/Rose - even though it is an init and would be turned off anyway, it is explicitly not loaded.
- Any software component of type 'thng' will not be registered.
- All scripts (for non-roman character input).
- Virtual Memory.
- Resources of type AINI which are AppleTalk drivers, this is where Open Transport gets turned off.

Other effects:

- The disk cache is set to 96K in System 7.5 and 64K in System 7.0 or System 7.1.
- The Finder will not launch files in the Startup Items folder, or execute the items in the Shutdown Items folder at Shut Down.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18701



Tech Info Library

ClassMaster: Losing Student Records (10/96)

Revised: 10/10/96
Security: Everyone

ClassMaster: Losing Student Records (10/96)

Article Created: 6 October 1995
Article Reviewed/Updated: 10 October 1996

TOPIC -----

I recently installed the ClassMaster software that came with my Teacher Solution Bundle. I installed it and entered my students' information with no problem.

I recently noticed that some student records are starting to disappear. I am having no other problems with my system and even Disk First Aid reports there is nothing wrong with my hard drive. What is wrong?

DISCUSSION -----

Issue

TechByte, the makers of ClassMaster, discovered an issue with the version of Classmaster that shipped on early Teacher Solution Bundle CDs. When the teacher deletes a student, the student below that record also appears to be deleted. Resorting the student database brings the second "apparently deleted" student back.

Resolution

The problem has been corrected in a newer version of ClassMaster. Check the serial number on the ClassMaster splash screen. M1094AEA is the version that exhibits the problem. M1095AEA is the updated version.

If you have the earlier version (M1094AEA), contact TechByte to receive an updated version of the program. Let the TechByte technical support representative know that you are having problems with losing student data. TechByte should give them two options to fix the problem.

- You can either be sent an updated copy of the program that has this problem fixed in it free of charge.

-or-

- You can upgrade (for a charge) to a newer recently released version of Classmaster that not only fixes the problem with losing student data, but also adds new features. TechByte can tell you what the "new features" are.

If you do not want to contact TechByte, or have already contacted TechByte and for some reason were told to contact to Apple, then Apple can send you the newer version of ClassMaster.

Newer Version Now Bundled

In the November 1995 time frame, Apple began including the Classmaster Update disk and installation instructions with the Teacher Solution Bundle.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

10 Oct 1996 - Added information about how to get newer version.
10 Nov 1995 - Added information on update disk being included in the bundle.
23 Oct 1995 - Corrected minor typo.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18702



Tech Info Library

Techbyte

Revised: 4/8/97
Security: Everyone

Techbyte

=====

Article Created: 6 October 1995
Article Reviewed/Updated: 8 April 1997

TechByte International (USA) Inc.

908 Niagara Falls Blvd.
North Tonawanda, NY, 14120

800-535-3487

716-743-8052

716-694-9092 FAX

Company Profile:
Manufacturer of educational administration software products like Classmaster,
for both Higher Ed and Elementary Education.

Support Information Services

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18703



Tech Info Library

PowerBook: 400 Hz -> 60 Hz Converters For Airplanes (10/95)

Revised: 10/6/95
Security: Everyone

PowerBook: 400 Hz -> 60 Hz Converters For Airplanes (10/95)

=====

Article Created: 6 October 1995

TOPIC -----

I work for an airline and have a Macintosh PowerBook computer. I would like to be able to run my computer from one of the AC service outlets, particularly on long flights. Such outlets are available on the plane in the cockpit and galley areas. They are 115 VAC/400 Hz power supplies. However, the computer's power adapter requires a 50 to 60 Hz input source. Is there any kind of adapter I can use to make this work?

DISCUSSION -----

Apple Computer, Inc. does not provide or support any solution for the situation you describe. However, one company, DLC Research, has advertised a solution in the Airline Pilots' Association periodical, "Airline Pilot". Partial text of their advertisement is as follows:

"...for Notebook Computers and other portable electronic devices. The APA 2000 will operate from any aircraft service outlet -- converting 115 VAC 400 Hz aircraft power to standard 115 VAC 60 Hz."

This article provides information about a non-Apple product and is posted for informational purposes only. No endorsement by Apple Computer, Inc. is either declared or implied. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, DLC Research, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18705



Tech Info Library

DLC Research (10/95)

Revised: 10/6/95
Security: Everyone

DLC Research (10/95)

=====

Article Created: 6 October 1995

DLC Research

P.O. Box 11561
Las Vegas, NV 89111

FAX 612-377-5919

Company Profile: Make AC converters for notebook computers and other portable electronic devices including converters which can be used on airplanes.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18706



Tech Info Library

Apple Printer Utility: Problems with Open Transport 1.0 (5/96)

Revised: 5/15/96
Security: Everyone

Apple Printer Utility: Problems with Open Transport 1.0 (5/96)

=====

Article Created: 9 October 1995
Article Reviewed/Updated: 15 May 1996

TOPIC -----

I have a Power Macintosh 9500 and cannot see any printers with the Apple Printer Utility v2.0. There are no zones defined on either my Ethernet or LocalTalk network.

DISCUSSION -----

There is a conflict between the Apple Printer Utility and Open Transport 1.0. For example, if you launch Apple Printer Utility v2.0 on a Power Macintosh 9500*, and if there are no zones on your network, no printers are displayed in the printer list. Fortunately, the majority of Ethernet networks have defined zones, and Power Macintosh 9500 computers are now shipping with a newer version of Open Transport, so this conflict will not likely be common. This conflict is not restricted to Ethernet networks, it also occurs when using LocalTalk.

* Note:

The Power Macintosh is the only computer that shipped with Open Transport v1.0

Workaround

=====

Upgrade your Power Macintosh 9500 from Open Transport v1.0 to v1.1. Version 1.1 does not have this conflict, and it is part of the System 7.5 Update 2.0 available on online services Apple publishes software updates on.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the

Apple Tech Info Library.

Article Change History:

15 May 1996 - Added information on LocalTalk also being affected.

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Tech Info Library Article Number:18707



Tech Info Library

Color LW 12/600 PS: Linescreen in Transparency Mode (1/97)

Revised: 1/31/97
Security: Everyone

Color LW 12/600 PS: Linescreen in Transparency Mode (1/97)

Article Created: 9 October 1995
Article Reviewed/Updated: 31 January 1997

TOPIC -----

I have a Color LaserWriter 12/600 and have the following questions:

What is the effective Linescreen of the Color LaserWriter 12/600? I have read that it changes from 200 to 141 depending upon the image type. Can you override these settings?

Are there any changes made when printing in Transparency mode? There are certain applications that do not give you the option to print in Transparency mode (such as PageMaker) is there a way around this?

I have also heard that although the options for different color matching are available, they are ignored by most applications. Is this true of the Transparency mode as well?

I know that the Transparency mode changes the speed of the overall throughput, I have not seen any other changes as I have tested it.

DISCUSSION -----

The linescreen on the Color LaserWriter 12/600 PS and the Color LaserWriter 12/660 PS printers is 200 lpi (lines per inch), and it CANNOT be changed; the firmware in these printers ignores any PostScript commands to change the linescreen. Depending on the area being imaged, the linescreen will change to an effective 141 lpi -- mostly in the lighter areas of an image. These settings, unfortunately, cannot be changed because they have been set to provide the optimum results from the print engine.

With transparencies, the only change (other than print engine speed) is that the halftoning structure is changed to allow for a lighter image, and in turn better "transparency" when viewed through an overhead. You may be able to notice the individual halftone cells due to the lower lpi, but this effect is only seen

when the transparency is viewed without an overhead projector -- it is not present when viewed through a projector.

To answer your other questions, we are unable to determine how to print in "transparency mode" through PageMaker; this is a function of the Apple print driver, and PageMaker uses their own driver. Customers should contact Adobe for this information. With regard to color matching being ignored by most applications, this also holds true in transparency mode.

Article Change History:

31 Jan 1997 - Added Color LaserWriter 12/660 PS printer to the article.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18709



Tech Info Library

MAE 2.x and Simultaneous Access (10/95)

Revised: 10/9/95
Security: Everyone

MAE 2.x and Simultaneous Access (10/95)

Article Created: 9 October 1995

TOPIC -----

What version of MAE do I need to let more than one client simultaneously access it from a UNIX workstation? At one version of MAE beta software this feature was possible, but the final version doesn't have this capability.

The reason I ask for this is to lighten the burden of administration, and reduce drive real estate space on my servers. I have chosen to still use a beta copy of MAE because my MAE 2.x final version is only license for one user. I need to either have MAE support 3 clients per copy with a copy of MAE on each of our 10 servers, or have one major copy of MAE supporting 30 clients.

DISCUSSION -----

First, MAE is licensed for either a login user ("john"), or a display ID ("sparc5"). Also, MAE is capable of letting multiple users simultaneously access and run the same copy of MAE on an UNIX workstation, just like an X Windows application can be shared over the network.

For best performance, you must manage and balance the work load on your UNIX servers according to each server's power. MAE performance is highly dependent upon the X server, X client, and network bandwidth and traffic.

MAE can be purchased in one single user, 20 user, 50 user, or volume (site license) license packages.

For the situation you describe, 10 servers to be used by 30 clients, the following suggestion may work:

- Get 30 licenses of MAE, one for each client.
- Install a copy of MAE on each of the 10 servers, and assign 3 clients, either user login ID, or display ID, to each workstation.

- Keep a single copy of the licence file on one workstation for license integrity checking.

The above solution is based on the assumption that all of the workstations are equal in CPU power.

Support Information Services

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Tech Info Library Article Number:18711



Tech Info Library

At Ease: Adding CD-ROM Based Applications to Setups (10/95)

Revised: 10/16/95
Security: Everyone

At Ease: Adding CD-ROM Based Applications to Setups (10/95)

=====

Article Created: 9 October 1995
Article Reviewed/Updated: 16 October 1995

TOPIC -----

I need to run programs on a CD-ROM disc from within At Ease. I do not know how to set up At Ease so that I can use the program directly from the CD-ROM disc without copying it to the hard drive. The program will not work properly if I copy it to the hard drive. How can I access a program on a CD-ROM disc from At Ease?

DISCUSSION -----

You can run an application on a CD-ROM disc without having to copy it to the hard drive.

Follow these steps for the version of At Ease you have:

At Ease 1.0

=====

Step 1

Insert the CD-ROM disc containing the program you wish to give access to.

Step 2

Open the At Ease Setup control panel in the Control Panels folder of your System Folder.

Step 3

Click the Select Items button.

Step 4

Click the Desktop button in the Open Dialog box. Double-click the name of the

CD-ROM disc that appears in the window in the left side of the Open Dialog box.
Click the Gather Applications... button.

Step 5

A dialog box will appear telling you which applications are on the disc that are not in At Ease. You will have the option to Add or Cancel. Click Add. You can remove any extra unwanted applications from the At Ease Items window by selecting each once and clicking Remove.

Step 6

Click Done, close the At Ease setup window.

At Ease 2.0.3 and At Ease 3.0

=====

Step 1

Insert the CD-ROM disc containing the program you wish to give access to.

Step 2

Open the At Ease Setup program.

Step 3

Double click the Setup you would like to add the program to.

Step 4

Click the Items icon to open the Items panel. Click the Add Applications button.

Step 5

In the Add Applications screen, you will see a choice of applications on the left side. Click and hold the word "Disk" at the top left corner to see the pop-up menu.

Step 6

Select the name of the CD-ROM which is currently in your computer and release. At Ease will search for any applications on that CD.

Step 7

Double-click the name of the program you want to add to the list of Items for This Setup on the right. Or, you can hold the shift key while single-clicking each application to select multiple items and then click the ">>Add>>" button. Repeat this process until you have added all the programs you want from the CD-ROM disc.

Step 8 for At Ease 3.0 only

At Ease 3.0 can allow access to all, none, or only administrator defined CD-ROM discs. Under the Options menu, choose CD-ROM Preferences. In order for the user of this setup to access the program you just added from this CD, click "Allow access to all CD-ROMs" (default setting).

If you want to limit access to only certain CD-ROMs discs, click the "Only allow access to the specified CD-ROMs" button. If you choose this option, you must click the Add button and select the mounted CD-ROM with the program you just added to this Setup. You can eject this disc and add other discs you want users of this setup to have access to from within this panel.

Step 9

Click the "OK" button and follow the rest of the steps as necessary to set up At Ease the way you like.

When you return to At Ease, you will see the button for the application you added in the At Ease panel. If you click the button and the disc is not already in the computer, a message asking you to insert the proper CD-ROM disc will appear.

Article Change History:

16 Oct 1995 - Clarified procedure.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18712



Tech Info Library

Apple Guide: Can I Print the Entire Apple Guide? (10/95)

Revised: 10/9/95
Security: Everyone

Apple Guide: Can I Print the Entire Apple Guide? (10/95)

=====

Article Created: 9 October 1995

TOPIC -----

I want to print out the entire Macintosh Apple Guide. I cannot seem to find the Print command. How can I send the Apple Guide to print?

DISCUSSION -----

There is no way to print Apple Guides. They have no menu items associated with them because they exist in a floating palette that is independent of the frontmost application and its menubar. That is, you can switch applications and the Guide stays on the top layer even though the menubar and application context has changed. This is so Guides can lead you through steps that may involve switching between multiple applications and always be the topmost window.

Tutorial Guide files do not lend themselves to printing in a linear fashion anyway. They are context sensitive databases. Guide sequences are really tree structures describing different actions to take with several branch paths depending on the current environment. You may notice that a Guide may not lead you through the same steps to perform an action every time. This is because it detects that, maybe today, you already have the Apple Menu Items folder or Control Panels folder open and it will skip the associated steps telling you to open that folder. So one user may see a different set of steps than another user for the same action sequence.

If you were able to print the branches of the tree sequence linearly, then each page would have to tell you which page to turn to next, since many times it would not be the following page. This would not be an easy book to follow. The advantage of the Guide is that it can do this jumping for you and even skip the pages you do not need to see.

There are five classes of Guide files. Tutorial, Help, and Other Guide files do not lend themselves to printing as described above. About and Shortcut Guides are simpler cases where each page is usually a stand alone piece of information with no action sequencing. These Guides usually contain a small number of Guide

Panels. An About Guide might have one or two pages and a Shortcut Guide might have six to twelve pages. You could take screen shots of these types of Guides using Command-Shift-3 and open, edit and print the captured PICT files.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18714



Tech Info Library

QuickDraw GX: What Fonts Come With QuickDraw GX? (10/95)

Revised: 10/9/95
Security: Everyone

QuickDraw GX: What Fonts Come With QuickDraw GX? (10/95)

=====

Article Created: 9 October 1995

TOPIC -----

What fonts come with QuickDraw GX, and to what extent can I use them?

DISCUSSION -----

Four QuickDraw GX fonts are installed by the QuickDraw GX installer:

- Apple Chancery
- Hoefler (Roman, Italic, Ornaments)
- Skia
- Tekton Plus Regular.

These fonts are designed to work with QuickDraw GX savvy applications in a QuickDraw GX environment. If they are used with QuickDraw GX disabled, they display on the screen fine, but they will not print properly or perhaps not at all. Sometimes the font will be substituted with another font, other times the printer will give a memory error.

To activate QuickDraw GX, turn on the QuickDraw GX extension with the Extensions Manager in your Control Panels folder and restart your Macintosh computer. To determine whether or not an application is QuickDraw GX savvy, contact the manufacturer of the application.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18715



Tech Info Library

Apple StyleWriter 1200: Which Fonts Are Included? (10/95)

Revised: 10/9/95
Security: Everyone

Apple StyleWriter 1200: Which Fonts Are Included? (10/95)

=====

Article Created: 9 October 1995

TOPIC -----

Which fonts are installed by the Apple StyleWriter 1200 Installer?

DISCUSSION -----

The following Fonts/Font Families are installed by the StyleWriter 1200 installer:

Avante Garde
- Avante Garde Bold

Bookman
- Bookman (bold)
- Bookman (bold, Italic)
- Bookman (italic)

Delphian

Garamond Narrow
-Garamond Narrow (bold)
-Garamond Narrow (bold, Italic)
-Garamond Narrow (Italic)

Helvetica Black

Helvetica Compressed

LubalinGraph
-LubalinGraph (bold)

Machine

Nadianne

-Nadianne (bold)

N Helvetica Narrow

-N Helvetica Narrow (bold)

New Century Schlbk (bold)

-New Century Schlbk (bold, Italic)

-New Century Schlbk (Italic)

Old English Text

Onyx

Oxford

Swing

Zapf Chancery

Zapf Dingbats

Zeal

Support Information Services

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Tech Info Library Article Number:18716



Tech Info Library

How To Unlock MacTCP Control Panel Settings (10/95)

Revised: 10/10/95
Security: Everyone

How To Unlock MacTCP Control Panel Settings (10/95)

=====

Article Created: 10 October 1995

TOPIC -----

When I click the more... button in the MacTCP control panel and go to its configuration screen, the setting titles are dimmed and the buttons are locked. What's wrong? How do I fix it?

DISCUSSION -----

The original settings may have been made using MacTCP Admin, which is available only with the product, TCP/IP Administration for Macintosh. When MacTCP Admin is used to configure the IP address and other settings, these settings cannot be altered using the MacTCP control panel. As an additional option, the administrator may also password-protect an individual's settings, which would require this password even if MacTCP Admin is used.

The reason for this security is because in most large IP environments addresses are assigned to individuals. Altering an IP address, may disrupt another user's access, or render the user's workstation incapable of communicating with the network.

If security is not an issue, a user should first verify, with the network administrator, that he or she has a list of the proper settings (IP address, Routing Information, Domain Name Server and address), and a copy of the MacTCP control panel that has never been configured. Then move from the System Folder or delete ALL of the MacTCP, MacTCP DNR, and MacTCP Prep files from the hard drive, restart, and then re-install and reconfigure the MacTCP control panel.

System 7.5 users may use the System 7.5 Installer by selecting Custom Install from the pop-up menu, selecting Control Panels, and then click MacTCP to install only the MacTCP control panel. Other users will obtain a fresh copy of the MacTCP control panel from their network administrator if site-licensed, or from the master disks of the product they purchased which included MacTCP.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18717



Tech Info Library

HyperCard: Compact Color Database Causes Some Color Loss 2/96

Revised: 2/7/96
Security: Everyone

HyperCard: Compact Color Database Causes Some Color Loss 2/96

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Article Created: 10 October 1995
Article Reviewed/Updated: 7 February 1996

TOPIC -----

After using "Compact Color Database" from the Edit menu of the color tools environment, some of the cards of my stack lost all their color objects.

DISCUSSION -----

This issue occurs in HyperCard 2.3 when used in conjunction with Color Tools Stack versions 2.3 through 2.3.3. This is due to an error in the AC_Compact handler in the Color Tools stack script. The solution for this problem is to update to the HyperCard 2.3.5 Stacks update posted online.

These articles can help you locate the HyperCard 2.3.5 Stacks mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
07 Feb 1996 - Added fix availability.
17 Oct 1995 - Added versions affected information.

Support Information Services

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Tech Info Library Article Number:18719



Tech Info Library

System 7.5.2: What Version of At Ease is Supported? (8/96)

Revised: 8/23/96
Security: Everyone

System 7.5.2: What Version of At Ease is Supported? (8/96)

Article Created: 10 October 1995
Article Reviewed/Updated: 23 August 1996

TOPIC -----

What version of At Ease is compatible with System 7.5.x?

DISCUSSION -----

With System 7.5.x you need to use At Ease 2.0.3, At Ease 2.0.3 for Workgroups, or At Ease 3.x. Previous versions of At Ease are NOT compatible with System 7.5.x.

Although At Ease 2.0.3 and At Ease 2.0.3 for Workgroups are compatible with System 7.5.x, some control panels and other features of System 7.5 may work differently while At Ease is running. This section provides information on these differences. Please refer to the Macintosh Guide, available in the Guide menu (marked with a question mark icon on the right of the menu bar), for more information on these topics.

AppleScript

Scripts written using AppleScript can be launched by At Ease. However, scripts that require the Finder will not run properly.

Extensions Manager

You cannot change the settings in this control panel while At Ease 2.0.3 is running.

Find File

When At Ease 2.0.3 or At Ease 2.0.3 for Workgroups is open, Find File does not allow you to open or print items that are found.

General Controls control panel

* Documents: This option can control where the Documents folder is created on your computer. At Ease always tries to open or save a document in the user's folder, within the At Ease Documents folder, regardless of the settings in the Documents option.

* If At Ease is running and you have not changed the Documents option, At Ease creates the Documents folder on the startup disk. If At Ease is not running and you select the Documents folder radio button, the Documents folder is created on the desktop.

* Launcher: The Launcher does not work with At Ease 2.0.3 and if it is set to open at startup, it will not do so.

Macintosh Easy Open (version 1.1 or later)

If you attempt to open a document without the application program that created it and Macintosh Easy Open is active, a dialog box asks if you want to open the document with another program. The only programs displayed are those made available to the user in the At Ease Setup program.

PowerTalk

You can now receive PowerTalk mail in the background while you are in At Ease. However, to read or write mail, you must be in the Finder.

QuickDraw GX

At Ease now supports printing from QuickDraw GX. However, once you start a print job you cannot log out of At Ease or go to the Finder until the printing is completed. If QuickDraw GX is installed, print jobs that are stopped cannot be restarted within At Ease. The user or the administrator must go to the Finder to restart a print job.

* Printer menu: When the user has access to the Chooser and QuickDraw GX is active, a new menu appears in At Ease called "Printer." This menu contains all desktop printers that have been created, with a checkmark next to the currently selected printer. To select a different printer, simply choose its name.

* Printer Status command: To view the status of the currently selected printer, choose Printer Status from the Printer menu. Print jobs started by your computer are displayed. A pop-up menu allows you to view the status of other printers.

Shutdown Items folder

The Shutdown Items folder is located within the System Folder. All items in this folder are started when you choose the Shut Down command from the Special menu to shut down your computer.

Article Change History:

23 Aug 1996 - Updated information for 7.5.3

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Tech Info Library Article Number:18720



Tech Info Library

HyperCard: Unable to Capture Sound on PCI-Based Systems (2/96)

Revised: 2/7/96
Security: Everyone

HyperCard: Unable to Capture Sound on PCI-Based Systems (2/96)

Article Created: 10 October 1995
Article Reviewed/Updated: 7 February 1996

TOPIC -----

I am trying to input audio into a HyperCard stack on my Power Macintosh 7500 computer. The sound seems to record fine, but when I play the sound back, all I hear is crackly, static noise. I have tried both HyperCard Player and a full version of HyperCard 2.3.3 and different microphones and computers.

DISCUSSION -----

Apple Engineering has recreated this issue on Power Macintosh 7200, 7500 and 8500 computers. This problem may also occur on Power Macintosh 9500 computers. This issue is fixed in the HyperCard 2.3.5 Stacks update posted online.

These articles can help you locate the HyperCard stacks mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

07 Feb 1996 - Added online fix availability.
25 Jan 1996 - Clarified methods.
11 Jan 1996 - Added additional sound import workaround options.

Support Information Services

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Tech Info Library Article Number:18721



Tech Info Library

QuickDraw GX: Print Spooler Patch Read Me File (4/97)

Revised: 4/29/97
Security: Everyone

QuickDraw GX: Print Spooler Patch Read Me File (4/97)

Article Created: 10 October 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article contains the ReadMe file included with the QuickDraw GX Print Spooler Patch posted online.

DISCUSSION -----

About the QuickDraw GX Print Spooler Patch

The QuickDraw GX Print Spooler Patch fixes a problem when trying to print to AppleShare and Novell Netware print spoolers. This application makes changes to the QuickDraw GX extension and the LaserWriter GX printer driver. You must first make copies of the QuickDraw GX and LaserWriter GX files, and then run the patcher on the copies. Once the files are updated, you need to drag the original files in the Extensions folder to the Trash, and drag in the new updated files.

NOTE: You will not be able to "Empty Trash" until the computer is restarted.

Disclaimer

This patch is provided as a way to allow people to use the latest versions of QuickDraw GX with AppleShare and Novell Netware print spoolers. This patch is not officially supported by Apple Computer. These problems will be fixed in an upcoming release of QuickDraw GX.

Warning

This patch cannot work properly while virus detection software is running. Please make sure that you have disabled any virus detectors before applying the patch.

About this patch...

This patch application was made with ResCompare, a free resource comparison and patch generation utility. ResCompare can be FTP'ed from most Macintosh archive sites. Send e-mail inquiries regarding ResCompare to Michael_Hecht@mac.sas.com.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18722



Tech Info Library

LaserWriter Software For Windows: Read Me File (1 of 2) (10/95)

Revised: 10/10/95
Security: Everyone

LaserWriter Software For Windows: Read Me File (1 of 2) (10/95)

=====

Article Created: 10 October 1995

TOPIC -----

This article contains the ReadMe file included with the LaserWriter Software For Windows version 1.1 posted online. This is part 1 of 2 of the document.

DISCUSSION -----

ABOUT YOUR APPLE LASERWRITER PRINTER SOFTWARE FOR WINDOWS
Revision 1.1

Revision 1.1 of the Apple LaserWriter Printer software for Windows 3.1 contains updated versions of these components:

••In part 1 of 2••

- Installer
- Apple Printer Utility
- Bidirectional driver

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference. You'll find information about:

- Installing the Printer Driver Software
- Installing additional PostScript printers
- Configuring the PostScript printer
- Deleting previous versions of the printer driver
- Installing the printer description on Windows NT 3.5
- Using the Apple Color LaserWriter 12/600 PS Printer
- Obtaining Printer Supplies for the Apple Color LaserWriter

12/600 PS

- Apple Printer Utility 2.0

••In part 2 of 2••

- AdobePS Printer Driver version 3.0
 - General driver compatibility issues
 - General font downloader compatibility issues
 - Application software compatibility issues

INSTALLING THE PRINTER DRIVER SOFTWARE

=====

Step 1

Start Windows 3.1.

Step 2

Exit from any applications that are now running.

Step 3

Insert Printer Disk 1 for Windows into your floppy disk drive.

Step 4

From the Windows Program Manager, choose File/Run.

Step 5

In the Command Line box, type a:\setup (where a: is your floppy diskette drive indicator), and click OK.

Step 6

The Welcome screen displays.

Step 7

Click Express Installation to continue the installation procedure. The installation begins. If the installer cannot copy the files to the WINDOWS/SYSTEM directory because that directory is write protected, it will alert you, asking whether to copy the files to an alternate directory.

Step 8

During the installation, the installer prompts you to restart Windows. Then, the Adobe PostScript Printers Control Panel asks you for the particular printer or printers to install. Highlight the printer name desired and click Install.

INSTALLING ADDITIONAL POSTSCRIPT PRINTERS FROM THEIR PPDS

=====

Step 1

Insert the diskette containing the PPD to be installed in a floppy diskette drive. The PPDs included with this disk set are located on Printer Disk 3.

Step 2

In the Control Panel of the Windows Program Manager, double-click the Adobe PostScript Printers icon. The Adobe PostScript Printers dialog box appears.

Step 3

In the Drives box, select the drive containing the PPD that you wish to install.

Step 4

In the Printer Descriptions Available box, select the PPD that you wish to use to install the PostScript printer.

Step 5

Click Install. You can continue to install PPDs by selecting entries in the Printer Descriptions Available box and clicking Install.

Step 6

Click Close when you have installed all the desired PPDs.

CONFIGURING THE POSTSCRIPT PRINTER DRIVER

=====

Step 1

In the Control Panel, double-click the Printers icon. The Printers dialog box appears.

Step 2

Select the name of the printer that you want to configure in the Installed Printers list of printers.

Step 3

To customize the printer driver settings available for your printer, follow the instructions in "Setting printer driver options" in Chapter 7 of the Apple Color LaserWriter 12/600 PS manual.

Step 4

If your printer is not connected to LPT1 or the port currently shown, click Connect.

Step 5

In the Connect dialog box, select the port to which your printer is connected and click OK. For more information on setting up for NetWare networks, see "Setting Up the PostScript printer driver for NetWare" in Chapter 3 of the Apple Color LaserWriter 12/600 PS manual.

DELETING PREVIOUS VERSIONS OF THE DRIVER SOFTWARE

=====

You are not required to remove previous versions of the driver or delete any previously installed PostScript printers. However, if you suspect installation problems, first remove your installed printers from the Printers dialog box in the Windows Control Panel and reinstall them via the Adobe PostScript Printers dialog box, also in the Windows Control Panel.

To delete a previous version of the driver:

1) Exit Windows.

2) From DOS, delete the following files (not all files may actually exist in your configuration from both your WINDOWS and WINDOWS\SYSTEM directories:

*.EBF
*.PPB
*.PPD
.PFM (delete these ONLY if you did not place them here using the ATM control panel or a font installation program) ADOBEPS?.
RUN_ENUM.*
PSINSTDV.EXE
WINDOWN.EXE
PS_ENUM.*
DOWN.DLL
DWN.HLP

3) Restart Windows to use Notepad or another ASCII text editor to delete the following entries from the WIN.INI file in the WINDOWS directory:

```
[<printer_name>,<port>]          <<<Delete this line
PrinterName=<printer_nickname>    <<<Delete this line

[devices]
<printer_name>=ADOBEPS,<port>,...<<<Delete this line

[PrinterPorts]
<printer_name>=ADOBEPS,<port>,15,45,...<<<Delete this line
```

If the device= line in the [windows] section of the Win.INI file refers to AdobePS, delete that line.

INSTALLING THE PRINTER DESCRIPTION ON WINDOWS NT 3.5

=====

Follow the steps below to install the PostScript Printer Description file for these Apple printers:

Apple Color LaserWriter 12/600 PS
Apple LaserWriter 16/600 PS
Apple LaserWriter Select 360
Apple LaserWriter Pro 600
Apple LaserWriter Pro 630

Step 1

Start Windows NT 3.5

Step 2

Insert the Apple Windows Printer Disk 1 into your floppy disk drive.

Step 3

From the Windows Program Manager, choose File/Run.

Step 4

In the Command Line box, type a:\setup (where a: is your floppy diskette drive indicator), and click OK.

Step 5

The Welcome screen appears.

Step 6

Select Custom Install and click Windows NT Printer Software. Make sure the other check boxes are deselected.

Step 7

Click Install. Instructions for installing the Windows NT software appear. Click Continue. The Print Manager appears.

Step 8

Select Create Printer from the Print Manager's Printer menu. The Create Printer dialog box appears.

Step 9

Select Other (at the bottom of the list) in the Driver Combo box.

Step 10

Insert the Apple Windows Printer Disk 3 into your floppy disk drive.

Step 11

Make sure the correct floppy drive is indicated in the Install Driver dialog box

and click OK. A list of printer drivers appears.

Step 12

Select the printer driver that corresponds to your printer and click OK.

Step 13

Follow the instructions on the screen. If you are installing software from the Windows NT 3.5 CD, you may need to type the path for your driver location. The path may be similar to this:

"c:\windows\system32\spool\drivers\w32x86\1\".

Click Continue and OK to complete the installation.

If you are installing Windows NT 3.5 software from floppy disks, you copy the following files (followed by their locations) to the path of your driver location:

PSCRIPTUI.DLL (Disk 13)

PSCRIPT.DLL (Disk 13)

PSCRIPT.HLP (Disk 18)

USING THE APPLE COLOR LASERWRITER 12/600 PS

=====

This section provides additional information on using the Color LaserWriter 12/600 PS printer.

About the Demonstration Page

When the power is turned on, the Color LaserWriter 12/600 PS automatically prints a startup page and a demonstration page. For legal and B5 paper sizes, only the startup page prints; the demonstration page is not printed. You can use the Apple Printer Utility to turn off the printing of the startup and demonstration pages.

About the Apple Color LaserWriter 12/600 PS Status Panel

As described in the Color LaserWriter 12/600 PS manual, Appendix G, the status panel lights aid in indicating hardware service problems found during printer startup. If the Alert light is flashing and all the door lights are flashing, check all the printer doors; one of them is open. If the Paper OUT and Paper Jam lights are flashing alternately, a hardware problem has been detected. To identify the problem, notice which toner lights (C, M, Y, Bk) and how many of the maintenance lights (in the area on the right-hand side of the status panel) are on, and refer to the table below. Each area listed under "Problem" represents a general circuit area for the service technician to investigate, not necessarily the exact cause of the problem.

Begin_Table

Toner	# Consumable	Problem
Lights On	Lights On	

C	0	I/O Controller Boar
C	1	SIMM, Slot J11
C	2	SIMM, Slot J10
M	2	Hard Drive
M	3	I/O Controller ROM
Y	0	Fuser
Y	1	Oil Pump in Fuser
Y	2	Thermal Sensor in Fuser
Y	3	Paper Feed Unit
Bk	0	DC Controller
Bk	1	Power Supply
Bk	2	Toner Carousel
Bk	3	Laser/Sanner Circuit
M & Bk	0	Main Motor
M & Bk	1	Drum Motor
M & Bk	2	Laser/Scanner
C & Bk	0	Controller Fan
C & Bk	1	Fuser Fan
C & Bk	2	Main Fan

End_Table

If you have an external SCSI hard disk drive attached but don't turn it on before you turn on the printer's power, the printer may indicate a hardware failure. To correct the problem, turn the hard disk drive on and restart the printer.

Using NetWare Banner Pages

The Color LaserWriter 12/600 PS is a PostScript printer only. If you are using NetWare 4.x, use PostScript banner pages only. If you use another type of banner page, your print job as well as the banner page will not print. Do not use banner pages at all with NetWare 3.x. If you do, neither the banner page nor your print job will print.

Printing Over Novell Networks

By default, binary PostScript sent via the Novell network is encoded in Tagged Binary Communications Protocol (TBCP). The printer's TBCP filtering mode for Novell is also on by default. If you change the Protocol Options to "None" from the Printer Control Panel's PostScript setup, you must send the following PostScript to turn off TBCP filtering for Novell on the printer:

```
true 0 startjob
(%PrintServer%)
<</Filtering /None>> setdevparams
```

If you subsequently change the Protocol Option back to "Default", you must send the following PostScript to turn on TBCP filtering for Novell on the printer:

```
true 0 startjob
(%PrintServer%)
```



```
<</Filtering /InterpreterBased>>  
setdevparams
```

The Novell filtering mode cannot be changed within a PostScript job, so the above PostScript sets the filtering mode outside the job context; thus it becomes permanent. If your printer's password has been changed from the default setting, replace the "true 0 startjob" line with "true <your password> startjob".

Obtaining the Best Results for Business Graphics

To obtain the best results for business graphics, colors should be 100% saturated. For example, to print pure yellow, define yellow as 100% red and 100% green without any blue. Then print your document, ensuring the Send Full Color Data option on the Job Control tab dialog is selected.

Printing on Legal-Size Paper

In the standard memory configuration, the Color LaserWriter 12/600 PS uses a higher compression technique for legal-sized paper using only the cyan, magenta, and yellow color planes. As a result of this compression technique, very complex pages may show missing pixels in fine lines or small text, "jaggies" (edges with low-resolution appearance) and color changes. To improve the image quality of such pages, you can increase the printer's memory to 16 MB or more. With at least 16 MB of printer memory, the Color LaserWriter 12/600 PS can achieve the same quality with legal-size pages as with letter and A4 sizes using all four color planes (cyan, magenta, yellow, and black.)

Printing Images on the Color LaserWriter 12/600 PS Printer

The Color LaserWriter 12/600 PS printer's highest resolution for printing images is 150 x 150 dpi. No gain in image quality is achieved if higher resolution images are used. All other types of documents print at 600 x 600 dpi.

Avoiding Hue Shifts When Printing to File

When you save an image in an Encapsulated PostScript (EPS) file all the PostScript settings relating to the original output device in effect are saved along with the image data. When the image is printed later, the settings that were in effect may cause major hue shifts. To prevent these hue shifts save the image in TIFF format instead of EPS.

The Density Control Panel

The Color LaserWriter 12/600 PS has been adjusted at the factory to produce the best possible image quality. However, small variations exist among different printers. To make subtle changes to image quality, you can use the Density Control Panel on the back of the printer. NOTE: If changing the settings produces inferior image quality, return to the factory settings by following these steps: Select each color using the Color Select button, then press the - or + button to move the indicator light to the center position. When the indicator is in the center, press Enter to make the setting permanent. Repeat

this procedure for all four colors.

Printer's Processor Speed

In the printer manual, Appendix A contains a typographical error: the microprocessor speed is 30 MHz, not 25 MHz as printed.

Using the Color LaserWriter 12/600 PS with a Windows NT Server

Using a Windows NT Server may cause spurious job records to be entered in the printer's Job Log if the printer is busy. The jobs will have a status of "cancelled".

OBTAINING PRINTER SUPPLIES FOR THE COLOR LASERWRITER 12/600 PS

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To order printer supplies for the Color LaserWriter 12/600 PS direct from Apple, call 1-800-600-7805. For order numbers, see Appendix A of the printer manual.

- * toner cartridges
- * transparencies
- * photoconductor cartridge (includes toner disposal boxes)
- * fuser oil
- * fuser

Instructions for replacing the fuser are in Appendix F of the printer manual. Instructions for replacing other printer parts come in the new packages.

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696, extension 525.

APPLE PRINTER UTILITY 2.0

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Using the Apple Printer Utility with Other Apple Printers - You can use the Apple Printer Utility for Windows only with the Apple Color LaserWriter 12/600 PS. For other Apple printers use the LaserWriter Utility for Windows that came with the printer.

Using the Apple Printer Utility on the Parallel Port - When you select the Parallel setting for the Apple Printer Utility you will see a delay of about twenty seconds before the printer name appears. You will also see a delay if you configure the Ethernet configuration within Communication Settings via parallel.

Opening Dialogs within the Apple Printer Utility - Use the check boxes to open individual dialogs within the Apple Printer Utility.

Printing on Parallel Connections Using Raw Protocol - The Color LaserWriter 12/600 PS printer does not support the Raw protocol on parallel connections.

Using the Apple Printer Utility with FaxWorks - The Apple Printer Utility may be incompatible with FaxWorks. The symptom that may appear is a General Protection Fault in the FaxWorks communication driver, FX-COMM.DRV. Using the default Microsoft communication driver (COMM.DRV) appears to solve the problem. To use

the Microsoft COMM.DRV edit the SYSTEM.INI file. Change the line
"comm.drv=fx-comm.drv" to "comm.drv=comm.drv", save and close the file, and then
restart your system.

Support Information Services

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Tech Info Library Article Number:18723



Tech Info Library

LaserWriter Software For Windows: Read Me File (2 of 2) (10/95)

Revised: 10/10/95
Security: Everyone

LaserWriter Software For Windows: Read Me File (2 of 2) (10/95)

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Article Created: 10 October 1995

TOPIC -----

This article contains the ReadMe file included with the LaserWriter Software For Windows version 1.1 posted online. This is part 2 of 2 of the document.

DISCUSSION -----

ABOUT YOUR APPLE LASERWRITER PRINTER SOFTWARE FOR WINDOWS
Revision 1.1

Revision 1.1 of the Apple LaserWriter Printer software for Windows 3.1 contains updated versions of these components:

••In part 1 of 2••

- Installer
- Apple Printer Utility
- Bidirectional driver

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference. You'll find information about:

- Installing the Printer Driver Software
- Installing additional PostScript printers
- Configuring the PostScript printer
- Deleting previous versions of the printer driver
- Installing the printer description on Windows NT 3.5
- Using the Apple Color LaserWriter 12/600 PS Printer
- Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS
- Apple Printer Utility 2.0

••In part 2 of 2••

- AdobePS Printer Driver version 3.0
 - General driver compatibility issues
 - General font downloader compatibility issues
 - Application software compatibility issues

ADOBEPS PRINTER DRIVER 3.0.1

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COLOR LASERWRITER 12/600 PS COMMUNICATION SWITCH

The ADOBEPS printer driver is configured by default for binary communications. Send Data in Binary on the PostScript Setup tab dialog is turned on by default.

The communication switch for the Color LaserWriter 12/600 PS is located on the back of the printer. The printer is shipped from the factory with the switch in the right or "Custom" position. Should the switch be reset to factory defaults by moving it to the left or "Reset" position and then back to the Custom position, the communications protocol for the printer's parallel port is incorrectly changed to ASCII. Because of this, print jobs sent from the AdobePS driver with Send Data in Binary turned on will not print.

To correct this problem, you can turn Send Data in Binary off. Alternatively, you can use the Apple Printer Utility to set the protocol back to binary (TBCP). To do this:

Step 1

Open the Apple LaserWriter Software folder, double-click the Apple Printer Utility, and select the desired printer.

Step 2

Select the Communication Configuration panel and then select Port Configuration. For the Protocol field, select TBCP. Then, press Send. The printer's protocol should now be set to binary (TBCP).

Step 3

This procedure must be performed each time the communication switch is reset.

GENERAL DRIVER COMPATIBILITY ISSUES

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Windows 3.0 - This version of AdobePS does not support Windows 3.0.

Installation - When installing the driver or a printer PPD, you must first exit all applications using this driver or the Printers dialog in the Control Panel will not proceed with the installation.

Interaction With Control Panel Printers Dialog Box - Some selections made in the

Printers dialog box, such as Set as Default Printer and Connect, take effect only after the Printers dialog box is closed.

Duplicate Features in the Driver and Application - If your application contains the same feature as the driver (such as scaling or number of copies), use your application to set the feature; do not set it using the driver. Use the driver tab dialogs only to set printer options you cannot control via your application's Print or Print Setup dialog box.

Printing From Multiple Applications - Multiple applications cannot use AdobePS 3 at the same time. You can print from multiple applications, but must wait until a job has completed before starting another one.

Image Printing Performance - For some applications, printing images may be slower than expected. Printing performance will depend on bitmap characteristics (such as size or color) and the method the application uses to print bitmaps. For example, 24-bit color images will print more slowly than 1-bit black-and-white images.

PostScript Protocol Options - For the printer's default configuration, protocol options located on the PostScript tab dialog should be set to Default. For the Color LaserWriter 12/600 PS you should be able to select Send Data in Binary for both parallel and network connections.

Optimize for Speed vs. Optimize for Portability - On the PostScript tab dialog, there is a group box called PostScript Performance. When you select Optimize for Speed, you may find certain jobs cause the printer to run out of memory, terminating the job with a VM or rangecheck error. If you encounter problems, try setting the PostScript Performance option to Optimize for Portability.

Downloadable Fonts - Printing lengthy documents that require the driver to download several fonts may generate one or more of the following error messages or conditions:

PostScript Error: limit check

PostScript Error: VM error

Page with the message that the printer has insufficient memory

Printer simply does not finish printing the job or resets.

Workarounds: Try one of the following:

- 1) Reduce the number of fonts in the document.
- 2) Try changing the PostScript Performance setting on the PostScript tab dialog to Optimize for Portability.
- 3) Add memory to the printer.

Do Not Download Fonts Option - The Job Control tab dialog contains the Font Control option Do Not Download Fonts. Use this option only if you know that the fonts that you use in your documents are always available to your printer, for example, via the hard disk attached to your printer. Otherwise, the printer may

substitute Courier for your fonts.

Document Structuring Conventions - AdobePS 3 does not emit the DSC comments
"%%BeginData ... %%EndData."

Some Images Print With Limited Color - Images based on RLE-4 and RLE-8
compression print with limited halftoning effects. Typically, shades of gray or
color will print as either black or white.

Installation of Printer Font Metrics - The list of characters available in a
font has changed from Windows 3.0 to Windows 3.1. AdobePS 3 uses the information
in Printer Font Metric (PFM) files to help applications lay out text correctly
and to instruct PostScript printers how to print text correctly. However,
because of the changes in characters available, some older PFMs may incorrectly
list character widths and cause either errors in layout of text on the screen,
in the printer, or both. AdobePS 3 includes the newest versions of font PFMs
for all of the printers it installs.

If Adobe Type Manager (ATM) is installed it includes PFMs for fonts on the
printer. AdobePS 3 assumes that those PFMs are more up to date than the PFMs
included during driver installation.

If you suspect that your ATM fonts are incorrect, you can force AdobePS 3 to use
its own PFMs by following these steps:

Step 1

Use Notepad to edit a line similar to PFM_Dir=c:\psfonts\pfm in the [Setup]
section of the ATM.INI file to read as follows:

```
;PFM_Dir=c:\psfonts\pfm
```

Step 2

Save the modified ATM.INI file.

Step 3

Proceed to install a new printer using the Printers dialog box in the Control
Panel.

Step 4

Restore the line in ATM.INI to its previous value.

Interaction with Adobe Type Manager - Certain applications may pass inaccurate
font information to Adobe Type Manager, causing it to abort. To work-around this
problem, double-click the ATM Control Panel, select the On or Off option, and
choose Exit. Restart Windows for the change to take effect. Then, try the
application again.

Removing Adobe Type Manager from Your System -In rare instances you may want to

remove ATM from your system. Follow these steps:

Step 1

Use the ATM Control Panel to remove Type 1 fonts from your system.

Step 2

Use Notepad or another text-editing accessory to open the SYSTEM.INI file in your Windows directory

Step 3

Replace the following two lines:

```
system.drv=atmsys.drv
```

```
atm.system.drv=system.drv
```

with this line:

```
system.drv=system.drv
```

The first two lines might vary on some systems. The replacement line, however, should be as shown above.

Step 4

Quit Notepad and exit Windows. Delete ATM16.DLL, ATM32.DLL, and the ATMSYS.DRV files from your Windows\System directory. Delete the ATM.INI and ATMCNTRL.EXE files from your Windows directory.

Step 5

Delete the .PFM and .PFB files from your Windows\psfonts directory. Delete the ATMFONTS.QLC file from your Windows\psfonts directory. Restart Windows.

Some Printers Reset When Sent Binary Mode Commands - The Apple Color LaserWriter 12/600 PS supports Tagged Binary Communications Protocol which is a superset of the Adobe Binary Communications Protocol. It does not support the Adobe Binary Communications Protocol (BCP) and may reset if sent the command to switch into binary mode (requested via the Job Control tab dialog, using Printer Mode, Send Mode). This happens only if you are using the incorrect PPD for your particular printer. To avoid this situation, install the correct PPD for your installed printer.

Using Print Manager - Windows Print Manager will create a temporary file when you print from an application. Deleting this temporary file terminates the print job.

Suggested use: Click Cancel from the dialog box to terminate the print job or delete from within Print Manager.

Custom Paper Dimensions - In some PPDs, the minimum width and height values for the Custom Paper option are represented by three decimal digits. AdobePS 3 rounds off the value to two decimal digits, which may result in an error indicating that one or both of your dimensions are invalid.

Workaround: If you wish to use the minimum value, change the AdobePS 3 rounded value (such as 8.26) to the exact value of the dimension with all decimal digits (such as 8.264).

Page Preview Image - The Page Preview image on the Paper tab dialog reflects only an approximation of the actual printed page. Paper size, color, and border filling in the page preview, for example, may not accurately represent the corresponding characteristic of the printed page.

Watermark Printing - In some applications, watermarks will print either in the background (the default) or in the foreground, but not in both.

Workaround: Try printing the watermarks in both the foreground and background to discover which location works best with your application and printed document.

Watermarks are enabled using the Forms capability in all Adobe PostScript Level 2 printers and will not print if sent to a PostScript Level 1 printer.

Workaround: Send jobs specifying watermarks to a PostScript Level 2 printer.

When you specify a watermark to print in outline format, the Page Preview image of the Watermark and Paper tab dialogs do not display the outline watermark. This is a limitation of the driver's display feature only; the watermark will print correctly on the physical page.

In some applications, when the Watermark First Page Only feature and Number of Copies features are combined, the watermark prints only on the first page of the first copy.

Workaround: Print each copy as a separate job.

Some applications submit the entire print job as one logical page. The single logical page, when printed, spans multiple physical pages. For such applications the watermark may appear only on the second physical page.

N-Up Printing - N-up printing may yield unanticipated results when you combine layout and orientation page-setup options in one document. The first logical page of a job determines the layout for the rest of the job. For example, if you choose portrait orientation for the first page of a document printed in 6-up, all pages in the document will print in the standard order for portrait orientation, left to right, top to bottom, even if you change to landscape orientation in the middle of the job. If you specify landscape orientation for the first page of a 6-up document, all document pages print bottom to top, left to right. For rotated landscape orientation, document pages print top to bottom, right to left.

Additionally, if you request a different resolution, page size, or paper source,

or if you request duplex settings for different pages of a document while using the n-up feature, AdobePS 3 completes the previous request and then starts a new page, applying the currently requested page-setup settings. The order of the layout remains the same, although virtual pages of an n-up layout will be blank.

This is because AdobePS 3 starts the next set of instructions on a new sheet of paper.

In some applications, when the Layout and Copies features are combined, new pages are started, as needed, only in the first copy.

Workaround: Print each copy as a separate job.

N-up printing and borders - You may experience problems printing documents that have borders when printed with n-up printing.

Workaround: Print documents with borders with 1 page per sheet of paper.

N-up printing and manually downloaded PostScript header - With some applications, manually downloading a PostScript header may cause errors when n-up printing is used.

Workaround: Instead of manually downloading the PostScript header, select "Send Header with each job" in the driver's Job Control tab dialog.

Dialog Box Warning: Application Incompatibility Watermark and N-Up Features - Some applications are incompatible with watermark and page layout (n-up) features. If this is true for an application you are using, AdobePS 3 displays the Application/Printer Setup Incompatibility dialog box, which lets you cancel the print job, try to print using the driver's features, or print without using the driver's features. By default, AdobePS 3 displays this dialog box each time you send a print job specifying features with which the application is incompatible. If this is an inconvenience for you, you can disable the dialog box.

To disable the Application/Printer Setup Incompatibility dialog box:

Step 1

Use Notepad or another ASCII text editor to open the WIN.INI file and go to the [AdobePS] section.

Step 2

Choose one of two options:

- * Find the line "Show Compatibility Alert=1" and change the value from 1 to 0.
- * If the Show Compatibility Alert line does not exist, add the line "Show Compatibility Alert=0."

Step 3

Save and close the file.

Problems Printing Envelope and Document in a Single Job - The Apple Color

LaserWriter 12/600 PS printer does not support envelopes. With other printers, when you print an envelope-and-letter job involving paper source changes, if the first page uses the manual-feed paper tray and the next page changes to Auto Tray Select, printing may yield unexpected results. For example, envelope text may be printed on letter-size paper instead of the expected envelope.

Workaround: Specify specific paper sources instead of Auto Tray Select, or print each page as a separate job.

Problems Printing to Printers in Adobe IntelliSelect (AIS) Mode - A Printer Mode value of ASCII Mode, set via the Job Control tab dialog, is incompatible with printers in AIS mode and results in an error. Also, files with embedded EPS graphics or text created via drivers other than AdobePS 3 may not print correctly to a printer in AIS mode.

Workaround: If your printer has a front panel, change from AIS mode to standard PostScript or TBCP and then reprint the job. Or, do not choose Send Mode and use only the printer's default mode.

Full-Color Bitmap Printing Performance - When you select the PostScript option Send Full Color Data and are using 24-bit color images, AdobePS 3 sends the full image data to the printer. You may not need this data for printers that are unable to render 24-bit color images. However, selecting this option allows the printer's halftoning capabilities to be used to their greatest extent to print the best possible image.

Alternative: If improved performance is more important than accurate color halftoning, turn off the Send Full Color Data option.

Accidentally Printing EPS Files - If a printer driver is accidentally configured to print EPS output to a printer rather than a file, AdobePS 3 displays a warning that EPS should not be output to a port; the job prints correctly within the application, then the printer stays in a waiting mode until either (a) another job is sent, or (b) a time-out error occurs. To avoid this situation, ensure that EPS format is only output to File, not Printer.

Font Installation - The presence of fonts installed by some font installers may not be recognized.

Workaround: To notify the driver of fonts installed by non-Adobe font installers, manually update the ATM.INI file. For more information, see the Adobe ATM user guide.

Match Color Across Printers Option - The Match Color Across Printers option uses the device-independent color-rendering feature available in PostScript Level 2 color printers to render color output as close as possible to the colors of other Level 2 printers. This feature is intended to give accurate and consistent color rendering across a wide range of color devices.

GENERAL FONT DOWNLOADER COMPATIBILITY ISSUES

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The Font Downloader is automatically installed along with the driver. Although

the downloader can be run as a stand-alone program, this is not recommended.

Downloading Task Thermometer - The task-progress thermometer does not always reflect the true status of the font downloading task. Even though the font does download, the thermometer may not reflect 100%.

TrueType fonts - TrueType fonts cannot be downloaded with the Font Downloader.

Downloading PostScript Files Containing Binary Data - The Font Downloader can download only PostScript files containing ASCII data and may display an error if the PostScript file contains binary data.

Workaround: In the PostScript tab dialog, turn off the Send Data in Binary option in the Performance Options box, and redownload the PostScript file. Or, do not use the Font Downloader; instead, send PostScript files containing binary data to the printer from DOS using the Copy command.

Device Installer Problems - Sometimes the Font Downloader does not let you delete installed devices, does not properly display newly installed devices in the device list box, or continues to list fonts previously deleted. In addition, the Font Downloader cannot verify that a device is installed correctly. If you're not sure, check the Color LaserWriter's startup page to see if the device name is listed. See chapter 5 of your user guide to verify that the hard disk has been installed correctly.

Workaround: Exit completely from the driver. Reenter the program via the Setup button of the Printers dialog box; choose the Fonts tab dialog; click the Font Downloader button, and the Font Downloader dialog box appears. Click Device Installer. The newly installed devices should now appear. To delete a device, highlight it, and choose Remove.

Deleting Fonts From the Printer's Memory - If you have downloaded fonts to the printer's memory using the Font Downloader, the fonts stay resident until the printer is restarted; the Font Downloader does not delete fonts from the printer's memory.

Workaround: Restart the printer using the Apple Printer Utility or turn the printer off, wait a few moments, and then turn the printer back on.

Update of WIN.INI File - The Font Downloader does not update the WIN.INI file to reflect the fonts that it has downloaded; therefore, other PostScript drivers or application programs that read WIN.INI for information updates will not know which fonts have already been downloaded.

Misleading Memory Messages - Sometimes when you are downloading a group of fonts, the Font Downloader sends messages indicating that there may not be enough available memory to download the individual font. This message may or may not reflect the true state of your printer.

Workaround: If you know your printer has plenty of memory, choose Yes in response to the Font Downloader message and continue downloading the fonts. Also, to avoid display of the insufficient memory message, download the fonts individually, not by group. If your printer is low in memory, you may not be

able to download all fonts to it.

Check Password - Check Password is not supported for Apple printers.

Workaround: NetWare security is available for the Apple Color LaserWriter 12/600 PS when it is used as a print server. You set up the password on the NetWare file server and on the printer being used as the print server. See Chapter 3, sections "Assigning a password for the print server" and "Setting additional parameters with the Apple Printer Utility for Windows" of the Apple Color LaserWriter 12/600 PS User Manual.

APPLICATION SOFTWARE COMPATIBILITY ISSUES

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Adobe Illustrator

If you install Adobe Illustrator after the Adobe PostScript driver, the following message may appear: "The file C:\WINDOWS\SYSTEM\PS_ENUM.DLL already exists and has a different date than the file Illustrator is about to install. Do you wish to overwrite the current file on the system?"

Select No; do not overwrite the file.

This same dialog will again appear for RUN_ENUM.EXE. Select No; do not overwrite this file, either.

If Illustrator has been installed without regard to the above instructions, reinstall the driver using the instructions listed in "Deleting Previous Versions of the Driver." You must clear all previous files to ensure a successful installation.

Aldus Freehand

Aldus Freehand does not support the Rotated Landscape Orientation option of the Paper tab dialog. In addition, Freehand does not support watermarks.

Ashlar Vellum 2.12

Ashlar Vellum does not support printing multiple copies.

CorelDraw 5.0

Printing watermarks with First Page Only selected causes the watermark to print only on the last page.

Workaround: Print page one only with the watermark selected. Then, print the remainder of the document without the watermark.

Fractal Design Painter 2.0

In the PostScript tab dialog is a group box called PostScript Performance. Fractal Design Painter 2.0 is compatible only with the Optimize for Portability option of that box.

Freelance Graphics 2.01

Print jobs may not scale correctly.

Micrografx ABC FlowCharter 3.0

In documents over seven pages long, letters might print superimposed upon each other. This problem seems to occur on printers with a resolution of 600dpi or higher.

Workaround: Print to a printer with a resolution lower than 600 dpi.

Micrografx Designer 4.0

AdobePS 3 does not support the Colored Pattern Brush feature of Designer 4.0 and the earlier application Charisma and prints filled areas of color bitmaps in black and white.

MS Excel

Printers with resolutions in excess of 300dpi may exhibit uneven patterning in graphics using color fill patterns.

MS Notepad and Cardfile

Resolution of 600dpi or above may cause Notepad and Cardfile to print with incorrect margins. Sometimes this can be corrected by specifically changing the requested margins from 0.75", the default margins, to another value; this does not always fix the problem.

Workaround: Most printers with resolution above 600dpi have lower resolution modes; if so, select a lower resolution in the printer's Print Setup, Setup, Features tab dialog. If not, install the Adobe Default Printer and select it when printing from Cardfile or Notepad.

MS Online

Microsoft Online may not print when AdobePS 3 is selected and the printer name is longer than 29 characters.

Workaround: Choose a printer name with fewer than 30 characters.

MS PowerPoint 3.0

Resolution changes requested from within the PowerPoint 3.0 Print Setup dialog box do not take effect.

Workaround: For printers that allow control of their resolution, use the AdobePS 3 Features tab dialog to change resolution in your PowerPoint 3.0 files.

When printing some colored text from PowerPoint 3.0, the text prints in black

rather than the selected color.

MS PowerPoint 4.0

Printing files containing multiple embedded EPS objects from this application sometimes results in either lost text or lost EPS objects.

Workaround: Convert the embedded EPS objects to PowerPoint objects by double-clicking on them.

MS Publisher 2.0

The BorderArt feature of MS Publisher 2.0 is incompatible with AdobePS 3. If you try to use this feature with AdobePS 3, the printed file may be missing lines from the upper and bottom right and left corners of the border.

PageMaker

AdobePS 3 is incompatible with PageMaker 5.0 or earlier if you are using a PJL printer.

Workaround: Upgrade to the latest version of PageMaker if you are using a PJL printer.

Some PageMaker files may print with unexpected results.

Workaround: Make sure that you have selected the correct type of printer in the PageMaker print dialog box and that the PageMaker private PPD directory contains the correct PPD for the printer you are using.

Persuasion 3.0

Depending on the file you are trying to print, Persuasion 3.0 is sometimes incompatible with AdobePS 3. Printing sometimes results in a blank first page or a PostScript error.

Quicken 3.0

If you choose to print partial checks in 1s or 2s, instead of the standard 3s, you may get unexpected results. When you request partial check printing, Quicken prints a blank first page, a second page in portrait orientation, and a third page in landscape orientation.

WordPerfect 5.1

Early versions of WordPerfect may exhibit some problems with this driver. Examples include: unreadable text in the WordPerfect Select Printers dialog; dimmed Select control in the Select Printers dialog when switching printers; and mismatched settings between AdobePS 3 and WordPerfect.

Workaround: Use at least version 5.1 of WordPerfect.

Support Information Services

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Tech Info Library

PowerBook 5300 & 190 Series: Internal & External Video (5/96)

Revised: 5/30/96
Security: Everyone

PowerBook 5300 & 190 Series: Internal & External Video (5/96)

Article Created: 10 October 1995
Article Reviewed/Updated: 30 May 1996

TOPIC -----

This article answers some commonly asked questions about the internal and external video capabilities of the Macintosh PowerBook 190 and 5300 series computers.

How do I connect an external display to a Macintosh PowerBook 190 or 5300 series computer?

When an external monitor is connected can I still run the computer from the battery?

Can I expand the Video RAM (VRAM) in these PowerBook computers?

What is the highest bit depth the Macintosh PowerBook 5300 series computers are capable of using with an external monitor attached?

Which Apple Macintosh displays can I use with these PowerBook computers? And what resolutions can these PowerBook computers output to them?

DISCUSSION -----

Connecting An External Display

5300 Series

The PowerBook 5300 series computers have the same type VID-14 video output connector as the earlier PowerBook 500 series computers. This adaptor cable will be needed to connect an external display. The Apple part number for the cable is M3927LL/A*. The PowerBook Video Adaptor cable is not included with the

PowerBook 5300 computers.

190 Series

The PowerBook 190 series computers can be upgraded to have the same video out capabilities that are built into the PowerBook 5300 series computers. You need to order the Macintosh PowerBook 8-Bit Color Video-Out Upgrade Kit (Apple part number M3743LL/A*) to get video out capability. You will use the same video cable mentioned above to attach an external display. The PowerBook Video Adaptor cable is not included with the PowerBook 190 computers. The PowerBook Video Adaptor cable is included in the Macintosh PowerBook 8-Bit Color Video-Out Upgrade Kit.

Running From The Battery

Unlike previous PowerBook computer models, the PowerBook 190 (with the video-out upgrade) and 5300 series computers can have an external monitor attached while running from the battery.

VRAM Expansion

=====

All of the PowerBook 5300 and the PowerBook 190 (with the video-out upgrade) series computers have two separate sets of VRAM to support the internal and external displays.

External Display VRAM

All of the PowerBook 5300 and the PowerBook 190 (with the video-out upgrade) series computers have 512K of VRAM soldered on a video card for supporting external displays.

The highest bit depth available for external displays at either 640x480 or 832x624 resolutions is 8 bits per pixel unless you expand the VRAM by replacing the Apple video-out card with a third party video expansion card product. If the VRAM on the third party video card is 1 MB, the computer will be able to output 16 bits per pixel on an external display.

Internal Display VRAM

NOTE: The following descriptions apply only to models sold in the United States. Europe and Asia have models that differ slightly from these configurations.

The Macintosh PowerBook 5300 and 5300cs computers and the 5300c (that comes with 8 MB of RAM) come with 512K VRAM soldered to the logic board for support of the internal LCD Display. It cannot be removed or upgraded.

The Macintosh PowerBook 5300c that comes with 16 MB of RAM on the logic board and the Macintosh PowerBook 5300ce have 1 MB of VRAM. This allows for higher bit depth support on the internal display. It also cannot be removed or upgraded.

Built In Video Support

=====

Internal Video Support

The following table lists the PowerBook 5300 and 190 (with the Apple video-out upgrade) series computer models and the amount of VRAM installed in each for use by the computer's internal display and an external display.

Begin_Table

Part #	Model #	Display Type	No. Colors on Int. Disp.	VRAM for Int. Disp	VRAM for Ext. Disp
-----	-----	-----	-----	-----	-----
M3135LL/A* (8 MB RAM 500 MB HD)	5300/100	9.5 inch Passive Matrix Grayscale	16 Grays	512K	512K
M3825LL/A* (8 MB RAM 500 MB HD)	5300cs/100	10.4 inch Dual Scan Passive Matrix Color	256 Colors	512K	512K
M3824LL/A* (16 MB RAM 750 MB HD)	5300cs/100	10.4 inch Dual Scan Passive Matrix Color	256 Colors	512K	512K
M3133LL/A* (8 MB RAM 500 MB HD)	5300c/100	10.4 inch Active Matrix Color	256 Colors•	512K	512K
•Note: This model displays thousands of colors, but only in the reduced screen size mode (640x400).					
M4488LL/A* (16 MB RAM 750 MB HD)	5300c/100	10.4 inch Active Matrix Color	Thousands of Colors	1 MB	512K
M3828LL/A* (32 MB RAM 1.1 GB HD)	5300ce/117	10.4 inch Active Matrix Color	Thousands of Colors	1 MB	512K
M3530LL/A* (4 MB RAM 500 MB HD)	190/66	9.5 inch Backlit Passive Matrix Grayscale	16 Grays	512K	512K (with video card upgrd)
M3531LL/A* (8 MB RAM 500 MB HD)	190/66	9.5 inch Backlit Passive Matrix Grayscale	16 Grays	512K	512K (with video card upgrd)
M4072LL/A*	190cs/66	10.4 inch	256 Colors	512K	512K

(4 MB RAM 500 MB HD)	Dual Scan Passive Matrix Color	(with video card upgrd)
M4073LL/A* 190cs/66 (8 MB RAM 500 MB HD)	10.4 inch Dual Scan Passive Matrix Color	256 Colors 512K 512K (with video card upgrd)

External Video Support

The following table lists the Apple Displays supported by the Macintosh PowerBook 5300 and 190 (with the Apple video-out upgrade) series computers and the bit depths supported with the standard 512K of VRAM installed.

Display	Resolution(HxV)	Bits/Pixel
-----	-----	-----
Macintosh 12-in. RGB Display	512x384	1-8bpp
Macintosh 12-in. Monochrome Display	640x480	1-8bpp
AppleColor High Resolution RGB Monitor (13-in.)	640x480	1-8bpp
All Apple 14-in. displays including the AudioVision (with adaptor)	640x480	1-8bpp
Macintosh Portrait Display	640x870	1-4bpp
Macintosh Portrait Display	640x818	1-8bpp
Macintosh 16-in. Color Display	832x624	1-8bpp
Apple Multiple Scan 15 display	640x480 832x624	1-8bpp 1-8bpp
Apple Multiple Scan 17 display	640x480 832x624 1024x768	1-8bpp 1-8bpp 1-4bpp***
Apple Multiple Scan 20 display	640x480 832x624 1024x768	1-8bpp 1-8bpp 1-4bpp***
VGA (60 Hz)	640x480	1-8bpp**
SuperVGA (56 Hz)	800x600	1-8bpp**
VESA 1024x768 (60 Hz)	1024x768	1-4bpp***

End_Table

Note: The resolutions and bits/pixel may be different with a third party video card. For more information you will need to contact the manufacturer of your video card.

* Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

** VGA and SVGA Monitors require special third-party VGA cables.

*** This is an unsupported resolution. It can only be obtained by holding down the Option key when pressing the Option button in the Monitors Control Panel. It may or may not be an available option in future revisions of the Monitors Control Panel.

Article Change History:

30 May 1996 - Clarified information on video adaptor cable.

11 Jan 1996 - Added info about 5300c and 1000s of colors and 17" display.

11 Oct 1995 - Clarified information about internal display VRAM.

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Tech Info Library Article Number:18726



Tech Info Library

Desktop Manager and Desktop Databases: What are they? (10/95)

Revised: 10/11/95
Security: Everyone

Desktop Manager and Desktop Databases: What are they? (10/95)

=====

Article Created: 11 October 1995

TOPIC -----

This article describes the history of the Desktop Manager and Desktop DB files. It also discusses the use and support of the Desktop Manager extension.

DISCUSSION -----

In the early days of the Macintosh operating system, new objects like icons and windows had to be stored and managed somewhere by the operating system. Information such as the bit mapped representation of the icon picture to display and the association of documents to the application that created them was saved in a database. This file was called "Desktop" and was an invisible file at the top level of every diskette. Information was placed in this file by the action of the Finder making calls to the Desktop Manager. The Desktop Manager, in turn, made calls to the Resource Manager, creating resource items within the Desktop file.

When hard drives came into use on the Macintosh and the file system was enhanced with real folders and a hierarchical organization. This became known as the Hierarchical File System (HFS). The Desktop file maintained the same information as before, but became much larger in size since hard drives held many more files and documents.

AppleShare File Servers added the ability for the Macintosh to share larger and larger hard drives. The fast access needs of the file servers began to strain the capabilities of the Resource Manager to maintain the Desktop database. A new database organization was designed for use by the Desktop Manager for use on AppleShare 2.0.x servers. This new Desktop database consisted of two invisible files called "Desktop DB" and "Desktop DF".

These files are of a more modern database design with an index and data file and provide much faster access to information than the original resource based file, especially when the number of files being managed becomes very large. These files are also created at the top level of every volume over 2 Megabytes in

size. Floppy disks kept the original resource based Desktop file, since it is an adequate method for small volumes.

The support of the internal interface for the new Desktop Manager database routines under System 6 was implemented as an extension on AppleShare Servers called Desktop Manager. Many users who owned the AppleShare 2.0.x product ran with this extension on their client computer with System 6 to help manage their growing file systems on large hard drives. This use of the Desktop Manager extension was never a supported or approved configuration by Apple outside of the AppleShare Server environment.

This new desktop database design was integrated into System 7 and is still in current use. In the early transition days from System 6 to System 7, many users were using the Desktop Manager extension from AppleShare with non-server computers because they found that when switching back and forth between System 6 and System 7, it would prevent a Desktop rebuild from occurring. This extension was enabling the same desktop files to be shared between the two different versions of the Mac OS. This was an untested and unsupported configuration that seemed to work for those who tried it.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18727



Tech Info Library

Macintosh Easy Open: Keeps Opening the Wrong Application (10/95)

Revised: 10/11/95
Security: Everyone

Macintosh Easy Open: Keeps Opening the Wrong Application (10/95)

=====

Article Created: 11 October 1995

TOPIC -----

When I attempted to open a file, Macintosh Easy Open appeared and provided a list of applications which I could use to open this file. I accidentally selected the wrong application. Now, each time I attempt to open the file, the wrong application is launched. Is there a way to reset this so that the wrong application will not be launched?

DISCUSSION -----

After selecting the wrong application to open a particular file, you will need to delete Macintosh Easy Open's preference file, or the wrong application will remain attached to that file. To delete the preference file, open the Macintosh Easy Open control panel, and click the Delete Preferences button.

After deleting the preference file, you will need to rebuild your desktop file this way:

Step 1

Restart your Macintosh and hold down the Space Bar until the Extensions Manager control panel opens.

Step 2

Use the pull down menu in the Extensions Manager to choose "All Off"

Step 3

Scroll down to the Control Panels section of the Extensions Manager window and click the Macintosh Easy Open item to put a check mark by it.

Step 4

Close the Extensions Manager window by clicking on the close box in the upper left corner.

Step 5

Immediately hold down the Command (Apple) and Option keys until you see the dialog box, "Are you sure you want to rebuild the desktop file?" Click Okay.

Once you have determined everything is working normally, you can go back to the Extensions Manager and turn on all the extensions you usually use. You need to restart to have the reactivated extensions load.

Support Information Services

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Tech Info Library Article Number:18728



Tech Info Library

At Ease: Cannot Access Floppy (Drive A) On The DOS Side (10/95)

Revised: 10/25/95
Security: Everyone

At Ease: Cannot Access Floppy (Drive A) On The DOS Side (10/95)

=====

Article Created: 11 October 1995
Article Reviewed/Updated: 25 October 1995

TOPIC -----

We have installed At Ease for Workgroups 3.0 on our PowerMac 6100/DOS compatible computers. At Ease seems to prevent the DOS side from seeing Drive A. If we turn off At Ease, the DOS side can access Drive A just fine.

DISCUSSION -----

At Ease sets the same limitations to floppy disk access on the DOS side as it sets for the Macintosh side. That is, if the At Ease Setup allows accessing and storing files on a floppy disk, then the DOS side can also use the floppy disk in Drive A.

The Full Finder setup has no restriction on the use of floppy disks and either the Macintosh or DOS side can access a floppy disk in Drive A.

In a Restricted Finder setup or At Ease Panels, access to floppies is controlled by the Locations pane that controls where files can be stored or opened.

Follow these steps to allow users to save and/or open documents from a floppy disk while in the At Ease panels:

Security Panel
=====

Step 1

Launch At Ease Setup, open the Setup you want to have access to the floppy drive.

Step 2

Click the Padlock button to go to the Security Panel.

Step 3

In the first section:

For new documents, users are required to use their At Ease Documents folder to:

☐ Open

☐ Save

Click the box to put an x in the Open section if you want your users to be able to open documents. Click the box to put an x in the Save section if you want your users to be able to save documents.

Locations Panel

=====

Step 1

Click the Floppy Disk button to go to the Locations Pane.

Step 2

In the second section:

Store user documents on:

☐ Setup location volume

☐ Floppy Disk

Click the box to put an x next to Setup location volume if you want your users to have access to the At Ease disk. Click the box to put an x next to the Floppy Disk section if you want your users to have access to a floppy disk.

Step 3

Click OK.

Article Change History:

25 Oct 1995 - Clarified procedure.

Support Information Services

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Tech Info Library Article Number:18729



Tech Info Library

WiggleWorks: Story Line Input Limit (10/95)

Revised: 10/11/95
Security: Everyone

WiggleWorks: Story Line Input Limit (10/95)

=====

Article Created: 11 October 1995

TOPIC -----

When I try to input more than three lines of text in the Birds on Stage section of the WiggleWorks program, my computer just beeps instead of taking in any more input.

DISCUSSION -----

The guide that is included with the WiggleWorks CD-ROM disc incorrectly states that you can input up to eight lines of text. The limit is, in fact, 256 characters. There is no dialog box or error message stating that this limit has been exceeded, only a system beep response as you continue to type on the keyboard.

There is no way to type beyond the 256 character limit.

Support Information Services

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Tech Info Library Article Number:18730



Tech Info Library

System 7.5.3 and Physical Ethernet Address Change (6/96)

Revised: 9/23/96
Security: Everyone

System 7.5.3 and Physical Ethernet Address Change (6/96)

Article Created: 11 October 1995
Article Reviewed/Updated: 27 June 1996

TOPIC -----

After installing System 7.5 Update 2.0 (System 7.5.3) I noticed the Ethernet hardware address of the computer changed from 00:A0:40:xx:xx:xx to 00:05:02:xx:xx:xx. Why did this occur? Is this due to Open Transport 1.1?

DISCUSSION -----

Apple was initially assigned Ethernet physical (Media Access Control) addresses of 08:00:07:xx:xx:xx. Apple NuBus and on-board Ethernet implementations from 1989 through part of 1995 were given addresses from this range. In 1995, however, Apple began to reach the end of the available addresses in that range, and petitioned the IEEE for an additional vendor code (address range) assignment. We were granted 00:A0:40. Apple began using these new addresses (00:A0:40:xx:xx:xx) in some of our Ethernet implementations in mid-year 1995.

MAC addresses are typically stored in an EPROM (erasable programmable read-only memory) on the Ethernet chip set, in what is known as "Token Ring format". This format has each byte stored in nibble-reversed order. For example:

Begin_Table

Ethernet format (hex):	00	A0	40
Binary equivalent:	0000 0000	1010 0000	0100 0000
Token Ring format (hex):	00	05	02
Binary equivalent:	0000 0000	0000 1010	0000 0010

End_Table

Some Macintosh computers, Power Macintosh 7200, 7500, 8500, and 9500, and some Apple NuBus Ethernet cards, had their MAC address mistakenly stored in Ethernet format; not in the standard Token Ring format. That is, rather than storing the

address as 00:05:02:xx:xx:xx and then converting to yield the assigned address range of 00:A0:40:xx:xx:xx, the addresses were stored as 00:A0:40:xx:xx:xx and would have been converted to 00:05:02:xx:xx:xx.

At the same time, however, there was a bug in the Open Firmware code for Power Macintosh 7200, 7500, 8500, and 9500 computers that caused those systems to NOT convert the address stored in the EPROM. The end result was the correct MAC addresses (00:A0:40:xx:xx:xx) were being used by these Ethernet implementations on the wire, even though they were stored in the incorrect format. (A rare case of "two wrongs do make a right".)

Many Apple and third-party network management utilities also access the EPROM to read the MAC address, and correctly assume it will be stored in Token Ring format. Therefore they convert the stored address before presentation to the user. As a result, such as utility would report an address of 00:05:02:xx:xx:xx, even though a network analyzer packet trace would show an address in the range 00:A0:40.

Apple NuBus Ethernet cards, with MAC addresses in the new range, were more problematic. Because the Open Firmware bug did not affect these cards (Open Firmware is a PCI specific technology), the MAC addresses were converted from 00:A0:40:xx:xx:xx to 00:05:02:xx:xx:xx, resulting in the use of unauthorized addresses on the wire. Fortunately, the 00:05:02 range was still unassigned, and these cards did not create inter-operability problems in the field.

Apple has since petitioned the IEEE and been granted the 00:05:02 range, in addition to the already approved 08:00:07 and 00:A0:40 ranges.

System 7.5 Update 2.0 (System 7.5.3) includes a fix for the Open Firmware bug that impacted the Power Macintosh 7200, 7500, 8500, and 9500 computers. A system with an address stored as 00:A0:40:xx:xx:xx (originally considered improper), once updated to Mac OS System 7.5.3, will now appear as 00:05:02:xx:xx:xx on the wire. This change impacted an Open Firmware component; it is not a part of Open Transport v1.1.

As Apple now has official use of the 00:05:02 range, these PCI Mac OS systems now have properly stored addresses. This brings the behavior of all on-board and NuBus Ethernet implementations back together, and lets Apple and third party utilities correctly report these addresses.

These changes were necessary to assure ongoing standards compliance, and to remedy the unintentional compatibility issues with network management utilities.

This situation may impact networks including the Apple Ethernet implementations noted. Specifically, any network access and configuration services which depend upon statically configured MAC addresses will require reconfiguration by the network administrator. Such services can include BootP, DHCP, RARP, certain firewall and security scenarios, some routing Access Control Lists, and smart Ethernet hubs incorporating MAC-level security.

The 00:A0:40 address range is now reserved for future Apple expansion, when the 08:00:07 and 00:05:02 ranges are exhausted.

This situation does not affect Power Macintosh 7200, 7500, 8500, and 9500 computers or other Apple Ethernet implementations with physical Ethernet addresses in the original 08:00:07 range.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

This article was published in the Information Alley on 25 March 1996.

Article Change History:

27 Jun 1996 - Made correction for technical accuracy.
26 Mar 1996 - Added Information Alley information.
25 Mar 1996 - Changed distribution status, and updated article.

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Tech Info Library Article Number:18731



Tech Info Library

At Ease: CPU Energy Saver Cannot Shut Down From Panels (10/95)

Revised: 10/12/95
Security: Everyone

At Ease: CPU Energy Saver Cannot Shut Down From Panels (10/95)

=====

Article Created: 12 October 1995

TOPIC -----

I set the CPU Energy saver on all the machines in my computer lab to shutdown if the machine has been idle for more than one hour. All the machines are running At Ease. The CPU Energy saver on all the machines starts counting down at the appropriate time but the machines do not shutdown.

DISCUSSION -----

The CPU Energy Saver can not shut the computer down when it is at the At Ease login screen or At Ease panels. It does the countdown and then the machine remains powered on. If you are in the Finder or Restricted Finder of At Ease, the computer will shutdown.

The Auto Power on/off control panel is able to shut down your computer even when you are in the At Ease panels.

Use the search string 'energy saver and ktable' to locate the TIL article "Energy Saving Control Panels: Description and Compatibility" to determine which energy saving control panels are right for your computer.

Support Information Services

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Tech Info Library Article Number:18733



Tech Info Library

System 7.5.2: Clean Install for PowerBook 5300, 2300, 190 7/96

Revised: 7/2/96
Security: Everyone

System 7.5.2: Clean Install for PowerBook 5300, 2300, 190 7/96

Article Created: 12 October 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This article presents the steps necessary to perform a clean installation of System 7.5.2 on a PowerBook 5300, 2300, or 190 series computer.

DISCUSSION -----

Purpose of a Clean Installation

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving most files in place, and forcing the Installer to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Follow these instructions in the order presented.

Restart with Disk Tools

Shut down your computer, insert Disk Tools in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk icon should be in the upper-right corner of your screen with your hard disk icon below it.

If the computer ejects the Disk Tools disk, make sure you have the Disk Tools specified for your model Macintosh.

Run Disk First Aid

=====

Disk First Aid can detect and repair problems with a hard disk. The Disk First Aid program can be found in the Utilities folder on the hard drive of the PowerBook.

Step 1

Open the Disk Tools disk, and double-click on the Disk First Aid icon. In the window that appears, select the main hard drive.

Step 2

Click once on Repair. Disk First Aid will check your hard disk for any potential problems and repair them if necessary.

Step 3

Repeat this procedure for each hard disk attached to the system.

Step 4

When you are finished verifying the hard disks, choose Quit from the File menu to return to the desktop.

If Disk First Aid cannot repair a hard disk, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For the internal PowerBook hard drive, use Drive Setup, also located on the Disk Tools disk.

Update Hard Disk Drivers

=====

If you do not have an Apple hard drive, or you use third-party software to format your hard disk, do not use the Drive Setup utility. However, you should contact your hard drive vendor to verify that your formatting software is compatible with System 7.5.2.

Following these steps to update the hard disk drivers on the internal PowerBook hard drive:

Step 1

Double-click the Drive Setup icon on the Disk Tools disk to open it.

Step 2

Select the hard drive name under List of Drives.

Step 3

Select Update Driver from the Functions menu.

Step 4

When you're finished, select Quit from the File menu to return to the desktop.

Sometimes Drive Setup can not update the hard disk driver (indicated if the Update Driver selection is dimmed). Here are some possible causes and solutions:

- If a third-party utility formatted your hard disk, you should obtain the latest version of the utility to update your hard drive.
- If the driver is corrupted, the Macintosh does not recognize the drive (that is, the drive doesn't show on the desktop when you start from a floppy disk). You may wish to reinitialize it with Drive Setup. This erases the disk, so be certain you back up the hard disk first.
- If the driver was modified with disk compression or security software you may not be able to update the hard drive with Drive Setup. Contact the vendor of the software for any special instructions.

Check Available Hard Disk Space

=====

Be sure you have at least 30 MB available on the hard disk where you plan to install the system software. Open the hard disk's window. Select By Name from the View menu. The amount of available disk space appears in the upper-right corner of any open window.

If there is less than 30 MB available, you need to delete some unnecessary files by moving them to the Trash. Choose Empty Trash from the Special menu, and you will have more disk space available. You can also copy files onto floppy disks or other media before moving them to the Trash.

Performing a Clean Install

=====

You should have made a set of system disks from the disk images on the hard drive when you first got the PowerBook using the Floppy Disk Maker program. The instructions for doing this appear on the screen every time the computer is turned on until the disks are made.

If you still have the disk images on your hard drive (you have not erased them), you will not need the floppy disks to do the clean install. To check if these images are still present, follow the folder path: (through your hard drive):

Utilities -> Floppy Disk Maker -> Disk Images -> System Software Images.

Open each of these folders on your hard drive. The System Software Images folder should contain at least 10 items, including the System Software Installer.

Method 1: If the System Software Images Are On the Hard Drive

=====

Step 1

Start up the computer while holding down the Shift key until you see the message "Welcome to Macintosh, Extensions Off." If your computer will not start up from the hard drive, you can start it up from the Disk Tools disk that came with the computer.

Step 2

Double-click the System Software Installer located in the System Software Images folder. Click OK at the Welcome to System 7.5.2 dialog box.

Step 3

Check that the Destination Disk (located in the lower left hand corner) is set to the startup drive for your computer.

Step 4

Press the Command-Shift-K keys simultaneously.

You are presented with a small dialog box with two selections:

- Update Existing System Folder
- Install New System Folder

Step 5

For a clean install, select Install New System Folder, then click OK.

Step 6

Click the Clean Install button.

The Installer will begin to install the new System Folder. The current System Folder will be renamed Previous System Folder. The installation process will take about 11 minutes and should not be interrupted. When the installation is complete, restart the computer.

Method 2: If the System Software Images Have Been Erased

=====

Step 1

Make sure you have the set of system software disks that you made with the Floppy Disk Maker program. There should be at least 10 disks.

Step 2

Shut down the computer.

Step 3

Insert the disk labeled Install Disk 1.

Step 4

Start up the computer. Click OK when you see the Welcome to System 7.5.2 dialog.

Step 5

Check that the Destination Disk (located in the lower left hand corner) is set to the startup drive for your computer.

Step 6

Press the Command-Shift-K keys simultaneously.

You are presented with a small dialog box with two selections:

- Update existing system folder
- Install new system folder

Step 7

For a clean install, select Install New System Folder, then click OK.

Step 8

Click the Clean Install button.

The Installer will begin to install the new System Folder, asking you to insert each system disk as needed. The current System Folder will be renamed to Previous System Folder. The installation process will take about 25 minutes and should not be interrupted. When the installation is complete, restart the computer.

Move Bundled Items Over

=====

After the computer has restarted, move the following items from the Previous System Folder to the same location in the System Folder:

ATM Font Database

Claris folder

DataViz folder

Launcher Items folder

MacLinkPlus Setup (in the Control Panels folder)

MacLinkPlus for Easy Open (in the Extensions folder)

Verify Problem Resolution

=====

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of this procedure.

Install Non-Standard Items

=====

You can now reinstall the non-standard items from the old System Folder (now named "Previous System Folder") such as fonts, screen savers, device drivers, and so on. If possible, you should reinstall these items from their original disks.

If the original disks are not available, you may move the non-standard items from the Previous System Folder to the new System Folder. Be careful to only move items that are not already in the new System Folder.

Step 1

Open each corresponding folder within the System Folder and the Previous System Folder then compare the contents.

Step 2

Move anything that is not already in the new System Folder and its subfolders from the Previous System Folder and its subfolders.

Step 3

Restart your Macintosh.

Troubleshooting Extension Conflicts

=====

If you have installed any system extensions or control panels, you will see their icons line up across the bottom of the screen when you restart. They load into memory at startup time and modify the standard behavior of the operating system.

Verify INIT Conflict

=====

If the Macintosh fails to restart or behaves erratically, you probably have an incompatible or conflicting INIT (also known as a system extension or control panel). To verify this problem, follow these steps:

Step 1

Be sure the Caps Lock key is off.

Step 2

Restart, and after you see the picture of a computer with a smile, hold down the Space Bar key.

Step 3

Release the Space Bar key when the "Extensions Manager" window appears.

Step 4

Select "All Off" in the Sets pull down menu then close Extensions Manager.

Step 5

When the Macintosh is ready, try to recreate the erratic behavior.

If the problem no longer occurs, then you have a conflicting extension or control panel. Continue with the steps in the next section.

Turn On and Turn Off INITs in System Folder

=====

Step 1

Using the Extensions Manager turn on your Extensions and Controls Panels a few at a time.

Step 2

Close the Extensions Manager, and restart the Macintosh.

Step 3

Attempt to recreate the original problem.

Repeat steps 1 through 3 for each item in the Extensions Manager until the problem reoccurs. One of the last items activated in the Extensions Manager is probably the cause of the problem.

Final Steps

=====

Verify that your applications are performing normally. If not, refer to the application manual or contact the vendor.

When the Macintosh behaves as expected, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

04 Jan 1996 - Added move items over section and reformatted.

26 Oct 1995 - Added fax availability information.

Support Information Services

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Tech Info Library Article Number:18734



Tech Info Library

Color LaserWriter 12/600 PS: Images Have Blue Tint (12/95)

Revised: 12/18/95
Security: Everyone

Color LaserWriter 12/600 PS: Images Have Blue Tint (12/95)

=====

Article Created: 13 October 1995
Article Reviewed/Updated: 18 December 1995

TOPIC -----

Why do all of my PhotoShop files that are converted to CMYK print with a bluish caste from the Color LaserWriter 12/600 PS printer? I have tried multiple versions of PhotoShop, but all have the same result.

DISCUSSION -----

There could be a couple of reasons why you see a bluish caste.

- Photoshop uses it's own color space conversion when you convert images from RGB to CMYK. A better solution is to keep the image in RGB space, which allows ColorSync to use the input and output device profiles for conversion when printing an image.

- Components of the file are based on a different monitor profile. In other words, some of the images in the file may have been imported from another file that had a different input profile. If this is the case, the colors are not being mapped properly. The images should be imported using the current environment profiles, and then printed using ColorSync Color Matching.

Article Change History:
18 Dec 1995 - Minor correction.

Support Information Services

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Tech Info Library Article Number:18738



Tech Info Library

PowerShare 1.1: Technical Specifications (10/95)

Revised: 10/13/95
Security: Everyone

PowerShare 1.1: Technical Specifications (10/95)

Article Created: 13 October 1995

TOPIC -----

This article provides the technical specifications for PowerShare 1.1 .

DISCUSSION -----

Technical Specifications

New features in PowerShare 1.1

- Improved server routing performance that gets messages to their destinations up to three times faster
- Ability to import tab-delimited text files containing data such as Internet addresses and telephone listings
- Ability to store Internet addresses in a PowerShare catalog and manage them from within the PowerShare Admin application
- Apple Migration Tool for Microsoft Mail, for transferring e-mail and user account information from a Microsoft Mail for AppleTalk Networks server to a PowerShare server

PowerShare Mail server

- Provides server-based messaging services for PowerTalk users
- Stores PowerTalk messages to ensure delivery when user systems come on-line
- Saves disk space on client workstations

PowerShare Catalog server

- Stores collaborative information—such as group addresses, document templates, graphics, and sounds—in shared catalogs
- Authenticates users and encrypts their network traffic (including e-mail)
- Supports distributed systems of multiple servers
- Replicates and synchronizes catalogs across multiple servers for higher performance and greater reliability
- Enables multiple collaborative applications to share a single catalog

PowerShare Admin utility

- Lets administrators create user accounts and define groups
- Monitors mail and catalog servers to detect problems
- Provides system alerts to administrators
- Permits server management from any Macintosh system on the network

Easy Setup utility

- Lets administrators quickly configure a simple PowerShare system

System requirements

- One of the following systems:
 - An Apple Macintosh computer with a 68020 or later processor
 - A Power Macintosh computer
 - Any other similarly equipped Mac OS-based computer
- At least 8MB of RAM
- Macintosh System 7.5 or later with PowerTalk* installed
- A hard disk drive
- An AppleTalk connection
- Client computers: Macintosh, PowerBook, Power Macintosh, and/or other Mac OS-based client computers running Macintosh System 7.5 or later with PowerTalk* installed and an AppleTalk connection (direct or via Apple Remote Access software)

* The PowerTalk software included in Macintosh System 7.5 provides a single universal mailbox for all incoming messages from many sources, supports the use of collaborative applications to work together over a network, and lets users set up catalogs (directories) of personal information.

Ordering Information

PowerShare Collaboration Servers

Order No. M1907Z/D

- PowerShare version 1.1 server software, including PowerShare Mail server, Catalog server, Admin, and Easy Setup software
- Apple Migration Tool for Microsoft Mail, for transferring information from a Microsoft Mail for AppleTalk Networks server to a PowerShare server
- PowerShare System Administrator's Guide
- PowerTalk and PowerShare Solutions Guide

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Support Information Services

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Tech Info Library Article Number:18740



Tech Info Library

AppleShare 4.2.1: Questions and Answers (5/96)

Revised: 5/30/96
Security: Everyone

AppleShare 4.2.1: Questions and Answers (5/96)

Article Created: 13 October 1995
Article Reviewed/Updated: 30 May 1996

TOPIC -----

This article provides a series of questions and answers about AppleShare 4.2.1.

DISCUSSION -----

Question: What is AppleShare?

Answer: AppleShare is high-performance, easy-to-use file and print sharing software that allows networked Macintosh and Microsoft Windows software-based computers to share files, applications, and printers.

Question: What is AppleShare 4.2.1?

Answer: AppleShare 4.2.1 is PowerPC native which supports NuBus-based Workgroup Servers or Power Macintosh computers with classic AppleTalk, and PCI-based Workgroup Servers or Power Macintosh computers with Open Transport 1.1. It provides an average performance improvement over AppleShare 4.1 of 111% for file transfers between clients and the server. However, much larger performance gains (as high as 352%) are experienced in multi-user database applications. These are applications where the database application runs on the client workstations and the shared database file resides on the AppleShare server.

AppleShare 4.2.1 supports up to four network segments simultaneously through Open Transport 1.1's multi-homing capabilities on PCI servers. AppleShare 4.2.1 also supports nearly ten times as many open files as AppleShare 4.1 (3000 instances of 346 unique files in 4.2 vs. 346 in 4.1) and increases the maximum number of concurrent users from 150 to 250.

It also includes a simple-to-manage block cache architecture that dynamically tunes itself for optimal performance. To set up the new cache, the administrator simply allocates a block of memory for the Mac OS and any server utilities (like

..TIL18744-AppleShare_4-2-1-Questions_and_Answers_5-96_(TA34552).pdf

Retrospect for nightly backups), and AppleShare 4.2.1 runs and caches data in the remaining memory. AppleGuide support in 4.2.1 also assists unfamiliar users, making it easier to:

- Set up Users & Groups
- Share volumes
- Set access privileges
- Configure printing

Question: How does AppleShare 4.2.1 differ from AppleShare 4.2?

Answer: AppleShare 4.2.1 adds support for multi-homing with Open Transport 1.1 on PCI-based servers. The AppleShare file server bundle comes with a version of the Apple Remote Access (ARA) Multiport server which allows dial in connections.

Out of the box, you can enable two dial in connections on the server's printer and modem ports. AppleShare 4.2.1 includes COPS Inc's COPS Talk for Windows 95 users. As of 8 May 1996, COPS Talk is not shipping in the AppleShare package. An insert in the box provides an (800) number to call to order the software. AppleShare 4.2.1 also addresses problems with access privileges and modification dates in the previous version.

Question: What do customers gain by running AppleShare native on PowerPC?

Answer: AppleShare 4.2.1 is PowerPC native and completely optimized to take advantage of PowerPC performance and scalability, so users get the familiar ease-of-use of previous versions and dramatically improved performance.

Question: How is AppleShare 4.2.1 being distributed?

Answer: AppleShare 4.2.1 is distributed with PowerPC Workgroup Servers and as an upgrade for the installed base of AppleShare 4.x users.

Question: Is AppleShare 4.2.1 compatible with Open Transport?

Answer: AppleShare 4.2.1 is compatible with Open Transport 1.1, which includes many AppleShare server-specific features like support for multiple concurrent sessions and 100 MB Ethernet performance tuning. Apple has not certified AppleShare 4.2.1 and Open Transport on NuBus-based Power Macintosh computers and Workgroup Servers. Customers running AppleShare 4.2.1 on these systems should continue to use the "Classic" AppleTalk stack.

Question: What are the hardware requirements for AppleShare 4.2.1.

Answer: AppleShare 4.2.1 is designed and tested with PowerPC-based Workgroup Servers (WS) in mind, including both NuBus and PCI products. Therefore, AppleShare 4.2.1 is intended for the following Workgroup Servers:

WS 6150 and WS6150/66 running at least Mac O/S 7.5.1

WS 8150 and WS8150/110	running at least Mac O/S 7.5.1
WS 9150 and WS9150/120	running at least Mac O/S 7.5.1
WS 7250/120	running at least Mac O/S 7.5.3
WS 8550/132	running at least Mac O/S 7.5.3

Customers who purchased AppleShare 4.x when it was available as a stand alone product may upgrade to AppleShare 4.2.1 and run AppleShare on the following systems and receive support from Apple:

Power Macintosh 6100/60	running at least Mac O/S 7.5.1
Power Macintosh 6100/66	running at least Mac O/S 7.5.1
Power Macintosh 7100/66	running at least Mac O/S 7.5.1
Power Macintosh 7100/80	running at least Mac O/S 7.5.1
Power Macintosh 8100/80	running at least Mac O/S 7.5.1
Power Macintosh 8100/100	running at least Mac O/S 7.5.1
Power Macintosh 8100/110	running at least Mac O/S 7.5.1
Power Macintosh 7200/75	running at least Mac O/S 7.5.3
Power Macintosh 7200/90	running at least Mac O/S 7.5.3
Power Macintosh 7200/120	running at least Mac O/S 7.5.3
Power Macintosh 7500/100	running at least Mac O/S 7.5.3
Power Macintosh 8500/120	running at least Mac O/S 7.5.3
Power Macintosh 8500/132	running at least Mac O/S 7.5.3
Power Macintosh 9500/120	running at least Mac O/S 7.5.3
Power Macintosh 9500/132	running at least Mac O/S 7.5.3

Question: Does AppleShare 4.2.1 require the AppleShare client software to be upgraded in order to experience the improved performance?

Answer: It is not necessary for customers to upgrade their AppleShare client to get the performance benefits of 4.2.1 on a server. The dramatic performance increases are due to additional server features like dynamic caching and PowerPC native code.

However, on a client workstation, if a customer is using AppleShare Workstation software prior to v3.6.1, Apple recommends that customers install the latest version of the AppleShare client software. AppleShare Workstation 3.6.2, when running with Mac OS System 7.5.1 or later, will significantly improve the performance of any AFP server on the client. Macintosh clients will notice greatly improved performance when copying large files in the Finder. AppleShare Workstation 3.6.2 in conjunction with System 7.5.3 allows users to set and change passwords with the Alias Manager.

Question: Can customers with AppleShare Pro, which runs on the Apple Workgroup Server (AWS) 95 with A/UX upgrade to AppleShare 4.2.1?

Answer: Yes. There is an upgrade path for AppleShare Pro customers. However, since it involves moving to a new hardware platform based on PowerPC technology, extra steps are required. Customers wishing to do this need to do three things.

1) Since AppleShare Pro did not use serial numbers, customers upgrading to AppleShare 4.2.1 need to get a unique serial number for each server being

upgraded. Do this by calling 800-767-2775 ext 916. Proof of ownership will be required.

2) Purchase the AppleShare 4.2.1 upgrade kit(M4568Z/B) by calling 800-293-6617 ext 759 for \$199. Proof of ownership will be required.

3) UNIX based applications that were running on the AWS 95 will no longer run on a Mac OS based server. Also, Apple recommends upgrading Macintosh applications to the native versions whenever possible. Customers moving from A/UX to Mac OS will want to plan this migration carefully.

Article Change History:

30 May 1996 - Updated for technical accuracy.

24 May 1996 - Updated for technical accuracy, and added Q & A pairs.

08 May 1996 - Added information about COPS Talk.

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Tech Info Library Article Number:18744



Tech Info Library

PowerShare 1.1: What Is New (10/95)

Revised: 10/13/95
Security: Everyone

PowerShare 1.1: What Is New (10/95)

=====

Article Created: 13 October 1995

TOPIC -----

What's new in PowerShare 1.1?

DISCUSSION -----

PowerShare 1.1 includes better support for Internet-style addresses, including the ability to import Internet addresses from a text file into the PowerShare catalog. PowerShare 1.1 allows administrators to import more types of data directly into the PowerShare catalog, improved performance in message routing and more information in the log windows. All of these features make PowerShare 1.1 easier to support and easier to integrate into an SMTP-based environment.

The PowerShare 1.1 box also includes the Apple Migration Tool for Microsoft Mail which will transfer user-account information from a Microsoft Mail for AppleTalk Networks server to a PowerShare system. Apple has also bundled a demonstration version of the StarNine Internet gateway for PowerShare.

Support Information Services

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Tech Info Library Article Number:18745



Tech Info Library

PowerShare 1.1 & 1.0 Servers Compatibility (10/95)

Revised: 10/13/95
Security: Everyone

PowerShare 1.1 & 1.0 Servers Compatibility (10/95)

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Article Created: 13 October 1995

TOPIC -----

Are PowerShare 1.1 servers and PowerShare 1.0 servers compatible?

DISCUSSION -----

PowerShare 1.0 and 1.1 servers work together seamlessly. It is possible to combine both revisions of the server software in the same PowerShare system. This makes upgrading significantly easier since not all servers need to be upgraded simultaneously.

Support Information Services

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Tech Info Library Article Number:18746



Tech Info Library

AppleShare Client for Windows: Difference 1.0 to 1.0.2 (11/95)

Revised: 11/27/95
Security: Everyone

AppleShare Client for Windows: Difference 1.0 to 1.0.2 (11/95)

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Article Created: 13 October 1995
Article Reviewed/Updated: 27 November 1995

TOPIC -----

How is AppleShare Client for Windows 1.0.2 version different from 1.0?

DISCUSSION -----

The AppleShare Client for Windows 1.0.2 differs from the 1.0 product in several ways. Version 1.0.2 supports LocalTalk and Token Ring networks, in addition to Ethernet networks that were supported in version 1.0. Version 1.0.2 also supports PCs with a PCI bus and includes an updated installer that is much easier. Additionally, version 1.0.2 supports double-byte languages, enabling it to be localized in Japanese, Korean and Chinese. Version 1.0.2 also allows rapid multiple print jobs and large (10 MB+) print jobs to print reliably and addresses a problem with Cisco router compatibility.

Article Change History:
27 Nov 1995 - Changed to AppleShare Client for Windows 1.0.2.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18747



Tech Info Library

AppleShare Client for Windows 1.0.2 and Windows 95 (5/96)

Revised: 5/31/96
Security: Everyone

AppleShare Client for Windows 1.0.2 and Windows 95 (5/96)

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Article Created: 13 October 1995
Article Reviewed/Updated: 31 May 1996

TOPIC -----

Is the AppleShare Client for Windows 1.0.2 compatible with Windows 95?

DISCUSSION -----

AppleShare Client for Windows is not compatible with Windows 95. There are third party vendor products that provide connectivity to LocalTalk, Ethernet or TokenRing networks. Personal MacLAN Connect by Miramar Systems, runs on Windows 3.1x and Windows 95. COPSTalk for Windows, by COPS, Inc., runs on Windows 3.x and Windows 95.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
31 May 1996 - Updated for technical accuracy.
27 Nov 1995 - Changed to AppleShare Client for Windows 1.0.2.

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Tech Info Library Article Number:18748



Tech Info Library

Personal LW SC: Use Regular Tray W/ Desktop Printing (10/95)

Revised: 10/20/95
Security: Everyone

Personal LW SC: Use Regular Tray W/ Desktop Printing (10/95)

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Article Created: 16 October 1995
Article Reviewed/Updated: 19 October 1995

TOPIC -----

When printing using the manual feed option on the Personal LaserWriter SC with desktop printing enabled, the computer bombs with a bus error. This does not happen with desktop printing disabled. How can I correct this?

DISCUSSION -----

There is a conflict between the Desktop PrintMonitor and the Personal LaserWriter SC driver. When printing using the manual feed, the bus error occurs. This conflict occurs with both Desktop PrintMonitor versions 1.0.1 and 1.0.3.

The problem is related to the method that the drivers use to communicate with the printers during certain functions. The solution has been identified by engineering and is scheduled to be fixed in the next revision of the Desktop Printing software.

The present workaround is to use the regular paper tray, and not manual feed.

Article Change History:
19 Oct 1995 - Reviewed for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18750



Tech Info Library

Power Macintosh 5200: Monitor Adjustment Cable Pinouts (10/95)

Revised: 10/17/95
Security: Everyone

Power Macintosh 5200: Monitor Adjustment Cable Pinouts (10/95)

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Article Created: 16 October 1995

TOPIC -----

I need the pinout of the Power Macintosh 5200 Monitor Adjustment cable, part number 922-1513, to view the on-screen video adjustment controls.

DISCUSSION -----

In order to view the on-screen video adjustment controls, which appears after the display test patterns, it is imperative to properly install the monitor adjustment cable as instructed in the Service Source CD. Be sure to connect pin 1 of the Monitor Adjustment Cable 2-pin connector to pin 1 of P805 (square marking on the analog board). The monitor adjustment cable service part number is 922-1513.

If the monitor adjustment cable is not properly connected, then you may never see MacTest Pro's on-screen video adjustment controls as shown in the Service Source CD.

For your information, the following are the monitor adjustment cable pin assignments (as seen from the cable connector):

Monitor Adjustment Cable serial end:
(Mini-Din Connector, 519-0322)

Begin_Graphic

• • •
6 7 8

• • • <----- Pins 3 and 5 are shorted together and
3 4 5 connected to the 2-pin connector pin 1

• •
1 2

2-pin Connector,
Apple p/n 517-0041:

• • <----- Pin 1 must be connected to the Mini-Din
1 2 connector, pins 3 and 5

End_Graphic

Support Information Services

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Tech Info Library Article Number:18752



Tech Info Library

Creative Digital Systems

Revised: 10/17/95
Security: Everyone

Creative Digital Systems

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Article Created: 16 October 1995

Creative Digital Systems

293 Corbett Ave.
San Francisco, CA 94114

Phone: (415) 621-4252

Company Profile: Produces Gismo Beam, an infrared interface for select model PowerBooks and Apple MessagePads.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18753



Tech Info Library

Differences Between AppleTalk v58.1.5 and v58.1.6 (1/96)

Revised: 1/12/96
Security: Everyone

Differences Between AppleTalk v58.1.5 and v58.1.6 (1/96)

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Article Created: 17 October 1995
Article Reviewed/Updated: 12 January 1996

TOPIC -----

What are the changes made from AppleTalk v58.1.5, distributed on the Network Software Installer (NSI) 1.5.1, to AppleTalk v58.1.6, shipped on the PowerBook 5300 series computers?

DISCUSSION -----

The change to AppleTalk v58.1.6 was needed to implement built-in infrared technology (IRTalk). If the version number for AppleTalk had not been revised with the PowerBook 5300 Series computers, then running NSI 1.5.1 would over write the IRTalk changes. So by changing AppleTalk to v58.1.6, even if a user does run NSI 1.5.1, the AppleTalk resources will not be written over because the version pre-installed on the PowerBook is newer than the one on the NSI 1.5.1 disk.

Article Change History:
12 Jan 1996 - Revised for clarity.

Support Information Services

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Tech Info Library Article Number:18757



Tech Info Library

UUencode & UUdecode: Explained (11/95)

Revised: 11/14/95
Security: Everyone

UUencode & UUdecode: Explained (11/95)

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Article Created: 17 October 1995
Article Reviewed/Updated: 14 November 1995

TOPIC -----

This article describes UUencoding and UUdecoding, a popular method to transfer binary information on the Internet.

DISCUSSION -----

What is UUencode?

=====

UUencode stands for Unix-to-Unix Encode. It is a text-based binary encryption protocol in wide use on the Internet to transfer files across multiple platforms including UNIX, Windows, MS-DOS, Macintosh, and other operating systems. UUencode is the UNIX name for the encryption program; it is normally used with another UNIX program, UUdecode, which decodes an encrypted message.

Why UUencode files?

=====

The basic idea behind UUencoding a file is to translate a binary representation of data -- which could be a graphic image, compressed file, or other type of binary data -- into an encrypted text representation of that file.

There are two reasons for doing this:

1) Many mail systems used on the Internet cannot handle binary transmissions since they are designed for text data. However, if a file is UUencoded, it can be included as text in the message.

2) Many mail systems and gateways have size limitations, often less than 50 kilobytes (K). It is sometimes necessary to use a text editor to split or

combine such files. Since a binary representation of that data would make the editing of data very difficult, and since software that automatically joins these binary files is relatively rare, UUencoding a binary file allows common text editors to be used to join such files.

How can you tell it's a UUencoded file?

=====

There is no standard file name convention, although most UNIX-based systems use a .uu as a suffix. DOS-based computers, with their standard three-digit suffixes, generally use .uue. This is one general method of telling whether or not it is a UUencoded file. Another method is actually looking at the first line of the file.

A UUencoded file can be identified by the first line of the file:

```
-> begin 644 myfile.gif
```

This line is followed immediately by the start of the data. The first character of every line is the letter M. If the file has other characters other than M, the file is either not a UUencoded file, or has been damaged:

```
-> MuVAA=baI<RabzvYHyw@_cpUbzvYHyw@@zwl@xF]TzbaAhgmE=baOyBaA<gaL
```

The block ends with a single line containing the statement:

```
-> end
```

The first line signals the start of the block. The number 644 is a UNIX permissions flag (in this case, giving the owner of the file full read and write permissions) while giving other users read permissions only). The third part is the file name that uudecode will expand the file as.

What are the versions of UUencode?

=====

UUencode is a standard, but a number of implementations of the software exist. Most implementations are based upon source code from versions of the UNIX software which are in the public domain.

Macintosh and most Windows versions tend to combine both the UUencode and UUdecode functions into a single program, and simply allow you to choose if you want to encode or decode a message.

What issues should I be aware of?

=====

UUencoded data should be line-terminated with a single carriage return. Some mail systems append multiple line feeds or carriage returns, which can confuse some implementations of UUdecode.

UUencode is intended for use with a straight binary file. Since Macintosh files contain both a data fork and a resource fork, you should use Binhex to send Macintosh binary files. There are some types of files that you can UUencode, but you should limit these to files you know are going to other people using different operating systems.

Types of Files You Can UUencode

- Graphics (includes GIF, JPEG, and TIFF files)*
- Word processing files
- Miscellaneous non-Macintosh specific files

* PICT files are Macintosh based, so you should use Binhex to transmit these types of graphics.

Type of Files You Should Not UUencode

- Applications
- Control panels
- Extensions
- Fonts
- Macintosh-specific compressed files (SuffIt, Compacter)

You should use Binhex to transmit these types of files.

UUencode and UUdecode Tips

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- Do not imbed "white space" in the file. The first line of the file should start with the begin line and the last line of the file should be the end statement.

If you UUencode a file, the only to determine if your file starts with begin and finishes with end is to open it in a text editor or word processing application and check it.

- If a message was received as multiple email messages, intervening message headers and "white space" should be removed. Some UUdecode utilities cannot handle the additional returns and headers.
- Since there are a large number of UUencoding and UUdecoding applications on various computer platforms, you may get some errors during the decoding process.

If you encounter errors decoding a file and are sure the source (input) file is correct, try a different UUdecoding utility. If the errors persist, have the sender of the data encrypt the data using a different version of UUencode.

Article Change History:

14 Nov 1995 - Made minor correction for technical accuracy.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18758



Tech Info Library

MAE 2.0: Limited to 2 GB Volumes (10/95)

Revised: 10/17/95
Security: Everyone

MAE 2.0: Limited to 2 GB Volumes (10/95)

=====

Article Created: 17 October 1995

TOPIC -----

Is there a limitation on the volume size that MAE supports?

DISCUSSION -----

Yes, MAE is based on System 7.1, which is limited to 2 GB volume sizes. Any partition cannot exceed 2 GB when using MAE, or else you will receive Disk Full error messages when trying to save to that volume.

This has been reported to engineering, however, there is no known date or knowledge if MAE will function differently.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18759



Tech Info Library

DOS Compatibility Card and System Memory Allocation (10/95)

Revised: 10/17/95
Security: Everyone

DOS Compatibility Card and System Memory Allocation (10/95)

=====

Article Created: 17 October 1995

TOPIC -----

In the About This Macintosh box, something is causing the System Software line to report a large allocation of memory. The DOS Compatibility Card software is not even installed and I have started the computer with extensions off. What is wrong?

DISCUSSION -----

The About This Macintosh box reports memory being shared with the DOS Compatibility Card on the System Software line along with the space taken up by normal system software. If the PC Setup control panel is not loaded, without first being turned off, the memory allocated to the DOS card will not be de-allocated and will still be reported as being used. Here are two workarounds that may clear this issue:

- Reload the PC Setup control panel and use the on/off option at the top of the control panel to turn off the DOS Compatibility Card. The System Software line will report the proper memory value after the computer is restarted.
- The Parameter RAM can be reset by holding down the Command-Option-P-R keys simultaneously at startup. This will also release the memory so the System Software line will report the proper memory value on startup.

Support Information Services

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Tech Info Library Article Number:18760



Tech Info Library

Color LaserWriter 12/600 PS: Maximum Imageable Area (10/95)

Revised: 10/17/95
Security: Everyone

Color LaserWriter 12/600 PS: Maximum Imageable Area (10/95)

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Article Created: 17 October 1995

TOPIC -----

This article provides information about the maximum printable area for the Color LaserWriter 12/600 PS printer.

DISCUSSION -----

The imageable area on a page does not change with additional RAM in the Color LaserWriter 12/600 PS printer. The imageable area is defined in the PPD file for a specific printer. You can view the image values by opening the PPD file in a text editor or word processing application. Search through the text until you see the imageable areas defined. The formula to determine the imageable area is a little complicated, but here are the results.

Note:

The results are posted in fractions of an inch and are rounded to the nearest 100th of an inch.

Imageable Areas

=====

Letter

left margin - .20
right margin - .20
top margin - .315
bottom margin - .20

Legal/US Legal:

left margin - .20
right margin - .20
top margin - .315
bottom margin - .20

A4:

left margin - .20

right margin - .20

top margin - .32

bottom margin - .20

Support Information Services

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Tech Info Library Article Number:18761



Tech Info Library

DOS Compatibility Card: Cannot Find PC Network Extension (10/95)

Revised: 10/17/95
Security: Everyone

DOS Compatibility Card: Cannot Find PC Network Extension (10/95)

Article Created: 17 October 1995

TOPIC -----

I get an error message when I try to run MS-DOS from my Power Macintosh DOS Compatibility Card. The error message occurs after MS-DOS gives up looking for the PC Network Extension, the error message reads "Cannot communicate with PC Network Extension". Why am I getting this message.

DISCUSSION -----

The PC Network Extension is a required extension for any MS-DOS networking product to work properly. These messages occur if the PC Network Extension is not loaded. There are two common reasons why PC Network Extension will not load:

1) AppleTalk is inactive in Chooser.

Make sure that AppleTalk is active in Chooser. Turning AppleTalk inactive disables the networking capabilities of your computer. When AppleTalk is inactive, the PC Network Extension cannot load because it is not able to access the Ethernet port.

2) PC Network Extension is not installed.

Make sure that the PC Network Extension is located in your Extensions folder. The PC Network Extension must be in the Extensions folder at startup for it to load. If you cannot find PC Network Extension, it can be replaced by reinstalling the DOS Compatibility Card Installer Disk for Macintosh Environment.

Support Information Services

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Tech Info Library Article Number:18762



Tech Info Library

QuickTime Conferencing: H.261 Compression Read Me File (10/95)

Revised: 10/17/95
Security: Everyone

QuickTime Conferencing: H.261 Compression Read Me File (10/95)

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Article Created: 17 October 1995

TOPIC -----

This article contains the ReadMe file about H.261 compression included with the QuickTime Conferencing software.

DISCUSSION -----

About H.261 Compression

The H.261 QuickTime Component is a software-only realization of the H.261 video-conferencing compression standard. It allows bit rates of 64 Kbits/sec to 384 Kbits/sec of 352x288 pixels or smaller frames. It can be used to compress QuickTime movie files, as well as video input from cameras.

System requirements and installation

This version of H.261 QuickTime Component works only on Power Macintosh computers. (You cannot send video to a 68000-based Macintosh using this method of compression.) The frame rate is dependent on the processing speed of your computer.

The H.261 coder decoder (codec) is installed in the Extensions folder (within the System Folder) by the QuickTime Conferencing Installer.

You should allow 1 MB of extra random-access memory (RAM) for the codec in addition to the 3 MB recommended for the Apple Media Conference application program. (You might try quitting other application programs or reducing the memory of the programs you are running.)

Setting options

You set compression options in the Video Settings dialog box. From the Apple Media Conference application program, choose Video Settings from the Settings menu. Select Compression in the Video Settings dialog box, then select H.261

from the Compressor pop-up menu.

Setting Video Bandwidth:

To set video bandwidth, you use the Quality slider in the Video Settings dialog box. The bandwidth changes linearly from 64 Kbits/sec. with the Quality slider set at Least, to 384 Kbits/sec. with the Quality slider set at Most.

When you are communicating over low-bandwidth networks (for example, Internet or ISDN), you should set the Quality slider to Least or Low.

Setting Key Frames:

Key frames improve video integrity when communicating over unreliable or low-bandwidth networks (at the expense of reducing image quality). The Key Frame option is accessed by opening the Video Settings dialog box. When the Key Frame option is unchecked, key frames are sent continuously. You can reduce the frequency of key frames by clicking on the Key Frame checkbox and entering a new key frame frequency. We recommend that you start with key frames every 25 or more frames.

Tips and troubleshooting

Window Sizes:

The current codec supports window sizes up to 352x288 pixels. The codec operates fastest when the window size is less than 176x144 pixels (note: Normal Size is 160x120). For medium and large window sizes, set the Quality slider at Medium, High, or Most.

Dropped Frames and Ghosting Artifacts:

If frames are dropped by the network, "ghosting" artifacts (that is, pieces or moving edges left over from previous frames) will persist in the image until the next key frame. This problem should not persist for more than a few frames (that is, less than a second) with QuickTime Conferencing.

"Ghosting" artifacts occur when receiving computer is too busy to decode the frames, or if the bandwidth of the connection between computers is too small. Here are some ways to alleviate ghosting problems:

On the sending computer:

- Set the Quality slider to a lower setting.
- Make the Self View window smaller.
- Use a key frame every 15 frames.
- Select Thousands from the Depth pop-up menu in the Video Settings dialog box.

On the receiving computer:

- Set your monitor to use Thousands or Millions of colors.
- Click the caller's window to make it active, and choose Normal Size from the Window menu.

Support Information Services

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Tech Info Library Article Number:18765



Tech Info Library

Share DOS Volume Between Power Macintosh DOS Computers (10/95)

Revised: 10/18/95
Security: Everyone

Share DOS Volume Between Power Macintosh DOS Computers (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

Can a Macintosh folder on a Power Macintosh 6100 DOS Compatible computer be used as a shared DOS volume and be seen as a shared DOS Drive on another Power Macintosh 6100 DOS Compatible computer?

DISCUSSION -----

Yes, you can do what you describe by following the steps below to mount a shared DOS volume.

Step 1

Create a folder on the desktop of the source Power Macintosh 6100 DOS Compatible computer, and map the folder to a drive letter using the Sharing option in the PC Setup control panel.

Step 2

Use Macintosh personal file sharing to share the folder, created in Step 1, on the network. Also be sure your Users & Groups control panel has either the shared user, or everyone setup so the destination Macintosh can access the folder.

Step 3

Mount the shared folder on the destination Power Macintosh 6100 DOS Compatible.

Step 4

Map this shared folder, from Step 3, to a drive letter with the Sharing option of PC Setup control panel.

Step 5

The same folder is now seen as a mounted drive in the respective DOS environments.

Please Note: The computers used to test this setup both had SIMMS installed on the DOS Compatibility Card. This lets the PC environment operate without sharing memory with the Macintosh environment.

Support Information Services

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Tech Info Library Article Number:18766



Tech Info Library

AppleVision 1710AV: Icons Rearranging On Restart (10/95)

Revised: 10/18/95
Security: Everyone

AppleVision 1710AV: Icons Rearranging On Restart (10/95)

=====

Article Created: 17 October 1995

TOPIC -----

I have a Power Macintosh 7100/66AV, running System 7.5.1, and an AppleVision 1710AV display. On startup or restart the desktop will automatically rearrange all of the icons on the desktop in alphabetical order on the right side of the screen, as if I had chosen the "Clean up all" command from the Special menu.

I have found that leaving a Finder window open in icon view before restarting or shutting down, will alphabetically rearrange the icons in that window, instead of on the desktop. Is there a way to correct this problem?

DISCUSSION -----

Apple is aware of this issue and some workarounds have been developed to address it. Try one of the following workarounds to prevent the icons from rearranging on your desktop:

Workarounds
=====

System 7.5

- Create a new empty folder in the Shutdown Items folder (in the System Folder). When the computer is shutdown, the folder will open. At startup the Finder will try to rearrange the contents of the empty folder, not the icons on the desktop.*

System 7.5 or Earlier System Software

- Leave a Finder window open before restarting or shutting down. The icons in that window will be rearranged, instead of the ones on the desktop.*

- Use a sense code adapter. Doing this would force the Macintosh computer to recognize the AppleVision 1710AV display as a monitor with only one available

resolution. For example, an adapter could be used to make the computer believe that the AppleVision 1710AV display was a 21-inch RGB display.

* Note: If you have any external volumes (hard drive, server, or other) that automatically mounts at startup, you will need to leave an empty open folder on the last mounting volume. If other volumes mount at startup after the empty window opens, the window will move to the background - and will not prevent reorganization.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18767



Tech Info Library

LaserWriter Printers: Available Line Screens (1/97)

Revised: 1/31/97
Security: Everyone

LaserWriter Printers: Available Line Screens (1/97)

Article Created: 18 October 1995
Article Reviewed/Updated: 31 January 1997

TOPIC -----

This article provides the line screen for all Apple LaserWriter printers, plus some common questions about line screen and printers.

DISCUSSION -----

Line Screen of Apple LaserWriter Printers

Here are the default line screens for Apple LaserWriter printers. These values are taken from the PPD files. Many applications such as Quark Xpress, PageMaker, and Illustrator allow you to change the line screen since these applications create their own PostScript code.

Begin_Table

Model	LPI	Screen Angle
=====	===	=====
LaserWriter	60	45 degrees
LaserWriter Plus	60	45 degrees
LaserWriter IINT	60	45 degrees
LaserWriter IINTX	60	45 degrees
LaserWriter IIIf	60	45 degrees
LaserWriter IIg	106	45 degrees
LaserWriter Pro 600	85	45 degrees
LaserWriter Pro 630	85	45 degrees
LaserWriter Pro 810	60	45 degrees
LaserWriter Select 360	85	45 degrees
LaserWriter 4/600	106	45 degrees
LaserWriter 16/600 PS	106	45 degrees
Color LaserWriter 12/600 PS	200/141	
Color LaserWriter 12/660 PS	200/141	

Personal LaserWriter NT	60	45 degrees
Personal LaserWriter NTR	60	45 degrees
Personal LaserWriter 320	53	45 degrees

End_Table

Common Line Screen Questions

=====

Question: Is line screen dependent on DPI or the printer? - meaning will every 300 DPI printer have the same line screen.

Answer: Not necessarily. There are two different issues here:

- 1) Line screen IS partially dependent on dpi, and enhancements like PhotoGrade.
- 2) The line screen on any printer can be changed with programs that generate their own PostScript.

Two 300 dpi printers can have the same line screen, however, may produce different results if one has PhotoGrade; PhotoGrade technology in effect increases dpi.

Line screens (LPI) are based on the number of horizontal dots in a halftone cell and the printer's DPI. Thus, a halftone cell of 2x2 has 2 dots horizontally which provides a 150 line screen on a 300 DPI printer, or a 300 line screen on a 600 DPI printer. A halftone cell of 1x1 has 1 dot horizontally, so produces a 300 line screen on a 300 DPI printer, or a 600 line screen on a 600 DPI printer.

Note that line screens equal to the printer's DPI are only useful when printing text since the levels of gray equals 2, black and white -- gray value of 2 is calculated by the following:

$((300/300)**2) + 1$, or $((600/600)**2) + 1$.

Note:

The maximum line screen can never exceed the dpi of the printer (for example, 300 LPI maximum for a 300 DPI printer), and programs such as Quark Xpress only allow certain line screen values between 15 and 400.

Question: Is line screen a fixed number on the printer, or can all printers print at different line screens?

Answer: Line screen is changeable on most all Apple printers. In our tests with the LaserWriter IINTX, for example, you are able to change the line screens to values like 15 LPI, 50 LPI, and 61 LPI and observe noticeable changes - greater levels of gray. On older printers like the LaserWriter IINTX, changing the line screen to greater than half of the dpi (for example >150 LPI on 300 DPI printers) resulted in no noticeable change. These printers have a "threshold" value that they do not exceed. For most of the older 300 DPI printers, the threshold line screen is 150 lpi since that provides 5 levels of gray $((300 \text{ DPI}/150 \text{ LPI})**2) + 1$. Any line screen value above 150 for a 300 DPI printer would produce less than 5 levels of gray (which the printer's ROM deems as

useless), so the printer does not go beyond a 150 line screen.

Line Screen Summary =====

The following relationship best summarizes what LPI really means:

- Increased LPI results in increased resolution, but decreased levels of gray.
- Decreased LPI results in decreased resolution, but increased levels of gray.
- Basically, as lpi approaches dpi, resolution is increased but the number of dots in a halftone cell decrease, resulting in less number of grays.

The best way to see all of these effects is by printing a picture of a person's face with some large text in the background, at 50 LPI and 100 LPI on a printer like the LaserWriter Pro 630.

Article Change History:

31 Jan 1997 - Added Color LaserWriter 12/660 PS printer.

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Tech Info Library Article Number:18771



Tech Info Library

LW Pro 810: EtherTalk and IP Address Issue (10/95)

Revised: 10/18/95
Security: Everyone

LW Pro 810: EtherTalk and IP Address Issue (10/95)

=====

Article Created: 6 April 1994
Article Reviewed/Updated: 18 October 1995

TOPIC -----

We have found that our LaserWriter Pro 810 could not be seen on an EtherTalk network until an IP address was assigned to it. Does an IP address have to be assigned even though we are not using TCP/IP?

One last question is how do you change the netmask for the printer?

DISCUSSION -----

We haven't experienced this problem. In your case, it may just be that the port was disabled, and defining an IP address enabled it. If this problem occurs again, check the status of the port via the printer's control panel; take the printer offline, select the Input Port menu, then select Ethernet and check if it's enabled/disabled. Again, from our experience the following statement on page 2-1 of the "Network Installation and Configuration Manual" is true:

"If you are ABSOLUTELY sure that NO host on the network uses (and never will use) the TCP protocol, an IP address is not needed."

To set the netmask to 255.255.252.0, you can do this via RCF (the printers Remote Console Facility) with the following command:

```
define server subnet mask 255.255.252.0
```

NOTE: You must be in super user mode to execute this command. After getting into RCF with "access" as the default password, you can get into super user mode by typing su <cr>, and then the super user password which is "system".

Changes will take effect after the printer has been restarted.

Article Change History:

18 Oct 1995 - Made a separate article for clarity.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18772



Tech Info Library

Color LW 12/600 PS: Windows Installer Runs Constantly (10/95)

Revised: 10/19/95
Security: Everyone

Color LW 12/600 PS: Windows Installer Runs Constantly (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

I installed the Windows software for the Color LaserWriter 12/600 PS. Now every time I restart Windows the computer comes up with a window titled 'Install PostScript Printer from PPD' that asks me to install another printer driver. Why does this happen and how can I make it stop doing this?

DISCUSSION -----

Windows uses a text file in the WINDOWS directory called WIN.INI to hold certain settings about the Windows environment, including a line instructing the computer what software to automatically run on startup. This line starts with the text 'run='. Any program after the equal sign automatically runs when Windows starts up.

The installer for the Color LaserWriter 12/600 PS restarts Windows in the middle of the software installation. It puts the text '_PPDSTRT' at the end of the 'run=' line so the installer continues once Windows is restarted. When _PPDSTRT is run, it brings up the 'Install PostScript Printer from PPD' screen.

Normally, the installer removes '_PPDSTRT' from the 'run=' line when installation is complete. However, if there is anything else on the 'run=' line when the software is installed, the installer will not remove '_PPDSTRT' from this line and the 'Install PostScript Printer from PPD' screen appears every time Windows is restarted.

To correct this, remove the text '_PPDSTRT' from the 'run=' line in your WIN.INI file.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18773



Tech Info Library

QuickTime Conferencing Camera: Which Cables Do I Use? (2/97)

Revised: 3/3/97
Security: Everyone

QuickTime Conferencing Camera: Which Cables Do I Use? (2/97)

Article Created: 17 October 1995
Article Reviewed/Updated: 3 March 1997

TOPIC -----

I am using a QuickTime Conferencing Camera 100 with my Power Macintosh 8500. I have them connected via the S-Video to RCA and DC Power combination cable that came with the camera. I am getting an image but it only appears in black and white. This happens regardless of color depth or resolution chosen in the Monitors control panel.

Which of the three cables that came with my QuickTime Conferencing Camera am I supposed to use?

DISCUSSION -----

There are three cables shipping with the QuickTime Conferencing Camera 100:

- A) 1 Combination cable, S-Video to DC Power and RCA jack
- B) RCA to RCA
- C) S-Video to DC Power

You must use the appropriate cable for your computer in order for QuickTime Conferencing to work correctly.

The output from the QuickTime Conferencing Camera 100 is an NTSC composite signal, not an S-Video component signal. With the exception of the Power Macintosh 7500 and 8500, AV equipped Power Macintosh computers will accept a composite video signal through the S-Video port. The S-Video port also provides 12-volt power to the QuickTime Conferencing Camera. For Power Macintosh AV computers other than the Power Macintosh 7500 and 8500, use cable A to connect the S-Video connector to the computer's S-Video port and the RCA and DC Power pigtail on the other end of the cable to the QuickTime Conferencing Camera.

The Power Macintosh 7500 and 8500 computers cannot receive a composite video signal in their S-Video connectors. Because of this, you need to connect cable B from the RCA jack on the QuickTime Conferencing camera to the RCA jack on the back of the Power Macintosh 7500 or 8500. If you use the S-Video port to deliver the video to the computer, you will see a black and white image. You also need to use cable C to deliver power from the S-Video port on the Power Macintosh 7500 or 8500 to the QuickTime Conferencing camera.

If you have a Macintosh Quadra or Centris 840AV or 660AV, there is no S-Video port to supply power to the camera. In addition to using cable B for video, you will need to purchase a 12-volt, 1.9 Watt AC adaptor. The specifications for the camera can be found in the camera manual so you can purchase the appropriate power supply. The standard 12 volt or "variable voltage" adaptor from Radio Shack will work.

Begin_Table

Summary Table

=====

Computer	Cable	Video Signal	Camera Power
-----	-----	-----	-----
Quadra/Centris 660AV/840AV	B	From Cable B	Separate Power Adaptor
Power Macintosh 6100AV	A	From Cable A	From Cable A
Power Macintosh 7100AV	A	From Cable A	From Cable A
Power Macintosh 8100AV	A	From Cable A	From Cable A
Power Macintosh 7500/7600	B & C	From Cable B	From Cable C
Power Macintosh 8500/8600	B & C	From Cable B	From Cable C
Power Macintosh 5400/5500**	B & C	From Cable B	From Cable C
Power Macintosh 6400/6500**	B & C	From Cable B	From Cable C

**Requires the Video-In Card, which is an optional card (that is, it does not come with these computers - it has to be added).

End_Table

Article Change History:

03 Mar 1997 - Added new computers.

26 Jun 1996 - Corrected 660AV & 840AV power adaptor information.

19 Oct 1995 - Added table for clarification, revised title.

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Tech Info Library Article Number:18775



Tech Info Library

PowerTalk: Mail*Link Internet For PowerTalk Read Me File (10/95)

Revised: 10/19/95
Security: Everyone

PowerTalk: Mail*Link Internet For PowerTalk Read Me File (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

This article contains the ReadMe file included with the Mail*Link Internet for PowerTalk gateway software posted online.

DISCUSSION -----

Mail*Link for PowerTalk/INET 1.6

Mail*Link Internet for PowerTalk is a personal gateway for PowerTalk users. This gateway will allow PowerTalk users to send mail via SMTP and receive mail from a POP3 account. Mail can be sent and read with any PowerTalk mail-enabled application.

This release of Mail*Link for PowerTalk/INET is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.5.1. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

Upgrade Note: If you are upgrading from version 1.5.1 or earlier it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.5.1 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

It is required that you install and configure MacTCP before using this gateway. See the PT/INET User Guide for more information.

ITEMS OF NOTE
=====

OpenTransport users: This gateway does not function correctly when used with Apple's OpenTransport. The gateway will connect one time but will not reconnect without a reboot. Apple is currently investigating problem.

INSTALLATION INSTRUCTIONS

=====

For new installations only:

We recommend that you install this software via the installer script.

Step 1

Double click on either the "Installer" icon.

Step 2

Select the drive on which you wish to install this software and click Install.

Step 3

Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link Internet for PowerTalk, you should follow these instructions:

Step 1

Install the software as instructed in the section "INSTALLATION INSTRUCTIONS".

Step 2

After the system has rebooted, open the "PowerTalk Key Chain".

Step 3

Open the PT/Internet personal gateway in the key chain.

The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/INET file. Opening and closing the PT/Internet Service configuration window will cause the new file-id to be written into the PowerTalk configuration file.

Step 4

Close the key chain. You will be told that you must reboot the system before PowerTalk will activate the gateway.

Step 5

Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

Creating your PT/Internet personal gateway

Once you have installed the software and rebooted the system (as described above), follow these instructions to create your PT/Internet personal gateway.

Step 1

Open the "Key Chain" located on your desktop.

Step 2

Press the "Add" button.

Step 3

You will be presented with a list of services that are available. Select "PT/Internet".

Step 4

A new item with the server name of "Not Configured" and a service type of "PT/Internet" will appear in your "Key Chain".

Step 5

Proceed to the "Configuring" section below.

Configuring your PT/Internet personal gateway

To configure the PT/Internet personal gateway, ensure that the "Key Chain" has been opened.

Step 1

Double click (Open) the item with a service type of "PT/Internet". The PT/Internet personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.

Step 2

You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).

Step 3

To finalize configuration YOU MUST select the preferences button on open the PT/INET Preference dialog. Change any preferences you need to (it is not necessary to change any) and close the window.

Step 4

Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.

Step 5

Once the PT/Internet configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

Step 1

Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):

- Mail*Link PT/QM
- Mail*Link PT/MS
- Mail*Link PT/INET

Step 2

Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.

StarNine (folder)
PowerTalk Setup Preferences
PowerTalk Startup Preferences

Step 3

Find the "Mail*Link Extras" folder, on the top level of your hard drive.
Drag this folder to the trash.

Step 4

Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.

Step 5

Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.

Step 6

Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS

=====

The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

Step 1

Place the distribution diskette in the floppy drive.

Step 2

Open the folder named "Drop Contents on System Folder".

Step 3

Select all of the items in this folder and drag them onto the "System Folder" icon.

Step 4

You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".

Step 5

Close the "Drop Contents on System Folder" folder.

Step 6

Open the folder named "Place Contents in Preferences Folder".

Step 7

Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").

Step 8

If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).

Step 9

Reboot the system. This is necessary because some of the software installed is only activated at boot time.

Note: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

=====

- When a mail message is forwarded, the name and address of the original sender are not preserved.
- CE Software's QM for AOCE may be used to send mail, although you must select the AppleMail format when sending the message. This application may NOT be used as the default mail reader. If it is selected, AppleMail will be used instead.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway please call Apple Support at: 1 (800) SOS - APPL

(10/10/95)

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Support Information Services

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Tech Info Library Article Number:18776



Tech Info Library

PowerTalk: Mail*Link PowerTalk to MS Mail Read Me File (10/95)

Revised: 10/19/95
Security: Everyone

PowerTalk: Mail*Link PowerTalk to MS Mail Read Me File (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

This article contains the ReadMe file included with the Mail*Link PT/MS for PowerTalk gateway software posted online.

DISCUSSION -----

Mail*Link for PowerTalk/MS 1.6

Mail*Link PT/MS for PowerTalk is a personal e-mail gateway for PowerTalk users. This gateway will allow PowerTalk users to send and receive mail into the StarNine Mail system or, as formerly known, Microsoft Mail for AppleTalk system. Mail can be sent and read with any PowerTalk mail-enabled application.

This release of Mail*Link for PowerTalk/MS is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.0.0. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

Note: If you are upgrading from version 1.0.0 it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.0.0 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

To use the PT/MS gateway you must have the Microsoft Mail Extension installed in the Extensions folder of your System folder. The Microsoft Mail Extension is part of Microsoft Mail for AppleTalk. Please refer to the PT/MS User Guide for more information.

ITEMS OF NOTE

=====

- Power PC: If you are using a Power PC, turn off the modern memory manager before installing PT/MS. After you have completed the gateway configuration described in Chapter 2 and are sure that the gateway is working properly, turn the modern memory manager back on. See "Power PC issues" on page 52 of the manual for related information.
- Gateway Operation: When you activate the PT/MS gateway, it uses the MS Mail extension to log in to the MS Mail Server specified in the Key Chain configuration window. It then sends pending mail from your Out Tray to the Server and transfers mail from your account on the Server to your PowerTalk In Tray at regular specified intervals until you deactivate the gateway or turn off your Macintosh. This process all takes place in background. While the MS Mail extension is actively communicating with the MS Mail Server, your Macintosh is temporarily unavailable for other tasks. This translates into slight freezes from time to time as you are going about your normal tasks as PT/MS logs into the server, with more significant hangups lasting a couple of seconds during large file transfers between the local disk and MS Mail Server. If the MS Mail Server is on a physically remote network or a large, busy network, the process of logging in to the Server will take longer. Increasing the interval at which you contact the MS Mail Server will mitigate hangups (An interval less than three or four minutes will hang your machine up in continual PowerTalk processing leaving no time for your machine to do anything else. We recommend a connection interval of at least five minutes).

INSTALLATION INSTRUCTIONS

=====

For new installations only:

We recommend that you install this software via the installer script.

Step 1

Double click on either the "Installer" icon.

Step 2

Select the drive on which you wish to install this software and click Install.

Step 3

Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link PT/MS for PowerTalk, you should follow these instructions:

Step 1

Install the software as instructed in the section "GETTING STARTED - Installing Mail*Link PT/MS".

Step 2

After the system has rebooted, open the "PowerTalk Key Chain".

Step 3

Open the PT/MS personal gateway in the key chain.

The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/MS file. Opening and closing the PT/MS Service configuration window will cause the new file-id to be written into the PowerTalk configuration file.

Step 4

Close the key chain.

You will be told that you must reboot the system before PowerTalk will activate the gateway.

Step 5

Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

Creating your PT/MS personal gateway

Once you have installed the software and rebooted the system (as described above), follow these instructions to create your PT/MS personal gateway.

Step 1

Open the "Key Chain" located on your desktop.

Step 2

Press the "Add" button.

Step 3

You will be presented with a list of services that are available. Select "Microsoft Mail Service".

Step 4

A new item with the server name of "Not Configured" and a service type of "Microsoft Mail Service" will appear in your "Key Chain".

Step 5

Proceed to the "Configuring" section below.

Configuring your PT/MS personal gateway

Before configuring, make sure that you have selected your MS Mail server in the Chooser. If you do not select this the PT/MS gateway will not be able to connect.

To configure the PT/MS personal gateway, ensure that the "Key Chain" has been opened.

Step 1

Double click (Open) the item with a service type of "Microsoft Mail Service". The PT/MS personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.

Step 2

A configuration window will be displayed. You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).

Step 3

Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.

Step 4

Once the PT/MS configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already

installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

Step 1

Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):

- Mail*Link PT/QM
- Mail*Link PT/MS
- Mail*Link PT/INET

Step 2

Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.

- StarNine (folder)
- PowerTalk Setup Preferences
- PowerTalk Startup Preferences

Step 3

Find the "Mail*Link Extras" folder, on the top level of your hard drive. Drag this folder to the trash.

Step 4

Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.

Step 5

Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.

Step 6

Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS

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The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this

gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

Step 1

Place the distribution diskette in the floppy drive.

Step 2

Open the folder named "Drop Contents on System Folder".

Step 3

Select all of the items in this folder and drag them onto the "System Folder" icon.

Step 4

You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".

Step 5

Close the "Drop Contents on System Folder" folder.

Step 6

Open the folder named "Place Contents in Preferences Folder".

Step 7

Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").

Step 8

If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).

Step 9

Reboot the system. This is necessary because some of the software installed is only activated at boot time.

Note: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

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- PT/MS and MailSwitch: Running the MS Mail MailSwitch utility simultaneous with gateway operation has been reported producing odd behavior, particularly, PT/MS reports a -1981 error in its log on a mail message send. A restart should cure the confusion.

- PT/MS and RAM-Doubler: There have been some reports of inconsistencies running PowerTalk and PMSAMs with RAM-Doubler.

- When a mail message is forwarded, the name and address of the original sender are not preserved.

- CE Software's QM for AOCE may be used to send mail, although you must select the AppleMail format when sending the message. This application may NOT be used as the default mail reader. If it is selected, AppleMail will be used instead.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway please call Apple Support at: 1 (800) SOS - APPL

(10/10/95)

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Support Information Services

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Tech Info Library Article Number:18777



Tech Info Library

PowerTalk: Mail*Link QuickMail to PowerTalk Read Me File (10/95)

Revised: 10/19/95
Security: Everyone

PowerTalk: Mail*Link QuickMail to PowerTalk Read Me File (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

This article contains the ReadMe file included with the Mail*Link for PowerTalk/QM gateway software posted online.

DISCUSSION -----

Mail*Link for PowerTalk/QM 1.6

This is a personal gateway for PowerTalk users. This gateway will allow PowerTalk users to send and receive mail from their QuickMail accounts without having to login to QuickMail and use the QuickMail DA. Mail can be sent and read with your favorite PowerTalk mail enabled application.

This release of Mail*Link for PowerTalk/QM is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.0.5. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

Note: If you are upgrading from version 1.0.5 or earlier it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.0.5 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

INSTALLATION INSTRUCTIONS

=====

For new installations only:

We recommend that you install this software via the installer script.

Step 1

Double click on either the "Installer" icons.

Step 2

Select the drive on which you wish to install this software.

Step 3

Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link PT/QM, you should follow these instructions:

Step 1

Install the software as instructed in the section "INSTALLATION INSTRUCTIONS".

Step 2

After the system has rebooted, open the "PowerTalk Key Chain".

Step 3

Open the QuickMail personal gateway in the key chain. The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/QM file. Opening and closing the QuickMail Service configuration window will cause the new file-id to be written into the PowerTalk configuration file.

Step 4

Close the key chain. You will be told that you must reboot the system before PowerTalk will activate the gateway.

Step 5

Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

Creating your QuickMail personal gateway

Once you have installed the software and rebooted the system (as described

above), follow these instructions to create your QuickMail personal gateway.

Step 1

Open the "Key Chain" located on your desktop.

Step 2

Press the "Add" button.

Step 3

You will be presented with a list of services that are available. Select "QuickMail".

Step 4

A new item with the server name of "Not Configured" and a service type of "QuickMail" will appear in your "Key Chain".

Step 5

Proceed to the "Configuring" section below.

Configuring your QuickMail personal gateway

To configure the QuickMail personal gateway, ensure that the "Key Chain" has been opened.

Step 1

You first need to select your QuickMail directory service. To do this: open the Chooser, choose QuickMessenger, select the directory service and close the Chooser.

Step 2

Double click (Open) the item with a service type of "QuickMail". The QuickMail personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.

Step 3

A configuration window will be displayed. You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).

Step 4

Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.

Step 5

Once the QuickMail configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

Step 1

Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):

- Mail*Link PT/QM
- Mail*Link PT/MS
- Mail*Link PT/INET

Step 2

Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.

- StarNine (folder)
- PowerTalk Setup Preferences
- PowerTalk Startup Preferences

Step 3

Find the "Mail*Link Extras" folder, on the top level of your hard drive. Drag this folder to the trash.

Step 4

Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.

Step 5

Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.

Step 6

Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS

=====

The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

Step 1

Place the distribution diskette in the floppy drive.

Step 2

Open the folder named "Drop Contents on System Folder".

Step 3

Select all of the items in this folder and drag them onto the "System Folder" icon.

Step 4

You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".

Step 5

Close the "Drop Contents on System Folder" folder.

Step 6

Open the folder named "Place Contents in Preferences Folder".

Step 7

Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").

Step 8

If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).

Step 9

Reboot the system. This is necessary because some of the software installed is only activated at boot time.

Note: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

=====

- When forwarding a mail message, the name and address of the original sender of the message is not preserved.
- When forwarding a message, the form content of the forwarded message is lost unless you type at least 1 character into the forwarded message.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway please call Apple Support at: 1 (800) SOS - APPL

(10/10/95)

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Support Information Services

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Tech Info Library Article Number:18778



Tech Info Library

Pantone for AppleVision: Read Me File (10/95)

Revised: 10/18/95
Security: Everyone

Pantone for AppleVision: Read Me File (10/95)

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Article Created: 18 October 1995

TOPIC -----

This article contains the ReadMe file included with the Pantone color picker module for the AppleVision 1710 AV display posted online.

DISCUSSION -----

PANTONE Color Picker for the AppleVision Color Display

The PANTONE Color Picker consists of a self contained Macintosh system extension. This extension is an extensible color picker module which displays calibrated PANTONE Colors from the PANTONE MATCHING SYSTEM. It will display the PANTONE Colors in three modes:

PANTONE MATCHING SYSTEM - As printed as a spot ink on a coated paper stock
PANTONE MATCHING SYSTEM - As printed as a spot ink on uncoated paper stock
PANTONE MATCHING SYSTEM - As reproduced in four-color process ("Spot to Process")

System requirements are: ColorSync 2.0 Apple Color Picker Extension
ICC/ColorSync 2.0 Monitor profiles

Installation
=====

Assuming you have ColorSync 2.0 and the Apple Color Picker extensions installed on your Macintosh, copy the PANTONE Color Picker extension into the Extensions folder within your System Folder. Then copy the ColorSync/ICC source profile into your ColorSync Profiles folder inside the Preferences folder. The source profile is named Pantone XYZ Source Profile and ensures that the purest PANTONE Color information is processed by ColorSync and your new AppleVision monitor.

Restart your Macintosh prior to using the Color Picker.

How to load the PANTONE Color Picker

=====

You can use the PANTONE Color Picker anytime the built-in Macintosh Color Picker is called by software running on your Macintosh. When the Color Picker is called, a dialog box such as the one shown below will appear.

When you exit the dialog box by clicking the OK button, the color value you selected is returned to the calling application or utility.

Setting the Display Profile

=====

You will need to tell the PANTONE Color Picker what monitor profile you want to use. Select your monitor type in the pop-up list under Profile: You new AppleVision Color display ships with software which enables you to re calibrate you monitor at any time and create a current ColorSync profile. If you use this software, make sure you save the profile in the ColorSync Profiles folder prior to loading the Color Picker.

Selecting a PANTONE Color Mode

=====

The PANTONE MATCHING SYSTEM is provided in three different flavors. You can obtain display simulations of PANTONE Colors as they would appear printed on Coated Paper, Uncoated Paper and as printed in four-color process on Coated stock. You will notice that the appearance of the colors change when you select each of the three modes.

Selecting a PANTONE Color

=====

To choose a PANTONE Color you can type the number in the edit field below the horizontal scroll bar. Or you can simply scroll through the colors until you find one you like. Additionally, you can click on the vertical multi-colored bar on the right side of the PANTONE Color display to jump to a particular color range.

Computer Displays _ Additive Color Mixing

=====

Additive color mixing is the basis for non-reflective sources such as computer monitors and televisions. Non-reflective sources are actually light sources, and each pixel on a color computer display is a separate light source.

Each pixel on a computer display is composed of three "cells," each of which is coated with a different type of phosphor. One type of phosphor emits bluish light when it is bombarded with electrons, one emits greenish light, and the third emits reddish light. In theory (though not quite in practice), each of these phosphors operate independently of the others. The intensity of the light emitted by each phosphor more or less depends on the intensity of the electron beam bombarding it. The color of the pixel results by adding together the light emitted by each of these phosphors.

The relationship between the intensity of the beam and the light emitted by the phosphor is only approximate and indirect. This can cause real problems for those who wish to display accurate and repeatable colors.

A factor that can effect color accuracy on a monitor is called "gamma". Gamma occurs because the intensity of light emitted by the pixel phosphors is not directly proportional to the number of electrons hitting them. Actually, the brightness emitted varies with a number that is between the square of the number of electrons and the cube of that number. For example, the monitor has a gamma of 2.6. This means that the brightness of the light emitted by a phosphor on that monitor is proportional to the number of electrons hitting it raised to the 2.6 power.

In order to ensure consistent color reproduction, all video cards for Macintosh displays have "average gamma correction" tables stored on-board the card. If the monitor response is measured and recorded in such a table, the monitor will be able to consistently reproduce colors.

Color Gamuts

=====

Each set of color primaries (RGB, CMY) define a "color space" that includes all colors that can result from any combination of these primaries. The "color space," or "color gamut," may be quite different for different sets of primaries. Typically, a CMY color gamut falls inside (is smaller) a RGB color gamut, which means that the eye can detect (or a monitor can display) more colors than a printer can print. In other words, it is not possible to print some colors that can be photographed or displayed on a monitor when using CMYK printing.

Some of the PANTONE Colors do not fall within the RGB color gamut for particular monitors because the primaries (or phosphors sets) are much more saturated than those that define the RGB gamut for particular phosphor sets. RGB color gamuts vary as well. For example, the color gamut for one monitor may be quite different from the color gamut for another, since the phosphor set that produces the RGB primaries, the gamma correction and other variables for the monitors may be different.

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Tech Info Library Article Number:18779



Tech Info Library

PowerBook: Liquid Crystal Display Refresh Rates (11/95)

Revised: 11/7/95
Security: Everyone

PowerBook: Liquid Crystal Display Refresh Rates (11/95)

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Article Created: 18 October 1995
Article Reviewed/Updated: 7 November 1995

TOPIC -----

What are the refresh rates for the displays in the Macintosh PowerBook 5300, 2300, and 190 series computers (both Active and passive matrix, color and grayscale)? How does this compare to the display on my desktop system?

DISCUSSION -----

This article provides general information on display refresh rates used in Macintosh PowerBook computers. However, it is difficult to compare Cathode Ray Tubes (CRTs), used with desktop Macintosh computers, to passive and active matrix Liquid Crystal Displays (LCDs), used in PowerBook computers, because it is an entirely different technology. To complicate things further, the two types of LCDs use two totally different technologies to create the image on the screen.

Active Matrix -----

Active matrix displays, also called Thin-Film Transistor (TFT), have transistors that are individually addressed and charged. The amount of time that it takes for the charge to diminish is somewhere around 20 milliseconds (ms). We currently use a refresh rate of 62Hz on all (color and grayscale) TFT displays which means that each row of pixels gets refreshed every 16ms.

Passive Matrix -----

Passive matrix displays, also called Film SuperTwisted Nematic (FSTN), are even better in that aspect. Once their pixels receive a charge, the time it takes for the pixel to lose its charge can be measured in seconds. In fact, the fastest time that the computer can turn a pixel off is over 60ms. The passive matrix screens use a refresh rate of 73Hz for grayscale passive matrix (MFSTN) displays and 79Hz for color passive matrix (CFSTN) displays, each row of pixels is refreshed every 12ms.

Article Change History:

07 Nov 1995 - Updated title for clarity.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18780



Tech Info Library

Apple Remote Access MultiPort Server 2.1: Description (3/96)

Revised: 3/12/96
Security: Everyone

Apple Remote Access MultiPort Server 2.1: Description (3/96)

Article Created: 13 October 1995
Article Reviewed/Updated: 12 March 1996

TOPIC -----

This article describes Apple Remote Access (ARA) MultiPort Server 2.1.

DISCUSSION -----

The Apple Remote Access MultiPort Server provides a flexible, scalable, and secure way to offer network access to large numbers of remote or mobile users. Used in conjunction with one or more Apple Remote Access Serial Cards, it allows a Macintosh computer or a Workgroup Server to support from 4 to 16 simultaneous dial-up connections*. This provides an ideal solution for workgroups or entire organizations that want to enable employees to work productively and efficiently no matter what their location -- whether they're at home, out of town, or even out of the country.

Unlike conventional complex server software, the Apple Remote Access MultiPort Server is designed to streamline administrative tasks, while maximizing administrator productivity and control. The software installs in minutes and features sophisticated management capabilities, including industry-standard Simple Network Management Protocol (SNMP) support. This allows administrators to flexibly manage and maintain connections. Adding ports is simple, and the server features an automatically generated activity log that can be exported to a variety of programs for further analysis.

On the client side, the Apple Remote Access Client for Macintosh software is also designed with efficiency and productivity in mind. From its single-step installation to such productivity-enhancing features as full System 7 integration and extensive connection-management capabilities, it provides everything users need to help them get their work done easily and efficiently -- wherever they are.

Users can also be confident that their work will be secure. The Apple Remote Access MultiPort Server offers a host of sophisticated security features that

allow administrators to maintain the integrity of the network. These features -- such as password aging, location validation, and the ability to filter access to services -- make it one of the most secure remote access servers available. And because its security architecture is supported by leading third-party security vendors, administrators can choose to augment the server's built-in security features with additional challenge-and-response security modules.

Features

Ease of installation and use

- Takes only minutes to set up a server and to add users or ports as needed
- Provides built-in context-sensitive help

Multilevel security

- Provides a variety of sophisticated security features, making it one of the most secure remote access servers available
- Is supported by leading third-party security vendors, so administrators can choose to augment its built-in capabilities with additional security modules

Scalable solution

- Allows a Macintosh computer, Power Macintosh computer, or a Workgroup Server to support from 4 to 16 simultaneous dial-up connections*
- Runs on a variety of Macintosh computers, so you can choose the system that's appropriate for your needs

Powerful administrative capabilities

- Allows flexible port configurations
- Offers comprehensive user-management facilities
- Supports industry-standard SNMP
- Tracks resource usage and automatically generates an activity log that can be exported for further analysis

Flexible client capabilities

- Supports a variety of connections, including cellular and ISDN**
- Is fully integrated with Macintosh System 7, so remote users can work with such familiar tools as the Chooser, Aliases, and the Finder

* The Apple Remote Access MultiPort Server includes support for 4 ports and is available for Macintosh and Power Macintosh computers and Workgroup Servers (Mac OS-based). Support for 8, 12, or 16 ports requires purchase of 1, 2, or 3 Apple Remote Access MultiPort Server Kits respectively.

** ISDN and cellular connections require additional Apple or third-party products.

Article Change History:

12 Mar 1996 - Changed distribution status.
18 Oct 1995 - Change distribution.

Support Information Services

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Tech Info Library Article Number:18781



Tech Info Library

ARA MultiPort Server 2.1: Technical Specifications (1/96)

Revised: 1/26/96
Security: Everyone

ARA MultiPort Server 2.1: Technical Specifications (1/96)

Article Created: 13 October 1995
Article Reviewed/Updated: 26 January 1996

TOPIC -----

This article provides the technical specifications for Apple Remote Access MultiPort Server 2.1.

DISCUSSION -----

Technical Specifications

Administrator control and monitoring

- Ability to monitor and manage server activity by port and user
- Ability to broadcast messages or send them to selected users
- Ability to adjust connection time by user
- Ability to disconnect any single user or all users
- Built-in Simple Network Management Protocol (SNMP), enabling you to monitor the server from any SNMP-based network management station

Security

- User name and password authentication
- Adjustable password length
- Filtering of network services by account
- Ability to disallow client use of Save Password option
- Account disable after specified number of password failures
- Password aging
- External security architecture (for example, for providing challenge-and-response authentication through a third-party security module)
- Call back feature that verifies the user's identity by returning calls to a predetermined phone number
- Activity log for recording user and server activities
- Administrative password option

Modem support and scripts

- Supports any Hayes-compatible 9,600-bps or higher speed modem with the appropriate script. Modem scripts for many popular modems are included:
 - V.fast modems: Motorola Codex 3260 Fast
 - V.32bis modems (14,400 bps): Hayes Ultra 144, Motorola Codex 3260, US Robotics Courier V.32bis
 - V.32 modems (9,600 bps): Hayes Ultra 96, Telebit T1600, UDS/Motorola 3225, UDS/Motorola 3227, US Robotics Sportster, US Robotics Worldport
 - V.34 modems (28,800 bps): US Robotics, V.Everything, SupraFax 28.8
- ISDN support: Hayes ISDN adapter
- 9,600-bps or higher-speed scripts included with the Apple Remote Access Client for Macintosh can also be used with the Apple Remote Access MultiPort Server
- Additional scripts may be available. Contact an authorized Apple reseller or representative or your modem manufacturer for more details.
- Administrators or other programmers familiar with connection control languages (CCLs) can also write the necessary scripts using the Apple Remote Access Modem Scripting Guide and Modem Workshop software, which are included with the Apple Remote Access MultiPort Server.

Network types supported

- Support for any AppleTalk network; the most common network choices include:
 - LocalTalk
 - Ethernet
 - Token Ring

Connection types supported

- Support for a range of connection types:
 - Standard telephone
 - Cellular*
 - ISDN*

Error detection/data compression

- Includes several built-in components that allow for error-free and optimized delivery of data
 - Smart buffering (developed by Apple Computer, Inc.) for data-transfer optimization
 - MNP, an industry standard for error detection
 - V.42bis, an industry standard for data compression

Specifications

- Maximum number of simultaneous connections: 16
- User name maximum length: 31 characters
- Password maximum length: 8 characters
- Total number of user records: 8,192
- Maximum connect time: selectable
- Maximum number of activity log entries: 32,767

Licensing information

- Comes with license to install Apple Remote Access MultiPort software on a single Macintosh and to install Apple Remote Access Client for Macintosh software on up to four systems
- Additional client software must be purchased or licensed separately;

consult your authorized Apple reseller or representative for information.

Operating requirements

For the server

- A Macintosh computer with one or more NuBus slots and at least 5MB of RAM, a Power Macintosh computer, or a Workgroup Server. For configurations with more than four ports, additional memory is required, and a high-performance system is recommended.
- Macintosh system software version 7.0 or later (version 7.1 or later recommended)
- A hard disk drive and an Apple SuperDrive floppy disk drive
- Apple Remote Access Serial Card
- One or more Hayes-compatible 9,600 bps/V.32 or higher-speed modems
- Apple Remote Access Client for Macintosh

For the client

- A Macintosh Plus or later model with at least 4MB of RAM or a Power Macintosh computer
- Macintosh system software version 7.0 or later
- A hard disk drive
- An Apple or other Hayes-compatible modem (2,400 bps minimum; 9,600 bps or higher recommended) and appropriate modem cable, if needed

* ISDN or cellular support requires additional third-party products.

Ordering Information

Apple Remote Access MultiPort Server

Order No. M5214Z/C

- Apple Remote Access MultiPort Server software and installer (includes support for four ports)
- Apple Remote Access Client for Macintosh software and installer (with license to install software on up to four client systems); additional client software can be purchased separately
- Apple Remote Access Serial Card

Apple Remote Access Client for Macintosh (single-pack)

Order No. M5227Z/B

Apple Remote Access Client for Macintosh (10-Pack)

Order No. M2692Z/B

Apple Remote Access Client for Macintosh (Volume Licensing)

Client software can be volume licensed separately for quantities of 50 or more users; consult your authorized Apple reseller or representative for purchasing information.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

26 Jan 1996 - Change distribution.

Support Information Services

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Tech Info Library Article Number:18782



Tech Info Library

ARA MultiPort Server 2.1 & 2.0 Differences (1/96)

Revised: 1/26/96
Security: Everyone

ARA MultiPort Server 2.1 & 2.0 Differences (1/96)

=====

Article Created: 13 October 1995
Article Reviewed/Updated: 26 January 1996

TOPIC -----

How does Apple Remote Access (ARA) MultiPort Server 2.1 differ from 2.0, and how will ARA MultiPort Server 2.1 affect 2.0 clients?

DISCUSSION -----

Here are the differences:

- Software includes bug fixes for improved server stability
- New short NuBus serial card fits all Macintosh NuBus systems
- Lower price
- No longer supports X.25 connections

The ARA MultiPort Server 2.1 lets ARA 2.0 and 1.0 clients connect. Users will notice no difference when connecting.

Article Change History:
26 Jan 1996 - Change distribution.

Support Information Services

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Tech Info Library Article Number:18783



Tech Info Library

Open Transport and PPP: Frequently Asked Questions (11/95)

Revised: 1/4/96
Security: Everyone

Open Transport and PPP: Frequently Asked Questions (11/95)

=====

Article Created: 19 October 1995
Article Reviewed/Updated: 15 December 1995

TOPIC -----

This article includes Frequently Asked Questions (FAQ) about Open Transport and point-to-point protocol (PPP).

Questions in this FAQ:
=====

- 1) Is Open Transport compatible with existing Internet Service Providers?
- 2) Which mdevs are currently supported?
- 3) Doesn't Apple offer a solution for SLIP or PPP dial-up to the Internet?
- 4) Does the Apple Internet Connection Kit require Open Transport?
- 5) If I need an updated copy of one of these mdevs, how can I get the software?
- 6) Are there other known limitations to backward compatibility mdev support?
- 7) Is there documentation available to assist with configuring Open Transport/TCP?
- 8) What additional updates are planned for Open Transport to improve compatibility with dial-up internet access?
- 9) When will Open Transport 1.1 be available?
- 10) Will Apple provide a SLIP or PPP solution for Open Transport?

DISCUSSION -----

- 1) Question: Is Open Transport compatible with existing Internet Service

Providers?

Answer: Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software models know as "mdevs".

With the appropriate mdev software installed, end-nodes can use either Serial Line Internet Protocol (SLIP) or PPP to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport backward compatibility services. It is important that the recommended versions of software be installed for the greatest level of compatibility.

2) Question: Which mdevs are currently supported?

Answer: Open Transport 1.0.7 works with the following MacTCP Link Access Modules (mdevs), with these known caveats.

- FreePPP - version 1.0 or more recent; compatible with Open Transport.
- InterSLIP - Version 1.0.1 is not compatible with Open Transport, you need a later version. InterCon should be contacted directly.
- InterPPP - use version 1.2.9 or more recent.
- InterPPP II - use the most current version.
- MacSLIP - use version 3.0 or more recent; compatible with Open Transport.
- MacPPP - use version 2.1.3sd or more recent (2.2.0 not recommended).

Apple is continuing to work with developers to better support existing mdevs; contact the third party developer of interest for the most recent information on compatibility.

3) Question: Doesn't Apple offer a solution for SLIP or PPP dial-up to the Internet?

Answer: The Apple Internet Connection Kit is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris EMailer Lite.

The kit includes MacPPP 2.1.4 along with the Apple Internet Dialer - software designed to make it simpler for Macintosh customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes Apple Guide software for on-line assistance.

4) Question: Does the Apple Internet Connection Kit require Open Transport?

Answer: No, the Apple Internet Connection Kit works with either MacTCP 2.0.6 or with Open Transport/TCP 1.0.7 or later.

5) Question: If I need an updated copy of one of these mdevs, how can I get the software?

Answer: Sources for mdev software will vary, as some of the recommended products are commercial and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of internet sites; typically at "info-mac" mirror sites in the comm/tcp directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com.hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found as of Oct. 1995 include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/>
<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/>

- InterSLIP is public domain software developed by InterCon Systems, and is currently available from:

<ftp://ftp.intercon.com/InterCon/sales/InterSLIP/>

- InterPPP and InterPPP II are commercial software products. For availability and ordering information contact InterCon Systems.

- MacSLIP is commercial software available developed by Hyde Park Software. For availability and ordering information contact TriSoft.

- MacPPP (v2.1.4) is available as a component of the Apple Internet Connection Kit, Apple Computer Inc., US 1-800-462-4396 for fax information or 1-800-538-9696 to locate an Apple authorized reseller near you.

The Tech Info Library article titled "Locating Vendor Information" can help you search for InterCon Systems' and TriSoft's address and phone number.

6) Question: Are there other known limitations to backward compatibility mdev support?

Answer: Yes. Due to differences in the underlying architectures between MacTCP and Open Transport/TCP, and some current shortcomings in the backward compatibility services, there are some additional limitations to mdev support:

- Some mdevs, when used with Open Transport, may not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This is being addressed by updated versions of mdevs.

- Some Internet Service Provider do not strictly follow standards practices, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforces this requirement in versions prior to 1.0.7. Beginning with Open Transport 1.0.7, the TCP/IP configuration utility software will automatically generate a compatible router address to facilitate connectivity to the ISP if the user leaves the router address field empty.

- Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different mdev may require restarting the Macintosh. Disconnecting from and redialing a service provider may also require restarting the Macintosh. This is planned to be addressed in Open Transport v1.1.

7) Question: Is there documentation available to assist with configuring Open Transport/TCP?

Answer: Yes. Although a full user's guide is planned for release with Open Transport v1.1, configuration tips for Open Transport 1.0.x are already available on various sites on the internet including:

ftp://seeding.apple.com/opentransport/OT_gen_info/TEXT/OTTCP_Config_Tips

8) Question: What additional updates are planned for Open Transport to improve compatibility with dial-up internet access?

Answer: Open Transport 1.1 is planned to include:

- Support for reconnection of a dial-up session without restart.
- Fix for a compatibility problem that could interfere with Qualcomm Eudora users sending short messages.

9) Question: When will Open Transport 1.1 be available?

Answer: Open Transport 1.1 is scheduled to be available in early 1996. For more information regarding Open Transport 1.1, please refer to:

ftp://seeding.apple.com/opentransport/OT_gen_info_/WORD/OT_QA

10) Question: Will Apple provide a SLIP or PPP solution for Open Transport?

Answer: Apple is developing an implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. This is planned to support dial-up access to both AppleTalk and TCP/IP networks. Additional details will be announced at a later date.

Article Change History:

- 15 Dec 1995 - Updated Open Transport 1.1 release time frame.
- 22 Nov 1995 - Updated format.
- 15 Nov 1995 - Corrected InterSLIP information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18785



Tech Info Library

At Ease: Adding Application from Mounted Volume to Setup (10/95)

Revised: 10/19/95
Security: Everyone

At Ease: Adding Application from Mounted Volume to Setup (10/95)

=====

Article Created: 18 October 1995

TOPIC -----

I want to run a program from a file server other than the server acting as the At Ease Disk. I want to set up At Ease so that I can use the program directly from a mounted hard drive without copying it to the At Ease Disk or the At Ease workstation hard drive. How can I access a program on a mounted volume from At Ease?

DISCUSSION -----

You can run an application from a shared hard drive on your network without copying it to the client computer's hard drive or the At Ease Disk (if you are using a Workgroup version of At Ease).

Follow these steps:

Note:

The steps in this article assume you know how to share a hard drive and set user access privileges. Use the search string 'system 7 and file sharing' to locate the TIL article "System 7 File Sharing" for additional information.

At Ease 1.0

=====

Step 1

While in the Macintosh Finder, under the Apple Menu, choose the Chooser. Click the AppleShare icon on the left side of the Chooser. Double-click the name of the shared hard drive on the right side of the Chooser which contains the program you want to run.

Step 2

Type in your user name and password to mount the hard drive on your desktop.

Note:

You need to set access privileges for the users of this setup on the shared hard drive in order for them to mount the server. Each time a user of this setup clicks on the button to open the application you are adding, At Ease will bring up the standard AppleShare login dialog box before you now. You can create a 'generic' user and password or if security is not an issue, grant guest access to this folder.

Step 3

Open the At Ease Setup control panel in the Control Panels folder of your System Folder.

Step 4

Click the Select Items button.

Step 5

Click the Desktop button in the Open Dialog box. Double-click the name of the mounted hard drive that appears in the window in the left side of the Open Dialog box. Click the Gather Applications... button.

Step 6

A dialog box will appear telling you which applications are on the mounted hard drive that are not in At Ease. You will have the option to Add or Cancel. Click Add. You can remove any extra unwanted applications from the At Ease Items window by clicking each once and clicking Remove.

Step 7

Click Done, close the At Ease setup window.

At Ease 2.0.3 and At Ease 3.0

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Step 1

While in the Macintosh Finder, under the Apple Menu, choose the Chooser. Click the AppleShare icon on the left side of the Chooser. Double-click the name of the shared hard drive on the right side of the Chooser which contains the program you want to run.

Step 2

Type in your user name and password to mount the hard drive on your desktop.

Note:

You need to set access privileges for the users of this setup on the shared hard drive in order for them to mount the server. Each time a user of this setup clicks on the button to open the application you are adding, At Ease will bring up the standard AppleShare login dialogue box before you now. You can create a

'generic' user and password or if security is not an issue, grant guest access to this folder.

Step 3

Launch the At Ease Setup application.

Step 4

Double click the Setup you would like to add the program to.

Step 5

Click the Items icon to open the Items panel. Click the Add Applications button.

Step 5

In the Add Applications screen, you will see a choice of applications on the left side. Click and hold the words after "Disk:" at the top left corner to see the pop-up menu.

Step 6

Select the name of the mounted hard drive and release. At Ease will search for any applications on that volume.

Step 7

Double-click the name of the program you want to add to the list of Items for This Setup on the right. Or, you can hold the shift key while single-clicking each application to select multiple items and then click the ">>Add>>" button. Repeat this process until you have added all the programs you want from the mounted volume.

Step 8

Click the "OK" button and follow the rest of the steps as necessary to set up At Ease the way you like.

When you return to At Ease, you will see the button for the application you added in the At Ease panel. If you click the button and the hard drive is not already mounted, the login window appears prompting you to enter a user name and password or to connect as a guest.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18786



Tech Info Library

DOS Compatibility Card: Can't Quit PC Print Spooler (10/95)

Revised: 10/19/95
Security: Everyone

DOS Compatibility Card: Can't Quit PC Print Spooler (10/95)

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Article Created: 19 October 1995

TOPIC -----

I've had problems printing from the DOS environment of my Macintosh DOS Compatible computer, and now I can't get PC Print Spooler to quit. I can get nothing at all to print from the PC environment. What is wrong, and how can I remedy it?

DISCUSSION -----

You may have a failed print job in your Spooler folder (the folder that holds queued print jobs from the PC environment). One failed print job can stop all jobs behind it from printing. In order to clear the Spooler folder, which will in turn stop the PC Print Spooler from being activated every time you start your Macintosh, follow the steps below:

Step 1

Start your Macintosh computer with extensions off by pressing the shift key. Keep pressing the shift key until the message, "Welcome to Macintosh. Extensions off." appears.

Step 2

Open the System Folder, open the Preferences folder, and locate the Spooler folder. Now throw the Spooler folder into the Trash and select the Empty Trash command from the Special menu.

Step 3

Restart your Macintosh computer. The next time a print job is sent from the PC environment, a new Spooler folder will be created, and your PC print jobs should now print normally.

Support Information Services

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Tech Info Library

DOS Compatibility Card: Resolutions, Colors in Windows (10/95)

Revised: 10/19/95
Security: Everyone

DOS Compatibility Card: Resolutions, Colors in Windows (10/95)

=====

Article Created: 19 October 1995

TOPIC -----

I have a Power Macintosh 6100 DOS Compatible computer, with a 17-inch Multiple Scan Display. What video driver should I use to get 800x600 resolution at 16 colors in Windows? Also, can I get 256 colors at 800x600? How much video RAM is there on the DOS card?

DISCUSSION -----

You should have already installed the Windows display drivers which are found on the floppy disk marked "Display Drivers" that came with your Macintosh DOS Compatible computer. If you have not, refer to page 39 of the "DOS Compatibility Card for Macintosh User's Guide," under the heading, Installing video drivers.

For 800x600 resolution at 16 colors on a 15-inch or 17-inch display, you should select the "* CHIPS 450 VGA 800x600 16 color" driver in the windows SETUP program. In the Macintosh environment, select the 832x624 resolution in the Monitors control panel. In the PC Setup control panel, under the display heading, select VGA or 16-inch. These selections will give you different results, so try both and use the one that works best for you.

The DOS Compatibility Card has 512K of video RAM. Therefore, 640x480 at 16 or 256 colors, or 800x600 at 16 colors are the only supported resolution and color depth combinations.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18788



Tech Info Library

DOS Compatibility Card: To Find Novell Client Software (10/95)

Revised: 10/19/95
Security: Everyone

DOS Compatibility Card: To Find Novell Client Software (10/95)

=====

Article Created: 19 October 1995

TOPIC -----

I need the Novell client software in order to set up a Ethernet-based network configuration, in the PC environment of my Power Macintosh 6100 DOS Compatible computer. How much does it cost, and where can I get it?

DISCUSSION -----

Novell's server software is a retail item, but the Netware client packages are available via anonymous ftp from ftp.novell.com. The DOS/Windows client software can be found in /pub/updates/nwos/dsclnt12/. The DOS client software consists of 5 self-extracting executable files: VLMKT1.EXE, VLMKT2.EXE, VLMKT3.EXE, VLMKT4.EXE, and VLMKT5.EXE.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18789



Tech Info Library

QuickTime Conferencing: Modems Aren't Supported (3/96)

Revised: 4/1/96
Security: Everyone

QuickTime Conferencing: Modems Aren't Supported (3/96)

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Article Created: 20 October 1995
Article Reviewed/Updated: 29 March 1996

TOPIC -----

Can I use QuickTime Conferencing from home through my modem?

DISCUSSION -----

Currently QuickTime Conferencing does not support dial-up (modem) connections. You need either an ISDN card, or other direct connection method to use QuickTime Conferencing. ISDN modems using a PPP/TCP/IP connection are also not supported.

This article was published in the Information Alley on 29 March 1996.

Article Change History:
29 Mar 1996 - Added information about ISDN modems not being supported.

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Tech Info Library Article Number:18791



Tech Info Library

PowerBook 5300: Disk Tools Contains Old Enabler (1/96)

Revised: 2/5/96
Security: Everyone

PowerBook 5300: Disk Tools Contains Old Enabler (1/96)

=====

Article Created: 20 October 1995
Article Reviewed/Updated: 5 February 1996

TOPIC -----

My computer is having problems charging the battery. I thought it might be software, so I turned off my computer and placed the Disk Tools Disk into the computer. Then I restarted so the System folder on the Disk Tools was used. However, the battery is still not charging, what's wrong?

DISCUSSION -----

Starting up from the Disk Tools disk is not always a good test. The Disk Tools disk only contains version 1.0.1 of the Powerbook 5300 enabler. This version of the enabler is not capable of charging Nickel Metal Hydride (NiMH) batteries only Lithium Ion (LiIon) batteries. Since the PowerBook 5300 Series computers have a NiMH battery, it doesn't get charged.

Because of disk space limitations, version enabler v1.0.1 is on the Disk Tools disk. To properly charge the NiMH battery, you must start from the system folder on your hard disk.

The PowerBook 5300 series computers ship with Nickel Metal Hydride (NiMH) batteries. For these batteries to work properly the Battery Enabler needs to be installed. Without this software the battery will appear to not be recognized by the computer.

A quick way to check for the existence of the enabler is to look in the "About this Macintosh" window in the Apple menu. The System software version should say "System Enabler 1.0.8". If it does not, the correct enabler software is not installed.

These articles can help you locate the software update mentioned here:

- [Where To Find Apple Software Updates](#)

Lists online services for "free" Apple software updates.

- Obtaining Apple Product Support in the USA

Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:

05 Feb 1996 - Added information about correct version needed.

Support Information Services

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18792



Tech Info Library

Telecom 2.3: Fax for PC Card Modems Read Me Error & Info (2/97)

Revised: 2/11/97
Security: Everyone

Telecom 2.3: Fax for PC Card Modems Read Me Error & Info (2/97)

Article Created: 20 October 1995
Article Reviewed/Updated: 11 February 1997

TOPIC -----

The Telecom 2.3 Fax for PC Card Modems ReadMe incorrectly states that the TDK-DF2814 model has been tested for compatibility. The Read Me file also does not give much information about the PC Cards mentioned as being tested.

DISCUSSION -----

The following is an excerpt from the Telecom Software 2.3: Fax for PC Card Modems Read Me file:

"The Apple Telecom software should be compatible with most fax class 2 compatible PC Card modems. The software has been specifically tested for compatibility with the cards listed below:

- COM1-MC217 and MC218 models.
- PNB-Danube V32bis and Danube V34 models.
- TDK-DF2814 model."

Corrections to and Clarifications for the Read Me File
=====

CORRECTION

* TDK-DF2814

TDK reports that their TDK-DF2814 PC card modem is class 1 and NOT class 2. Users have reported, when configuring Fax Terminal by selecting Select Auto Answer, quitting Fax Terminal and then re-launching it; they receive an error message that the modem is not a Class II modem.

Users can, however, use the TDK-DF2814 modem for data without problem. This has been verified with some data communications-based products.

CLARIFICATIONS

* COM1-MC217 and MC218

The MC217 and MC218 cards are made by a company called COM One. The MC217 is a 14.4 kbps data/fax PC card and the MC218 is a 28.8 kbps data/ 14.4 kbps fax PC Card. An update is available on the COM One web page for the MC218 which upgrades it to a 33.6 kbps data modem.

* PNB-Danube V32bis and Danube V34

The PNB-Danube cards were made by a company called P.N.B. in Suresnes, France. The Danube V32bis is a 14.4 kbps data/fax card and the Danube V34 is a 28.8 kbps data/ 14.4 kbps fax card.

In 1993 US Robotics acquired 100 percent of the common stock of Suresnes, France-based P.N.B. s.a., a designer and manufacturer of data communications products for IBM-compatible personal computers and workstations and a leading international supplier of products for portable computers.

For more information about these cards, you should contact US Robotics' French division, U.S. Robotics s.a., in Villeneuve d'Ascq, France.

Note: This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

11 Feb 1997 - Added clarifications info.

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Tech Info Library Article Number:18793



Tech Info Library

PowerBook 100: Use Apple HD SC Setup 7.3.2 or Later (10/95)

Revised: 10/24/95
Security: Everyone

PowerBook 100: Use Apple HD SC Setup 7.3.2 or Later (10/95)

=====

Article Created: 24 October 1995

TOPIC -----

I am trying to reinitialize the hard drive in my PowerBook 100 using the Apple HD SC Setup utility on the original Disk Tools disk that came with my computer. Each time I try, I get an error ID=02. What is wrong?

DISCUSSION -----

This was an issue with the version of Apple HD SC Setup included with your PowerBook 100 computer. This was fixed with Apple HD SC Setup version 7.3.2 which first shipped with System 7.5. This version is available from online services.

These articles can help you locate Apple HD SC Setup:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18794



Tech Info Library

Apple HD SC Setup: Does it Support Blind Transfers? (11/95)

Revised: 11/9/95
Security: Everyone

Apple HD SC Setup: Does it Support "Blind Transfers"? (11/95)

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Article Created: 20 October 1995
Article Reviewed/Updated: 9 November 1995

TOPIC -----

What are blind transfers and what are the results of having a disk formatted using them as opposed to not using them? I recently added a Daystar PowerPro 601 upgrade card to my Quadra 800 and the documentation recommended turning off blind transfers. Does Apple HD SC Setup use blind transfers?

DISCUSSION -----

Blind transfers refer to the way data is transferred to the hard drive by the driver. In drive formatting software that supports turning this option on or off, a different version of the driver is written to the driver partition.

If blind transfers are not enabled, polled transfers are used. Polled transfers are used with slow SCSI devices or SCSI devices attached to older Macintosh computers. Older, in this case, means the Macintosh SE and Macintosh Plus. In polled transfer mode, the SCSI Manager polls the SCSI controller to see if there is data to be read before reading or that the last set of data was written before sending the next set. This is the safest method for performing reads and writes.

When using blind transfers, SCSI Manager assumes the data can be written to or read from the drive as fast as SCSI Manager can read it. If a slow drive is used, there is the potential for data corruption due to timing problems. If the drive cannot write the data fast enough, data will be lost due to overflow of data buffers. If the drive cannot supply data fast enough during a read, SCSI Manager will be reading erroneous information out of the controller because the data has not arrived yet. Blind transfers can significantly improve the speed of SCSI throughput.

Apple HD SC Setup determines whether or not to install the driver which uses blind transfers based on the computer the drive is attached to when it is formatted. Apple HD SC Setup only turns off blind transfers on drives formatted

while connected to the Macintosh SE or Macintosh Plus.

Article Change History:

09 Nov 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18796



Tech Info Library

Document Convertor 1.0.4: Read Me File (10/95)

Revised: 10/20/95
Security: Everyone

Document Convertor 1.0.4: Read Me File (10/95)

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Article Created: 20 October 1995

TOPIC -----

This article contains the ReadMe file included with the Document Convertor software version 1.0.4.

DISCUSSION -----

What is it?

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Macintosh Easy Open is a system extension from Apple Computer that works with MacLinkPlus/Easy Open Translators to deliver file translation as transparently as possible. Together, they allow you to open a file when you don't have the application that created it (see end of document for list of file translators included with MacLinkPlus).

The Macintosh Easy Open system extension also includes a "Document Converter." This is a mini-application that can be set up to translate files into different application formats by dragging files on top of it.

Installation

=====

Macintosh Easy Open should already be installed with your system. There are several components in Macintosh Easy Open and the Document Converter which are installed different places:

Macintosh Easy Open...Extensions folder in the System folder
Macintosh Easy Open Setup...Control Panels folder in the System folder
MacLinkPlus for Easy Open...Extensions folder in the System folder
Document Converter... MacLinkPlus folder

What does it do?

=====

Macintosh Easy Open operates behind the scenes to provide three services.

Translation Management

Macintosh Easy Open intervenes in situations when no application takes responsibility for creating a file.

When you double-click on a file that doesn't have an "owner" (the application that created that file), Macintosh Easy Open will present you with all the applications on your hard drive that can open that file, either with their own internal translation capabilities, or with the help of an external translation system, such as MacLinkPlus. You simply need to select an application from the list, then click the "Open" button. If the application was listed "with MacLinkPlus translation", MacLinkPlus will convert the file into that application's format.

Once the file is translated, the application that was selected launches and opens the file. Macintosh Easy Open stores your "choice" as a preference. The next time you double-click on another file of the same format (for example, WordPerfect PC), your preference will be highlighted in the Macintosh Easy Open dialog.

Note: The dialog box (above) appears whether you double-click on a "foreign" file, drag the file on an application or choose "File: Open".

Descriptive "Kind" Information

Macintosh Easy Open adds new, more descriptive file information to your Macintosh. Rather than seeing every file described as "document", you will see more descriptive information - regardless of the applications that reside on your Mac.

Enhanced "Open" Dialog

Macintosh Easy Open lists all files or documents you can open when you are working in an application program. It also adds larger icons to files.

Document Converter

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Macintosh Easy Open provides a capability through its Document Converter to drag-and-drop files onto pre-set mini-applications and have them translate automatically. This facility makes it easy to convert a file without opening it. Macintosh Easy Open must be installed for the Document Converter to work.

Each Document Converter translates to a specific format using the file translation capabilities available to your Mac. You can set up one or more Document Converters by making copies of the Document Converter provided in the MacLinkPlus folder. Once the document converter is "set", it will always translate similar file formats into its appropriate format. Duplicate a document converter each time you need to translate a file type into a new

format. Document Converters can be changed by double-clicking and re-setting them.

Note: Unlike most Macintosh applications, Document Converters behave differently when you double-click on them than they do when you drag a file onto them. Double-clicking on a Document Converter only sets the translation path. Dragging a file onto it actually activates the translation.

Control Panel Options

=====

Macintosh Easy Open has a "setup" control panel in the system folder. This control panel contains four options:

"On/Off": allows you to turn Macintosh Easy Open's file translation services on and off. This will not affect the enhanced file information available in the View menu or the ability to use the Document Converter.

"Always Show Choices": controls whether or not the Macintosh Easy Open dialog will appear. If this option is selected, the Macintosh Easy Open dialog will always appear with all available translation options. If it is deselected, Macintosh Easy Open will automatically choose the last translation option that you selected for a particular file format.

"Include Choices from Servers": extends Macintosh Easy Open's search for applications to file servers. Note: Including choices from servers can be fairly slow depending on how many server volumes are available to you and how large they are. If you want Macintosh Easy Open to limit its search for applications to disks directly connected to your Macintosh, uncheck this option (recommended in most cases).

"Delete Preferences": deletes your Macintosh Easy Open preferences.

List of Translators Supported by MacLinkPlus

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Word Processors

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Macintosh

ClarisWorks

Framemaker

MacWrite, MacWrite II, MacWrite Pro

Nisus

RTF

Text

MS Word

WordPerfect

MS Works

WriteNow

PC (DOS & Windows)

Ami Pro
ClarisWorks (Windows)
DCA-RFT
Multimate
OfficeWriter
Professional Write
RTF
Text
MS Word (DOS & Windows)
WordPerfect (DOS & Windows)
Wordstar
MS Works (DOS & Windows)
XYWrite III

* You can translate between any of these file formats. For example, Word to WordPerfect, Ami Pro to MacWrite Pro, Nisus to WriteNow, etc.

Graphics

=====

Mac to PC

FROM:

PICT

TO:

PC Paintbrush (PCX)

TIFF

Windows Bitmap (BMP)

Windows Metafile (WMF)

WordPerfect (WPG)

PC to Mac

FROM:

AutoCad (DXF)

Harvard Graphics (CGM)

Lotus (PIC)

Lotus Freelance (CGM)

PC Paintbrush (PCX)

TIFF

Ventura Publisher (IMG & GEM)

Windows Bitmap (BMP)

Windows Metafile (WMF)

WordPerfect (WPG)

TO:

PICT

Spreadsheets

=====

Macintosh

Excel
MS Works
SYLK

PC (DOS & Windows)

Excel
Lotus 1-2-3
Quattro Pro
SYLK
Symphony

Macintosh

MS Works
dBase
FoxBASE

PC (DOS & Windows)

dBASE
FoxBASE
MS Works (DOS & Windows)
Mac

Support Information Services

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Tech Info Library Article Number:18797



Tech Info Library

PowerBook 190 & 5300: Norton Util Reports Wrong Speed (10/95)

Revised: 10/20/95
Security: Everyone

PowerBook 190 & 5300: Norton Util Reports Wrong Speed (10/95)

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Article Created: 20 October 1995

TOPIC -----

I ran Norton Utilities 3.1 and it reported that my supposedly 100Mhz Macintosh Powerbook 5300cs is running at 87MHz! What's wrong? Does my computer need service?

DISCUSSION -----

Apple has been informed by Symantec, the company that owns Norton Utilities, that the reason for the error you experienced is that they did not have the correct Gestalt call implemented in their software for this Macintosh PowerBook computer when they wrote the latest version of Norton Utilities. This is why Norton Utilities reports the wrong speed for your PowerBook 5300 computer and some other new PowerBook computers like the Powerbook 190.

A Gestalt call is implemented in many software applications by programmers to allow the application to find out if a certain feature is available on the computer on which it is running. In your case, Norton Utilities was checking the processor speed, but did not send the correct Gestalt call to get the right answer. So, for example, if a programmer is writing a program that requires a Floating Point Unit (FPU) they can do a Gestalt call at the beginning of their program and the computer will tell them whether it has one or not. That way they can tell the user sorry you have no FPU this program requires one, instead of making a direct call to the which would generate an error since the machine does not have one.

NOTE:

This article provides information about a non-Apple product and is posted for informational purposes only. No endorsement by Apple Computer, Inc. is either declared or implied. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you

search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18798



Tech Info Library

MAE 2.0 and MS Office Floppy Disk Install Issue (10/95)

Revised: 10/23/95
Security: Everyone

MAE 2.0 and MS Office Floppy Disk Install Issue (10/95)

Article Created: 23 October 1995

TOPIC -----

I'm having problems installing Microsoft (MS) Office on my SCARCStation with MAE 2.0 and Solaris 2.4. The installation generally fails towards the end of the installation process. Is there a known issue when using the Microsoft 1.6 MB floppy disk format?

DISCUSSION -----

Yes, there can be an issue with a Microsoft Office floppy disk installation. This issue is in an MAE Tech Note, a portion of which is below:

MAE and Microsoft Office

Microsoft has instituted a new floppy disk format (known as DMF -- Distributed Media Format) that permits distribution of software on a smaller number of floppy disks. This is accomplished by using a format of 1.6 MB which cannot be read by current PC-compatible (360 KB/720 KB/1.4 MB) or Apple (400 KB/800 KB/1.4 MB) floppy drives and requires the installer program to read the floppies. The special installer modifies the hardware floppy driver to support this new format.

To properly install MS Office for use with MAE, you either need a CD, or a floppy disk set that does not use DMF. When running the install, select a new folder when asked, to specify the directory for installation. The directory created will then be the installation folder, and the install will proceed normally.

In addition, when asked to update Excel graphs, select No.

Support Information Services

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Tech Info Library

At Ease 3.0 and ARA 2.0.1 Compatibility (10/95)

Revised: 10/23/95
Security: Everyone

At Ease 3.0 and ARA 2.0.1 Compatibility (10/95)

=====

Article Created: 23 October 1995

TOPIC -----

This article describes compatibility between Apple Remote Access (ARA) 2.0.1 and At Ease for Workgroups and Basic 3.0.

DISCUSSION -----

At Ease 3.0 and ARA 2.0.1 are compatible. ARA may be added to an At Ease Panel, used with At Ease panels, Restricted Finder, or Finder access, and used to dial out.

However, you will not be able to access the Remote Access Setup control panel from ARA's Setup menu. You will receive a message that states, "The Remote Access Setup icon cannot be opened because the Finder is unavailable. You must either locate the icon and open it manually, or launch the Finder and retry your selection."

The At Ease Administrator should pre-select the correct modem script in the Remote Access Setup control panel before adding ARA to the At Ease panel.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18801



Tech Info Library

PlainTalk 1.4.1: No Sound Speakable Items Enabled (11/96)

Revised: 11/11/96
Security: Everyone

PlainTalk 1.4.1: No Sound Speakable Items Enabled (11/96)

=====

Article Created: 23 October 1995
Article Reviewed/Updated: 11 November 1996

TOPIC -----

I just installed PlainTalk 1.4.1 on my Macintosh Performa 6200. When I turn on Speakable Items in the Speech Control Panel, I no longer hear any sound from my computer. The speech recognition is working and executing the commands I speak, but there are no feedback sounds or system beeps playing from my speaker. It is as if my speakers are muted. I checked the Sound control panel, and it is set at full output volume to the internal speaker of the computer.

DISCUSSION -----

This issue has been resolved in PlainTalk 1.5, which is available from <http://www.speech.apple.com>. The following computers require PlainTalk 1.5 in order to properly use speech recognition:

- Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- Macintosh 5300CD family: Macintosh 5300/100 LC, Performa 5300.
- Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.
- Macintosh 6300CD family: Performa 6300, Performa 6290

Article Change History:

11 Nov 1996 - Added 1.5 information.
24 Jul 1996 - Updated information based on info in Read Me.
13 Jul 1996 - Updated information.

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Tech Info Library Article Number:18802



Tech Info Library

PowerBook PC Cards: Card Won't Show on Desktop (10/95)

Revised: 10/23/95
Security: Everyone

PowerBook PC Cards: Card Won't Show on Desktop (10/95)

=====

Article Created: 23 October 1995

TOPIC -----

I recently purchased a Global Village PowerPort Platinum PC Card for my PowerBook 5300 computer. It has been working fine for several days, but now it does not show on my desktop when I insert it. I can still use it for fax or data communication as if it is there.

DISCUSSION -----

The PC Card Extension must be loaded at startup in order for your PC Card to appear on the desktop. You can still use your PC Card even though it does not appear on the desktop but you will have to use the eject button next to the PC slot to eject the card.

Verify that the PC Card extension is in the Extensions folder of your System Folder and that it has not been disabled in the Extensions Manager control panel. Restart your PowerBook. Your card should appear when the computer completes its startup sequence.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18803



Tech Info Library

Open Transport: MegaPhone & Other Apps Activate AppleTalk (3/96)

Revised: 3/22/96
Security: Everyone

Open Transport: MegaPhone & Other Apps Activate AppleTalk (3/96)

Article Created: 23 October 1995
Article Reviewed/Updated: 22 March 1996

TOPIC -----

I have a Power Macintosh 7500/100 with a GeoPort Telecom Adapter, and I'm using Telecom 2.1 software. The GeoPort Telecom Adapter is connected to the computer's modem port.

After doing a clean install of the system software and installing the Apple Telecom 2.1 software, while troubleshooting, I was able to use the MegaPhone demo software version 1.0.2ST successfully. I then installed the released MegaPhone software, version 1.0.2, selected the modem port in the AppleTalk control panel, and made AppleTalk inactive.

When launching MegaPhone, AppleTalk automatically becomes active, and I'm unable to use the MegaPhone software. What is wrong?

DISCUSSION -----

Issue

Cypress Research has reported, when launching the released version of the MegaPhone application, it checks to see if AppleTalk is active or inactive. When this check is made, AppleTalk automatically becomes active.

This issue has also been noticed with some other applications which make the same system check and automatically activate AppleTalk such as some versions of the following: Adobe Pagemaker, Macromedia Freehand, Quark XPress, Global Village Fax Software, and others.

MegaPhone Workaround

If a user calls Cypress with this issue, Cypress will send them a modified version of MegaPhone which does not check AppleTalk for being active or inactive.

Resolution

Open Transport version 1.1, installed with System 7.5 Update 2.0 corrects this issue.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

22 Mar 1996 - Added information about Sys Upd 2.0.

02 Jan 1996 - Added information on OT 1.1 fix.

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Tech Info Library Article Number:18804



Tech Info Library

PowerBook & Power Mac: RAM Doubler Compatibility Issue (2/96)

Revised: 2/15/96
Security: Everyone

PowerBook & Power Mac: RAM Doubler Compatibility Issue (2/96)

Article Created: 24 October 1995
Article Reviewed/Updated: 15 February 1996

TOPIC -----

My new PowerBook 5300 computer has been freezing at startup since I installed the latest version of RAM Doubler.

DISCUSSION -----

Issue
=====

Connectix Corporation, the maker of RAM Doubler, acknowledges that there is a compatibility issue with version 1.5.2 of their RAM Doubler application with some PowerBook computers.

The compatibility issue mentioned here affects the Macintosh PowerBook 2300, 5300, 5300c, 5300cs and 5300ce series computers and Power Macintosh 7200, 7500, 8500, and 9500 computers.

This issue does not affect any other desktop Macintosh computers, any earlier model PowerBook computers, or the PowerBook 190 and 190cs series computers. Other Connectix programs, such as Speed Doubler and Maxima, have no compatibility issues with the Macintosh PowerBook computers mentioned here.

Resolution
=====

According to Connectix, RAM Doubler version 1.6.1 and Speed Doubler version 1.1 are both fully compatible with the Macintosh PowerBook 5300 series computers. If a customer is not up to date, they can download a current updater from the Connectix web site (www.connectix.com) or from any online service.

The issue with these desktop Power Macintosh computers can be resolved by

installing RAM Doubler 1.5.3 or later (available from Connectix).

Workaround

=====

If you have RAM Doubler version 1.5.2 and you cannot immediately get version 1.6.1, you should remove RAM Doubler from your operating system.

Step 1

To remove RAM Doubler startup your computer with the extensions off by pressing on and holding down the shift key and the tilde (~) key during startup.

Note: You need to hold down both keys because the shift key alone will not disable RAM Doubler.

Step 2

Insert the RAM Doubler disk and use the Installer to de-install the application.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Connectix, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

15 Feb 1996 - Updated RAM Doubler version compatibility information.

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Tech Info Library Article Number:18805



Tech Info Library

ARA MultiPort Server & Global Village Platinum Modem (10/95)

Revised: 10/24/95
Security: Everyone

ARA MultiPort Server & Global Village Platinum Modem (10/95)

=====

Article Created: 24 October 1995

TOPIC -----

I have an Apple Remote Access (ARA) MultiPort Server, and I just purchased a Global Village TelePort Platinum modem to use with the server. This modem has a permanently attached cable with a DIN-8 connector for a Macintosh computer's serial port, however, this pre-attached modem cable will not attach to the ARA Serial Card and RS-232 Cable's DB-25 connectors. I have searched for an adapter that will connect the DB-25 plug to the DIN-8 plug (a DB-25 socket to DIN-8 socket adapter), and despite being told that any electronics store should have one, I have found none. Do you know of such an adapter?

DISCUSSION -----

Essentially, the TelePort Platinum modem will not work with an ARA Serial Card and RS-232 Cable, as you have discovered. The cable supplies four RS-232 Ports using DB-25 plug connectors. The modem has a captive cable which ends in a DIN-8 plug connector.

A socket DIN-8 "in" cable mounting configuration is rare in the United States. The company that imports this connector into the United States, HB Associates at 510-487-3933, reports that no major United States companies purchase the plug cable connector. They can order one for you from one of the DIN-8 component manufacturers.

However, you will still have to determine the pinouts of the adapter cable, and wire the adaptor yourself, which is not recommended unless you are familiar with this process.

Apple's recommendation is to reconsider using the TelePort Platinum modem with the ARA Serial Card and RS-232 Cable. If you need multiple port access, you should find another modem that either supports DB-25 connectors, or does not use a captive cable with a DIN-8 connector. If you must use the TelePort Platinum modem, you may be able to use the modem port in the Macintosh computer, or try another multiple port card or cable.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18806



Tech Info Library

PCI Cards Maximum Size (2/97)

Revised: 2/24/97
Security: Everyone

PCI Cards Maximum Size (2/97)

Article Created: 24 October 1995
Article Reviewed/Updated: 24 February 1997

TOPIC -----

I'm looking for the maximum size, length by height, of PCI cards used in the PCI-based Power Macintosh computers.

DISCUSSION -----

The Power Macintosh computers, such as the 7200, 7300, 7500, 7600, 8500, 8600, 9500 and 9600 support two different sizes of PCI cards in any of the PCI slots: 7-inch x 4-inch, and 12-inch x 4-inch.

The Power Macintosh 4400 has two PCI expansion slots, and one slot accepts only 7-inch PCI cards, but the other slot accepts either 7- or 12-inch cards.

Finally, the Power Macintosh 5400, 5500, 6400, 6500 and Macintosh Performa 6400 series, and Macintosh Performa 6360/160 computers support only 7-inch PCI cards.

The PCI local bus Specification 2.0 list the exact dimensions as:

Begin_Table

In Inches	6.875 x 4.2	and	12.283 x 4.2
In Millimeters	174.630 x 106.68	and	312 x 106.68

End_Table

Article Change History:

24 Feb 1997 - Added additional computers.
20 Nov 1996 - Removed one computer model which was listed in error.
15 Nov 1996 - Added 6360.

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Tech Info Library Article Number:18807



Tech Info Library

Apple LAN Utility 1.0b4e1: ReadMe File (10/95)

Revised: 10/24/95
Security: Everyone

Apple LAN Utility 1.0b4e1: ReadMe File (10/95)

=====

Article Created: 24 October 1995

TOPIC -----

This article contains the Read Me file included with the Apple LAN Utility 1.0b4e1 posted online. This update adds support for the PCI-based Power Macintosh 7200, 7500 and 8500 computers.

DISCUSSION -----

Apple LAN Utility version 1.0b4e1

The Apple LAN Utility is provided to perform the following tasks for Apple LAN interfaces:

- 1) Obtain the burned-in address without connecting to a network.
- 2) Override the burned-in address with a locally-administered address (this is mostly done in SNA and DECnet environments).
- 3) Set the speed for token ring interfaces that are software selectable.

The utility is intended to handle all Apple ethernet and token ring interfaces, whether built-in or on cards. When run, the utility opens one window per interface present in the machine, describing what its configuration will be the next time that interface is activated. This utility makes no attempt to alter the current operation of an active interface.

To make any changes to an interface, it is necessary to choose "Allow Changes" from the Edit menu. This was provided to minimize the chance of accidentally overriding a burned-in address.

To remove a locally-administered address, either clear the entry or set it to 12 zeroes.

The utility can save a tab-delimited text file describing the machine's configuration. The file has the following format:

..TIL18809-Apple_LAN_Utility_1-0b4e1-ReadMe_File_10-95_(TA34610).pdf

Line 1: The Macintosh model, machine name and user name
Line 2: Title strings
Lines 3 - n: One line per interface with bus/slot, interface name, burned-in address, local address and speed

The addresses are given in hexadecimal and are quoted to allow the file to be imported into a spreadsheet if desired.

Although the text file is rather ugly when viewed in TeachText/SimpleText, it can be made to look better when viewed in a word processor or spreadsheet program by adjusting the tabs or cell sizes appropriately.

This utility is provided free of charge on an "as is" basis. This is not an official product of Apple Computer!

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Release Notes

Version 1.0b4 includes the following changes:

Support was added for newer PCI-based Power Macintoshes - the 7200, 7500 and 8500.

Version 1.0b3 includes the following changes:

Support was added for the Power Macintosh 9500.

Support Information Services

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Tech Info Library Article Number:18809



Tech Info Library

QuickDraw 3D Accelerator Card: Specifications (10/96)

Revised: 10/22/96
Security: Everyone

QuickDraw 3D Accelerator Card: Specifications (10/96)

Article Created: 24 October 1995
Article Reviewed/Updated: 22 October 1996

TOPIC -----

This article provides the specifications of the QuickDraw 3D Accelerator Card for Power Macintosh computers with PCI slots.

DISCUSSION -----

Memory

- 128K SRAM cache
- 512K of high-speed SRAM texture memory, for up to 12 texture maps
- Does not include frame buffer ASICs
- Includes two custom ASICs. Rendering engine is based on state-of-the-art 0.5µ technology

Acceleration capabilities

- Accelerates QuickDraw 3D rendering to speeds as high as 12 times faster
- Renders 10 million trilinearly filtered, mipmapped texture pixels per second
- Renders up to 120,000 triangles per second
- Accelerates Gouraud shading, texture mapping, transparency, and Constructive Solid Geometry (CSG)
- Continually enables trilinear filtering, and mipmapping diffuse and specular lighting producing very high quality texture mapped images
- Uses high-performance SRAM memory to display up to 12 texture maps in each open window
- Outputs an alpha channel, making it fast and easy to transfer images between applications
- Offers hardware-accelerated per-pixel Z sorting for precise rendering of transparent surfaces or CSG, regardless of submission order or interpenetration
- A single card accelerates 3D rendering to all frame buffers in the system. This means it accelerates rendering on multiple monitors.

Environmental requirements

- Operating temperature: 50° to 104° F (10° to 40° C)
- Humidity: 20% to 95% noncondensing

Standards compliance/agency approvals

- PCI 2.1 compliant, IEEE 802.5 and 802.2

System requirements

- An Apple Power Macintosh computer with PCI slots or another PCI-equipped computer running the Mac OS
- Macintosh system software version 7.5.2 or later; System Enabler 1.1 or later
- At least 16 MB of RAM
- A hard disk drive
- A CD-ROM drive for installing software

Software and demos included on CD-ROM

- QuickDraw 3D 1.03 Installer and Demo Files - The installer will be localized in the following languages: English, French, German, Spanish, Italian, Japanese, Dutch, and Swedish.
- Apple QD3D HW Driver
- Apple QD3D HW Plug-In (Driver)
- ReadMe file
- Demos folder - In the Demos folder are the following third party and Apple-developed demos:
 - TextureEyes, a live-video mapping 3D application with models and movies
 - MoviePlayer 2.1
 - Havoc, a 3D game demo from Reality Bytes
 - Models, textures, and product catalog from Specular International
 - Models from ViewPoint Datalabs

Article Change History:

- 22 Oct 1996 - Added keyword and reformatted.
- 27 Oct 1995 - Changed distribution status.

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Tech Info Library Article Number:18810



Tech Info Library

QuickDraw 3D Accelerator Card: Read Me File (11/96)

Revised: 11/21/96
Security: Everyone

QuickDraw 3D Accelerator Card: Read Me File (11/96)

Article Created: 24 October 1995
Article Reviewed/Updated: 21 November 1996

TOPIC -----

This article contains the ReadMe file installed with the QuickDraw 3D Accelerator Card.

DISCUSSION -----

Important Information About QuickDraw 3D

QuickDraw 3D enables your Macintosh computer to display three-dimensional graphics, using applications designed to take advantage of QuickDraw 3D. It also provides a common file format, called 3DMF (for "3D metafile"), for exchanging 3D documents and acceleration services which support plug-and-play accelerator cards.

The following are required to install and run QuickDraw 3D and the QuickDraw Accelerator Card:

- A PowerPC based computer equipped with a PCI slot (such as a Power Macintosh 7200, 7500, 8500, or 9500)
- 16 megabytes of random access memory (RAM)
- Macintosh system software version 7.5.2, with System Enabler 1.1, or later
- A system that can display thousands or millions of colors

The QuickDraw 3D Accelerator Card

The QuickDraw 3D Accelerator Card brings workstation-class 3D acceleration to any Power Macintosh or Macintosh Performa computer with a PCI (Peripheral Component Interconnect) slot. Its accelerated 3D rendering allows you to create or work with 3D objects and scenes quickly and efficiently.

Featuring a compact (6.88-inch) design, the QuickDraw 3D Accelerator Card provides exceptional performance. It plugs easily into the PCI slot of your

Power Macintosh (or other PCI-equipped computer running Macintosh system software version 7.5.2 or later), to let you design 3D scenes and shade and texture objects faster than ever before. You can interact smoothly with 3D models that cover the full screen, even when performing Constructive Solid Geometry (CSG) or when positioning texture maps. And you'll find that the motion in your 3D animations flows smoothly and looks natural.

To accomplish this workstation-class performance, the QuickDraw 3D Accelerator Card works in conjunction with QuickDraw 3D, a cross-platform application program interface (API) that is an emerging standard in the area of computer-based 3D graphics and animations. By itself, QuickDraw 3D was designed to take advantage of PowerPC RISC technology to provide real-time, interactive rendering for simple models. The QuickDraw 3D Accelerator Card enhances this capability, enabling you to use your Macintosh computer to work in real time with much larger and more complicated models.

With complex 3D models rapidly becoming the standard in computer-based graphics, high-speed 3D rendering capabilities are increasingly a necessity for many computer users. So whether you're an architect, a graphic artist, a multimedia developer, a scientist who works with visualization, or simply a 3D game enthusiast, the QuickDraw 3D Accelerator Card will make your interactions with on-screen images significantly faster, better—and more satisfying.

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models, and textures that allow you to explore the 3D capabilities of your Macintosh:

- SimpleText version 1.3.1 and Scrapbook version 7.5.1. These applications allow you to open and interact with 3DMF models.
- A game called "Gerbils!" so you can experience the fun side of 3D graphics.
- Cumulus, a multimedia database provided by Canto Software.
- A new Scrapbook File with sample 3DMF models.
- A number of 3DMF models provided by Model Masters and Viewpoint Datalabs International.
- Textures provided by Wraptures and Xaos Tools.

You can expect more applications using QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

QuickDraw 3D and Image Quality

QuickDraw 3D has been optimized to display three-dimensional graphics of high quality. To display high-quality images, and obtain the best performance from your system, we recommend that you set your system to display thousands or millions of colors.

The QuickDraw 3D Accelerator Card only accelerates rendering to screens which display thousands or millions of colors. QuickDraw 3D will run if you choose another display format, but rendering will not be accelerated.

Features of Your QuickDraw 3D Accelerator Card

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Workstation-class 3D acceleration

- Accelerates QuickDraw 3D rendering up to 12 times (12X)
- Renders 10 million tri-linearly filtered, bitmapped texture pixels/second
- Renders up to 120 thousand triangles per second
- Accelerates Gouraud shading, texture mapping, transparency, and Constructive Solid Geometry (CSG)
- Tri-linear filtering, mipmapping, and diffuse and specular lighting are always enabled, producing very high-quality texture-mapped images
- Uses high-performance SRAM memory to display up to 12 texture maps in each window
- Outputs an alpha channel, making it fast and easy to transfer images between applications
- Hardware-accelerated per-pixel Z-sorting provides precise rendering of transparent surfaces or CSG, regardless of submission order or interpenetration

Scalability

- A single card accelerates 3D rendering to all frame buffers in the system.
- Hardware rendering performance can be doubled simply by installing a second card.

Troubleshooting 3D Acceleration

=====

If 3D rendering does not appear to be accelerated, check the following:

- Check that your system is set to display thousands or millions of colors. These are the only display modes in which acceleration can occur.
- Check that your application uses QuickDraw 3D. Some older 3D applications don't use QuickDraw 3D for rendering, and can not be accelerated.
- Some applications allow you to switch hardware acceleration on or off. Check your application's documentation to be sure that hardware acceleration is enabled (on).
- Check that the following files are in the Extensions Folder, inside the System Folder:

Apple QD3D HW Driver
Apple QD3D HW Plug-In

- The performance advantage of any 3D accelerator varies depending on the type of scene being rendered. You may find that some applications show the benefits of acceleration more than others. If you want to verify that acceleration is working, try the Gerbils! application (included on your installer CD-ROM) – it runs much faster when the QuickDraw 3D Accelerator Card is installed.

Turning Off 3D Acceleration

If you need to turn off the QuickDraw 3D Accelerator Card (for example, to compare accelerated performance with software-only rendering), follow these steps:

Step 1

Quit all applications that use QuickDraw 3D.

Step 2

Create an empty folder on the desktop.

Step 3

Move the file named "Apple QD3D HW Plug-In" from the Extensions Folder (inside the System Folder) into the empty folder. The accelerator card is now disabled.

Step 4

Restart QuickDraw 3D applications.

To turn the QuickDraw 3D Accelerator Card back on, follow these steps:

Step 1

Quit all applications that use QuickDraw 3D.

Step 2

Move the file named "Apple QD3D HW Plug-In" back into the Extensions Folder.

Step 3

Restart QuickDraw 3D applications.

General Troubleshooting

For better performance, we recommend that Virtual Memory be turned off. If your system has only 16 megabytes of RAM, leaving Virtual Memory enabled can cause unexpected crashes. For 16-megabyte systems, make sure to turn Virtual Memory off before starting any application that uses QuickDraw 3D.

If you try to start an application that uses QuickDraw 3D and get the message "The application '<application name>' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions Folder, inside the System Folder:

- QuickDraw 3D
- QuickDraw 3D Accelerator
- QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try one or more of the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application. Take these steps to reduce it:
 1. Select the application's icon in the Finder.
 2. Choose Get Info from the File menu.
 3. Type a lower number in the boxes for Minimum Size and Preferred Size.
- Install more memory (RAM.)

If you would like to use the Scrapbook File supplied in the QuickDraw 3D folder instead of your existing Scrapbook File, you must copy the Scrapbook File from the QuickDraw 3D Folder to the System Folder on your Macintosh. Note that this will replace your existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

How QuickDraw 3D Uses Memory =====

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D are open, the library does not take up random access memory (RAM) space. Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared library doesn't increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from "temporary memory." When you choose About This Macintosh from the Apple (🍏) menu, it is shown as memory used by the System. After you quit the application, the memory becomes available, but the size shown in the About This Macintosh window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed).

If You Need to Reinstall QuickDraw 3D =====

If you need to reinstall QuickDraw 3D, follow these steps:

Step 1

Open the QuickDraw 3D Install folder and double-click the Installer icon.

Step 2

After installing QuickDraw 3D, restart your computer.

Step 3

If you want the items in the QuickDraw 3D Extras folder, drag the folder to the newly-created QuickDraw 3D Folder inside the Apple Extras folder.

Removing QuickDraw 3D

=====

If you wish to remove QuickDraw 3D, follow these steps:

Step 1

Insert the CD that contains the QuickDraw 3D software.

Step 2

Open the QuickDraw 3D Install folder and double-click the Installer icon.

Step 3

Choose Custom Remove from the pop-up menu.

Step 4

Click the box next to each item to put a check in it.

Step 5

Click Remove.

Step 6

Restart your computer.

Article Change History:

21 Nov 1996 - Corrected typographical error and updated format.

27 Oct 1995 - Changed distribution status.

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Tech Info Library Article Number:18811



Tech Info Library

QuickDraw 3D: Read Me File (10/95)

Revised: 10/27/95
Security: Everyone

QuickDraw 3D: Read Me File (10/95)

=====
Article Created: 24 October 1995
Article Reviewed/Updated: 27 October 1995

TOPIC -----

This article contains the ReadMe file installed with the QuickDraw 3D software.

DISCUSSION -----

Important Information About QuickDraw 3D

QuickDraw 3D enables your Macintosh computer to display three-dimensional graphics, using applications designed to take advantage of QuickDraw 3D. It also provides a common file format, called 3DMF (for "3D metafile"), for exchanging 3D documents and acceleration services which support plug-and-play accelerator cards.

The following are required to install and run QuickDraw 3D:

- a PowerPC based computer
- 16 Megabytes of memory (RAM)
- System 7.1.2 or later

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models and textures that allow you to explore the 3D capabilities of your Macintosh:

- SimpleText version 1.3 and Scrapbook version 7.5.1. These applications allow you to open and interact with 3DMF models.
- A new Scrapbook File with sample 3DMF models.
- A number of 3DMF models provided by Model Masters and Viewpoint Datalabs International.

- Textures provided by Wraptures and Xaos Tools.

You can expect more applications using QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

QuickDraw 3D and image quality

QuickDraw 3D has been optimized to display three-dimensional graphics of high quality. To display high-quality images, and obtain the best performance from your system, we recommend that you set your system to display thousands or millions of colors.

Troubleshooting


For better performance, we recommend that Virtual Memory be turned off. If your system has only 16 Megabytes of RAM, leaving Virtual Memory enabled can cause unexpected crashes. For 16 Megabyte systems, make sure to turn Virtual Memory off before launching any application that uses QuickDraw 3D.

If you try to start an application that uses QuickDraw 3D and get the message "The application '<application name>' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions Folder, inside the System Folder:

- QuickDraw 3D
- QuickDraw 3D Accelerator
- QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application. This is done by:
 - selecting the application's icon in the Finder
 - choosing "Get Info..." from the File menu
 - typing a lower number in the boxes for Minimum Size and Preferred Size
- Install more memory (RAM.)

If you are using a localized system, and you install this U.S. software, you will need to copy the "Scrapbook File" in the "QuickDraw 3D Folder" to the System Folder on your Macintosh. Otherwise, when you select the Scrapbook from the  menu, you will get an empty scrapbook. Note that this operation will replace any existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

How QuickDraw 3D uses memory

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D are open, the library does not take up memory space (RAM). Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared

library doesn't increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from "temporary memory." This memory shows up in the "About This Macintosh..." window as memory used by the System. When you quit the application, the memory becomes available, but the size shown in the "About This Macintosh..." window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed.)

If You Need to Reinstall QuickDraw 3D

If you need to reinstall QuickDraw 3D, follow these steps:

Step 1

Open the "QuickDraw 3D Install" folder and double-click the Installer icon.

Step 2

After installing QuickDraw 3D, restart your computer.

Step 3

If you want the items in the "QuickDraw 3D Extras" folder, drag the folder to the newly-created "QuickDraw 3D Folder" inside the "Apple Extras" folder.

Removing QuickDraw 3D

If you wish to remove QuickDraw 3D, follow these steps:

Step 1

Insert the CD that contains the QuickDraw 3D software.

Step 2

Open the "QuickDraw 3D Install" folder and double-click the Installer icon.

Step 3

Choose Custom Remove from the pop-up menu.

Step 4

Click the box next to each item to put a check in it.

Step 5

Click Remove.

Step 6

Restart your computer.

Article Change History:

27 Oct 1995 - Changed distribution status.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18812



Tech Info Library

Apple MessagePad 120: W/ Newton 2.0 OS Description (4/97)

Revised: 5/1/97
Security: Everyone

Apple MessagePad 120: W/ Newton 2.0 OS Description (4/97)

Article Created: 24 October 1995
Article Reviewed/Updated: 1 May 1997

TOPIC -----

This article provides the product description of the Apple MessagePad 120 with the Newton 2.0 installed.

DISCUSSION -----

The MessagePad 120 with Newton 2.0 OS

The MessagePad 120 personal digital assistant (PDA) makes your information as mobile as you are.

It allows you to organize your work and personal life; to integrate information with your personal computer; to communicate using faxes, pages, and e-mail; and to expand your capabilities with third-party solutions.

It has a built-in Notepad, to-do list, datebook, telephone log, and address file for organizing personal and business affairs, as well as Pocket Quicken to help organize personal and business expenses.

You can enter information in many ways: as digital ink, printed text, hand-drawn graphics, or with an on-screen keyboard. There's even an optional external keyboard.

Pen-based navigation and data entry make finding information easy and fast.

Its improved recognition software transforms your handwriting into typed text. You can also print your information as it appears on its easy-to-read screen, or as fully formatted pages.

The MessagePad 120 can receive wireless messages and alphanumeric pages, and can send and receive faxes and electronic mail.

The MessagePad 120 also lets you share and exchange information with either Windows software-based or Macintosh computers using the included Newton Backup Utility, or optional Newton Connection Utilities and Newton Press software.

Your MessagePad 120 can also be customized with software applications as well as accessories and on-line services that put critical information at your fingertips, no matter where you are.

Built-in organization

- Helps you plan monthly, weekly, and daily activities using the calendar and manage priorities using the Notepad
- Allows free-form notes, outlines, lists, and phone logs
- Includes customizable name and address files for colleagues and friends using a familiar business-card format
- Offers an assortment of information and productivity tools such as time-zone maps, a calculator, and currency exchange
- Includes Pocket Quicken, which puts current information about your cash, checking, savings, and credit-card accounts at your fingertips

Built-in communications

- Actively assists you in making phone calls, faxing, printing, finding information, and sending electronic mail
- Lets you beam notes, messages, schedules, or business cards via built-in infrared communications
- Uses an optional wired or wireless modem to send and receive faxes.
- Prints formatted letters and notes using Apple printers or serial or parallel printers using the optional Print Pack

Built-in integration with your personal computer

- Backs up all data onto your personal computer and can install software into your MessagePad 120 via the included Newton Backup Utility
- Using the optional Newton Connection Utilities, lets you integrate your Windows software-based or Macintosh computers to back up and synchronize information
- Using the optional Newton Press software, lets you publish electronic documents such as travel itineraries, reference books, or sales charts on your personal computer for viewing and

annotating on your MessagePad

Expandability

- Works with a large selection of PC cards and serial peripherals such as modems, pagers, wireless communications and storage products, and a keyboard
- Offers a large selection of productivity, finance, time, billing, management, reference, electronic document publishing, and entertainment software

Newton operating system upgrade

=====

For a limited time only, your MessagePad 120 with Newton 1.x operating system can be upgraded to the Newton 2.0 operating system. To order the upgrade or receive more information on the upgrade program, call 1-800-SOS-APPL, or via the Internet <http://www.info.apple.com/newton>

Product specifications are subject to change. Check with your authorized Apple reseller for the most current information about product specifications and configurations.

Article Change History:

1 May 1997 - Removed out dated on line references.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18813



Tech Info Library

Apple MessagePad: List of Accessories Available (4/96)

Revised: 4/11/96
Security: Everyone

Apple MessagePad: List of Accessories Available (4/96)

Article Created: 24 October 1995
Article Reviewed/Updated: 11 April 1996

TOPIC -----

This article describes the accessories available for the Apple MessagePad 120. Some accessories are only available with the Newton 2.0 OS. Accessories Requiring Newton 2.0 OS are marked as such.

DISCUSSION -----

MessagePad Accessories
=====

Now you can make your Apple MessagePad personal digital assistant (PDA) even more valuable, and make it work even more efficiently.

Because no matter which MessagePad product you have, you can choose from a broad range of accessory products -- from connectivity solutions to battery enhancements to storage options.

With these optional accessories, you can print letters, send and receive faxes, receive wireless messages and pages, connect to your personal computer, or gain access to information on your network. You can also work for hours without having to change batteries. And you can protect your MessagePad -- and its accessories -- in a leather carrying case, wherever you go.

Accessories
=====

Newton Connection Kits

These kits connect your Apple MessagePad or other Newton technology-based products to a Windows PC or an Apple Macintosh computer to create, view, edit, synchronize, and back up information. They also enable you to move Newton software from your personal computer to your Newton device.

Newton Connection Utilities

This software allows your MessagePad 120 with Newton 2.0 operating system to connect to your Windows-based or Macintosh computer to create, view, edit, synchronize, and back up information with popular personal computer applications, and to gain access to your personal computer's information while at your desk or from a remote location.

Newton Press

This program allows you to publish electronic documents such as travel itineraries, reference books, or sales charts on your personal computer for viewing and annotating on your MessagePad.

Newton Keyboard

Now you can enter information into your MessagePad 120 as fast as you can type. The touchtype comfortable keyboard is lightweight and portable and comes with an attractive carrying case, so you can take it wherever you take your MessagePad. It comes in several international versions.

Power Adapter

The Power Adapter lets you run your MessagePad or Fax Modem using AC power and rechargeable battery pack for the MessagePad 110 and 120. It comes in several versions to meet international power requirements.

Rechargeable Battery Packs

These rechargeable nickel-cadmium battery packs can be one of the most effective ways to keep your MessagePad running.

Battery Booster Pack

Plug this portable pack's cable into your MessagePad and its eight AA alkaline batteries add hours of running time. Batteries are not included.

MessagePad Charging Station

Plug your MessagePad 110 or 120 into this charging station to run it on AC power while recharging its batteries. You can simultaneously quick-charge its external battery pack in two to three hours.

Battery Pack Recharger

This recharger quickly recharges battery packs for your MessagePad or MessagePad 100. One rechargeable nickel-cadmium battery pack is included.

Print Pack

The Print Pack allows you to use your parallel printer with your MessagePad. It works with most popular laser, dot-matrix, portable ink-jet, and thermal

printers, as well as printers compatible with MS-DOS and Windows-based computers.

2 MB and 4 MB Flash Storage Cards

Use the 2 MB or 4 MB Storage Card to increase the storage capacity of your MessagePad, to back up your information, and to run more applications.
Carrying Case This case protects your MessagePad 110 or 120 and your add-in PC cards when you take them on the road. It's made of durable black synthetic leather and stays securely closed.

Leather Carrying Case

The leather carrying case has room for add-in PC cards and lots of business cards, and has a zipper to keep everything where it belongs.

Communications System Carrying Case

Use this synthetic-leather carrying case to hold your MessagePad or MessagePad 100 and accessories—from the Fax Modem to storage cards.

MessagePad Telescoping Pen

This pen is designed to fit perfectly in your MessagePad 110 or 120.

Product Name	Technical Specifications	MessagePad Model	
		Original & MP 100	MP 110 & MP 120
Newton Connection Kit 2.0 for Macintosh	• Requires system software version 7 or later, a Macintosh with a 68030 or faster microprocessor with at least 4MB of RAM, an Apple SuperDrive floppy disk drive, a hard disk drive with 3MB of available disk space, and a serial port. Works with Newton 1.x operating system only.	H0030LL/B	H0030LL/B
Newton Connection Kit 2.0 for Windows	• Requires Microsoft Windows version 3.1 (enhanced) or later, an IBM PC-compatible computer with an 80386DX (80486 recommended) or faster microprocessor with at least 4MB of RAM, a serial-port connection, a hard disk drive with 8MB of available disk	H0029LL/B	H0029LL/B

	<ul style="list-style-type: none"> space, and a high-density 3.5-inch floppy disk drive. • Works with Newton 1.x operating system only. 		
Newton Connection Utilities for Macintosh Coming Soon	<ul style="list-style-type: none"> • Same Macintosh requirements as Newton Connection Kit 2.0 for Macintosh • Works with Newton 2.0 operating system only • May require a Macintosh serial cable 		H0170LL/A
Newton Connection Utilities for Windows Coming Soon	<ul style="list-style-type: none"> • Same Windows requirements as Newton Connection Kit 2.0 for Windows • Works with Newton 2.0 operating system only • May require Newton Serial Cable for Windows 		H0169LL/A
Newton Press for Macintosh	<ul style="list-style-type: none"> • Same Macintosh requirements as Newton Connection Kit 2.0 for Macintosh • Works with Newton 1.x and 2.0 operating system • May require a Macintosh serial cable 	M4055LL/A	M4055LL/A
Newton Press for Windows	<ul style="list-style-type: none"> • Same Windows requirements as Newton Connection Kit 2.0 for Windows • Works with Newton 1.x and 2.0 operating system • May require Newton Serial Cable for Windows 	M4057LL/A	M4057LL/A
Newton Keyboard	<ul style="list-style-type: none"> • Requires a PDA running the Newton 2.0 operating system • Includes attached serial cable and carrying case 		X0035LL/A X0035B/A GB X0035F/A FR X0035D/A GR X0035S/A SD

Print Pack	<ul style="list-style-type: none"> • Works with parallel printers: dot matrix (80 or 120 column), multiform printers, portable printers, and HP DeskJet and LaserJet printers 	H0015LL/A	H0015LL/A
Power Adapter	<ul style="list-style-type: none"> • Output 7 volts at 0.5 amp, universal 100 to 240 volts -- In-line adapter for U.S., Canada, and Japan ----->H0003Z/A -- Right-angle adapter for international use ----->H0011Z/A -- Right-angle adapter for Great Britain ----->H0011B/A -- Right-angle adapter for Australia ----->H0011X/A 		H0003Z/A H0011Z/A H0011B/A H0011X/A
Battery Booster Pack	<ul style="list-style-type: none"> • Unit holds eight AA alkaline batteries for extended mobile use • Flexible cable connects to MessagePad through AC port 	H0010LL/A	H0010LL/A
Rechargeable Batt. Packs	<ul style="list-style-type: none"> • Includes one nickel-cadmium battery pack • Includes one nickel-cadmium battery pack and recharger <ul style="list-style-type: none"> -- (U.S./Canada/Japan) ----->H0002LL/A -- (international) ----->H0023Z/A • Recharger prevents overcharging with automatic built-in timer 	H0007LL/A	H0074LL/A
MessagePad Charging Station for the MessagePad 110 or 120	<ul style="list-style-type: none"> • Includes one nickel-cadmium battery pack, station, adapter, and pen • Charges spare Rechargeable Battery Pack while MessagePad 110 or 120 charging • MessagePad 110 or 120 internal battery pack 	H0073LL/A	

2MB Flash Storage Card	<ul style="list-style-type: none"> Fits in PC type II slot 	H0008LL/A	H0008LL/A
4MB Flash Storage Card	<ul style="list-style-type: none"> Provides twice the capacity of 2MB Storage Card 	H0092LL/A	H0092LL/A
Carrying Case	<ul style="list-style-type: none"> Filofax-like case made of black synthetic leather 		H0122LL/A
Leather Carrying Case	<ul style="list-style-type: none"> Case made of high-quality black leather H0075LL/A		H0075LL/A
Communi- cations System Carrying Case	<ul style="list-style-type: none"> Zippered case made of black synthetic leather Space for MessagePad and Fax Modem 	H0053LL/A	
Telescop- ing Pen	<ul style="list-style-type: none"> Replacement pen for MessagePad 110 or 120 		H0076LL/A

Article Change History:

11 Apr 1996 - Added availability information on NCU products.

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Tech Info Library Article Number:18814



Tech Info Library

Apple MessagePad 120: W/ Newton 2.0 OS Specifications (4/97)

Revised: 5/1/97
Security: Everyone

Apple MessagePad 120: W/ Newton 2.0 OS Specifications (4/97)

Article Created: 24 October 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides the technical specifications of the Apple MessagePad 120 with the Newton 2.0 OS installed.

DISCUSSION -----

Technical Specifications
=====

Newton Intelligence

- Newton Recognition Architecture
 - Recognizes handwriting—printed, cursive, or a mixture of the two—with the assistance of a 93,000- word, built-in word list
 - Lets you add up to 1,000 words to its word list
 - Includes four pop-up keyboards: typewriter, numeric, phone, and time/date
 - Recognizes graphics and symmetrical objects
- Newton Information Architecture
 - Object-oriented database stores, finds, and links information and provides a flexible view of this data
 - Newton Toolkit lets you easily create custom applications using its flexible graphical toolbox
 - Architecture lets you easily share data across applications
- Newton Communications Architecture
 - Built-in support for serial communications, PC card modems, fax send and receive, and electronic mail
 - Provides single interface for modular, object-oriented communication services
 - Supports new communications capabilities through its modular

design

- Intelligent Assistance Architecture
 - Helps users complete repetitive tasks in multiple categories, including communications, scheduling, finding, and reminding functions
 - Contains smart defaults to reduce complexity
 - Works in and between applications
 - Supports third-party extensions
- Newton Hardware Architecture
 - ARM 610 RISC processor at 20 MHz
 - Apple custom system ASIC
 - Low-power, reflective LCD display (320x240 pixels) 3.8x2.8 in. (9.6x7.2 cm)
 - Telescoping pen and crisp, transparent tablet
 - 8 MB of ROM –687K of system RAM; 1,361K of nonvolatile user RAM
 - One PC Card Type II slot with 325 mA capacity
 - LocalTalk and RS-232-compatible serial port
 - Low-power, half-duplex, infrared transceiver works at up to 38.4 kbits/sec within 3.28 feet (1 meter)
 - Protective removable lid

Communications capabilities

- Print using a variety of serial, parallel, and network printers
- Receive and store wireless messages using optional messaging cards*
- Communicate via e-mail or tap into on-line information services with an optional wired or wireless modem card and software
- Fax with optional fax/modem (automatic cover-page generation, post-formatting)
- Beam notes, name cards, and appointments at up to 38.4 kbits/sec within 3.28 feet (1 meter) using high-speed infrared technology
- Automatically dial phone calls with assistance for intelligent auto-dialing (DTMF or modem dialing)*
- Exchange electronic mail with users of on-line services including the Internet

* Note:

This service may not be available in all countries.

Size and weight

- Length: 8.0 in. (20.32 cm)
- Width: 4.0 in. (10.16 cm)

- Height: 1.2 in. (2.9 cm)
- Weight: 1.0 lb. (0.48 kg) without batteries

Operating environment

- Temperature: 32 to 104 deg. F (0 to 40 deg. C)
- Storage temperature: -4 to 117 deg. F (-20 to 47 deg. C)
- Transit temperature: -4 to 149 deg. F (-20 to 65 deg. C) for up to 72 hours
- Relative humidity: 20% to 90% noncondensing

Power requirements

- Power adapter
 - Universal, 100 to 240 volts AC, 50/60 Hz
 - Four plug configurations: U.S., U.K., Europe, and Australia
- Battery type: alkaline or NiCd Battery Pack
- Lithium cell: DL2032 –Operating range: 3 volts (nominal)
- Built-in fast charger for optional NiCd Battery Pack
- Power source: four AA batteries (included), optional Power Adapter, and optional Rechargeable NiCd Battery Pack

Computer connectivity hardware requirements

- Works with PC-compatible computers with 80386DX or later processors running Windows version 3.0 or later
- Works with Macintosh computers with 68030 or later processors and system software version 7.1 or later

Printer support

- Built-in support for the Apple LaserWriter, Apple Color LaserWriter, Apple StyleWriter, and Apple Color StyleWriter printers series (does not support the Apple Color StyleWriter Pro)
- Works with most popular PC printers, including the Hewlett-Packard LaserJet II, DeskJet 500, Canon BubbleJet 10e, and Epson LQ and FX using the optional Print Pack

Fax machine support

- Supports Group 3 fax machines

Ordering Information

MessagePad 120/2MB

Order No. H0153LL/A

- MessagePad 120 personal digital assistant with Newton 2.0 operating system
- Telescoping pen
- Batteries
- Pocket Quicken software
- Newton Backup Utility and cables
- Complete setup, learning, and reference documentation
- Limited warranty

Accessories

- The MessagePad 120 with Newton 2.0 operating system is compatible with most accessories available for the MessagePad 110 and MessagePad 120 with Newton 1.x operating system.

Please see the MessagePad Accessories data sheet for detailed information.

Newton operating system upgrade

For a limited time only, your MessagePad 120 with Newton 1.x operating system can be upgraded to the Newton 2.0 operating system. To order the upgrade or receive more information on the upgrade program, call 1-800-SOS-APPL, or through the Internet <http://www.info.apple.com/newton>

Product specifications are subject to change. Check with your authorized Apple reseller for the most current information about product specifications and configurations.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18815



Tech Info Library

LaserWriter Pro 810: Configuring TCP/IP Printing (3/96)

Revised: 3/4/96
Security: Everyone

LaserWriter Pro 810: Configuring TCP/IP Printing (3/96)

Article Created: 25 October 1995
Article Reviewed/Updated: 4 March 1996

TOPIC -----

I am trying to configure my LaserWriter Pro 810 for printing with TCP/IP. How do I need to set this up?

DISCUSSION -----

Connecting the LaserWriter Pro 810 to Ethernet

TCP/IP printing to the LaserWriter Pro 810 is supported only through Ethernet, there is no Token Ring support.

You should ensure that you have the appropriate Ethernet adapter installed in the LaserWriter Pro 810. Apple supports both thin coax and twisted pair with the following:

Service Part

661-0853 - Ethernet, 10 Base T
661-0854 - Ethernet, 10 Base 2

You should power the printer on after installation to confirm that the Ethernet card is recognized. The startup page will have an Ethernet icon if the interface is active.

Detailed instructions on Ethernet installation can be found in the "Network Installation and Configuration Manual":

Rev A, Part 1, Section 2.1-3.2, (p 2-1 to 3-2)
Rev B, Part 1, Section 2.4-5 and 3.1-2, (p 2-7 to 3-2)

Setting The IP Address =====

NOTE: BOOTP cannot be used to configure an IP number. The IP address of the printer can be changed by 2 methods:

- RARP (reverse address resolution protocol)
- RCF (remove command facility).

Check for an already assigned IP number -----

Using the front control panel:

- 1) Press offline
- 2) Press print status
- 3) Press online.

Three pages will print out. On page two, "printer configuration" a section for Ethernet, and a field for IP address.

Reverse address resolution protocol (RARP) -----

RARP requires a UNIX host with rarpd support on the same subnet as the LaserWriter Pro 810.

Instructions for RARP are contained in Network Configuration and Installation Manual:

Part 2, Section 3.4.1 (page 3-9) of Rev A
Part 1, Section 2.3.3 (page 2-6) of Rev B

RARP cannot configure subnet or gateway information. You will have to connect via RCF to configure the other settings.

Remote Control Facility -----

Login to the LaserWriter 810 via Maintenance Port, TELNET or NCP.

The Maintenance Port requires using a serial to RJ12 cable, and connect at 9600 bps, 8 bits, 1 stop bit, no parity.

Cable pinouts for RJ-12 to DB-25 (typical DOS serial connector) are in (both Rev A & B)

Part 1, A-2 (page A-2)

- TELNET works only if the LaserWriter Pro 810 already has an IP address.
- NCP connects at the Ethernet address level, and does not require a pre-existing IP address. Become privileged by typing:

su

Enter the system password (default is "system").

Change the IP address by using:

DEFINE SERVER IP w.x.y.z
substitute desired address with w.x.y.z

Restart printer and print configuration page to confirm change.

Configuring gateway and subnet mask

To define the server subnet mask, enter the following command:

Define server subnet mask <w.x.y.z>

Confirm by restarting computer and entering the following commands:

Show server tcp

Define node <w.x.y.z> gateway default

NOTE: Users should not use the set/define/change route command unless they have a specific network configuration that requires complex routing tables.

Article Change History:

04 Mar 1996 - Corrected maintenance port settings.

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Tech Info Library Article Number:18816



Tech Info Library

Apple Remote Access: Dialing String Length (10/95)

Revised: 10/25/95
Security: Everyone

Apple Remote Access: Dialing String Length (10/95)

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Article Created: 25 October 1995

TOPIC -----

I'm using the Apple Remote Access (ARA) Client 2.0.1, and I want to enter a 39 character string in the Long Distance Access setup of the Dial Assist control panel (10 digit phone number, 2 commas, 14 digit credit card number, 4 commas, and 9 digit phone number). When I have tried to connect, ARA seems to only dial the first 31 characters. Is there a limit of characters ARA can dial?

DISCUSSION -----

This is not a limitation of ARA. Different modems may have different maximum command line lengths that they will accept. This maximum is defined in the mlts resource of the modem script. If an mlts resources is not defined then ARA assumes a default length of 30 characters. ARA also provides the ability to break one long string up into substrings, but the specific modem script must be written to take advantage of this feature. If the modem script you are using does not dial all the characters you are entering contact the modem manufacturer for an updated script.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18818



Tech Info Library

ARA: Credit Card Number Visible in Activity Log (10/95)

Revised: 10/25/95
Security: Everyone

ARA: Credit Card Number Visible in Activity Log (10/95)

=====

Article Created: 25 October 1995

TOPIC -----

I use my long distance credit card number when connecting with Apple Remote Access (ARA) by entering the number in the Long Distance Access field of the DialAssist control panel. I've noticed that the Activity Log shows my credit card number instead of black dots, and I'm concerned other people using my PowerBook can get my credit card number from the Log. Is there a way to hide my credit card number?

DISCUSSION -----

To keep your credit card number from appearing in the Activity Log, enter the credit card number in the Suffix field of the DialAssist control panel. If you enter your credit card information in the Long Distance Access field of the DialAssist control panel, the number will be visible in the Log.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18819



Tech Info Library

PowerBook 190 & 5300: PC Card Usage Affects Battery Life (10/95)

Revised: 10/26/95
Security: Everyone

PowerBook 190 & 5300: PC Card Usage Affects Battery Life (10/95)

Article Created: 26 October 1995

TOPIC -----

Will inserting PC (PCMCIA) cards into a Macintosh PowerBook 190 or 5300 series computer reduce battery life?

DISCUSSION -----

Inserting PC (PCMCIA) cards into the PowerBook 5300 or PowerBook 190 will reduce battery life. This is more evident if the cards are active or in use. However, PC cards do draw some power when they are just inserted and not in use. Most cards have two states, idle or in use.

How to Minimize PC Card Power Usage

- Eject the PC card. This is the best way to minimize power usage.
- Use a different PC card. The amount of power drawn by a PC card varies per individual PC card and by different manufacturers' designs. To test whether your PC card may be drawing more power than you think it should, causing the battery to drain too quickly, you may want to swap it with another similar PC card or a different brand of PC card.
- Do not insert PC cards which are not needed. Eject the PC card when it is no longer in use.
- Plug it in to AC power rather than running from the battery. In most circumstances when a person would need to use a modem or network, there is a power outlet nearby. Apple recommends using the AC adapter, when AC power is available, to retain a full battery charge for times when external power is not available.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18824



Tech Info Library

Open Transport 1.0.8 Read Me (1/97)

Revised: 1/17/97
Security: Everyone

Open Transport 1.0.8 Read Me (1/97)

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Article Created: 26 October 1995
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article is the Open Transport 1.0.8 Read Me file.

DISCUSSION -----

What is this version of Open Transport?

Open Transport 1.0.8 is a maintenance release of Open Transport networking software.

What Macintosh systems are able to use this software?

Open Transport 1.0.8 is designed for installation on Power Macintosh 7200, 7500, 8500, and 9500 computers that have Open Transport version 1.0.6 or 1.0.7 and System Software 7.5.2 version 2 installed. If you have a Power Macintosh 7200, 7500, or 8500, the correct version of system software is already installed. If you have a Power Macintosh 9500, check to see if "System Enabler 1.1" is in your System Folder. If you have System Enabler 1.1, you have System Software 7.5.2 version 2.

Who needs this software?

Anyone that has a Power Macintosh 7200, 7500, 8500, or 9500 computer and is experiencing one or more of the problems described below.

What has changed in this release?

This section documents only the changes made since version 1.0.7. Changes made in earlier updates have been documented in the Read Me files accompanying each version.

Changes to Open Transport AppleTalk software

- DDP CheckSum

Open Transport DDP now properly handles a checksum of \$FFFF. In earlier versions, the computer could appear to freeze because packets with a checksum of \$FFFF were rejected.

- QuickMail out of sockets

When attempting to verify addresses with the QuickMail 3.0.4 client, the software would display the error message: "NameServer Communications Error. Try again, or increase time outs for NameServer using QM Time outs." This bug has been fixed.

Changes to Open Transport TCP/IP software

- BootP

Corrected a bug in the TCP/IP control panel that could, under some circumstances, prevent accepting the gateway and domain name server addresses provided by a BootP server.

- Eudora e-mail

Problems with sending mail from Eudora when using SLIP or PPP have been fixed.

- Aborting Netscape Connections

Aborting Netscape connections sometimes caused a crash when using Open Transport. This problem has been fixed.

- DHCP/Windows NT

Previous versions of Open Transport TCP/IP software were able to obtain an IP address and subnet mask, but no other settings, from Windows NT DHCP servers. With this release, Open Transport TCP/IP explicitly requests a domain name, default gateway address, domain name server address, subnet mask, and subnet broadcast address in addition to an IP address.

Printing Problem with System 7.5.2

On Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2, it may be necessary to restart your computer if you attempt to print to a network-based printer that is already busy. The file "7.5.2 Printing Fix," which solves this problem, is available in the Apple Software Updates areas on the services:

* America Online - keyword: applecomputer

* CompuServe - GO APLSUP

* Internet -

- Worldwide Web: <<http://www.info.apple.com/swupdates>>

- ftp: <<ftp://ftp.info.apple.com>>

Compatibility Problem with MacPPP and FreePPP

Power Macintosh computers using Virtual Memory (including RAM Doubler) may crash when using MacPPP 2.1.2SD or FreePPP (1.0 and 1.0.1). The crash occurs when opening a PPP connection or during a data transfer. To avoid this problem, turn off Virtual Memory.

This problem is not related to Open Transport, and is expected to be addressed in a later release of FreePPP. To find out when the next FreePPP release is available, look for an announcement in the comp.sys.mac.comm newsgroup. The next version of FreePPP is expected to be available for ftp from the /comm/tcp/ directory of the InfoMac archives.

How do I install the software?

Open Transport 1.0.8 is delivered as a full installation of the Open Transport software; unlike some previous updates, there is no patching application supplied. To install Open Transport 1.0.8, run the Installer script supplied by following these steps:

- 1) Open the OT 1.0.8 folder.
- 2) Double-click the Installer icon.
- 3) In the Welcome box that appears, click OK.
- 4) In the Easy Install box, make sure the disk named is the disk you want to install Open Transport on, then click Install.
- 5) When the installation is finished, click Restart to restart your computer in order to use Open Transport 1.0.8.

Article Change History:

17 Jan 1997 - Updated online references.

Support Information Services

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Tech Info Library Article Number:18826



Tech Info Library

Open Transport 1.0.8: General Information Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: General Information Q & A (3/96)

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Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers of general information on Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What is Apple Open Transport?

Answer: Apple Open Transport is the modern networking and communications subsystem for the Mac OS. Open Transport is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Mac OS systems, while preserving and enhancing the hallmark of the Macintosh and Mac OS -- built-in support for easy-to-use networking.

Question: What long-range Apple goals are advanced through Open Transport?

Answer: Apple believes that communications and collaboration technologies are integral and fundamental to personal and workgroup computing. With Open Transport our goal is to provide the foundation to make the Mac OS the best desktop OS for multi-protocol networking, anywhere.

Question: What needs must be addressed to be "the best"?

Answer: Networking and communications technologies are mission critical -- thus reliability is a base-level requirement. Organizations require interoperability in heterogeneous environments; full compliance with standards is necessary.

High performance is also key. Increasing file sizes -- often related to the rich media types found in graphics and publishing, multimedia, video production, and technical markets -- create a demand for effective use of higher bandwidth communications technologies such as ISDN, FDDI, fast ethernet and ATM.

Beyond these base-level requirements network managers, end-users and developers each have additional needs.

- Network managers need networked systems to support a flexible model of administration that accommodates both centralized and decentralized management models.
- Users are typically more interested in using communications as a basis for productivity applications. As such, they want networking that is easy to set up and easy to use. This becomes even more important when users are mobile, needing access to networking services from wherever they may be -- without requiring complex reconfiguration for each connection type.
- Developers need to address the broadest possible markets with minimum incremental investment. In short, they need standards-based, cross-platform APIs and development tools.

Question: What were some of the key goals driving the development of Open Transport?

Answer: Apple began with two key assumptions: that networking is inherently a multiplatform, multi-protocol proposition; and that customers cannot (and should not have to!) start over to achieve networking interoperability. This led us to adopt five key design goals:

- Open Transport must protect customer and developer investments in existing network infrastructure and applications.
- Open Transport must be based on existing cross-platform industry standards.
- Open Transport must provide users with an easy to set-up, easy to use abstraction of the underlying complexity of multi-protocol networking.
- Open Transport must also provide a complementary abstraction of networking and communications services for applications developers.
- Open Transport must offer a flexible run time model - one that lets a specific protocol be configured and selected at run time, rather than linked at compile time.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18829



Tech Info Library

Open Transport 1.0.8: Key Features and Benefits Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: Key Features and Benefits Q & A (3/96)

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Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers about the key features and benefits in Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: How will Open Transport benefit users?

Answer: Open Transport provides individual computer users with many benefits. Two of the most immediately visible and important benefits relate to making networking more accessible.

First, Open Transport makes it easy to switch from one network configuration to another. A computer user "on the go" might want to hook up to the Internet in various locations, each requiring a different network configuration. With Open Transport settings for each network location can be stored for easy access and use. Changed settings are available immediately - no reboot of the computer is required to use the new configuration.

Second, Open Transport integrates on-line help, based on AppleGuide technology, to make it easier for an individual to hook up to an network, with fewer demands on network manager and support resources.

Question: How will Open Transport benefit network managers and organizations?

Answer: Open Transport provides significant new flexibility in setting up network configurations; with Open Transport, the network manager can recommend

or require configuration settings for users on the network, or allow users to determine their own settings.

Open Transport also improves support for centralized configuration management. For example, Open Transport/TCP supports the Dynamic Host Configuration Protocol (DHCP), allowing network managers to administer addressing and other TCP/IP configuration information from a central server.

Question: How will Open Transport benefit developers?

Answer: Open Transport is designed to make it easier and more cost-effective to develop Macintosh-based applications for a wide variety of customers and markets. With Open Transport the Mac OS has built-in networking and communications based on cross-platform industry standards, including the POSIX compliant X/Open Transport Interface (XTI), UNIX STREAMs and Data Link Provider Interface (DLPI).

Applications written to support Open Transport can directly support a wide range of networking environments (serial, dial-up network, LAN, and WAN), and multiple protocols (AppleTalk, TCP/IP, serial, and others) from a common code base. This capability is sometimes referred to as transport independence.

Question: What is transport independence? Why is it important?

Answer: Different people judge networking in different ways. End-users focus on what they can do using the network, and tend to select applications based on functionality and ease of use. Network managers are interested in delivering reliable network services in a cost efficient manner. Developers want to create compelling functionality for users, but are strongly influenced by the availability of networking infrastructure.

Unfortunately, with current networking tools and systems developers are forced to tie their applications to specific network infrastructure requirements -- driven by their API choices. This creates a potential conflict between individual and organizational needs. If network managers restrict protocols to control support costs, users may not have access to the applications they need. If user require specific applications they may increase support costs for the network manager by "dragging along" specific network infrastructure requirements. Developer are stuck in the middle, making decisions for both users and network managers by selection of an API at compile time.

Transport independence is a concept that breaks this undesirable linkage. When implemented, it allows developers to write to a uniform set of APIs, users to focus on selecting the best applications, and network managers to make independent decisions about network infrastructure, all on an ongoing basis.

Question: What benefits can be realized from transport independent applications?

Answer: For end-users, transport independence brings an increased freedom to

select applications that meet their needs, without being concerned with the bits and bytes of networking protocols. For network managers, transport independence allows increased flexibility in designing and controlling infrastructure demands arising from support of end-user applications, that is, the freedom to manage the bits and bytes of networking protocols.

Developers who create transport independent applications will find access to broader markets with incremental resources; code written for the AppleTalk market, for example, can be delivered to TCP/IP markets as well.

Question: How does Open Transport enable transport independence?

Answer: Open Transport brings together four technologies to support the development and deployment of transport independent applications on the Mac OS:

- a set of look-and-feel guidelines that promote consistency for configuration of network services across protocols,
- a unified set of cross-platform, standards-based APIs for all networking and communications protocols; for example, applications can send and receive data over an AppleTalk LAN or the TCP/IP-based Internet using the same programming interfaces,
- a dynamic link-and-load architecture and set of protocols; protocols are loaded and unloaded on demand, conserving system resources, and making it possible to substitute TCP for ADSP at the application launch time (for example), and
- an addressing and naming support tool box; for example, applications can open a communications end-point by name (that is, "seeding.apple.com" or "printer16:LaserWriter@sales"; Open Transport will automatically provide the appropriate name-to-address mapping services (that is, DNR, NBP, and so on).

Together these support the creation of transport independent applications on the Mac OS.

Question: Are all Open Transport applications transport independent?

Answer: No. While Open Transport provides the necessary foundation, there are certain guidelines and programming practices required for developers to create transport independent applications. For example, most protocols have many features in common - but also some features that are protocol-specific. If an application depends on a protocol-specific feature, then it will depend upon that protocol as well.

In some cases it may be appropriate or desirable to develop a transport-specific application. For example, an MBone client is currently only useful when communicating using TCP/IP.

Question: Does transport independence imply that my organization can offer "AppleTalk services" without supporting "AppleTalk protocols"?

Answer: For each service and network environment, protocol and services choices will be determined by a combination of factors; transport independence is only one of them.

This begins with both the client and the server implementations of the particular service of interest (file, print, e-mail, directory, security, back-up, calendar, and so on) supporting the Open Transport APIs. Next, both the client and server must have the protocol stack(s) of choice installed. Finally, the server application must include some administration utility to allow the network manager to specify the protocol(s) over which application and/or presentation layer services are to be provided.

The user experience for selecting the server (that is, "Choosing", or "name-binding") may vary depending on the underlying protocol. For example, AppleTalk offers a distinctive user experience through the "Chooser" and the underlying NBP/ZIP protocols. TCP/IP offers a substantially different model for name-to-address translation (DNS); NetWare/IPX still another (NDS).

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18830



Tech Info Library

Open Transport 1.0.8: AppleTalk Features Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: AppleTalk Features Q & A (3/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on the AppleTalk features in Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What are some of the upgraded protocol features of Open Transport/AppleTalk?

Answer: Open Transport/AppleTalk now includes new support for assigned (manually administered) protocol addresses. This allows AppleTalk nodes to be managed using protocol address as a unique and stable identifier. It also reduces some of the network traffic associated with AppleTalk's dynamic address assignment features (AARP).

Dynamic addressing continues to be available for those customers who prefer the automated address allocation.

Question: Does the use of AppleTalk manual addressing increase the requirement for network administration?

Answer: Open Transport/AppleTalk offers network administrators a choice. Sites that prefer to have the network infrastructure automatically assign unique protocol addresses can continue to rely on AppleTalk Address Resolution Protocol (AARP). Sites that find advantage in having fixed and well-known protocol addresses for each end-node can implement manual addressing.

When manual addressing is selected there will be a requirement to allocate and assign the initial protocol addresses, which will subsequently be "locked". Some administrators may prefer to do this allocation based on a central numbering plan, creating individual configuration templates (recommended or required settings) for each user. Others may prefer to allow the network to determine the initial address configuration (that is, use dynamic addressing once), and then lock the uniquely assigned addresses after initialization.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently - either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict between a new dynamic node acquiring an address assigned to an off-line, manually-addressed node. Administrators can enforce the addressing policy for a subnet by locking the addressing mode in the "dynamic" or in the "manual" state. As an administrative precaution, however, Open Transport/AppleTalk does continue to check for the presence of duplicate protocol addresses on the LAN when static addressing is configured.

Question: Are there other benefits that arise from the new support for AppleTalk manual addressing?

Answer: Yes. Manual configuration of static AppleTalk addresses supports Mac OS products that utilize WAN datalinks where non-full-mesh topologies are important. This includes datalinks such as Frame Relay, SMDS, and ATM.

Question: Is Open Transport/AppleTalk "AppleTalk Phase 3"?

Answer: No. Open Transport/AppleTalk is a new, modern implementation of the AppleTalk Phase 2 protocol architecture for the Mac OS -- from the people who invented AppleTalk.

Question: What happened to the "Network" control panel?

Answer: The Network Control Panel has been replaced by the Open Transport AppleTalk configuration utility. This change was made to reflect the true function of the utility.

Question: Are there other changes to the human interface for AppleTalk?

Answer: Yes. The AppleTalk configuration utility now provides basic troubleshooting information as a part of the human interface. For example, the Advanced and Administrator views provide access to the current AppleTalk router address and the current AppleTalk network number range for the cable. Previously this information was only available through the use of router administration software, or protocol analysis software.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library

Open Transport 1.0.8: TCP/IP Features Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: TCP/IP Features Q & A (3/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on the TCP/IP features in Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What are some of the changes to the human interface for Open Transport/TCP?

Answer: The Open Transport/TCP configuration application represents a complete overhaul of the human interface from the MacTCP software it replaces. In addition to generic new features noted elsewhere (multiple saved configurations, recommended and required settings, on-line documentation, and so on), key new features include:

- direct entry of IP addresses and subnet mask in standard "dot notation";
- explicit selection of desired configuration method, now including DHCP;
- support for attachment to networks using Classless InterDomain Routing (CIDR);
- support for multiple entries in the router, name server, and explicit domain search lists; and
- improved support for large AppleTalk networks when using MacIP server/gateways.

Question: What are some of the upgraded features of Open Transport/TCP protocol stack?

Answer: With the broad adoption of TCP/IP -- and the tremendous excitement and visibility of the Internet -- Apple has made a significant investment in bringing a workstation-class implementation of TCP/IP protocols to the Mac OS. As with MacTCP, Open Transport/TCP is a full 32-bit stack. Open Transport/TCP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies;
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol;
- IP multicast, for participation as an MBone client;
- simultaneous TCP connections limited only by installed memory and processor power, for increased functionality as a Internet or other TCP/IP network server;
- ethernet version 2 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts;
- implicit and explicit domain name search paths, for increased control of domain name resolution; and,
- multiple IP routers with fail-over, for increased robustness in mission critical applications.

Question: How does the new support for Dynamic Path MTU discovery work?

Answer: Open Transport/TCP sets the "don't fragment" bit unless the packet size is larger than the MTU for the network. Intermediate routers are required by current RFCs to send back an "ICMP can't fragment" error when presented with a "don't fragment" packet that cannot be forwarded without fragmentation with that MTU size. In that event, Open Transport/TCP moves to the next smaller MTU size for that path and re-sends the packet, again with the "don't fragment" bit set. This process results in using the largest supported MTU size for off-subnet traffic.

Question: Which DHCP servers are supported by Open Transport/TCP?

Answer: Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport/TCP has been tested with the following DHCP server implementations:

- Competitive Automation,
- FTP Software (<http://www.ftp.com>),
- Hewlett Packard HP-UX (<http://www.hp.com>),
- Microsoft Windows NT Advanced Server (see Network Planning and Administration),
- Silicon Graphics (<http://www.sgi.com>),
- Sun Solaris and SunOS (<http://www.sun.com>), and
- TGV (<http://www.tgv.com>).

Question: Does Open Transport/TCP support DHCP address leases?

Answer: Yes. Open Transport/TCP fully supports DHCP address leases. Open Transport/TCP will automatically attempt to renew any address lease that reaches it's Renewal Interval, which defaults to half of the lease's lifetime. (The Renewal Interval may be configured to a different value by making changes to the configuring DHCP server). Renewal will be attempted regardless of how many times the lease has already been renewed. Should an interface's IP address lease expire, the interface will be closed down.

Question: Does Open Transport/TCP support MacTCP "Server" addressing?

Answer: MacTCP Server mode addressing is a combination of the Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. When Server mode is selected, MacTCP will use BootP to attempt to acquire an IP address. If BootP fails to provide a valid address it would then try RARP. Whichever protocol was successful would be stored as a preference, and would be used first on next system startup. While this "fall-back" approach added a degree of robustness from the users point of view, it also added a degree of unpredictability from a network administrators point of view.

Based on customer feedback, Open Transport/TCP allows a network administrator to explicitly specify the single method they prefer to use. Thus while both RARP and BootP are supported, the Server mode does not appear as a choice in the Open Transport/TCP configuration utility.

Question: Does Open Transport/TCP support MacTCP "Dynamic" addressing?

Answer: No. MacTCP "Dynamic" mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set-up a Macintosh only stand-alone TCP/IP network. Use of this Dynamic Addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (the IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Apple has adopted the industry standard DHCP and dropped support for the earlier Apple "Dynamic" mode addressing with Open Transport/TCP.

Question: Does Open Transport/TCP support a local HOSTS file?

Answer: Yes. Open Transport/TCP supports a HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. This file is parsed when Open Transport/TCP is initialized. As in MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Should a HOSTS file be used, every effort should be made to keep it as small as possible, and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and

minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, Open Transport/TCP must be configured using either the Advanced or Administrator mode to select the appropriate file. The text file must already exist, and can be created with any text editor or word processor. Also note that the HOSTS file selection is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when a user connects via ethernet on the campus LAN and that same user when dialing-in from a remote location.

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified domain name. The FQDN need not be terminated by a dot, but must contain at least one dot internally, and where

```
<rr> = [<ttl>] [<class>] <type> <rdata> OR [<class>] [<ttl>] <type> <rdata>
```

The only <class> currently supported is IN (Internet Domain); <ttl>, time to live, indicates the record's configured lifetime in seconds; and <type> can be A (host address), CNAME (canonical name of an alias), or NS (name server). If <ttl> is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a value of minus-one (-1). \$INCLUDE and \$ORIGIN are not supported.

Open Transport/TCP is somewhat more stringent regarding the format and content of the HOSTS file than was MacTCP. MacTCP permitted violation of the Fully Qualified requirement for <domain-name>; this feature was often used to avoid the necessity for entering CNAME records by associating an address directly with a non-fully qualified name. For instance, this format:

```
charlie                A                128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie                CNAME            myhost.mydomain.edu
myhost.mydomain.edu    A                128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

Question: How does the new Open Transport/TCP Domain Name Resolver work?

Answer: When a client of the DNR requests a name-to-address mapping, the DNR checks for a "." at the end of the name. If it exists the name is assumed to be fully qualified (RFCs 1034 and 1035), and the DNR will search for that name. If the name contains at least one "." internally but does not end with "." it is considered to be provisionally fully qualified. The DNR will begin a search for these names without further manipulation.

Otherwise the name is assumed to be partially qualified. The DNR will begin a search for the name in the domain name configured in the "Default Domain name:" field. For example, an attempt to resolve joe with a Default Domain of tech.support.apple.com would look for joe.tech.support.apple.com.

If the requested name is not found and an optional Admin Domain has been configured using either the Advanced or Administrator mode, implicit searches will take place next. Continuing with the example, with a Default Domain of tech.support.apple.com and an Admin Domain of apple.com, a search for the name joe would look for the following additional names:

joe.support.apple.com
joe.apple.com.

Implicit searching will stop when the name is resolved, or when the FQDN becomes equal to the name-to-be-resolved concatenated with the Admin Domain (that is in the example no implicit search would be made for joe.com). Implicit searching will not be attempted unless an Admin Domain is explicitly configured and the Default Domain is a subdomain of the Admin Domain (per RFC 1535).

If the name is still not found, the explicit Search Domains are searched. For each search domain the configured name server(s) are contacted in the order specified in the Name Servers field. If the name is resolved in the first search domain that answer is returned; other Search Domains will not be checked. If an authoritative answer that the "name-does-not-exist" is returned the DNR immediately begins the search in the next configured Search Domain. The search continues through the configured Search Domains. If still no match is found, the DNR will search the root domain if it makes sense to do so.

The DNR has an overall time-out of 2 minutes, after which it will abandon its search.

Question: What is MacIP?

Answer: MacIP, sometimes also referred to as KIP (Kinetics Internet Protocol), is a protocol specification developed as a method for carrying TCP/IP traffic on AppleTalk only networks -- originally these would have been LocalTalk networks. MacIP is today frequently used in conjunction with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services. MacIP specifies encapsulation of TCP/IP datagrams in AppleTalk packets for transmission over such connections.

Use of MacIP requires a MacIP gateway. AppleTalk encapsulated IP packets are

sent to the MacIP gateway using AppleTalk protocols (DDP). The gateway strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are destined for the MacIP end-node, that gateway provides the needed encapsulation services.

MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network, acting as a middleman between the MacIP end-node and the appropriate TCP/IP-based hosts on the LAN or WAN.

Open Transport includes end-node support for MacIP. A end-node is configured to use MacIP using the TCP/IP configuration utility by selecting "AppleTalk (MacIP)" in the "Connect via:" pop-up menu. The user (or network administrator) must also specify where on the network (in which zone) to look for the MacIP gateway. Once selected, TCP/IP will be encapsulated in AppleTalk and will be sent out the "Connect via:" interface selected using the AppleTalk configuration utility.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18832



Tech Info Library

Open Transport 1.0.8: Network Interface Options Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: Network Interface Options Q & A (3/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on the network interface options in Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What network interface options are available with Open Transport?

Answer: Open Transport v1.0 supports PCI-bus NICs and Macintosh built-in (LocalTalk and ethernet) network adapters. Beginning with v1.0.6, Open Transport adds support for infrared and PC Card (formerly known as PCMCIA) network adapters on select Macintosh systems.

Third party options available for Open Transport include fast ethernet, ATM, and FDDI.

Question: What about dial-up network connectivity solutions?

Answer: For connectivity to AppleTalk networks, Open Transport supports Apple Remote Access v2.0.1 client and personal server through backward compatibility services. For dial-up connectivity to TCP/IP networks including the Internet, Open Transport supports select third party MacTCP software extensions (known as mdevs), providing SLIP or PPP connectivity. See Network Compatibility for more information.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18833



Tech Info Library

Open Transport 1.0.8: Availability & Distribution Q & A (4/97)

Revised: 5/1/97
Security: Everyone

Open Transport 1.0.8: Availability & Distribution Q & A (4/97)

Article Created: 27 October 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article is a series of questions and answers on the availability and distribution of Apple Open Transport 1.0.8.

Open Transport 1.1.1 (as well as OT 1.1.2 for selected machines) is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What is the current production version of Open Transport?

Answer: Open Transport v1.1.1. This maintenance release was designed and is recommended for all PCI-bus Power Macintosh systems. It includes the following changes:

- Open Transport/AppleTalk's DDP implementation will now properly handle a checksum of \$FFFF. In earlier versions, packets with a checksum of \$FFFF would be rejected, resulting in unnecessary retransmissions of data.
- When attempting to verify addresses with the QuickMail 3.0.4 client, the software would come back with an error message that read "NameServer Communications Error. Try again, or increase time outs for NameServer using QM Time outs." This bug has been fixed.
- Corrected a bug in the Open Transport/TCP control panel that could, under some circumstances, prevent the acceptance of the gateway and domain name server information provided by the BootP server.
- Problems with sending mail from Eudora when using SLIP or PPP have been fixed.
- Aborting Netscape connections could sometimes cause a crash. This problem has been fixed.
- Previous versions of Open Transport/TCP were unable to fully configure

from Windows NT DHCP servers. Unlike most DHCP servers, Windows NT does not provide DHCP options unless specifically requested by the client. Open Transport/TCP 1.0.8 now requests a domain name, default gateway address, domain name server address(es), subnet mask, and subnet broadcast address, in addition to an IP address.

More complete details on the changes incorporated in v1.0.8 are found in the current Open Transport Release Notes. These are available by anonymous ftp from <ftp://seeding.apple.com/opentransport/>

Question: How is Open Transport v1.0.8 made available to customers?

Answer: Open Transport v1.0.8 is planned to be distributed via a variety of information services and a number of Internet sites. This release is distributed as a full installation of Open Transport software - not an updater or patcher.

- * America Online - keyword: applecomputer
- * CompuServe - GO APLSUP
- * Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>

The software is only designed to work on PCI-bus Power Macintosh systems, and is recommended to customers who are experiencing one or more of the problems identified above as fixed with the 1.0.8 release.

Question: Summarize the earlier Open Transport v1.0.x releases?

Answer: Open Transport version 1.0 was focused on offering strong backward compatibility with existing networking client applications, and on significantly upgrading the feature set and performance of TCP/IP on the Mac OS.

Version 1.0.1 was a maintenance update, designed to correct a potential problem with data truncation in large file transfers.

Version 1.0.6 added support for the Power Macintosh 7200, 7500, and 8500 systems, and addresses bugs discovered since the initial 1.0 release.

Version 1.0.7 included further changes to improve performance and compatibility of Open Transport/TCP with third party SLIP and PPP connections, and to accommodate certain Internet Service Provider (ISP) address assignment practices.

Question: How was Open Transport v1.0.7 made available to customers?

Answer: Open Transport v1.0.7 is distributed electronically, as an update to be applied to an existing installation of Open Transport v1.0.6. The update is available on a variety of information services and a number of Internet sites

including

ftp://seeding.apple.com/opentransport/update/OT_1.0.7_patch/

Question: How was Open Transport v1.0.6 made available to customers?

Answer: Open Transport v1.0.6 ships as a built-in component of Mac OS system software (System Software 7.5.2 version 2) on the Power Macintosh 7200, 7500, and 8500 models. Software on newly manufactured Power Macintosh 9500 systems is updated to this release as well.

Customers who previously bought a 9500 can get this system software update (which contains System 7.5.2 version 2 and Open Transport 1.0.6) by calling the Apple Order Center. This system software update is recommended for all Power Macintosh 9500 customers.

Question: Will Open Transport be made available to software developers, publishers, and/or Internet Service Providers (ISPs) for redistribution and bundling options?

Answer: Yes. Following the availability of Open Transport v1.1 Apple is planning to offer two redistribution licensing agreements for Open Transport, to meet the needs of publishers, developers, and ISPs.

The first agreement is designed for Internet service providers, network and communications reference work authors and publishers, and others interested in bundling Open Transport software as an added customer benefit to their product or service offering. This license is planned to be based on a sliding-scale per-unit license fee, and will require annual reporting of licenses issued.

The second agreement is designed for software developers with products that adopt the new Open Transport APIs who wish to ship Open Transport as a part of an integrated product installation process. This agreement is to be based on the Mac OS SDK, and would allow qualified developers to ship the Open Transport run-time environment to end-users as a part of their product.

To qualify, developers would execute the Open Transport License Addendum, and meet the following requirements:

- have developed an Open Transport-ready or Open Transport-enhanced software product,
- be current subscribers to the Mac OS SDK,
- provide Apple advance notice of their intent to ship their Open Transport product(s),
- distribute the required Open Transport components only in conjunction with their product(s), and,
- annually report the total number of licenses issued. Other terms and conditions may apply, however, no additional fees (beyond the Mac OS SDK subscription) are planned for this license.

Final details on these agreements will be available later this year. Interested developers should send electronic mail to OT.LICENSE@seeding.apple.com

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

27 May 1996 - Updated for technical accuracy.

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18834



Tech Info Library

Open Transport 1.0.8: Network Planning & Admin Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: Network Planning & Admin Q & A (3/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on the network planning and administration of Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Will Open Transport require organizations to make changes in network administration, planning, or design?

Answer: The first Open Transport protocols -- AppleTalk and TCP/IP -- offer new features that give a network manager more flexibility and control. Some of these features, when implemented in a network environment will require additional thought and planning by a network manager.

In particular, Open Transport/AppleTalk adds support for the use of static (manually assigned) AppleTalk node addresses. If implemented, a network manager may prefer to assign addresses based on a pre-designed protocol address management plan. Open Transport/TCP adds support for the Dynamic Host Configuration Protocol (DHCP). DHCP allows network managers to allocate IP addresses and other configuration information from a DHCP server. Optimum deployment of DHCP services within an enterprise does require planning.

In order to better conform to applicable standards, Open Transport/TCP also has somewhat more rigorous requirements regarding the content and format of the local HOSTS file. See TCP/IP Features for more information.

Question: Does Open Transport offer network managers more control over Mac OS

networking?

Answer: Yes. Open Transport allows network managers to specify details of the network connection and configuration in advance, via a "preferences" file. These configurations may contain a mixture of user-provided information and network manager recommended and/or network manager required settings. Recommended data provides a default for the end-user, while required configuration data is locked with an administrator's password.

Open Transport configurations can be prepared on one machine and distributed to other systems. To support this, the Open Transport configuration utilities allow a configuration to "exported" and "imported". Exported configurations can be distributed via electronic mail, a file server, or even "sneaker net".

Question: Can Open Transport/TCP act as a DHCP client to a Windows NT Advanced Server?

Answer: Yes. However, due to significant differences between the Microsoft Windows NTAS implementation of DHCP and typical UNIX-based servers, there have been some interoperability issues with Open Transport 1.0.x:

- Customers running Open Transport v1.0 or v1.0.1 will not be able to acquire leased IP addresses. This is due to unusually long reply-time-out values used in the NTAS implementation. Open Transport v1.0.6 was changed to accommodate NTAS behavior in this regard.
- Customers running versions of Open Transport prior to v1.0.8 will be incompletely configured via DHCP.

NTAS sends only IP address, IP address lease information, the configuring server's IP address, and a subnet mask. Investigation revealed that other configuration options entered in the NT DHCP server's database (default gateway address, domain name server addresses, domain name, broadcast address, and so on) were not sent unless specifically requested by the client using the DHCP Parameter Request List option.

Apple believes that this practice -- requiring use of this option in order for the client to be properly configured -- is contrary to the DHCP server specification described in RFC 1541 (Dynamic Host Configuration Protocol). This RFC documents the Parameter Request List option as a MAY, rather than a MUST or SHOULD, making required use of the parameter inappropriate. Further, this behavior appears to be unique to the NTAS implementation.

In interest of interoperability, Open Transport v1.0.8 (and the planned v1.1) uses the Parameter Request List option to request default gateways, DNS servers, domain name, subnet mask, and broadcast address. This permits Open Transport/TCP clients to be fully configured by Windows NT DHCP servers, without adversely affecting interoperability with other fully compliant DHCP servers, at the expense of a few additional packets on the wire during the initialization phase.

Question: Can Open Transport/TCP act as a WINS client to a Windows NT Advanced Server?

Answer: No, not at this time. The Microsoft WINS server is dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support) that provide some automation for assignment and registration of IP host and domain names.

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group.

Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge. We welcome customer feedback on this topic -- should sufficient demand for a WINS client materialize, we'd be open to exploring this issue. A future Mac OS WINS client would be dependent upon Microsoft releasing sufficient technical detail regarding their proprietary extensions to IP to make an interoperable implementation possible.

Article Change History:

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Tech Info Library

Open Transport 1.0.8: Applications Compatibility Q & A (3/96)

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Open Transport 1.0.8: Applications Compatibility Q & A (3/96)

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Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on applications compatibility in Apple Open Transport.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Is Open Transport compatible with existing applications and network extensions?

Answer: Apple and third party developers have to date announced over 130 Open Transport compatible applications. A compatibility list is available from:
ftp://seeding.apple.com/opentransport/OT_Compat_List

Open Transport provides "backward compatibility" services in four areas:

- to support existing applications using the documented AppleTalk APIs;
- to support existing applications using the documented MacTCP APIs;
- to support existing Chooser devices; and,
- to existing NuBus based network interface cards to work with Open Transport.

Question: What is implied when an application is "Open Transport Compatible"? Does that mean that it takes advantage of new Open Transport features?

Answer: Apple has defined three levels of interoperability with Open Transport. The first, Open Transport Compatible, is used to describe a network application originally developed for "classic" AppleTalk or MacTCP, that now takes advantage

of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the new Open Transport configuration utilities. However, they will not realize a significant performance increase on Power Macintosh computers, nor can they take advantage of Open Transport's transport-independence capabilities.

The second, Open Transport Ready, are those applications that have been modified to adopt the new Open Transport APIs (XTI). They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport Ready applications not only benefit from the new configuration utilities, but have the opportunity for a significant performance boost when running on Power Macintosh.

The third and final category of interoperability is referred to as Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being Power PC native, these applications have been modified to exploit the transport-independent capabilities of Open Transport, that is, they can be dynamically configured to support AppleTalk, TCP/IP, or serial communications.

Question: How is backward compatibility for AppleTalk implemented?

Answer: AppleTalk applications backwards compatibility is accomplished by intercepting all AppleTalk networking calls at the ".ddp" driver API. Above this protocol layer, applications written to the classic AppleTalk APIs continue to rely on the classic (680x0 based) implementation of AppleTalk. Calls to the ".ddp" driver are translated to the corresponding Open Transport XTI calls and are then passed to the new native implementation of DDP for processing. The process is reversed for incoming packets.

Using this approach, backwards compatibility is very robust - the classic implementations of ADSP, ASP, ATP, NBP, ZIP, and PAP are actually present (vs. simply mimicked). This also decreases the total memory footprint of backwards compatibility as compared to an implementation based on individual adaptation layers for each of the AppleTalk protocols. The primary trade-off of this approach is that applications relying on backwards compatibility do not gain any meaningful performance increases on Power Macintosh; essentially only native DDP is actually in use in these cases.

Open Transport/AppleTalk also includes broad support for existing applications software and network devices that rely on the Chooser or the Network Control Panel software for selection and configuration, known as "cdevs" and "adevs" respectively.

Question: How is backward compatibility for MacTCP implemented?

Answer: TCP/IP (MacTCP) applications backwards compatibility is accomplished by intercepting all MacTCP networking calls at the ".ipp" driver level. Calls to the ".ipp" driver are translated to corresponding Open Transport XTI calls and then passed to the native TCP/IP stack for processing. The process is reversed for incoming packets.

This approach allows most MacTCP applications to benefit from the native

implementation of the TCP/IP protocols on Power Macintosh, at least to some degree. While the backwards compatibility layer itself must run as 680x0 code, most of the handling of the packet happens in the new native Open Transport/TCP implementation. The drawback of this implementation is that "warts and all" backward compatibility is somewhat less robust; applications depending on idiosyncrasies of MacTCP or referencing internal MacTCP data structures are likely to need an update.

TCP/IP backward compatibility also includes targeted support for select software products that rely on the MacTCP (or Admin TCP) Control Panel software for configuration. Support for these software modules, known as MacTCP Link Access Modules, or simply "mdevs", is more limited than that provided for AppleTalk "adevs", due to certain technical considerations.

Question: How is backward compatibility for other network products implemented?

Answer: Certain networking extensions -- such as MacIPX from Novell or PATHWORKS (LAT and DECnet) from Digital Equipment Corp. or Thursby Software Systems -- as well as applications such as Insignia Solutions SoftWindows do not access the AppleTalk or MacTCP APIs; instead they deal directly with the Macintosh OS Ethernet driver software. With the introduction of PCI bus to the Macintosh this driver architecture and software has changed.

Additional backward compatibility software included with the System Enabler 1.1 for System 7.5.2 (that is, System 7.5.2 version 2) allows these networking extensions and applications to communicate with the new DLPI based Ethernet driver as if it were a "classic" Ethernet device.

This compatibility software supports only the built-in Ethernet adapter of Power Macintosh systems with PCI bus (7200, 7500, 8500, and 9500). Thus current versions of such network extensions and applications (those that write directly to the Ethernet driver) cannot access PCI based network interface cards.

This backward compatibility module was not available in the original distribution of System 7.5.2 for the Power Macintosh 9500 (with Open Transport v1.0). It is now included as part of System 7.5.2 version 2, or more recent, and is recommended for use with Open Transport 1.0.6 or later (see Availability and Distribution).

Question: Are there known limitations to applications backward compatibility?

Answer: Yes. Applications that rely on undocumented APIs or examine private data structures in the current AppleTalk or MacTCP may not be fully compatible with Open Transport.

Examples include the MacSNMP AppleTalk and TCP/IP Agents (however, MacSNMP and the Macintosh System Agent are compatible), the Apple Internet Router 3.x, the Apple Remote Access MultiPort Server 2.x, LaserWriter Bridge, and some utilities like MacTCP Watcher and MacTCP Spy. Updated versions of these software products will be required for full compatibility.

Question: There have been reports of problems with the use of Open Transport and MacX 1.2. Is there an Open Transport compatible X Window System server available?

Answer: Apple MacX 1.5 is compatible with Open Transport, and is a recommended upgrade for customers who have earlier versions of MacX. There is a known bug in MacX 1.2 that can cause it to crash when running on a Macintosh system with System 7.5.2 and Open Transport.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

20 Nov 1995 - Added Q & A on Open Transport Compatible means.

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Tech Info Library

Open Transport 1.0.8: Network Compatibility Q & A (3/96)

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Open Transport 1.0.8: Network Compatibility Q & A (3/96)

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TOPIC -----

This article is a series of questions and answers on network compatibility in Apple Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Is Open Transport interoperable with installed AppleTalk and TCP/IP networks?

Answer: Open Transport 1.0.x is compatible with existing AppleTalk and TCP/IP LocalTalk and ethernet network at the "packets on the wire" level. Organizations can introduce one, a few, or hundreds of new Macintosh systems running Open Transport into their environment without worrying about interoperability with existing networking services.

Question: Is Open Transport compatible with existing Internet Service Provider offerings?

Answer: As noted in "Network Interface Options" Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software modules known as "mdevs".

With the appropriate mdev installed, end-nodes can use either SLIP or PPP to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport backward compatibility services. It is important that the recommended versions of

software be installed for the greatest level of compatibility.

It is also important that TCP/IP addressing and other configuration information be properly configured. As there is a new human interface provided by the Open Transport/TCP configuration utility, there are some changes in the process as compared to the older MacTCP software.

Question: Is there documentation available to assist with configuring Open Transport/TCP?

Answer: Yes. Although a full user's guide is planned for release with Open Transport v1.1, configuration tips for Open Transport 1.0.x are already available from various sites on the internet including:

ftp://seeding.apple.com/opentransport/OT_gen_info/TEXT/OTTCP_Config_Tips

Question: Does Apple offer a solution for SLIP or PPP dial-up to the Internet?

Answer: Yes. The Apple Internet Connection Kit is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris EMailer Lite. The kit includes MacPPP 2.1.4 along with the Apple Internet Dialer -- software designed to make it simpler for Macintosh customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes Apple Guide software for on-line assistance.

Question: What is MacPPP 2.1.4? Is it available on the Internet?

Answer: MacPPP 2.1.4 is a derivative of the MacPPP 2.1.x SD versions of Merit's PPP. It includes code contributed by Apple engineering to enhance compatibility with Open Transport/TCP. These Apple updates have also been provided to the authors of FreePPP (the successor to the "SD" releases of MacPPP).

FreePPP 1.0.x also includes these updates, and is available for download on the Internet.

Question: Does the Apple Internet Connection Kit require Open Transport?

Answer: The Apple Internet Connection Kit works with either MacTCP, or Open Transport/TCP.

Question: Which mdevs are currently supported by Open Transport/TCP?

Answer: Open Transport 1.0.8 supports the following MacTCP Link Access Modules (mdevs).

- FreePPP - version 1.0 or more recent; compatible with Open Transport.

- InterPPP - use version 1.2.9 or more recent.
- InterPPP II - use the most current version.
- MacSLIP - use version 3.0 or more recent; compatible with Open Transport.
- MacPPP - use version 2.1.3 SD, or more recent (version 2.2.0 is not recommended).

Apple is continuing to work with developers to better support existing mdevs; contact the third party developer of interest for the most recent information on compatibility.

Question: Are there known limitations to backward compatibility mdev support?

Answer: Yes. Due to differences in the underlying architectures (between MacTCP and Open Transport/TCP), and some current (1.0.8) shortcomings in the backward compatibility services, there are some additional limitations to mdev support:

- Some mdevs, when used with Open Transport, may not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This is being addressed by updated versions of the mdevs.
- Once a TCP/IP application launches and uses a SLIP or PPP mdev, use of a different mdev may require restarting the Macintosh. Disconnecting from and redialing a service provider may also require restarting the Macintosh. This is planned to be addressed in Open Transport v1.1 (See Future Directions).
- Some Internet Service Providers do not strictly follow standards practices, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforces this requirement in versions prior to 1.0.7. Beginning with Open Transport 1.0.7, the TCP/IP configuration utility software will automatically generate a compatible router address to facilitate connectivity to the ISP if the user leaves the router address field empty.

Question: If a user needs an updated copy of one of these mdevs, how can they get the software?

Answer: Sources for mdev software will vary, as some of the noted products are commercial and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of internet sites; typically at "info-mac" mirror sites in the comm/tcp directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com.hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/>

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/>

- InterPPP and InterPPP II are commercial software products. For availability and ordering information contact InterCon Systems, US 1-703-709-5500
- MacSLIP is commercial software available developed by Hyde Park Software. For availability and ordering information contact TriSoft, US 1-800-531-5170.
- MacPPP (v2.1.4) is available as a component of the Apple Internet Connection Kit, Apple Computer Inc., US 1-800-462-4396 for fax information or 1-800-538-9696 to locate an Apple authorized reseller near you.

Question: There have been reports of problems with Open Transport, PPP, and the use of Virtual Memory. Is Open Transport compatible with Virtual Memory?

Answer: Open Transport fully supports the use of virtual memory. However there are problems identified with MacPPP 2.1.2 SD and FreePPP 1.0 when used with Open Transport and Virtual Memory (including RAM Doubler). These problems are under investigation, with Apple engineering working together with the authors of FreePPP. Current plans call for an update to FreePPP to be available once a fix is determined. In the interim, users who experience problems with PPP and Virtual Memory are advised to turn VM off.

Question: Will Apple provide a "native" SLIP or PPP solution for Open Transport?

Answer: Apple is developing an implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. This is planned to support dial-up access to both AppleTalk and TCP/IP networks. (see Future Directions).

Question: Is Open Transport compatible with PowerTalk built-in support for SMTP mail?

Answer: Apple recently announced that it has licensed, and will distribute and maintain, the PowerTalk Internet PMSAM formerly available from StarNine Technologies. This software provides the Mac OS with built-in support for Internet SMTP mail. The Apple Internet PMSAM is fully compatible with Open Transport 1.0.x when used on a LAN. When the PMSAM is to be used over a dial-up SLIP or PPP link, the same recommendations and limitations noted above for SLIP and PPP currently apply.

Article Change History:

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Tech Info Library

Open Transport 1.0.8: Apple Adoption of OT Q & A (3/96)

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Open Transport 1.0.8: Apple Adoption of OT Q & A (3/96)

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TOPIC -----

This article is a series of questions and answers on Apple's adoption of Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: When will Open Transport become part of the Mac OS? Not until Copland?

Answer: Open Transport will be made available as a component of the Mac OS with a future system software integration release, currently expected in the first half of 1996.

Open Transport v2.0 is being developed as an integral part of the Copland OS release; support is planned for all Copland platforms, including the Common Hardware Reference Platform (CHRP).

Question: What Apple products will support Open Transport? Will these also be native on Power Macintosh?

Answer: Apple plans to include support for Open Transport in the following products, as well many other unannounced products:

- QuickTime Conferencing
- Apple Remote Access
- AppleShare
- MacSNMP

- PowerTalk
- Copland release of the Mac OS

Plans call for these services to go native either before, or at the same time as, they support Open Transport.

Question: When will Apple products offer Open Transport support?

Answer: Apple QuickTime Conferencing, Apple Remote Access, and AppleShare are projected to become available late in 1995 through early 1996. The Copland OS is projected to be in customer hands in the second half of 1996.

Other projects have different schedules; information will be released at a later date.

Article Change History:

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Tech Info Library

Open Transport 1.0.8 and Cross-Platform Issues Q & A (1/97)

Revised: 1/20/97
Security: Everyone

Open Transport 1.0.8 and Cross-Platform Issues Q & A (1/97)

Article Created: 27 October 1995
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article is a series of questions and answers on Open Transport 1.0.8 and cross-platform issues.

Open Transport 1.1.2 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: Where can I get the latest version of Open Transport?

Answer: Here is the current list of online locations for Open Transport, as well as other Apple Software updates.

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Question: Will Apple port Open Transport to Windows or UNIX?

Answer: Apple does not plan to port Open Transport to other operating systems. Rather, Open Transport is based on Apple porting three existing, cross-platform industry standards to the Mac OS. These standards have their roots in the UNIX community and experienced UNIX network developers will find themselves "right at home" when developing for Open Transport.

Question: What about Windows developers? What about Windows Sockets?

Answer: NetManage, the leading developer of TCP/IP protocols and applications for DOS and Windows, has announced plans to develop and offer Windows Socket tools for Mac OS, to provide access to Open Transport/TCP and MacTCP services via the Windows Sockets (Winsock 1.1) API.

Additional details of this announcement will be made public at a later date.

Question: With both XTI and Windows Sockets available for Open Transport, which API should a developer use?

Answer: The choice of API will depend upon a developer's background, experience, and goals. For developers with a background in UNIX, a need for POSIX compliance, or a need to deploy an application across Mac OS and UNIX systems, XTI is the logical choice. For developers with a background on Microsoft Windows, or a need to deploy an application across Mac OS and Windows, Windows 95, and/or Windows 95 systems, the planned Winsock tools from NetManage will provide an attractive cross-platform alternative.

Apple is committed to XTI and will focus development on transport independence around this API. Macintosh developers now using classic AppleTalk or MacTCP APIs are encouraged to move to Open Transport XTI API.

Article Change History:

20 Jan 1997 - Updated list of online references.

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library

Open Transport 1.0.8 and Servers Q & A (3/96)

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Open Transport 1.0.8 and Servers Q & A (3/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on Open Transport and Workgroup Servers.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: What role does Open Transport play for servers?

Answer: The Open Transport architecture is designed to provide server applications -- file, print, database, e-mail, directory, and other -- with a foundation for higher performance and for more flexible configuration, while maintaining the historical differentiation of Mac OS based servers -- ease of configuration and administration.

Question: How will Open Transport enhance server performance?

Answer: Servers, as network-aware applications, gain access to the higher performance Power PC native implementation of networking protocols that Open Transport provides. To exploit this performance opportunity, server applications must be accelerated for Power Macintosh and must utilize the new Open Transport XTI APIs.

Severs will also benefit through access to new high-speed PCI datalink implementations for Macintosh such as fast ethernet and ATM.

Question: How will Open Transport enhance server flexibility?

Answer: Open Transport introduces the capability of activating more than one network connection at the same time, using the same networking protocol. This capability is known as multihoming, and enables servers to support more clients, to offer greater total performance, and to increase the reliability of mission critical applications.

Finally, as discussed above, Open Transport enables the development of transport independent applications. This will be especially valuable for server applications which need to be deployed in AppleTalk, or TCP/IP, or NCP/IPX, or other protocol environments.

Question: Will Apple's server products such as AppleShare and PowerShare exploit Open Transport features?

Answer: Yes. Apple server products will adopt Open Transport, and will over time exploit Open Transport features including multihoming and transport independence. Product details will be announced at a later date.

Question: Are PCI-bus Power Macs with Open Transport 1.0.x recommended as application servers?

Answer: No, not at this time. As is discussed elsewhere in this document, to meet customer expectations in regards to anticipated increases in flexibility and performance, server applications such as AppleShare and PowerShare, as well as third party server applications need to be accelerated for Power Macintosh and adopt the new Open Transport APIs.

Question: When will PCI-bus Power Macintosh systems be recommended as servers?

Answer: Apple recommends that server application developer adopt Open Transport v1.1 as the basis for new network applications development as soon as is possible within their product life cycles. As these updated versions of server software become available customers will find that the combination of PCI-bus, Power Macintosh, and Open Transport makes a great platform for flexible, high-performance network applications.

Article Change History:

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Open Transport 1.0.8: Future Directions Q & A (3/96)

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Open Transport 1.0.8: Future Directions Q & A (3/96)

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TOPIC -----

This article is a series of questions and answers on the future directions of Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: How will Open Transport be made available to customers with 680x0 and NuBus-based Power Macintosh computers?

Answer: Open Transport v1.1 is planned to support 68030 and 68040 Macintosh computers, as well as NuBus-based Power Macintosh systems. This release is currently expected to be available in the second half of 1995:

- as a no-charge upgrade to customers with MacTCP software maintenance agreements;
- as a no-charge upgrade to customers with system software maintenance agreements;
- as a component of a planned Mac OS system software system update;
- bundled with Apple and third party applications software that are Open Transport-ready;
- as a retail software product in single-user software package; and,
- from select Apple-licensed publishers and Internet Service Providers.

Question: Will Open Transport v1.1 include additional capabilities?

Answer: Yes. In addition to support for all targeted Mac OS systems and integration of all available bug fixes, Open Transport v1.1 should also:

- provide a basis of support for PPP-based AppleTalk and TCP/IP remote networking,
- provide a basis of support for modem and ISDN communications devices,
- offer tuning to optimize performance of high speed datalinks,
- offer tuning to support multi-client, multi-threaded server applications,
- provide display of the selected datalink Media Access Control address for ethernet and token ring networks,
- provide notification in the event duplicate AppleTalk or TCP/IP addresses are established,
- automatically convert users existing AppleTalk and MacTCP setting to Open Transport configuration files,
- offer improved Balloon Help text for System 7 users, and,
- include all bug fixes available to date.

Question: Will Open Transport v1.1 be available to PCI-bus Macintosh customers as well?

Answer: Yes, Open Transport v1.1 will support PCI-bus Macintosh systems, and will be included as a component of a planned Mac OS system software System Update, and with a future Mac OS system software release.

Question: What additional network interface options are planned to be available with Open Transport?

Answer: Open Transport v1.1 is planned to add support for existing NuBus NICs, as well as backwards compatibility support for SCSI-attached ethernet adapters for those Macintosh models that do not have built-in ethernet or ethernet expansion options.

Modem and ISDN support are to be available following the introduction of the next generation of Apple Remote Access products (incorporating Open Transport/PPP and Open Transport v1.1).

SCSI-attached ethernet adapters for PCI-bus Macintosh computers will require development of new DLPI drivers.

Question: How will backward compatibility for NuBus network interface cards be implemented?

Answer: For 680x0 and Power PC Macintosh systems with NuBus, Open Transport v1.1 will allow use of existing NuBus NICs and drivers. This compatibility is to be provided by software support mapping DLPI driver calls generated by new Open Transport protocols to corresponding calls to "classic" Mac OS LAP Manager, .enet and .tokn APIs.

Question: Will PPP connectivity be distributed as a bundled component of Open Transport v1.1?

Answer: AppleTalk and TCP/IP connectivity over Open Transport/PPP links will first be offered as a feature of the upcoming Apple Remote Access products. ARA products would include necessary Open Transport components.

Apple currently plans to fully merge ARA client and personal server capabilities with basic Open Transport capabilities to offer an integrated communications package for LANs, WANs, and remote networking. These integrated capabilities are also expected to be delivered as a part of a future update to Mac OS. This timetable has not been finalized; details will be announced at a later date.

Question: Will the planned Apple Open Transport/PPP solution truly be standard PPP?

Answer: Apple is developing a native implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. Current plans call for full support of the following RFCs:

- RFC 1661 - PPP
- RFC 1662 - PPP in HDLC-like framing
- RFC 1570 - PPP LCP extensions
- RFC 1334 - PPP Authentication protocols
- RFC 1663 - PPP Reliable transmission
- RFC 1378 - ATCP AppleTalk Control Protocol
- RFC 1332 - IPCP Internet Protocol Control Protocol

Question: What about NetWare NCP/IPX? Will Apple or Novell deliver an Open Transport-based Macintosh client that uses IPX protocols as the transport layer?

Answer: Apple and Novell have publicly committed to making Macintosh a first-class NetWare client. An Open Transport-ready implementation of NetWare protocols and client services is currently under active investigation. The two companies are not ready to announce specific product plans or availability details at this time.

Question: What about IP version 6 (IPv6) support in Open Transport?

Answer: IPv6 is an proposed update of the current Internet Protocol (IPv4), part of the TCP/IP suite of protocols used to allow computers to communicate with each other over the Internet. The Internet Engineering Task Force (IETF) is in the process of specifying the standards for IPv6.

IPv6 is being designed to respond to the limitations of IPv4 -- including an upcoming shortage of new IP addresses -- to allow for the continued expansion of the Internet and deployment on corporate networks. IPv6 also incorporates new functionality to provide security, multimedia support, and plug and play capabilities, features necessary to usher the Internet into the twenty-first century.

At the October 1995 Networld+InterOp trade show, Apple Computer and Mentat Inc.

demonstrated a prototype implementation of Internet Protocol Version 6 running on Apple Open Transport. The demonstration showed the flexibility of the Open Transport environment -- with current IPv4 applications such as Fetch, Netscape, and Web*Star running unmodified with IPv6 support -- and showed the benefits of Open Transport's underlying standards-based architecture - facilitating code portability. The demonstration also included basic interoperability testing with IPv6 prototype implementations from DEC and HP, using standard IP utilities such as Ping and Telnet.

Apple and Mentat will continue to work together to ensure timely availability of IPv6 for the Mac OS once the standard has been completed.

Question: Will Open Transport v2.0 for Copland offer any new capabilities?

Answer: Yes. Open Transport v2.0 is being designed to take full advantage of the new microkernel services available in the Copland OS. As a result, Open Transport networking on Copland is planned as a set of multi-threaded, preemptively scheduled tasks running in protected memory.

To a user, this will mean that networking will be even more robust and higher performance. To a developer, this will mean that a rogue application running in another memory space will not be able to corrupt system level networking task.

In addition, Open Transport v2.0 is expected to incorporate a second generation update to the human interface introduced with Open Transport v1.0. Current plans call for this release to include support for features such as:

- Configuration selection will be integrated with system level workspaces and the location assistance toolbox;
- Advanced end-users and network administrators will be able to configure a protocol stack for simultaneous support of multiple network connections (multi-homing);
- Administrators will find additional trouble-shooting tools (such as Ping, trace route, local ARP cache, access to local routing tables, and others) integrated with the configuration utilities;
- Support for AppleScript; and
- Desktop aliases for network configurations to allow double-click reconfiguration of services.

Open Transport 2.0 is also planned to include integrated support for NetWare/IPX, X.25, ATM, and ISDN.

Question: What about the Apple Internet Router, ARA Multiport Server, and LaserWriter Bridge? Will they be revised for Open Transport?

Answer: Apple is not announcing future plans regarding these products at this time.

Question: What about MacSNMP? When will it be revised to work with Open Transport?

Answer: MacSNMP v1.5 is planned to be available in 1996. This release is designed to include support for MIB II statistics from the Open Transport/TCP stack, transport of SNMP data over Open Transport/TCP, and to add support in the Macintosh System MIB for both NuBus and PCI interface cards.

MacSNMP and the Mac System Agent are supported through Open Transport's backward compatibility services.

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

06 Nov 1995 - Change distribution status.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18841



Tech Info Library

Open Transport 1.0.8: For More Information Q & A (3/96)

Revised: 3/26/96
Security: Everyone

Open Transport 1.0.8: For More Information Q & A (3/96)

=====

Article Created: 27 October 1995
Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is a series of questions and answers on getting more information on Open Transport 1.0.8.

Open Transport 1.1 is now available, and Apple recommends upgrading to it. Also refer to Open Transport 1.1 Reference Questions and Answers Tech Info Library articles for the most recent information.

DISCUSSION -----

Question: How can interested parties get more information on Open Transport?

Answer: Documentation for Open Transport is publicly available by anonymous ftp on the Internet at <ftp://seeding.apple.com/opentransport/>. There you will find release notes, general information (including the latest version of this Q&A), and developer notes from the SDK.

Question: How can interested customers apply to receive pre-release copies of Open Transport for implementation testing?

Answer: The Open Transport Early Access program was announced in March 1995. Based on the overwhelming customer response this program is now enrolled to capacity -- no further applications can be accepted or approved. Alternatively, you should contact your local Apple Computer support representative concerning locally supported seeding programs.

The final Open Transport 1.1 software will be available in the near future.

Question: How can interested developers apply to receive pre-release copies of Open Transport for development and testing?

Answer: The Open Transport developer seeding program has reached over 5,000 developers to date. As the final code for Open Transport 1.1 is nearing completion, Apple will move to make the Open Transport Software Developers Kit (SDK) widely available through electronic information services, including select sites on the Internet. The Open Transport SDK will also be included on the next issue of the Mac OS SDK, available from APDA.

No further pre-release seeding of the Open Transport 1.1 SDK is planned at this time. Following the shipment of version 1.1, a new seeding program is planned for future versions of Open Transport. Details of additional seeding programs will be announced at a later date.

Question: How can developers get support while developing Open Transport applications?

Answer: Open Transport is a strategic and supported technology. Apple Developer Support services have engineering specialists fully trained on Open Transport development and debugging. Access to these engineers is just one of the benefits of the Apple Developer Partner's program.

For more information on Apple's Developer Support services, including information on how to register as an Apple Developer Partner, contact the Macintosh Developer Services Information Line at US 1-408-974-4897.

For developers who are not a part of one of Apple's Developer Support services programs, the Open Transport engineering team has established an email address for general feedback: opentpt@applelink.apple.com. This address is not for technical support, however, nor can all inquiries can be acknowledged.

Question: Are there general reference sources on XTI, STREAMs and DLPI?

Answer: Sources of information that are applicable to XTI and STREAMs include:

- OSF/1 Operating System: Network Applications Programmer's Guide; Open Software Foundation, Prentice Hall, ISBN 0-13-640145-7
- UNIX Network Programming; W. Richard Stevens, Prentice Hall, ISBN 0-13-949876-1
- UNIX System V Release 4: Programmer's Guide: STREAMs; Unix Press (A Prentice Hall title), ISBN - 0-13-020660-1
- Programming UNIX SVR4.2: Network Programming Interfaces; UNIX Press (A Prentice Hall title), ISBN 0-13-017641-9
- X/Open CAE Specification: X/Open Transport Interface (XTI); X/Open Company, Ltd. (XO/CAE/91/600) ISBN 1-872630-29-4
- Transport Provider Interface Specification, rev 1.5 (92/12/10); UNIX International, OSI Special Interest Group
- Data Link Provider Interface Specification, rev 2.0.0 (91/08/20); UNIX International, OSI Work Group

Article Change History:

26 Mar 1996 - Added statement on Open Transport 1.1 release.

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Tech Info Library Article Number:18842



Tech Info Library

QuickTime Conferencing: Reasons for B&W Self View Image (5/96)

Revised: 5/22/96
Security: Everyone

QuickTime Conferencing: Reasons for B&W Self View Image (5/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 21 May 1996

TOPIC -----

I am using a QuickTime Conferencing Camera 100 with my AV equipped Macintosh computer. I am getting an image but it only appears in black and white. This happens regardless of color depth chosen in the Monitors control panel.

DISCUSSION -----

There are two common reasons why your QuickTime Conferencing Self View window may be showing only in Black and White.

Monitor Size or Screen Resolution Selected

If your screen resolution is set higher than 832x624, your Self View image will appear on your monitor and sent to other conference members in black and white. This happens regardless of how much VRAM you have because the VRAM cannot draw that large of an image and redraw a color Self-View window quickly enough.

Lower your monitor's screen resolution to 832x624 or lower in the Monitors control panel and your Self View image will appear and broadcast in color.

How the Camera is Connected to the Computer

Three cables ship with the QuickTime Conferencing Camera 100:

- A. 1 Combination cable, S-Video to DC Power and RCA jack
- B. RCA to RCA
- C. S-Video to DC Power

You must use the appropriate cable for your computer in order for the QuickTime Conferencing Camera to work correctly.

The output from the QuickTime Conferencing Camera 100 is an NTSC composite signal, not an S-Video component signal. With the exception of the Power Macintosh 7500 and 8500, AV equipped Power Macintosh computers will accept a composite video signal through the S-Video port. The S-Video port also provides 12-volt power to the QuickTime Conferencing Camera. For Power Macintosh AV computers other than the Power Macintosh 7500 and 8500, use cable A to connect the S-Video connector to the computer's S-Video port and the RCA and DC Power pigtail on the other end of the cable to the QuickTime Conferencing Camera.

The Power Macintosh 7500 and 8500 computers cannot receive a composite video signal in their S-Video connectors. Because of this, you need to connect cable B from the RCA jack on the QuickTime Conferencing camera to the RCA jack on the back of the Power Macintosh 7500 or 8500. If you use the S-Video port to deliver the video to the computer, you will see a black and white image. You also need to use cable C to deliver power from the S-Video port on the Power Macintosh 7500 or 8500 to the QuickTime Conferencing camera.

If you have a Macintosh Quadra or Centris 840 AV or 660 AV, there is no S-Video port to supply power to the camera. In addition to using cable B for video, you will need to purchase a 12-volt, 1.9 Watt AC adaptor from your local Apple Dealer or an electronics store.

Begin_Table

Summary Table

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Computer	Cable	Video Signal	Camera Power
-----	-----	-----	-----
Quadra/Centris 660/840 AV	B	From Cable B	Separate Power Adaptor
Power Macintosh 6100 AV	A	From Cable A	From Cable A
Power Macintosh 7100 AV	A	From Cable A	From Cable A
Power Macintosh 8100 AV	A	From Cable A	From Cable A
Power Macintosh 7500	B & C	From Cable B	From Cable C
Power Macintosh 8500	B & C	From Cable B	From Cable C

End_Table

Article Change History:

21 May 1996 - Updated information.

30 Oct 1995 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:18845



Tech Info Library

DOS Compatible: CD-ROM Needs to be in Drive at Startup (11/96)

Revised: 11/18/96
Security: Everyone

DOS Compatible: CD-ROM Needs to be in Drive at Startup (11/96)

Article Created: 27 October 1995
Article Reviewed/Updated: 18 November 1996

TOPIC -----

I cannot access the CD-ROM from DOS or Windows since I upgraded to version 5.1.1 of CD-ROM Setup on my DOS Compatible Macintosh computer. Everything worked before I did the upgrade and I have not changed anything on the DOS side. What is wrong?

DISCUSSION -----

This issue was present with both CD-ROM Setup versions 5.1.1 and 5.1.2. This issue is resolved with the DOS Compatibility 1.5 software update which is available online or for a shipping and handling fee from Apple.

The DOS Compatibility Software Update is a set of software enhancements that improves the reliability and performance of the following:

- Power Macintosh 6100 DOS Compatible computer
- Macintosh Performa 6100 DOS Compatible computer
- Macintosh Performa 630 and 640CD DOS Compatible computers
- Macintosh LC 630 DOS Compatible computer

This update also works with any Power Macintosh 6100 or Macintosh Performa 6100 series computer that has a DOS Compatibility Card installed.

IMPORTANT: PCI based PC Compatibility cards already ship with the DOS Compatibility 1.5 software and do not need to install this update.

The update is also not intended for the Quadra or Centris 610 DOS Compatible computers. Quadra and Centris 610 DOS Compatible computers will need to continue to use one of the above workarounds.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

18 Nov 1996 - Added resolution information.

26 Jan 1996 - Added online availability information.

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Tech Info Library Article Number:18846



Tech Info Library

PC Exchange: Known SCSI Option Issues (5/96)

Revised: 5/14/96
Security: Everyone

PC Exchange: Known SCSI Option Issues (5/96)

Article Created: 26 October 1995
Article Reviewed/Updated: 14 May 1996

TOPIC -----

I have a Power Macintosh 8500 and a Syquest drive that I use to read DOS formatted Syquest cartridges. Since I have upgraded to the 8500, PC Exchange will not let me select the Syquest drive to access DOS files. The SCSI ID on the Syquest drive is 3. The drive will mount Macintosh cartridges so what is wrong?

DISCUSSION -----

Your Power Macintosh 8500 computer has an internal and external SCSI bus. This allows you to connect up to 12 SCSI devices. You can use the same SCSI ID number twice on the same computer as long as the duplicate SCSI ID numbers are not on the same bus.

In your case, the internal CD-ROM drive is set at SCSI ID 3 at the factory and your Syquest drive on the external bus is also set at SCSI ID number 3. This configuration works fine, however, PC Exchange does not understand multiple SCSI buses and is unable to access the second device with the duplicate SCSI ID on the external bus.

The workaround is to set a SCSI ID for the Syquest drive that is unique to both buses. After doing this, PC Exchange will be able to access the Syquest drive.

On Macintosh computers with more than one SCSI bus, another issue sometimes appears. If you use the internal fast-SCSI bus, PC Exchange show multiple devices for the same device. For example a third-party hard disk may be shown in PC Exchange as ID 0 and 0.1

Apple Engineering is aware of these issues. Multiple bus support will be added to a future version of PC Exchange.

Article Change History:

14 May 1996 - Added fast-SCSI devices showing up with multiple SCSI IDs.

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Tech Info Library Article Number:18847



Tech Info Library

PowerBook 5300 & 190: System SW Custom Install Options (10/95)

Revised: 10/27/95
Security: Everyone

PowerBook 5300 & 190: System SW Custom Install Options (10/95)

Article Created: 27 October 1995

TOPIC -----

This article describes the Custom Install options of the System 7.5.2 installer

DISCUSSION -----

The System 7.5.2 Custom Install for the PowerBook 5300 series and PowerBook 190 series contains some new items and some differences not found with previous System 7.5.x installers.

Some differences:

- If you need to re-install the PC Card extensions there is a custom install option called PC Card Modem Files. This installs the PC Card Modem extension and the PC Card extension in the extensions folder. These extensions are designed by Apple and are required if PC cards are being used in the PowerBook. Many third-party PC Cards will require the additional drivers or other software provided by the vendor of the card.
- There is no custom installation option for MacTCP listed under Control Panels and MacTCP is not part of an Easy Install. To install MacTCP 2.0.6:

Step 1

Launch the Installer, click Continue to get to the Installation Window.

Step 2

Click on the upper left pop-up menu and choose Custom Install. Scroll down to locate the Networking Software section. Click on the triangle next to Networking Software to expand the list.

Step 3

Click in the box next to TCP/IP. Click Install. This places MacTCP 2.0.6, the MacTCP DNR, and MacTCP Prep file in your System Folder.

Here is the entire list of what can be custom installed in System 7.5.2:

Begin_Table

System Software

Macintosh System Software

Minimal Macintosh System Software

Printing

ImageWriter

LaswerWriter

StyleWriter Family

LaserWriter 8

LaserWriter 300

Networking Software

PowerBook 190 Options

PowerBook 5300 Options

File Sharing

EtherTalk

TokenTalk

Apple IR File Exchange

TCP/IP

File Sharing

Apple Talk

TCP/IP

Utility Software

Apple Guide

AppleScript

ColorSync

Multimedia Software

CD-ROM

QuickTime

Text-to-Speech

Compatibility Software

Macintosh Easy Open

PC Exchange

Fonts

Chicago

Courier

Geneva

Helvetica

Monaco

New York

Palatino

Symbol

Times

Apple Menu Items

Calculator

Chooser

Control Panels Alias

Find File

Graphing Calculator

Jigsaw Puzzle

Key Caps

Note Pad

Scrapbook

Stickies

- Shut Down

Control Panels

Apple Menu Options

Auto Remounter

Color

Control Strip

Date and Time

Desktop Patterns

File Sharing Monitor

General Controls

Keyboard

Labels

Launcher

Macintosh Easy Open

Map

Memory

Monitors

Mouse

Network

Numbers

PC Exchange

PowerBook

PowerBook Display

PowerBook Setup

Sharing Setup

Sound

Startup Disk

Text

TrackPad

Users and Groups

Views

WindowShade

PC Card Modem Files

End_Table

Support Information Services

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Tech Info Library Article Number:18848



Tech Info Library

Apple LaserWriters: Creating Watermarks (10/95)

Revised: 10/30/95
Security: Everyone

Apple LaserWriters: Creating Watermarks (10/95)

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Article Created: 30 October 1995

TOPIC -----

I want to create watermarks with my LaserWriter printer. Is there a way to do this on the LaserWriter printer?

DISCUSSION -----

There are several ways you can create and use watermarks.

- QuickDraw GX and Peirce Paper Saver
- Third-Party Solutions
- Application level support
- Some StyleWriter printer drivers

As you can see from this list, the LaserWriter 8.3 does not have built-in support for creating or using watermarks.

QuickDraw GX and Peirce Paper Saver

=====

You can use and create watermarks with QuickDraw GX and Peirce Paper Saver. Peirce Software, Inc. in conjunction with Apple Computer, provides a free copy of Peirce Paper Saver and Peirce Watermark. Peirce Paper Saver and Peirce Watermark are QuickDraw GX printing extensions that enhance your printing capabilities when using QuickDraw GX printing and applications that support the new GX printing dialogs. Additional information on installing and using the Peirce Paper Saver extension is available in the Tech Library article titled "QuickDraw GX: Installing Printing Extensions".

Third-party solutions

=====

Software can be used to modify print jobs and add watermarks. One product that

has the ability to do this is Working Watermarker from Working Software, Inc.

Application level support

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Microsoft Word 4 and later versions have support for inserting fragments of PostScript code, and formatting them in a special "PostScript" style. There were MacUser articles that outlined how to write fragments that would create watermarks for Word documents.

Certain Apple Inkjet printers

=====

The StyleWriter 1200, Color StyleWriter 2200, and Color StyleWriter 2400 (second release) have printer drivers that support watermark printing.

NOTE:

Color StyleWriter Pro printer driver does not support watermark printing.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:18849



Tech Info Library

Macintosh 630 Series: Using Ethernet CS Cards In Windows (10/95)

Revised: 10/30/95
Security: Everyone

Macintosh 630 Series: Using Ethernet CS Cards In Windows (10/95)

=====

Article Created: 30 October 1995

TOPIC -----

I have a Macintosh 630 series computer with a DOS Compatibility Card installed, and I want to use Ethernet in the Windows/MS-DOS environment. What Communication Slot Ethernet cards allow me to do this?

DISCUSSION -----

Ethernet cards that are designed to use the .ENET driver should work for Windows/MS-DOS networking. Information that passes from the MS-DOS side to the Ethernet card must go through the PC Network Extension, which must be located in the Extensions folder on the Macintosh. Because the PC Network Extension is written to use the .ENET driver, any card that does not use this driver will not work properly from Windows/MS-DOS.

The Apple Ethernet CS cards use the .ENET driver, so they will work properly. Contact other vendors to find out if their Ethernet cards use the .ENET driver.

Support Information Services

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Tech Info Library Article Number:18850



Tech Info Library

DOS Compat Card: Sharing Files Between Environments (10/95)

Revised: 10/30/95
Security: Everyone

DOS Compat Card: Sharing Files Between Environments (10/95)

Article Created: 30 October 1995

TOPIC -----

How can I share files between the Macintosh and PC environments of my Macintosh DOS Compatible computer? What steps do I need to take to set this up?

DISCUSSION -----

To transfer files between the Macintosh and PC environments of your Power Macintosh 6100 DOS Compatible computer, follow the steps provided below:

Step 1

Make sure the DOS Compatibility Card Installer Disk for DOS environment has been installed. At the C:\> prompt, enter this command:

MEM /C /P then press return.

This command lists all drivers currently resident in DOS memory. If you see APPLEPC, DOSCLIP, and MACSHARE, then your DOS Compatibility Card Installer Disk for DOS Environment is already installed. If you do not see these modules listed, look for Installing additional PC software in the "DOS Compatibility Card for Macintosh User's Guide."

Step 2

Make sure that you have a LASTDRIVE statement in your CONFIG.SYS file. Have a line somewhere in your CONFIG.SYS file as shown below:

LASTDRIVE=Z

Step 3

Create a new folder in the Macintosh environment, and give it a descriptive name, something like, DOS TRANSFER.

Step 4

Open the PC Setup control panel. Look for the pop-up menu labeled Sharing, and select one of the available DOS drive letters. A dialog box appears, letting you select the folder that you have made for sharing files with the PC environment. If you want the connection to be permanent, select the checkbox labeled Share every time PC is started.

NOTE: An entire volume can be shared in this manner also.

You can now save or read files back and forth between the Macintosh and PC environments. You can save files to the folder created in step 3 from the Macintosh environment and access these files from the PC environment, or the other way around, save files from the PC environment and access these files from the Macintosh environment. For more information on shared folders and volumes, look for Choosing shared folders or volumes in the "DOS Compatibility Card for Macintosh User's Guide."

Support Information Services

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Tech Info Library Article Number:18851



Tech Info Library

Apple Video Player: Volume Control Has No Affect On Input 10/95

Revised: 10/31/95
Security: Everyone

Apple Video Player: Volume Control Has No Affect On Input 10/95

=====

Article Created: 31 October 1995

TOPIC -----

I am using Apple Video Player to capture audio and video from a VCR that has very low sound output through its audio channel. Regardless of how high I set the volume control in Apple Video Player during recording, when I playback the captured video, the audio is still too low. What can I do to increase the audio portion of the movie?

DISCUSSION -----

The Apple Video Player application does not have a feature for increasing audio input volume or gain. You need to use an application, like Avid's VideoShop or VideoFusion, that allows you to increase the gain from the source you are capturing. If you are capturing from an external device like a VCR or LaserDisc player, you can also route the audio/video signal through a mixer to increase the gain before the signal enters the computer.

Support Information Services

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Tech Info Library Article Number:18854



Tech Info Library

Power Macintosh 8500: Screen Resolution Set Too Low (2/96)

Revised: 2/7/96
Security: Everyone

Power Macintosh 8500: Screen Resolution Set Too Low (2/96)

Article Created: 31 October 1995
Article Reviewed/Updated: 5 February 1996

TOPIC -----

I am using a television as my monitor for my Power Macintosh 8500. I set the screen resolution to 256x192 and now when I try to reopen the Sound & Displays Control Panel, I get a message saying that the screen is too small to display this window and it closes. I tried resetting the parameter RAM (PRAM), but the small resolution remains. How can I set my monitor resolution back to normal when I cannot access the Sound & Displays control panel?

DISCUSSION -----

When the Power Macintosh 8500 is using a television as its only display, The Sound & Displays control panel offers screen resolution options of 640x480, 512x384, 320x240, and 256x192. At the 256x192 resolution, you are not able to reopen the Sound & Displays control panel to return to a larger screen size. Resetting the PRAM will not return the resolution to a standard setting either.

The way to set your monitor back to a larger screen size is to use the Control Strip software that comes with the Power Macintosh 8500. Use the Resolution Control Strip module (the second module from the left) to switch to a larger screen resolution.

If you have removed the Control Strip software or cannot see the Control Strip, you can follow these steps to reset the display settings:

Step 1

Zap PRAM by holding down the Command-Option-P-R keys simultaneously from a cold startup (that is, you must turn off or shutdown the computer, then turn it back on again; you cannot choose Restart from the Special menu).

Step 2

After the second startup sound, release all of the keys and startup with the extensions off by holding down the Shift key until you see the message that says "Welcome to Macintosh Extensions Off". Then you can release the Shift key.

Step 3

Once the computer has started up, go to the Preferences Folder, which is inside the System Folder, and throw away the Display Preferences file.

Article Change History:

05 Feb 1996 - Added additional resolution.

01 Nov 1995 - Clarified fix.

Support Information Services

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Tech Info Library Article Number:18857



Tech Info Library

ISDN Line Ordering and Configuration Parameters (3/96)

Revised: 3/6/96
Security: Everyone

ISDN Line Ordering and Configuration Parameters (3/96)

Article Created: 30 October 1995
Article Reviewed/Updated: 6 March 1996

TOPIC -----

This article describes ISDN ordering and configuration parameters for QuickTime Conferencing H.320/ISDN products when used with United States telephone lines.

DISCUSSION -----

This is a summary of the types of ISDN lines supported by phone companies. All Apple QuickTime Conferencing H.320/ISDN products work with all ISDN switch types (AT&T, Northern Telecom, and Siemens). The ISDN lines offered by your telephone company may differ from region to region. If you are given the choice of line types, order the National ISDN-1 or NI-1 configuration.

Follow the guidelines below when ordering the specific type of line you choose. You may want to copy the guidelines and fax them to your ISDN service provider to expedite the ordering process.

Begin_Table

National ISDN-1 (NI-1)

Service Type:

- Choose Circuit-Switched Data (CSD) on the first B-channel.
- Choose Circuit-Switched Data/Voice (CSD/V) on the second B-channel.

Maximum Number Of B Channels:	2
TEI Assignment:	Dynamic
Packet Mode:	No
Number Of Call Appearances:	1 if you choose CSD/V; otherwise none
Terminal Type:	A (basic call terminal)
Protocol Version Control (PVC):	2 (on Northern Telecom lines only)

EKTS:	No requirement
Service Profile Identification	
Numbers (SPIDs):	2 (one per B-channel)

Make sure you receive the correct Service Profile Identification Numbers (SPIDs) with your ISDN line. Also make sure your ISDN provider informs you which B Channel has voice capabilities.

Optional: Order Call Forwarding Busy for both B channels if you have ordered an ISDN line with 2 Directory (Telephone) Numbers. This will forward a call to an open B channel if the called B channel is in us.

NOTE: For 5ESS National Internet (NI-1) lines it is possible to order a NI-1 ISDN line with only one Directory Number. This circumvents the issue of having to forward calls to an unused B channel. For Northern Telecom DMS-100 ISDN lines (both NI-1 and Custom) you must have two Directory Numbers, therefore the call forwarding option is desired.

AT&T Custom 5ESS (5E6, 5E7, 5E8, and 5E9)

Service Type:

- Choose Circuit-Switched Data (CSD) on the first B-channel.
- Choose Circuit-Switched Data/Voice (CSD/V) on the second B-channel.

Maximum Number Of B Channels:	2
Line Configuration:	Point-to-point
TEI Assignment:	Dynamic
Packet Mode:	No
Number Of Call Appearances:	1 if you choose CSD/V; otherwise none
Terminal Type:	D if you choose CSD/V; otherwise A (basic call terminal)
Bearer Service Restrictions:	None (DMD on both channels)
EKTS:	No requirement
One Touch:	No
Auto-Hold:	No

NOTE: The information in this section is for custom 5ESS lines only. If you can order a 5ESS line that is configured to the National ISDN-1 standard, please refer to the guidelines for setting up a National ISDN-1 line above.

Northern Telecom DMS Custom (With BCS-33 Through BCS-36)

Service Type:

- Choose Circuit-Switched Data (CSD) on the first B-channel.
- Choose Circuit-Switched Data/Voice (CSD/V) on the second B-channel.

Telephone Numbers:	2 (with SPIDs)
--------------------	----------------

TEI Assignment:	Dynamic
Terminal Type:	A (basic call terminal)
Bearer Service Restrictions:	None
Ringer Indicator:	Yes
EKTS:	No requirement
Authorized Call Types:	CMD
MXK:	Not applicable, or default

Make sure you receive the correct Service Profile Identification Numbers (SPIDs) with your ISDN line. Also make sure your ISDN provider informs you which B Channel has voice capabilities.

End_Table

Article Change History:
06 Mar 1996 - Updated with new information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18858



Tech Info Library

Personal LW NTR: Multipurpose Tray & Legal Paper (11/95)

Revised: 11/1/95
Security: Everyone

Personal LW NTR: Multipurpose Tray & Legal Paper (11/95)

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Article Created: 1 November 1995

TOPIC -----

I want to print on legal paper with my Personal LaserWriter NTR using the multipurpose tray. I do not have any cassette feeders and I want to use the LaserWriter 8 driver's auto tray selection function, can I do this?

DISCUSSION -----

After you setup the Personal LaserWriter NTR with the LaserWriter 8 driver in the Chooser, you will be offered four paper source selections:

Auto Select
Multipurpose Tray
Paper Cassette (grayed out)
Manual Feed

To print legal size paper from a Personal LaserWriter NTR and multipurpose tray with the LaserWriter 8 driver, you will have to select Multipurpose Tray every time from the pop-up menu in the Print dialog. The print driver does not retain your last paper source selection.

With US Legal selected from the Page Setup command in the File menu, and Multipurpose Tray or Manual Feed chosen in the Print dialog, a US Legal page will print correctly. However, if Auto Select is chosen in the Print dialog, the printer will center the bottom of the legal sized image to fit on a US Letter size page. This will cause the top 3-inches to be cut off.

With Auto Select chosen, the LaserWriter NTR assumes the paper size in the tray to be US Letter. Unfortunately, the printer cannot be configured with LaserWriter Utility or Apple Printer Utility to know that a Multipurpose Tray or Manual Feed selection has legal size paper.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18862



Tech Info Library

Power Macintosh 7200 Series: Frequently Asked Questions (1/97)

Revised: 2/3/97
Security: Everyone

Power Macintosh 7200 Series: Frequently Asked Questions (1/97)

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Article Created: 30 October 1995
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Power Macintosh 7200 series computers.

Questions answered in this FAQ:

- 1) What is the difference between native software, conventional software, and "Fat" software?
- 2) What causes Type 11 errors?
- 3) What causes Type 10 errors?
- 4) Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I see errors that an FPU is not installed.
- 5) I need to run DOS software on my Power Macintosh 7200 series computer. What are my options?
- 6) I have an old program which tells me to turn off 32-bit addressing. But I do not see this as an option in my Memory control panel. Why?
- 7) How can I get the built-in Ethernet address for my computer?
- 8) Can I add level-2 processor cache to my computer? Is it a SIMM or DIMM?
- 9) Can I add Video RAM (VRAM) to my computer?
- 10) I started my Power Macintosh computer from the startup CD but Disk First Aid says "files are open." How can I close those files?

- 11) I have an old program that requires less than 256 colors to be on. But the Monitors control panel settings don't show anything less than 256. What can I do?
- 12) At startup time, my monitor flashes off and back on again. Why?
- 13) I have a CD-ROM that said to install the Apple Multimedia Tuner. Do I need this on my Power Macintosh 7200?
- 14) I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I use?
- 15) I can't see a restart button on the computer. What do I use to restart my Power Macintosh 7200 if the screen is frozen?
- 16) I am trying to connect to my internet service provider (ISP) using SLIP/PPP software. What do I need to know?
- 17) Can NuBus cards be used with these Power Macintosh computers?
- 18) Is there an upgrade available for the Power Macintosh 7200 series computers?
- 19) Where can I find the latest Apple software updates online?

DISCUSSION -----

1) Question: What is the difference between native software, conventional software, and "Fat" software?

Answer: The Power Macintosh runs in two modes, without any further assistance from the user: it can run "native" software, which is software written for the PowerPC chip, or "conventional" software, which is software written for an older 68000, 68020, 68030, or 68040-based computer. Conventional software is sometimes referred to as "68K" software.

Conventional software runs in an "emulation" mode, which is functionally similar to the 68LC040 processor. Conventional software will generally give between Macintosh IIci and Quadra 605 performance, depending on how many references the software makes to the native "toolbox" in the computer. Conventional extensions and control panels may rewrite native parts of the system software causing slower performance.

Native software runs only on Power Macintosh computers. It has been rewritten to be aware of and to take advantage of the PowerPC chip inside of all Power Macintosh computers.

"Fat" applications are programs that can be run on either a 68K or Power Macintosh computer without modification. The operating system automatically determines which part to use.

Since "Fat" applications are really two programs in one, many installers will offer either a "Power Macintosh" or "Conventional" install. If you have

installed a software billing itself as "Accelerated for Power Macintosh" and, once installed, it does not recognize features which definitely exist, such as an FPU, make sure you have installed the correct version and build. Both versions will run on the Power Macintosh, but only the "native" version will benefit from all the special features of the Power Macintosh.

2) Question: What causes Type 11 errors?

Answer: Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- Incompatible software running in emulation.
- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Power Macintosh computer).
- RAM problems: bad RAM has been installed.

For steps on how to troubleshoot such problems, see the referenced article in the online Apple Technical Info Library (on the Internet at <http://til.info.apple.com/>)

- Use the search string "type 11 power" to locate the article "Power Macintosh: Meaning of Error Type 11."
- Use the search string "sys7 extension troubleshoot" to locate the article "Troubleshooting Macintosh System 7 INIT Conflicts"

3) Question: Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I see errors that an FPU is not installed.

Answer: All PowerPC processor chips, which all Power Macintosh computers use, have an integrated FPU. You may be seeing the "FPU not installed" error for two reasons:

- You are running "conventional" software in 68K emulation. This operating mode does not provide access to the computer's floating point unit. Thus, the program does not work. See if there is an upgrade to a PowerPC native version of the program. Certain software "bridges" exist to allow conventional software access to the PowerPC microprocessor's FPU. See the Redgate Communications area to search for such products.
- You are using software, in either emulation or native mode, which is simply failing. Since the PowerPC supports pipelining instructions, a number of errors are occurring simultaneously. They eventually percolate out as an "FPU not installed" error. An error did occur, but it has nothing whatsoever to do with the need for a floating point unit. You should apply standard troubleshooting steps to resolve this issue. Standard troubleshooting information can be found in the online Apple Tech Info Library.

4) Question: What causes Type 10 errors?

Answer: A Type 10 error seen on a Power Macintosh 7200 series computer is going

to occur under the same circumstances as an FPU error. Due to the changes and enhancements in the 680x0 emulator, there are instances where an FPU error will be returned as a type 10 error. Follow the same troubleshooting steps you would when troubleshooting an FPU error.

5) Question: I need to run DOS software on my Power Macintosh 7200 series computer. What are my options?

Answer: With a Power Macintosh 7200 series computer, there are several ways to accomplish this.

- Apple offers two PC Compatibility cards featuring either a Pentium 100-megahertz processor on a 12-inch card (M4092LL/A) or a 586 100-megahertz processor on a 7-inch card (M4091LL/A). These PC Compatibility Cards let you run MS-DOS and Windows applications directly on your Power Macintosh computer. You can switch instantly between Mac OS, Windows, and MS-DOS environments with a single keystroke.

- Orange Micro has announced a version of their Orange PC card for PCI based Power Macintosh computers. The Orange PC cards use an expansion slot inside of your Power Macintosh 7200 series computer. You can get more information by contacting Orange Micro directly. Their phone number is 714-779-2772.

- Reply, Inc. has also announced a version of their DOS on Mac card for PCI based Power Macintosh computers. The Reply cards use an expansion slot inside of your Power Macintosh 7200 series computer. You can get more information by contacting Reply directly. Their phone number is 800-801-6898.

- You can use Insignia Solutions' SoftWindows emulator. This is a Macintosh application which emulates a PC DOS/Windows environment. You can get more information, such as pricing, performance, system requirements, and compatibility information from Insignia by calling them at 800-848-7677.

6) Question: I have an old program which tells me to turn off 32-bit addressing. But I do not see this as an option in my Memory control panel. Why?

Answer: All Power Macintosh computers run only in 32-bit memory addressing mode. There is no way to turn this off. Check with the vendor for a 32-bit compatible version of the software.

7) Question: How can I get the built-in Ethernet address for my computer?

Answer: The Apple LAN Utility version 1.0b4e1 can obtain the built-in Ethernet address in the Power Macintosh 7200 series computer. While this utility is not supported by Apple, it is available in the Apple Software Updates area of the online services we post to (path: Macintosh -> Unsupported -> Apple LAN Utility 1.0b4e1)

With System 7.5.3 and the included Open Transport networking software 1.1, you can also determine the Ethernet address in either the TCP/IP or the AppleTalk

control panels. The following steps apply to either control panel.

Step 1

Open either the AppleTalk or TCP/IP control panel.

Step 2

Choose User Mode from under the Edit menu. Click once on Advanced and click Okay.

Step 3

Click on the Info button at the bottom of the AppleTalk or TCP/IP window. The built-in Ethernet address is listed as the Hardware Address and is in Hexadecimal format.

8) Question: Can I add level-2 processor cache to my computer? Is it a SIMM or DIMM?

Answer: You can add a level-2 processor cache to the Power Macintosh 7200 series computers. The cache is a 160 pin DIMM (dual in-line memory module). You can contact an Apple-authorized service provider for ordering information and installation.

9) Question: Can I add Video RAM (VRAM) to my computer?

Answer: You can increase your VRAM to 2 MB or 4 MB from the 1 MB it originally shipped with. The VRAM DIMMs must be 1 MB, 112-pin fast-paged mode, with 70 ns RAM access time or faster. Do not use 256K VRAM SIMMs. If you increase the VRAM to 2 MB, make sure the DIMM is added to the first VRAM slot. You can contact an Apple-authorized service provider for ordering information and installation.

Note also that adding VRAM will increase overall graphic performance on the Power Macintosh 7200 series computers because the bus is increased from a 32-bit wide bus to 64-bit wide bus with the additional VRAM.

10) Question: I started my Power Macintosh computer from the startup CD but Disk First Aid says "files are open" and won't allow me to click on repair. How can I close those files and repair the directory?

Answer: Virtual memory is active when started from the Power Macintosh CD. Here are two ways to disable Virtual memory.

Step 1

Insert the CD into the computer. Open the Startup Disk control panel and select the Power Macintosh CD. Restart the computer and push and hold down the Shift key. Release the Shift key when you see the Extensions Off message at the Welcome to Macintosh screen. Virtual memory is now off and Disk First Aid should be able to attempt repairs.

Step 2

Start the computer with the Power Macintosh CD in the drive and hold the letter C down. When you see the Macintosh face on the screen, immediately release the letter C and push and hold down the Shift key. Release shift when you see the Extensions off message at the Welcome to Macintosh screen.

11) Question: I have an old program that requires less than 256 colors to be on. But the Monitors control panel settings don't show anything less than 256. What can I do?

Answer: The built in video will not support less than 256 colors or greys. If you have a program that requires black and white, 4, or 16 colors to run, then you will not be able to run these programs. Check with the software vendor for availability of a compatible version. You could also check with video card vendors to see if any offer support for less than 256 colors.

12) Question: At startup time, my monitor flashes off and back on again. Why?

Answer: The software video driver for the monitor is loading up. This is normal and is answered in the Power Macintosh 7200/9500 Read Me file.

13) Question: I have a CD-ROM that said to install the Apple Multimedia Tuner. Do I need this on my Power Macintosh 7200?

Answer: The Power Macintosh 7200 series computers originally shipped with QuickTime 2.0. and will benefit from the Tuner. If you have installed QuickTime 2.1, then you do not need to install the Apple Multimedia Tuner. Check the version of QuickTime installed to determine if you need the Tuner. We would recommend upgrading to QuickTime 2.1 which incorporates the Tuner. QuickTime 2.1 is available in the Apple Software Updates area (Path: Macintosh -> System Software -> Other System Software -> QuickTime 2.1)

Additionally, if you are using System 7.5.3, then you do not have to upgrade because QuickTime 2.1 is included.

14) Question: I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I use?

Answer: You should use at least the Apple Telecom 2.1 that is in the Apple Telecom folder inside of the Apple Extras folder on your hard drive (and on your backup CD if you have removed it). Megaphone 1.0.2 is also provided in this folder. The current Apple Telecom 2.3 is compatible, but adds no additional functionality for the Power Macintosh 7200 series computers.

15) Question: I cannot see a restart button on the computer. What do I use to restart my Power Macintosh 7200 if the screen is frozen?

Answer: The reset command is a keyboard shortcut identical to the Macintosh Quadra 605 and Macintosh LC computers. The key combination is

Command-Control-Power. In addition to the keyboard power button, the Power Macintosh 7200 series computers also have a power button on the bottom front left panel (below the speaker panel).

If these do not restart or shut down the computer, it may be necessary to disconnect the power from your Macintosh computer. This can be done by turning off the power strip or by disconnecting the cable from the outlet or the back of the computer.

16) Question: I am trying to connect to my internet service provider (ISP) using SLIP/PPP software. What do I need to know?

Answer: Check the Open Transport FAQ for more detailed information. Make sure you have at least Open Transport 1.0.7 (1.0.6 is what originally came with your Power Macintosh 7200 series computer). Version 1.1 is the current version and is included with System 7.5.3. Computers with Mac OS 7.5.2 can update to 7.5.3 by installing the System 7.5 Update 2.0. The system update is available online or from the Apple Order Center at 1-800-293-6617, ext. 984 for a \$13 shipping and handling fee. Both updates are available in the Apple Software Updates area on the online services to which Apple posts its software.

Also make sure you are using the TCP/IP control panel and not trying to get MacTCP to work. MacTCP is not compatible with the Power Macintosh 7200 series computers.

17) Question: Can NuBus cards be used with these Power Macintosh computers?

Answer: NuBus cards cannot be used in this Power Macintosh. However, to preserve your investment in NuBus technology, a NuBus expansion chassis for PCI will be available from Second Wave, Inc. This chassis will enable you to continue to use your existing NuBus cards in Power Macintosh systems with PCI slots.

18) Question: Is there an upgrade available for the Power Macintosh 7200 series computers?

Answer: The Power Macintosh 7200 series computers can currently be upgraded to a Power Macintosh 7600/120 or a 7600/132. See Technical Information Library article titled "Pwr Mac Processor Crds & Logic Brd Upgrades: Descriptions" for more detailed information or contact your local Apple-authorized service provider.

19) Where can I find the latest Apple software updates online?

- On the Internet at the following sites:
 - Worldwide Web: <http://www.info.apple.com/swupdates>
 - ftp: <ftp://ftp.info.apple.com/>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Article Change History:

31 Jan 1997 - Updated ftp references.

20 Jan 1997 - Updated online references.

06 Jun 1996 - Updated tech info and added additional question.

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Tech Info Library Article Number:18863



Tech Info Library

PowerBook 5300 & 2300: Is Speech Recognition Supported? (8/96)

Revised: 8/14/96
Security: Everyone

PowerBook 5300 & 2300: Is Speech Recognition Supported? (8/96)

Article Created: 1 November 1995
Article Reviewed/Updated: 14 August 1996

TOPIC -----

Can I use PlainTalk Speech Recognition or Text-to-Speech software on my PowerBook 5300 or 2300c?

DISCUSSION -----

PlainTalk
=====

PlainTalk Speech Recognition will work with a PowerBook 5300 or 2300 series computer if you install PlainTalk version 1.4.1 and the English Speech Recognition system extension version 1.5.

NOTE: You can only use Speech Recognition with the built-in microphone of the PowerBook 5300 and 2300 series, not with an external microphone. Speech Recognition cannot be used with a PowerBook 2300 series computer in a Duo docking station because the dock does not support 16-bit sound.

Follow these steps to install PlainTalk:

Step 1

Download the PlainTalk software from the Web at the following URL:

<http://speech.apple.com/speech/ptk/ptk.html>

Step 2

Install PlainTalk 1.4.1 (English Speech Recognition and Text-to-Speech).

Step 3

Replace the Speech Recognition extension 1.4.1 with version 1.5.

Text-to-Speech

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Text-to-Speech is bundled with PowerBook 5300 series computers and is supported.

This article was published in the Information Alley on 14 August 1996.

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Tech Info Library Article Number:18864



Tech Info Library

CD-ROM Setup 5.1.2: Read Me File (11/95)

Revised: 11/1/95
Security: Everyone

CD-ROM Setup 5.1.2: Read Me File (11/95)

Article Created: 1 November 1995

TOPIC -----

This article contains the ReadMe file included with CD-ROM Setup 5.1.2 posted online.

DISCUSSION -----

About Apple CD-ROM version 5.1.2

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This file includes important information about Apple CD-ROM version 5.1.2, software that lets you use an Apple CD-ROM drive with your Macintosh computer. You need system software version 7.1 or later to use this software. Because this information is not included in the documentation accompanying the product, you may want to print it. To do so, choose Print from the File menu.

Installation Instructions

IMPORTANT The full instructions below assume you have an Apple CD-ROM installation disk. If, instead, you're downloading the Apple CD-ROM software from an online service, follow step 1, below. Next, copy the software onto your hard disk and double-click the Installer icon to start the Installer. Then follow steps 5 through 9.

To install this extension, follow these steps:

Step 1

While holding down the Shift key, choose Restart from the Special menu and continue to hold until you see a message. When a message on the screen tells you that the extensions are off, release the Shift key.

When you restart the Macintosh after you install Apple CD-ROM version 5.1.2, the extensions will turn on again.

Step 2

Make sure the Apple CD-ROM installation disk is locked.

Step 3

Insert the Apple CD-ROM installation disk into a disk drive.

If you can't see the Installer icon, double-click the disk icon to open it.

Step 4

To start the Installer program, double-click its icon.

Step 5

In the Welcome dialog box that appears, click Continue.

After a moment, the Install dialog box appears.

IMPORTANT When you started the Installer, it checked to make sure you have what you need to use the software. If you're missing anything, you'll now see a message that tells you what you need. You won't be able to install the software until you correct the problem. If a dialog box says you don't have the correct system software, you can purchase a new version of system software from an Apple-authorized dealer.

Step 6

Make sure the disk named in the Destination Disk box is the one on which you want to install the software. If it's not, click Switch Disk until the correct disk name appears.

Step 7

Click the Install button.

The Installer takes a few moments to calculate what needs to be done and then begins to install files.

Step 8

Follow the instructions on the screen until the installation is complete.

Step 9

When you see a message reporting that installation was successful, click Restart to restart your Macintosh.

The Apple CD-ROM software is now installed on the hard disk.

Improvements to Version 5.1

If you have an Apple CD-600 drive and were using Apple CD-ROM version 5.1, you may have had intermittent problems playing the Peter and the Wolf CD. In version 5.1.2, this problem has been corrected.

Previously a Photo CD with more than 30 sessions would not start up properly. Now a Photo CD of up to 50 sessions (the theoretical maximum number of sessions on a Photo CD) will start properly.

Support Information Services

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Tech Info Library Article Number:18865



Tech Info Library

ARPLE CD: How To Perform Manual Install (11/95)

Revised: 11/2/95
Security: Everyone

ARPLE CD: How To Perform Manual Install (11/95)

Article Created: 2 November 1995

TOPIC -----

I am experiencing difficulty with the installation of the new Apple Reference, Performance, & Learning Expert (ARPLE) CD, October '95 Provider Edition. Each time that I try to run the ARPLE II HD Installer, the installer provides a "unsuccessfully installed" message.

I have tried two different ARPLE CDs (both October), on three different computers (Macintosh Workgroup Server 8150, Quadra 840AV, Quadra 800 with PowerPC card all with system 7.5.1), with the same non-results.

DISCUSSION -----

You may be experiencing an installer issue where the Apple Media Tool preferences file is not being installed properly. You could try restarting with all of extensions off, except your CD-ROM extension, before attempting to run the installer or you could try a manual installation.

The following instructions describe how to perform a manual installation:

Manual Installation Instructions

If you have difficulty using the ARPLE Installer, follow the directions below for manual installation.

Step 1

Create a folder named, ARPLE II Internal Folder on your hard drive.

Step 2

Open the folder on the CD named, ARPLE II Folder and copy all of the files except PMedia and Preferences to the new folder on your hard drive.

Step 3

In the ARPLE II Folder on the CD, open the folder named, Preferences and drag the complete folder named ARPLE to the preferences folder in your System Folder.

Step 4

To launch the ARPLE interface from your hard drive open the ARPLE II Internal folder and double click on the ARPLE II application icon.

Support Information Services

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Tech Info Library Article Number:18866



Tech Info Library

Quadra 800, 900 & 950: Frequently Asked Questions (11/95)

Revised: 11/2/95
Security: Everyone

Quadra 800, 900 & 950: Frequently Asked Questions (11/95)

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Article Created: 2 November 1995

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) about high end Quadra computers, including the Macintosh Quadra 800, 900 and 950.

Questions in this FAQ

- 1) What is an enabler and do I need one?
- 2) What are the expansion options for the high end Macintosh Quadra computers?
- 3) How do I upgrade the memory on my Macintosh Quadra 800, 900, or 950 computer?
- 4) What is an FPU, and does my computer have one?
- 5) What is 32-bit addressing and when does it need to be active?
- 6) What is "resetting the PRAM"? Do I need to do this often?
- 7) Rebuilding the desktop file; what is it and why would I need to do it?

DISCUSSION -----

- 1) Question: What is an enabler and why do I need one?

Answer: Rather than create a new version of the system software each time a new computer is released, Apple Computer created the system enabler. These enablers contain system software code specific to a particular Macintosh computer. Enablers provide older system software with the information necessary to properly run on a newly released Macintosh.

The Macintosh Quadra 800, 900 and 950 computers do not require an enabler when using System 7.5 or later.

The Macintosh Quadra 900 and 950 computers do not require an enabler when using System 7.1.

If you are using System 7.1 on a Quadra 800, you will require System Enabler 040.

2) Question: What are the expansion options for the high end Macintosh Quadra computers?

Answer: On the high end Macintosh Quadra computers, Apple provided several expansion options such as a processor-direct slot (PDS), as well as NuBus slots on each of these computers.

The PDS allows expansion cards to have direct access to the processor. Numerous PDS cards are available; video, network and accelerator cards have implemented a PDS design

NOTE: Because different Macintosh computers use different processors, there are several implementations of the processor-direct slot. Not all PDS cards are compatible with the different PDS types. To ensure compatibility, contact the manufacturer of the PDS card.

NuBus is a standard designed by Texas Instruments. It features self-configuration and bus-mastering on a 32 data-bit card. Bus-mastering means a card can take control of the bus, which allows for multi-processor computing. The card self configures using on-board ROM (Read Only Memory).

The card slot is a one-piece socket connector with two rows for pins. The card has a plug connector with pins that plug into the socket. This slot type is not compatible with any other slot standard.

Here are the expansion slots available on the Macintosh Quadra 800, 900 and 950 computers:

- Macintosh Quadra 800:

Support for two internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Three internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest possible performance.

- Macintosh Quadra 900:

Support for up to three internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Five internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest-possible performance.

- Macintosh Quadra 950:

Support for four internal SCSI devices, such as a CD-ROM, DAT drive, or SCSI hard disk drive (several capacities available). Five internal NuBus expansion slots. One 68040 PDS provides access to the CPU for highest possible performance.

3) Question: How do I upgrade the memory on my Macintosh Quadra 800, 900, or 950 computer?

Answer:

Begin_Table

System	RAM Soldered on Board	Number of SIMM Slots	Possible SIMM Sizes	Physical RAM Configs(MB)	Speed	Notes
Quadra 800*	8	4	4MB,8MB,16MB, 32MB	8,12,16,20, 24,28,32,36,40, 44,48,52,56,60, 64,68,72,76,80, 84,88,92,96,104, 108,112,120,136	60ns	3,11, 12,13
Quadra 900*	0	16	1MB,4MB	4,8,12,16,20 24,28,32,36 40,48,52,64	80ns	3
Quadra 950	0	16	1MB,4MB	4,8,12,16,20 24,28,32,36 40,48,52,64	80ns	3

* Product no longer being produced by Apple.

End_Table

NOTES:

3. These systems have 32-bit-clean ROMs. Computers with 32-bit-clean ROMs can take advantage of more than 8MB of physical RAM under System 7.

11. These systems use 32-bit wide, 72-pin SIMMs (fast-paged mode) not previously used in Macintosh computers.

12. The Centris 650, and Quadra 800 use "memory interleaving" which occurs when SIMM pairs are used (for example: two 8MB SIMMs). This allows the memory subsystem to perform certain operations faster. Basically, it allows the memory subsystem to write to the same memory address in different banks of memory before incrementing the address. Depending on how memory intensive the application, this can improve performance 5 to 10%.

13. The Centris/Quadra 610, Centris/Quadra 650, and Quadra 800 have flexible memory systems, meaning that any supported SIMM size can go into any SIMM socket in any order, and they can run with partially populated banks. They don't support 1MB, 2MB, or 64MB 72-pin SIMMs.

4) Question: What is an FPU, and does my computer have one?

Answer: Floating-point Units (FPUs or math coprocessors), such as the 68881/68882, offer the greatest benefit in applications that tend to be very floating-point (arithmetic) intensive. The specific types of applications that benefit most from an FPU are those that process large amounts of floating-point instructions for precision, and will utilize an FPU extensively. Examples are CAD/CAM, 3-D modeling, scientific applications, and financial applications.

The Macintosh Quadra 800, 900 and 950 computers have a built in Floating Point Unit (FPU).

5) Question: What is 32-bit addressing and when does it need to be active?

Answer: With 32-bit addressing, you can install and access more than 8 MB of physical RAM in your Macintosh. This means you can work with very large data files, very large applications, or many applications concurrently. 32-bit addressing is most attractive to Macintosh users working with large memory-intensive problems. While virtually anyone can benefit from the large amount of memory offered by 32-bit addressing, it will immediately benefit database users, color-graphic users, CAD/CAM users, and programmers.

More technically speaking, 32-bit addressing lets most recent Macintosh models access the entire memory range of the microprocessor.

32-bit addressing is fully implemented in the Macintosh Quadra series. If more than 8 MB of RAM is installed, 32-bit addressing should be active in the Memory control panel. If, for example, 16 MB of RAM is installed on a Macintosh Quadra 800 and 32-bit addressing is off in the Memory control panel, the system software will appear to take up most of the available memory. The solution is to activate 32-bit addressing in the Memory control panel.

6) Question: What is "resetting the PRAM"? Do I need to do this often?

Answer: Parameter RAM (PRAM) is used to keep settings for a Macintosh. PRAM keeps track of the date, time, status of serial ports, which printer has been chosen in the Chooser and numerous other settings.

Occasionally, a corrupt setting in PRAM can adversely affect the operation of the computer. Resetting PRAM can sometimes solve these problems.

It is not a requirement to reset PRAM on a regular, or scheduled basis.

To reset PRAM, restart the computer, press and hold the Command, Option, P and R keys simultaneously. Continue to press these keys until you hear the computer's startup chime the second time.

7) Question: Rebuilding the desktop file; what is it and why would I need to do it?

Answer: The Desktop file is an invisible file in the main level of your hard

drive. It is the file that keeps track of all the documents and applications that are on your drive.

For System 6 and earlier the file name is desktop. System 7.0 and later the invisible files are named Desktop DB and Desktop DF.

Occasionally your Desktop file may become too large or may be damaged.

A symptom of a damaged Desktop file is when icons on your desktop appear as "generic" rather than "custom" icons. Rebuilding the Desktop file may eliminate the problem.

The Desktop file manages all icons on a particular hard drive or floppy disk. When you insert a new or customized icon, the Desktop file may not load it or may load a previous version of the icon. To have the special icon appear on the desktop, the Desktop file must be rebuilt to update the Desktop file and register the icon.

Icons change to generic document (blank page with a corner turned down) or application (diamond with a hand) icons for several reasons, including the following:

- Utilities such as compression or security software can alter icons.
- Custom icons become damaged or deleted.
- The Desktop file has been damaged.
- Applications that create files may not assign icons to the files.
- An application that created a file and assigned an icon may no longer be available.
- A file may have lost the bit that indicates a custom icon (this is known as the bundle bit).

If the Desktop file becomes too large, the computer may have difficulty reading it efficiently and speedily. This can cause the Finder to access files more slowly. Rebuilding the Desktop file can clean up old information and speed up Finder access.

You can also make a file-by-file backup of the drive, re-initialize the drive, and then restore the files. This re-groups all the files, de-fragments them, and increases the efficiency of the drive.

To rebuild the desktop using System 7

Follow these steps:

1. Press and hold the Shift key down while starting up the computer.
2. As soon as you see "Welcome to Macintosh Extensions Off", release the Shift key, and press and hold the Command and Option keys.
3. Continue pressing the Command and Option keys until you see a dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click the OK button.

After the desktop has been rebuilt, restart the computer, and all extensions and control panels will be active again.

To rebuild the desktop using System 7.5 or later

Follow these steps:

1. Before you rebuild your desktop, use the Extensions Manager control panel to save a record of the extensions that are currently turned on.
 - Open the Extensions Manager control pane.
 - Open the Sets pop-up menu, and choose Save Set.
 - When the Save Set dialog box opens, type a name for your currently selected extensions (for example, My Extensions). When you close the dialog box, the name of your set is added to the Sets pop-up menu.
2. To turn off all extensions, open the Sets pop-up menu again and choose All Off.
3. To turn on Macintosh Easy Open, find it on the list and click it to put a checkmark beside it.
4. To rebuild the desktop, restart your computer while pressing and holding the Command and Option keys.
5. When you see the dialog that says "Are you sure you want to rebuild your desktop on your disk? All of your info window comments will be lost," release the keys and click the OK button.
6. When the desktop is rebuilt, open the Apple menu and choose Control Panels.
7. Open the Extensions Manager control panel.
8. To turn your extensions back on, open the Sets pop-up menu and choose the name you gave your set of extensions in step 1 (for example, 'My Extensions').
9. Restart your computer to activate the extensions.

Support Information Services

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Tech Info Library Article Number:18867



Tech Info Library

CLW 12/600 PS: Config RPRINTER on Netware 3.1.x (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Config RPRINTER on Netware 3.1.x (10/96)

Article Created: 2 November 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article provides the documentation for setting up a Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printer in RPRINTER mode on a Netware 3.12 server. This information is not in the printer User Manual.

DISCUSSION -----

Step 1 - Apple Printer Utility
=====

- 1) From a Macintosh Launch Apple Printer Utility
- 2) Make sure that RPRINTER is selected
- 3) Enter a name into the Remote PSERVER name
Note: Write down the Remote PSERVER name for later
- 4) Select Port configuration, ensure that Netware is set to ON
- 5) Exit the Apple Printer Utility

Step 2 - Configure with PCONSOLE
=====

NOTE: The Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS must be configured as printer "0". This is not an option because other printer number assignments do not work. This may require recreating configurations for other printers being serviced by PSERVER.

- 1) Run PCONSOLE from a DOS Client
- 2) Select Print Server Information
- 3) Press INS to create new print server
- 4) Enter the Print Server name from Step 1
- 5) Press Return
- 6) Select Full Name press enter

- 7) Enter: RPRINTER <Any Printer Name> <0> - and press enter
Note: This printer requires the first Printer definition, that is "0",
to work properly, also write down the printer name for later
- 8) Select Print Server Configuration
- 9) Select Printer Configuration
- 10) Select printer 0 not installed
- 11) Enter the name enter into "Full Name"
- 12) Select Type - press return
- 13) Select Remote other unknown - press return
- 14) Press escape back to Available Options - answer yes when prompted to
save
- 15) Select Print Queue Information
- 16) Press INS
- 17) Enter any name for a queue name
Note: Write down the Queue name for later
- 18) Press enter
- 19) Press enter on that queue name
- 20) Select Queue Servers press enter
- 21) Press INS
- 22) Select the queue server name that you entered earlier
- 23) Press return
- 24) Press ESC until you are back to available options - Save any changes
if asked
- 25) Select Print Server Information Menu press return
- 26) Select Print Server Configuration
- 27) Select Ques Serviced by Printer
- 28) Press return twice
- 29) Press INS
- 30) Select the Queue that you have setup for this printer - press enter
twice
- 31) Escape out of PCONSOLE - saving changes of asked
- 32) At the Netware server:
Enter: LOAD PSERVER <REMOTE-PSERVER-NAME>
The REMOTE-PSERVER-NAME will be the same from Step 1

Step 3 - Restart Printer =====

If the printer does not show waiting print job on the PSERVER screen,
restart the printer.

Step 4 - Print to the Queue =====

- 1) Enter: capture q=q_name/no banner/ti=5
- 2) z:
- 3) print fontlist.ps

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS.

05 Mar 1996 - Removed LaserWriter 16/600 PS from article.

05 Feb 1996 - Updated Step 2, and added LaserWriter 16/600 PS printer.

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Tech Info Library Article Number:18868



Tech Info Library

AppleShare Client for Windows and AppleTalk Phase I (1/96)

Revised: 1/19/96
Security: Everyone

AppleShare Client for Windows and AppleTalk Phase I (1/96)

=====
Article Created: 2 November 1995
Article Reviewed/Updated: 19 January 1996

TOPIC -----

I'm unable to access any of the computers on an AppleTalk Phase I network, however, on an AppleTalk Phase II network connections work properly.

DISCUSSION -----

AppleShare Client for Windows does not support AppleTalk phase I. Version 1.0.2 now supports LocalTalk. The solution is to upgrade those AppleTalk Phase I segments to AppleTalk Phase II.

Article Change History:
19 Jan 1996 - Corrected version number.

Support Information Services

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Tech Info Library Article Number:18869



Tech Info Library

Power Macintosh: Memory Interleaving Performance Gain (6/96)

Revised: 6/27/96
Security: Everyone

Power Macintosh: Memory Interleaving Performance Gain (6/96)

=====

Article Created: 2 November 1995
Article Review/Updated: 27 June 1996

TOPIC -----

Is there any information available on the performance gains or losses when using interleaved instead of non-interleaved memory on PCI-based Power Macintosh computers?

Specifically how much of a speed advantage would be lost if you use one 16 MB DIMM rather than two 8 MB DIMMs in an interleaved arrangement?

DISCUSSION -----

For increased performance it is better to configure a PCI-based Power Macintosh computer for memory interleaving rather than installing memory in a non-interleaved configuration. This means that you will get better performance if you configure your system with two 16 MB DIMMs rather than one 32 MB DIMM. This applies to all other combinations of same-sized DIMMs.

The actual performance will vary from computer to computer. In general, a Power Macintosh with a PowerPC 604 microprocessor, such as the Power Macintosh 8500 or 9500 series computer, gets anywhere from a 5% to 15% boost in performance. The average is about an 8% increase in performance speed. On a Power Macintosh with a PowerPC 601 microprocessor, such as the Power Macintosh 7500 series, you may get only a slightly better performance gain by using memory interleaving rather than non-interleaved DIMMs. Some third-party benchmarking applications may report exaggerated performance differences between interleaved and non-interleaved computers.

This article was published in the Information Alley on 26 June 1996.

Article Change History:

27 Jun 1996 - Added keyword.
26 Jun 1996 - Made minor correction.
10 May 1996 - Added information about exaggerated benchmarking results.

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Tech Info Library Article Number:18870



Tech Info Library

PowerBook 190 & 5300: Ethernet PC Card Switching (11/95)

Revised: 11/2/95
Security: Everyone

PowerBook 190 & 5300: Ethernet PC Card Switching (11/95)

=====

Article Created: 2 November 1995

TOPIC -----

I have several different Ethernet PC cards that I need to use. I seem to have trouble getting on the network when I switch cards. Why?

DISCUSSION -----

When switching between PC Cards on a Macintosh PowerBook 5300 Series computer, you must pay careful attention to any software drivers that get left behind that are no longer going to be used. The Ethernet drivers are particularly susceptible to "confusion" if not removed.

As an example of this, if you have a Dayna Ethernet card and switch to a PowerPort Platinum Pro PC Card, you will experience problems with Ethernet if you fail to remove the Dayna drivers. This is because the MacOS only recognizes two different Ethernet driver names, and Global Village and Dayna (in this case) have chosen the same name (Ethernet Driver). The symptom will be that Ethernet will work intermittently, if at all.

Be sure to get all the parts of the old driver software (use the Installer to remove/de-install the driver software, if possible) when removing it. In particular, be sure to remove the Ethernet driver from the System suitcase.

Support Information Services

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Tech Info Library Article Number:18873



Tech Info Library

System 7.5: Startup Items Launch Order (11/95)

Revised: 11/6/95
Security: Everyone

System 7.5: Startup Items Launch Order (11/95)

Article Created: 2 November 1995

TOPIC -----

If I put several different items in the Startup Items folder of my System 7.5 Folder, how does the operating system determine the launch order?

DISCUSSION -----

This is how the System 7.5 Finder handles opening the items in the Startup Items folder.

After the Finder finishes loading at startup it "selects" all the items and executes an open items command. Next, the Finder groups everything into one of five classes: applications, documents, stationery, folders, and aliases. Aliases are resolved to their original item and then the resulting items are launched in the following order:

1) Applications

- Alphabetically

2) All documents with the same creator

- Alphabetically.
- Documents created by an application that is also in the list are opened when the application is launched, before other documents and before other applications.
- The Finder checks for stationery unaware applications or applications that do not automatically duplicate a file that has the Stationery pad option checked in its information window. If the Finder finds any stationery unaware applications and it is opening a stationery file for one of those applications, it duplicates the file before it starts launching any applications. The Finder then opens these duplicated files last, even though they may come alphabetically before

other files.

3) Remaining documents

- Alphabetically.

4) Everything else

- Sounds, folders, control panels, and font suitcases are opened alphabetically.

Support Information Services

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Tech Info Library Article Number:18877



Tech Info Library

Arabic Language Kit: Description and Specifications (11/95)

Revised: 11/3/95
Security: Everyone

Arabic Language Kit: Description and Specifications (11/95)

=====

Article Created: 3 November 1995

TOPIC -----

The Arabic Language Kit allows users to display, input, edit and print Arabic or Persian documents on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Arabic Language Kit and lists its hardware and software requirement specifications.

DISCUSSION -----

Overview

=====

Apple's Arabic Language Kit is the easiest, most affordable way to add Arabic and Persian text to your documents.

After the simple installation process, you can switch effortlessly between the computer's main language and Arabic or Persian. The kit lets you enter, edit, and print Arabic and Persian text, and mix either language with left-to-right languages in the same document, even in the same sentence. The kit comes with a selection of keyboard layouts optimized for both native speakers and students, accompanied by transparent labels for customizing your keyboard.

The Arabic Language Kit can be used with most Mac OS-compatible applications that support right-to-left text entry (including multilingual applications), or that have been localized for Arabic or Persian. The kit works with the built-in multilingual capabilities of the Mac OS, so you can copy and paste or drag and drop text between applications. And you can work with documents created by colleagues in the Arab world who use the Arabic or Persian version of the Mac OS.

The kit includes a selection of Apple TrueType fonts to ensure high-quality on-screen and printed characters at any size. These fonts incorporate exciting

new typographic features based on Apple's QuickDraw GX technology. Most of the kit's fonts are also provided in PostScript versions.

The Arabic Language Kit is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple's other multilingual products include the Chinese Language Kit, the Chinese Dictation Kit, the Cyrillic Language Kit, the Hebrew Language Kit, the Japanese Language Kit, and others.

Technical Specifications =====

Usage Requirements -----

- - A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM
- OR-
- A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left textOrdering Information

System Software Requirements -----

- Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts -----

- Arabic fonts
 - AlBayan (TrueType and Postscript)
 - Baghdad (TrueType and Postscript)
 - Cairo (bitmap)
 - Geeza (TrueType and Postscript)
 - Kufi (TrueType and Postscript)
 - Nadeem (TrueType and Postscript)
 - Thuluth (Postscript)
- Persian fonts
 - Amir (TrueType and Postscript)
 - Ashfahan (TrueType and Postscript)
 - Kamran (TrueType and Postscript)
 - Mashad (TrueType and Postscript)
 - NadeemFarsi (TrueType and Postscript)
 - Tehran (bitmap)

Compatible applications -----

The Arabic Language Kit is based on Apple's WorldScript I technology, and is compatible with applications that take advantage of WorldScript I. The applications listed below are multilingual and/or Arabic-localized products that have been tested with this kit; check with the software publisher for

compatibility information on other applications.

- PageMaker ME from Adobe Systems (distributed by WinSoft S.A.)
- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks Arabic from Claris Corporation
- FileMaker Arabic from Claris Corporation
- El Nashir El Sahafi from Diwan
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Arabic Language Kit include:

- Ready,Set,Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features

=====

Versatile multilingual capabilities

- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

High-quality fonts

- Seven Arabic fonts and six Persian fonts
- Apple TrueType format for high-quality on-screen and printed characters
- Support for PostScript printers
- QuickDraw GX features for state-of-the-art typography*

* QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple

Language Kits

- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information

=====

Arabic Language Kit

Order No. M4454Z/A

- Five 1.4MB floppy disks and one CD-ROM containing:
 - Arabic Language Kit
 - Standard Arabic and Persian keyboard layouts
 - Transliterated QWERTY and AZERTY keyboard layouts
 - SimpleText Arabic, a basic text-processing application
 - Demonstration versions of compatible applications and utilities
- Arabic Installation and User's Guide (in English and French)
- Transparent keyboard labels with Arabic and Persian characters

Support Information Services

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Tech Info Library Article Number:18878



Tech Info Library

Cyrillic Language Kit: Description and Specifications (11/95)

Revised: 11/3/95
Security: Everyone

Cyrillic Language Kit: Description and Specifications (11/95)

=====

Article Created: 3 November 1995

TOPIC -----

The Cyrillic Language Kit allows users to display, input, edit and print documents in Bulgarian, Russian, Ukrainian, Belorussian, Macedonian, Serbian, or any other language based on the Cyrillic writing system on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Cyrillic Language Kit and lists its hardware and software requirement specifications.

DISCUSSION -----

Overview

=====

Apple's Cyrillic Language Kit makes it easy to create documents in any Cyrillic-based language.

This affordable, easy-to-install kit lets you switch effortlessly between the computer's main language and Bulgarian, Russian, or Ukrainian. You can also work in Belorussian, Macedonian, Serbian, or any other language based on the Cyrillic writing system. Cyrillic text can be mixed with other languages that your computer supports—including right-to-left and Asian languages—in the same document. The kit comes with a selection of keyboard layouts optimized for both native speakers and students, accompanied by transparent labels for customizing your keyboard.

The Cyrillic Language Kit works with almost any Mac OS-compatible application, including those that have been localized for Bulgarian, Russian, or Ukrainian. Because the kit builds on the inherent multilingual capabilities of the Mac OS, text created in one application can be copied and pasted or dragged and dropped into another application. With the kit, you can work with documents created by colleagues in Eastern Europe who use the Bulgarian, Russian, or Ukrainian

version of the Mac OS. You can also display Cyrillic-based World Wide Web servers.

The Cyrillic Language Kit includes a selection of Apple TrueType fonts, which ensure high-quality on-screen and printed characters at any size and feature exciting new QuickDraw GX typographic capabilities. The fonts provided in TrueType format are also supplied in PostScript versions.

This product is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple also offers the Arabic Language Kit, the Chinese Language Kit, the Chinese Dictation Kit, the Hebrew Language Kit, the Japanese Language Kit, and others.

Technical Specifications

=====

Usage Requirements

- - A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM
- OR-
- - A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left textOrdering Information

System Software Requirements

- Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts

- APC Courier (TrueType and Postscript)
- Bastion (TrueType and Postscript)
- Latinski (TrueType and Postscript)
- Sistemny (bitmap)
- Pryamoy Prop (bitmap)
- Pryamoy (bitmap)

Compatible applications

The Cyrillic Language Kit can be used with almost every Macintosh application. However, the best results will be achieved with applications that have been developed specifically to support multiple languages, including:

- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks from Claris Corporation
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.

- WordPerfect from Novell, Inc.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Cyrillic Language Kit include:

- Ready,Set,Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features

=====

Versatile multilingual capabilities

- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

High-quality fonts

- Six Cyrillic fonts
- Apple TrueType format for high-quality on-screen and printed characters
- Support for PostScript printers
- QuickDraw GX features for state-of-the-art typography*

* QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple Language Kits
- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information

=====

Cyrillic Language Kit

Order No. M4455Z/A

- Four 1.4MB floppy disks and one CD-ROM containing:
 - Cyrillic Language Kit
 - Standard Bulgarian, Russian, and Ukrainian keyboard layouts
 - Transliterated QWERTY, AZERTY, and QWERTZ keyboard layouts
 - SimpleText Bulgarian, SimpleText Russian, and SimpleText Ukrainian, basic

text-processing applications

– Demonstration versions of compatible applications and utilities

- Cyrillic Installation and User's Guide

(in English and French)

- Transparent keyboard labels with Russian, Bulgarian, and Ukrainian characters

Support Information Services

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Tech Info Library Article Number:18879



Tech Info Library

Hebrew Language Kit: Description and Specifications (11/95)

Revised: 11/6/95
Security: Everyone

Hebrew Language Kit: Description and Specifications (11/95)

=====

Article Created: 3 November 1995

TOPIC -----

The Hebrew Language Kit allows users to display, input, edit and print Hebrew documents on their Mac OS computer. The software is intended for educators and students, multinational businesses, and bilingual home users.

The following article contains a description of the Hebrew Language Kit and lists its hardware and software requirement specifications.

DISCUSSION -----

Overview

=====

With Apple's Hebrew Language Kit, adding Hebrew and Yiddish text to your documents is both easy and affordable.

This easy-to-install, easy-to-use kit lets you enter, edit, and print Hebrew and Yiddish text. You can switch effortlessly between these languages and the computer's main language. Hebrew and Yiddish can be mixed with left-to-right languages in the same document—even in the same sentence. The kit features a selection of keyboard layouts optimized for both native speakers and students, along with transparent labels for customizing your keyboard.

The Hebrew Language Kit works with most Mac OS-compatible applications that support right-to-left text entry, including multilingual and Hebrew-localized applications. Because the kit builds on the inherent multilingual capabilities of the Mac OS, text created in one application is transportable to another. You can copy and paste or drag and drop between applications, and work with documents created by colleagues in Israel who use the Hebrew version of the Mac OS.

The Hebrew Language Kit includes a selection of Apple TrueType fonts enhanced with exciting new QuickDraw GX typographic features. TrueType font technology

ensures high-quality on-screen and printed characters at any size.

This product is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. You can install as many different Apple Language Kits as you need on a single computer. Apple's multilingual product offerings include the Arabic Language Kit, the Chinese Language Kit, the Chinese Dictation Kit, the Cyrillic Language Kit, the Japanese Language Kit, and others.

Technical Specifications

=====

Usage Requirements

- - A Macintosh or PowerBook computer with a 68020 or later processor and 4MB of RAM
- OR-
- A Power Macintosh computer with 8MB of RAM
- An Apple SuperDrive floppy disk drive or a CD-ROM drive
- An application that has been localized for the target language or that supports right-to-left textOrdering Information

System Software Requirements

- Macintosh System 7.1 or later (System 7.5 or later required to take advantage of QuickDraw GX features)

Included fonts

- Arial (TrueType)
- Corsiva (TrueType)
- Eilat (bitmap)
- Hermon (bitmap)
- New Peninim (TrueType)
- Raanana (TrueType)

Compatible applications

The Hebrew Language Kit is based on Apple's WorldScript I technology, and is compatible with all applications that take advantage of WorldScript I. The applications listed below are multilingual and/or Hebrew-localized products that have been tested with this kit; check with the software publisher for compatibility information on other applications.

- PageMaker ME from Adobe Systems (distributed by WinSoft S.A.)
- HyperCard from Apple Computer, Inc.
- SimpleText from Apple Computer, Inc.
- ClarisWorks HB from Claris Corporation
- FileMaker HB from Claris Corporation
- Nisus Writer from Nisus Software Inc.
- WinText from WinSoft S.A.
- WorldWrite from World Software Corporation

Applications that support QuickDraw GX technology and the Hebrew Language Kit include:

- Ready,Set,Go! GX International from Manhattan Graphics Corp.
- LightningDraw GX from Lari Software, Inc.

Features

=====

Capabilities

- Switch between languages easily
- Combine different languages in the same document
- Install as many language kits as needed on a single Macintosh system

Ease of use

- Simple, flexible installation process
- Informative installation and user's guide (in English and French)
- Transparent labels for different keyboard layouts
- Keyboard quick-reference card

High-quality fonts

- Six Hebrew fonts, including Yiddish characters
- Apple TrueType format for high-quality on-screen and printed characters
- QuickDraw GX features for state-of-the-art typography*

* QuickDraw GX font features require System 7.5 or later, QuickDraw GX software, and a QuickDraw GX compatible application.

Compatibility

- Works with System 7.1 and all subsequent versions of the Mac OS
- Compatible with any localized version of the Mac OS and with other Apple

Language Kits

- Supports QuickDraw GX in System 7.5
- Runs in native mode on Power Macintosh computers

Ordering Information

=====

Hebrew Language Kit

Order No. M4453Z/A

- Four 1.4MB floppy disks and one CD-ROM containing:
 - Hebrew Language Kit
 - Standard Hebrew keyboard layout
 - Transliterated QWERTY and AZERTY keyboard layouts
 - SimpleText Hebrew, a basic text-processing application
 - Demonstration versions of compatible applications and utilities
- Hebrew Installation and User's Guide

(in English and French)

- Transparent keyboard labels with Hebrew characters

Support Information Services

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Tech Info Library Article Number:18880



Tech Info Library

ARA 2.0.x Connection and No IP Address (11/95)

Revised: 11/4/95
Security: Everyone

ARA 2.0.x Connection and No IP Address (11/95)

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Article Created: 4 November 1995

TOPIC -----

Our remote users are dialing in with Apple Remote Access (ARA) 2.0.x to a Shiva LanRover 8/E, and we are intermittently not receiving an IP address from the server. We currently are restarting the remote computer and redialing. Do you have any idea how to correct this?

DISCUSSION -----

A problem that may be causing this is when MacTCP is configured for Manual addressing and the MacTCP stack is initialized before the ARA connection is made.

This can be reproduced by installing MacSNMP software on a remote Macintosh. MacSNMP software will load at startup and initialize the MacTCP stack, causing MacTCP connections over an ARA link to not work. Removing MacSNMP software from the remote Macintosh resolves this.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18881



Tech Info Library

Internet Server For WWW: Number of Connections (11/95)

Revised: 11/4/95
Security: Everyone

Internet Server For WWW: Number of Connections (11/95)

=====

Article Created: 4 November 1995

TOPIC -----

How many users can log onto a WWW Internet Server? I'm interested in the number connecting through our LAN (local area network).

DISCUSSION -----

MacTCP has a limit of 64 sockets or simultaneous IP connections. Simultaneous IP connections under Open Transport will be limited by installed memory and processor power.

The WebSTAR server software, which comes with the Internet Server, keeps track of all connections. A log is generated which includes information on where the request came from as well as what the request was (file, image, html file), including the name of the file.

Each entry includes the DATE, TIME and RESULT (OK or ERROR) for the request made.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18882



Tech Info Library

PowerTalk INET Gateway & Open Transport Compatibility (11/95)

Revised: 11/6/95
Security: Everyone

PowerTalk INET Gateway & Open Transport Compatibility (11/95)

=====

Article Created: 6 November 1995

TOPIC -----

When using the Mail*Link Internet for PowerTalk (PT/INET) Gateway 1.6 on my PCI-based Power Macintosh, the gateway will connect once but not again until I restart the computer. What is wrong?

DISCUSSION -----

This is a known issue which Apple is investigating. Below is a quote from the Mail*Link for PowerTalk/INET 1.6 Read Me file:

"Open Transport users: This gateway does not function correctly when used with Apple's OpenTransport. The gateway will connect one time but will not reconnect without a reboot. Apple is currently investigating problem."

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18883



Tech Info Library

AppleVision 1710AV: Lines on Screen (5/96)

Revised: 5/2/96
Security: Everyone

AppleVision 1710AV: Lines on Screen (5/96)

=====

Article Created: 6 November 1995
Article Reviewed/Updated: 2 May 1996

TOPIC -----

Various symptoms have been reported where there are lines on the screen.

Customers are reporting symptoms of horizontal or vertical lines on various parts of the screen. In particular:

- 1) display has 2 horizontal lines in the screen one-third of the way down and one-quarter of the way up;
- 2) thin red line on the outer left, outer right or top;
- 3) monitor changes from yellow to red approximately every 5 minutes and there are flickering horizontal lines every 10 seconds.

DISCUSSION -----

The following technical explanations may assist you in identifying the difference between a display problem, computer problem, or normal display operation.

Horizontal Lines
=====

Customer Issue:
Display has 2 horizontal lines in the screen one-third of the way down and one-quarter of the way up

Explanation:
This is the stabilization wires common to every Trinitron display. The construction of a Trinitron CRT includes one or two horizontal wires about one-quarter to one-third of the way down/up from the top/bottom of the display

image. The wire appears as a very thin light gray horizontal line across the entire width of the display image. The lines are common to all Trinitron displays. All replacement displays have the same lines.

Thin Red Line on Display =====

Customer Issue:

Thin red line on the outer left, outer right or top of the display.

Explanation:

Display convergence may need to be adjusted. This can be performed by the customer. If convergence is misadjusted, a color line, usually red or blue, on one or more sides of the display image appears. Convergence is adjusted using the Sounds & Displays control panel.

NOTE:

No CRT display device has perfect geometry (image shape) and convergence. Convergence should be adjusted for the best overall screen performance. A display with perfect convergence in one area of the screen may have slight misconvergence in another area (the adjustment should be made to have the best convergence balance over the entire screen). If the customer can make adjustments so the convergence is within a half millimeter, the display is working correctly.

Display Changes From Yellow to Red =====

Customer Issue:

Monitor changes from yellow to red approximately every 5 minutes and there are flickering horizontal lines every 10 seconds.

Explanation:

The display and the Macintosh computer attached to it should be checked by an authorized Apple Service provider. The problem described could be caused by a variety of problems including the video card, cable and connector, and display circuitry among other components. The entire system should be checked to properly isolate the problem.

Article Change History:

02 May 1996 - Revised discussion to include current information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18885



Tech Info Library

Apple Multiple Scan Displays: Status Indicator Lights (1/97)

Revised: 1/29/97
Security: Everyone

Apple Multiple Scan Displays: Status Indicator Lights (1/97)

=====

Article Created: 7 November 1995
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article describes the status indicator lights for the following Apple displays:

Multiple Scan 14 Display
Multiple Scan 15 Display
Multiple Scan 1705 Display
AppleVision 1710AV Display
AppleVision 1710 Display

DISCUSSION -----

Multiple Scan 14

- Power On - Green
- Sleep Mode - Flashing green
- Power On, but not connected to computer - Green
- Power Off - No light

Multiple Scan 15

- Power On - Amber to Green
- Sleep Mode - Amber
- Power On, but not connected to computer - Amber
- Power Off - No light

Multiple Scan 1705

- Power On - Green
- Sleep Mode - Amber
- Power On, but not connected to computer - Green power lamp, and the adjustment lights blink sequentially from left to right.
- Power Off - No light

AppleVision 1710AV and AppleVision 1710 Display

- Power On - Green
- Sleep Mode - Green
- Power On, but not connected to computer - No light
- Power Off - No light

Article Change History:

29 Jan 1997 - Added AppleVision Display to the article.

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Tech Info Library Article Number:18888



Tech Info Library

PowerBook 190 Series: Read Me File (5/96)

Revised: 5/27/96
Security: Everyone

PowerBook 190 Series: Read Me File (5/96)

=====

Article Created: 7 November 1995
Article Reviewed/Updated: 27 May 1996

TOPIC -----

The following is the ReadMe file for the PowerBook 190 Series computers.

DISCUSSION -----

Important Information About Your Macintosh PowerBook 190 Series Computer

Congratulations on purchasing your Macintosh PowerBook 190 series computer. This document adds to and updates the information in the manuals that came with your computer. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

Contents
=====

Tips

- Charging your battery
- Using the Battery Monitor in the Control Strip
- Using the trackpad
- Using a modem
- Using expansion bay modules
- Using PC Cards
- Using a DOS-formatted PC Card
- Using your PowerBook in SCSI disk mode
- Using Apple IR File Exchange
- Using the Password Security control panel
- Printing

Troubleshooting

- Problems starting your PowerBook
- Resetting the parameter RAM (PRAM)
- Using Drive Setup
- Using Acrobat Reader after installing QuickDraw GX
- Using Apple Remote Access
- Incorrect Guide File Balloons
- Using a DigiSign Signature Card with PowerTalk
- AppleShare Displays Incorrect Information for Large Drives
- AppleShare Server Software Version 4.1
- Application Programs Using Sound
- Using QuickDraw GX with a Fax Modem
- Using the Japanese Language Kit
- Using the Chinese Language Kit

Tips

=====

Charging your battery

You should connect the power adapter to your computer and let the battery charge overnight when you first unpack your computer. (The battery may have been depleted between the time it was charged at the factory and the time you purchased the computer.)

Using the Battery Monitor in the Control Strip

The estimated time remaining that is displayed in the Battery Monitor portion of the Control Strip depends on the charge remaining and the battery consumption rate. The battery consumption rate depends on the software and hardware features you are using.

Using The Trackpad

If the trackpad seems unresponsive, try the following in the order listed:

Step 1

Put your PowerBook to sleep (by closing the display) and then wake it up (by pressing any key on the keyboard).

Step 2

Press the reset button on the back of the computer.

Step 3

Reset the parameter RAM (PRAM) (see the section in Troubleshooting below for instructions).

Step 4

Attach an external mouse.

Using A Modem

• If you are using the LocalTalk or IRTalk, turn off AppleTalk in the Chooser to improve modem performance.

• Modem connection files for various PC Card modems that will work with Apple Remote Access (ARA) and AppleLink are included on your computer's hard disk. The modem files for ARA are in the Extensions folder. If a file for your modem is not included, please contact your communications software manufacturer to see if your modem is supported. See the user's manual that came with your computer for more information on using PC Card modems.

• When accessing the internet using the InterSLIP protocol, use the 14.4K baud rate rather than the 28.8K baud rate for better performance. The actual throughput at 14.4K baud is higher than at 28.8K baud.

Using Expansion Bay Modules

Never remove a floppy disk from the expansion bay module while the PowerBook is in sleep. You may damage the disk or lose data.

Using PC Cards

• For best results, purchase only cards that have been qualified for use on a Macintosh computer. If you are in the United States, you can receive a faxed list of currently available PC Cards by calling 1-800-462-4396 and requesting document 10307. You can call this number anytime. In Canada, call 1-800-263-3394 and request document 10307. Outside the United States and Canada, please consult your Apple-authorized dealer.

• Do not use an SRAM storage card as a startup disk on your PowerBook. Use SRAM cards for extra storage only.

• If you are using a mass storage PC Card, you can only eject the card using the eject buttons when the computer is shut down. The eject buttons will not work with storage PC Cards when the computer is turned on.

- Never eject a PC Card manually (with a paper clip) while the PowerBook is in sleep. You may damage the card or lose data.

Using a DOS-formatted PC Card

If your PowerBook has the Macintosh PC Exchange control panel installed and PC Exchange is turned on, you can use a PC Card that has been preformatted in a DOS format in your PowerBook. However, you cannot start up your computer using the DOS-formatted PC Card; you can only start up your computer using a Mac OS-formatted PC Card. If you want to reformat your DOS-formatted PC Card as a Mac OS-formatted PC Card, you need to turn PC Exchange off, and then format the card as you would any non-Mac OS-formatted disk. Follow these steps:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Open the PC Exchange control panel.

Step 3

Click the Off button and close the PC Exchange control panel.

Step 4

Insert your PC Card. A window appears asking if you want to initialize (format) the disk.

Step 5

Click Initialize to format the PC Card. Once the PC Card is reformatted, you can turn Macintosh PC Exchange back on in the PC Exchange control panel.

You cannot reformat a Mac OS-formatted PC Card as a DOS-formatted PC Card with PC Exchange. To do so, you need to use a DOS/Windows computer with PC Card capabilities.

Using Your PowerBook In SCSI Disk Mode

- Using Norton Utilities Speed Disk or Disk Doctor from a desktop computer on your PowerBook while it is in SCSI disk mode may cause the desktop computer to crash or freeze. To avoid this problem, create an emergency startup floppy disk using Norton Utilities and then use that disk to startup your PowerBook.
- You cannot use password protection on your PowerBook while the PowerBook is in SCSI disk mode. Turn off password protection in the Password Security control panel before connecting your PowerBook in SCSI disk mode.

Using Apple IR File Exchange

Apple IR File Exchange provides a very simple way to exchange files with another IR-equipped Macintosh user. You need to upgrade your computer with the PowerBook Infrared Upgrade Card before you can use Apple IR File Exchange.

- If you use Apple IR File Exchange with a computer that is equipped with a third-party IR device and is also connected to a wired network (for example, a LocalTalk or Ethernet network), you may see other Apple IR File Exchange users that are beyond your local IR network. If you want to prevent this from happening, select IRTalk in the Network control panel on the computer that is connected to the wired network. (This will have the effect of disconnecting that computer from the wired network. See the manufacturer's manual for more details.)
- If you see a dialog box telling you there is a broken connection, make sure that both you and the other Apple IR File Exchange user select the same option (either "break connection" or "continue"). If the other user breaks the connection and you try to continue, your computer may appear to hang for 2 minutes while it tries unsuccessfully to reestablish the connection.
- When you select IRTalk in the Network control panel, your computer chooses a random network address. Occasionally, you may come within range of another computer using the same network address and experience difficulty communicating with it.

When this occurs, you'll see a dialog box telling you that a duplicate AppleTalk address has been detected. Click OK in the dialog box, then open the Network control panel and select IRTalk again. This will give your computer a new network address and will correct the problem. (Alternately, you can activate and inactivate AppleTalk from the Control Strip or the Chooser.)

Using the Password Security Control Panel

The Password Security control panel provides security for information stored on your hard disk. To use this feature, you must enter a password and turn it on. If you forget or lose your password, you will not be able to access your hard disk. Should you lose your password, you may be charged for assistance.

You cannot use your PowerBook in SCSI disk mode with password protection turned on in the Password Security control panel. You must turn it off before using your PowerBook in SCSI disk mode.

Information stored on PC Cards is not protected by password security. Password security is designed to prevent casual access to your hard drive. It does not provide encryption.

Printing

If you are printing on a network printer, make sure you have the same version of printer software as others on the network. If you are using a StyleWriter II on a network, make sure you use the StyleWriter 2.0 printer driver. (Printer drivers are found in the Extensions folder).

Troubleshooting

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Problems Starting Your PowerBook

If you have problems starting your PowerBook immediately after you shut it down (for instance, you see the "Sad Mac" icon on the screen), wait several seconds after shutting down, and then press the Power key to turn the computer on again.

Resetting the parameter RAM (PRAM)

When you need to reset (or "zap") your PowerBook's PRAM, follow the steps below. Note that resetting the PRAM erases the contents of your RAM disk, if you have one. Resetting the PRAM also restores the default settings in most control panels. After you reset the PRAM, be sure to check any custom settings you made for the desktop pattern, memory, network, AppleTalk, trackpad, power conservation, and so forth. Resetting the PRAM also resets the power manager.

Follow these steps to reset the PRAM:

Step 1

Locate the keys Command, Option, P, and R.

Step 2

Make sure the Caps Lock key is not down.

Step 3

Restart your Macintosh. Immediately after hearing the startup sound, press the Command, Option, P, and R keys simultaneously.

If you do not hold down the key combination within 5-10 seconds after you restart, you may need to repeat steps 1-3.

Step 4

Hold down the keys until you hear the startup sound. Then release the keys.

Step 5

If the computer shuts itself off, press the Reset key on the back of your

computer to turn it back on.

Step 6

When the computer has finished starting up, you may need to restore control panel settings as well as network and printer settings in the Chooser.

Using Drive Setup

Make sure you only use the Drive Setup application program that comes with your PowerBook to update and partition hard disks. If you use an earlier version of Drive Setup (called HD SC Setup) you could damage your computer.

Using Acrobat Reader After Installing QuickDraw GX

Once you install QuickDraw GX, you need to reinstall Acrobat Reader on your computer in order to use it. Double-click the Acrobat Reader Installer icon in the Adobe Acrobat Reader folder (inside the Applications folder).

Using Apple Remote Access

Make sure you use only Apple Remote Access Client version 2.0.1 on your PowerBook. Earlier versions will not work.

Incorrect Guide File Balloons

Your system software includes Apple Guide documents which provide on screen instructions and other information to help you use your computer. However, if you turn on Balloon Help (by choosing Show Balloons from the Guide menu) and point to a Guide file icon on the hard disk, the balloon may give you the wrong information about where the file belongs or what you can do with it. To avoid being misled by incorrect balloons, follow the guidelines below:

- Leave Guide files where they are. Some Guide files (for example, the Guide file named "Macintosh Guide") belong in the Extensions folder. Others will not work if they are put into the Extensions folder.
- Keep application programs that have Guide files in the same folder as the Guide file. For example, keep the file named "File Assistant Guide" in the same folder as the File Assistant program. If you move a Guide file that belongs with an application program, you will not be able to get help while using the program.

Using A DigiSign Signature Card With PowerTalk

To use the Apple DigiSign Utility with PowerTalk, follow these steps:

Step 1

Turn off processor cycling in the PowerBook control panel. To see the option for processor cycling, hold down the option key while you select Custom in the PowerBook control panel.

Step 2

Follow the steps for creating a Signer file.
If you need help, select "How do I obtain a valid Signer file?" in the Digital Signatures topic of the PowerTalk Guide.

Step 3

Turn processor cycling back on in the PowerBook control panel.

AppleShare Displays Incorrect Information For Large Drives

If you use file sharing to connect to a disk attached to another computer, and the shared disk is larger than 2 gigabytes (GB), the Get Info box for that disk shows an incorrect size. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

AppleShare Server Software Version 4.1

If you purchase AppleShare server software version 4.1, make sure to choose Custom Install (instead of Easy Install) when you install it.

NOTE: This note is not part of the original Read Me, it is being added to correct information presented here. AppleShare 4.1 or later is not sold separately and is available when purchasing a Workgroup Server. Also AppleShare v 4.1 or 4.2 is not supported on these computers.

Application Programs Using Sound

If you have application programs that make extensive use of sound, you should turn off virtual memory while using those programs. When virtual memory is turned on, it can compromise the programs' sound quality.

Some older versions of programs, especially games, may generate sounds that seem too slow or too fast. For best results with these programs, open the Sound control panel, choose Sound Out from the pop-up menu, and set the sample rate to 22.050 kHz.

Using QuickDraw GX With A Fax Modem

If you installed QuickDraw GX and you have a fax modem, you need a QuickDraw GX modem driver in order to send faxes. Contact the fax software manufacturer to obtain the QuickDraw GX driver.

If you have installed QuickDraw GX and do not yet have the QuickDraw GX modem driver, you can temporarily turn off QuickDraw GX and use your previous fax modem driver. To turn off QuickDraw GX:

Step 1

Hold down the Space bar while you choose Restart from the Special menu to restart your PowerBook. Continue to hold down the Space bar until the Extensions Manager appears on the screen.

Step 2

Click the QuickDraw GX extension to remove the check beside it. This prevents the QuickDraw GX software from loading.

Step 3

Click the close box in the Extensions Manager window to resume startup. Your fax modem should work normally. You will not be able to use any QuickDraw GX features until you turn the extension back on again.

Using the Japanese Language Kit

To use the Japanese Language Kit with your Macintosh PowerBook, make sure you use version 1.2 or later. In the United States, you can obtain an upgrade, with proof of purchase, by calling the Apple Order Center. Customers outside of the United States should contact their local Apple-authorized dealer.

After you install the Japanese Language Kit 1.2, you need to replace an extension that gets installed with the software. Follow these steps:

Step 1

Follow the instructions for installing the Japanese Language Kit 1.2 that came with the software.

Step 2

After you see that the installation was successful, restart the computer with the Extensions off. To do this, hold down the shift key while you press the Restart button in the installer screen (or as you choose Restart from the Special menu).

Step 3

Double-click the Apple Extras folder to open it.

Step 4

Double-click the JLK 1.2 Update folder to open it.

Step 5

Drag the file called "Font Extension 3" to the Extensions folder (inside the System folder) on your hard disk. Click OK if you see a dialog box asking if it is ok to replace this file.

Step 6

Choose Restart from the Special menu.

Using the Chinese Language Kit

To use the Chinese Language Kit with your Macintosh, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, first install the World Script Updater 1.0. Then install the Chinese Language Kit version 1.1. Finally, install the Chinese Language Kit Updater to update your software to version 1.1.1.

To install the World Script Updater, follow these steps:

Step 1

Double-click the Apple Extras folder to open it.

Step 2

Double-click the World Script Install folder to open it.

Step 3

Double-click the World Script Installer icon.
Follow the instructions on the screen.

Step 4

Follow the instructions that came with the language kit to install the language kit software.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

27 May 1996 - Updated for technical accuracy.

18 Dec 1995 - Added correction to AppleShare section.

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Tech Info Library Article Number:18889



Tech Info Library

Group IV TIFF Viewer for Macintosh (11/95)

Revised: 11/7/95
Security: Everyone

Group IV TIFF Viewer for Macintosh (11/95)

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Article Created: 7 November 1995

TOPIC -----

I need to find a viewer for Group IV TIFF that runs on a Macintosh. Group IV TIFF is a standard format used in the PC environment. Scanners from Xionx, Kofax, Seaport Imaging (Cornerstone) use Group IV TIFF as their native file format. I have several of these files on a server and would like to make them available on the Web, and I want to be able to point users to a free or low-cost viewer application.

Is there free ware or public-domain viewers available that a Macintosh can use?

DISCUSSION -----

TIFF Group4 images should be able to be opened with most any current application that supports the TIFF standard. Below are three applications that should be able to handle the task of opening your TIFF files.

GraphicConverter

Available at:

ftp://mirror.aol.com/pub/info-mac/_Graphic_%26_Sound_Tool/_Graphic/

GraphicConverter is share ware. It converts pictures to different formats. Also it contains many useful features for picture manipulation. GraphicConverter imports PICT, Startup-Screen, MacPaint, TIFF (uncompressed, packbits, CCITT3/4 and lzw), RIFF, PICS, 8BIM, 8BPS/PSD, JPEG/JFIF, GIF, PCX/SCR, GEM-IMG/-XIMG, BMP (RLE compressed BMP's also), ICO/ICN, PIC (16 bit), FLI/FLC, TGA, MSP, PIC (PC Paint), SCX (ColorIX), SHP, WPG, PBM/PGM/PPM, CGM (only binary), SUN , RLE, XBM, PM, IFF/LBM, PAC, Degas, TINY, NeoChrome, PIC (ATARI), SPU/SPC, GEM-Metafile, Animated NeoChrome, Imagic, ImageLab/Print Technic, HP-GL/2, FITS, SGI, DL, XWD, WMF, Scitex-CT, DCX, KONTRON, Lotus-PIC, Dr. Halo, GRP, VFF, Apple IIgs, AMBER, TRS-80, VB HB600, ppat, QDV, CLP, IPLab, SOFTIMAGE, GATAN, CVG and MSX.

JPEGView

Available at:

<http://www.med.cornell.edu/jpegview.html>

JPEGView is postcardware. It is a fast, powerful image viewer for both 680x0 and PowerPC Macintoshes. JPEGView can open and display images in JPEG, PICT, GIF, TIFF, BMP, MacPaint, or Startup Screen formats.

NIH Image

Available at:

<ftp://zipppy.nimh.nih.gov/pub/nih-image/>

NIH Image is a public domain image processing and analysis program for the Macintosh. It can acquire, display, edit, enhance, analyze and animate images. It reads and writes TIFF, PICT, PICS and MacPaint files, providing compatibility with many other applications, including programs for scanning, processing, editing, publishing and analyzing images. It supports many standard image processing functions, including contrast enhancement, density profiling, smoothing, sharpening, edge detection, median filtering, and spatial convolution with user defined kernels.

Support Information Services

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Tech Info Library Article Number:18890



Tech Info Library

Electroservice Laboratories (11/95)

Revised: 11/7/95
Security: Everyone

Electroservice Laboratories (11/95)

=====

Article Created: 7 November 1995

Electroservice Laboratories

6085 Sikorsky Street
Ventura, CA 93003

805-644-2944

Company Profile:

Electroservice Laboratories services various DAT drives, including Hewlett-Packard. They act as an authorized repair center for most tape drive OEMs.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18891



Tech Info Library

Retrospect: -50, feature not supported Error (11/95)

Revised: 11/7/95
Security: Everyone

Retrospect: "-50, feature not supported" Error (11/95)

=====

Article Created: 7 November 1995

TOPIC -----

I'm using Retrospect 2.0ci on an Apple Workgroup Server (AWS) 95. Last night I encountered the following error during an unattended backup:

Error -50 : Feature not supported

I have not made changes to my script and backups have been without error for several weeks. I cannot find a description of this error and would appreciate feedback on how it is triggered.

DISCUSSION -----

The "-50, feature not supported" error is reported when Retrospect tries to automatically mount a shared volume that no longer exists.

You should go to your backup scripts and remove this volume. If you are unsure which volume it is, go Immediate > Volumes, select a file-shared volume, and try to scan it. If you can scan it, it is fine; repeat the process for the other file-shared volumes.

If you get an error, you should then choose to "Forget" the volume.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18892



Tech Info Library

Color LaserWriter 12/600 PS: Using External Hard Drives (11/95)

Revised: 11/8/95
Security: Everyone

Color LaserWriter 12/600 PS: Using External Hard Drives (11/95)

=====

Article Created: 8 November 1995

TOPIC -----

The Apple Color LaserWriter PS Internal Hard Disk Upgrade (M3875G/A) provides 240 MB of storage. What options are available for customers who need more than 240 MB of storage?

DISCUSSION -----

Apple provides an internal hard drive solution which uses hard drive mechanisms that have been thoroughly tested with the Color LaserWriter 12/600 PS. Apple engineering does not have the resources to test and qualify all of the different hard drives on the market. However, during their testing they found that the IBM hard drives selected for this printer work fine and satisfy the needs of a majority of customers. Customer's who need larger storage capabilities than those provided by the Color LaserWriter 12/600 PS Internal Hard Disk (M3875G/A) should use the external SCSI connection. Here is some information on connecting external hard drives to the Color LaserWriter 12/600 PS. This information is available in the User's Manual:

Using external hard disks from manufacturers other than Apple

IMPORTANT Some older model hard disk drives may not be compatible with the Color LaserWriter 12/600 PS

If you are considering connecting external hard disks to your printer, keep these points in mind:

- The printer requires SCSI 40 MB (or larger) hard disks
- The printer must be able to tell how much storage space is available on the disk. This is not possible with some hard disks from manufacturers other than Apple. You cannot use these disks with the printer.
- Some non-Apple disks have internal SCSI terminators. There should be no more

than one terminator in addition to the one on the printer's controller board (one on the first device in the chain and one on the last device).

- The hard disk must be able to deliver at least 5 volts of termination power.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18894



Tech Info Library

AppleScript: Changing a Script Saved as an Application (11/95)

Revised: 11/8/95
Security: Everyone

AppleScript: Changing a Script Saved as an Application (11/95)

=====

Article Created: 7 November 1995

TOPIC -----

How can I make changes to an AppleScript saved as a compiled application?

DISCUSSION -----

If the compiled AppleScript, or applet, was not saved as a Run-Only application, there are several ways to modify it. An AppleScript that has been saved as Run-Only does not save the original AppleScript text for re-editing.

Here are three ways to access the AppleScript Text of a non Run-Only applet.

1) Press and hold the control key while double-clicking on the applet. When the Applet's splash screen appears with its Run or Quit options, select Edit Script from the Edit menu. This will launch the Script Editor, if it's not already running, and open a Script Editor window with the compiled AppleScript text.

2) Drag the AppleScript Applet onto the application icon of the Script Editor. This will launch the Script Editor, if it's not already running, and open a Script Editor window with the compiled AppleScript text.

3) Launch the Script Editor and choose Open Script from the File menu. Use the open file dialog to navigate and select the applet you wish to edit. The Script Editor will open a window with the compiled AppleScript text.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18896



Tech Info Library

Apple Personal Diagnostics: Frequently Asked Questions (1/97)

Revised: 1/17/97
Security: Everyone

Apple Personal Diagnostics: Frequently Asked Questions (1/97)

=====

Article Created: 27 November 1995
Article Review History: 17 January 1997

TOPIC -----

This article contains frequently asked questions (FAQ) on the Apple Personal Diagnostics (APD) software.

Questions answered in this FAQ:
=====

- 1) Apple Personal Diagnostics reports a disk or directory problem with my hard disk, but when I run Disk First Aid, no problems are found. What is causing this contradiction?
- 2) I have noticed that running APD while using video mirroring is causing trouble. Is APD compatible with video mirroring?
- 3) Is the Apple Personal Diagnostic (APD) 1.0 compatible with Power Macintosh computers?
- 4) I have System 7.5 with the System 7.5 Update 1.0 installed on my Power Macintosh computer. My Apple Personal Diagnostics 1.1 is reporting problems with my Power Macintosh computer's logic board. What should I do?
- 5) Is Apple Personal Diagnostics (APD) version 1.1.3 supported on the Power Macintosh 7200, 7500, and 8500 computers?
- 6) Sometimes when I try to launch my Apple Personal Diagnostics software or while I am using it, I get a low-memory alert. How do I correct this?
- 7) I ran the Disk First Aid utility and it said my hard disk needed to be repaired. However, the Repair button is dimmed.
- 8) I am following the System 7.5 upgrade guide, attempting to update the hard drive with Apple HD SC setup and it is unable to locate a suitable SCSI device.

I can see my hard disk icon. What does that message mean? Can I skip this step?

9) I ran the Disk First Aid utility and it said it found problems, but Disk First Aid cannot repair them. What should I do?

DISCUSSION -----

1) Question: Apple Personal Diagnostics reports a disk or directory problem with my hard disk, but when I run Disk First Aid, no problems are found. What is causing this contradiction?

Answer: Under some circumstances, Apple Personal Diagnostics may incorrectly report disk or directory problems, but drive diagnostics such as Disk First Aid may not find these problems. This situation is usually caused by extension conflicts with the Apple Personal Diagnostic utility.

For best results, when running Apple Personal Diagnostics, disable Extensions by holding down the Shift key at startup, then run the diagnostics.

2) Question: I have noticed that running APD while using video mirroring is causing trouble. Is APD compatible with video mirroring?

Answer: Apple Personal Diagnostics has known incompatibilities with video mirroring. If you sometimes use the video mirroring option, Apple recommends you make sure video mirroring is turned off before running APD.

3) Question: Is the Apple Personal Diagnostic (APD) 1.0 compatible with the Power Macintosh computers?

No, however APD version 1.1.1 fully supports the Power Macintosh 6100, 7100, and 8100 series computers. APD version 1.1.3 adds additional support for the Power Macintosh 9500 computer.

You can download the Apple Personal Diagnostics 1.1.3 Update from one of the Apple Software Updates areas located on America Online, CompuServe, and the Internet:

- * America Online - keyword: applecomputer

- * CompuServe - GO APLSUP

- * Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>

You can also call the Apple Order Center for the upgrade. The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

4) Question: I have System 7.5 with the System 7.5 Update 1.0 installed on my Power Macintosh computer. My Apple Personal Diagnostics 1.1 is reporting problems with my Power Macintosh computer's the logic board. What should I do?

Answer: Apple Personal Diagnostics 1.1 is generating a false error message. To resolve this you need to upgrade to at least version 1.1.1. The current version is 1.1.3.

You can download the Apple Personal Diagnostics 1.1.3 Update from one of the Apple Software Updates areas located on America Online, CompuServe, and the Internet:

- * America Online - keyword: applecomputer

- * CompuServe - GO APLSUP

- * Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>

You can also call the Apple Order Center for the upgrade. The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

5) Question: Is Apple Personal Diagnostics (APD) version 1.1.3 supported on the Power Macintosh 7200, 7500, and 8500 computers?

Answer: APD 1.1.3 is not supported on these computers. Here is a list of Apple computers supported by Apple Personal Diagnostics v1.1.3:

Apple Workgroup Server 60
Apple Workgroup Server 80
Apple Workgroup Server 95
Workgroup Server 6150
Workgroup Server 6150/66
Workgroup Server 8150
Workgroup Server 8150/110
Workgroup Server 9150
Workgroup Server 9150/120

Macintosh Plus
Macintosh Portable
Macintosh SE
Macintosh SE/FDHD
Macintosh SE/30
Macintosh Classic
Macintosh Classic II
Macintosh Color Classic
Macintosh Color Classic II
Macintosh TV

Macintosh II

Macintosh IIX
Macintosh IIIfx
Macintosh IICi
Macintosh IICx
Macintosh IISi
Macintosh IIvi
Macintosh IIvx
Macintosh IIvm

Macintosh LC
Macintosh LC II
Macintosh LC III
Macintosh LC 475
Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh LC 630

Macintosh Centris 610
Macintosh Centris 650
Macintosh Centris 660AV

Macintosh Performa 200
Macintosh Performa 250
Macintosh Performa 275
Macintosh Performa 400
Macintosh Performa 405
Macintosh Performa 410
Macintosh Performa 430
Macintosh Performa 450
Macintosh Performa 460 Series
Macintosh Performa 475
Macintosh Performa 476
Macintosh Performa 520
Macintosh Performa 550
Macintosh Performa 560
Macintosh Performa 570 Series
Macintosh Performa 580 Series
Macintosh Performa 600 Series
Macintosh Performa 630 Series
Macintosh Performa 640 Series
Macintosh Performa 5200 Series
Macintosh Performa 6100 Series
Macintosh Performa 6200 Series

Macintosh PowerBook 100
Macintosh PowerBook 140
Macintosh PowerBook 145
Macintosh PowerBook 145B
Macintosh PowerBook 150
Macintosh PowerBook 160
Macintosh PowerBook 165
Macintosh PowerBook 165c

Macintosh PowerBook 170
Macintosh PowerBook 180
Macintosh PowerBook 180c
Macintosh PowerBook 500 Series
Macintosh PowerBook Duo 200 Series

Macintosh Quadra 605
Macintosh Quadra 610
Macintosh Quadra 610 DOS Compatible
Macintosh Quadra 630
Macintosh Quadra 650
Macintosh Quadra 660AV
Macintosh Quadra 700
Macintosh Quadra 800
Macintosh Quadra 840AV
Macintosh Quadra 900
Macintosh Quadra 950

Power Macintosh 5200 LC/75
Power Macintosh 6100 Series
Power Macintosh 7100 Series
Power Macintosh 8100 Series
Power Macintosh 9500 Series

Note: APD also tests the Power Macintosh Upgrade and Macintosh Processor Upgrade cards. APD does not test the DOS Compatible Card or DOS Compatibility Upgrade Card.

6) Question: Sometimes when I try to launch my Apple Personal Diagnostics software or while I am using it, I get a low-memory alert. How do I correct this?

Answer: Apple Personal Diagnostics returns a low-memory alert when the APD application does not have enough memory to run or is running low on memory. For example, if you have created a report that requires more memory than is currently available. To allocate more memory to the APD application, you can do one or more of the following:

If you are using System 7.x, or System 6 with MultiFinder try the following:

- Quit other applications that may be running at the same time as APD
- If you have sufficient RAM installed in your system: quit the APD application, click once on the APD application icon, under File choose Get Info, increase the "preferred" application memory size from 1200K to 1500K
- Close any open report
- Reduce the size of any installed RAM disk and the system RAM cache.

If you are using System 6 with Finder rather than MultiFinder:

- Close any open report
- Reduce the size of any installed RAM disk and the system Disk cache

7) Question: I ran the Disk First Aid utility and it said my hard disk needed to be repaired. However, the Repair button is dimmed.

Answer: Disk First Aid is not being used properly. You cannot repair the startup disk with Disk First Aid. If you started from your hard drive, Disk First Aid cannot repair it until you start your Macintosh from another startup disk. Make sure you are starting up from your Power Macintosh CD, the System 7.5 Disk Tools floppy diskette, or other bootable disk. Disk First Aid also cannot repair the disk from which it was launched or any disk attached to a computer that has File Sharing turned on.

8) Question: I am following the System 7.5 upgrade guide, attempting to update the hard drive with Apple HD SC setup and it is unable to locate a suitable SCSI device. I can see my hard disk icon. What does that message mean? Can I skip this step?

Answer: This message may appear for two reasons:

- You may have used a non-Apple formatting utility to format your hard disk. If you have been using a previous version of System 7, you can safely skip this step and continue on with the installation of System 7.5. If you have been running System 6 or earlier, you should check with the vendor of either your hard drive or your hard drive's formatting utility and verify compatibility.
- Your computer may have an IDE hard drive which Apple HD SC Setup is not designed to format or update. You should use Drive Setup 1.0.2 to test, format, and partition your IDE hard drive.

The following computers use IDE hard drives:

Macintosh 630 Family computers*

Macintosh LC 580

Macintosh Performa 5200 series computers

Macintosh Performa 5300 series computers

Macintosh Performa 6200 series computers

Macintosh Performa 6300 series computers

Macintosh PowerBook 150 series computers

Macintosh PowerBook 190 series computers

Macintosh PowerBook 2300 series computers

Macintosh PowerBook 5300 series computers

Power Macintosh 5200/75 LC

Power Macintosh 5300/100 LC

*Note: The Macintosh 630 Family includes the following computers: Macintosh LC 630, Quadra 630, and Performa 630, Performa 635, Performa 636, Performa 637, and Performa 638.

9) Question: I ran the Disk First Aid utility and it reported it found problems, but Disk First Aid cannot repair them. What should I do?

Answer: This message indicates you have a corrupted directory structure. Apple

recommends backing up and reformatting a hard drive with a damaged directory. There are, however, third-party utilities such as "The Norton Utilities for the Macintosh", "Symantec Utilities for the Macintosh", and "Central Point's MacTools DiskFix" that attempt to repair damaged directories.

If a third-party utility cannot repair your hard disk, then back up all the data on your hard disk and reformat it using Apple HD SC Setup if you have a SCSI hard drive, Drive Setup 1.0.2 if you have an IDE hard drive.

Article Change History:

17 Jan 1997 - Updated all online references.
24 May 1996 - Updated for technical accuracy.
06 Feb 1996 - Updated supported computer listing.
09 Jan 1996 - Updated unsupported computer listing.

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Tech Info Library Article Number:18898



Tech Info Library

JLK: PowerBook 190, Freezes After Installation (5/96)

Revised: 5/14/96
Security: Everyone

JLK: PowerBook 190, Freezes After Installation (5/96)

Article Created: 8 November 1995
Article Reviewed/Updated: 14 May 1996

TOPIC -----

I have successfully installed the Japanese Language Kit (JLK) 1.2 on my PowerBook 190cs. When I restart my computer, it hangs after the Mac OS graphic. The menu bar is blank and the cursor is frozen. What is wrong?

DISCUSSION -----

The Macintosh PowerBook 190 and 190cs computers require you to install the Font Extension 3 software in the System Folder of your computer in order for the JLK software to load properly. This extension is in the Apple Extras folder on your PowerBook computer's hard drive.

Use the following procedure from the JLK Read Me to install the Font Extension 3 software.

Step 1

Follow the instructions for installing the Japanese Language Kit 1.2 that came with the software.

Step 2

After you see that the installation was successful, restart the computer with the Extensions off. To do this, hold down the shift key while you press the Restart button in the installer screen (or as you choose Restart from the Special menu). Continue holding the shift key down until you see the "Welcome to Macintosh, Extensions off" message.

Step 3

Double-click the Apple Extras folder on your hard drive to open it.

Step 4

Double-click the JLK 1.2 Update folder to open it.

Step 5

Drag the file "Font Extension 3" to the Extensions folder (inside the System Folder) on your hard disk. Click OK if you see a dialog box asking if it is ok to replace this file.

Step 6

Choose Restart from the Special menu.

Your JLK software is now ready to use.

Article Change History:

14 May 1996 - Removed erroneous reference to PowerBook 2300 and 5300 series computers

08 Jan 1996 - Added PowerBook 2300 and 5300 series computers to article.

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Tech Info Library Article Number:18899



Tech Info Library

Performa 5200,5300,6200,6300: Static Sound (2/96)

Revised: 2/16/96
Security: Everyone

Performa 5200,5300,6200,6300: Static Sound (2/96)

Article Created: 8 November 1995
Article Reviewed/Updated: 16 February 1996

TOPIC -----

I just restored the system software on my Macintosh Performa computer. Now, I hear static whenever my computer plays any sounds, except for audio CD-ROM discs.

DISCUSSION -----

Power Macintosh or Macintosh Performa 5200, 5300, 6200, and 6300 series computers with 16-bit audio capabilities may experience static when playing sounds from the hard drive or CD-ROM discs. However, audio CD-ROM discs sound fine.

To resolve this, you need to install the Audio Volume Extension. Although these computers originally included the Audio Volume extension, the system software CD may not include it. You can download a copy of the Audio Volume Installer disk image from the Apple Software Update locations. Follow the steps below to determine if you need this extension:

Step 1

Verify that your computer has 16-bit sound.

1. Open the Sound control panel
2. Select Sound Out from the Alert Sounds pop-up menu.
3. Check to see if the 16-bit radio button is selected. If so, your computer has 16-bit sound. If 8-bit sound is selected, you do not need the Audio Volume extension.

Step 2

Determine when the static occurs.

1. Verify that the static occurs only from programs on the hard disk or CD-ROM disc, not audio CD-ROM discs.
2. Open the Sound control panel. Listen to several of the standard system alert sounds at both even- and odd-numbered alert volume levels.

If you hear any distortion or static during the playback of these sounds at even numbered alert levels **ONLY**, then you should install the Audio Volume Extension. If you hear distortion or static at all levels, it is recommended to have the computer serviced.

These articles can help you locate the software mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

16 Feb 1996 - Clarified step 2.

01 Dec 1995 - Updated technical information.

Support Information Services

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Tech Info Library Article Number:18900



Tech Info Library

MacX 1.5 Read Me (4/97)

Revised: 5/1/97
Security: Everyone

MacX 1.5 Read Me (4/97)

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Article Created: 8 November 1995

TOPIC -----

This article is the MacX 1.5 ReadMe file.

DISCUSSION -----

MacX 1.5 is Apple Computer's enhanced X Window System server for the Apple Power Macintosh and 680x0-based Macintosh platforms. MacX lets users work with Macintosh applications and network-based X client applications simultaneously on their desktops.

Here are some of the features that are new to MacX 1.5:

- X11R5 compliance
- Acceleration for Power Macintosh computers (fat binary for PowerPC-based and 680x0-based support)
- Performance tuning for 680x0 computers (new compiler)
- Standard X11R6 fonts (.PCF and .BDF files)
- Standard X11 font server access
- Standard X11 XDM support (for starting Unix X sessions)
- Support for XIE (X Image Extension) on PowerPC platforms
- A sample font directory with CDE font aliases
- Balloon Help
- Single-button installation

- Support for core Apple events
- New remote login option (RSH)
- Upgrade to MacTCP 2.0.6

MacX 1.5 retains many of the MacX 1.2 features, including support for multiple monitors, the ability to display rooted and rootless windows simultaneously, built-in window management for rootless windows, and the ability to cut and paste text and graphics.

System Requirements

=====

- System 7.0 or higher
- Apple Macintosh with 68030 or 68040, or Power Macintosh processor
 - 680x0 users will benefit from having 8 or more megabytes (MB) of RAM
 - Full installation requires approximately 13 MB of disk space
 - Minimal installation requires approximately 7 MB of disk space
- Ethernet hardware

MacX users typically access X clients with TCP/IP over Ethernet. MacX 1.5 includes MacTCP version 2.0.6. All Power Macintosh and many newer 680x0 computers include built-in Ethernet hardware. Users with other hardware configurations will need the appropriate NuBus or PDS slot Ethernet cards for their computers.

MacX 1.5 also works with DECnet software and other third-party TCP/IP software packages. In certain configurations, MacX also runs on AppleTalk connections with the appropriate router software.

Installation Notes

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Before starting the installation, restart your computer with extensions off. (Press and hold the Shift key while choosing Restart from the Special menu.) Double-click the MacX Installer Script icon to begin the installation.

Users who have already installed System 7.5 or later should already have a version of MacTCP installed that is compatible with MacX. If you already have version 2.0.6 or later of MacTCP installed on your computer, the MacX installation process will leave that version untouched.

If you have not previously used MacTCP on your system, you must set your computer's internet address in the MacTCP Control Panel. (See the MacTCP Administrator's Guide, which is provided on the MacX CD-ROM disc.) If you do not

have a domain name server available on your network, you will want to update the Hosts file in your System Folder with your local host names. You must restart for changes to take effect.

IMPORTANT:

If you have Open Transport installed on your computer (for example, new PCI-based computers), do not install MacTCP. (Choose the Custom Install option and skip installing MacTCP.) Be sure to fully configure your TCP/IP control panel to include a default router and a domain name server.

After installing MacX, you may want to increase its preferred memory size. Select the MacX application icon by clicking it once. Then choose Get Info from the File menu in the Finder. Enter a new preferred memory size in the Info dialog box.

Network Installation

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If your licensing agreement allows multiple copies of MacX, you may want to perform a network-based installation. Users with network access to the MacX CD-ROM can simply open up the MacX 1 folder and double-click the MacX Installer Script icon.

Font Management

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MacX supports the traditional view of fonts in X11 (it does not currently give users access to their native Macintosh TrueType or Bitmap fonts). The Easy Install option will install the miscellaneous, 75 dpi, and 100 dpi font directories. You can choose Fonts from the Edit menu in MacX to display a dialog box that lets you modify the default font path. The Fonts dialog box also provides other font utility functions. See the MacX User's Guide for more information.

Other Tidbits

=====

These shortcuts or hints may prove useful:

- To move an X client window that doesn't have a title bar, press the Option key while dragging the window.
- To scroll within a rooted window, press the Option-x keys and the mouse button simultaneously. The pointer changes to a hand, allowing you to scroll through the window.
- To edit a remote command, press the Option key while choosing a command from the Remote menu.

Known Problems

=====

These problems may occur when you use MacX 1.5:

- Built-in window manager (rootless) is missing support for newer ICCCM hints.
- Shaped parent windows don't work very well in rootless mode.
- Color palette management with two Macintosh monitors is less than optimal.
- Switching between the rexec and rsh remote clients may not work.

Known Conflicts

=====

Older versions of MacTCP and Ethernet drivers may occasionally lock up or hang MacX. The maze application may exacerbate this situation due to maze's high packet rates.

Technical Support

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Please refer to the MacX documentation for questions about using MacX. If you need additional help, you can call 1-800-SOS-APPL for direct access to support engineers knowledgeable about MacX.

Support is available Monday through Friday, from 6 a.m. to 6 p.m. (PST).

Technical support engineers handle questions about configuration, installation, compatibility, and product use. Technical support engineers do not resolve presale or development questions, nor questions about modified hardware or software source code.

Apple also provides the Apple Tech Info Library (TIL), an excellent online reference source for technical information. You can search through thousands of articles on current and past Apple products. The articles are updated regularly by Apple Support personnel.

The Apple Tech Info Library is available on:

- Internet - <http://www.info.apple.com/til.html/>
- CompuServe - GO APLTIL
- America Online - Select the Keyword command in the GoTo menu (or cmd-K) and enter Apple Computer in the search window.

Article Change History:

..TIL18901-MacX_1-5_Read_Me_4-97_(TA34694).pdf

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18901



Tech Info Library

PowerBook 5300: Portable StyleWriter Compatibilty (4/96)

Revised: 4/25/96
Security: Everyone

PowerBook 5300: Portable StyleWriter Compatibilty (4/96)

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Article Created: 8 November 1995
Article Reviewed/Updated: 25 April 1996

TOPIC -----

Is the Portable StyleWriter compatible with the PowerBook 5300?

DISCUSSION -----

Setting Up
=====

Here are the steps to configure your PowerBook 5300 series computer to print to a Portable StyleWriter.

Step 1

Installing the Portable StyleWriter driver with the Installer.

Step 2

Connecting the printer to your PowerBook 5300 series computer with a serial cable.

Step 3

Pull down the Apple Menu and select Chooser.

Step 4

In the Chooser, if you were using LocalTalk, set AppleTalk to Inactive. If you are using EtherTalk or IRTalk, you may keep AppleTalk Active.

Step 5

Select the Portable StyleWriter driver

Step 6

Select the Modem port icon (even though two icons appear, the PowerBook 5300 series computers have only one physical serial port and you need to select the Modem port).

Notes

=====

1. The latest Portable StyleWriter driver shipped by Apple is v1.0.1 and is posted online in all of the available Apple Software Updates areas.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:

22 Mar 1996 - Added information about latest Portable StyleWriter software.

25 Apr 1996 - Removed reference to SerialDMA.

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Tech Info Library Article Number:18902



Tech Info Library

ImageWriter II: Color Printing Not Supported by Driver (5/96)

Revised: 5/6/96
Security: Everyone

ImageWriter II: Color Printing Not Supported by Driver (5/96)

Article Created: 8 November 1995
Article Reviewed/Updated: 6 May 1996

TOPIC -----

I cannot get my ImageWriter II printer to print in color. Color printing is not an option in either the Page Setup, or the Print dialog. How can I get the ImageWriter to print in color?

DISCUSSION -----

Color printing on the ImageWriter II printer is not part of the ImageWriter II Printer Driver. It requires the application you are using to generate the proper commands for color printing. For compatibility information on a particular application, call the vendor of the application.

If you have Quickdraw GX installed, you can print in color from most applications even if the application does not support color printing from the normal imagewriter driver, or is not QuickDraw GX-savvy.

Other Solutions
=====

You may also want to consider a third-party solution such as MacPalette II from Microspot. MacPalette II provides an ImageWriter II printer driver that allows color printing from most applications.

Determining if the Printer is Working Properly
=====

If you generate a test page with the color ribbon installed, you can determine if the printer is printing color properly. The test page will print multi-color letters on the page.

Generating a Test Page

=====

Step 1

Turn the ImageWriter II printer off

Step 2

Hold down the power and form feed buttons

Step 3

Turn the ImageWriter II on, then release the buttons.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

06 May 1996 - Added information on QuickDraw GX.

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Tech Info Library Article Number:18903



Tech Info Library

GeoPort 2.3 Telecom Adapter ReadMe (5/96)

Revised: 10/28/96
Security: Everyone

GeoPort 2.3 Telecom Adapter ReadMe (5/96)

Article Created: 8 November 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the GeoPort 2.3 Telecom Adapter Read Me file.

DISCUSSION -----

Software Included in the GeoPort Telecom Adapter Kit

Apple Telecom Software

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 7200 series, 7500/100, 8100 series, 8500/120, and 9500 series.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.x software on Macintosh systems equipped with an Express Modem card.

NOTE: For Power Macintosh 7200 series, 7500/100, 8500/120, and 9500 series, version 2.1 or higher of Apple Telecom Software is required. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any LocalTalk devices attached to the printer port (serial devices can remain attached).

IMPORTANT: If you select "Sleep" from the Special Menu available on some Power Macintosh models while there is an active GeoPort connection, the GeoPort

Telecom Adapter will automatically disconnect the call without warning. When a Power Macintosh 7200 series model is in the low-power mode, the GeoPort Telecom Adapter will wake up the machine if the telephone rings and the machine is awaiting an incoming call. The monitor will remain in the low-power mode. While a connection is open via a GeoPort Telecom Adapter, your Power Macintosh will not enter the low-power mode, but the monitor will dim the screen.

MegaPhone (for United States, Canada, and Japan only)

This is a screen-based telephone application that delivers full support of the telephony capabilities of the Apple Telecom 2.x software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information, and voice-mail functions.

The GeoPort Telecom Adapter Kit also includes a free 30-day trial of call logging, MegaDial dialing manager, intelligent synchronization with directory information (saving telephone numbers to a PowerTalk catalog, for example), and other extended capabilities.

See also: the MegaPhone electronic manual included on Disk 3 (Telecom Applications).

NOTE: MegaPhone is not installed by the Apple Telecom Installer program. You must install it separately.

SITcomm SE/GTA (for United States and Canada only)

This is a terminal emulator application. With SITcomm SE/GTA (Special Edition for GeoPort Telecom Adapter), your Macintosh can communicate with a variety of other computers, linked by serial cables or by telephone lines.

With SITcomm you can exchange information with

- A colleague who is using another computer with similar communications software.
- Text-based information and electronic mail services, such as CompuServe or MCI Mail.
- Your company or school's remote minicomputer or mainframe.

See also the SITcomm SE electronic manual included on Disk 4 (Telecom Applications).

NOTE: SITcomm is not installed by the Apple Telecom Installer program. You must install it separately.

NOTE: SITcomm (Disk 4) is not included with free upgrades. You can order the full upgrade, including SITcomm SE and the Apple Telecom User's Guide manual, by calling the Apple Order Center. Ask for the Apple Telecom software version 2.x upgrade for use with your GeoPort Telecom Adapter.

Upgrading From Previous Releases of GeoPort Telecom Adapter Software

=====

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

NOTE: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version; you may delete them.

Connection (CCL) Scripts for Apple Remote Access

=====

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)

ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center.

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select one of these connection files in the Apple Remote Access Setup control panel.

NOTE: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Remote Access Dial Back

If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX with QuickDraw GX 1.1

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The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex grayscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

NOTE: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk Network

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Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

NOTE: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

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The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

NOTE: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

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The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript printers.

Troubleshooting

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Online Services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying incoming calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone), we recommend that you select Voice as the default call type. If you are using a data

telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing fax storage folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Using a Centris 660AV or Quadra 660AV/840AV

If you are using a Centris 660AV or Quadra 660AV/840AV and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with the GeoPort Telecom Adapter. To change this setting, open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

Clicking sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

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The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660AV/840AV). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually

attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

What goes where
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When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter ReadMe
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- Modem AT Command Set

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- AudioTuneUp (9500 series only)
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)

- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension (660/840AV and 6100/7100/8100 series only)
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

26 May 1996 - Updated for technical accuracy.

08 Feb 1996 - Removed keyword.

04 Jan 1996 - Added keyword.

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Tech Info Library Article Number:18904



Tech Info Library

GeoPort 2.3 and Compatible Computers (11/95)

Revised: 11/9/95
Security: Everyone

GeoPort 2.3 and Compatible Computers (11/95)

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Article Created: 8 November 1995

TOPIC -----

This article provides the computers which are compatible with the GeoPort 2.3 Telecom Adapter.

DISCUSSION -----

Following is the list of GeoPort compatible computers from the GeoPort 2.3 Telecom Adapter Read Me:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 7200 series, 7500/100, 8100 series, 8500/120, and 9500 series.

Support Information Services

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Tech Info Library Article Number:18905



Tech Info Library

System 7.5.2: Control Strip Software (11/95)

Revised: 11/9/95
Security: Everyone

System 7.5.2: Control Strip Software (11/95)

Article Created: 9 November 1995

TOPIC -----

This article describes the Control Strip software included on the Power Macintosh 7500 and 8500 computers and also installed by the AppleVision 1710 AV Display software.

For information on the Control Strip software on PowerBook computers see the TIL article "PowerBook: Control Strip Software".

DISCUSSION -----

The Control Strip that ships with System 7.5.2 on the Power Macintosh 7500 and 8500 is only supported on these computers. The AppleVision 1710 AV Display also includes the Control Strip software, but only includes modules for controlling the monitor.

The Control Strip by default appears at the bottom left portion of your screen, but can be moved easily to fit your needs. To do this, hold down the option key while dragging the sizing tab.

The location of each function (known as "modules") can be changed within the strip by option-click dragging the module you wish to move to a different position. The strip can be easily re-sized by dragging the sizing tab on the end of the strip.

Modules that appear within the Control Strip are stored in the Control Strip Modules folder of the System Folder. These modules cannot be modified but some applications or developers may provide Control Strip Modules which can be installed in the Control Strip Modules folder. It is important to note that all modules in this folder may not appear in the Control Strip depending on the features of the computer you are using.

The following modules are included in the Control Strip with System 7.5.2 on the Power Macintosh 7500 and 8500 computers:

- AppleTalk Switch

Allows user to switch AppleTalk on or off without going to the Chooser and without restarting.

- File Sharing

Allows user to switch file sharing on or off and change the sharing setup. A red "X" through the File Sharing folder icon usually means AppleTalk was not loaded during startup. To start AppleTalk, select "AppleTalk: Active on restart" in the Chooser and restart the computer.

NOTE: Changing file sharing settings on the Control Strip will only create a temporary change and therefore will return to its original setting once the computer has been restarted. To make the setting permanent, it is necessary to make changes using the Sharing Setup control panel.

- Sound Volume

Allows you to adjust the volume setting of the computer.

- Video Mirroring

Allows you to switch the video mirroring feature on or off. Video mirroring is only available when a television or other NTSC device is receiving video from a Power Macintosh 8500 with 4 MB of VRAM.

The following modules are included in the Control Strip with System 7.5.2 and the AppleVision 1710 AV Display software:

- Monitor Bit Depth

Allows you to adjust the color depth of the monitor.

- Monitor Resolution

Allows you to adjust the resolution on a multiple-scan capable display.

It is also possible to get a description of each module in the Control Strip through Balloon Help. To do this, pull down the Help Menu, choose Show Balloons, and point to the modules one at a time.

Support Information Services

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Tech Info Library Article Number:18908



Tech Info Library

At Ease 3.0: Frequently Asked Questions (1/97)

Revised: 1/20/97
Security: Everyone

At Ease 3.0: Frequently Asked Questions (1/97)

Article Created: 10 November 1995
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article contains frequently asked questions (FAQ) on the At Ease 3.0 software.

Questions answered in this FAQ:

1) I use At Ease 3.0's Restricted Finder. My computer freezes when I drag a file to a Desktop Printer icon. How can I resolve this?

2) I am getting an error message when I try to edit an existing Setup, it states: "The setup <name of setup> is being modified by another administrator. Please try again later." The message occurs AFTER At Ease Setup is open, not before. How do I resolve this?

3) I have created a setup that does not have access to the control panels, yet my users can still increase and decrease the sound volume and the screen brightness using the buttons on the front of the Macintosh/ Performa 5300, 5200, 580, 575, 550, & 520 computers. How can I keep the users from changing these settings?

4) My At Ease workstations do not shut down after clicking on the Shut Down button in the login pane. Instead, the login pane disappears and all I can see is the background pattern with the beach ball cursor spinning counter-clockwise. How can I resolve this?

5) I am using At Ease 3.0's Restricted Finder and it will not mount the MS-DOS floppy disks; instead, it asks to format them. It will mount Macintosh disks. If I switch to the normal Finder it will recognize MS-DOS floppy disks.

6) How do I rebuild the desktop with At Ease running?

7) Students are holding down the space bar at startup to open the Extensions Manager. Then they disable (deselect) At Ease Startup. The next time the computer restarts, it goes straight to the Finder. How can I prevent my students from getting access to the Finder, yet still run System 7.5 and At Ease?

8) How do I add existing documents or new applications to a particular user and not to all users of a setup?

9) A user changed his password, but it only works on the computer he changed it on. Why don't the other computers recognize it?

DISCUSSION -----

1) Question: I use At Ease 3.0's Restricted Finder. My computer freezes when I drag a file to a Desktop Printer icon. How can I resolve this?

Answer: You need to upgrade the Desktop Printing Software to at least version 1.0.3. (The current version is 2.0.1)

You can download Desktop Printing Software 1.0.3 from one of following online locations:

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Apple Software Updates are posted to a variety of online services, please search the Apple Tech Info Library (on the Internet at <<http://til.info.apple.com/>>) by the string "Apple Software Updates" for a current list of online services we post Apple Software Updates to (You can also use the special string: kol to search for this information in the Apple Tech Info Library).

2) Question: I am getting an error message when I try to edit an existing Setup, it states: "The setup <name of setup> is being modified by another administrator. Please try again later." The message occurs AFTER At Ease Setup is open, not before. How do I resolve this?

Answer: Quit At Ease Setup. Hold down the Command (Apple) key and run At Ease Setup again. Continue holding the Command key (except when entering the Admin name/password) until you get the message "Are you sure you want to validate the Users and Setups databases now?" Click on the OK button.

3) Question: I have created a setup that does not have access to the control panels, yet my users can still increase and decrease the sound volume and the screen brightness using the buttons on the front of the Macintosh Performa/LC 580, 575, 550, 520, 5200, 5300, and 5260 computers. How can I keep the users from changing these settings?

Answer: System 7.5 includes a control panel called Button Disabler that can be installed by doing a custom system software install. This control panel has a single check box that, when checked, deactivates the sound and brightness controls on the front of Macintosh computers with built-in controls.

Use the custom install feature of your Macintosh CD to install the Button Disabler control panel, restart your computer, and click to place an X in the box to the left of "Disable Buttons".

4) Question: My At Ease workstations do not shut down after clicking on the Shut Down button in the login pane. Instead, the login pane disappears and all I see is the background pattern with the beach ball cursor spinning counter-clockwise. How can I resolve this?

Answer: You have AppleShare Workstation version 3.6 installed on the workstations. AppleShare Workstation 3.6 comes with AppleShare 4.1 and 4.2. At Ease 3.0 and At Ease for Workgroups 3.0 do not support AppleShare Workstation 3.6.

You have two options:

- Select Shut Down from someplace else. For example, you can log into any Setup/User and choose Shut Down from the Apple menu or the Special menu.
- Revert to a previous version of AppleShare Workstation. To do this, you can custom install the networking software that came with your system software. If you choose this method you will not be taking full advantage of the speed capabilities of the AppleShare 4.1 software.

5) Question: I am using At Ease 3.0's Restricted Finder and it will not mount the MS-DOS floppy disks; instead, it asks to format them. It will mount Macintosh disks. If I switch to the normal Finder it will recognize MS-DOS floppy disks.

Answer: Add the PC Exchange control panel to At Ease by using the Find Items option in At Ease Setup, OR give the Restricted Finder setup access to the Control Panels.

6) Question: How do I rebuild the desktop with At Ease running?

Answer: To rebuild the desktop, the Command and Option keys must be pressed while the Finder is loading. Here are two methods to do this with At Ease running on your computer:

Method A: Rebuilding the Desktop at Startup

Step 1

Start your computer holding down the shift key. Continue pressing the Shift key until you see the message, "Welcome to Macintosh, Extensions off". Release the

Shift key and press and hold the Command and Option keys simultaneously.

Step 2

If you have not used a password to protect the Finder you will go directly to Step 3.

If you have used a password to protect the Finder, you will get a message asking you to enter it in the next screen. Release the Command and Option keys and click OK. Enter your password in the next dialog box and hold down the Command and Option keys while you click OK. Go to Step 3.

Step 3

At the dialog box asking you if you are sure you want to rebuild the desktop, click OK.

Method B: Rebuilding the Desktop While in At Ease

You can rebuild the desktop from within the At Ease panels if you have access to the Go To Finder option under the Special menu.

Step 1

Press and hold the Command and Option keys while choosing Go To Finder from the Special menu.

Step 2

If you have not used a password to protect the Finder you will go directly to Step 3.

If you have used a password to protect the Finder, you will get a message asking you to enter it in the next screen. Release the Command and Option keys and click OK. Enter your password in the next dialog box and hold down the Command and Option keys while you click OK. Go to Step 3.

Step 3

At the dialog box asking you if you are sure you want to rebuild the desktop, click OK.

Note: If you go to the Finder, then go back to At Ease through the Application menu instead of the File menu, and then try to rebuild the desktop using Method B, it does not work because the Finder is still running when you switch back to it.

7) Question: Students are holding down the space bar at startup to open the Extensions Manager. Then they disable (deselect) At Ease Startup. The next time the computer restarts, it goes straight to the Finder. How can I prevent my students from getting access to the Finder, yet still run System 7.5 and At

Ease?

Answer: This issue was fixed in At Ease 3.0. If you are using an earlier version of At Ease, here are two workarounds:

Remove Extensions Manager From the Control Panels folder

Move the Extensions Manager control panel out of the Control Panels folder of your System Folder. This will prevent the Space bar from activating the Extensions Manager at startup.

Users with access to the Finder can still open the Extensions Manager and use it without it actually residing in the Control Panels folder. In other words, moving it out of the Control Panels folder will not disable it entirely, it will only disables using the Space bar to access it at startup.

Remove Extensions Manager From the Extensions folder

You can also remove the EM Extension from the Extensions folder of your System Folder, which also prevents the Space bar from opening the Extensions Manager at startup. If you remove the EM Extension, the Extensions Manager will no longer be functional to any user, even if the user has access to the Finder.

At Ease will NOT let users without Finder access open the Extensions Manager control panel even if they have access to other control panels.

8) Question: How do I add existing documents or new applications to a particular user and not to all users of a setup?

Answer: In the Finder, place the items in that particular user's Documents folder. Here's how:

Step 1

Form the Finder, Open the Documents folder on the At Ease disk.

Step 2

Inside the Documents folder is an individual Documents folder for each user who has logged on to this At Ease disk. Find the user's own folder.

Step 3

Move the documents, aliases, or applications you wish to add to this user's documents panel.

Anything you add to the user's documents folder, including applications, will appear in the user's document panel not the At Ease Items panel.

9) Question: A user changed his password, but it only works on the computer he changed it on. Why don't the other computers recognize it?

Answer: If your workgroup is not on a server, you will have to update each Macintosh in the group separately so they "know" about the new password.

10) Question: The administrator changed the configuration of one of the Setups, then tried to update the other computers. Why didn't the changes show up?

Answer: When you update over the network, each computer will receive the new information. However, At Ease will not reflect the changes on a computer until you Quit and re-launch At Ease on that computer.

Article Change History:

20 Jan 1997 - Added online references.

07 Jan 1997 - Removed Performa 5400 from Button Disabler section.

11 Sep 1996 - Added Performa/LC 5260 and 5400 series computers.

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Tech Info Library Article Number:18909



Tech Info Library

Audio Volume 1.1: Read Me File (11/95)

Revised: 11/10/95
Security: Everyone

Audio Volume 1.1: Read Me File (11/95)

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Article Created: 9 November 1995

TOPIC -----

This article contains the ReadMe file from the Audio Volume 1.1 software posted online.

DISCUSSION -----

Important Information About Reinstalling Performa Software

This document tells you how to install the Audio Volume software on your computer after you have reinstalled your Performa software. You need to install the Audio Volume software only after you reinstall Performa software. The Audio Volume software improves sound quality on your computer.

You may want to print this document and keep it with your manuals, since this information may not be in the documentation that came with your computer. After you finish reading this document, choose Quit from the File menu.

Installing the Audio Volume Software

To reinstall Performa software on your computer, follow the instructions in the Macintosh Performa CD booklet, then follow these steps:

Step 1

Insert the disk System Backup Disk: Audio Volume Installer into your floppy disk drive.

Step 2

Find and double-click the Install Audio Volume icon.

Step 3

Follow the instructions that appear on the screen. If you get a message asking you if it's OK to place the Audio Volume software in a folder or to replace an earlier version of the file, click OK. The instructions on the screen let you know when the installer has finished installing the Audio Volume software.

When your computer restarts, the Audio Volume software is installed on your computer. Keep the disk System Backup Disk: Audio Volume Installer in case you ever need to reinstall Performa software again.

Support Information Services

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Tech Info Library Article Number:18910



Tech Info Library

ColorSync 2.0 Photoshop Plug-In Modules 1.3: Read Me File (4/97)

Revised: 4/28/97
Security: Everyone

ColorSync 2.0 Photoshop Plug-In Modules 1.3: Read Me File (4/97)

Article Created: 9 November 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article contains the ReadMe file included with the ColorSync 2.0 Photoshop Plug-in Modules 1.3 posted online.

DISCUSSION -----

ColorSync 2.0 Photoshop Plug-In Modules 1.3 Read Me

What are ColorSync 2.0 Plug-In Modules?

The ColorSync 2.0 Plug-In Modules provide an easy way for you to obtain high quality reproduction of color images. Together with the ColorSync 2.0 System Extension and the installed device profiles, the ColorSync 2.0 Plug-In Modules ensure that your color images will be reproduced most accurately on any device. Three Modules (Acquire, Export, and Filter) are available to fit into any type of work-flow, and to provide color matching capabilities to the novice color user as well as to the most demanding color user.

With the Plug-In's you will be able to:

- Accurately print the image viewed on your monitor.
- Accurately print or view the image you have scanned.
- Embed a profile in your image to be specified as the image's source.
- Make color separations for any press printing condition.
- Use your in-house device to preview what your image will look like on the printing press.
- Execute any custom color matching needed.

What are the system requirements?

Before using any of the modules, you should make sure that:

- Your Macintosh has a 68020 or later processor, or a PowerPC 601 or later

processor.

- Your Macintosh is running System Software version 7.1 or higher.
- The ColorSync 2.0 System Extension and ColorSync 2.0 System Profile Control Panel are installed in the Extensions and Control Panels folders, respectively.
- The ColorSync 2.0 (or ICC-compatible) profiles for your peripherals are installed in "System Folder:Preferences:ColorSync Profiles" folder.
- You are using Adobe Photoshop version 2.5.1 or later, or other software that accepts version 4.0 Photoshop Plug-In modules.

How do I install the software?

If ColorSync 2.0 is not already installed on your system, you can download a copy of the ColorSync installer disks from any of the on-line services mentioned at the end of this document. Please follow the instructions that are included on the disk before installing ColorSync 2.0.

The ColorSync 2.0 Plug-In Modules are installed by coping all three into the "Acquire Export" folder in your Photoshop 3.0 Plug-Ins folder. For Photoshop 2.5, copy all three directly into the "Plug-Ins" folder. For other applications that use plug-ins, refer to the documentation that comes with the application.

Important Definitions

Color matching/color reproduction:

The process of making a controlled transformation of color values generated from one device to values intended for another device.

Profile:

A file containing information about the color reproduction capabilities of a device, such as a scanner, a digital camera, a monitor , or a printer. Commonly, two profiles (source and output) are used during a color matching session.

Source profile:

A profile representing a device from which an image was originated. For example, if an image is scanned in, then the scanner profile is the source profile. Or, if an image is created and viewed on the monitor, then the monitor profile is the source profile.

Output profile:

A profile representing a device on which an image is to be outputted. For example, if an image is to be printed on a color printer, then the printer's profile is the output profile. Or, if an image is to be viewed on the monitor, the monitor profile is the output profile.

Proofer profile:

Proofing is the process of using one device to predict the output of an image on another device. A proofer profile represents the device which is used for the prediction. For example, if an image whose output on a color printer is to be proofed on a monitor, the monitor profile will be the proofer profile.

Matching style:

Because of the differences among devices' color capability, different methods exist for applying color matching on an image. The matching style is usually selected according to the content of the image . See below.

Perceptual matching style:

A matching style which gives the most pleasing reproduction given the capabilities of the devices involved. This is the most commonly used style, especially for reproduction of photographic images.

Colorimetric matching style:

A matching style where colors are reproduced exactly the same as the eye can distinguish. This may result in clipping of certain colors which can not be reproduced on a device. Colorimetric matching can further be divided into relative colorimetric matching and absolute colorimetric matching, where relative matching accounts for the ability of the human eye to automatically adapt to the surround white (e.g., white of the paper the image is printed on), and absolute does not. Colorimetric matching is most commonly used for reproducing Logo colors where the exactness of the color is important.

Saturation matching style:

A matching style where the vividness of the image is best preserved. This style is mostly used for reproduction of graphs and pie charts.

Matching quality:

The matching quality indicates the overall computation precision of a particular matching session. Higher computation precision requires more run-time memory. It is always best to use the highest matching quality your system allows.

Using the Acquire Module:

The Acquire Module will import a Tiff image from disk into Photoshop while applying ColorSync matching. The Acquire Module is most convenient to use if you simply want to match your image for printing from Photoshop, or if you want to match an image you scanned previously for viewing.

To use the Acquire Module:

Step 1

In Photoshop, select the "Tiff with ColorSync Profile..." from the "Acquire" menu under "File". A standard file selection dialog box appears prompting you to select a Tiff image to be imported.

Step 2

Select the Tiff image you want to import and click the "Open" button. The ColorSync Acquire Module dialog box appears. Select the appropriate "Source" and "Output Profile" for the image, and select the desired "Matching Style" and "Quality" setting. Refer to the "Important Definitions" section above for more explanations .

Step 3

Click the "Import" button to start importing.

Note 1: If the Tiff image to be imported already has a profile embedded, the embedded profile will show up on the list of available Source Profiles as an *Italic* item.

Note 2: Only profiles whose color space information match that of the selected Tiff image appear in the list of "Source Profiles". Therefore, for a Tiff CMYK image, only profiles that are CMYK based are available as "Source Profile".

Note 3: Certain Tiff images cannot be imported if they contain unsupported Tiff image format features such as compression.

Using the Filter Module:

The Filter Module will apply ColorSync matching on the current Photoshop image. The Filter Module is most convenient for matching an image which is already in Photoshop without writing it to disk.

To use the Filter Module:

Step 1

In Photoshop, select the "ColorSync Filter" in the "Color Matching" menu under "Filter". The ColorSync Filter Module dialog box will appear.

Step 2

Select the appropriate "Source" and "Output Profile" for the image, and select the desired "Matching Style" and "Quality" setting. Refer to the "Important Definitions" section above for more explanations.

Step 3

Click the "OK" button to start filtering.

Note: Due to limitations of the Photoshop Filter Module API, the ColorSync Filter Module can only match images from/to the same color space. Therefore, it cannot match an RGB image for a CMYK device, and vice versa.

Using the Export Module:

The Export Module will save the current Photoshop image to disk as a Tiff image with ColorSync matching applied. It is the most flexible module out of the three.

To use the Export Module:

Step 1

In Photoshop, select the "Tiff with ColorSync Profile..." module from the "Export" menu under "File". The ColorSync Export Module dialog box will appear.

Step 2

Select the desired choice from "Processing Selection". Action for each of the choices are as follows:

- "Embed" simply embeds into the current image the selected "Source Profile" with the selected "Matching Style". No color matching occurs.
- "Match" applies a matching session using the selected "Source" and "Output Profile" and the selected "Quality" and "Matching Style". The "Output Profile" is also embedded in the output image to indicate that the matched image is now intended for the device associated with the profile.
- "Proof Matched" applies a proofing session using the selected "Source", "Output", and "Proofer Profile" and the selected "Quality" and "Matching Style". "Matching Style" is applied separately for the source-to-output match AND for the output-to-proof match. The "Proofer Profile" is also embedded to indicate that the matched image is now intended for the device associated with the profile.
- "Custom" enables more extensive matching sessions.

Click the "Export" button if "Embed", "Match", or "Proof" is selected and go to step 6. Click the "Select..." button if "Custom" is selected and go to step 3 below.

Step 3

"Custom" matching is used for the rare occasion when you want to perform matching with many profiles. It comes up with a dialog box with a scrollable list of "Profiles Selected" and a "Quality" selection that is to be applied for the entire matching session.

Step 4

Click the "Add Profile" button to add a profile after the last element on the "Profiles Selected" list. This brings up the list of available profiles. Select the desired profile and the "Matching Style" setting and click the "Add" button. The "Matching Style" selecting is applied for the match from the current profile to the next selected profile. The "Matching Style" of the last selected profile is ignored.

Step 5

Repeat step 4. as many times as necessary to add more profiles to the list. When done, click the "Export Tiff..." button. To remove a profile from the list, all succeeding profiles following that profile must be removed first. To remove the last profile from the list, simply select the profile and click "Remove Profile".

Step 6

The standard save file dialog box will appear prompting for a name of the image file to be saved as. Enter the desired file name and click the "Save" button to execute.

Note: An image must be loaded in RGB or CMYK mode in order for the "Tiff with Color Sync Profile" menu item in the Export menu item to be selectable. The item is not selectable if the image is in indexed mode.

Where do I go for more information?

- ColorSync system extension available on-line from:

Internet: <http://www.austin.com/macros>

- ColorSync White Paper, available on line from :

Internet: http://www.austin.com/macros/tech/media/colorsync/cs_wp/contents.html

- Bug reports :

Internet: apple.bugs@applelink.apple.com

Article Change History:

09 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18911



Tech Info Library

Power Macintosh: Type 11 & No FPU Errors Technote (7/96)

Revised: 7/3/96
Security: Everyone

Power Macintosh: Type 11 & No FPU Errors Technote (7/96)

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Article Created: 10 November 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This Technote explains some of the causes of "Type 11" and "No FPU Installed" errors, along with debugging hints to help you find and fix them. It also focuses on what you as a programmer can do to prevent such errors.

DISCUSSION -----

Both Type 11 and No FPU Installed errors occur on Power Macintosh computers, depending on various factors. Both error messages are the result of programming errors. The No FPU Installed error usually means that your program is executing data rather than instructions. The Type 11 error is any error (such as a bus error) in native code.

NOTE: In this Technote, I will occasionally mention third-party products by name. If a third-party product is mentioned by name, it's meant to be a possible solution for you to investigate, not a recommendation. DTS doesn't evaluate third-party tools, nor maintain complete lists of possible third-party solutions. You should consult catalogs of development tools such as:

- Macintosh Development Tools & Languages
- the Redgate Macintosh Registry
- the ubiquitous Internet
- the APDA catalog and
- reviews in technical magazines to find a product that fits your needs.

There are many Web sites on the Internet -- for example, Apple's Third-Party Development Products Database at http://www.info.apple.com/dev/thirdparty/third_party.html lists many Macintosh development tools. Perhaps you may find an appropriate tool to meet your development needs in this way.

About "No FPU Installed" Errors

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On a Power Macintosh computer, the error message No FPU Installed usually means your code has jumped to a non-code area and is executing garbage. Somewhere in that data (which is being interpreted as instructions) is an instruction whose op code begins with the hex value F. No FPU Installed is equivalent to a Type 10 Error -- i.e., your program has attempted to execute an unknown instruction op code starting with the hex value F.

On a Power Macintosh, No FPU Installed means that some program has jumped to an area of data and has tried to execute any data word starting with the hex value F. The PowerPC chip has floating point support built in, but that floating-point support is different from the Motorola 680x0 family floating-point support. The Motorola 680x0 family uses an external floating-point unit. (There are also external memory management units (MMUs) and other specialized coprocessors.) Motorola 680x0 CPUs use instructions starting with hex value F as instructions for these coprocessors.

680x0 Microprocessor Instructions

All Motorola 680x0 microprocessors have instructions consisting of at least one word (the operation word); some instructions can have up to eleven words (see the Motorola MC68020 32-bit Microprocessor User's Manual, Third edition, page 3-1.) The operation word determines what kind of instruction is to be executed. For example, the instruction

```
MOVE.B D1, D2
```

translates to the hexadecimal value

```
1401
```

This instruction starts with the hex value 1. The instruction

```
FMOVE.X    FP3,-(A7)
```

translates to

```
F227 6980
```

This instruction starts with the hex value F.

F-line Instructions

The Motorola 680x0 architecture was originally designed to support a floating-point coprocessor chip. This chip, the Floating Point Unit (FPU), communicates with the CPU via a special set of instructions called F-line instructions. These instructions always start with an operation word beginning with the hex value F.

A program can be compiled to take advantage of the hardware assistance the FPU provides, and thus yield faster floating-point calculations than would be available with SANE (the Standard Apple Numerics Package). Such programs would

have instructions in the program which start with the hex value F. A program only using SANE would never have an instruction starting with the hex value F.

NOTE: Some Macintosh models, such as the Macintosh SE/30, the Macintosh IIfx, and the Macintosh IIfx, shipped with an FPU coprocessor installed. Other 680x0-based Macintosh computers, such as the Macintosh IIsi and the Macintosh Color Classic, had an optional FPU coprocessor. For these machines, it was possible to purchase an optional card with an FPU coprocessor.

68040 & 68040LC Microprocessors

With the introduction of the 68040 and 68040LC chips, things got a bit more complicated. The 68040 microprocessor has most of the 68882 FPU included on the chip. Not everything in the 68881/68882 FPU is in the 68040 chip, however -- just the routines that Motorola determined were most frequently used. The rest of the FPU routines are automatically emulated by software. Because the FPU is "built-in," as it were, the 68040 chip handles instructions that start with an operation word beginning with the hex value F by itself. There is no way to add a coprocessor to a 68040 chip; the instructions are never brought out of the chip itself.

The 68040LC is a cost-reduced version of the 68040 chip. Savings came about by removing the FPU portion of the chip. Not only does a 68040LC chip have no FPU, there is no way to add one.

The Power Macintosh

Power Macintosh computers emulate a Motorola 68040LC, i.e., a machine without FPU support. When you get a bomb with the message No FPU installed, it means some instruction has been executed with an operation word starting with the hex value F, and that your program is running on a machine without a FPU. This machine could be one of the following:

- a Macintosh with a 68020 or 68030 microprocessor and no FPU coprocessor
- a Macintosh with a 68040LC microprocessor (which can never have a FPU)
- a Macintosh with a PowerPC chip running 68K code in emulation (since the 68K emulator emulates a 68040LC microprocessor).

Power Macintosh computers contain very fast floating-point support as part of the CPU. This floating-point support is different from the floating-point support provided by the Motorola 680x0 microprocessors. Inside Macintosh:PowerPC Numerics, describes Power Macintosh floating-point support.

Defining a Type 11 Error

A Type 11 error means an illegal interrupt vector on a 680x0 machine. On a Power Macintosh, a Type 11 error is any exception in native code not handled by one of the installed exception handlers. On a Power Macintosh, a Type 11 error can be almost any error that occurred in native code. Type 11 errors may include:

- an address error
- a bus error

- an illegal instruction error that occurred in native code.

The exception handlers installed for native code don't correctly handle the particular condition which was raised, and the error is returned back to the System Error manager via the Mixed Mode manager. The System Error manager maps all such exceptions to the system error Type 11 Error.

If you install Macsbug 6.5.2 or later, some Type 11 errors may be reported as a PowerPC unmapped memory exception. This is equivalent to a bus error, i.e., an error indicating your program is accessing memory that doesn't exist.

The Modern Memory Manager was designed to be less forgiving than the classic (68K) Memory Manager. Disposing of something twice, disposing of memory that was never allocated, and other memory handling problems will often generate a Type 11 error, while on a 68K machine the problem may go unnoticed.

Programming Mistakes Causing Type 11 Errors

=====

The following sections give you examples of programming mistakes that may cause Type 11 errors.

Example #1: Writing Past the End of an Array

Writing past the end of an array can be a subtle and difficult-to-find bug.

Example #1 shows you why.

Begin_Table

```
=====
;Begin C Code
;
void IAmGoingToCrash(void)
{
    Str27    badArray;
    BlockMoveData("\pThis string is too long for this array", badArray, 39);
}
;
;End C Code
=====
```

End_Table

NOTE: I've made the bug very obvious; it may not be quite so obvious, however, in your code. In this example, I've put a string of 39 characters into an array defined to hold 27 characters. This overwrites the stack, which contains such useful things as your return address. On a 68K Mac, this causes a bus error. On a PowerPC Mac in 68K emulation, this causes a bus error. On a Power Macintosh in native code, this causes a Type 11 error.

Example #2: Using a Poorly Initialized Pointer or Handle

If your program tries to use an uninitialized or badly initialized pointer, it

can generate a Type 11 error. Here is what happens in Example #2:

```
;=====
;Begin C Code
;
Ptr badPointer = (Ptr)-2;
*badPointer = 0;
;
;End C Code
;=====
```

End_Table

NOTE: I've made the bug very obvious; it may not be quite so obvious, however, in your code. In this example, I've created a pointer to non-existent memory (-2 isn't a valid address) and then tried to access the memory to which the pointer refers. On a 68K Mac, this causes a bus error. On a PowerPC Mac in 68K emulation, this also causes a bus error. On a Power Macintosh in native code, this causes a Type 11 error.

Other Situations Causing Type 11 Errors

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The following sections document some of the known bugs in various products that may cause Type 11 errors.

Color Picker vs Third-Party SCSI Drivers

One reproducible problem stems from a known bug in several third-party SCSI hard disk drivers. The bug causes the Color Picker to crash when trying to resolve a boot volume alias it makes at startup time. This problem exists in any system when Color Picker 2.0 or 2.0.1 is installed and the boot volume is not a removable drive. The fundamental cause of the problem is that the SCSI driver incorrectly marks the boot drive as a removable drive during the boot process and changes it to be properly marked as a fixed device after startup. To find its code, the Color Picker resolves the boot volume alias it made during startup. Since the alias passed to the Alias Manager is for a removable drive, the Alias Manager can't resolve the alias (since the device is now marked as fixed.) The Color Picker design did not anticipate the boot volume not being found. This results in a Type 11 error. The fix is to upgrade your SCSI driver to a later version.

Calling a Routine That May Move Memory at Interrupt Time

The Apple Media Kit, release 1.2, had a problem that could cause random errors. During a VBL task, AMK was calling SetCCursor. SetCCursor can possibly move memory. Moving memory during interrupt time is a very bad idea. The Memory Manager may be in an unstable state, such as compacting memory, when an interrupt routine gets called. This can cause a Type 11 error in native code.

A replacement cursor.c file has been provided in the Apple Media Tool/Programming Environment Runtime folder, and we do have a replacement Runtime Maker:Codes:Program file for Apple Media Tool. If you are currently

developing titles, replacing these files and rebuilding your projects will remove the bug.

Not Enough Heap Space

There are some situations where having small amounts of memory available in the system heap may lead to a Type 11 error. As an example, if the shared library manager can't load a shared library, you may get a Type 11 error. This can happen when QuickTime tries to load a decompressor for certain kinds of images.

Writing Past the End of an Array

In OpenTransport 1.0.5 or earlier, there was a bug in the TCP/IP control panel code that could corrupt memory if there were more than 256 zones and a MacIP server was found in a zone past the 256th zone. Under these conditions, the control panel code wrote past the end of one of its buffers. This bug would manifest itself if the user opened the select zone dialog and the TCP/IP control panel was left open long enough for the NBP lookup calls for zones past the 256th zone to complete. This is corrected in OpenTransport 1.0.6 and later, but is given here as an example of a Type 11 error.

Insufficient Stack Space

Heavy use of local variables or recursion may cause your program to run out of stack space. When this happens, you may have crashes that are difficult to track down. Increasing your program's stack is one solution. Whenever you are using a large number of local variables or recursive routines, you should increase your program's stack (using the procedure listed in Inside Macintosh: Memory on page 1-40).

As an extreme example, a faceless background application (documented in Technical Note PS 2) has only a 2K stack by default. A 68K application has 24K of stack on most modern machines (8K if no Color QuickDraw is installed, 32K if A/UX is installed.) You can use the low memory accessor function LMGetDfltStack to find your current stack size. Native QuickDraw has several changes in algorithms that have increased the size of some structures. PowerPC alignment issues may cause the size of data structures to increase. Check your compiler documentation for further details.

To help detect collisions between the stack and the heap, a "stack sniffer" VBL task is installed that compares the current ends of the stack and heap and generates a system error 28 in case of a collision. Unfortunately, the Thread Manager is forced to disable the stack sniffer whenever it is installed. (This is because threads can have a stack in places where the stack sniffer doesn't expect them; if the stack sniffer is enabled, it would generate a system error 28.) This means you don't have the same level of protection as you did under older system software versions without the Thread Manager installed.

Too Much Recursion in QuickDraw

Native QuickDraw before version 2.4.1 used a recursive routine to handle regions. This recursive code could cause your stack to run into the heap when handling certain region shapes. Version 2.4.1 of QuickDraw changed to a

non-recursive routine which eliminates this error. (You can detect the version of QuickDraw using the Gestalt selector 'qd 'which returns a version.) In general, recursion on PowerMacs is dangerous unless you have substantial stack space available; PowerPC stack frames are very large, and putting many of them on the stack may quickly exhaust available stack.

Interrupts Not Handled by Device Drivers

Some Type 11 errors may legitimately be illegal interrupt vector errors, rather than simply unhandled exceptions in native code. If a device driver for a NuBus or PCI card does not install an interrupt service routine, but the card raises an interrupt, you will receive a Type 11 error. This will happen whether you are running in 68K code or PowerPC code. The only solution for such a problem is to update the driver to correctly handle the interrupt issued by the card.

Other Programming Errors

Common programming errors may cause Type 11 or No FPU Installed errors. These include the same kinds of errors that usually result in address errors on 680x0-based Macintosh computers. For example:

- Indexing through an array incorrectly so that your program goes outside the memory allocated for that array (as demonstrated above).
- Disposing of memory twice
- Disposing of memory that was never allocated
- Calling DisposeHandle on a resource handle (use DisposeResource instead, to ensure that the Resource Manager doesn't lose handles behind its back.)

Some Techniques To Help Avoid Type 11 Errors

The following techniques may help resolve situations that might lead to Type 11 errors:

- Test your code carefully.
- Install the Debugging Modern Memory Manager, available on the Tool chest Developer CD. This version of the Modern Memory Manager has additional checks installed which allow you to track down and eliminate many memory management bugs.
- Use extensions such as EvenBetterBusError (found on the Tool chest Developer CD) in conjunction with Macsbug 6.5.2 or later, to detect use of uninitialized pointers or handles.
- Use third-party testing tools such as QC™ by Onyx or MemoryMine™ by Adianta.

IMPORTANT: It goes without saying that good testing before you release a product will prevent expensive customer support calls later on.

User-Level Recommendations

Here are some user-level suggestions recommended by Apple for unexplained Type 11 or No FPU installed errors:

1. Upgrade your hard disk driver(s) to the latest version available. There are

some known problems between SCSI Manager 4.3 and some SCSI disk drivers. Starting with System 7.5, the SCSI Manager 4.3 is installed on all Macintosh Quadras and Power Macintosh computers. There are some known programming problems in some older third-party disk drivers.

2. Upgrade to the latest System Software appropriate for your system. Several significant bug fixes in system updates should reduce the number of Type 11 and No FPU Installed errors you encounter.

3. Do a clean install of your System Software. Use the Extensions Manager control panel to determine if any additional control panels or extensions are conflicting with your system software.

4. Some Type 11 errors may result from corrupted PRAM. Unfortunately, most of extended PRAM is undocumented. (See Inside Macintosh:Operating System Utilities, chapter 7, Parameter RAM Utilities, for what details are documented.) You can restore your default PRAM values by holding down Command-Option-P-R at system startup time, or by using a shareware utility such as TechTool.

5. Make sure you are not using composite RAM in a Power Macintosh. Memory specifications are in the developer hardware notes for each computer.

6. Some users claim that installing the shareware extension SoftwareFPU cuts down on No FPU Installed problems. This extension emulates the Motorola FPU (at a considerably slower speed), thus preventing bombs from software which incorrectly makes FPU calls. This may alleviate no FPU Installed errors, but it doesn't address the fundamental problem, namely that some software is executing unexpected data or making illegal calls to a non-existent FPU.

7. Upgrade any software you find that causes repeatable errors.

Summary

=====

There are no easy solutions for handling Type 11 Error or No FPU Installed errors. Only careful debugging and testing can reduce the number and frequency of these errors. Most problems stem from common programming errors.

Further Reference

- Inside Macintosh, PowerPC System Software, Addison-Wesley
- Inside Macintosh:PowerPC Numerics, Addison-Wesley
- Macsbug Reference and Debugging Guide, Addison-Wesley
- Macsbug Release Notes, part of the distribution of Macsbug
- Motorola MC68020 32-bit Microprocessor User's Manual, Third edition (available from Motorola)
- PowerPC Microprocessor Family: The Programming Environment (available from IBM or Motorola)
- Inside Macintosh:Memory, Addison-Wesley

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

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Tech Info Library

Color LW 12/600 PS: Using Special Features in Windows NT (11/95)

Revised: 11/27/95
Security: Everyone

Color LW 12/600 PS: Using Special Features in Windows NT (11/95)

Article Created: 13 November 1995
Article Reviewed/Updated: 27 November 1995

TOPIC -----

I need to setup fonts, margins, watermarks, and print quality for the Color LaserWriter 12/600 PS printer. My Color LaserWriter 12/600 PS is connected to a Windows NT computer, and since the Apple LaserWriter Utility does not work on Windows NT, how do I change these things?

DISCUSSION -----

For these particular options you do not need the Apple Printer Utility, they can be done on a per job basis from either Windows NT, the client sending the print job, or the application that is printing the job. If you need to use the Apple Printer Utility, you can use this utility from a Macintosh using AppleTalk, or a Windows client directly connected to LPT1 or connected using Netware.

Font Sets

From Windows NT, open the Color LaserWriter 12/600 PS driver ICON. Select Properties from the first menu. Select setup, font substitution. Also on a per job basis from a remote client, from the application the customer may select Print Setup, Options and Fonts for full font control.

Print Quality

From Windows NT open the Color LaserWriter 12/600 PS driver ICON. Select Properties from the first pull down menu. Select details, job defaults, options. Also be aware that If you are printing from a remote client you have options from the Control Panel for Print Setup, and you may also have the some options built into the application you are printing from.

Margins

Setting margins is not usually an option in the driver, these are handled by the

application you are printing from.

Watermarks

Watermarks are supported from the Windows NT spooler, but can be selected from the client once again from the application select Print Setup, Options and Watermarks.

Article Change History:

27 Nov 1995 - Made correction for technical accuracy.

Support Information Services

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Tech Info Library Article Number:18915



Tech Info Library

Color StyleWriter: Using Iron-on Transfer Paper (11/95)

Revised: 11/13/95
Security: Everyone

Color StyleWriter: Using Iron-on Transfer Paper (11/95)

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Article Created: 13 November 1995

TOPIC -----

Can images printed on the Color StyleWriter 2200, 2400, and Color StyleWriter Pro printers be transferred to fabric?

DISCUSSION -----

Transfer paper are special purpose papers that can be used to transfer images from a printed page to another surface such as a shirt. Apple does not supply or test transfer papers on our printers, however there are third-party companies that supply products which should be compatible.

Canon sells special transfer paper for their line of MS-DOS/Windows color ink-jet printers which, due to the design similarities with the Color StyleWriter series of printers, should produce acceptable results when used with the Color StyleWriter 2200, Color StyleWriter 2400, and Color StyleWriter Pro.

Under normal conditions the inks used in the Color StyleWriter 2200, Color StyleWriter 2400, and Color StyleWriter Pro are water soluble. This makes them poor candidates for transferring images to cloth, since you would normally wash the cloth. However, Canon sells a special coated transfer paper that can be used to transfer image to fabric. In order to permanently set the water-soluble ink into the fabric the cloth is dipped into a vinegar solution using the instructions provided with the paper.

Canon's transfer paper does not require any special ink and can be ordered directly from Canon's consumer supplies group at (800) 671-1090. The Canon T-shirt Transfer Paper part number is TR101.

Support Information Services

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Tech Info Library Article Number:18916



Tech Info Library

AppleScript: Recompile Script After Recording (11/95)

Revised: 11/13/95
Security: Everyone

AppleScript: Recompile Script After Recording (11/95)

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Article Created: 13 November 1995

TOPIC -----

I recorded a script in the AppleScript Script Editor, and it worked properly within the Script Editor. However, after I saved the script as an applet, the script no longer works. When the applet is launched, it opens, but does not perform any actions, then quits. Why is this happening?

DISCUSSION -----

This is a currently known problem. A recorded script must be checked before saving. After recording is finished, select and retype any character of the script. This enables the check button in the Script Editor window. Check the script before saving as an applet.

To fix a recorded script applet showing this problem, reopen the script in the Script Editor, make a change to the script text and check the script before resaving.

Support Information Services

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Tech Info Library Article Number:18917



Tech Info Library

Color StyleWriter 2400: Serial Number Location (11/95)

Revised: 11/14/95
Security: Everyone

Color StyleWriter 2400: Serial Number Location (11/95)

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Article Created: 13 November 1995

TOPIC -----

This article describes the location of the serial number on the Color StyleWriter 2400 printer.

DISCUSSION -----

The serial number on the Color StyleWriter Printer is located under the paper receiving tray. To locate the serial number, turn the printer over and pull out the paper receiving tray. The serial number usually starts with the letters CE or CC.

Support Information Services

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Tech Info Library Article Number:18918



Tech Info Library

Power Macintosh: No FPU Installed Error (11/95)

Revised: 11/20/95
Security: Everyone

Power Macintosh: No FPU Installed Error (11/95)

Article Created: 13 November 1995

TOPIC -----

I have a Power Macintosh computer, and I get errors stating that the FPU is not installed. What is wrong? I thought I had an FPU. Is there any way to check to make sure that it is there?

DISCUSSION -----

Your PowerPC microprocessor has an FPU (floating-point or math co-processor) installed. The FPU is incorporated within the PowerPC microprocessor itself and is part of the basic specification of the computer.

An "FPU not installed" error is software-related and can occur in two ways:

1. You are attempting to use a program which is running in emulation mode and which requires a floating-point unit. The emulation mode in Power Macintosh computers does not simulate a floating-point unit. Many applications check for the presence of a math co-processor before attempting to use it. However, if the application does not check for a math co-processor and attempts to use one, then you get the "No FPU installed" error.

The solution is to update your software with a version that is Power Macintosh-native. In some cases, you may be able to use third-party products which provide a software-based FPU.

2. You are running software--either emulated or native--which is failing. For a variety of reasons, the error message is coming across as an "FPU not installed" error.

The solution, in this case, is to locate which software (such as extensions, control panels, drivers, or applications) is causing the error, and either contact the publisher for compatibility information, or do not use it.

See these related Tech Info Library articles for additional information:

"Troubleshooting Macintosh System 7 INIT Conflicts"

"System 7.5: Troubleshooting Extension Conflicts"

"Native, Conventional, & Fat Applications: What Are They?"

"Power Macintosh: 68LC040 Emulator"

"Power Macintosh: Type 11 & No FPU Errors Technote"

Support Information Services

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Tech Info Library Article Number:18921



Tech Info Library

Sound & Displays Control Panel: Common Problems & Solutions 5/96

Revised: 9/23/96
Security: Everyone

Sound & Displays Control Panel: Common Problems & Solutions 5/96

Article Created: 21 August 1995
Article Reviewed/Updated: 31 May 1996

TOPIC -----

This article addresses common problems with the Sound & Displays control panel which is part of System 7.5.2 for the Power Macintosh 7500 and 8500 computers. As of January 1996, no other Macintosh computer uses the Sound & Displays control panel, including the Power Macintosh 7200 series or Power Macintosh 9500 series which also ship with System 7.5.2.

Issues covered in this article:

- (1) "Sound & Displays cannot operate correctly" message.
- (2) "Sound & Displays cannot be used at this time" message.
- (3) "This port cannot be deactivated" message.
- (4) "This port cannot be activated" message.
- (5) Computer Speaker option is automatically unchecked when I restart.
- (6) Audio compact discs do not play.
- (7) Unable to locate the AppleVision Setup control panel.
- (8) AppleVision options do not appear in Sound & Displays control panel.

DISCUSSION -----

1) "Sound & Displays cannot operate correctly" message

Issue: When I try to open the Sound & Displays control panel, an error message says, "Sorry... Sound & Displays cannot operate correctly on this Macintosh. Please consult your Sound & Displays documentation for a description of what

your Macintosh needs for Sound & Displays (Quit)".

Resolution: The Sound & Displays control panel requires AppleScript in order to operate properly. Make sure AppleScript has not been disabled by opening the Extensions Manager in your Control Panels folder under your Apple Menu. If there is not a check to the left of the AppleScript Extension, click on the extension to put a check there, close the Extensions Manager, and restart your computer.

If the Sound & Displays control panel still fails to launch, you should reinstall AppleScript by using the "Apple Macintosh CD" that came with your computer:

Step 1

Double-click the installer located in the Install System Software folder of the disc.

Step 2

Click on the Easy Install pop-up menu and choose Custom Install

Step 3

Click the triangle next to Utility Software, check the box to the left of AppleScript, and then click Install.

2) "Sound & Displays cannot be used at this time" message

Issue: When I try to open the Sound & Displays control panel, an error message says, "Sorry... Sound & Displays cannot be used at this time. The required extensions cannot be found. These extensions have either been disabled or are not present. To use this application, first put the Sound & Displays extensions in your extensions folder, and then restart your Macintosh."

Resolution: The Sound & Displays extensions are "AVSetup" and "SystemAV". There is no file called "Sound & Displays Extension". Although these files are stored in the Extensions Folder, they are not listed by the Extensions Manager control panel. However, they are listed by some third-party extension-managing software (such as Conflict Catcher). Make certain these two extensions have not been disabled or removed from the Extensions folder. If these extensions are missing, reinstall the system software using the "Apple Macintosh CD" that came with your computer:

Step 1

Double-click the installer located in the Install System Software folder of the disc.

Step 2

Click Install.

Step 3

When the installation is complete, quit the installer, and restart your computer to load the newly installed extensions.

3) "Port cannot be deactivated" message

Issue: When I try to deselect one of the options under Sound Input, I get the error message, "This port cannot be deactivated."

Resolution: You cannot uncheck a Sound Input source, because then you would not have any Sound Input source. The way to uncheck a particular source is to check one of the other two sources. The three sources available are External Audio Input, Internal CD, and External Microphone.

(4) "This port cannot be activated" message

Issue: When I try to check External Microphone under Sound Input, this error message appears, "This port cannot be activated."

Resolution: When Speech Recognition is turned on, it locks the Sound Input so that the Sound Input cannot be changed. Turn Speech Recognition off by opening the Speech control panel, choosing Speakable Items from the popup menu, and clicking the OFF button.

If you want to use Speech Recognition, first select External Microphone in the Sound & Displays control panel, and then open the Speech control panel to turn Speakable Items on.

5) Computer Speaker option is automatically unchecked when I restart

Issue: Every time I start up my computer, the option for "Computer Speaker" under "Sound Output" is unchecked. I click to check it, and then I get sound out of my internal speaker. However, the next time I start up my computer, the "Computer Speaker" option is unchecked again.

Resolution: When you start up your computer, it checks to see if anything is plugged into the speaker port (such as headphones). If something is plugged in, the operating system will automatically check "External Headphones" and uncheck "Computer Speaker" under Sound Output. You can override these settings by clicking the desired output option, but the setting is not saved between restarts.

6) Audio compact discs do not play

Issue: I cannot play audio compact discs. I can mount audio CD-ROM discs, and see the counter working in the AppleCD Audio Player, but I hear no sound. I can hear audio from multimedia CD-ROM discs and alert sounds without any problems.

Resolution: This is an issue involving accessing sound options while running Speech Recognition. When you turn Speech Recognition on, it "listens" for commands captured by the microphone. Because of this, Speech Recognition will not allow you to select the Audio CD as the input source. Therefore, you cannot play an audio compact disc through your internal speakers while speech recognition is turned on. Turn Speakable Items off in the Speech control panel and then select Audio CD as your sound input source in the Sound & Displays control panel.

7) Unable to locate the AppleVision Setup control panel

Issue: I have successfully installed the AppleVision software that came with my AppleVision 1710AV display, but I am unable to locate the AppleVision Setup control panel. I am using a Power Macintosh 8500. What do you recommend?

Resolution: AppleVision Setup does not appear as a separate control panel on either the Power Macintosh 8500 or 7500 series computers. If you have installed the AppleVision software, the settings options found in the AppleVision Setup control panel are automatically incorporated into the Sound & Displays control panel.

To access the configuration options for an AppleVision 1710AV monitor connected to either the Power Macintosh 7500 or 8500, follow these steps:

Step 1

Choose the Sound & Displays control panel from the Control Panels folder under your Apple Menu.

Step 2

In the lower right corner of the Sound and Displays control panel in the Displays option section, double-click the text "AppleVision 1710AV".

Although the interface may be slightly different than described in your AppleVision manual, you can now access the same options mentioned in the documentation for the AppleVision Setup control panel.

8) AppleVision options do not appear in Sound & Displays control panel

Issue: The AppleVision options do not appear in the Sound & Displays control panel.

Resolution: The ADB (keyboard) cable is plugged directly into the computer. Plug the ADB cable into the monitor, and connect an ADB cable from the monitor to the computer's ADB port.

Article Change History:

30 May 1996 - Corrected technical info.

29 Jan 1996 - Added Info Alley information.

19 Jan 1996 - Clarified a procedure.

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Tech Info Library Article Number:18923



Tech Info Library

Performa 6200CD: No Sound From Internal GV Modem (11/95)

Revised: 11/16/95
Security: Everyone

Performa 6200CD: No Sound From Internal GV Modem (11/95)

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Article Created: 13 November 1995
Article Reviewed/Updated: 14 November 1995

TOPIC -----

I have a Performa 6200CD with an internal Global Village modem. Whenever I use it to either fax a document or connect to an online service, I do not hear the modem dialing or connecting. However the modem does allow me to fax and I can connect to online services.

I have had the modem replaced, but the replacement still does not make sounds. What is wrong?

DISCUSSION -----

The Macintosh Performa 5200, 5300, 6200, and 6300 series computers requires additional software to make the modem sounds most people are used to hearing. Unlike external modems, the internal Global Village TelePort Gold IIv and TelePort Platinum V modems do not have a speaker on them. Two extensions, Audio Volume Extension and Internal Modem Sound extension, were developed to use the Macintosh speaker in place of a modem speaker.

The Audio Volume extension is the newer of the two extensions and can be used with any of the Macintosh Performa computers that use Internal Global Village TelePort modems.

You can get the Audio Volume extension from online services where Apple provides software updates.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the

Apple Tech Info Library.

Article Change History:

14 Nov 1995 - Added where to get Audio Volume extension.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18924



Tech Info Library

AppleShare: Cannot Resolve Server Volume Alias (11/95)

Revised: 11/14/95
Security: Everyone

AppleShare: Cannot Resolve Server Volume Alias (11/95)

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Article Created: 14 November 1995

TOPIC -----

When I double click on an alias I get a dialog box indicating that the alias cannot be resolved. When I click OK, the volume that the alias points to is mounted anyway.

I use the chooser to mount a server volume. If I then try to create an alias I get a -50 error.

DISCUSSION -----

A newer ROM set, which shipped in the Power Macintosh 7200, 7500, 8500, and 9500, has changes that can affect some third party disk drive partitioning software. The alias issue described above is an example of this. If you are experiencing these errors, contact the manufacturer of the disk drive partitioning software for an updated version. This issue is known and has been corrected in newer versions of partitioning software.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18925



Tech Info Library

Audio Volume Read Me (11/95)

Revised: 11/14/95
Security: Everyone

Audio Volume Read Me (11/95)

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Article Created: 14 November 1995

TOPIC -----

This article is the Audio Volume Read Me file.

DISCUSSION -----

This software replaces the Internal Modem Sound extension 1.0 that lets an internal Global Village modem sound play through internal speaker. The Audio Volume extension supports 16-Bit audio capable Performa 5200, 5300, 6200, and 6300 computers with an internal Global Village modem.

Audio Volume Read Me
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Important Information About Reinstalling Performa Software

This document tells you how to install the Audio Volume software on your computer after you have reinstalled your Performa software. You need to install the Audio Volume software only after you reinstall Performa software. The Audio Volume software improves sound quality on your computer.

You may want to print this document and keep it with your manuals, since this information may not be in the documentation that came with your computer. After you finish reading this document, choose Quit from the File menu.

Installing the Audio Volume Software

To reinstall Performa software on your computer, follow the instructions in the Macintosh Performa CD booklet, then follow these steps:

- 1) Insert the disk System Backup Disk: Audio Volume Installer into your floppy disk drive.

- 2) Find and double-click the Install Audio Volume icon.
- 3) Follow the instructions that appear on the screen. If you get a message asking you if it's OK to place the Audio Volume software in a folder or to replace an earlier version of the file, click OK. The instructions on the screen let you know when the installer has finished installing the Audio Volume software.

When your computer restarts, the Audio Volume software is installed on your computer. Keep the disk System Backup Disk: Audio Volume Installer in case you ever need to reinstall Performa software again.

Support Information Services

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Tech Info Library Article Number:18926



Tech Info Library

Performa: MacTCP 2.0.4 to MacTCP 2.0.6 Update Issue (11/95)

Revised: 11/14/95
Security: Everyone

Performa: MacTCP 2.0.4 to MacTCP 2.0.6 Update Issue (11/95)

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Article Created: 14 November 1995

TOPIC -----

I have a Performa, and the MacTCP 2.0.4 control panel that came with my computer cannot be updated with the MacTCP 2.0.6 Update installer, an error is reported. I have restored my System Software and the update installer still does not work. What is wrong?

DISCUSSION -----

The MacTCP 2.0.4 control panel that ships with Performa computers cannot be updated using the MacTCP 2.0.6 Update installer. You should use the System 7.5 Update 1.0 which includes MacTCP 2.0.6.

The System 7.5 Update 1.0 will install MacTCP 2.0.6 if it finds an older version in the Control Panels folder. Otherwise, you can use the custom install feature in the System 7.5 Update 1.0 installer by following the steps below:

- 1) Choose Custom Install in the pop-up menu.
- 2) Click the triangle next to Control Panels to expand these options.
- 3) Click the checkbox next to MacTCP to select it.
- 4) Click the Install button.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:18927



Tech Info Library

Macintosh Performa 5xxx/6xxx: Frequently Asked Questions (4/97)

Revised: 4/30/97
Security: Everyone

Macintosh Performa 5xxx/6xxx: Frequently Asked Questions (4/97)

Article Created: 15 November 1995
Article Reviewed/Updated: 30 April 1997

TOPIC -----

This article includes Frequently Asked Questions (FAQ) about the Macintosh Performa 5200 and 6200 series computers.

Questions in this FAQ:
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- 1) What are the memory and VRAM expansion capabilities of the Macintosh Performa 5200 and 6200?
- 2) When I put a CD-ROM disc into my CD-ROM drive I get a message stating, "This disk is unreadable by this Macintosh. Do you want to initialize the disk?" What does this message mean?
- 3) My Performa System freezes and I'm wondering if there's something wrong with the machine. How can I check for this?
- 4) I read that there is a flaw in some 603 processors and that there is diagnostic software to check our computers. Where can I find this software?
- 5) Is the GeoPort Telecom Adapter compatible with the Macintosh Performa 5200 and 6200?
- 6) Will the DOS Compatibility Card work in the PDS slot of the Macintosh Performa 5200 and 6200 series computers?
- 7) Why do some benchmark utilities report false information about the Macintosh Performa 5200 and 6200 series computers?
- 8) Is there a Level-2 cache card installed in these computers?
- 9) What kind of hard drive is included? How do I reformat this drive?

10) Can I upgrade my Macintosh Performa 5200 or 6200 computer to a Macintosh Performa 5300 or 6300 computer?

11) Every time I start up my computer I get a message stating that QuickTime installation has failed because QuickTime was already installed. Why does this message appear at startup?

12) When I try to install English Speech Recognition (ESR) on my Macintosh Performa 6200 or 5200 series computer, I get an error message stating that English Speech Recognition requires 16-bit sound input, and that it cannot be used on this Macintosh. What can I do to install this software?

13) I am unable to use any type of external serial device with the modem serial port. Why is this?

14) I get the following message, "Telephone manager 2.0 (or later) is required. Please install this software before launching," when I try to use MegaPhone. What is happening?

15) I cannot hear the dial tone or the other caller when making a call with Megaphone. What should I do?

16) Question: Can I upgrade my Global Village Gold IIv 14.4 Kbps modem to 28.8 Kbps? Does Apple sell a replacement modem?

DISCUSSION -----

1) Question: What are the memory and VRAM expansion capabilities of the Macintosh Performa 5200 and 6200?

Answer: These computers do not have memory soldered on the logic board; all memory is placed in two 72-pin SIMM slots. Memory can be installed in one or both slots using 4, 8, 16 or 32 MB SIMMs. Most configurations shipped with a single 8 MB or 16 MB SIMM in one of the slots. The Power Macintosh 5200 can address up to 64 MB of RAM.

The Performa 5200 and 6200 series, and the Power Macintosh 5200/75 do not use VRAM. These computers store video data in a 1 MB DRAM frame buffer (separate from RAM) and no further video memory expansion is supported.

If you want greater color depth or screen resolution, you can install a third-party video card in the processor-direct slot and attach a second monitor.

2) Question: When I put a CD-ROM disc into my CD-ROM drive I get a message stating, "This disk is unreadable by this Macintosh. Do you want to initialize the disk?" What does this message mean?

Answer: When the CD-ROM drive does not recognize a particular type of CD, this indicates the CD-ROM software is not properly installed or is missing certain files. In some cases, one or several of the CD-ROM "Access" files may be damaged

or a third-party extension or control panel may be conflicting with the CD-ROM software.

See the Tech Info Library article, "CD-ROM: "This disk is unreadable" Message" for the troubleshooting steps you should take to resolve this issue.

3) Question: My Performa System freezes and I'm wondering if there's something wrong with the machine. How can I check for this?

Answer: The 5xxx/6xxx Tester should be used to test for known component issues that may cause system freezing in ALL Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers, including the Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.) The 5xxx/6xxx Tester is available to the following online locations:

- On the Internet at the following sites:
 - Worldwide Web: <http://www.info.apple.com/swupdates>
 - ftp:
ftp://ftp.info.apple.com/Apple.Support.Area/Apple.Software.Updates/US/Macintosh/Utilities/5xxx-6xxx_Tester_1.0.sea.hqx
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

4) Question: I read that there is a flaw in some 603 processors and that there is diagnostic software to check our computers. Where can I find this software online?

Answer: Use the 5xxx/6xxx Tester, mentioned in the answer to question #3 above.

(The following information below is provided for historical purposes:)
Previously, the 52xx/62xx Diagnostic Utility was made available to detect an issue with a small number of PowerPC 603 microprocessors used in ONLY Macintosh Performa 5200, 6200, and Power Macintosh 5200/75 LC computers. Only computers within a specific serial number range were potentially affected by this issue. The Diagnostic Utility was posted on the online services, but it has since been removed with the posting of the 5xxx/6xxx Tester.

5) Question: Is the GeoPort Telecom Adapter compatible with the Macintosh Performa 5200 and 6200?

Answer: The GeoPort Telecom Adapter is not compatible with the Power Macintosh 5200 series. As the Power Macintosh 5200's target audience is the K-12 education channels, support for the GeoPort Telecom Adapter was not part of the requested feature set.

6) Question: Will the DOS Compatibility Card work in the PDS slot of the 5200 series computers?

Answer: No, the DOS Compatibility Card for the Power Macintosh 6100 does not work in Macintosh Performa 5200 and 6200 series computers.

7) Question: Why do some benchmark utilities report false information about the Macintosh Performa 5200 and 6200 series computers?

Answer: Each time Apple Computer releases a new computer, third-party diagnostic utilities which provide benchmark information may not have the data for the new computer. Contact the manufacturer of your diagnostic software for additional information on obtaining an updated version of their software.

8) Question: Is there a Level-2 cache card installed in these computers?

Answer: Yes, a 256k level-2 cache card comes pre-installed on these computers. The level-2 cache card not only functions as a 256k level-2 cache, but contains these computers' ROM set, as well. For this reason, third party level-2 cache cards are not compatible with the Power Macintosh 5200. At this time, Apple does not plan on releasing a larger level-2 cache for the Macintosh Performa 5200 and 6200 series.

9) Question: What kind of hard drive is included in these computers? How do I reformat this drive?

Answer: The Macintosh Performa 5200 and 6200 series computers contain hard drives based on the IDE interface. Apple's implementation of the IDE Interface supports IDE and Enhanced IDE drives. If replacing the internal hard drive with a third-party IDE drive, the replacement IDE drive must support Logical Block Addressing (LBA).

To reformat the IDE drive, you should use the Internal HD Format Utility; if it does not work, use the Drive Setup Utility instead, which is available on the online services. You cannot use Apple HD SC Setup to check the internal IDE hard drive.

10) Question: Can I upgrade my Macintosh Performa 5200 or 6200 computer to a Macintosh Performa 5300 or 6300 computer?

Answer: The 5300/6300 Logic Board Upgrade (M4447LL/A) is available for the Macintosh Performa 5200 and 6200 family of computers.

11) Question: Every time I start up my computer I get a message stating that QuickTime installation has failed because QuickTime was already installed. Why does this message appear at startup?

Answer: This message is caused by having two copies of the QuickTime extension in your System Folder. See the Tech Info Library article, "QuickTime Installation Failed Message at Startup," to resolve this particular issue. The

Apple Tech Info Library is located on the Internet at
<<http://til.info.apple.com/>>

12) Question: When I try to install English Speech Recognition (ESR) on my Macintosh Performa 6200 or 5200 series computer, I get an error message stating that English Speech Recognition requires 16-bit sound input, and that it cannot be used on this Macintosh. What can I do to install this software?

Answer: Using the ESR 1.4.1 installer you can customize the installation and successfully install the PlainTalk software. For detailed instructions, follow the steps given in the Tech Info Library article "Plaintalk 1.4.1: Can't Install Recognition on 8-bit Mac."

13) Question: I am unable to use any type of external serial device with the modem serial port. Why is this?

Answer: The presence of the internal modem disables the modem serial port. See the Tech Info Library article, "Performa: Modem Port Disabled w/Internal Modem Present", for more details.

There are several possible workarounds:

- Consider connecting your serial device to the printer port. If you already have a printer, you might want to investigate a switch box (also referred to as an A/B box) to share the port between the two devices. You would still only be able to use one device at a time, but this would reduce the wear and tear on your connectors by continually reseating the connections.

NOTE: Using a switch box is not tested or supported by Apple. If you choose to use one, contact the switch box manufacturer for compatibility information and technical assistance.

- Instead of using a switch box, you could also use a serial card. Such a card would need to be connected to the processor-direct slot in the computer, and it would provide you with additional serial connections.

- Alternatively, you can remove both the modem card and the plastic cover over the modem port. Instructions for installing a card into the communications slot are included in the Macintosh Performa User's Guide. You can follow these instructions for removing the internal modem. Although such cards are typically user-installable, you may want to contact an Apple-authorized service provider for assistance with this procedure.

NOTE: Any damage caused by the addition or removal of the modem is NOT covered under the warranty.

14) Question: I get the following message, "Telephone manager 2.0 (or later) is required. Please install this software before launching," when I try to use MegaPhone. What is happening?

Answer: MegaPhone installs various invisible resources into the System file. If the System suitcase is damaged or had been replaced these resources are no longer available. See the Tech Info Library article, "MegaPhone for Performa: Telephone Manager Required Message," to resolve this issue.

15) Question: I cannot hear the dial tone or the other caller when making a call with Megaphone. What should I do?

Answer: This can occur if the External CD Sound Extension has been installed or if the Internal Modem Sound extension has been removed or disabled. However, if you have a Macintosh Performa 5300 or 6300 series computer, then you should verify that the Audio Volume extension has not been removed. This extension replaces the Internal Modem Sound extension.

The External CD Sound extension allows you to connect an external CD-ROM player and play audio CD-ROM discs through the internal speaker. The Internal Modem Sound extension needs to be in the Extensions folder for MegaPhone to work properly. See the Tech Info Library article, "Megaphone: Caller Hears Me, I Can't Hear Them ," to resolve this issue.

16) Question: Can I upgrade my Global Village Gold IIv 14.4 Kbps modem to 28.8 Kbps? Does Apple sell a replacement modem?

Answer: Apple does not offer an upgrade for your modem. However, Global Village has recently released an upgrade path for your modem. This upgraded internal modem would replace the modem already installed in your computer.

Contact Global Village Communications directly (800-469-3764) to order this modem or to obtain additional information, including compatibility with specific computer systems and pricing.

Note that support for this modem, once installed on a Performa computer, will be provided by Global Village directly. Apple only supports Global Village modems which are bundled with specific systems.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

30 Apr 1997 - Reviewed for technical accuracy.

31 Jan 1997 - Updated ftp location and name of 5xxx/6xxx Tester Application.

20 Jan 1997 - Updated online references.

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Tech Info Library Article Number:18928



Tech Info Library

Power Macintosh 5200: Video Playback Issue with MPEG (11/95)

Revised: 11/15/95
Security: Everyone

Power Macintosh 5200: Video Playback Issue with MPEG (11/95)

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Article Created: 15 November 1995

TOPIC -----

I have a Power Macintosh 5200 series computer with an MPEG card. However, when I try to use the MPEG card to play video, I either don't see any video at all or the computer locks up. What could be causing this?

DISCUSSION -----

Some of the Power Macintosh 5200 series computers with 8-bit sound have an issue with the Apple MPEG Card. The solution is to replace the MPEG card.

If you are experiencing difficulty using the MPEG card to play video, contact an Apple-authorized service provider or the Apple Assistance Center (800-SOS-APPL) for additional assistance or service.

Support Information Services

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Tech Info Library Article Number:18929



Tech Info Library

AppleVision 1710AV Display: Energy Saver Issue (11/95)

Revised: 2/12/96
Security: Everyone

AppleVision 1710AV Display: Energy Saver Issue (11/95)

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Article Created: 16 November 1995

TOPIC -----

This article discusses an issue with the AppleVision 1710AV display and the Energy Saver mode.

DISCUSSION -----

Apple has recently discovered an issue related to Energy Saver mode when used with a limited number of early shipping AppleVision 1710AV Displays.

AppleVision 1710AV Displays with serial numbers between SG522xxxxxx and SG536xxxxxx inclusive should have Energy Saver mode temporarily disabled using the Energy Saver control panel until the display can be serviced. Displays within this serial number range may not operate as originally intended while in Energy Saver mode when connected to a Power Macintosh 7200, 7500, 8500, or 9500 computer, or some third-party video cards. Monitors with serial numbers greater than SG537xxxxxx are not affected and will function normally with Energy Saver.

Symptoms

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- Under normal operation, when the display goes into Energy Saver mode, there is no visible raster and the power LED is not illuminated.
- In affected displays, there is still no video but the power LED begins to randomly flash, and you may hear a popping or clicking sound from the display enclosure or speakers. In some displays, this repeated cycling can cause loss of video.

Workaround

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The workaround prior to service of the display is to disable System Sleep in the Energy Saver control panel.

With System Sleep temporarily disabled, if you wish to put your computer and display to sleep, manually select Sleep from the Special menu, or shut down your computer completely.

If you experience this issue, or your monitor falls within the stated serial number range, contact your local service provider or 1-800-SOS-APPL. International customers should contact your local service provider.

Support Information Services

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Tech Info Library Article Number:18930



Tech Info Library

Dual-Channel Asynchronous SCSI Interface: An Overview (2/97)

Revised: 2/24/97
Security: Everyone

Dual-Channel Asynchronous SCSI Interface: An Overview (2/97)

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Article Created: 27 November 1995
Article Reviewed/Updated: 24 February 1997

TOPIC -----

This article provides a general overview of the dual-channel asynchronous SCSI interface included in some Macintosh computers.

For specific information about the implementation of dual-channel SCSI or Fast-SCSI in different Macintosh computers, see these related Tech Info articles:

"Power Mac 7500,7600,8500,9500 Series: SCSI-2 Compliance"
"Power Macintosh: SCSI Termination Explained"
"Macintosh: Compatibility with SCSI-2 Devices"
"SCSI Manager 4.3: Compatibility and Features"
"Technical Specifications" for each Macintosh computer.

DISCUSSION -----

Computers with dual-channel asynchronous SCSI have a single SCSI controller responsible for the entire I/O subsystem. This primary I/O controller chip manages SCSI communications through dual SCSI controllers: a controller for the internal SCSI bus and a second controller chip for an external SCSI connection and an additional internal connection. This second SCSI controller also manages Ethernet and serialcommunications. In the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 computers, the internal SCSI bus controller provides Fast SCSI communications up to 10 MB per second.

Because there are actually two separate SCSI buses, both are capable of handling seven devices. So, theoretically, you could have 13 devices attached to the computer. (Note that the theoretical limit is not 14 because the computer will always be one of the devices). However, space limitations prohibit the connection of that many separate devices.

With only one internal connector, the internal SCSI bus will be particularly

limited by the amount of available space inside the computer. For the other SCSI bus, you also are limited by space for internal devices, but the external devices are only limited by SCSI ID numbers.

Different computer models may have distinct standard configurations of the SCSI buses. For example, on the Power Macintosh 9500 series, the internal CD-ROM drive and the internal hard drive are both attached to the Fast (internal) SCSI bus, but on the Power Macintosh 8100 series, only the internal hard drive is attached to the internal SCSI bus; the CD-ROM drive is on the other SCSI bus.

Article Change History:

24 Feb 1997 - Added new computers.

22 Jul 1996 - Modified title of reference article.

26 Jun 1996 - Added additional computer.

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Tech Info Library Article Number:18931



Tech Info Library

System 7.5 Only and ARA: Extensions and Control Panels (11/95)

Revised: 11/16/95
Security: Everyone

System 7.5 Only and ARA: Extensions and Control Panels (11/95)

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Article Created: 16 November 1995

TOPIC -----

I want to verify that Apple Remote Access (ARA) is not conflicting with another extension. Beside choosing System 7.5 Only, in the Sets pop-up menu of the Extensions Manager control panel, what other extensions do I need to enable?

DISCUSSION -----

In the Apple Menu folder: Remote Access Disconnect
In the Control Panels folder: Remote Access Setup
In the Extensions folder: Remote Access Aliases and Remote Only

Enabling System 7.5 only and ARA extensions and control panels may not find the conflicts or system corruption you are investigating, because ARA loads resources in the System file also. A clean system software installation may be required if issues persist, even with only these extension loaded.

Support Information Services

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Tech Info Library Article Number:18932



Tech Info Library

System 7.5.2 Printing Fix 1.1: Read Me File (11/95)

Revised: 11/16/95
Security: Everyone

System 7.5.2 Printing Fix 1.1: Read Me File (11/95)

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Article Created: 16 November 1995

TOPIC -----

This article contains the ReadMe file included with the System 7.5.2 Printing Fix version 1.1 which is part of the System 7.5.2 Printing Update 1.1 posted online.

DISCUSSION -----

Macintosh System 7.5.2 Printing Fix Read Me

What is the Macintosh System 7.5.2 Printing Fix (Version 1.1)?

This system extension fixes printing problems that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2. Without this fix, your computer may freeze if you attempt to print on a network printer, and it may be necessary to restart your computer.

To install this extension follow these steps:

Step 1

Locate the System Folder on the computer's hard disk. Don't open the System Folder.

Step 2

Drag the file named "7.5.2 Printing Fix" to the System folder.

Step 3

A message appears asking if you want the 7.5.2 Printing Fix to be put into the Extensions Folder. Click OK. If a message appears stating that the 7.5.2 Printing Fix already exists and asks you if you would like to replace it, click

OK.

Step 4

Open the Special menu and choose Restart.

What is new with version 1.1 of this extension?

Version 1.0.2 of the 7.5.2 Printing Fix corrected a problem printing to a network printer when the printer was already busy. Version 1.1 also corrects a similar problem when printing to a network printer using LocalTalk.

11/14/95

Support Information Services

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Tech Info Library Article Number:18933



Tech Info Library

System 7.5.2 Printing Update 1.1: Read Me File (1/97)

Revised: 2/14/97
Security: Everyone

System 7.5.2 Printing Update 1.1: Read Me File (1/97)

Article Created: 16 November 1995
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article contains the ReadMe file from the System 7.5.2 Printing Update 1.1.

DISCUSSION -----

Macintosh System 7.5.2 Printing Update Read Me

(Important Note: This printing update was incorporated into System 7.5 Update 2.0, released in March 1996, as well as successive System Software releases, including System 7.5.3, System 7.5.3 Revision 2 and System Update 7.5.5, as well as later releases.

What are the Macintosh System 7.5.2 Printing Updates?

These software updates fix printing problems that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2. Without these fixes, your computer may freeze or never complete printing, and it may be necessary to restart your computer or cancel the printing job.

This bundle contains several folders. Each folder contains an update, and a Read Me file that explains how to install the update and what problems are fixed. To avoid printing problems, install each of these updates.

Contents

SerialDMA folder

Use this update to fix problems while printing on serial printers and to improve overall performance of the serial port.

7.5.2 Printing fix folder

Use this update to fix problems while printing on network printers.

LaserWriter 8.3.2 folder

Use this update to fix problems while printing on network printers. All versions of the LaserWriter driver prior to LaserWriter 8.3.2 contain problems preventing PCI-based computers from printing on a busy printer and printing large documents. All System 7.5.2 users should install the LaserWriter 8.3.2 driver included in this folder.

Open Transport information

For the 7.5.2 Printing fix and LaserWriter 8.3.2 to work properly, you must have Open Transport 1.0.7 or later installed on your system.

Open Transport software is available on the following online locations:

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Troubleshooting known System 7.5.2 printing problems
=====

A postscript error appears when you attempt to print.

Sometimes attempting to print large files on older LaserWriter printers (including the LaserWriter IINT, IINTX, and other Postscript level 1 printers) results in a postscript error.

Workaround: Before you print, convert the files to gray scale 300 DPI images.

A message appears stating that there's a "-49" error.

This problem can occur when you use the Print command from the File menu on the desktop. The error occurs if you try to print multiple documents from more than one application program at the same time.

Workaround: Print documents from one application at a time when printing from the desktop.

A message appears stating that there's a "Type 10" error when you print Adobe Photoshop documents from the desktop.

This error occurs when you print an Adobe Photoshop file from the desktop using

the Print command.

Workaround: Print Adobe Photoshop documents from within Photoshop (make sure Photoshop is active, then use Photoshop's File menu to print).

Postscript errors occur or documents never print when printing QuarkXPress documents.

Postscript errors may occur while printing QuarkXPress documents if the printer type is not set correctly in the QuarkXPress Page Setup dialog box.

Workaround:

- Make sure the correct printer type is selected in the QuarkXPress Page Setup dialog box.
- If the printer type is correct in the Page Setup dialog box and you are using a LaserWriter 16/600 printer and QuarkXPress 3.3, a later version of QuarkXPress may help. Contact Quark for assistance.

Article Change History:

14 Feb 1997 - Reformatted.

20 Jan 1997 - Updated online references, added info on system updates.

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Tech Info Library Article Number:18934



Tech Info Library

Apple Video Player 1.3.2: Where is Tint Control? (11/95)

Revised: 11/17/95
Security: Everyone

Apple Video Player 1.3.2: Where is Tint Control? (11/95)

=====

Article Created: 17 November 1995

TOPIC -----

I upgraded from Apple Video Player version 1.0.3 to version 1.3.2, and I noticed that the Tint control is now missing from the Controls window. The Contrast option has taken its place. Why?

DISCUSSION -----

The reason for switching the control from Tint to Contrast is Tint had no effect on non-NTSC video systems, such as PAL and SECAM. Changing the Tint setting to Contrast offers European customers the same adjustment flexibility as US customers using Apple Video Player.

Support Information Services

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Tech Info Library Article Number:18935



Tech Info Library

LaserWriter 8.3.2: Read Me file(7/96)

Revised: 9/26/96
Security: Everyone

LaserWriter 8.3.2: Read Me file(7/96)

Article Created: 17 November 1995
Article Reviewed/Updated: 02 July 1996

TOPIC -----

This article contains the Readme file for the LaserWriter 8.3.2 software.

DISCUSSION -----

What is the Macintosh System LaserWriter 8.3.2 Extension?

This system extension fixes two printing problems that may occur on Power Macintosh 7200, 7500, 8500, and 9500 computers using System 7.5.2. Without these fixes, your computer may freeze if you attempt to print large documents on a network printer, or if you try to print any document on a network printer when the printer is already busy.

To install this extension follow these steps:

1. Locate the System Folder on the computer's hard disk. Don't open the System Folder.
2. Drag the file named "LaserWriter 8" to the System Folder.
3. A message appears asking if you want the LaserWriter 8 extension to be put into the Extensions Folder. Click OK. If a second message appears stating that LaserWriter 8 already exists and asks you if you would like to replace it, click OK.
4. Open the Special menu and choose Restart.

IMPORTANT

If a second message does not appear, then your System Folder is missing some files needed to use LaserWriter 8. Do the following:

1. Refer to the printed manual that came with your computer, and follow the instructions for doing a custom installation.
2. In the Custom Install dialog box you'll see a list of items that can be installed. Click the arrow to the left of the "Printing" check box to reveal the list of printers.
3. Click to put an X in the "LaserWriter 8" checkbox.
4. Click Install. If a message appears stating that you have a newer version already installed, click Newer.
5. Quit the Installer. Open the Special menu and choose Restart.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

01 Dec 95 - Changed title to better reflect contents.

Support Information Services

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Tech Info Library Article Number:18942



Tech Info Library

SerialDMA 2.0.2 Read Me (11/95)

Revised: 11/17/95
Security: Everyone

SerialDMA 2.0.2 Read Me (11/95)

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Article Created: 17 November 1995

TOPIC -----

This article contains the Readme file for the SerialDMA 2.0.2 software.

DISCUSSION -----

What is the SerialDMA 2.0.2 extension?

Version 2.0.2 of this extension is simply version 2.0 of this extension plus a couple of additional fixes and support for the new PCI Power Macintosh computers (7200, 7500, 8500, and 9500). Version 2.0 of this extension was a complete rewrite of the DMA serial driver which originally accompanied the Centris 660AV, Quadra 660AV, Quadra 840AV, Power Macintosh 6100/60, Power Macintosh 6100/66, Power Macintosh 7100/66, Power Macintosh 7100/80, Power Macintosh 8100/80, Power Macintosh 8100/100, and Power Macintosh 8100/110. It also supports the various Performa and Apple Workgroup Server products derived from the models listed. The SerialDMA driver is a replacement for the standard set of Macintosh serial device drivers referred to by their driver names: ".AIn," ".AOut," ".BIn," and ".BOut." SerialDMA is applicable only to the set of Macintosh models which incorporate DMA channels servicing the standard Z8530 Serial Communications Controller.

The original serial driver for these products suffered from occasional system hangs, communications timeouts, poor communications performance, and various other glitches. The new SerialDMA 2.0.2 driver corrects these problems and provides the targeted products with a serial driver that should exceed the performance and reliability standards for serial communications on the Macintosh platform.

Installing SerialDMA 2.0.2 extension

The SerialDMA extension requires System 7.5 or later. To install this extension, drag it onto the System folder of your boot drive (the Finder will

remind you that extensions need to be placed in the Extensions folder; click OK and the SerialDMA extension will be copied). After the SerialDMA extension is in your System folder, you need to restart your Macintosh.

What the SerialDMA 2.0.2 extension provides

The following problems have been eliminated to improve functionality and compatibility:

- The SerialDMA driver will no longer mysteriously "lock up" and cease processing new input requests as a result of interrupt synchronization problems during chained reads.
- The SerialDMA driver will no longer fail to complete a transmission correctly on a Power Macintosh. This fixes a longstanding driver bug referenced in the GlobalFAX software release notes, since it had a highly detrimental effect on that FAX software. This problem could have affected any sort of file transfer using hardware or XOn/XOff handshaking.
- Handshaking now works reliably, especially XOn/XOff handshaking. This will eliminate numerous scenarios where customers were seeing gratuitous overrun errors.
- Driver performance and responsiveness is now more than acceptable for small input requests. The original driver highly favored large transfer performance over small transfer performance, resulting in unacceptable performance degradation for a large number of customers.
- It is now possible once again to make a synchronous I/O request of the SerialDMA driver from a VBL, Time Manager task, or other interrupt task. This improves compatibility with some products, but should not be considered an endorsement of this unsupported technique.
- Break conditions are now handled correctly, producing results consistent with what would be seen in a non-DMA serial driver.
- A bug was fixed allowing DTR to remain negated when the driver is closed. Formerly it was possible for DTR to become asserted when closing the driver, even when the client software requested otherwise.
- A bug in the algorithm used by older versions of SerialDMA for setting some baud rates could give improper results. This has been fixed in SerialDMA 2.0.2. This bug affected Quadra 840AV and 660AV CPUs only.
- A bug in older versions of SerialDMA that caused problems printing to StyleWriters has been fixed in SerialDMA 2.0.2. This bug affected Power Macintosh 7200/7500/8500/9500 CPUs only.

The following enhancements improve performance and reliability:

- The SerialDMA driver is now native for Power Macintosh. This driver grew in size very little as a result of RISC code expansion. On 68040 models, SerialDMA is now compiled with a much better optimizing compiler resulting in

significantly smaller and faster code. Simplifications in the basic driver design also reduce code size while improving reliability.

- SerialDMA 2.0.2 takes fuller advantage of the power of DMA to offer 115,200 and 230,400 baud serial data streams. (Driver clients should operate within certain efficiency guidelines to ensure that they do not become bottlenecks at these high data rates.)
- SerialDMA 2.0.2 uses a more efficient hardware abstraction interface to support different Macintosh models with a minimum of administrative overhead. This also improves driver reliability.
- DMA receive channel management has been significantly improved, resulting in almost no possibility of hardware overrun errors and allowing higher data rates with higher reliability. Error reporting is more robust.
- DMA transmit channel management has been improved for some DMA architectures, reducing overhead by use of a dump-and-run DMA strategy.
- The mechanism for implementing XOn/XOff handshaking is more sophisticated, and results in better performance with less system overhead.

Note:

There is a known problem on Power Macintosh 7200, 7500, 8500, and 9500 with the Serial Port Arbitrator that ships as part of AppleTalk Remote Access. The problem can cause a crash at boot time if both SerialDMA and Serial Port Arbitrator are present. Serial Port Arbitrator should be removed from your System folder to avoid this conflict.

Support Information Services

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Tech Info Library Article Number:18943



Tech Info Library

Power Macintosh 7200/90: Ethernet Issue (11/96)

Revised: 4/21/97
Security: Everyone

Power Macintosh 7200/90: Ethernet Issue (11/96)

Article Created: 17 November 1995
Article Reviewed/Updated: 4 November 1996

TOPIC -----

This article describes the Power Macintosh 7200 Ethernet Jitter Service Notice - December 1995.

DISCUSSION -----

Overview

Under certain network conditions, independent of the protocol being used, the Power Macintosh 7200/90 computer's built-in Ethernet port may fail to successfully send large packets over Ethernet.

Depending on the application or operation being performed, a user might experience one of the symptoms summarized below:

- 1) When using TCP as the transport protocol, the Power Macintosh 7200/90 may lock-up or timeout under certain conditions (for example, transferring a file to a UNIX host, or sending or composing messages from a Notes client to a Lotus Notes server).
- 2) Transferring or printing large files across certain repeaters may appear to cause the Power Macintosh 7200/90 to hang or may exhibit poor performance.

IMPORTANT: Not all Power Macintosh 7200/90 customers will experience this problem nor are other Power Macintosh models affected.

As of November 1995, Apple inventory of both service parts and newly manufactured computers are not affected by this issue.

Identification

If the Power Macintosh 7200/90 unit has a serial number of xx545xxxxxx or higher, then the computer should have the revised logic board installed.

If the Power Macintosh 7200/90 has a serial number of xx544xxxxxx then the computer MOST LIKELY has the revised logic board, but you should perform a visual inspection of the logic board using the Logic Board Identification instructions below.

If the Power Macintosh 7200/90 has a serial number of xx543xxxxxx or below then you will need to do a visual inspection of the logic board using the Logic Board Identification instructions below.

Troubleshooting

If you believe that you are experiencing difficulties related to this Ethernet jitter issue, we recommend that you try the following troubleshooting steps:

STEP ONE: VERIFICATION

- Verify that you are using a Power Macintosh 7200/90.
- Verify that the unit is attached to an Ethernet network.

STEP TWO: ISOLATE USING A NON-POWER MACINTOSH 7200/90 COMPUTER

Does the problem occur on systems other than the Power Macintosh 7200/90 (preferably Power Macintosh 7200/75 to 9500 computers that use Apple's new Open Transport networking protocol)?

- If YES, then the problem may be related to the software or network that the unit is attached to. Perform basic software and network troubleshooting to narrow down the problem.
- If NO, then the problem may be related to Ethernet clock jitter. Refer to Logic Board Identification below to determine whether or not the logic board has been reworked. If the logic board has already been reworked then you may have a network problem. If the board has not been reworked then replace the main logic board in at least one of the systems to verify whether a reworked board resolves the problem.

Logic Board Identification

To identify whether a Power Macintosh 7200/90 logic board has been reworked is to look at location G1 on the main logic board. G1 is located next to the internal 50-pin SCSI connector and the CURIO ASIC.

- If there is a 20MHz oscillator present at location G1 on the main logic board then the logic board has been reworked.
- If no 20MHz oscillator is present (four blank solder pads) then the board has not been reworked.

IMPORTANT:

If you contact (800) SOS-APPL for assistance with this issue, inform the engineer to reference Tech Info Library article, 0018825.

Article Change History:

04 Nov 1996 - Added note for contacting tech support.

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Tech Info Library Article Number:18944



Tech Info Library

QuickDraw 3D Glossary of Terms - A to F (1/96)

Revised: 1/29/96
Security: Everyone

QuickDraw 3D Glossary of Terms - A to F (1/96)

=====

Article Created: 17 November 1995
Article Reviewed/Updated: 25 January 1996

TOPIC -----

This article is a glossary of terms for QuickDraw 3D.

DISCUSSION -----

2D: Two-dimensional. See also planar.

3D: Three-dimensional. See also spatial.

3DMF: See QuickDraw 3D Object Metafile.

3D pointing device: Any physical device capable of controlling movements or specifying positions in three-dimensional space.

3D Viewer: A shared library that you can use to display 3D objects and other data in a window and to allow users limited interaction with those objects. See also viewer object.

accelerator: See graphics accelerator.

adjoint: The transpose of a matrix in which each element has been replaced by its cofactor.

adjoint matrix: See adjoint.

affine matrix: A matrix that specifies an affine transform.

affine transform: Any arbitrary concatenation of scale, translate, and rotate transforms. An affine transform preserves parallel lines in the objects transformed.

aliasing: The jagged edges (or staircasing) that result from drawing an image on

a raster device such as a computer screen. Compare antialiasing.alpha channel A color component in some color spaces whose value represents the opacity of the color defined in the other components. Compare ARGB color structure.

ambient coefficient: A measure of an object's level of reflection of ambient light.

ambient light: An amount of light of a specific color that is added to the illumination of all surfaces in a model.

ambient reflection coefficient: See ambient coefficient.

antialiasing: The smoothing of jagged edges on a displayed shape by modifying the transparencies of individual pixels along the shape's edge. Compare aliasing.

API: See application programming interface.

application coordinate system: See world coordinate system.

application space: See world coordinate system.

application programming interface (API): The total set of constants, data structures, routines, and other programming elements that allow developers to use some part of the system software.

area: A rectangular section of a plane. Defined by the TQ3Area data type.

ARGB color space: A color space whose components measure the intensity of red, green, and blue, together with the opacity (or alpha component) of the color thus defined.

ARGB color structure: A data structure that contains information about a color and its opacity. Defined by the TQ3ColorARGB data type.

artifact: Any oddity or unwanted feature of a rendered image. Compare aliasing.

aspect ratio: The ratio of the width of an image or other rectangular area to its height.

aspect ratio camera: A type of perspective camera defined in terms of a viewing angle and a horizontal-to-vertical aspect ratio.

aspect ratio camera data structure: A data structure that contains basic information about an aspect ratio camera. Defined by the TQ3ViewAngleAspectCameraData data type.

attenuation: The loss of light intensity over distance.

attribute: See attribute object.

attribute metahandler: A metahandler that defines methods for handling custom attribute data.

attribute object: A type of QuickDraw 3D object that determines some of the characteristics of a model, such as the color of objects or parts of objects in the model, the transparency of objects, and so forth. An attribute is of type TQ3Element. See also ambient coefficient, diffuse color, highlight state, normal vector, shading parameterization, specular color, specular reflection exponent, standard surface parameterization, surface shader, surface tangent, transparency color.

attribute set: A collection of zero or more different attribute types and their associated data.

axis: See coordinate axis.

back clipping plane: See yon plane.

backface culling: Ignoring backfacing polygons during rendering. Backface culling can reduce the amount of time required to render a model. Compare hidden surface removal.

backfacing polygon: Any polygon in a surface whose surface normal points away from a view's camera.

backfacing style: A type of QuickDraw 3D object that determines whether or not a renderer draws shapes that face away from a scene's camera.

badge: A visual element in a frame of a 3D model displayed by the 3D Viewer that distinguishes the frame from a static image.

base class: See parent class.

big-endian: Data formatting in which each field is addressed by referring to its most significant byte. See also little-endian.

binary file: A file object whose data is a stream of raw binary data, the type of which is indicated by object type codes. Compare text file.

bitmap: A two-dimensional array of values, each of which represents the state of one pixel. Defined by the TQ3Bitmap data type. See also pixmap, storage pixmap.

bounding box: A rectangular box, aligned with the coordinate axes, that completely encloses an object. Defined by the TQ3BoundingBox data type.

bounding loop: A section of code in which all bounding box or sphere calculation takes place. A bounding loop begins with a call to the Q3View_StartBoundingBox (or Q3View_StartBoundingSphere) routine and should end when a call to Q3View_EndBoundingBox (or Q3View_EndBoundingSphere) returns some value other than kQ3ViewStatusRetraverse. A bounding loop is a type of submitting loop. See also picking loop, rendering loop, writing loop.

bounding sphere: A sphere that completely encloses an object. Defined by the TQ3BoundingSphere data type.

bounding volume: A bounding box or a bounding sphere.

bounds: See bounding volume.

box: A three-dimensional object defined by an origin (that is, a corner of the box) and three vectors that define the edges of the box meeting in that corner. Defined by the TQ3BoxData data type.

B-spline curve: A curve that passes smoothly through a series of control points.

B-spline polynomial: A parametric equation that defines a B-spline curve.

B-spline surface: A surface that passes smoothly through a series of control points.

camera: See camera object. camera angle button A button in the controller strip of a viewer object that, when held down, causes a pop-up menu to appear listing the available cameras. Compare distance button, move button, rotate button, zoom button.

camera coordinate system: The coordinate system defined by a view's camera. Also called the view coordinate system. Compare local coordinate system, window coordinate system, world coordinate system.

camera data structure: A data structure that contains basic information about a camera. Defined by the TQ3CameraData data type.

camera location: The position, in the world coordinate system, of a camera. Also called the eye point. Compare camera placement structure.

camera object: A type of QuickDraw 3D object that you can use to define a point of view, a range of visible objects, and a method of projection for generating a two-dimensional image of those objects from a three-dimensional model. A camera object is an instance of the TQ3CameraObject

class: See also aspect ratio camera, orthographic camera, view plane camera.

camera placement: The location, orientation, and direction of a camera. See also camera placement structure.

camera placement structure: A data structure that contains information about the placement (that is, the location, orientation, and direction) of a camera. Defined by the TQ3CameraPlacement data type.

camera range: The spatial extent that lies between the hither and yon planes of a camera. See also camera range structure.

camera range structure: A data structure that contains information about the hither and yon clipping planes for a camera. Defined by the TQ3CameraRange data type.

camera space: See camera coordinate system.

camera vector: See viewing direction.

camera view port: The rectangular portion of a view plane that is to be mapped onto the area specified by the current draw context.

camera view port structure: A data structure that contains information about the view port of a camera. Defined by the TQ3CameraViewPort data type.

cap: A plane figure having the shape of an oval that closes the base of a cone or one end of a cylinder.

Cartesian coordinate system: A system of assigning planar positions to objects in terms of their distances from two mutually perpendicular lines (the x and y coordinate axes), or of assigning spatial positions to objects in terms of their distances from three mutually perpendicular lines (the x, y, and z coordinate axes). Compare polar coordinate system, spherical coordinate system.

center of projection: The point at which the projectors in a perspective projection intersect.

child class: A class that is immediately below some other class (the parent class) in the QuickDraw 3D class hierarchy. For example, the light class is a child class of the shape class. A child class inherits all of the methods of its parent. Also called a subclass.

clamp: For a shader effect, to replicate the boundaries of the effect across the portion of the mapped area that lies outside the valid range 0.0 to 1.0. Compare wrap.

class: See QuickDraw 3D class.

class type: See object type.

clipping plane: Either of the two planes that limit the part of a model that is rendered. See also hither plane, yon plane.

closed: Not open. Compare open.

color space: A specification of a particular method for representing colors. Compare RGB color space.

complement: The set of points that lie outside a given solid object. The complement of the object A is represented by the function \bar{A} . Compare intersection, union.

component: See mesh component.

concave polygon: A polygon with at least one interior angle greater than 180°. Compare convex polygon.

conic: See conic section.

conic section: Any two-dimensional curve that is formed by the intersection of a plane with a right circular cone. The most common conic sections are ellipses, circles, parabolas, and hyperbolas. Compare nonuniform rational B-spline (NURB).

connected: Said of a pair of mesh vertices if an unbroken path of edges exists linking one vertex to the other. Compare mesh component.

constant shading: A method of shading surfaces in which the incident light color and intensity are calculated for a single point on a polygon and then applied to the entire polygon. Compare Gouraud shading, Phong shading.

constant subdivision: A method of subdividing smooth curves and surfaces. In this method, the renderer subdivides a curve into some given number of polyline segments and a surface into a certain-sized mesh of polygons. Compare screen-space subdivision, world-space subdivision.

constructive solid geometry (CSG): A way of modeling solid objects constructed from the union, intersection, or difference of other solid objects.

container face: The face in a mesh that contains a particular contour.

contour: A list of vertices. In a mesh, a contour specifies a hole in a face. Compare container face.

controller: See controller object.

controller channel: Any piece of information sent from an application to an input device. Compare controller value.

controller data structure: A data structure that contains information about a controller. Defined by the TQ3ControllerData data type. controller object A QuickDraw 3D object that represents a 3D pointing device. A controller object is an instance of the TQ3ControllerObject class. See also tracker object.

controller state: See controller state object.

controller state object: A QuickDraw 3D object that represents the current channels and other settings of a controller. A controller state object is an instance of the TQ3ControllerStateObject class.

controller strip: A rectangular area at the bottom of a viewer object that contains one or more controls (usually buttons). Compare camera angle button, distance button, move button, rotate button, zoom button.

controller value: Any piece of information sent from an input device to an application. Compare controller channel.

control point: A geometric point used to control the curvature of a curve or surface. Compare knot.

convex polygon: A polygon whose interior angles are all less than or equal to 180°. Compare concave polygon.

coordinate axis: A line in a plane or in space that helps to define the position of geometric objects. See also x axis, y axis, z axis.

coordinates: (1) See coordinate system. (2) See tracker coordinates.

coordinate space: See coordinate system.

coordinate system: Any system of assigning planar or spatial positions to objects. Compare Cartesian coordinate system, polar coordinate system, spherical coordinate system.

corner: See mesh corner.

cross product: The vector that is perpendicular to two given vectors and whose magnitude is the product of the magnitudes of those two vectors multiplied by the sine of the angle between them. The cross product of the vectors u and v is denoted $u \times v$. Compare dot product.

CSG: See constructive solid geometry.

CSG equation: A value that encodes which CSG operations are to be performed on a model's CSG objects.

CSG object ID: A number, attached to an object as an attribute, that identifies an object for CSG operations.

C standard I/O library: See standard I/O library.

C string object: A QuickDraw 3D object that contains a standard C string (that is, an array of characters terminated by the null character).

culling: See backface culling.

custom: Supplied by your application, not by QuickDraw 3D.

custom surface parameterization: A parameterization of a surface supplied by your application. Compare natural surface parameterization, standard surface parameterization.
database file A metafile in which all shared objects contained in the file are listed in the file's table of contents. See also normal file, stream file.

database mode: The mode in which a database file is opened. See also normal mode, stream mode.

default surface parameterization: See standard surface parameterization.

degrees of freedom (DOF): The number of dimensions that are independently specifiable by a particular input device. For example, a slider or a dial has one degree of freedom; a mouse typically has two degrees of freedom.

device coordinate system: See window coordinate system.

device space: See window coordinate system.

differential scaling: A scale transform in which the scaling values $d x$, $d y$, and $d z$ are not all identical. Compare uniform scaling.

diffuse coefficient: A measure of an object's level of diffuse reflection.

diffuse color: The color of the light of a diffuse reflection.

diffuse reflection: The type of reflection that is characteristic of light reflected from a dull, nonshiny surface. Also called Lambertian reflection. Compare specular reflection.

diffuse reflection coefficient: See diffuse coefficient.

directional light: A light source that emits parallel rays of light in a specific direction.

directional light data structure: A data structure that contains information about a directional light. Defined by the `TQ3DirectionalLightData` data type.

dirty state: A Boolean value that indicates whether an unknown object is preserved in its original state (`kQ3False`) or should be updated when written back to the file object from which it was originally read (`kQ3True`).

display group: A type of group that contains drawable objects. See also ordered display group, proxy display group.

distance button: A button in the controller strip of a viewer object that, when clicked, puts the cursor into trucking mode. Subsequent dragging up or down in the picture area causes the object to move farther away or closer. Compare camera angle button, move button, rotate button, zoom button.

DOF: See degrees of freedom.

dot product: The floating-point number obtained by multiplying corresponding scalar components of two vectors and then adding together all those products. The dot product of the vectors u and v is denoted $u \cdot v$. Compare cross product.

drawable flag: A group state flag that determines whether a group is to be drawn when it is passed to a view for rendering or picking. Compare inline flag, picking flag.

draw context: See draw context object.

draw context coordinate system: See window coordinate system.
draw context data structure A data structure that contains basic information about a draw context. Defined by the `TQ3DrawContextData` data type.

draw context object: A QuickDraw 3D object that maintains information specific to a particular window system or drawing destination. A draw context object is an instance of the `TQ3DrawContextObject` class. See also Macintosh draw context, pixmap draw context.

draw context space: See window coordinate system.

drawing destination: The window or other output destination for a rendered model.

edge: A straight line that connects two vertices. See also mesh edge.

edge tolerance: A measure of how close a point must be to a line for a hit to occur. Compare vertex tolerance.

element: See element object.

element object: Any QuickDraw 3D object that can be part of a set. An element object is an instance of the TQ3ElementObject class.

elevation projection: A type of orthographic projection in which the view plane is perpendicular to one of the principal axes of the object being projected. See also front elevation projection, side elevation projection, top elevation projection. Compare isometric projection.

error: A nonrecoverable condition that causes the currently executing QuickDraw 3D routine to fail. See also fatal error, notice, warning.

Error Manager: The part of QuickDraw 3D that you can use to handle any errors or other exceptional conditions that occur during the execution of QuickDraw 3D routines.

even-odd rule: A method of determining which planar areas defined by an arbitrary list of vertices are inside a polygon. To determine whether a particular bounded region is inside or outside a polygon, shoot a ray from any point in that region in any direction that does not intersect any vertex. If the ray cuts an odd number of edges, that region is inside the polygon; if the ray cuts an even number of edges, that region is outside the polygon.

eye point: See camera location.

face: A closed figure that forms part of the surface of an object. Usually faces are planar, but mesh faces do not need to be planar. See also mesh face.

face attribute: An attribute that defines a characteristic of a polygonal object.

face index: In a mesh, a unique integer (between 0 the total number of faces in the mesh minus 1) associated with a face. Compare vertex index.

facet: See face.

faceted shading: See constant shading.fall-off value A measure of the attenuation of a spot light's intensity from the edge of the hot angle to the edge of the outer angle. See also hot angle, outer angle.

far plane: See yon plane.

fatal error: An error whose effects persist even after the call that caused it has ended.

field of view: The horizontal or vertical angular expanse visible through a camera. See also aspect ratio camera.

file: See file object.

file idle method: A callback routine that is called during lengthy file operations. Compare view idle method.

file mode: A set of flags that determine which operations can be performed on a piece of storage.

file mode flag: A value used to construct a file mode.

file object: A type of QuickDraw 3D object that you can use to access disk- or memory-based data stored in a container. A file object is an instance of the TQ3FileObject class. See also storage object.

file status value: A value returned by the Q3File_EndWrite function that indicates whether QuickDraw 3D has finished writing the model to a file object.

fill style: A type of QuickDraw 3D object that determines whether an object is drawn as a solid filled object or is decomposed into its components (namely, into a set of edges or points).

flat shading: See constant shading.

frame: See viewer pane.

front clipping plane: See hither plane.

front elevation projection: A type of elevation projection in which the view plane is parallel to the front of the object being projected.

frustum: A solid figure created by cutting a cone or pyramid with two parallel planes. Compare view frustum.

frustum coordinate system: See camera coordinate system.

frustum space: See camera coordinate system.

frustum-to-window transform: A transform that defines the relationship between a frustum coordinate system and a window coordinate system. Compare local-to-world transform, world-to-frustum transform.

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QuickDraw 3D Glossary of Terms - G to O (1/96)

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TOPIC -----

This article is a glossary of terms for QuickDraw 3D.

DISCUSSION -----

general polygon: A closed plane figure defined by one or more lists of vertices (that is, defined by one or more contours). Defined by the TQ3GeneralPolygonData data type. See also simple polygon.

generic renderer: A renderer that you can use solely to collect state information. The generic renderer does not draw any image.

geometric object: A type of QuickDraw 3D object that describes a particular kind of drawable shape, such as a triangle or a box. A geometric object is an instance of the TQ3GeometryObject class. See also box, general polygon, line, marker, mesh, NURB curve, NURB patch, point, polygon, triangle, trigrid.geometric primitive Any of the basic geometric objects defined by QuickDraw 3D.

geometry: See geometric object.

geometry attribute: An attribute that defines a characteristic of a nonpolygonal geometric object.

global coordinate system: See world coordinate system.

global space: See world coordinate system.

Gouraud shading: A method of shading surfaces in which the incident light color and intensity are calculated for each vertex of a polygon and then interpolated linearly across the entire polygon. Compare constant shading, Phong shading.

graphics accelerator: Any hardware device used by QuickDraw 3D to accelerate rendering.

group: See group object.

group object: A type of QuickDraw 3D object that you can use to collect objects together into hierarchical models. A group object is an instance of the TQ3GroupObject class.

group position: A pointer to a data structure maintained internally by QuickDraw 3D that indicates the position of a group element in the group.

group state flag: A value that indicates the state of some characteristic of a group.

group state value: A set of group state flags that determine how a group is traversed during rendering or picking, or during computation of its bounding box or sphere.

handle storage object: A storage object that represents a handle to a dynamically allocated block of RAM.

hidden line removal: The process of removing any lines in a model that are hidden by opaque surfaces of objects.

hidden surface removal: The process of removing any surfaces in a model that are hidden by opaque surfaces of objects. Compare backface culling.

hierarchy: See QuickDraw 3D class hierarchy.

highlight state: An attribute having data of type TQ3Boolean that determines whether a highlight style overrides the material attributes of an object (kQ3True) or not.

highlight style: A type of QuickDraw 3D object that determines the material attributes of a geometric object (or a group of geometric objects) that override the normal attributes of the object (or group of objects).

high-order bit: See most significant bit.

hit: An object in a model that is close enough to the pick geometry. See also hit list.

hit data structure: A data structure that contains information about a hit. Defined by the TQ3HitData data type.hither plane The clipping plane closest to the camera.

hit information mask: A value that indicates the type of information you want returned for the items in a hit list.

hit list: A list of all objects in a model that are close to the pick geometry.

hit list sorting value: A value that determines the kind of sorting that is to

be done on a hit list.

hit path structure: A data structure that contains information about the path through a model hierarchy to a specific picked object. Defined by the TQ3HitPath data type.

hit testing: See picking.

hot angle: The half-angle (specified in radians) from the center of a spot light's cone of light within which the light remains at constant full intensity. See also fall-off value, outer angle.

identity matrix: Any $n \times n$ square matrix with elements a_{ij} such that $a_{ij} = 1$ if $i = j$ and $a_{ij} = 0$ otherwise. Compare inverse.

idle method: See file idle method, view idle method.

illumination shader: A shader that determines the effects of the view's group of lights on the objects in a model. Compare Lambert illumination shader, Phong illumination shader.

image: The two-dimensional product of rendering.

image plane structure: A data structure that contains information about an image plane. Defined by the TQ3ImagePlane data type.

immediate mode: A mode of defining and rendering a model in which the application maintains the only copy of the model data. See also retained mode.

immediate object: An object that is rendered in immediate mode. See also retained object.

infinite light: See directional light.

information group: A group that contains one or more strings (and no other types of QuickDraw 3D objects).

inherit: To have the data and methods of a parent class apply to a child class. Compare override.

inheritance: The property of the QuickDraw 3D class hierarchy whereby a child class inherits the data and methods of its parent class.

initial line: See polar axis.

inline: A method of executing groups that does not push and pop the graphics state stack before and after it is executed.

inline flag: A group state flag that determines whether or not a group should be executed inline. Compare drawable flag, picking flag.

inner product: See dot product.

input/output (I/O): The parts of a computer system that transfer data to or from peripheral devices.
instantiable class A class of which instances can be created. All leaf classes are instantiable, and many parent classes are instantiable as well. (For example, both the class TQ3AttributeSet and its parent class TQ3SetObject are instantiable.)

interacting: The process of selecting and manipulating objects in a model.

interactive renderer: A renderer that uses a fast and accurate algorithm for drawing solid, shaded surfaces. See also wireframe renderer.

interpolated shading: See Gouraud shading.

interpolation style: A type of QuickDraw 3D object that determines the method of interpolation a renderer uses when applying lighting or other shading effects to a surface.

intersection: The set of points that lie inside both of two given solid objects. The intersection of the objects A and B is represented by the function $A \llcorner B$. Compare complement, union.

inverse: For an $n \times n$ square matrix A with a nonzero determinant, the matrix B such that $AB = BA = I$, where I is the $n \times n$ identity matrix.

inverse matrix: See inverse.

I/O: See input/output.

I/O proxy display group: A display group that contains several representations of a single geometric object.

isometric projection: A type of orthographic projection in which the view plane is not perpendicular to any of the principal axes of the object being projected but makes equal angles with each of those axes. Compare elevation projection.

join point: See knot.

knot: A point on a curve that joins two segments of the curve.

knot vector: An array of numbers that defines a curve's knots.

Lambertian reflection: See diffuse reflection.

Lambert illumination: A method of calculating the illumination of a point on a surface based on diffuse reflection. Compare null illumination, Phong illumination.

Lambert illumination shader: An illumination shader that implements a Lambert illumination model. Compare null illumination shader, Phong illumination shader.

leaf class: A class that has no children.

leaf object: An instance of a leaf class.

leaf type: The object type of a leaf object.

least significant bit (LSB): The bit contributing the least value in a string of bits. Same as low-order bit. Compare most significant bit.

left-handed coordinate system: A coordinate system that obeys the left-hand rule. In a left-handed coordinate system, positive rotations of an axis are clockwise. Compare right-handed coordinate system.

left-hand rule: A method of determining the direction of the positive z axis (and thereby the front of a planar surface). According to the left-hand rule, if the thumb of the left hand points in the direction of the positive x axis and the index finger points in the direction of the positive y axis, then the middle finger points in the direction of the positive z axis. Compare right-hand rule.

light: See light object.

light attenuation: See attenuation.

light data structure: A data structure that contains basic information about a light. Defined by the TQ3LightData data type.

light fall-off: See fall-off value.

light group: A group that contains one or more lights (and no other types of QuickDraw 3D objects).

light object: A type of QuickDraw 3D object that you can use to illuminate the surfaces in a model. A light object is an instance of the TQ3LightObject class. See also ambient light, directional light, point light, spot light.

line: A straight segment in three-dimensional space defined by its two endpoints, with an optional set of attributes. Defined by the TQ3LineData data type.

line of projection: See projector.

little-endian: Data formatting in which each field is addressed by referring to its least significant byte. See also big-endian.

local coordinate system: The coordinate system in which an individual geometric objects is defined. Also called the object coordinate system or the modeling coordinatesystem. Compare camera coordinate system, window coordinate system, world coordinate system.

local space: See local coordinate system.

local-to-world transform: A transform that defines the relationship between an object's local coordinate system and the world coordinate system. Compare frustum-to-window transform, world-to-frustum transform.

low-order bit: See least significant bit.

LSB: See least significant bit.

luminance: The intensity of light in a color.

Macintosh draw context: A draw context that is associated with a Macintosh window.

Macintosh draw context data structure: A data structure that contains information about a Macintosh draw context. Defined by the TQ3MacDrawContextData data type.

Macintosh FSSpec storage object: A storage object that represents the data fork of a Macintosh file using a file system specification structure (of type FSSpec).

Macintosh storage object: A storage object that represents the data fork of a Macintosh file using a file reference number. Compare Macintosh FSSpec storage object.

mapping: The process of transforming one coordinate space into another.

marker: A two-dimensional object typically used to indicate the position of an object (or part of an object) in a window. Defined by the TQ3MarkerData data type.
matrix A rectangular array of numbers. QuickDraw 3D defines 3-by-3 and 4-by-4 matrices using the TQ3Matrix3x3 and TQ3Matrix4x4 data types.

matrix transform: Any transform specified by an affine, invertible 4-by-4 matrix.

memory storage object: A storage object that represents a dynamically allocated block of RAM. Compare handle storage object.

mesh: A collection of vertices, faces, and edges that represent a topological polyhedron. Defined by the TQ3Mesh data type.

mesh component: A collection of connected vertices in a mesh. Defined by the TQ3MeshComponent data type.

mesh corner: A mesh face together with one of its vertices. You can associate a set of attributes with a mesh corner. The attributes in a corner override any existing attributes of the associated vertex.

mesh edge: A line that connects two mesh vertices. A mesh edge is part of one or more mesh faces. Defined by the TQ3MeshEdge data type.

mesh face: A closed figure that forms part of a mesh. Unlike the faces of other geometric objects, mesh faces do not need to be planar. Defined by the TQ3MeshFace data type.

mesh iterator structure: A data structure used by QuickDraw 3D to maintain information when iterating through parts of a mesh. Defined by the

TQ3MeshIterator data type.

mesh part: See mesh part object.

mesh part object: A distinguishable part of a mesh. A mesh part object is an instance of the TQ3MeshPartObject class.

mesh vertex: A vertex (that is, a three-dimensional point) that is contained in a mesh. Defined by the TQ3MeshVertex data type.

metafile: A file format (that is, a description of the format of a kind of file). See also QuickDraw 3D Object Metafile.

metafile object: A basic unit contained in a file that conforms to the QuickDraw 3D Object Metafile.

metahandler: An application-defined function that QuickDraw 3D calls to build a method table for a custom object type. Compare attribute metahandler.

method: An item of data associated with a particular object class. The data is usually a function pointer or other information used by the object class.

metric pick: See metric pick object.

metric pick object: A pick object whose pick geometry has a pick origin.

model: A collection of synthetic three-dimensional geometric objects and groups of geometric objects. A model represents a prototype.

modeling: The process of creating a representation of real or abstract objects.

modeling coordinate system: See local coordinate system.

modeling space: See local coordinate system.
most significant bit (MSB) The bit contributing the greatest value in a string of bits. Same as high-order bit. Compare least significant bit.

move button: A button in the controller strip of a viewer object that, when clicked, puts the cursor into move mode. Subsequent dragging on an object in the picture area causes the object to be moved to a new location. Compare camera angle button, distance button, rotate button, zoom button.

MSB: See most significant bit.

natural attribute: An attribute that can naturally be contained in a set of attributes of a specific type.

natural surface parameterization: A parameterization of a surface that can be derived directly from the definition of the surface. Compare custom surface parameterization, standard surface parameterization.

near plane: See hither plane.

nonuniform rational B-spline (NURB): A curve defined by nonuniform parametric ratios of B-spline polynomials. NURB curves can be used to define very complex curves and surfaces, as well as very common geometric objects (for instance, the conic sections). See also control point, knot, NURB curve, NURB patch.

normal: (a.) Perpendicular. (n.) A normal vector.

normal file: A metafile in which the specification of an object in the file never occurs more than once. In other words, a file object that contains a table of contents that lists all multiply-referenced objects in the file. See also normal file, stream file.

normalized vector: A vector whose length is 1.

normal mode: The mode in which a normal file is opened. See also database mode, stream mode.

normal vector: A vector that is normal (that is perpendicular) to a surface or planar object at a specific point.

notice: A condition that is less severe than a warning, and that will likely not cause problems. See also error, warning.

notify function: See tracker notify function.

null illumination: A method of calculating the illumination of a point on a surface that depends only on the diffuse color of the point. Compare Lambert illumination, Phong illumination.

null illumination shader: An illumination shader that implements a null illumination model. Compare Lambert illumination shader, Phong illumination shader.

NURB: See nonuniform rational B-spline.

NURB curve: A three-dimensional curve represented by a NURB equation. Defined by the TQ3NURBCurveData data type.

NURB patch: A three-dimensional surface represented by a NURB equation. Defined by the TQ3NURBPatchData data type.

object: (1) See QuickDraw 3D object. (2) See metafile object. object coordinate system See local coordinate system.

object space: See local coordinate system.

object type: The identifier of the class of which a QuickDraw 3D object is an instance. Also called the class type.

oblique projection: A type of parallel projection in which the view plane is not perpendicular to the viewing direction. Compare orthographic projection.

off-axis viewing: A method of perspective projection in which the center of the projected object on the view plane is not on the camera vector.

opaque: (1) For a data structure, not publicly defined. You must use QuickDraw 3D functions to get and set values in an opaque data structure. For an object, having data and methods that are not publicly defined. (2) For a geometric object, not allowing light to pass through.

open: Said of a storage object whenever its associated storage is in use—for example, when an application is reading data from a file object attached to the storage object.

order: For a NURB curve or patch, one more than the highest degree equation used to define the curve or patch. For example, the order of a NURB curve defined by cubic polynomial equations is 4.

ordered display group: A display group in which the objects in the group are sorted by their type.

orientation style: A type of QuickDraw 3D object that determines which side of a planar surface is considered to be the "front" side.

origin: In Cartesian coordinates, the point (0, 0) or (0, 0, 0). The coordinate axes intersect at the origin.

original QuickDraw: See QuickDraw.

orthogonal: Perpendicular.

orthographic camera: A type of camera that uses orthographic projection.

orthographic camera data structure: A data structure that contains basic information about an orthographic camera. Defined by the TQ3OrthographicCameraData data type.

orthographic projection: A type of parallel projection in which the view plane is perpendicular to the viewing direction. Compare oblique projection. See also elevation projection, isometric projection.

outer angle: The half-angle (specified in radians) from the center of a spot light's cone to the edge of the cone. See also fall-off value, hot angle.

outer product: See cross product.

override: To define class data or methods that replace those of the parent class. Compare inherit.

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QuickDraw 3D Glossary of Terms - T to Z (11/95)

Article Created: 17 November 1995

TOPIC -----

This article is a glossary of terms for QuickDraw 3D.

DISCUSSION -----

tangent: A line or plane that intersects a curve or surface at a single point.
Compare surface tangent.

tessellate: To decompose a curve or surface into polygonal faces.

text file: A file object whose data is a stream of ASCII characters with
meaningful labels for each type of object contained in the file. Compare binary
file.

texture: See texture object.

texture mapping: A technique wherein a predefined image (the texture) is mapped
onto the surface of an object in a model.

texture object: A type of QuickDraw 3D object used to perform texture mapping.
Compare pixmap texture object.

texture parameterization: A parametric function that maps the unit square to a
texture.

texture shader: A type of surface shader that applies textures to surfaces.

tolerance: See edge tolerance, vertex tolerance.

top elevation projection: A type of elevation projection in which the view plane
is parallel to the top of the object being projected. Also called plan elevation
projection.

tracker: See tracker object.

tracker coordinates: The current settings (that is, position and orientation) of a tracker.

tracker notify function: A function that is called whenever the coordinates of a tracker change by more than a specified amount.

tracker object: A QuickDraw 3D object that represents the position and orientation of a single element in your application's user interface. A tracker object is an instance of the TQ3TrackerObject class. See also controller object.

tracker serial number: A unique number that changes every time the coordinates of a tracker are updated by a controller.

tracker threshold: The amount by which a tracker's coordinates must change for the tracker notify function to be called.

transform: See transform object.

transform object: A type of QuickDraw 3D object that you can use to modify or transform the appearance or behavior of a QuickDraw 3D object. A transform object is an instance of the TQ3TransformObject class.

translate: To reposition an object by adding values d_x , d_y , and d_z to the x , y , and z coordinates of each of its points.

translate transform: A type of transform that translates an object along the x , y , and z axes by specified values.

transparency: The ability of an object to allow light to pass through it.

transparency color: A color of type TQ3ColorRGB that determines the amount of light that can pass through a surface. The color (0, 0, 0) indicates complete transparency, and (1, 1, 1) indicates complete opacity.

transpose: (n.) For an $m \times n$ matrix with elements a_{ij} , the $n \times m$ matrix with elements b_{ij} such that $b_{ij} = a_{ji}$. (v.) To form the transpose of a given matrix.

transpose matrix: See transpose.

triangle: A closed plane figure defined by three edges. Defined by the TQ3TriangleData data type.

trigrid: A grid composed of triangular facets. Defined by the TQ3TriGridData data type.

type: See object type.

under-color shader: A shader associated with some other shader that supplies an under color for surfaces shaded by that shader.

uniform scaling: A scale transform in which the scaling values d_x , d_y , and d_z are all identical. Compare differential scaling.

union: The set of points that lie inside either of two given solid objects. The union of the objects A and B is represented by the function $A \cup B$. Compare complement, intersection.

unit cube: A box whose three defining edges have a length of 1.

unit vector: See normalized vector.

UNIX path name storage object: A storage object that represents a file using a path name.

UNIX storage object: A storage object that represents a file using a structure of type FILE (defined in the standard I/O library). Compare UNIX path name storage object.

unknown object: A type of QuickDraw 3D object that is created when QuickDraw 3D encounters data it doesn't recognize while reading a metafile. An unknown object is an instance of the TQ3UnknownObject class.
up vector: A vector that indicates which direction is up. A camera has an up vector that defines its orientation. Compare camera placement.

user interface view: See user interface view object.

user interface view notify function: A function that is called whenever one of your user interface views needs to be redrawn.

user interface view object: A type of view that allows the user to interact (using interface elements such as a 3D cursor or widgets) with the 3D objects displayed in the view. A user interface view object is an instance of the TQ3UIViewObject class.

valid range: The range of u and v parametric values for a standard surface parameterization. For QuickDraw 3D, the valid range is the closed interval $[0.0, 1.0]$.

vector: A pair or triple of floating-point numbers that obeys the laws of vector arithmetic. Defined by the TQ3Vector2D and TQ3Vector3D data types. Compare cross product, dot product, normal.

vector-normal interpolation shading: See Phong shading.

vector product: See cross product.

vertex: A dimensionless position in three- or four-dimensional space at which two or more lines (for instance, edges) intersect, with an optional set of vertex attributes. Defined by the TQ3Vertex3D and TQ3Vertex4D data types. See also mesh vertex.

vertex attribute: An attribute that defines a characteristic of a vertex of a

polygonal object.

vertex index: In a mesh, a unique integer (between 0 the total number of vertices in the mesh minus 1) associated with a vertex. Compare face index.

vertex tolerance: A measure of how close two points must be for a hit to occur. Compare edge tolerance.

view: See view object.

view attribute: An attribute that defines a characteristic of a view object.

view-based shader: A shader that operates independently of the material properties or orientation of objects (in other words, that operates solely on aspects of the view, such as the camera position). Compare surface-based shader.

viewing box: The rectangular box defined by an orthographic camera and the hither and yon clipping planes. Compare viewing frustum.

view coordinate system: See camera coordinate system.

viewer: See viewer object.

Viewer: See 3D Viewer.

viewer badge: See badge.

viewer controller strip: See controller strip.

viewer flags: A set of bit flags that specify information about the appearance and behavior of a viewer object.

viewer frame: See viewer pane.
viewer object An instance of the 3D Viewer. A viewer object is of type ViewerObject.

viewer pane: The portion of a window occupied by a viewer object. The pane includes the picture area and the controller strip.

viewer state flags: A set of bit flags returned by the Q3ViewerGetState function that specify information about the current state of a viewer object.

viewing frustum: The rectangular frustum defined by a perspective camera and the hither and yon clipping planes. Compare viewing box.

view hints object: An object in a metafile that gives hints about how to render a scene.

view idle method: A callback routine that is called during lengthy rendering operations. Compare file idle method.

view information structure: A data structure that contains information about a view. Defined by the TQ3ViewInfo data type.

viewing direction: The direction of a view's camera. Also called the camera vector or the viewing vector.

viewing vector: See viewing direction.

view mapping matrix: A matrix maintained by QuickDraw 3D that transforms the viewing frustum into a standard rectangular solid. The world-to-frustum transform is the product of the transforms specified by the view orientation matrix and the view mapping matrix. Compare view orientation matrix.

view object: A type of QuickDraw 3D object used to collect state information that controls the appearance and position of objects at the time of rendering. A view object is an instance of the TQ3ViewObject class.

view orientation matrix: A matrix maintained by QuickDraw 3D that rotates and translates a view's camera so that it is pointing down the negative z axis. The world-to-frustum transform is the product of the transforms specified by the view orientation matrix and the view mapping matrix. Compare view mapping matrix.

view plane: The plane onto which a model is projected. Also called the projection plane.

view plane camera: A type of perspective camera defined in terms of an arbitrary view plane.

view plane camera data structure: A data structure that contains basic information about a view plane camera. Defined by the TQ3ViewPlaneCameraData data type.

view plane coordinate system: The two-dimensional coordinate system whose origin is the point at which the viewing direction intersects the view plane and whose positive y axis is parallel to the camera's up vector.

view port: See camera view port.

view space: See camera coordinate system.

view status value: A value returned by the Q3View_EndRendering function that indicates whether the renderer has finished processing the model.view volume The part of world space that is projected onto the view plane during rendering. See also view box, view frustum.

virtual: See synthetic.

virtual camera: See camera object.

visual line determination: See hidden line removal.

visual surface determination: See hidden surface removal.

warning: A condition that, though less severe than an error, might cause an

error if your application continues execution without handling the warning. See also error, notice.

widget: An element of an application's 3D user interface.

window coordinate system: The coordinate system defined by a window. Also called the screen coordinate system or the draw context coordinate system. Compare camera coordinate system, local coordinate system, world coordinate system.

window picking: See screen-space picking.

window-point pick data structure: A data structure that contains information about a window-point pick object. Defined by the TQ3WindowPointPickData data type.

window-point pick object: A pick object that tests for closeness between a point in a window and the screen projections of the objects in the model.

window-rectangle pick data structure: A data structure that contains information about a window-rectangle pick object. Defined by the TQ3WindowRectPickData data type.

window-rectangle pick object: A pick object that tests for closeness between a rectangle in a window and the screen projections of the objects in the model.

window space: See window coordinate system.

wireframe renderer: A renderer that creates line drawings of models. See also interactive renderer.

world coordinate system: The coordinate system that defines the locations of all geometric objects as they exist at rendering or picking time, with all applicable transforms acting on them. Also called the global coordinate system or the application coordinate system. Compare camera coordinate system, local coordinate system, window coordinate system.

world space: See world coordinate system.

world-space subdivision: A method of subdividing smooth curves and surfaces according to which the renderer subdivides a curve (or surface) into polylines (or polygons) whose sides have a world-space length that is at most as large as a given value. Compare constant subdivision, screen-space subdivision.

world-to-frustum transform: A transform that defines the relationship between the world coordinate system and the frustum coordinate system. Compare frustum-to- window transform, local-to-world transform.

wrap: For a shader effect, to replicate the entire effect across the mapped area. Compare clamp.

writing loop: A section of code in which all writing takes place. A writing loop begins with a call to the Q3View_StartWriting routine and should end when a call to Q3View_EndWriting returns some value other than kQ3ViewStatusRetraverse. A

writing loop is a type of submitting loop. See also bounding loop, picking loop, rendering loop.

x axis: In Cartesian coordinates, the horizontal axis.

y axis: In Cartesian coordinates, the vertical axis.

yon plane: The clipping plane farthest away from the camera.

z axis: In Cartesian coordinates, the axis that represents depth.

zoom button: A button in the controller strip of a viewer object that, when clicked, puts the cursor into zooming mode. Subsequent dragging up or down in the picture area causes the camera's field of view to increase or decrease. Compare camera angle button, distance button, move button, rotate button.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18947



Tech Info Library

Macintosh Performa: Kidsoft Extension and Type 11 (11/95)

Revised: 11/20/95
Security: Everyone

Macintosh Performa: Kidsoft Extension and Type 11 (11/95)

=====

Article Created: 17 November 1995

TOPIC -----

When I start up my Power Macintosh 5200/75 LC computer, I get the message, "Volume 3 Issue 4, Type 11." I can only start up my computer if I disable extensions. What is causing this?

DISCUSSION -----

Within the Extensions folder in your System Folder, check to see if you have a file called, "Volume 3 Issue 4". If so, remove it because it is likely the cause of the error. This file appears to be installed from the KidSoft CD, and you should contact KidSoft for additional assistance.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18948



Tech Info Library

Newton 2.0 OS: No Meetings Shorter than 30 Minutes (8/96)

Revised: 8/27/96
Security: Everyone

Newton 2.0 OS: No Meetings Shorter than 30 Minutes (8/96)

=====

Article Created: 20 November 1995
Article Reviewed/Updated: 27 August 1996

TOPIC -----

I am using the Newton 2.0 OS, and I having trouble making a meeting in the Dates area less than 30 minutes. How can I do this?

DISCUSSION -----

When creating a meeting (by drawing a line over the desired meeting time), the graphic user interface displays meetings as being 30 minutes or longer. If you edit the meeting, in the meeting slip, and specify the meeting is less than 30 minutes, when you close the meeting slip, the meeting time goes back to the minimum 30 minute meeting. This time limitation is in the OS, and there is no supported method of changing this restriction. A 30 minute meeting ensures that the vertical bar is of sufficient size, and leaves room for the meeting icon and the meeting title.

Article Change History:
27 Aug 1996 - Elaborated on discussion.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18949



Tech Info Library

Newton 2.0 OS: Make Backdrop Location (11/95)

Revised: 11/20/95
Security: Everyone

Newton 2.0 OS: Make Backdrop Location (11/95)

=====

Article Created: 20 November 1995

TOPIC -----

This article describes the location of the built-in Make Backdrop option in the Newton 2.0 OS (Operating System).

DISCUSSION -----

The Backdrop application is the one which appears on the MessagePad screen when you power on your Newton PDA (Personal Digital Assistant).

In the Newton 2.0 OS, the Make Backdrop option is located in the Memory Info area, in the Extras drawer. You can get to the Memory Info area by tapping on the 'i' in the lower right corner of the MessagePad screen.

Apple chose to put the backdrop option in the memory area instead of a setup area since users may want to change the built-in make backdrop over a period of time, not just during the setup.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18950



Tech Info Library

Color LW 12/600 PS: Changing Trays With PostScript (4/97)

Revised: 4/14/97
Security: Everyone

Color LW 12/600 PS: Changing Trays With PostScript (4/97)

Article Created: 20 November 1995
Article Reviewed/Updated: 14 April 1997

TOPIC -----

This article explains how to use PostScript commands to print from a specific paper tray on the Color LaserWriter 12/600 PS printer either by default, or on a per-job basis.

DISCUSSION -----

In order to change the paper tray for one job, you can use the following PostScript code fragments. This was taken from the Color LaserWriter 12/600 PS PPD. You need to insert the code at the beginning of your print job.

CAUTION:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

250 Page Tray

Begin_Table

```
%=====
% Begin PostScript code
%
currentpagedevice /InputAttributes get 0 get
dup null eq
{ pop }
{ dup length 1 add dict copy
  dup /InputAttributes
  1 dict dup /Priority [0 1 2] put
  put setpagedevice
} ifelse
```

```
%
% End PostScript code
%=====
```

Multipurpose Tray

```
%=====
% Begin PostScript code
%
  currentpagedevice /InputAttributes get 1 get
  dup null eq
  { pop }
  { dup length 1 add dict copy
    dup /InputAttributes
    1 dict dup /Priority [1 0 2] put
    put setpagedevice
  } ifelse
%
% End PostScript code
%=====
```

Optional Tray

```
%=====
% Begin PostScript code
%
  currentpagedevice /InputAttributes get 2 get
  dup null eq
  { pop }
  { dup length 1 add dict copy
    dup /InputAttributes
    1 dict dup /Priority [2 0 1] put
    put setpagedevice
  } ifelse
%
% End PostScript code
%=====
```

Changing Default Tray

If you wish to change the default paper tray,

This is PostScript Level 1 code:

```
%=====
% Begin PostScript Code
%
```

```
serverdict begin 0 exitserver
statusdict begin n setdefaultpapertray end
%
% end PostScript Code
%=====
```

End_Table

Replace "n" before "setdefaultpapertray" based on the following table:

```
0 (StandardCassette)
1 (Multipurpose)
2 (OptionalCassette)
```

This changes the default paper tray permanently, or until you use this PostScript code to change the default tray again.

This is the equivalent PostScript Level 2 code:

```
%=====
% Begin PostScript Code
%
serverdict begin 0 exitserver
1 dict dup /InputAttributes 1 dict dup /Priority [2 1 0] put put setpagedevice
%
% End PostScript Code
%=====
```

This sets the paper tray priority to:

1st Priority - Cassette (500 Sheets) - designated by the "2" in the array above.
2nd Priority - Multipurpose Tray - designated by the "1" in the array above.
3rd Priority - Cassette (250 Sheets) - designated by the "0" in the array above.

You can change the paper tray priority order by changing the values in "/Priority [2 1 0]".

For example, /Priority [0 1 2] makes the 250 sheet cassette first priority, then the Multipurpose tray next, then the 500 sheet cassette.

Article Change History:

14 Apr 1997 - Added PostScript Level 2 code.

Copyright 1995-1997, Apple Computer, Inc.

Tech Info Library Article Number:18951



Tech Info Library

Top Apple Tech Info Library Articles (12/96)

Revised: 12/3/96
Security: Everyone

Top Apple Tech Info Library Articles (12/96)

Article Created: 20 November 1995
Article Reviewed/Updated: 3 December 1996

TOPIC -----

Below is the current list of the Top Apple Tech Info Library articles, as compiled by our WAIS database on the Internet, <http://til.info.apple.com>. The Apple Tech Info Library is also available on AppleLink, CompuServe and eWorld. When searching for the complete list of articles, use the keyword: ktoptil as a search string on any of the services mentioned above. You can search by article number on AppleLink only.

DISCUSSION -----

These are the Top Apple Tech Info Library articles as of 13-Feb-96:

Number	Title
13125	ABS Tech Note: AS01 AppleSearch Character Support (8/93)
18216	Apple Displays: Frequently Asked Questions (2/96)
18287	Apple Internet Connection Kit (11/95)
19144	Apple Internet Connection Kit Read Me (1/96)
18219	Apple LaserWriter Printers: Frequently Asked Questions (11/95)
15372	Apple Printers: Printer Drivers and Cables (1/96)
11094	Apple Software: Current Versions (2/96)
18232	Apple StyleWriter Printers: Frequently Asked Questions (1/96)
19202	Apple Telecom Software 2.3.2: Read Me (1/96)
19112	AppleCD 600: Issues With CD Plus (CD+) Discs (1/96)
11893	AppleScript: Description (11/95)
17036	AppleScript: Using AppleScript Documentation (11/95)
6784	Desktop Macintosh Memory Configurations (1/96)
18528	DOS Compatibility Card: Windows 95 is Compatible (9/95)
17897	DOS Compatible Products: Frequently Asked Questions (1/96)
18380	GeoPort 2.2 Telecom Adapter ReadMe (8/95)
18904	GeoPort 2.3 Telecom Adapter ReadMe (2/96)
16986	GeoPort Telecom Adapter: Frequently Asked Questions (11/95)
17907	Global Village Modems: Frequently Asked Questions (11/95)

18057 LaserWriter 8.3: Read Me (11/95)
18211 Macintosh Computers w/PCI: Resetting Video (1/96)
15987 Macintosh Monitor Sense Codes: Technical Description (11/95)
18928 Macintosh Performa 5200/6200: Frequently Asked Questions (1/96)
18133 Macintosh Performa 6200 Series: Description (1/96)
19143 Macintosh Performa: Available Power Macintosh Upgrades (1/96)
17350 Macintosh System 7.5 Update 1.0 ReadMe (10/95)
1749 Macintosh System Error Codes Explained (11/95)
13998 Macintosh to Performa Comparison Chart (9/95)
7748 Macintosh: "Sad Mac" Error Code Meaning (11/95)
9387 Macintosh: Connecting SCSI Devices (9/95)
14438 Macintosh: Startup Problems Q & A (5/95)
11762 Macintosh: VRAM Chart (10/95)
17266 MacTCP: DNS (Domain Name Server) Configuration Problems (12/95)
18270 Modern Memory Manager: Frequently Asked Questions (11/95)
17998 Multimedia: Frequently Asked Questions (11/95)
18826 Open Transport 1.0.8 Read Me (10/95)
18836 Open Transport 1.0.8: Applications Compatibility Q & A (11/95)
18553 Open Transport 1.0.8: Should Be Used (11/95)
18832 Open Transport 1.0.8: TCP/IP Features Q & A (10/95)
18785 Open Transport and PPP: Frequently Asked Questions (11/95)
18238 Open Transport TCP/IP Configuration (10/95)
18638 Open Transport, Eudora, and PPP Connection Issue (10/95)
17962 Open Transport: Compatibility Q & A (11/95)
18391 Open Transport: TCP/IP Control Panel Simplified (10/95)
17732 PCI Expansion Bus Architecture Description (9/95)
16167 PCMCIA for PowerBook: Frequently Asked Questions (11/95)
18132 Performa 6200CD Series: Specifications (2/96)
18291 Performa 630 Series: Frequently Asked Questions (11/95)
18969 Power Mac 5200, 5300, & 6200: Software Updates Read Me (11/95)
18872 Power Macintosh 5200: Frequently Asked Questions (1/96)
18349 Power Macintosh 6100 DOS Compatible: ReadMe File (8/95)
19029 Power Macintosh 7200 & 7500: Difficulty Mounting CDs (12/95)
18155 Power Macintosh 7200 and 9500 Series: Read Me (1/96)
18081 Power Macintosh 7200 Series: Description (8/95)
18863 Power Macintosh 7200 Series: Frequently Asked Questions (1/96)
18301 Power Macintosh 7200/7500/8500: New Items in Sys Folder 11/95
18944 Power Macintosh 7200/90: Ethernet Issue (11/95)
19176 Power Macintosh 7500 & 8500: Frequently Asked Questions (2/96)
19096 Power Macintosh 7500 & 8500: Using a DAV Card (12/95)
19204 Power Macintosh 7500 & 8500: Vertical Lines Follow Cursor (1/96)
19030 Power Macintosh 7500 and 8500: Technical Info Update (12/95)
18070 Power Macintosh 7500 Series: Description (9/95)
18080 Power Macintosh 7500 Series: Technical Specifications (1/96)
18198 Power Macintosh 7500, 8500, 9500 Series: SCSI-2 Compliance 1/96
18316 Power Macintosh 7500/8500: ReadMe File (2/96)
18068 Power Macintosh 8500 Series: Description (9/95)
19152 Power Macintosh 8500: Video Output Hardware Zoom (1/96)
18056 Power Macintosh 9500 Series: Frequently Asked Questions (11/95)
14750 Power Macintosh: L2 Cache Explained (11/95)
16004 Power Macintosh: Meaning of Error Type 11 (1/96)
18912 Power Macintosh: Type 11 & No FPU Errors Technote (2/96)
14734 Power Macintosh: Upgrades Available (2/96)

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18461 PowerBook 5300 Series: Read Me File (12/95)
19185 PowerBook 5300 System Update: Frequently Asked Questions (1/96)
18230 PowerBook Modem & Telecom: Frequently Asked Questions (12/95)
18220 PowerBook Software: Frequently Asked Questions (11/95)
19088 PowerBook: Miscellaneous Frequently Asked Questions (12/95)
18241 PowerBook: Power & Battery Frequently Asked Questions (11/95)
19091 PowerPC PowerBook Computers: Frequently Asked Questions (1/96)
17035 Pwr Mac DOS Compatibility Card: Read Me File (11/95)
19026 SerialDMA & Serial Port Arbitrator Compatibility Issue (2/96)
18923 Sound & Displays Control Panel: Common Problems & Solutions 1/96
16222 System 7.1: Troubleshooting Common Problems (10/95)
18006 System 7.5.2: Available for Earlier Macintosh Computers? (2/96)
18570 System 7.5.2: Which Software Updates Do I Need? (2/96)
16159 System 7.5.x: Extensions Folder Contents (1/96)
16095 System 7.5: Clean Install Procedure (11/95)
16473 System 7.x: Troubleshooting Startup Problems (9/95)
11491 System Enablers: Current Versions & Change History (1/96)
16529 TCP/IP Connection for Macintosh 2.0.4 (6/95)
11291 TCP/IP, SLIP, and PPP Applications (1/93)
17225 Tech Info Library: How to Search for Articles (1/96)
16284 US Apple Software Updates: Structure List (2/96)
15854 Virtual Memory: How It Differs On Power Macintosh (11/95)
16533 What's New-US Apple Software Updates (2/96)

Article Change History:

03 Dec 1996 - Corrected spelling.
13 Feb 1996 - Updated List
18 Jan 1996 - Updated List

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Tech Info Library Article Number:18952



Tech Info Library

PowerTalk to MS Mail Gateway & MS Mail on Novell Server (11/95)

Revised: 11/21/95
Security: Everyone

PowerTalk to MS Mail Gateway & MS Mail on Novell Server (11/95)

=====

Article Created: 21 November 1995

TOPIC -----

We are trying to setup the Microsoft (MS) Mail Gateway 1.6 for use with PowerTalk 1.1. Our clients are Power Macintosh 7100/80 computers, the MS Mail Server is running on a Novell 4.1 Server.

The users can see the MS Mail Server in the chooser, but they cannot see the mail server in the keychain. Are there versions of PowerTalk that are not compatible with this setup, or are there problems with the MS Post Office running on a Novell 4.1 Server?

DISCUSSION -----

Your issue is in running the MS Mail Server on a Novell 4.1 Server. The MS Mail to PowerTalk gateway only connects to an MS Mail Server running on a Macintosh.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18953



Tech Info Library

System 7.5.x: Documents Save to Preferences (11/95)

Revised: 11/20/95
Security: Everyone

System 7.5.x: Documents "Save to" Preferences (11/95)

=====

Article Created: 20 November 1995

TOPIC -----

I have the General Controls control panel set to save in the "Last folder used in the application", but it is not doing it. Where does this setting get stored? What do the three choices mean?

DISCUSSION -----

The Documents section of the System 7.5.x General Controls control panel sets which folder will be offered as the default location to be saved to when you save a document. There are three options to choose from:

- 1) The choice "Folder which contains the application" saves your document in the same folder which the application resides.
- 2) "Last folder used in the application" refers to the last folder to which the current application saved a document. Information for each application you use is stored in the General Controls Prefs file in the Preferences Folder of your System Folder. If this file is corrupted, the computer may revert to the last folder saved to by some other application. You can resolve this by dragging the General Controls Prefs file to the trash but you will loose the preferred folder settings for all your applications. This file will be recreated and updated as you save files in your applications again.
- 3) The last choice, "Documents folder" saves all documents to a folder called "Documents" that is created on your desktop. You can move the Documents folder and the General Controls control panel will locate it. If there is no Documents folder when you save a document, one is created on your desktop.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18955



Tech Info Library

ColorSync: Profile Keeps Resetting to 13 RGB (11/95)

Revised: 11/20/95
Security: Everyone

ColorSync: Profile Keeps Resetting to 13" RGB (11/95)

=====

Article Created: 20 November 1995

TOPIC -----

The System Profile in my ColorSync System Profile control panel keeps reverting back to Apple 13" RGB Standard. I cannot find a preference file to trash. Where is this information saved and how do I solve this issue?

DISCUSSION -----

The System Profile selection is stored in the ColorSync extension itself. Drag the ColorSync extension to the Trash and re-install it from your backup system software or display software installer. You will have to reselect your display type in the ColorSync System Profile control panel but it will now save your setting.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18956



Tech Info Library

Apple Business Education Bundle: Where Are the Templates? 11/95

Revised: 11/20/95
Security: Everyone

Apple Business Education Bundle: Where Are the Templates? 11/95

=====

Article Created: 20 November 1995

TOPIC -----

According to the "Computing with Clarisworks" textbook that comes with the Apple Business Education Bundle, the bundle is supposed to come with a set of curriculum templates students use when going through that textbook. However, I cannot find where the Business Education Bundle installer CD places these templates. Where are they?

DISCUSSION -----

The curriculum templates are not installed onto the hard drive by the Business Education Bundle installer. Apple released an update floppy disk that installs three missing folders that the Business Education Bundle installer fails to install. During the week of October 30, 1995, Apple sent all Business Education customers (1 diskette per location) an update diskette entitled "Business Education Bundle Update Diskette," along with a letter explaining this issue. By the end of January 1996, you should receive the update diskette and letter.

You can install the folders included with the update disk by following these steps:

Step 1

Turn on your computer and insert the floppy disk.

Step 2

Double-click the disk icon when it appears on your desktop.

Step 3

Click and hold on one of the folders and drag it to your hard drive icon.

Step 4

Release the mouse button.

Step 5

The folder will now appear on your hard drive.

Step 6

Repeat steps 3-5 for the two remaining folders.

If you have not received the update floppy, the templates can still be accessed directly from the CD-ROM disc by using the following procedure:

Step 1

Launch Clarisworks.

Step 2

Insert the Business Education Bundle CD-ROM disc into the CD-ROM drive.

Step 3

Choose the Open command from the File menu.

Step 4

Click the "Desktop" button in the open dialog box. Double-click on the Business Education Bundle CD.

Step 5

Open the Clarisworks Templates folder. Scroll to locate the correct chapter/lesson and double-click the template the textbook is referring to.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18958



Tech Info Library

Macintosh Guide: How to Access It (11/95)

Revised: 11/20/95
Security: Everyone

Macintosh Guide: How to Access It (11/95)

=====

Article Created: 17 November 1995

TOPIC -----

I was told to use Macintosh Guide to learn how to use my computer, but I cannot find it. What should I do?

DISCUSSION -----

Macintosh Guide is a System 7.5.x Apple Guide help file which is accessed through the Guide menu (the question mark in upper right hand corner of your screen) while you are in the Finder. The Finder is the operating environment which shows your desktop icons, such as your Trash can. The Macintosh Guide is not displayed as an option if you are currently in another application. If the application developer included it, you would find a Guide file for that application in place of the Macintosh Guide.

You can determine whether the Finder is the current application by clicking on the Application menu (to the right of the question mark in the menu bar). The currently-running application will have a check-mark next to it. If Finder does not have a check-mark next to it, drag down to it, and release the mouse. You should then be able to click on the Help menu and see Macintosh Guide.

If Macintosh Guide is not an option in the Guide Menu, it may have been disabled. For Macintosh Guide to be an option, these two files must be present in the Extensions folder of your System Folder:

- Apple Guide
- Macintosh Guide

If one or both of these files are missing from this folder, Macintosh Guide will not be available. You will need to use the Custom Install feature of your backup disks or system software CD to re-install the Utility files.

You must also make sure that Apple Guide is not disabled in the Extensions Manager. Use the following steps to verify this:

Step 1

Choose Control Panels from your Apple Menu.

Step 2

Open the Extensions Manager control panel.

Step 3

See if Apple Guide is listed under the "Extensions" list.

If it is, make sure there is a check-mark next to the file, then close the Extensions Manager and restart your computer.

Once you have Macintosh Guide installed, you can choose it from your Help menu and use the Look For command to search for topics of interest.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18959



Tech Info Library

Macintosh Performa 6205CD: Technical Specifications (4/97)

Revised: 4/28/97
Security: Everyone

Macintosh Performa 6205CD: Technical Specifications (4/97)

Article Created: 20 November 1995
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 6205CD computer.

DISCUSSION -----

Microprocessor

- PowerPC 603 RISC microprocessor running at 75 MHz
- 256K Level 2 cache on 64-bit PPC bus

Memory

- 8 MB RAM
- Expandable up to 64 MB (32 MB x 2 slots)
- Two 72-pin SIMM slots, 80 ns or faster
- Expandable one SIMM at a time
- 32-bit memory bus

Storage

- 1.4 MB Apple SuperDrive disk drive - read and write MS-DOS disks
- 1.2 GB IDE hard drive, 1/3 height
- AppleCD 600i CD-ROM drive (Quad Speed)

Expansion & Ports

- LC processor direct slot
- Video-in slot for optional video capture card
- TV tuner slot
- Communications slot
- SCSI interface for connecting up to five external devices

- One serial (RS-232/RS-422) printer port*
- ADB port
- Sound-in (PlainTalk compatible)
- Sound-out

* Note:

The modem serial port is disabled with an internal modem installed in the Communications Slot.

Video

- 1 MB DRAM video frame buffer
- 16-bit color at 640x480, 8-bit color at 800x600, 832x624
- Supports Video In with optional card
- Apple Multiple Scan 15 Display included

Sound

- 16-bit CD audio
- 16-bit sound out and internal**
- PlainTalk (or line level) microphone required

** Note:

The Macintosh User's Guide for Macintosh Performa 6200CD computers incorrectly states that these computers have 8-bit sound.

Communications

- External 28.8K baud fax/data modem.

Ergonomic Features

- Front controls for volume and contrast
- Front headphone jack
- Infrared remote control
- Power on/off from keyboard

Keyboard

- Includes AppleDesign Keyboard
- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

- Apple Desktop Mouse 11

Clock/Calendar

- CMOS customer chip and battery

Disability Access

- CloseView, Easy Access, and visible-beep software are built in.

- Third-party options provide alternative input and output devices

Electrical Requirements

- 110 - 240v, 50 - 60 Hz
- Power consumption 45 watts max (excluding monitor)
- EPA Energy Star compliant

ADB Power Requirements

- Maximum power draw for all ADB devices is 500mA
- Mouse draws 10mA
- Keyboard draws 10mA

Size and Weight

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32 cm)
- Depth: 16.5 in. (41.95 cm)
- Weight: 19 lb. (8.6 kg)

Operating Environment

- 10 to 40 deg. C (50 to 104 deg. F)

System Software

- Mac OS System 7.5.1 with Apple Guide, AppleScript and PC Exchange included

Third-party software bundles

=====

Begin_Table

SOFTWARE TITLES

- | | |
|---------------------------------------|-----------------------|
| • At Ease 2.0.3 | • Mangia v.1.2.3 |
| • Newton Tour 1.1 | • Virex 5.5.3P2 |
| • Ram Doubler Demo | • Espresso 1.0 |
| • Widget Workshop 1.0 | • ClarisWorks 3.0v1 |
| • WealthBuilder/Reuters 4.0 | • Power Pete 1.0A |
| • MacTess Home Learning Software 2.5c | • Fine Artist 1.0 OEM |
| • MacLink Plus 8.0.2 | • Writing Center 1.04 |
| • Click Art Performa Collection | • Quicken 5.0r5P |
| • MacGallery Clip Art Treasure Pak | |

End_Table

The Macintosh Performa 6205CD comes with eight (8) CD titles, including:

- The 1995 Grolier Multimedia Encyclopedia
- Electronic Arts 3D Atlas
- The Family Doctor
- Smithsonian's America

- Club KidSoft Sampler
- Thinkin' Things Collection 2
- My First Incredible, Amazing Dictionary
- Professor Piccolo

Product specifications are subject to change. Check with an Apple reseller for the most current information about product specifications and configurations.

Article Change History:

09 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18960



Tech Info Library

LaserWriter Pro 810: SCO UNIX 3.2 Error Code 2 (11/95)

Revised: 11/20/95
Security: Everyone

LaserWriter Pro 810: SCO UNIX 3.2 Error Code 2 (11/95)

=====

Article Created: 20 November 1995

TOPIC -----

I have installed the LaserWriter Pro 810 software on a computer using SCO UNIX 3.2 version 2, and I keep getting an error message sent to me from the root when I try to print PostScript. Why?

DISCUSSION -----

The error message you are getting:

"Your request <print job name> destined for <printer name> encountered an error while printing on printer <printer name>. Printing stopped with an exit code of 2." (Error code 2 is file not found.)

Solution
=====

Step 1

Replace the /etc/printcap file with an original copy

Step 2

Reinstall the LaserWriter 810 software to a directory called /usr/apple

Step 3

Rerun the software installation (eninstall -b)

Running from the hard wired /usr/apple location appears to make the correct printcap entries, so no errors are reported.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18961



Tech Info Library

System 7.5.2: ImageWriter LQ driver isn't included (5/96)

Revised: 5/8/96
Security: Everyone

System 7.5.2: ImageWriter LQ driver isn't included (5/96)

Article Created: 20 November 1995
Article Reviewed/Updated: 8 May 1996

TOPIC -----

System 7.5.2 does not seem to include a driver for my LQ ImageWriter, or LQ AppleTalk ImageWriter printers. Where can I get a compatible driver for this computer?

DISCUSSION -----

The following drivers are compatible with the corresponding printers and System 7.5.2. The following drivers are all available from Apple Online Support areas. System 7.5.2 also does not include an AppleTalk Imagewriter driver.

ImageWriter LQ

LQ ImageWriter	7.0.1	Serial
ImageWriter LQ GX	1.1.1	Serial
LQ AppleTalk ImageWriter	7.0.1	LocalTalk

ImageWriter

AppleTalk ImageWriter	7.0.1	LocalTalk
-----------------------	-------	-----------

Article Change History:
08 May 1996 - Added AppleTalk ImageWriter driver to article.

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Tech Info Library Article Number:18963



Tech Info Library

DOS Compatibility Card: Floppy Disk Read/Write Issue (4/97)

Revised: 5/2/97
Security: Everyone

DOS Compatibility Card: Floppy Disk Read/Write Issue (4/97)

Article Created: 20 November 1995
Article Reviewed/Created: 2 May 1997

TOPIC -----

I cannot reliably copy files to a floppy disk in the PC environment of my Power Macintosh 6100 DOS Compatible computer. When I try, I either get an error message or the system hangs completely.

DISCUSSION -----

Keeping in mind that almost all floppy disk read or write issues in the PC environment of the Power Macintosh 6100 DOS Compatible computer are related to either RAM compression programs, or virus checking software. Try these troubleshooting steps:

Step 1

Start the computer while pressing and holding the space bar. This will activate the Extensions Manager control panel before extensions and control panels load, letting you choose which extensions or control panels will be enabled. In the Sets pop-up menu choose System 7.5 Only. Now select the additional extensions and control panels below by putting a check mark to the left of each:

Find File Extension
PC Clipboard
PC Print Spooler
PC Setup

Close the Extensions Manager control panel and let the computer finish starting up. Insert a floppy disk and try to read or write from the PC environment. If you are now able to copy or format disks reliably, you may be experiencing an extension or control panel conflict. To determine which extension or control panel is in conflict, use the Extensions Manager control panel and enable the extensions one at a time until your computer exhibits the symptoms you are having. The last extension or control panel added is the conflicting item and

should not be used. If this does not resolve the issue continue to the next step.

Step 2

Reset the computers parameter random access memory (PRAM). To do this in System 7 or later, press and hold the control, option, P, and R keys while restarting the computer. Continue pressing these keys until you hear the startup chime a second time, then release the keys. Once the computer has finished its startup process, open the PC Setup control panel. You should receive a dialog indicating the PC software did not load properly, click OK, and close the PC Setup control panel. Restart the computer and insert a floppy disk and try to read or write from the PC environment. If this does not resolve the issue continue to the next step.

Step 3

Create a new PC drive container, and install DOS onto it. Start the PC environment from the new container just created as the C: drive. Insert a floppy disk and try to read or write from the PC environment. If this resolves the issue, use this new container as your C: drive. For help on creating a new drive container, refer to Creating a Drive Container on page 32 of the "DOS Compatibility Card for Macintosh User's Guide." If this does not resolve the issue continue to the next step.

Step 4

Perform a clean installation of the Mac OS software for the Macintosh environment. Also re-install the software from the DOS Compatibility Card installer disk for Macintosh. For assistance, see Installing Macintosh OS Software on page 31 of the "DOS Compatibility Card for Macintosh User's Guide."

If you need assistance re-installing system software, search the Apple Tech Info Library with the search string "system 7.5 and clean install procedure" to locate the article titled, "System 7.5: Clean Install Procedure."

Article Change History:

1 May 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18965



Tech Info Library

MacX 1.5 and Connect With XDMCP: Key Mapping Issue (11/95)

Revised: 11/21/95
Security: Everyone

MacX 1.5 and Connect With XDMCP: Key Mapping Issue (11/95)

Article Created: 21 November 1995

TOPIC -----

When using MacX 1.5 and the XDMCP protocol to connect to a workstation, I noticed that some of my keys no longer work. If I use a remote command like xterm, I do not have this key mapping issue. Why are the key mappings different.

DISCUSSION -----

We believe the XDM settings have mapped the keys differently. To correct this, follow the following steps:

Step 1

Connect with a remote xterm command, so the keys mappings are correct.

Step 2

Type the command:

```
xmodmap -pke > $HOME/mykeymap
```

This command will output your key mappings to a file.

Step 3

Create a file called '.xsession' in you HOME directory.

Step 4

In .xsession, enter this line: 'xmodmap mykeymap'

Step 5

Save this file, make it executable and exit.

Step 6

Connect again with XDMCP. The Xsessions file will read the user's .xsession file, issuing the command to execute the command xmodmap and map the users working key map.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18966



Tech Info Library

TCP/IP Control Panel: No Zone Information (4/96)

Revised: 4/4/96
Security: Everyone

TCP/IP Control Panel: No Zone Information (4/96)

=====

Article Created: 21 November 1995
Article Reviewed/Updated: 4 April 1996

TOPIC -----

AppleTalk control panel reports proper Ethernet zone, the Chooser shows zones available, but TCP/IP control panel shows no zones to select. This happens with Open Transport 1.0.6, 1.0.7, and 1.0.8. Why does this happen and is this going to be fixed?

Also the Apple LAN Utility lets you manually configure the Ethernet address. When saving the new address, a dialog box says "save changes to LAN Built-In". Where is this information saved?

DISCUSSION -----

There was a bug that affects the ability to see zones in the TCP/IP control panel if there are more than 512 zones on the internet. This bug is fixed in Open Transport 1.1, and you should upgrade to it.

The Apple LAN Utility writes the data to the ecfg resource stored in the Ethernet driver itself.

Article Change History:
04 Apr 1996 - Added OT 1.1 fix, and changed distribution.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18967



Tech Info Library

Power Macintosh 5200, 5300, and 6200: Read Me (12/95)

Revised: 12/18/95
Security: Everyone

Power Macintosh 5200, 5300, and 6200: Read Me (12/95)

=====

Article Created: 22 November 1995
Article Reviewed/Updated: 18 December 1995

TOPIC -----

This is the Read Me file for the Power Macintosh 5200/75 LC, 5300/100 LC, and the 6200/75 LC series computers.

DISCUSSION -----

Important Information About Your Macintosh
=====

Congratulations on purchasing your computer. This document adds to and updates the information in the manual that came with your computer. It is a good idea to read this document now, and keep a copy handy for future reference.

System Software CD (or Disks)

Your Macintosh came with system software on either a CD or floppy disks. Since this software is also installed on your hard disk, you won't need to use the system software CD or disks unless you have a problem with your system software. If you need to reinstall system software, be sure to start with the Apple Macintosh CD (or the Install Disk 1 floppy disk). For instructions, see the information on installing system software in your user's guide.

Note: The CD contains all the information from all the system software disks (and possibly, some additional programs). If you received a system software CD, use your CD in any steps that refer to a specific disk mentioned below.

Disk Tools Disk

Your Apple Macintosh CD also includes utilities for formatting and repairing hard disks. (Alternately, if you received a system software disk set, one of the disks is the Disk Tools disk). Don't use the Apple Macintosh CD or Disk Tools disk during your normal computer use, or regularly start up your computer using

the CD or disk. (If you do, your computer may not operate properly.)

Your Internal Hard Disk and the Drive Setup Program

Your computer's internal hard disk is based on IDE (Integrated Device Electronics) technology. You can use the Drive Setup application program included on your Apple Macintosh CD or Disk Tools disk to check your internal IDE hard disk for damage (and to format the disk if you ever need to do so). Some utility programs, such as Apple HD SC Setup, will not work with IDE hard disks. Before you purchase any hard disk utility program for this computer, make sure it's compatible with IDE hard disks.

Note: If you start your computer from an external SCSI hard drive and—while attempting to reinitialize your internal hard disk—receive a message that initialization failed, check to make sure you do not have filesharing or a modem turned on. If you do, turn off filesharing or the modem and try the reinitialization again.

Apple Video Player

The Apple Video Player lets you view video and capture video images or sequences if you have a video input card installed in your Macintosh. Additionally, if you have a TV tuner card installed, you can also watch TV, capture TV images or sequences on your computer, and manage channel access. Apple Video Player comes installed on your computer's hard disk. See the Read Me file in the Apple MPEG Media Software 1.0, MPEG Software, Video Software folder for more information on Apple Video Player.

Video viewing and video capture are supported in windows sized up to 640 x 480 pixels. Turn off virtual memory when capturing video and record in Smallest window size for best results.

For the highest-quality video (and TV) viewing and video capture, use the standard video window sizes (Smallest, Normal, or Largest) in Apple Video Player's Windows menu. If you customize the window size (by choosing Other in the Windows menu), the image's resolution will decrease.

Video resolution is best when you view the Apple Video Player video window on the monitor connected to the monitor port on your Macintosh. You can drag the video window to a secondary monitor (connected to an expansion card), but the image resolution will decrease.

Reinstalling the MPEG Media System Software or Apple Video Player Software

=====

To install the latest MPEG, Apple Video Player, and CD-ROM Software

Step 1

Double click on the "Installer" icon in the Apple MPEG Media Software 1.0 folder. The installer dialog will appear on your screen.

Step 2

Click on the "Install" button. The MPEG Media System, CD-ROM, and Apple Video Player software will be automatically installed.

Step 3

When the installer has finished copying the software to your system, it will force a restart of the machine.

To install only the Apple Video Player Software

Step 1

Double click on the "Installer" icon in the Apple MPEG Media Software 1.0 folder. The installer dialog will appear on your screen.

Step 2

In the upper left corner of the installer dialog select "Custom Install" from the pop-up menu.

Step 3

The custom install screen will appear.

Step 4

Click on the "Apple Video Player" checkbox.

Step 5

Click on the "Install" button. The Apple Video Player software will be automatically installed.

Step 6

When the installer has finished copying the software to your system, it will force a restart of the machine.

Apple Video Player Hot Key

=====

The Apple Video Player application program allows you to use a keyboard shortcut (called a "hot key") to open and quit the program, and to switch between Apple Video Player and any other open programs. Due to potential incompatibility problems, the Hot Key is not enabled by default. To select a Hot Key setting, launch the Apple Video Player from the Apple menu (🍏). Select the "Hot Key..." menu item from the "Setup" menu. In response to the dialog that appears, simply press the key combination you want to use to turn Apple Video Player on and off.

Apple Video Player Closed Captioning

=====

If you have a TV tuner card, the Apple Video Player application program can display closed captions for TV channels that provide them. To see closed captions on the screen, the video window size must be set to Normal Size or greater. Also, for best results, networking or printing should not be active when you select close captioning.

Apple Video Player - Capturing Movies

=====

The Apple Video Player program can capture video images or sequences. For best results, networking (including use of a modem) or printing should not be active when you are recording video from either television or another video source. Virtual memory should also be turned off when capturing video. Recording in Smallest window size will also improve the quality of captured video.

Playing Audio CDs on an External CD-ROM Drive

=====

If you connect an external CD-ROM drive to your Macintosh, and wish to play audio CDs using the AppleCD Audio Player, you will need to drag the External CD Sound extension into your Extensions folder. To do this:

Step 1

Open the Apple Extras folder on your hard drive.

Step 2

Drag the External CD Sound extension into your System Folder.

Step 3

Select "OK" in response to the dialog which prompts you to store the extension into the Extensions folder.

Step 4

Restart your Macintosh.

AppleShare Server Software and Virtual Memory

=====

If you want to use AppleShare to set up your Macintosh for file sharing or print-sharing on a network, you must use AppleShare Server Software version 4.0.2 or later. If you are using version 4.0.2, be sure to turn off Virtual Memory, or you may experience memory problems.

NOTE: This note is not part of the original Read Me, it is being added to correct information presented here. AppleShare 4.0.2 for Power Macintosh is no longer sold separately and is not available from Apple Computer. Later versions of AppleShare, v 4.1 or 4.2, are not supported on these computers.

Using Slide Show Viewer with Photo CDs

=====

If you use the Slide Show Viewer to view Photo CD images, it may take awhile to

launch the viewer the first time it is used. Once launched initially, a preferences file is created, and subsequent launches should be much faster.

Using an Internal Express Modem

=====

If you install an Express Modem in the internal communications slot of your computer, you should use version 1.5.4 or later of the Express Modem software. Apple Telecom 2.0 software also supports the internal Express Modem. If you install using this version, select the Custom Install option and then select the "Express Modem Software for internal modems" item for installation.

Article Change History:

18 Dec 1995 - Added correction on AppleShare.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18968



Tech Info Library

Power Mac 5200, 5300, & 6200: Software Updates Read Me (11/95)

Revised: 3/20/96
Security: Everyone

Power Mac 5200, 5300, & 6200: Software Updates Read Me (11/95)

=====

Article Created: 22 November 1995

TOPIC -----

This article provides information about the software updates on the system software CD for the Power Macintosh 5200/75 LC, 5300/100 LC, and the 6200/75 LC series computers.

DISCUSSION -----

About the Macintosh Software Updates

This document provides important information about some system files installed on your computer.

When you are finished reading and printing this document, choose Quit from the File menu to quit the SimpleText application program.

The following system extensions and control panel have been installed on your computer's hard disk:

- At Ease 7.5 Layer Patch: if you have At Ease installed on your machine this extension fixes a potential problem when trying to launch an application or selecting the menu item "Go To Finder" with At Ease. This is only a problem if you have desktop hiding enabled in the General Controls control panel.
- Processor Info Extension: fixes a potential problem that could cause your computer to report back the incorrect processor and bus speeds.
- Audio Volume Extension: if you have an internal modem installed (not related to Express modem), this extension fixes a problem where no sound is emitted by the modem. This extension also fixes a potential problem where poor sound quality may be heard.
- Screen Control Panel: fixes a problem that could cause your computer to behave

incorrectly when Screen Power Saver mode is enabled.

If you reinstall system software, you should also reinstall these files. To reinstall, drag each file into your System folder. Click OK when you are asked whether to put each file in their respective folders.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18969



Tech Info Library

Apple Modem Tool 1.5.3: Read Me File (11/95)

Revised: 11/22/95
Security: Everyone

Apple Modem Tool 1.5.3: Read Me File (11/95)

Article Created: 22 November 1995

TOPIC -----

This article contains the ReadMe file for the Apple Modem Tool extension v1.5.3.

DISCUSSION -----

Apple Modem Tool 1.5 improves reliability and performance through support of the Microcom Networking Protocol (MNP levels 1 through 4) and CCITT v.42bis data compression protocol.

It features an enhanced user interface that provides support for user-installed modem definitions and provides easy access to a list of phone numbers of the services you wish to contact.

The Details

- Support for MNP using a modified version of the .MNP driver from ARA 1.0.

The .AMT driver is installed in the DCE the first time the Apple Modem Tool is used after a reboot. It contains several modifications provided by the Newton team. These changes correct problems in the ARA 1.0 driver found while modifying the code for use in the Newton ROM.

This includes the changes necessary to bring the protocol code more in compliance with the MNP specification. (Two bytes were swapped somewhere in the negotiations. Since both sides of ARA had this characteristic, it worked.... but it wouldn't work with hardware implementations.) The actual protocols are MNP 2, 4, and v.42bis.

The driver consumes about 22K of System Heap, meaning that System 6.0.X users may have to increase their system heap size in order to use the new protocol

support. The driver is always installed the first time the tool is opened. If the driver wasn't installed successfully the user is notified that they will not be able to make an error free connection, but can continue to use the tool without that support.

The tool does not refer to the v.42bis compression or give the user control over it. It is negotiated for if the user requests error correction. A scripting token, "SoftwareCompression" can disable this. Scripting support for error correction was also added.

The tool also supports error correction/compression in the modem. The user (or scripting tokens) may choose among "None", "Optional", and "Required".

The "Required" selection indicates that the connection should fail if the desired type of error-correction could not be obtained. A dialog is provided to indicate that this occurred. ("Hardware" and "None") or ("Software" and ("Optional" or "Required")) mean that the tool additionally sends a modem-specific AT command to disable "hardware" error correction, which is on by default in the modem's initialization command.

If "Hardware" is selected, then the tool looks for the CONNECT message to have an appendage such as "CONNECT 9600/REL". The "9600" has always been used to correct the Mac's serial port speed if necessary, and now the "/REL" is used to indicate that a "Hardware" error correction connection has been established. This string is also modem specific, and multiple strings can be used to indicate the establishment of "Hardware" error correction and when specified, these strings are separated by a bullet character, as in "/REL•/LAPM".

- The user interface (the "Choose" dialog) was significantly changed.

In order to comfortably fit the new error correction controls, a pair of radio buttons and a checkbox were removed.

The checkbox that determined if the tool will use <CR><LF>NO CARRIER<CR><LF> (pause) to detect the other side having hung-up or a dropped connection was removed. The control was deemed unnecessary. The feature is always on unless the "LookForNOCARRIER" scripting token is set to false.

The removed radio buttons were used to select between the user configuring the tool for dialing or answering. This was a common point of user confusion, as these radio buttons didn't actually make this choice for the user. These radio buttons only dimmed out the settings not needed for whichever type of connection the user expected to do. This choice was actually made later when the application calls CMOpen or CMListen, typically controlled by menu selections such as "Open Connection" and "Wait for connection". Their purpose has been superseded by titled gray control groupings, which use less screen real-estate.

Additionally, there used to be an icon that indicated which type of dialing, "Tone", "Pulse", "Mixed", or a ringing phone was active. Since the ringing phone case was not really true, this status icon was removed to make space, and the dialing method pop-up was clarified from "Tone" to "Touch-Tone™".

A static text item containing the short version string was added, and this serves to bring up the about box. The "phone numbers" pop-up is now never hidden. It used to only appear if the user had manually created an "Apple Modem Tool Phone Numbers" file. This item allows the user to select a phone number to dial by name from their personal list.

The pop-up now also contains a "Modify this menu..." item, which brings up the "Add Modify Remove" dialog. This dialog is common to the "Modify this menu..." items in both the "phone numbers" and "modem type" pop-ups. It allows the user to alter the list that appears in the menu the user chose. It features an "Import..." button which provides for merging in of additional items from another file. This is how users will add third-party modem definitions or import phone number databases.

The "custom modem" dialog has been modified to support configuration of error correction features for a modem definition. A button called "Cabling..." was added. This button brings up a dialog containing a picture that describes the cable needed for use with the currently selected modem as well as support information such as the modem manufacturer's phone number. The dialog has a "Save..." button which creates a TeachText read-only ('ttro') file that contains the picture as well as the modem's name. The intent is that this file may be printed and brought to the dealer to ensure that the user obtains the correct cable.

All user items now draw in color when appropriate. All graphics have been replaced with new color ones (except the file icon, which was already color) provided by Bill Woodcock (woody@zocolo.com). Bill generously donated his time and art skills.

- Modem Definitions files contain an updated format 'modm' resource.

This resource describes the modem in terms of its initialization string, preferred baud rate, etc. This resource now contains controlling information about error correction such as the "Hardware error correction has been established" string. This resource additionally may contain a resource ID for a PICT that describes the necessary cable for connecting the modem to a Mac as well as support information, such as the modem manufacturer's phone number.

'modm' resources for all Apple modems (except the "Global Village Teleport/Bronze II for Performa") are contained in the Apple Modem Tool file itself. Additional 'modm' resources may be created by the user via the "Choose" dialog. These resources, and accompanying 'PICT's are renumbered and placed into the "Apple Modem Tool Prefs" file.

The new 'modm' format includes some bits that control support for "direct connect mode". These bits are "undocumented" in that the 'TMPL' for editing 'modm' resources and the developer documentation for the 'modm' format, including the Rez declaration, are listed as "Reserved." "Direct connect mode" turns off all AT command set support. It is provided for use by the "Newton Serial Connection" 'modm', which is used by the Newton Connection Kit and Newton Toolkit.

A 'PICT' resource for the "Newton Serial Connection" is built-in as are 'PICT's

to describe a standard Mini Din-8 to Mini Din-8 cable (M0197) and for a DB-25 to Mini Din-8 cable. The 8-to-8 picture is used for a few of the built-in Apple modems. The 25-to-8 picture is provided for use by third-party modem definitions (particularly those created by power-users and distributed online). Note that these pictures are wrong for a Mac Plus which has a DB-9.

Version Information

1.5.1 - Several bug fixes, most affecting the "Direct Newton Connection" sections of the code. Also, when using CMListen() and require software MNP, an incoming modem connection which established carrier but failed during error correction negotiation would not properly hang up the phone. This was fixed.
1.5.2 - Not distributed.
1.5.3 - CMGetConfig() no longer returns an erroneous token which caused the file "False" to be created on the desktop if this same string was passed in to CMSetConfig(). CMRead() was returning a garbage error value if called async with a non-zero timeout under the right circumstances. It now correctly returns noErr.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18970



Tech Info Library

Newton 2.0 OS: Won't Write to 1.X Formatted PC Cards (11/95)

Revised: 11/27/95
Security: Everyone

Newton 2.0 OS: Won't Write to 1.X Formatted PC Cards (11/95)

=====

Article Created: 27 November 1995

TOPIC -----

When I insert a Newton PC memory card into my Apple MessagePad 120 with the Newton 2.0 OS, a message appears asking if I want to mount the card as read only, or convert the card. If I convert the card can I still use it in other Newton PDA devices that have the Newton 1.x OS installed?

DISCUSSION -----

No, if you choose to convert a PC card to the Newton 2.0 OS, then you will not be able to read it on a Newton PDA using 1.x of the Newton OS without reformatting the PC card using 1.x of the Newton OS.

If you need to use data on a MessagePad with 2.0 installed, you should select Read Only when the message appears. Selecting Read Only sets a soft write protect on the card, which prevents you from writing to the PC card.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18975



Tech Info Library

Coach Pro and ClarisWorks 4 Compatibility (4/97)

Revised: 4/28/97
Security: Everyone

Coach Pro and ClarisWorks 4 Compatibility (4/97)

Article Created: 27 November 1995
Article Reviewed/Updated: 17 January 1996

TOPIC -----

I received Spelling Coach Professional (Coach Pro) with the Teacher Productivity Bundle CD-ROM, which is part of the Teach Solution Bundle. However, when I use Coach Pro with ClarisWorks 4, I get the following message, "Coach Pro is having a problem converting the clipboard in this application." Is Coach Pro compatible with ClarisWorks 4?

DISCUSSION -----

Deneba Support has advised that ClarisWorks 4 requires Coach Pro 4.1, which was released in November, 1995. Contact Deneba Software directly for the Spelling Coach Pro 4.1 upgrade, or download a compatibility module form Deneba's support location on America On-Line or CompuServe.

Deneba Support also advises: If you are stuck in a loop with this or a similar message, a way to break out of the loop is to select another piece of text to check, then go back to the original selection and check it again.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
09 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18976



Tech Info Library

PostScript Fonts: Momentary Freeze copying to Server (7/96)

Revised: 7/12/96
Security: Everyone

PostScript Fonts: Momentary "Freeze" copying to Server (7/96)

=====

Article Created: 27 November 1995
Article Reviewed/Updated: 12 July 1996

TOPIC -----

The article discusses an issue with copying numerous PostScript fonts to a file server. When doing this, the file server appears to "freeze" momentarily. However, after a few seconds it works properly.

DISCUSSION -----

The appearance of the file server "freezing" during large PostScript font transfers is caused by Adobe PostScript fonts having a BNDL bit. When a file, whose info bits indicates an icon bundle is present, is copied to a server, the Finder adds this information to the Desktop database. Things that can make this worse are when the Desktop file grows so that the file becomes fragmented on disk, increasing the disk access time to process the file. Rebuilding the Desktop may reduce the size of the desktop database files, but it may still leave the file fragmented. Having a large amount of free space on the disk may help the possibility that the desktop files get a contiguous amount of disk space.

There is not hard and fast rules as to how many PostScript fonts can be copied without experiencing this momentary "freeze". However, some servers may be more prone to this if they have a large hard disk, which allows more files to be stored on them, which leads to a larger desktop file. A hard disk that is nearing capacity, can have a fragmented desktop file, which can increase the time it takes to update the desktop file.

Compressing PostScript fonts with third-party utilities, transferring them to the server, and then decompressing them should speed up the copy across the network. However, this may actually take longer since the files must be decompressed once the file is copied to the server. Also while the files are being restored to their original state, the Finder on the server is placing the icons into the desktop databases.

Third-party copy utilities such as Disktop, CopyDoubler, Desktop Speedboost, or Copyright Pro, which offload the copy operation from the Finder to another task, could potentially decrease the wait, but eventually the Finder on the target server machine has to update the desktop database, so you should not expect much of an improvement, if any, with these utilities.

Since this is the way the Mac OS works, Apple is not doing anything to address this momentary wait. The same phenomenon happens when you drag a number of application files to a server. This would happen to any large number of files that are copied to a file server, which contain BNDL information. The problem may be seen more often with PostScript fonts since these are the type of files typically copied by dragging a large number to a file server.

One other option, which Apple Computer, Inc. does not endorse, is to turn off the bundle bit in the font, to do this you can use ResEdit, or in A/UX you could use setfile.

One thing to remember is that this momentary wait is only experienced once, when the fonts are copied to the server. Compressing the fonts prior to copying them to the file server should speed up the copy process to server since there is less data to copy, and no font icon to update. However, also remember that expanding the PostScript fonts back into their original format after copying them, takes some additional time.

Article Change History:

12 Jul 1996 - Added BNDL bit solution.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18977



Tech Info Library

Newton OS: NewtonMail Mods 1.0.1 Read Me (4/97)

Revised: 5/1/97
Security: Everyone

Newton OS: NewtonMail Mods 1.0.1 Read Me (4/97)

=====

Article Created: 27 November 1995

TOPIC -----

This article contains the ReadMe file for NewtonMail Mods 1.0.1 update file.

DISCUSSION -----

NewtonMail Users,

Over the last several months, many of you asked us for a number of enhancements to NewtonMail. In order to provide you with an immediate solution to your most frequent requests, we have developed a set of NewtonMail Modules which are enclosed in this folder. These modules give you an immediate upgrade path for NewtonMail which will be supported and integrated within future releases of NewtonMail.

This document gives an overview of the current functionality of these NewtonMail Modules. The modules are an addition to the existing mail software that is built into your Newton ROM. The Newton Connection Kit is required in order to install the modules in this folder.

NEWTONMAIL EXTENSION 1.1 AND FOUR ADDITIONAL MODULES

The new NewtonMail Modules consist of one new extension and four modules. The extension is "NewtonMail Extension 1.1" and the modules are "NewtonMail 1.2", "Group Mail 1.0", "MailMany 1.0", and "Tymnet/MCI 1.1".

The "NewtonMail Extension 1.1" is a base extension required for the new modules. This extension should be installed in the Newton's Internal RAM.

The new enhancement modules (NewtonMail 1.2, Group Mail 1.0, MailMany 1.0, and Tymnet/MCI 1.1) can be installed on the internal RAM or on a PCMCIA card. The modules do not appear in the Extras Drawer, nor will they take up a slot in the Extras Drawer. The modules can be removed via the remove software function. Since each of the optional modules can operate independently, the user has the

flexibility to save space by installing only those modules that are desired.

OVERVIEW OF FUNCTIONALITY:

NewtonMail Extension 1.1 (Size 7.5K)

This extension, which should be installed in the Internal RAM, is required as a base for the additional modules. It may also be installed without any additional modules, in which case it will serve to greatly reduce mail truncation problems and provide a simple "Copy" button to allow the user to copy basic text notes to the NotePad.

Newton Mail 1.2 (Size 16K)

Newton Mail 1.2 provides additional functionality via a new action envelope within the in and out boxes. The following are the main functions that were added:

- Integrates Copy Text to Notes button for documents In/Outbox (including mail header information).
- Allows received items to be easily forwarded.
- Allows mail messages to be readdressed while still in the Outbox.
- Allows mail messages to be printed from the In/Outbox.
- Allows the item's text to be faxed from the In/Outbox.
- Leaves additional space to write in the reply message area.
- Offers automatic save the sender's address to names file feature.

GroupMail 1.0 (Size 16K)

GroupMail adds a "Group Mail" button to the routing slip.

- Enables users to send messages to a set of people in the name card file that have Email addresses.
- Provides selection of multiple names by check boxes.
- Offers automatic creation of mailing lists as Name Card Items.

Mail Many 1.0 (Size 12K)

Mail Many allows users to mail multiple NotePad items.

- Offers a list of all the notes in your NotePad via an additional "Mail Many" option on the NotePad action envelope.
- Provides selection of multiple items by check boxes, beginning with most recently created notes.

Tymnet/MCI 1.1 (Size 12K)

A Newton Connection Kit is required to install the module.

Tymnet/MCI 1.1 is a Mail network script that allows users to connect to NewtonMail via Tymnet/MCI networks.

- Offers Tymnet option as a diamond under Network choices in Mail

Preferences.

- Changes between version 1.0 and 1.1, include a revision to the script to succesfully connect in Europe as well as the US.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18978



Tech Info Library

Macintosh Performa: How Do I Use the ARA CCL? (11/95)

Revised: 11/27/95
Security: Everyone

Macintosh Performa: How Do I Use the ARA CCL? (11/95)

=====

Article Created: 27 November 1995

TOPIC -----

I have a Macintosh Performa computer. I have an Apple Remote Access (ARA) file called ARA CCL on my hard drive. When I double-click it, I get a message telling me to put it in my Extensions folder. Even if I place it in my Extensions folder and restart, I get the same message. What is Apple Remote Access? How do I use this software?

DISCUSSION -----

Apple Remote Access software provides an easy way to connect a desktop Apple Macintosh or PowerBook computer to another Macintosh computer at a remote location over telephone lines.

Some modem equipped Macintosh Performa computers have an ARA modem script (also known as a CCL file) installed on the hard drive. The file is used to configure your modem to work with the Apple Remote Access software.

Your Performa computer does not include the Apple Remote Access software that uses this CCL file. The file is included on your hard drive so it is available if you decide to purchase ARA. Leaving the file in your System Folder or on your hard drive will not affect the operation of your computer.

You can purchase the Apple Remote Access Client software from your Apple-authorized dealer.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18979



Tech Info Library

CLW 12/600 PS: Use Printer Pantone Files For Correct Color 10/96

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Use Printer Pantone Files For Correct Color 10/96

Article Created: 28 November 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

I'm printing to a Color LaserWriter 12/600 PS from Quark Xpress using Pantone colors. Unfortunately, my printouts DO NOT match some hard copy Pantone swatches that I have. I have printed out the raw PostScript file that came on the "Pantone files for the Color LaserWriter 12/600" disk, and the colors that printed more or less match my Pantone swatches.

Why can I not get my Quark Xpress files to match? Can I change the density settings in the back of my Color LaserWriter 12/600 PS so I get a better match?

DISCUSSION -----

Quark Xpress, like most of the other high-end graphic applications, have their own Pantone color tables you can use. These color selections SHOULD NOT be used when printing to the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printers since they are "tuned" only for monitors. The application-specific files provided on the Pantone disk for the Color LaserWriter 12/600 PS are the correct files to use since they provide Color LaserWriter 12/600 PS-specific CMYK values.

With regard to any changes that can be made in the Color LaserWriter 12/600 PS for color, with the exception of the Density Control Panel at the back of the printer, there are none. We would suggest leaving all of the colors as neutral, unless as the manual says:

"There are always small variations in color between different printers. If you have two Color LaserWriter printers on the same network, you can use the density control panel to make subtle changes to match the two printers."

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS to the discussion.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18983



Tech Info Library

Personal Internet Solution: Description & Specifications 4/97

Revised: 5/1/97
Security: Everyone

Personal Internet Solution: Description & Specifications 4/97

=====

Article Created: 28 November 1995

TOPIC -----

This article describes the Personal Internet Solution Bundle, part of the Apple Education Series.

DISCUSSION -----

The Personal Internet Solution Bundle offered to education customers is intended to provide librarians, administrators, students and individual teachers easy access to the Internet.

Features And Benefits
=====

Feature - Power Macintosh 5200/75 LC or Macintosh LC 580 computer.

Benefit - Apple latest education computers offer expandability, compatibility and high performance including a CD ROM drive.

Feature - Internet software package.

Benefit - Offers some of the most popular Internet applications including Netscape Navigator for Web browsing, Eudora by Qualcomm for electronic mail, and an Internet serial line connection package with custom configuration script.

Feature - Reference CD Collection

Benefit - Four of the best known reference CDs available to bring the world of information into the classroom. Allows users to begin research locally and then venture out into the Internet for additional data and insight.

Feature - Global Village 14.4 external Data and Fax Modem

Benefit - Without additional modem purchase, allows connection to Internet and online services. Allows faxing from the computer.

Feature - Getting Started Guide

Benefit - Give users an easy-to-follow and complete guide to setup of the bundle.

Feature - Portal Information Network Internet provider connection.

Benefit - Up to \$75 connect time credit, no setup fee, and up to three monthly maintenance fees waived from this popular Internet access provider with more than 1100 local access numbers servicing up to 95% of the US.

Feature - Discount coupons for educational reference materials.

Benefit - Savings on even more relevant resources.

Bundled Items

=====

The AES Personal Internet Solution Bundles include the following software and miscellaneous items:

- Personal Internet Solution CD
 - Netscape Navigator by Netscape Communications 1-800-NET-SITE (638-7483)
 - Eudora by Qualcomm 1-800-2-EUDORA (383672)
 - InterSlip by Intercon

Reference CD Collection

- 3D Atlas by Electronic Arts 1-415-572-2787
- Grolier Multimedia Encyclopedia by Mindscape 1-415-883-5157
- INFOPEDIA by Future Vision Multimedia 1-914-426-0400 ext. 4
- Time Almanac: Reference Edition by Compact Publishing 1-404-428-0008

Other

- Global Village 14.4 Data and Fax Modem 1-415-390-8200
- Getting Started Guide
- Portal Information Network 1-408-973-9111
- Other coupons
 - 20% discount coupon National School Board Association special report "Telecommunications and Education: Surfing and the Art of Change."
 - 25% discount coupon toward the book "Education on the Internet."
 - Free 3-month subscription to "Classroom CONNECT," a monthly guide to the Internet.

System Requirements

- System software 7.1 or later
- Macintosh with a 68030 processor or later*
- At least 8MB of RAM
- CD-ROM drive
- 13" monitor or larger

* The Personal Internet Solution Bundle is not compatible with the Power Macintosh 7200, 7500, 8500 or 9500 computers.

Ordering Information

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Part No. Description

B2424LL/D Macintosh LC 580 Personal Internet Solution Bundle

- Includes Macintosh LC 580 8MB Hard Disk 800 w/CD-ROM CPU and AppleDesign Keyboard (M3964LL/B) and Personal Internet Solution Accessory Kit

B2423LL/F Power Macintosh 5200/75 LC Personal Internet Solution Bundle

- Includes PowerMacintosh 5200/75 LC 8MB Hard Disk 800 w/CD-ROM CPU AppleDesign Keyboard (M3947LL/C) and Personal Internet Solution Accessory Kit

T1646LL/C Personal Internet Standalone Solution

- Supports Macintosh with 030 processor or better**, 8MB RAM and CD-ROM Drive

** The Personal Internet Solution Bundle is not compatible with the Power Macintosh 7200, 7500, 8500 or 9500 computers.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:18984



Tech Info Library

Power Macintosh: Startup Failure Tone (11/95)

Revised: 11/29/95
Security: Everyone

Power Macintosh: Startup Failure Tone (11/95)

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Article Created: 29 November 1995

TOPIC -----

Whenever I attempt to start up my Power Macintosh computer, the computer plays a "car crash" sound. What is causing this?

DISCUSSION -----

The "car crash" sound is the startup failure tone on the Power Macintosh series computers. Such a failure could be caused by either software or hardware problems. To troubleshoot this error tone, see the Tech Info Library article, "System 7.x: Troubleshooting Startup Problems".

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18985



Tech Info Library

Macintosh Quadra 660AV and 840AV: Startup Failure Tone (11/95)

Revised: 11/29/95
Security: Everyone

Macintosh Quadra 660AV and 840AV: Startup Failure Tone (11/95)

=====

Article Created: 29 November 1995

TOPIC -----

Whenever I attempt to start up my Macintosh Quadra 660av computer, the computer plays a "bongo drum" sound. What is causing this?

DISCUSSION -----

The "bongo drum" sound is the startup failure tone on the Macintosh Quadra 660av and 840av computers. Such a failure could be caused by either software or hardware problems. To troubleshoot this error tone, see the Tech Info Library article, "System 7.x: Troubleshooting Startup Problems".

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18986



Tech Info Library

PowerBook & PowerBook Accessories:Serial Number Locations(11/95)

Revised: 11/29/95
Security: Everyone

PowerBook & PowerBook Accessories:Serial Number Locations(11/95)

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Article Created: 29 November 1995

TOPIC -----

This article describes where serial numbers are located on various PowerBook computers and PowerBook accessories. The serial number is printed underneath a barcoded number and is normally 10 or 11 digits.

DISCUSSION -----

On the Back of the Computer Under the Ports

The serial numbers for the following PowerBook computers are located on the back of the unit where the ports are found. There is a small I/O door on the back that must be opened in order to gain access to this area of the computer.

- Most PowerBook 100 Series (140, 145, 145b, 160, 165c, 170, 180, 180c)
- PowerBook 500 Series

On the Bottom of the Computer

The serial numbers for the following PowerBooks are located on the bottom of the unit in the center.

- PowerBook 100, 150
- PowerBook Duo Series (210, 230, 250, 270c, 280, 280c, 2300c)*
- PowerBook 190 Series (190, 190cs)
- PowerBook 5300 Series (5300/100, 5300cs/100, 5300c/100, 5300ce/117)

Other Serial Number Locations

Other Portable units and accessories:

- Macintosh Portable: Orient the Macintosh Portable computer so it is standing vertically on its back (where the ports are located). The serial number is on the bottom of the machine, in the upper right corner.
- Mini Dock, Duo Floppy Drive, Battery charger, Duo Floppy Adapter: The serial number is located on the bottom in the center.
- Duo Dock, Duo Dock II, Duo Dock Plus: The serial number is located on the back (where the ports are located) in the center.

* Note: the serial numbers for PowerBook 200 series computers (Duos) are not visible while they are attached to a docking device or accessory.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18987



Tech Info Library

A/UX or AWS 95: Copy Complete Contents Of A Partition (11/95)

Revised: 11/29/95
Security: Everyone

A/UX or AWS 95: Copy Complete Contents Of A Partition (11/95)

=====

Article Created: 29 November 1995

TOPIC -----

I'm trying to copy the UNIX drive from my Apple Workgroup Server (AWS) 95 to another UNIX drive, in the same computer. How do I do this?

DISCUSSION -----

NOTE:

This is a long response, please read it in its entirety before attempting to follow the steps outlined below.

CAUTION:

There are steps in this procedure that will destroy the data on a disk. Please make sure the disk is backed up, and the correct parameters are used because loosing data in this fashion would be non-recoverable.

We do not have a clear understanding of what, "copying the UNIX drive," means. We will assume you are trying to move the data from your AWS 95 root disk to a second hard disk, in other words, creating a copy of the AWS 95 A/UX partition. If this is not correct, the procedure below should work for any partition you want to copy, that is, you could us the same process to copy other A/UX partitions.

Example and Procedure

The internal drive, to be copied, is connected to the PDS card with its SCSI address set to 0. Since the root volume is assigned Slice 0, the device name to access this drive would be /dev/dsk/c300d0s0.

The target drive is connected to the external port of the PDS card with its SCSI ID set to 5. Since we are trying to copy the root file system, it should have a partition with Slice 0 assigned to it. The device name to access this drive would be /dev/dsk/c405d0s0.

Also, be certain the partition of the target drive is large enough to contain all of the data in the source partition.

When we refer to using a command, we mean typing the command in a CommandShell window.

Make sure AppleShare Pro is not running.

Step 1

Since we are going to copy ONLY the contents of the root partition, make sure you unmount all other partitions, you can use the command:

```
umount -a
```

Step 2

Run Apple HDSC Setup WHILE IN A/UX -- this is important. If this step is done while in the Mac OS, the disk will be partitioned but the UNIX partitions will not contain a file system. Below are three ways for creating UNIX partitions -- the first is recommended:

- If you use the Apple HDSC Setup program while in A/UX, the program will ask you for a mount point for the file system being created. Since we are assuming you are copying the root drive and volume, mount the drive on a directory called "/s0".
- If the disk was formatted and partitioned while in the Mac OS, a file system can be created on the UNIX partitions with the command:

```
newfs /dev/dsk/cX0Yd0sZ  (## This erases all data in the partition ##)
```

Where X = SCSI BUS (1, 2, 3 or 4)

Y = SCSI ID of the drive (0, 1, 2, 3, 4, 5 or 6)

Z = Slice where the file system will be created (0 for root volume)

The value for Z is chosen when partitioning the drive and creating a UNIX partition.

- If Apple HDSC Setup will not be used, create a directory called /s0 and mount the partition using the commands:

```
mkdir /s0
```

```
mount /dev/dsk/c405d0s0 /s0
```

Step 3

Copy the data to the target drive. The following commands will copy the contents of the complete file system preserving access privileges, access times and modification dates:

```
cd /  
find . -print | grep -v /s0 | cpio -pdlmuv /s0
```

Step 4

Unmount the target partition and run fsck on it with the following commands:

```
umount /s0  
fsck /dev/dsk/c405d0s0
```

The target drive now contains a copy of the source drive's file system.

If you are planning on using this drive as a complete replacement for the internal drive, special care should be taken that the drive contains the following partitions:

- A Macintosh Volume that contains a copy of the contents of the MacPartition
- A Swap partition that is at least the same size as the amount of RAM in the AWS 95.

Support Information Services

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Tech Info Library Article Number:18988



Tech Info Library

AplShare Windows Client: Unsupported Network Adapters (11/95)

Revised: 11/29/95
Security: Everyone

AplShare Windows Client: Unsupported Network Adapters (11/95)

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Article Created: 29 November 1995

TOPIC -----

This article explains how to install the AppleShare Client for Windows if it does not come with the driver for your particular network adapter.

DISCUSSION -----

Windows for Workgroups 3.11 and Unsupported Network Adapters

If you are using Windows for Workgroups 3.11, use your Windows for Workgroups installation disks to install your network adapter. Once the network adapter is working in Windows, you can install the AppleShare Client for Windows software using the normal installation procedures.

Windows 3.1 and 3.11 and Unsupported Network Adapters

If you are using Windows 3.11 or Windows 3.1 without Windows networking software, and you have a vendor supplied ODI driver for an unsupported network adapter, you may be able to use the procedures in this section to install AppleShare Client for Windows.

CAUTION:

Installing your system for networking requires that you manually install the network adapter driver and edit your driver configuration file and your DOS startup batch files. Performing these procedures incorrectly can cause your computer to fail.

Before performing the following procedures, you should locate the software and documentation that came with your network adapter. As you perform the procedures, you will need information from the documentation.

Step 1

If your network adapter is not already installed, install and test it, following the instructions in your network adapter documentation.

Step 2

Restart your computer and run Windows.

Step 3

Run the INSTALL.EXE program on the AppleShare Client for Windows Disk 1.

Step 4

In the Installation Options dialog box, choose the Standard Installation option and click Continue.

The Select Adapter dialog box appears.

Step 5

Select the line at the end of the adapter list that reads "[Other] Unlisted Adapter Option," and click OK.

The Network Adapter Settings dialog box appears.

Step 6

Enter the configuration settings for your network adapter.

If possible, select values that match the adapter configuration settings you used in completing step 1 above. If no matching settings are displayed, simply continue with step 7. If you are already running ODE-based networking software, AppleShare Client for Windows Installer will use your existing network adapter configuration settings.

Step 7

Complete the AppleShare Client for Windows installation.

Step 8

Exit Windows and restart your computer as instructed by the Installer.

If your computer was not already running ODE-based networking software, continue with step 11.

Step 9

If your computer was already running ODE-based networking software using your network adapter card, edit the file ATDRIVER.BAT (by default in the C:\APPLE\A_SHARE directory). Remove the word "REM" from the beginning of the last line so that it reads "C:\APPLE\A_SHARE\ODI.EXE".

Step 10

Restart your computer.

AppleShare Client for Windows is completely installed and should run when you start Windows. Skip the rest of this procedure.

Step 11

Use DOS to copy the ODI driver and any supporting files for your network adapter to your AppleShare Client for Windows directory. The default directory path is C:\APPLE\A_SHARE.

Step 12

Edit the NET.CFG file in the C:\APPLE\A_SHARE directory.

First, replace all strings of four consecutive X characters (that is, XXXX) with the file name of your driver, excluding the .COM extension for the file.

Next, change any parameters that do not match your adapter configuration settings. Check the values for the following parameters:

- the interrupt request level, a one- or two-digit number preceded by INT #1
- the I/O port number, a 3-digit value such as 300, preceded by PORT #1
- the direct memory access channel, a value of 1 or 2 preceded by DMA
- the memory access address, a data address value such as D8000, preceded by MEM

You should consult your network adapter card documentation to determine if other parameters are required for your system.

Finally, save the NET.CFG file.

Step 13

Edit the file ATDRIVER.BAT (by default in the C:\APPLE\A_SHARE directory).

First, remove the word "REM" from the beginning of every line. Next, replace the string "XXXX" in the second line of the file with the filename of your network adapter driver. Be sure to include the filename extension.

Step 14

Save the ATDRIVER.BAT file.

Step 15

Restart your computer by turning it off and on.

AppleShare Client for Windows is completely installed and should run when you start Windows.

If you experience any problems after completing these instructions, see the file C:\APPLE\A_SHARE\PROBLEMS.WRI.

Support Information Services

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Tech Info Library Article Number:18989



Tech Info Library

Seamless Integration (4/97)

Revised: 5/1/97
Security: Everyone

Seamless Integration (4/97)

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Article Created: 29 November 1995
Article Reviewed/Updated: 29 April 1997

Seamless Integration

6860 South Olive Way, Suite 100
Englewood, CO 80112

303-694-2272

Company Profile:

Seamless Integration is a software manufacturer developing products to run specifically on the Newton Platform. Products include comprehensive mobile estimating solutions for the insurance and construction industries.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:18990



Tech Info Library

LaserWriter 16/600 PS: Supports HPGL/2 Through PCL5 (11/95)

Revised: 11/29/95
Security: Everyone

LaserWriter 16/600 PS: Supports HPGL/2 Through PCL5 (11/95)

Article Created: 28 November 1995

TOPIC -----

We have a Power Macintosh 6100/66 DOS Compatible Macintosh and are trying to print to a LaserWriter 16/600 PS. The application we are using is DOS-based, and outputs HPGL. I've heard that the LaserWriter 16/600 PS printer supports HPGL/2, but I'm unable to get any output when I send HPGL to the printer. What's wrong? Also, is HPGL/2 backward compatible with the original HPGL language?

DISCUSSION -----

The LaserWriter 16/600 PS does support the HPGL printing language. This Support for HPGL is provided though the PCL5 emulation, which inherently has HPGL/2 support. Tests on our LaserWriter 16/600 PS using HPGL/2 were successfully. Your problem is likely with the initial escape sequences used by the MS-DOS-based program to set the printer into HPGL/2 mode, or in the HPGL/2 drawing commands themselves.

The problem you are seeing is not related to the DOS Compatibility Card or the LaserWriter 16/600 PS printer since:

- Print jobs from the MS-DOS environment are sent without modification of the output. All of the output data is sent directly to the printer.
- HPGL/2 data we downloaded to the LaserWriter 16/600 PS prints without problem.

Depending on which input port, and mode it is set to: PCL, or PostScript, of the LaserWriter 16/600 PS you are using, you may need to send a line of PostScript code to the printer prior to all HPGL/2 and PCL5 print jobs. The following command places the PostScript interpreter into PCL5 mode:

```
%=====
% Begin PostScript code
%
```

```
currentfile /LaserJetIII statusdict /emulate get exec
%
% End PostScript code
%=====
```

Once the printer is placed into the PCL5 emulation, you need to use the following escape sequence to place the printer into the HPGL/2 mode:

To go from PCL5 to HPGL/2: <esc>%#B

To return from PCL5 from HPGL/2: <esc>%#A

HPGL/2 Compatibility

=====

Regarding the question about backward compatibility of HPGL/2 with the original HPGL language, we contacted Hewlett-Packard technical support and they cited only the following differences:

MISSING HPGL/2 COMMANDS

The HP LaserJet III, IIID, 4, 4Si, 4L, and 4P printers do not have every command that is available in HPGL or HPGL/2. The following is a list of some of the known commands that are not available with the printers mentioned.

- XT and YT (X-Tick and Y-Tick)

This command allows plotters to automatically print an x and y axis on printed plots. This command is a HPGL command and is not found in HPGL/2.

- RP (Replot)

This command allows a plotter to automatically recreate a plot without having to send new data to the plotter. When using the HP LaserJet III and 4, family printers, the only method of obtaining multiple plots is to send the copy command before entering HPGL/2 followed by the exit HPGL/2 command at the end of the file.

- PG (Page Advance)

This command tells the plotter to eject a plot. This was disabled on the HP LaserJet III and 4 printers so PCL and HPGL/2 could be mixed on the same page without any page eject problems.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18991



Tech Info Library

Apple Printers: Can Print Postnet Codes (11/95)

Revised: 11/29/95
Security: Everyone

Apple Printers: Can Print Postnet Codes (11/95)

=====

Article Created: 29 November 1995

TOPIC -----

Can I print bar codes on my envelopes from Apple printers, that can be read by the U.S. Postal Service?

DISCUSSION -----

The Bar Code standard for the U.S. Postal Service is called Postnet.

There are a several third-party commercial and shareware packages available for Apple printers to generate Postnet characters.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:18993



Tech Info Library

AppleShare, Alias Manager Issue Fixed (4/96)

Revised: 4/3/96
Security: Everyone

AppleShare, Alias Manager Issue Fixed (4/96)

Article Created: 29 November 1995
Article Reviewed/Updated: 3 April 1996

TOPIC -----

This article describes an AppleShare and Alias Manager issue, and how it has been fixed with System 7.5.3 and AppleShare Workstation 3.6.2.

DISCUSSION -----

Summary of the Issue

The first issue was with the Alias Manager returning the wrong error message when a client tried to connect to an AFP server with an expired password. Instead of receiving the message to the effect "Your password has expired. Please enter a new one," the user received the message "The volume <name> could not be found on the network." The proper message appeared when connecting through the AppleShare Chooser, PowerTalk Catalog, or KeyChain, but not with the Alias Manager.

The second issue was if the user received the correct error message, there was no option for changing the password from the login panel from both the Alias Manager and PowerTalk. Logging in from the Chooser presents the user with a "Set Password" option.

The Fix in Two Parts

PART 1

System 7.5.3 (installed with System 7.5 Update 2.0) includes code changes to present the correct error message from both the Alias Manager and the PowerTalk Catalog or KeyChain. This solves the first issue above. System 7.5.3 also includes code to enable the fix in PART 2 below. System 7.5 Update 2.0 is available as a free upgrade for any 68030-based or later Macintosh computer running System 7.5 or later.

PART 2

AppleShare 4.2.1 includes a new version of the AppleShare Workstation, version 3.6.2, that presents a user with the "Set Password" option from the Chooser, the Alias Manager Login Window, and the PowerTalk Catalog or KeyChain Login Window. This fix requires the code changes in System 7.5.3 mentioned above. AppleShare Workstation 3.6.2 is compatible with earlier versions of the Mac OS, but will not fix the password expiration issue unless it is used in conjunction with System 7.5.3.

IMPORTANT NOTE:

Because System 7.5.3 and System 7.5 Update 2.0 were completed before AppleShare 4.2.1 was completed, AppleShare Workstation 3.6.2 is not part of System 7.5.3 (AppleShare Workstation 3.6.1 is in System 7.5.3). AppleShare Workstation 3.6.2 is distributed with AppleShare 4.2.1 and will also be posted to various online services and the Internet.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

03 Apr 1996 - Change distribution and updated article.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:18994



Tech Info Library

PowerBook 500 Series: Frequently Asked Questions (5/96)

Revised: 10/14/96
Security: Everyone

PowerBook 500 Series: Frequently Asked Questions (5/96)

=====

Article Created: 29 November 1995
Article Reviewed/Updated: 9 May 1996

TOPIC -----

This document contains the answers to the following frequently asked questions (FAQ) about PowerBook 500 series computers.

- 1) I recently purchased a new battery for my 500 series PowerBook. My PowerBook isn't charging/recognizing this battery. What should I do?
- 2) My PowerBook does not always eject floppy disks, what's the problem?
- 3) My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?
- 4) My external monitor is not displaying an image when I start up my PowerBook.
- 5) I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen.
- 6) I'm trying to connect my PowerBook as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.
- 7) Sometimes I can't seem to use my internal modem and print at the same time. Why is this?
- 8) Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?
- 9) Sometimes when I try to use the Trackpad, the cursor jumps around uncontrollably. What causes this?
- 10) Will my RAM and internal modem still be compatible after I upgrade my PowerBook 500 series computer to the PowerPC 603e processor?

11) I want to use an external modem with my PowerBook 500 series. According to the manual that came with my PowerBook, I need to check Normal in my PowerBook Setup control panel. I open the control panel, and the setting is not there. What's wrong?

12) I have a PowerBook 500 series with a Global Village PowerPort Mercury modem. Can you tell me how to send and receive faxes?

13) I've hooked up an external CD-ROM drive to my PowerBook 500 series and I'm playing an audio CD. When I bring up the AppleCD Audio Player I can see the numbers moving but there is no sound coming through the speakers, although I can hear the sound of regular multimedia CD's fine. Can I play an Audio CD through the internal speakers?

14) Will the Apple PlainTalk microphone work with the PowerBook 500 series?

15) How can I use an external microphone?

16) I am trying to record a sample of an audio CD with the Sound control panel. The sound comes out non-existent or weak. The CD player is running through the audio input port on the back of the computer. What's the problem?

17) Where else can I go for answers?

DISCUSSION -----

1) Question: I recently purchased a new battery for my 500 series PowerBook. My PowerBook isn't charging/recognizing this battery. What should I do?

Answer: Try running the Intelligent Battery Update on your battery. This will update and fix the battery if needed, or let you know that the battery needs to be replaced. The Intelligent Battery Update can be found at the path
US -> Macintosh -> Powerbook -> Other PB SW.

If the Intelligent Battery Update does not alleviate the symptoms, try resetting the power manager on the PowerBook by following these steps:

Step 1

Shut down the PowerBook using the Special menu.

Step 2

Press the Command-Option-Control-Power On keys simultaneously and let go. Pressing the keys will not appear to do anything.

Step 3

Press the Power On key to start up the PowerBook. Your brightness and contrast settings may be reset and you may need to adjust them in order to see the screen.

If the symptom is still not resolved, the battery may need replacement. You can contact the Apple Assistance Center at 800-SOS-APPL (800-767-2775) or contact the Apple Referral Center at 800-538-9696 to

2) Question: My PowerBook does not always eject floppy disks, what's the problem?

Answer: The drive may not be properly aligned. If you can see the metal frame sticking up more than a couple of centimeters behind the floppy drive door, you should contact the Apple Assistance Center at 800-SOS-APPL (800-767-2775) to arrange for repair at our repair center or contact the Apple Referral Center at 800-538-9696 to obtain a phone number for an Apple-authorized service provider in your area.

3) Question: My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

Answer: The technology used on the passive-matrix displays is susceptible to shadowing and ghosting, since it does not individually address each pixel on the display. Gray-scale passive-matrix displays are particularly susceptible to the symptoms. The PowerBook 100, 140, 145, 145B, 150, 160, 165, 210, 230, 520, 190, and 5300/100 all use a gray-scale passive-matrix display.

Some suggestions to reduce the effects of the shadowing:

- * Adjust the brightness and contrast settings of the display. Usually a lighter contrast setting will look better.

- * Use a darker desktop pattern. The effects of the shadowing will not be as apparent with the darker background.

- * Open the Monitors control panel and select "Black & White" instead of 16 Shades of Gray.

Although these tips can help mitigate the effects of the shadowing, some amount of screen anomalies will always be present on gray-scale passive-matrix displays.

4) Question: My external monitor is not displaying an image when I start up my PowerBook.

Answer: Follow this procedure:

Step 1

Shut down the PowerBook.

Step 2

Make sure the video cable connected to both the PowerBook video port and the

Monitor video port is secure.

Step 3

Make sure the PowerBook is plugged into the AC adapter, which is required to use an external monitor.

Step 4

Start up the PowerBook and open the Monitors control panel. You should see images of two monitors, representing the PowerBook display and the external monitor. If you don't see the image of the external monitor, repeat steps 1 and 2.

Step 5

In the Monitors control panel, click (and hold) the "Identify" button. A large 2 should be displayed on the external monitor icon.*

*Tip: If you wish to use the external monitor as your primary monitor, open the Monitors control panel and drag the menu bar from the top of the internal display (labeled 1) to the top of the external monitor (labeled 2).

5) Question: I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen.

Answer: You are most likely using the wrong SCSI cable. You should be using the HDI-30 SCSI System Cable (M2538LL/A), which is a light gray color and only has 29 pins (there is a pin missing). You are most likely using the HDI-30 SCSI Disk Adapter cable (M2539LL/A) which is dark gray and has all 30 pins.

6) Question: I'm trying to connect my PowerBook as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.

Answer: You may have the wrong cable. Use the Apple HDI-30 SCSI disk adapter cable, part number M2539LL/A, in conjunction with an Apple SCSI System Cable appropriate to your other Macintosh along with proper SCSI termination.

7) Question: Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook models that have only one serial port (200's, 2300's, 190's, 5300's), the serial port is mapped as a modem port. Under normal conditions this isn't a problem - the internal modem can be used at the same time as a serial device such as a printer is being used.

The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control

panel to Internal, Compatible, or "Use internal modem instead of modem port".

The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there's an update.

8) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook with a single serial port (200's, 2300's, 190's, 5300's) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook:

Step 1

AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.

Step 2

If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.

Step 3

When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

9) Question: Sometimes when I try to use the Trackpad, the cursor jumps around uncontrollably. What causes this?

Answer: The Trackpad works on a principal called coupling capacitance. As your finger moves over the surface, the Trackpad evaluates the change in capacitance between two layers of measurement electrodes built into the surface of the Trackpad.

The most common cause of a jumping Trackpad cursor is moisture interference. If you have sweaty hands or if moisture collects on the pad, this may confuse the Trackpad. Wiping off the Trackpad with a cloth or tissue will usually fix this problem. If you find that it continues to get wet you may want to consider purchasing a teflon or mylar pad to fit over the pad to prevent the moisture from having direct contact with the pad. Before installing the pad, make sure the Trackpad is clean. You can use a mild glass cleaner sprayed onto the cloth, not onto the Trackpad itself.

Make sure only one part of your finger is touching the pad. You will not be able to use a pen or other object, it is designed to work with your finger. Also make sure that you are not resting your wrist on or very close to the pad. The Trackpad may interpret this as your wrist touching it and make the cursor move in that direction. If you suspect either of these is causing the cursor's behavior, try raising your wrist in the air and only touch the pad with the tip of your finger. If the symptom goes away then you know that one of the above is the cause and you should adjust the position of your wrist and or finger.

Oil or lotion can cause the same problem. Either do not use hand lotion, or consider purchasing a teflon or mylar pad to protect the pad. Before installing the teflon pad, make sure the Trackpad is clean.

Jewelry may also cause interference. Try removing rings or bracelets and see if the jumping or erratic behavior disappears.

10) Question: Will my RAM and internal modem still be compatible after I upgrade my PowerBook 500 series computer to the PowerPC 603e processor?

Answer: The existing RAM card and internal modem should be compatible with the PowerPC 603e upgrade. All Apple products are.

11) Question: I want to use an external modem with my PowerBook 500 series. According to the manual that came with my PowerBook, I need to check Normal in my PowerBook Setup control panel. I open the control panel, and the setting is not there. What's wrong?

Answer: If you do not have an internal modem, this setting will not appear in the PowerBook Setup control panel. If you want to use an external modem with your PowerBook 500 series, simply make certain AppleTalk is inactive in the Chooser and select the modem port in your communications software. You can leave AppleTalk active if you select something other than LocalTalk in the Network control panel.

12) Question: I have a PowerBook 500 series with a Global Village PowerPort Mercury modem. Can you tell me how to send and receive faxes?

Answer: Instructions for sending a fax are detailed on pp. 77-89 of your PowerPort 500 Series User's Guide.

Sending a fax is a lot like printing. You can follow these instructions to send your first fax:

Step 1

Open whatever document you would like to fax. You could fax from within the application SimpleText, for example.

Step 2

Hold down the Option key on your keyboard, and choose the command Fax from your File menu.

Step 3

The Send Fax Setup dialog box will appear. Here you can enter your Station Name and Station Fax Number. Click OK when you are done.

Step 4

The GlobalFax dialog will appear. Enter the number you wish to call in the Fax field, and enter the recipient's name in the To field. You can also choose a cover sheet at this window.

Step 5

Once you've entered the fax number and name of the recipient, click the Send... button. Your software should image and fax the document.

Instructions for receiving a fax are detailed on pp. 99-105 of your PowerPort 500 Series User's Guide.

You can configure your PowerBook to receive faxes automatically. Of course, it will have to be connected to an analog phone line. To set your PowerBook up to receive faxes automatically, follow these steps:

Step 1

Open the "Global Village Fax Center" under the Apple menu.

Step 2

Under the Fax menu, choose Setup and Receiving.

Step 3

In the Receive Fax Setup dialog box, put an X next to Receive Fax... Click OK when done.

After this, the Global Village Fax Center will answer incoming calls to receive faxes.

13) Question: I've hooked up an external CD-ROM drive to my PowerBook 500 series and I'm playing an audio CD. When I bring up the AppleCD Audio Player I can see the numbers moving but there is no sound coming through the speakers, although I can hear the sound of regular multimedia CD's fine. Can I play an Audio CD through the internal speakers?

Answer: There is not a direct connection between the SCSI port and the speakers,

so direct play-through of audio CD's is not readily possible. Typically, only Macintosh computers which have an internal CD-ROM drive can play-through audio CD sound to the internal speakers. You will need to connect external speakers to the external CD-ROM drive to hear the audio CD sound.

14) Question: Will the Apple PlainTalk microphone work with the PowerBook 500 series?

Answer: No, the PlainTalk microphone is only supported with most Power Macintosh computers and the Quadra 840AV and 660AV.

15) Question: How can I use an external microphone?

Answer: The audio input port on the PowerBook 500 series computer is a line-level input. This means that it requires an audio signal with a strength of at least 1 volt peak-to-peak. If you want to use an external microphone, you will need to run it through a stereo system or a pre-amp that outputs a line-level signal, and you must be using a program capable of using this type of signal (see the next question).

16) Question: I am trying to record a sample of an audio CD with the Sound control panel. The sound comes out non-existent or weak. The CD player is running through the audio input port on the back of the computer. What's the problem?

Answer: The PowerBook 500 series uses an audio input port that requires a line-level signal, which your CD player is most likely providing. The problem is that the Sound control panel does not read this type of signal, and will not record it correctly. The Sound control panel is only designed to record sounds from the internal microphone on the PowerBook 500 series computers. To record sound from any device running through the external audio input on a PowerBook 500 series computer, you will need to use an application program such as Opcode Audio Shop that has an "auto-gain" option or some similar feature.

17) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

Article Change History:

09 May 1996 - corrected software path

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Tech Info Library Article Number:18995



Tech Info Library

PowerBook 100 Series: Frequently Asked Questions (11/95)

Revised: 2/13/96
Security: Everyone

PowerBook 100 Series: Frequently Asked Questions (11/95)

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Article Created: 29 November 1995

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about PowerBook 100 series computers.

Questions Answered in This FAQ:
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1) When I press the power button, my PowerBook does not start up, or flashes the display momentarily. What is wrong?

2) Since I installed a modem on my PowerBook 150, the battery seems to get depleted very quickly. What can I do to save battery power?

3) My PowerBook does not always eject floppy disks, what's the problem?

4) My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

5) I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen. Why is this?

6) I'm trying to connect my PowerBook as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number. What's wrong?

7) My battery lasts only a very short time. What can I do?

8) When starting up, my PowerBook with Express Modem displays the Fax Modem extension icon with an "X" through it. I can't use my modem to send a fax. What's wrong?

9) My external monitor is not displaying an image when I start up my PowerBook.

10) Do PowerBook 190 computers support external video?

11) Why does my PowerBook trackball sometimes appear to "stick" or "jump" when rolled?

12) How do I back up the files on my PowerBook 145B or 150?

13) I made a backup of the information on my PowerBook 145B/150 hard drive. Now I would like to restore just one of my control panels. Can I restore a single file from the backup?

14) I did not make a backup of the system software on my PowerBook 145B (or PowerBook 150), and now I think I need to reload the operating system. I do not want to upgrade to System 7.5. Where can I get a new copy of the software that came with my PowerBook?

15) I am upgrading my PowerBook with Express Modem to System 7.5. What version of the Express Modem software should I be using?

16) Can the PowerBook 5300/190 use two batteries simultaneously?

17) Where else can I go for answers?

DISCUSSION -----

1) Question: When I press the power button, my PowerBook does not start up, or flashes the display momentarily. What is wrong?

Answer: First try plugging in the AC Adapter. If the computer starts with the AC Adapter, but not with the battery in the battery compartment, you either need to charge the battery, or you may need to replace the battery.

If that doesn't help, try resetting the power management circuitry. Please see the document titled "PowerBook Power/Batteries: Frequently Asked Questions" for instructions on resetting the power manager.

2) Question: Since I installed a modem on my PowerBook 150, the battery seems to get depleted very quickly. What can I do to save battery power?

Answer: Apple released the PowerBook 150 Update to correct this problem. When the PowerBook 150 has an internal modem, the modem continues to draw power when not in use. This shortens the battery life. The update is available at the path U.S.A. Apple Software Updates -> Macintosh -> System Software -> Other System Software. The update is not required with system software version 7.5 or later.

3) Question: My PowerBook does not always eject floppy disks, what's the problem?

Answer: The drive may not be properly aligned. If you can see the metal frame

sticking up more than a couple of centimeters behind the floppy drive door, you should contact the Apple Assistance Center at 800-SOS-APPL (800-767-2775) to arrange for repair at our repair center or contact the Apple Referral Center at 800-538-9696 to obtain a phone number for an Apple-authorized service provider in your area.

4) Question: My PowerBook display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

Answer: The technology used on the passive-matrix displays is susceptible to shadowing and ghosting, since it does not individually address each pixel on the display. Gray-scale passive-matrix displays are particularly susceptible to these symptoms. The PowerBook 100, 140, 145, 145B, 150, 160, 165, 210, 230, 520, 190, and 5300/100 all use a gray-scale passive-matrix display.

Some suggestions to reduce the effects of the shadowing:

- * Adjust the brightness and contrast settings of the display. Usually a lighter contrast setting will look better.

- * Use a darker desktop pattern. The effects of the shadowing will not be as apparent with the darker background.

- * Open the Monitors control panel and select "Black & White" instead of 16 Shades of Gray.

Although these tips can help mitigate the effects of the shadowing, some amount of screen anomalies will always be present on gray-scale passive-matrix displays.

5) Question: I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen. Why is this?

Answer: You are most likely using the wrong SCSI cable. You should be using the HDI-30 SCSI System Cable (M2538LL/A), which is a light gray color and only has 29 pins (there is a pin missing). You are most likely using the HDI-30 SCSI Disk Adapter cable (M2539LL/A) which is dark gray and has all 30 pins.

6) Question: I'm trying to connect my PowerBook as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number. What's wrong?

Answer: You may have the wrong cable. Use the Apple HDI-30 SCSI disk adapter cable, part number M2539LL/A, in conjunction with an Apple SCSI System Cable appropriate to your other Macintosh along with proper SCSI termination.

NOTE: SCSI Disk Mode is NOT supported on the following PowerBook models: 140, 145, 145B, 150, and 170.

7) Question: My battery lasts only a very short time. What can I do?

Answer: Follow the procedure detailed below.

Step 1

Reset the power manager, following the procedure detailed in the document titled "PowerBook Power/Batteries: Frequently Asked Questions".

Step 2

Let the battery charge for 8 hours. This procedure should resolve the problem.

Step 3

A few words about ongoing battery care: Completely discharge the battery after approximately 15 to 20 recharges. Here's how to do this:

Let the battery discharge completely until the PowerBook goes into sleep mode. You'll see three battery warning dialog boxes before this occurs. This process will "recycle" the nickel cadmium (NiCad) battery and eliminate a "memory effect," which makes the battery appear depleted when it is not.

Note: Do not attempt to fully discharge or recondition a PowerBook 100 lead-acid battery. If the battery life has significantly diminished on a lead-acid battery, then it probably needs to be replaced.

8) Question: When starting up, my PowerBook with Express Modem displays the Fax Modem extension icon with an "X" through it. I can't use my modem to send a fax. What's wrong?

Answer: Open the Preferences folder inside your System Folder and trash the Fax Preferences file, empty the Trash, and restart your PowerBook. The Fax Preferences file can be corrupted due to a system error or screen freeze, disabling the Fax Modem extension as a result.

9) Question: My external monitor is not displaying an image when I start up my PowerBook.

Answer: Follow this procedure:

Step 1

Shut down the PowerBook.

Step 2

Make sure the video cable connected to both the PowerBook video port and the Monitor video port is secure.

Step 3

Make sure the PowerBook is plugged into the AC Adapter, which is required to use an external monitor.

Step 4

Start up the PowerBook and open the Monitors control panel. You should see images of two monitors, representing the PowerBook display and the external monitor. If you don't see the image of the external monitor, repeat steps 1 and 2.

Step 5

In the Monitors control panel, click (and hold) the "Identify" button. A large 2 should be displayed on the external monitor icon.

Tip: If you wish to use the external monitor as your primary monitor, open the Monitors control panel and drag the menu bar from the top of the internal display (labeled 1) to the top of the external monitor (labeled 2).

10) Question: Do PowerBook 190 computers support external video?

Answer: External video on the PowerBook 190 computers is optional. The PowerBook 190 implements a PDS slot in the rear of the computer that can be filled with an Apple or third-party video card. Apple's video card, model number M3743LL/A, provides 8-bit color at resolutions up to 832x624 using 512k VRAM.

11) Question: Why does my PowerBook trackball sometimes appear to "stick" or "jump" when rolled?

Answer: Most PowerBook trackball problems are due to contamination of the rollers. The trackball is just like the standard Apple mouse in that dust and debris can accumulate on the rollers and impede smooth movement of the trackball.

Symptoms of a Dirty Trackball

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Symptoms that your trackball is dirty are:

- * The trackball appears to "stick" or "jump" when rolled.
- * The cursor will not track horizontally or vertically.
- * It sometimes seems like the cursor is "hitting a wall."
- * The movement of the cursor on the screen isn't smooth.
- * The trackball is physically difficult to roll.

How to Clean the Trackball

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Step 1

Remove the trackball retaining ring by turning it counterclockwise until it pops out (about 1/4 turn). You don't need tools for this; you can just press against the two small ridges on the ring with your fingernails.

Step 2

Lift the retaining ring and trackball out of its cavity.

Step 3

Locate the small rubber rollers at the left and bottom sides of the trackball cavity. Depending on your model, they may look like small rings or wheels.

Step 4

Use any reasonably clean, blunt object (such as your finger or a cotton swab) to wipe off the rollers. Do not use any liquid, including any amount of cleaning fluid or water, inside the computer.

Step 5

Locate the three bearings located at approximately clockwise 4:00, 7:00, and 11:00 in all PowerBooks except the PowerBook 100, which has three black posts instead of bearings. Using a fingertip, dry cotton swab, or other blunt object, clean them of any debris.

Step 6

Replace the trackball and the retaining ring.

In addition, on a PowerBook 140 or 170, reseating the cables on the trackball and keyboard may solve the problem. This is very effective if the failure is related to the computer heating up. These cables are located inside the PowerBook, so your authorized service provider or Apple must do this.

12) Question: How do I back up the files on my PowerBook 145B or 150?

Answer: Instructions for backing up the information on the PowerBook 145B or PowerBook 150 are available in the online Apple Technical Information Library. Use the search string "PowerBook 145B and backup" to locate the article "PowerBook 145 & 150: Backup and Restore Instructions." The instructions are also detailed in the User's Guide that comes with both computers.

13) Question: I made a backup of the information on my PowerBook 145B/150 hard drive. Now I would like to restore just one of my control panels. Can I restore a single file from the backup?

Answer: No. The PowerBook 145B and 150 backup does not allow for restoring single files.

14) Question: I did not make a backup of the system software on my PowerBook 145B (or PowerBook 150), and now I think I need to reload the operating system. I do not want to upgrade to System 7.5. Where can I get a new copy of the software that came with my PowerBook?

Answer: You can order a pre-made backup of the operating system for a PowerBook 145B and 150 by contacting Apple at 800-767-2775. A shipping and handling fee will apply.

15) Question: I am upgrading my PowerBook with Express Modem to System 7.5. What version of the Express Modem software should I be using?

Answer: You should upgrade your Express Modem software to at least version 1.5.3. Earlier versions may not work properly with System 7.5.

16) Question: Can the PowerBook 5300/190 use two batteries simultaneously?

Answer: Yes, the PowerBook 5300/190 expansion bay (where the floppy disk drive normally is) can accept a battery. BTI (800-982-8284) is in the process of releasing such a battery as of this writing. Since the expansion bay does not pass AC power through, any battery used through the expansion bay will require its own power supply for charging.

17) Question: Where else can I go for answers?

Answer: If you haven't done so already, check the other PowerBook FAQ documents. Also, depending on where you found this FAQ, you should have access to Apple's Technical Information Library (TIL). This library contains thousands of technical articles which are easily searchable using boolean search strings.

Support Information Services

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Tech Info Library Article Number:18996



Tech Info Library

AppleSearch 1.5: Work with Network Firewalls (11/95)

Revised: 11/30/95
Security: Everyone

AppleSearch 1.5: Work with Network Firewalls (11/95)

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Article Created: 30 November 1995

TOPIC -----

This article describes getting AppleSearch 1.5 to work with network firewalls.

DISCUSSION -----

You may be having problems getting AppleSearch Server v1.5 to work properly with network firewalls. Since the AppleSearch Server v1.5 does WAIS communications, it should be set it up as a WAIS connection when configuring the network firewall.

About Firewalls

Firewalls are not as static and immutable as the name suggests. They are essentially filters that look for particular types of network traffic and allow or disallow the packets to proceed, accordingly. Internet services identify themselves by a port or socket number which is attached to each packet. These packets are usually what firewalls look at with their filters. WAIS operates on socket 210, so when the network administrators configure the firewall, they can allow 210 traffic to pass. This allows WAIS and the AppleSearch Server v1.5 to work correctly within network firewalls.

Support Information Services

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Tech Info Library Article Number:18997



Tech Info Library

LaserWriter Driver 8.3.2: Requirements (11/95)

Revised: 11/30/95
Security: Everyone

LaserWriter Driver 8.3.2: Requirements (11/95)

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Article Created: 30 November 1995

TOPIC -----

What Macintosh models and version of the Mac OS can the LaserWriter 8.3.2 printer driver software be used with?

DISCUSSION -----

The LaserWriter 8.3.2 software, which was included with the System 7.5.2 Printing Update v1.1, can be used in place of any version of the LaserWriter 8.x software. The LaserWriter 8.3.2 driver is supported on any Macintosh computer using System Software 7.1 or greater.

The Read Me file for the LaserWriter 8.3.2 driver mentions it corrected issues on new PCI-based Power Macintosh computers, however these issues could have occurred (in extremely rare cases) on previous Macintosh computer too.

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Tech Info Library Article Number:18998



Tech Info Library

Macintosh: Unimplemented Trap Error Message Explained (11/95)

Revised: 12/1/95
Security: Everyone

Macintosh: Unimplemented Trap Error Message Explained (11/95)

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Article Created: 30 November 1995

TOPIC -----

This article describes what a trap is in the Mac OS. It also explains why you might occasionally get an "Unimplemented Trap" error message.

DISCUSSION -----

The Macintosh operating system (Mac OS) operates by using a series of interrupts to perform an operation. When an application draws a line, for example, it sends a specially encoded instruction to the microprocessor. The microprocessor decides if this is one of the 200+ fundamental instructions that are part of the microprocessor, if it is not, it calls a software routine called a "trap dispatcher". This routine then calls a software routine (usually in ROM) which draws the line.

If the instruction received by the microprocessor is improperly formatted, but appears to have the characteristics of a trap, it still sends it to the trap dispatcher. If the trap dispatcher cannot handle it, then you get an unimplemented trap message.

While unimplemented trap errors can be spurious and caused by software. If you get this error message consistently performing a function on your Macintosh, it could be a real software related error. When you consistently get unimplemented trap errors, you should look at the software on your hard disk since it could be corrupted, or incompatible. Software issues can result from the use of incompatible or corrupt third-party drivers, control panels, or extensions. But, these errors are not limited to third-party products, they can also result from the use of corrupted system software.

To correct these problems, you should remove the third-party extension, control panel, or application, or reinstall your system software.

Support Information Services

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Tech Info Library Article Number:18999



Tech Info Library

DOS Compatibility Card: What is APPLEPC.EXE? (11/95)

Revised: 11/30/95
Security: Everyone

DOS Compatibility Card: What is APPLEPC.EXE? (11/95)

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Article Created: 30 November 1995

TOPIC -----

I have a DOS Compatibility Card, and noticed there is something called APPLEPC.EXE that is loaded in my AUTOEXEC.BAT file. What does APPLEPC.EXE do?

DISCUSSION -----

APPLEPC.EXE, in conjunction with WINCLIP.EXE, lets you copy-and-paste between Microsoft Windows and the Mac OS. APPLEPC.EXE normally loads in AUTOEXEC.BAT, and WINCLIP.EXE is located in the Startup group in Windows.

If you want this functionality and do not have it, reinstall from the disk labelled "DOS Compatibility Card Installer Disk for DOS Environment".

If you do not want this functionality, you can remove both of these items.

Support Information Services

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Tech Info Library Article Number:19000



Tech Info Library

Newton Keyboard: Auto-Capitalization Disabled (12/95)

Revised: 12/18/95
Security: Everyone

Newton Keyboard: Auto-Capitalization Disabled (12/95)

Article Created: 30 November 1995
Article Reviewed/Updated: 15 December 1995

TOPIC -----

When I have the Newton Keyboard attached to my Apple MessagePad 120 with the Newton OS 2.0 installed, I have found that fields that would automatically capitalize, do not with the keyboard attached. Why?

DISCUSSION -----

This is actually the way it is supposed to work. The soft keyboard does not always reflect what the Newton keyboard types. If you press the caps lock key on the Newton keyboard, the soft keyboard does not change and the Newton keyboard types upper case letters while the soft keyboard types lower case letters. The MessagePad cannot set the state of the caps lock, or shift keys on the Newton keyboard.

Article Change History:
15 Dec 1995 - Changed title to better reflect contents.

Support Information Services

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Tech Info Library Article Number:19001



Tech Info Library

Apple MessagePad: Trouble-Shooting the Newton Print Pack (4/97)

Revised: 4/18/97
Security: Everyone

Apple MessagePad: Trouble-Shooting the Newton Print Pack (4/97)

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Article Created: 1 December 1995
Article Reviewed/Updated: 18 April 1997

TOPIC -----

When using the Apple MessagePad and the Print Pack Cable, I either get the message that no printer is connected, or I am unable to select one of the printer drivers when trying to print. What should I do?

DISCUSSION -----

The Newton print pack cable is a "smart cable". The cable contains both a serial to parallel cable converter and a ROM that stores printer drivers for Epson FX/LQ, HP LaserJet, Canon BubbleJet, and HP DeskJet printers. When the MessagePad is powered on, the print pack cable and the MessagePad communicate and transfer the drivers from the ROM to MessagePad's system memory. When the MessagePad is turned off and on again, without the cable attached, the drivers are flushed from system memory.

Most of the problems with the Print Pack cable involve the loading of the drivers from the ROM in the cable. To ensure that the MessagePad and cable are initialized and configured correctly, follow these steps:

Step 1

Turn the MessagePad and the printer off.

Step 2

Attach the cable between the MessagePad and the printer

Step 3

Turn MessagePad on. Wait 10 seconds. During this wait time, the LED on the print pack cable should flash twice - the first flash is short, the second flash is longer.

Step 4

Turn the printer on.

Step 5

Try to print.

If you still have problems printing, reset the MessagePad and try again. If the MessagePad powers off unexpectedly while printing or immediately after being turned on, try fresh batteries, or use an AC adapter. The Print Pack cable draws a lot of power at start up. This is when the Apple MessagePad is downloading the drivers. The Print Pack cable also draws a lot of power while printing.

You should repeat these steps anytime the MessagePad is turned off or disconnected from the cable and printer and reconnected.

IMPORTANT:

You need to attach the Apple MessagePad to the cable with both the printer and Apple MessagePad off, then power the devices on. These are outlined in steps (3) and (4).

Sometimes, if the printer is turned on while turning the MessagePad on, the cable gets confused and does not transmit the drivers to the Apple MessagePad. This only happens with some printers. If you follow the steps listed earlier, you will get a good connection between printer and Apple MessagePad.

Article Change History:

18 Apr 1997 - Editing changes.

28 Aug 1996 - Corrected spelling.

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Tech Info Library Article Number:19002



Tech Info Library

LaserWriter 8.2.2: Read Me File (12/95)

Revised: 12/1/95
Security: Everyone

LaserWriter 8.2.2: Read Me File (12/95)

=====

Article Created: 1 December 1995

TOPIC -----

This article contains the ReadMe file from the LaserWriter 8.2.2 printer software.

DISCUSSION -----

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference.

The software on this disk includes version 8.2.2 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This document includes information about the software, as well as about several of the printers.

What's new in version 8.2.2

=====

With version 8.2, some applications could cause documents to be faxed instead of printed to printers installed with PostScript fax options. With version 8.2, printers on an multi-zone Ethernet network sometimes failed to appear in the Chooser. Both problems are fixed in version 8.2.2.

Installing the Printer Driver Software

=====

The manual that comes with your printer contains detailed installation instructions. You cannot install the software and fonts by dragging their icons; you must use the Installer program as described in the printer manual.

Please note: before installing the printer software, you should restart your system with all Extensions turned off. To do this, hold down the Shift key while

you restart your computer.

The Installer does not remove versions of the LaserWriter printer driver that are older than version 8.0. You may remove these files from your System Folder if you no longer need them.

The Installer does remove older versions of the LaserWriter 8 driver (for example, LaserWriter 8.0) and replaces the PPD files for Apple LaserWriter printers with the latest versions.

When you choose Easy Install, the Installer places the following files in the System Folder on your hard disk. LaserWriter 8 and LaserWriter GX are placed in the Extensions folder. The PPD files which are used by LaserWriter 8 are in a folder called Printer Descriptions also located in the Extensions folder. TrueType fonts are installed in the Fonts folder if you have System 7.1 or later; they are installed in the System file if you have System 7.0. The Apple Printer Utility and LaserWriter Utility are placed in the System Folder.

Please note: if the Installer is unable to remove old files from your hard disk, it will terminate the installation procedure. If this happens, please remove old copies of the LaserWriter 8 driver and the PPD files. Then move your Fonts folder from the System Folder to the desktop. Run the installer again. Once completed, move the fonts from the Fonts folder on the desktop back to the new Fonts folder in your System Folder.

About PPD Files

=====

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, click the Setup button in the Chooser when selecting your printer for the first time, or after installing an additional option. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

About Creating EPS Files

=====

You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.

- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other applications that create their own PostScript code may not display the EPS file accurately on the screen.

About the LaserWriter Utility and the Apple Printer Utility

Installing the LaserWriter 8 driver and printer software places the Apple Printer Utility program in your System Folder. The Apple Printer Utility program is designed to work with the LaserWriter 16/600 PS printer and succeeding releases of new printers.

To configure and work with previously released LaserWriter models, use the LaserWriter Utility that came with your printer. The LaserWriter Utility is also provided on your printer software disks. You can install the LaserWriter Utility on your computer's hard disk by using the Custom install option of the Installer.

Using the LaserWriter 8 Driver With LaserWriter Printers

=====

When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- The LaserWriter 8 driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text in some documents reflows or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.
- Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless the Unlimited Downloadable Fonts option is selected in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.
- Printing multiple documents with the Finder may not work if the documents have been created by different application programs.
- If you encounter a time-out (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

LaserWriter IIg and IIx

..TIL19003-LaserWriter_8-2-2-Read_Me_File_12-95.pdf

- When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter II^f/II^g printers to be more compatible with other Apple LaserWriter printers. If your legal-sized documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.
- Some form-printing applications cannot print forms using the Layout settings in the Page Setup dialog box.

LaserWriter II NT and II NTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.
- Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter Pro 600 and 630

- You cannot use Auto Select as the Paper Source in the Print dialog box to print envelopes from the optional envelope feeder.
- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter Pro 810

- With some graphics applications, bitmapped graphics will be reduced by 25% in size when printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box.
- When you create a PostScript file with a LaserWriter Pro 810 selected as the printer and send the file to a printer that uses PostScript Level 1, a PostScript error will occur.

LaserWriter 16/600 PS

- If Tray Switching is turned on and you have installed the optional 500-sheet feeder, and it contains the same paper size as the 250-sheet feeder, you should set up the driver to use the 500-sheet feeder as the preferred paper source for optimal printing performance. See Chapter 5 in the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

Using the LaserWriter 8 Driver With the Kanji System

=====

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.1.1 or later.

Using the LaserWriter 8 Driver With Application Programs

=====

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- With many applications, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.

Aldus Freehand 4.0

- Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- EPS files created using the LaserWriter 8 driver from within Freehand cannot be used in other programs.

Aldus PageMaker 5.0

- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if fonts Geneva, New York or Monaco are used.

CricketDraw III 2.01

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Manager 1.4

- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

Lotus 1-2-3 1.1

- Text printed with the Outline or Shadow text style appears filled with gray.

MacDraft 3.01 and earlier versions

- When you print using the Cut Marks option, a PostScript error results.

Microsoft PowerPoint 3.0

- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Painter 2.0

- When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0

- When printing using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

RagTime 3.2

- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 with the LaserWriter 8 printer driver; earlier versions will not work.

- You cannot print documents that use pen patterns.

Studio/8 & Studio/32

- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0

- When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.

How to Get Updated Printer Software

=====

If you need to update your printer software and you have an AppleLink account, you can obtain the latest versions of the LaserWriter 8 software from AppleLink.

Follow this path to locate the LaserWriter 8 software:

Apple Products
Apple Software Updates
Macintosh
Printing Software

The latest LaserWriter 8 software is also available from Apple's ftp site on the Internet. The path is:

/ftp/dts/mac/sys.soft/laserwriter.8.2/

Support Information Services

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Tech Info Library Article Number:19003



Tech Info Library

Macintosh Performa: Error Type 2012 (12/95)

Revised: 12/1/95
Security: Everyone

Macintosh Performa: Error Type 2012 (12/95)

Article Created: 1 December 1995

TOPIC -----

When I start up my Macintosh Performa computer, I get an error message with a number 2012. What should I do?

DISCUSSION -----

The 2012 error is generated by the Global Village software, and occurs if the Global Village software preferences are corrupted.

To resolve the issue, perform the following steps:

Step 1

Open your System Folder.

Step 2

Open your GlobalFax Personal folder.

Step 3

Throw away the following two files:

- Queue Temp
- GlobalFax Preferences

The Global Village software recreates the Queue Temp and GlobalFax Preferences files. However, certain preferences, such as your preferred local Zip Code and registration information, are lost. You may need to reconfigure this information, but you do not need to re-register your computer. Also, your address book will be left intact; there is no risk of loss of that data.

If these steps do not resolve this error, reinstall your system software. To do

..TIL19004-Macintosh_Performa-Error_Type_2012_12-95_(TA34786).pdf

this, start your computer using your Macintosh Performa CD and choose the "Restore All Software" option. This process is fully described in your Macintosh Performa User's Guide.

Support Information Services

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Tech Info Library Article Number:19004



Tech Info Library

Newton 2.0 OS: Handwriting Recognizers Explained (5/96)

Revised: 5/7/96
Security: Everyone

Newton 2.0 OS: Handwriting Recognizers Explained (5/96)

Article Created: 1 December 1995
Article Reviewed/Updated: 7 May 1996

TOPIC -----

In the release of Newton 2.0 OS, Apple included a new handwriting recognizer. This article explains when the new recognition technology is used, and how it differs from the previous handwriting recognition technology.

DISCUSSION -----

With the release of the Newton 2.0 OS, the Newton 1.x OS the paragraph recognizer is now the cursive recognizer in the Newton 2.0 OS. The cursive recognizer learns how to adapt to your handwriting, but the printed recognizer does not.

There are several word lists in the Newton OS. These include names, cities, states and others. The only word list that can be modified by the user is the personal word list and it is imported when upgrading to the Newton 2.0 OS. All other word lists are not imported.

The printed recognizer still searches dictionaries, but considers letter-by-letter possibilities as well treating non-words as less probable.

The basic difference is that the printed recognizer does not does not learn and the letters each need to be separated buy pen lifts.

The cursive recognizer has new algorithms which have been improved for better recognition and speed.

Article Change History:
07 May 1996 - Added additional information on printed recognizer.

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Tech Info Library Article Number:19005



Tech Info Library

CLW 12/600 PS: Toner Cartridges Don't Fit or Make Noise (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Toner Cartridges Don't Fit or Make Noise (10/96)

Article Created: 1 December 1995
Article Reviewed/Updated: 23 October 1996

TOPIC -----

I am installing the toner cartridges in a Color LaserWriter 12/600 PS printer, and one of cartridges does not slide all the way into the toner bay. This toner cartridge stops and leaves about 1/8-in. extending from the toner bay. This cartridge also does not make a click sound like the other cartridges. When I try to remove the cartridge the cartridge release lever makes a noise. One time, I was able to get the cartridge into the bay, but now the toner carousel is stuck between cartridges and the printer is making a grinding noise. How can I correct this?

DISCUSSION -----

The Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers have four toner cartridges: black, cyan, magenta, and yellow. Each cartridge is "keyed" so that you do not accidentally put the wrong cartridge into the wrong bay. For example, putting the yellow cartridge in the black cartridge bay.

These keys can be pulled out of place, so you need to be careful when installing and removing the cartridges. The Color LaserWriter 12/600 PS User's Manual says:

"gently rock toner back and forth" in a rolling motion, not side to side (page 22).

This chart shows you where the individual key plugs belong. The cartridges are viewed label side down, with an imprint number at the bottom:

Begin_Graphic

Black
() (0)

```
( )      ( )  
---imprint #---
```

```
      Cyan  
( )      ( )  
( )      (0)  
---imprint #---
```

```
      Magenta  
(0)      ( )  
( )      ( )  
---imprint #---
```

```
      Yellow  
( )      ( )  
(0)      ( )  
---imprint #---
```

End_Graphic

When a cartridge gets stuck in the printer, use the teal colored toner carousel knob by pressing it in and rotating it clockwise until the cartridge lines up in the open bay area (you can not rotate it the counter-clockwise). Slowly pull the toner release lever out as far as it goes.

IMPORTANT: Do not force the toner release lever, doing so can damage the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printer.

NOTE:

If the toner carousel does not rotate freely, service is required.

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS to discussion.

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Tech Info Library Article Number:19006



Tech Info Library

Apple MessagePad: Trouble-Shooting Power Related Issues (12/95)

Revised: 12/1/95
Security: Everyone

Apple MessagePad: Trouble-Shooting Power Related Issues (12/95)

Article Created: 1 December 1995

TOPIC -----

This article describes some trouble-shooting techniques you can use when your Apple MessagePad will not power on.

DISCUSSION -----

When your Apple MessagePad will not power on, first check your batteries. Make sure you have good batteries, typically this problem will happen after putting in fresh batteries or removing a PC-card.

Here are some steps you can try to get the Apple MessagePad to power on. Start with step one and continue following the steps until your Apple MessagePad powers on.

WARNING:

The earlier Apple MessagePad devices (the Original MessagePad, MessagePad 100, MessagePad 110) have all data internally in SRAM, so backup your Apple MessagePad BEFORE removing all the batteries in the MessagePad.

The MessagePad 120 has user data stored in "Flash RAM", which is persistent, and the system in SRAM which needs to have power. If you have to remove all power, will NOT lose your data. However, you will have to reset Date & Time, and a few other minor settings.

Step 1

Reset the Apple MessagePad

Step 2

Plug the Apple MessagePad into AC power if you have the Newton Power Adaptor, then reset the unit.

Step 3

Remove the batteries and reset the Apple MessagePad with AC power only.

Step 4

Remove all power, including the backup battery, for at least 15 minutes. Then replace the batteries and repeat step one through three.

If after following these steps, your Apple MessagePad still does not power on, you need to have your unit serviced.

Notes:

- Resetting is always a good thing to try first on the Apple MessagePad. It is like restarting a Macintosh computer (Newton PDA devices are always sleeping, not being shut down!).
- When you take out the backup battery, the little screw is set into the metal plate so you will not lose it.

Support Information Services

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Tech Info Library Article Number:19007



Tech Info Library

Newton 2.0 OS: Serial 9600 Package Explained (12/95)

Revised: 12/1/95
Security: Everyone

Newton 2.0 OS: Serial 9600 Package Explained (12/95)

=====

Article Created: 1 December 1995

TOPIC -----

When I tap on the Serial 9600 icon in the Newton 2.0 OS Extras Drawer, a message appears that reads: "Packages: Tapping this does nothing." I looked for a reference to the Serial 9600 package, but couldn't find anything. What does this package do?

DISCUSSION -----

The Serial 9600 package is only used when communicating with older Windows-based computers. The Serial 9600 package is a standard package that is loaded at the factory. It adds one item to the "Connection" popup (Windows - 9600). Allowing Windows users to reduce the serial speed to 9600 bps. This option was added because some older Windows-based computers cannot communicate at 38.4 Kbps.

Support Information Services

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Tech Info Library Article Number:19008



Tech Info Library

Macintosh Performa 5300CD: Specifications (4/97)

Revised: 5/1/97
Security: Everyone

Macintosh Performa 5300CD: Specifications (4/97)

Article Created: 01 December 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article gives the technical specifications for the Macintosh Performa 5300CD computer.

DISCUSSION -----

Processor

- PowerPC 603e processor running at 100 MHz

Memory

- 16 MB of RAM minimum, installed in one of the SIMM sockets
- Two 72-pin SIMM sockets; RAM can be expanded to 64 MB (80 nanoseconds)
- 4 MB read-only memory (ROM)
- 256K Level 2 cache
- 1 MB DRAM frame buffer on board (for video support)

Storage

- Apple SuperDrive 1.4 MB high-density floppy disk drive
- Internal 1.2 GB IDE hard disk drive (1/3-height)
- Internal SCSI 4x CD-ROM player

Video

- 15" flat square shadow mask CRT
- 0.28 mm dot pitch

- Resolutions:

Begin_Table

Resolution	Max. Bit Depth	Max. Number of Colors	Frequency (Hz)
-----	-----	-----	-----
640 x 480	16	32,768	67 (60 VGA)
800 x 600	8	256	60, 72
832 x 624*	8	256	75

*Does not support video input

End_Table

• Using the optional external video connector kit, video mirroring is supported on the following external displays:

Begin_Table

External Monitor	Supported resolutions		
	640 x 480	800 x 600	832 x 624
-----	-----	-----	-----
Macintosh 13" Color Display	X		
Apple Color Plus 14" Display	X		
Macintosh Color Display	X		
Apple Performa Plus Display	X		
Apple Multiple Scan 14 Display	X	X	
Apple Multiple Scan 15 Display	X	X	X
Apple Multiple Scan 17 Display	X	X	X
Apple Multiple Scan 20 Display	X	X	X
SVGA monitors (may need adapter)	X	X	

End_Table

Sound

- 16-bit monophonic sound input
- 16-bit stereophonic sound output
- Integrated microphone for monaural sound input
- Sound input port for microphone or line input (port accepts stereophonic input, but sound is combined into monophonic sound for play-through or recording)
- Two stereophonic sound output ports, level nominally 0.5 volts RMS into 39 ohms
- Internal stereo speakers, muted whenever a plug is inserted into either sound output port

Clock/calendar

- CMOS custom chip with battery

Keyboard

- Includes AppleDesign keyboard
- Supports all Apple Desktop Bus (ADB) keyboards

Expansion & Ports

- ADB port for keyboard, mouse, and other input devices using a low-speed, synchronous serial bus
- Two serial port for printers and other serial devices*
- SCSI port for a chain of up to seven SCSI devices
- LC-compatible 68030 processor-direct slot (96/114-pin)
- Communication slot with included internal Global Village 14.4 modem.
- Built-in video capture card providing real-time video display, video capture, and overlay (60-pin)
- Built-in internal TV tuner card
- Optional monitor-out port for video mirroring (using external video connector kit, purchased separately)

*Note: The Macintosh Performa 5300CD includes an internal Global Village 14.4 modem which disables one of the external serial ports. In order to use both serial ports, the internal modem must be removed.

Additional features

- All-in-one enclosure
- Tilt from -5 degrees to +15 degrees, swivel 360 degrees
- Support for optional infrared remote control
- Front panel push-button controls for volume
- Front panel stereo headphone jack
- Power on and off from keyboard and optional remote control

Environment

- Operating temperature: 10° C to 40° C (50° F to 104° F)
- Storage : -40° C to 47° C (-40° F to 116.6° F)
- Relative humidity: 5% to 95% noncondensing
- Altitude: Works below 3048 m (10,000 ft.)

Weight

- 21.15 kg (47 lbs)

Height and Weight

- Height: 17.5" (44.5 cm)
- Width: 15.1" (38.3 cm)
- Depth: 16.0" (40.6 cm)

Apple Desktop Bus power requirements

- Maximum current draw for all ADB devices is 500 milliamperes (mA)
- Mouse draws up to 10 mA
- Keyboard draws 25-80 mA (varies with model)

Note: The maximum number of ADB devices recommended in a daisy chain connected to the ADB port is three.

AC line input

- Line voltage: 100-240 volts AC, RMS, single phase, nominal
- Frequency: 50-60 hertz (Hz)
- Power consumption: 125 watts

System Software

- Mac OS 7.5.1 with Apple Guide, AppleScript, and PC Exchange included.

Software bundle

Begin_Table

- | | |
|-----------------------|-------------------------------------|
| • At Ease | • MacLinkPlus/Easy Open Translators |
| • ClarisWorks | • American Heritage Dictionary |
| • Quicken | • ClickArt Performa Collection |
| • Apple Video Player | • Megaphone for Performa |
| • MacGallery Clip Art | • Apple Remote Access |
| • Global Fax software | • HyperCard Player |
| • Adobe Acrobat | |

End_Table

CD bundle

- 1995 Grolier's Multimedia Encyclopedia
- Club KidSoft
- VideoShop
- 1995 TIME Alamanac
- 3D Atlas
- Family Doctor

Configurations and Ordering Information

Macintosh Performa 5300 computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, 1.2 GB IDE internal hard disk drive

- Video capture card
- TV tuner
- Built-in 15 inch display
- Global Village internal 14.4 Kbps fax/send modem
- Bundled third-party software and CDs
- AppleDesign Keyboard
- Order No. M4498LL/A

Article Change History:

- 28 Apr 1997 - Removed out dated on line references.
04 Dec 1995 - Added bundled software information.

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Tech Info Library Article Number:19009



Tech Info Library

AppleShare Client for Windows 1.0.2 Read Me File (4/97)

Revised: 4/3/97
Security: Everyone

AppleShare Client for Windows 1.0.2 Read Me File (4/97)

=====

Article Created: 1 December 1995
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article contains the ReadMe file from AppleShare Client for Windows v1.0.2.

DISCUSSION -----

This document provides late-breaking news about AppleShare Client for Windows. It contains the following sections:

For more information

Bugs fixed

- Duplicate AppleTalk node IDs
- Cisco router incompatibility
- Incorrect default group access privileges

Disk space requirements

Installing from a hard disk

Network adapter support

- Windows for Workgroups 3.11 and unsupported network adapters
- Windows 3.1 and 3.11 and unsupported network adapters

Changing the location of print spool files

Viewing Mac OS-formatted files from Windows and DOS applications

Text-file differences between Mac OS and Windows

Saving the battery charge on your portable computer

Supported printer drivers

Obtaining updated LaserWriter printer drivers

Useful network utilities

Obtaining information about Apple products for DOS and Windows

Removing the Farallon PhoneNET PC product

WinZip incompatibility

Using Open Transport

Documentation Errata

For more information

=====

Refer to the following documentation for more information:

"Getting Started With AppleShare Client for Windows"-- This printed manual describes how to install the AppleShare Client application.

AppleShare Client Installer Help--This file describes installing, uninstalling, and re-installing the AppleShare Client application. AppleShare Client Installer Help is available through the AppleShare Client Installer.

AppleShare Client Help--This file describes the features of the AppleShare Client application and how you use it to share network resources. AppleShare Client Help is available through the AppleShare Client application.

PROBLEMS.WRI--This file describes potential problems you might encounter while installing and using the AppleShare Client application, describes possible causes for those problems and provides suggested solutions to those problems. PROBLEMS.WRI is stored on the AppleShare Client for Windows Disk 1. During installation, it is copied into the C:\APPLE\A_SHARE directory by default.

USERINST.WRI--This file, located on the AppleShare Client for Windows Disk 2, describes how to install the AppleShare Client application. This file is provided to allow the system administrator to modify the installation instructions for site-specific purposes and distribute them to users. During installation, it is copied into the C:\APPLE\A_SHARE directory by default.

Bugs fixed

=====

This version 1.0.1 of AppleShare Client for Windows includes fixes for a few bugs found in version 1.0. They are as follows:

Duplicate AppleTalk node IDs

In version 1.0, particularly with large networks, it was possible for a client computer to assume an AppleTalk node identifier that was already being used. This problem could be represented by an apparent inability to see any nodes in a particular zone, or by a general slowdown in network performance.

Cisco router incompatibility

Cisco model 7000 routers are incompatible with AppleShare Client for Windows, version 1.0. These routers are supported by AppleShare Client for Windows, version 1.0.2, but may take longer to connect to a file server.

Incorrect default group access privileges

AppleShare Client for Windows, version 1.0.2, automatically sets the group access privileges of a newly created folder to those of the enclosing folder. In version 1.0, group privileges for such new folders were incorrectly set to None by default.

Disk space requirements

=====

To install and run AppleShare Client for Windows, you should have a minimum of 3.5 MB of free space on your hard disk. To use the Uninstall option of the Installer to remove AppleShare Client for Windows, you need to have 1.5 MB of free space.

Installing from a hard disk

=====

You can run the Installer from a local (non-network) hard disk drive to install or remove the AppleShare Client for Windows software. To do so, create a directory on your hard disk and copy all the files from both AppleShare Client for Windows floppy disks into that directory. Then, run the INSTALL.EXE program from that directory, and follow the installation instructions in the online help or the printed book Getting Started with AppleShare Client for Windows.

IMPORTANT! Do not run the INSTALL.EXE program from a connected AppleShare server to perform an upgrade.

Note that if a previous version of AppleShare Client for Windows is already installed on your computer, you will first have to remove the old version (by using the Uninstall option of the Installer) before installing the new version. After your computer has been restarted, run the INSTALL.EXE program again to install the new version.

Network adapter support

=====

Before installing AppleShare Client for Windows, you should determine whether you are using supported network adapter hardware. If your network adapter is not in the following list, you may still be able to use AppleShare Client for Windows. For more information, see the section "Windows for Workgroups 3.11 and Unsupported Network Adapters" or "Windows 3.1 and 3.11 and Unsupported Network Adapters," as appropriate for your version of Windows.

AE2MC	Artisoft AE-2 MCA Ethernet
APEXXLT	Apexx LocalTalk Parallel Interface (PCTALK)
APEXXE	Apexx EtherWave Parallel Interface (ECHAIN)
ASANTE	Asante 2000 series Ethernet (NE2000)
ASANTENW	Asante NWMLID Ethernet
ASANTEM	Asante 2100 series MCA Ethernet (NE2100)
EII	3Com EtherLink II Adapter (3C503)
EII16	3Com EtherLink II/16 Adapter (3C503)
EIII	3Com EtherLink III Adapter (3C5x9, 3C509)
EIIIIEISA	3Com EtherLink III (3C5x9, 3C579 EISA)
ELIIIIMC	3Com EtherLink III (3C529 MicroChannel)

EIIIIPCM	3Com EtherLink III PCMCIA (3C589)
ELMC	3Com EtherLink/MC (3C523 MicroChannel)
EWAVE	Farallon EtherWave PCMCIA
EXP16	Intel EtherExpress 16 Ethernet
EXPPRO	Intel EtherExpress PRO Adapter
LTALK	Dayna/Farallon PhoneNet PC3 LocalTalk
NE2000	Novell NE2000 or compatible Ethernet
SKYCARD	AnamNET LocalTalk PCMCIA
SMC8000	SMC EtherCard PLUS Elite16C,& 8216
SMC8003	SMC EtherCard PLUS Elite (8Bit)
SMC8100	SMC TokenCard EliteSeries 8100
SMC8100A	SMC TokenCard EliteSeries 8100A
SMC80PC	SMC EliteCard PCMCIA
XIRCOM	Xircom Pocket Ethernet
XIRCOM2	Xircom Pocket Ethernet II
XIRCOM3	Xircom Pocket Ethernet III
XIRCOMC	Xircom Creditcard Ethernet

Windows for Workgroups 3.11 and unsupported network adapters

If you are using Windows for Workgroups 3.11, use your Windows for Workgroups installation disks to install your network adapter. Once the network adapter is working in Windows, you can install the AppleShare Client for Windows software using the normal installation procedures.

Windows 3.1 and 3.11 and unsupported network adapters

If you are using Windows 3.11 or Windows 3.1 without Windows networking software, and you have an a vendor-supplied ODI driver for your unsupported network adapter, you may be able to use the procedures in this section to install AppleShare Client for Windows.

WARNING:

Installing your system for networking requires that you manually install the network adapter driver and edit your driver configuration file and your DOS startup batch files. Performing these procedures incorrectly can cause your computer to fail.

Before performing the following procedures, you should locate the software and documentation that came with your network adapter. As you perform the procedures, you will need information from the documentation.

1. If your network adapter is not already installed, install and test it, following the instructions in your network adapter documentation.
2. Restart your computer and run Windows.
3. Run the INSTALL.EXE program on the AppleShare Client for Windows Disk 1.
4. In the Installation Options dialog box, choose the Standard Installation option and click Continue.

The Select Adapter dialog box appears.

5. Select the line at the end of the adapter list that reads "[Other] Unlisted Adapter Option," and click OK.

The Network Adapter Settings dialog box appears.

- 6 Enter the configuration settings for your network adapter.

If possible, select values that match the adapter configuration settings you used in completing step 1 above. If no matching settings are displayed, simply continue with step 7. If you are already running ODI-based networking software, AppleShare Client for Windows Installer will use your existing network adapter configuration settings.

7. Complete the AppleShare Client for Windows installation.
8. Exit Windows and restart your computer as instructed by the Installer.

If your computer was not already running ODI-based networking software, continue with step 11.

9. If your computer was already running ODI-based networking software using your network adapter card, edit the file ATDRIVER.BAT (in the C:\APPLE\A_SHARE directory by default). Remove the word "REM" from the beginning of the last line so that it reads "C:\APPLE\A_SHARE\ODI.EXE".
10. Restart your computer.

AppleShare Client for Windows is completely installed and should run when you start Windows. Skip the rest of this procedure.

11. Use DOS to copy the ODI driver and any supporting files for your network adapter to your AppleShare Client for Windows directory. The default directory path is C:\APPLE\A_SHARE.
12. Edit the NET.CFG file in the C:\APPLE\A_SHARE directory.

First, replace all strings of four consecutive X characters (that is, XXXX) with the file name of your driver, excluding the .COM extension for the file.

Next, change any parameters that do not match your adapter configuration settings. Check the values for the following parameters:

- the interrupt request level, a one- or two-digit number preceded by INT #1
- the I/O port number, a 3-digit value such as 300, preceded by PORT #1
- the direct memory access channel, a value of 1 or 2 preceded by DMA
- the memory access address, a data address value such as D8000, preceded by MEM

You should consult your network adapter card documentation to determine if other parameters are required for your system.

Finally, save the NET.CFG file.

13. Edit the file ATDRIVER.BAT (in the C:\APPLE\A_SHARE directory by default). First, remove the word "REM" from the beginning of every line. Next, replace the string "XXXX" in the second line of the file with the filename of your network adapter driver. Be sure to include the filename extension.
14. Save the ATDRIVER.BAT file.
15. Restart your computer by turning it off and on.

AppleShare Client for Windows is completely installed and should run when you start Windows.

If you experience any problems after completing these instructions, see the file C:\APPLE\A_SHARE\PROBLEMS.WRI.

Changing the location of print spool files =====

You may want to change the location of the spool files used by the AppleShare Client to store PostScript print jobs until they can be sent to the networked LaserWriter printer. For example, you may want to store these files in their own directory or on a disk with more free space. Do not change the spool file location to a floppy disk or to a CD-ROM disc. It is recommended that you do not change the spool file location to a removable cartridge drive or a network drive unless you are certain that it will be available at all times.

To change the location of the spool files, you must edit the [ports] section of the WIN.INI file. There are three spool files, each on its own line, in the form C:\LWx.prn=. Edit each line to change the pathname of the file. Do not change the filename itself (LWx.prn). Also be sure to retain the equal sign (=) at the end of the line. Do not add a colon before the equal sign; it is a special identifier only for ports such as LPT1: and COM1:.

Viewing Mac OS-formatted files from Windows and DOS applications

=====

AppleShare Client for Windows hides Macintosh files that contain resource forks to prevent their being damaged by an incompatible application or operating system. See the section "Macintosh File Formats" in AppleShare Client Help for additional information.

AppleShare Client for Windows can be prevented from marking these files as hidden, thereby allowing access to the portions of these files that Windows applications might be able to use. To prevent hiding these files, add the following lines to the ASHARE.INI file (C:\WINDOWS\ASHARE.INI):

```
[FileRedir]
HIDERESFILES=FALSE
```

Warning:

Changing this value does not change the format of Macintosh files; you should use these files only with great care.

Text file differences between Mac OS and Windows

=====

A Mac OS-formatted text file contains a single character to indicate the end of a line of text. Windows text files contain two characters for this purpose. Some Windows-based text-viewing programs like NOTEPAD and WRITE require text files to contain the DOS/Windows two-character ASCII combination (line feed and carriage return) to indicate the end of a line. Consequently, an entire text file created on the Macintosh may appear as a single line of text to such applications.

If a text file that you create under Windows is opened and then saved (even as a text file) by a Mac OS-based application, the file will be formatted for the Mac OS. Many word processing applications can process multiple file formats. Other low-cost file- and text-translation utilities are readily available for converting text files and other types of documents.

Saving the battery charge on your portable computer

=====

Most portable computers minimize battery drain by running the hard disk only when necessary. To provide timely printing of your files, the AppleShare Client print spooler checks the disk every five seconds for pending print jobs. This level of disk activity can significantly shorten the battery charge time. If your computer is not printing to a network printer, you may want to disable the print spooling temporarily.

One easy way to disable the print spooler is to disconnect all assigned network printers. To disconnect printers, click the print services button in the main AppleShare Client window, select each printer, and click Disconnect.

Supported printer drivers
=====

Drivers for some of the newest LaserWriter printers may not work yet with AppleShare Client for Windows. If the driver for your printer does not seem to work, try setting printer driver options as described in the file PROBLEMS.WRI, or install a supported driver. The supported drivers should work for your printer, but may not support the advanced features of that printer.

Note that the Apple LaserWriter printer driver disks do not come with your AppleShare Client for Windows, Version 1.0.2, product if you purchased it as an upgrade. The installation process does not affect installed printer drivers. If you need to reinstall Apple printer drivers, you can use the driver disks that came with your printer or with AppleShare Client for Windows, Version 1.0.

Provided with Windows installation disks:

Apple LaserWriter
Apple LaserWriter Plus
Apple LaserWriter II NT
Apple LaserWriter II NTX

Drivers provided with AppleShare Client for Windows, Version 1.0:

Adobe Default Printer
Apple LaserWriter 16/600 PS
Apple LaserWriter Pro 600
Apple laserWriter Pro 630
Apple LaserWriter Select 320

Obtaining updated LaserWriter printer drivers
=====

Windows LaserWriter drivers available for the following printers can be obtained from the sources listed below.

LaserWriter Pro 810
LaserWriter Select 360
LaserWriter Select 310
Personal LaserWriter NTR
LaserWriter Pro 600/630

CompuServe

(go aplsup) Apple Support Forum:Browse Libraries:
DOS/Windows SW

Apple on the Internet

<<http://www.info.apple.com/swupdates>>
<<ftp://ftp.info.apple.com/>>

America Online

keyword: applecomputer

Useful network utilities
=====

The PC Exchange utility from Apple computer allows you to use your Macintosh computer to format floppy disks for PC computers and to store PC-formatted files on your floppy disks and SCSI hard drives. PC Exchange can be purchased at Apple dealers, and it is included for free in the Mac OS System 7.5.

The PC Net Exchange utility associates a PC icon with PC files stored on a Macintosh server. If you have PC Exchange installed, adding PC Net Exchange allows you to specify document-to-application and document- to-icon mapping based on the filename extension. PC Net Exchange can be downloaded for free from the following sources:

CompuServe

(go aplsup) Apple Support Forum:Net & Comm.SW

Apple FTP

Apple Software Updates (ftp.support.apple.com) in
the path

PUB:APPLE SW UPDATES:US:MACINTOSH:
NETWORKING & COMMUNICATIONS:APPLESHARE

Obtaining information about Apple products for DOS & Windows
=====

CompuServe:

(go apilton) Apple Tech Info Library

The Internet-Home Gopher Server:

Home Gopher Server->Computer Information->
Apple Tech Info Library

The Apple Support and Information Web Server

www.info.apple.com
Web URL http://www.info.apple.com
Web IP address 204.96.16.2

The Apple Support FTP site

Apple Software Updates
ftp.info.apple.com
IP address: 204.96.16.4)

Removing the Farallon PhoneNet PC product
=====

Farallon PhoneNET PC cannot be used on the same computer with AppleShare Client for Windows. To avoid disabling your existing network services, the AppleShare Client for Windows Installer currently will not run if PhoneNET PC is already installed. If you want to replace PhoneNET PC with AppleShare Client for Windows, you must first remove PhoneNET PC from the system. At the time this

Read Me file was written, no commonly available utility is known to successfully remove the entire PhoneNET PC. This section details how to remove the product so that you can install AppleShare Client for Windows. (You must perform steps 2 and 5 at a minimum to install AppleShare Client for Windows successfully.)

IMPORTANT:

Before you remove any network software, you should ensure that no important application depend on that software.

The files that you will change or delete are located in four directories:

C:\
C:\PHONENET
C:\WINDOWS
C:\WINDOWS\SYSTEM

To remove the PhoneNET PC product, perform the following steps:

1. Back up all PhoneNET PC files and all system files that contain references to them:

In the directory C:\
CONFIG.SYS
AUTOEXEC.BAT

In the directory C:\PHONENET
All files. Especially important are the NET.CFG file and the network adapter driver file. You can recognize the driver by the .COM extension of its filename. When you install AppleShare Client for Windows, you will re-install the driver, and you may need to enter the settings for your network adapter card that are contained in the NET.CFG file.

In the directory C:\WINDOWS
SYSTEM.INI
WIN.INI
PROGMAN.INI
DOSAPP.INI
PHONENET.INI
PHONENET.GRP
TIMBUKTU.BMP
TIMBUKTU.HLP

In the directory C:\WINDOWS\SYSTEM
ADSP.DLL
PNTPROTO.DLL
PNTDATA.DLL
FPRINT.386
PNTALK.DRV

2. Delete or "remark out" any command lines in the AUTOEXEC.BAT file that reference or call PhoneNET PC batch files. For example, if your system is configured to start PhoneNET PC when your system boots, your AUTOEXEC.BAT probably contains the following command line, which must be deleted:

```
CALL C:\PHONENET.BAT
```

You should delete or remark any command lines calling the following batch files and executables:

```
AARP.COM  
ABOTH.BAT  
AFILES.BAT  
APRINT.COM  
APRNT.BAT  
ASHARE.COM  
ASP_WS.COM  
ATALK.COM  
EXTEND.BAT  
PNTVDD.EXE
```

3. Edit the C:\CONFIG.SYS file.

In the command line beginning "LASTDRIVE=" set the drive letter to P.

4. Delete the C:\PHONENET directory and all the files in it. These files are as follows:

```
3C509.COM  
AARP.COM  
ABOTH.BAT  
AFILES.BAT  
ANET.EXE  
APRINT.COM  
APRNT.BAT  
ASHARE.COM  
ASP_WS.COM  
ATALK.COM  
ATNET.DLL  
CHOOSER.EXE  
CHOOSER.HLP  
COMPAT.COM  
DA.DTA  
DA.EXE  
DA.HLP  
DESPOOL.EXE  
EXTEND.BAT
```

LSL.COM
MAKECFG.EXE
MINSES.EXE
NET.CFG
PAP_WS.COM
PHONENET.BAT
PHONENET.WRI
PNSN
PNTVDD.EXE
QIAO.DLL
README.DOC
REDIR.EXE
ROUTE.COM
SETUP.LOG
SPOOL (a subdirectory)
TB2.EXE
TB2RECPB.DLL
TB2TOOLS.DLL
TIMBUKTU.WRI

5. Edit the C:\WINDOWS\SYSTEM.INI file.

In the [boot] section, change
"network.drv=pntalk.drv" to "network.drv="

In the [boot.description] section, change
"network.drv=PhoneNET PC" to
"network.drv=No Network Installed"

In the [386Enh] section, remove the following lines:
"device=fprint.386"
"PhoneNETMemoryPool=n" (where n is any number)

Remove the entire [fprint] section

6. Edit the C:\WINDOWS\WIN.INI file.

In the [windows] section, delete the following line:

"load=PNNOTIFY.EXE"

Delete the entire [MacintoshToPC] section
Delete the entire [PCToMacintosh] section

7. Edit the C:\WINDOWS\PROGMAN.INI file.

In the [Groups] section, find the following line:

"Group(n)=C:\WINDOWS\PHONENET.GRP"

Make a note of the group number (n).

In the [Settings] section, edit the line beginning "Order=" to delete the group number (n) that you noted.

In the [Groups] section, delete the Group line:
"Group(n)=C:\WINDOWS\PHONENET.GRP"

8. Edit the C:\WINDOWS\DOSAPP.INI file.

In the [DOS Applications] section, delete all lines that refer to the C:\PHONENET directory. These include the following:

```
C:\PHONENET\ANET.EXE=1
C:\PHONENET\ASHARE.COM=1
C:\PHONENET\APRINT.COM=1
```

9. From the C:\WINDOWS directory, delete the following files:

```
PHONENET.INI
PHONENET.GRP
TIMBUKTU.BMP
TIMBUKTU.HLP
```

10. From the C:\WINDOWS\SYSTEM directory, delete the following files:

```
ADSP.DLL
PNTPROTO.DLL
PNTDATA.DLL
FPRINT.386
PNTALK.DRV
```

WinZip incompatibility

=====

The shareware compression/decompression utility WinZip is not completely compatible with AppleShare Client for Windows, Version 1.0.2. The WinZip Open Archive dialog box includes a Network button for connecting to a network drive. If you use this button with AppleShare Client for Windows installed, you receive an error message. To connect to a network drive, use the network connection item in the Disk menu from the File Manager.

Using Open Transport

=====

If you are running Open Transport, you must use the latest version available to ensure compatibility with AppleShare Client for Windows.

Documentation errata

=====

Your documentation may refer to this product as AppleShare Client for Windows version 1.0.1. AppleShare Client for Windows 1.0.2 includes a recently developed change to ensure correct installation on systems running NetWare. This minor improvement is the only difference between the two versions.

Article Change History:

02 Apr 1997 - Updated Internet & online sw updates locations.

05 Dec 1995 - Updated Network adapter support list.

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Tech Info Library Article Number:19011



Tech Info Library

Password Security Control Panel (12/95)

Revised: 12/8/95
Security: Everyone

Password Security Control Panel (12/95)

=====

Article Created: 2 December 1995
Article Reviewed/Updated: 8 December 1995

TOPIC -----

I want to use the Password Security control panel, which came on my new Macintosh Powerbook, on my desktop Macintosh too. Can I do this?

DISCUSSION -----

The Password Security control panel is part of the PowerBook System 7.5.2, and only works on a limited number of Powerbook computers. Here is a list of PowerBook computers the Password Security control panel currently works with.

- PowerBook 190 series
- PowerBook Duo 2300 series
- PowerBook 5300 series

The components of System 7.5.2 do not function on earlier Macintosh systems. However, many of the new technologies included in System 7.5.2 will be rolled into future operating system updates.

Article Change History:
8 Dec 1995 - rewrote topic area for clarification of problem.

Support Information Services

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Tech Info Library Article Number:19012



Tech Info Library

Newton Backup Utility: Only Performs Backup with 1.3 OS (12/95)

Revised: 12/4/95
Security: Everyone

Newton Backup Utility: Only Performs Backup with 1.3 OS (12/95)

=====

Article Created: 4 December 1995

TOPIC -----

I downloaded the Newton Backup Utility from an online service, and I am having problems using it with my Apple MessagePad 100 with Newton 1.3x OS. When I establish a connection with my Macintosh computer, Newton Backup Utility only allows me to backup my Newton. Once the backup is performed, the connection is dropped. When I establish the connection again, I still only have the option to backup my Apple MessagePad. Why?

DISCUSSION -----

The Newton Backup Utility is designed for use with the Newton 2.0 OS. Using the Newton 1.3 OS on an original MessagePad, the MessagePad 100, MessagePad 110, or MessagePad 120, only the ability to backup your data is allowed. The only reason to use the Newton Backup Utility with the Newton 1.3 OS is if you are upgrading an Apple MessagePad 120 to Newton 2.0 OS. When upgrading, you need to use the Newton Backup Utility to backup your Apple MessagePad, then once the Newton 2.0 OS upgrade is performed, restore your data using the Newton Backup Utility. You only get the additional options of installing packages, and restoring your Apple MessagePad with the Newton 2.0 OS installed.

Support Information Services

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Tech Info Library Article Number:19014



Tech Info Library

Newton 2.0 OS: Package Activation Issues (2/96)

Revised: 2/5/96
Security: Everyone

Newton 2.0 OS: Package Activation Issues (2/96)

=====

Article Created: 4 December 1995
Article Reviewed/Updated: 5 February 1996

TOPIC -----

This article discusses package activation issues with the Newton 2.0 OS.

DISCUSSION -----

Getting Rid Of Undeleteable Apps
=====

Here's a tip to help you deal with incompatible applications - even ones that mess the system up so badly you cannot delete them.

The procedure is quite simple. The first section should be enough to get you going. The rest is for people who want more details.

Previously, if you had a package on the internal store that caused trouble at startup your only option was to completely erase the internal store (reset with the power switch down). Similarly, if you had a package on a card that interfered with mounting the card you had to force the card to be erased (insert the card with Prefs open).

In Newton 2.0 OS it is possible to suppress package activation. This allows the unit to start up, or a card to be inserted without running any of the packages' code. This gives you a chance to delete the problem package instead of having to completely erase the store it is on. Macintosh users will find it reminiscent of starting up with the shift key down to keep extensions from loading.

Suppressing Package Activation on Internal Store
=====

To suppress package activation on the internal store:

Step 1

Reset the Apple MessagePad

Step 2

Turn the Apple MessagePad over and hold the pen down in the left 1/4-in. of the screen. Keep the pen down until you see a message asking if you want to activate the packages on the internal store.

Step 3

Select "No."

When you open the extras drawer you will see X's over some of the icons. This indicates those packages are not active. This procedure does not affect the packages that are built into the ROM. Only the packages you have loaded, or that were pre-loaded onto the unit at the factory can be disabled in this way.

The only "trick" is that you can put the pen down too far to the left - resting against the raised edge of the plastic case. There is a small "dead" area at the border of the screen and the case that you need to avoid.

Note:

If you are using a PIN number, you should wait until the PIN number box appears on the screen before pressing down on the left side of the screen.

The message comes up before the splash screen disappears, so if the splash screen disappears, you need to try again - holding the pen a little further in from the edge.

Activating a Package Once It Has Been Deactivated

=====

Tapping on an icon with an X causes the package to be activated. Activate them one at a time until you identify the package giving you trouble. For example, if the symptom is the Names application will not open anymore, tap on an icon with an X, and once the X disappears see if the Names application works.

If at this point you can delete the icon, do so. If it messes up the extras drawer, you'll have to reset again suppressing package activation. This time you should just delete the icon without first activating it.

When searching for the offending apps remember to look in the extensions folder (or show "All Icons"). In 1.X systems there were some packages that did not have a corresponding icon in the extras drawer. In 2.0, every package has at least one icon.

Storage Cards

=====

The same procedure can be applied to cards. Insert the card. After you lock it, hold the pen down near the left edge of the screen. You will be asked if you want to activate the packages on the card.

Resetting Orientation and Backdrop Application - A More Advanced Trick =====

If you reset the unit and hold down the pen near the top edge of the screen (instead of the left edge), in addition to suppressing package activation, the unit's orientation and backdrop app will be reset to their defaults - portrait orientation and Notepad as backdrop.

This is useful if you have some application that seems to be working fine - until you make it the backdrop.

The top edge only has these additional features when you reset the unit. When inserting storage cards, you can use the top or left edge to suppress package activation.

Other Times Icons are X'd Out =====

An icon with an X indicates its package is inactive. Even if you don't suppress package loading, there are other circumstances when you might run into inactive packages. The most common would be if you have two copies of the package installed. For example, package "foo" is on the internal store and a card containing "foo" is inserted. The icon for "foo" on the card will have X over it.

There might be other odd circumstances where you briefly see an X. For example, moving a package between stores causes it to be deactivated, moved, then reactivated. We try not to show the X in this situation because the package is only temporarily inactive, but in some circumstances the X is briefly visible.

If you see an inactive icon, go ahead and tap on it. The system will attempt to activate and launch it. If there is a problem you will get an error message. The message should be an informative one like: "The package "foo" (on store "my card") was not activated because a package by the same name (on store "internal") is already in use."

Package Freezing =====

If you do not know what frozen packages are, you probably will soon.

** There are a variety of third party developers providing utilities that turn on this latent feature of the Extras Drawer.**

Frozen packages are inactive packages. The difference is that they are purposely made inactive by the user and stay inactive until the user taps on them. Suppressing package activation as described above only deactivates packages

temporarily. If you reset the unit (or reinsert the card), the icons that were X'd out won't be anymore.

Activating packages uses up some of the system's working memory and takes time. Cards with a large number of packages can take a long time to mount and can cause you to run low on memory.

A way to work around this is to selectively "Freeze" (deactivate) the packages you don't use very often. You freeze a package or group of packages by selecting them in the Extras Drawer and choosing freeze from the action button. Its icon will turn into a snowflake indicating that it's frozen. You thaw (activate) a frozen package by simply tapping on it.

The package freezing feature in the Extras Drawer is not available by default. You need to get a utility package to turn it on.

Article Change History:

05 Feb 1996 - Reviewed and reclassified.

15 Dec 1995- Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:19015



Tech Info Library

Multiple Scan 1705 Display: Use Included Cable (12/95)

Revised: 12/5/95
Security: Everyone

Multiple Scan 1705 Display: Use Included Cable (12/95)

=====

Article Created: 4 December 1995

TOPIC -----

I am replacing an existing monitor with the Apple Multiple Scan 1705 Display. I left the cable from my previous monitor connected to my Macintosh computer, and used the included adapter to connect the other end of the existing cable to the Multiple Scan 1705 Display. When I power on the computer and display, the power light on the display remains amber, and I do not get any video. What is happening?

DISCUSSION -----

The Multiple Scan 1705 Display uses a different connector than previous monitors. You must use the cable that shipped with the Multiple Scan 1705 Display. The adapter that shipped with the display is required for only for PC-compatible computers. The adapter should not be used with any Macintosh cable.

Connecting to a Macintosh Computer

=====

To connect the Multiple Scan 1705 Display to the built-in video on a Macintosh computer, connect one end of the included video cable into your Macintosh and the other end into the monitor. Do NOT use the PC adapter.

Connecting to a PC-Compatible Computer

=====

To connect the Multiple Scan 1705 Display to a PC-compatible computer, connect one end of the included video cable into the display. Next, connect the PC adapter to your computer's video card. Then connect the other end of the included cable into the PC adapter.

Support Information Services

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Tech Info Library Article Number:19016



Tech Info Library

At Ease: Trouble When Sharing a Floppy Disk? (12/95)

Revised: 12/4/95
Security: Everyone

At Ease: Trouble When Sharing a Floppy Disk? (12/95)

=====

Article Created: 1 December 1995

TOPIC -----

I have my At Ease lab set up so two students store their documents on one floppy disk.

The problem I am encountering is the first student will access his documents on the disk, eject it and hand it to the second student to access his documents on another workstation. When the first student gets the disk back, the computer does not recognize the disk. It displays the message: "Please insert the Disk named 'Disk Name'" even though that is the disk that is in the floppy drive. What is wrong?

DISCUSSION -----

The problem you are encountering is not related to At Ease, but the way the Finder handles floppy disk operations.

When a disk is ejected from your computer, you will notice an unhighlighted disk image remains on the desktop. This is the Finder retaining the disk's contents in RAM. When the disk is inserted into another computer, information about the floppy disk called the checksum value is changed. When the disk is returned to the first computer, the operating system, does not recognize it as being the disk stored in RAM because of the different checksum value.

If you drag the disk image to the Trash before taking it to the second computer, the disk information is not saved in RAM, the unhighlighted image does not stay on the desktop, and when you return the disk to the first computer it mounts and is recognized. The problem with this workaround is if a file on the disk is still in use, you cannot drag the disk to the Trash.

At Ease handles ejected disks as if they are ejected not trashed and thus retains the disk information causing the problem you are experiencing with students sharing the same disk. There are two options for you to resolve this.

1. The best solution is to provide each student with their own floppy disk. If two students share disks, they both have access to the other student's work, which is usually not desirable anyway.

2. If student's accessing each other's work is not a concern, and you have hard drive storage space, setup At Ease so the students save to the Shared Folder on the hard drive or At Ease disk and avoid using floppies entirely. Follow these steps to setup a Shared Folder:

Step 1

Open the At Ease Setup program.

Step 2

Double-click the Setup you want to modify.

Step 3

Click the Locations icon (it looks like a floppy disk) to access the Locations panel.

Step 4

In the "Store user documents on:" section, click to select "Setup location volume"

Click to select "Allow access to shared folder"

Step 5

Click "OK".

Support Information Services

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Tech Info Library Article Number:19017



Tech Info Library

HyperCard 2.3: Specifying Operands for Picture XCMD (12/95)

Revised: 12/5/95
Security: Everyone

HyperCard 2.3: Specifying Operands for Picture XCMD (12/95)

=====

Article Created: 4 December 1995
Article Reviewed/Updated: 5 December 1995

TOPIC -----

In HyperCard 2.3.x the Picture XCMD will not work correctly if the "clipboard" option is used. For example, in the script:

```
picture "Test", clipboard, roundrect
```

In HyperCard versions previous to 2.3, the above command works fine. When the above command is used in HyperCard 2.3 and 2.3.3, the program opens a dialog asking you to find the file called "Test". It seems as though the word "clipboard" is not being recognized correctly.

DISCUSSION -----

In HyperCard 2.3, "clipboard" (command to get/set the text contents of the clipboard) was added to HyperTalk. You now need to quote the word "clipboard" when you pass it to the Picture XCMD.

In versions of HyperCard prior to 2.3, "clipboard" did not have a special meaning, so when the parser saw an unquoted "clipboard" that was not already used as a variable, it passed the string "clipboard" to the XCMD.

You should quote "roundrect", also. In general, it is good practice not to rely on unquoted literals, if possible.

Article Change History:
05 Dec 1995 - Updated title.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19018



Tech Info Library

AppleVision 1710AV: Proper Setup for Microphone (12/95)

Revised: 12/5/95
Security: Everyone

AppleVision 1710AV: Proper Setup for Microphone (12/95)

=====

Article Created: 05 December 1995

TOPIC -----

How can I properly set up the microphone on my AppleVision 1710AV Display?

DISCUSSION -----

To verify that the AppleVision 1710AV Display is properly set up, follow these steps:

Step 1

Make sure that the audio cables are plugged into the correct places on the computer. An easy way to check this is to verify that the icon on the cable matches the icon on the computer's port.

Step 2

Use Macintosh Guide to properly set up the software. The setup varies depending on which computer the display is connected to.

Step 3

Set the microphone to the highest quality sample rate (44 kHz) and bit depth (16-bit).

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19019



Tech Info Library

Macintosh: Free Space Available on Floppy Disks (12/95)

Revised: 12/5/95
Security: Everyone

Macintosh: Free Space Available on Floppy Disks (12/95)

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Article Created: 05 December 1995

TOPIC -----

I have two floppy disks of the same size, but each one has a different amount of free space available even after initializing them. What is causing them to be different?

DISCUSSION -----

Beginning with system software version 7.0, the Disk Initialization Manager tries to initialize a disk even if it contains some bad blocks; this feature is called bad block sparing.

Without bad block sparing, the Disk Initialization Manager considers a disk unusable even if just one block is bad. With bad block sparing, however, the Disk Initialization Manager attempts to work around the bad block by removing it from the pool of available free blocks. This prevents the File Manager from allocating the block to a file.

The bad block sparing occurs during the disk-zeroing phase of disk initialization - with the only visible sign of the sparing process being an additional dialog box containing the message "Re-verifying Disk."

Except in cases involving critical blocks on a disk, the Disk Initialization Manager can usually initialize a disk that would previously have been rejected as invalid. However, if more than 25 percent of the disk is found to contain bad blocks, if the I/O errors appear to be due to hardware failure rather than media failure, or if certain critical sectors are bad then the disk initialization fails just as it would have without the bad block sparing.

Critical sectors of a disk that must be good even on a spared disk include the boot blocks, the master and alternate master directory blocks, the volume bitmap, and the initial extents for the catalog and extents B-Tree files of the volume.

Note: This information is taken from Inside Macintosh: Files.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19020



Tech Info Library

LaserWriter 16/600 PS Fax: Windows 95 Compatibility (6/96)

Revised: 9/4/96
Security: Everyone

LaserWriter 16/600 PS Fax: Windows 95 Compatibility (6/96)

=====
Article Created: 6 December 1995
Article Reviewed/Updated: 26 June 1996

TOPIC -----

I am trying to send a fax with my LaserWriter 16/600 PS fax printer using Microsoft Windows 95. The Windows driver I downloaded from online services does not work. Is the driver compatible with the printers fax feature?

DISCUSSION -----

Apple does not provide a PostScript fax compatible driver for Microsoft Windows 95. There may be some third-party options available, but we do not know of any. In order to use the fax capabilities of the LaserWriter 16/600 PS printer, you must use a PC-compatible running Windows 3.1 upon which to install the Windows PS Fax software, or a Macintosh computer and the LaserWriter 8.2.3f driver.

Article Change History:
04 Sep 1996 - Updated Windows information.
26 Jun 1996 - Included updated information on Windows driver.

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Tech Info Library Article Number:19021



Tech Info Library

Workgroup Server Read Me (12/95)

Revised: 12/6/95
Security: Everyone

Workgroup Server Read Me (12/95)

=====

Article Created: 6 December 1995

TOPIC -----

This article is the Workgroup Server ReadMe.

DISCUSSION -----

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=====

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Windows Clients on AppleShare Servers

IMPORTANT: Be sure to review this entire document. It contains important information about your Workgroup Server and system software. You may want to print this document for reference.

About Your System and Server Software

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About System Software Version 7.5.1

- Your Workgroup Server contains all improvements and new features for system software version 7.5 plus all enhancements and features included in the System 7.5 Update, version 1.0, and the Network Software Installer (NSI) version 1.4.5.

IMPORTANT: Be sure to check the Fixes folder, in the Extras folder, on the Workgroup Server Software CD-ROM disc for any late-breaking software fixes that you might want to add to your system.

- MacTCP network connection software is included with System 7.5 and users may ask you for help with it. The MacTCP control panel provides a way for users to connect to networks that use the TCP/IP protocol, such as the Internet. However, after setting up the MacTCP control panel, users still need one or more network applications to use TCP/IP. Example network applications include client software for the World Wide Web, terminal emulators, and Email programs. For information on MacTCP and TCP/IP in general, see the MacTCP Administrator's Guide version 2.0 in the Electronic Library folder on your Workgroup Server Software CD-ROM disc.

System Software Exceptions for Workgroup Servers

- Starting with System 7.5 Update 1.0, the Power On key can also function as a Power Off key—but not for Workgroup Servers. To prevent accidental disruption of network services, this functionality has been removed.
- Although the CPU Energy Saver control panel is included in the Apple Extras folder on the server's hard disk, it is not recommended for use with servers. Moreover, this control panel only works with Workgroup Servers 8150 (80 MHz) and 9150 (80 MHz).

Workgroup Server Warnings

- Do not turn on virtual memory

The virtual memory option in the Memory control panel does not improve the performance of server applications. Some server applications, such as the Apple Internet Router, can't run with virtual memory turned on. To improve performance, install additional memory. The Technical Information booklet for your server describes how much memory can be added.

- About installing more memory (DRAM SIMMS)

As you add more server applications, control panels, extensions, fonts, etc., you may want to add memory to the server. To avoid damage to your server, Apple Computer recommends that only an Apple-authorized dealer or service provider install additional memory packages, called DRAM SIMMS. The SIMMS must be the correct type for your server, added in same-size pairs, and installed in paired slots. Incorrect installation of DRAM SIMMS can result in errors, unpredictable results, and damage to your equipment and data.

Re-creating a Factory-Installed Startup Disk

If your server's startup disk should become damaged, see the instructions for re-creating a factory-installed startup disk in the "About This CD" document on the Workgroup Server Software CD-ROM disc. If you need to re-install AppleShare after re-creating your startup disk, see the AppleShare Installation and Upgrade Guide.

NOTE: If you want to use the server's startup disk with Apple RAID Software, see the instructions for reformatting the disk in the Apple RAID Software Administrator's Guide.

About PowerTalk and QuickDraw GX

These optional programs are not recommended for use on a server, but if you want to use them, you can find the appropriate Installers in the System Software Installers folder on the Workgroup Server Software CD-ROM disc.

Order of Installing and Starting Up Server Software

Check Before Installing

If you plan to install server application software such as AppleShare, AppleSearch, or Apple Remote Access, the order in which you install and start these programs is important. Be sure to review the documentation for all the server application programs that you plan to use before installing and running them. Note that the order in which you install is dependent on whether you are using the server for file, print, or database applications. For example, AppleSearch uses the AppleShare File Server to transmit its reports, so AppleShare must start up before AppleSearch.

Use the Correct Versions

Be sure to use these (or later) versions of server software with your Workgroup

Server:

- AppleShare File and Print Server 4.1
- AppleTalk Internet Router 3.0.1
- Apple Remote Access 2.0.1
- AppleSearch Server 1.5

Tips

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Using the Auto Power On/Off Control Panel

Starting with System 7.5, you can use the Auto Power On/Off control panel to set the WS 8150 and WS 9150 to automatically restart after a power failure. You can also use this control panel to set a time when the server automatically shuts down and starts up. Due to its hardware design, the WS 6150 cannot use this feature.

Using the Energy Saver Control Panel

You can use the Energy Saver Control Panel to set how long the server can remain idle before the system dims the monitor screen.

Using the Shutdown Items Folder

The Shutdown Items folder in the System Folder allows you to specify scripts or programs that automatically run during shutdown. This folder works much like the Startup Items folder. To specify an item to run during shutdown, put the item into the Shutdown Items folder and then choose Shut Down or Restart from the Special menu. (Do not choose Shut Down from the Apple menu. It will not launch items in the Shutdown Items folder.)

Reconnecting to a Server

When connection to a server is unexpectedly lost, the server's icon remains dimmed on the screen. If you double-click the dimmed icon or choose the server from the Recent Servers item in the Apple () menu, you see a message telling you that the disk could not be opened because you do not have the required access privileges. Before you can reconnect to the server, you must close any open files, and then drag the server's dimmed icon to the Trash. If you need to save your work on an open file, use Save As to save it on a different disk.

Cleaning a DAT Drive

The Workgroup Server DDS-2 DAT drive option is approved for use with the Apple cleaning cassette P/N 654-0002. This cleaning tape is the "dry" type cleaner. Don't use the "wet," alcohol style cleaning tapes. Note that, in general, cleaning tapes that work with DDS-2 drives also work with (the original) DDS drives, but DDS cleaning tapes should not be used with newer DDS-2 drives.

Troubleshooting

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IMPORTANT: Be sure to review the Troubleshooting chapter of your Workgroup Server Administrator's Guide.

Problems Starting Up on a Network

Sometimes during heavy network traffic a server may not start up correctly. You may hear a prolonged "beep" during this process. Try disconnecting the Ethernet cable before startup, and reconnecting it after startup. You'll also need to switch back to EtherTalk in the Network control panel.

Problems Rebuilding the Desktop

Some Apple and non-Apple extensions may interfere when you need to rebuild the server desktop. To prevent problems, turn off all extensions except Macintosh Easy Open before you rebuild. After rebuilding, turn the extensions you want to use back on.

To rebuild the desktop, follow these steps:

- 1) First, use the Extensions Manager to save a record of extensions that you use.
 - Open the Extensions Manager control panel.
 - Open the Sets pop-up menu, and choose Save Set.
 - When the Save Set dialog box opens, type a name (for example, 'My Extensions').
- 2) Turn off current extensions by choosing All Off in the Sets pop-up menu.
- 3) Turn on Macintosh Easy Open by clicking to put a checkmark beside it.
- 4) Restart your computer while holding down the Command and Option keys.
- 5) When you see the dialog box alerting you to the loss of your Info window comments, release the keys and click OK.
- 6) When the desktop is rebuilt, open the Apple menu and choose Control Panels.
- 7) Open the Extensions Manager control panel.
- 8) Turn extensions back on by selecting the set you saved in step 1.
- 9) To activate your extensions, restart the computer .

QuarkXPress Problems

To use QuarkXPress with System 7.5 on a Workgroup Server, you must upgrade to QuarkXPress version 3.3.1 or later. For upgrade information contact Quark, Inc., at 1-800-788-7835.

ISO 9660 and High Sierra CD-ROM Disc Problems

Discs in the ISO 9660 and High Sierra formats have version numbers attached to filenames. Some application programs need these version numbers in order to use the files. If you have problems using an ISO 9660 or High Sierra CD-ROM with a program, follow the instructions below to make the version numbers available to the program:

- 1) Make sure the application program you want to use with the CD-ROM is active.
- 2) Drag the CD-ROM icon to the Trash to eject the disc.
- 3) Hold down the Option key while you reinsert the disc. Keep holding down the Option key until the disc is in the player. The program should now be able to locate the filenames on the CD-ROM disc.

If You Need to De-Install PowerTalk

Follow the steps below if you need to remove PowerTalk software from the server.

- 1) Restart with all extensions off by holding down the Shift key during startup.
- 2) Open the System Folder and drag the PowerTalk Data folder to the Trash.
- 3) Open the Apple Menu Items folder, in the System Folder, and drag the Mail and Catalogs folder to the Trash.
- 4) Open the Control Panels folder and drag PowerTalk Setup to the Trash.
- 5) Open the Extensions folder in the System Folder and drag these to the Trash:
 - AppleTalk Service (the PowerTalk extension)
 - Catalogs Extension
 - Mailbox Extension
 - PowerTalk Extension
 - PowerTalk Guide (Apple Guide document)
 - PowerTalk Manager (system extension)
- 6) Open the Preferences folder, in the System Folder, and drag these to the Trash:
 - AppleMail Letterheads (folder)
 - PowerTalk Setup Pref (PowerTalk Manager preferences document)
 - PowerTalk Startup Pref (PowerTalk Manager preferences document)
- 7) Close the System Folder.
- 8) Drag the PowerTalk folder, in the Apple Extras folder, to the Trash.
- 9) Choose Empty Trash from the Special menu.
- 10) To complete the de-installation, restart the server.

About Macintosh PC Exchange and DOS-Formatted Media

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Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with PC Exchange and should not be used while PC Exchange is installed. Version 2.0 of PC Exchange contains an easier and more intuitive method for accessing DOS and Apple II ProDOS disks on a Macintosh.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option.

ClarisWorks Version 1.0v2 or Earlier

Some versions of ClarisWorks cannot read or write files on DOS-format floppy disks. To open a PC document in ClarisWorks, you must first copy the document to your computer's hard disk. Always save ClarisWorks documents on your Macintosh hard disk. You can then copy the documents to a DOS-format floppy disk. Contact Claris to obtain version 1.0v3 or later of ClarisWorks.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other MS-DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Macintosh, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With PC-Format Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the Macintosh-, DOS-, or ProDOS-format partitions as individual logical drives on the Macintosh desktop. If the disk contains both Macintosh and DOS-format partitions, however, PC Exchange will only recognize the Macintosh partition. In addition, PC Exchange will only recognize ProDOS-format partitions on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Macintosh-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Macintosh, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working With DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize SCSI removable media devices, you must turn on the device and eject any cartridges before you turn on your Macintosh system.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply re-insert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on an

PC-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. Do not use the MS-DOS Fdisk command to initialize a removable media cartridge. In addition, you should use the MS-DOS Format command to format the disk before you copy DOS files to a newly initialized removable media cartridge on a PC.

When you initialize a removable media cartridge on an PC-compatible computer, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working With DOS-Format SCSI Hard Disk Drives

In order for PC Exchange to recognize SCSI hard disk drives, you must turn on the drive before you turn on your Macintosh.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your Macintosh. PC Exchange will install its own device driver for that SCSI device.

For initializing an external SCSI hard disk on a PC-compatible computer, use the MS-DOS Fdisk command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. Use the MS-DOS Format command to format the disk before you copy DOS files to a new SCSI hard disk on a PC.

Macintosh PC Exchange Tips and Problems

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- A "Sad Mac" error may occur on your Macintosh if a removable media cartridge is left in the drive during startup. To keep this problem from occurring, manually eject removable media cartridges from the drive before you turn on your Macintosh.
 - PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

Windows Clients on AppleShare Servers

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Mac OS and DOS/Windows systems store and maintain files differently. Use caution when sharing files on an AppleShare server accessible to DOS/Windows users. Follow these basic rules to avoid problems:

- Store your Mac OS files, especially applications, in different folders than your DOS/Windows files.

Opening, moving, copying, or duplicating Macintosh files on the server can damage those files. Separating the two types of files, especially applications (which can only work on one system) minimizes accidental damage. A DOS/Windows client can easily determine where a file originated.

- Set access privileges to prevent unauthorized use.

An innocent mistake by a DOS/Windows user, such as accidentally placing a DOS/Windows folder in a Mac OS folder, can cause damage.

- Inform users about how to avoid problems.

If your Mac OS and DOS/Windows clients need to share files, tell them to copy those files to their own system, modify them if necessary, and save them to the server under another name. They should not change the original file. Many files can be opened by applications other than those that were used to create them; once changed by a different application, a file could be permanently damaged.

- Use the more limited DOS/Windows conventions for naming shared files whenever possible.

The DOS/Windows file system supports filenames of eight or less characters with an optional extension consisting of a period and three or less characters. Most special characters (spaces, asterisks, brackets, and so forth) are not allowed; letter case is insignificant.

The server processes names of files that do not conform to DOS/Windows naming conventions so that DOS/Windows clients can view them. For your convenience, clicking the filename in an Info window for the file displays the filename that the DOS/Windows clients will see. (To display the Info window, select the file in the Finder and choose Get Info from the File menu.) Names that result from this processing begin with an exclamation mark (!).

Support Information Services

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Tech Info Library Article Number:19022



Tech Info Library

Workgroup Server ReadMe Additions (1/96)

Revised: 1/5/96
Security: Everyone

Workgroup Server ReadMe Additions (1/96)

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Article Created: 6 December 1995
Article Reviewed/Updated: 5 January 1996

TOPIC -----

This article is the WS Read Me Additions file.

DISCUSSION -----

About These Additions

This document contains some last minute information that didn't make it into the Workgroup Server Read Me. You may want to print this document for future reference.

Adobe Acrobat Low Memory Problems

The Adobe Acrobat Reader 2.0.1 needs a bit more than 3 megabytes of memory to work properly. If there is not enough memory available, the program asks that you reinstall Adobe Type Manager (ATM). This is usually not necessary. Instead, free up memory by quitting applications and try opening Acrobat Reader again. To avoid low memory problems, consider having an Apple-authorized service provider install more memory in your server.

NOTE: If you agree to the terms of the Electronic End User License Agreement (in the Adobe Acrobat 2.0 folder), you can distribute Adobe Acrobat Reader 2.0.1 to as many clients as you like. Doing this allows those client systems to read files in the Portable Document Format (pdf).

Installing Adobe Acrobat from the Workgroup Server Software CD-ROM

The Acrobat Installer is in the Adobe Installers folder in the Electronic Library folder on the Workgroup Server Software CD-ROM disc. During installation, the Adobe Acrobat Installer tries to put the ATM Font Database file in the startup disk's System Folder. Thus, if you start up from the Workgroup Server Software CD-ROM and then try to install Acrobat on your hard

disk, the installation will fail (Error -44). If you want to install Acrobat on the server's internal disk, startup from the hard disk. After installation you can move the application to a more convenient location.

Problems Ejecting a CD-ROM Disc

The Workgroup Server 6150/66, 8150/110 and 9150/120 use the new AppleCD 600i drive. This CD-ROM drive offers twice the performance of previous models. It also uses new CD-ROM driver software.

When the Workgroup Server starts up, if a CD-ROM disc with a startup System Folder is inserted in the drive, the server uses the driver software on the disc rather than its own driver. As of March 1995, very few startup CD-ROM discs contain driver software that is completely compatible with the AppleCD 600i drive.

If the server starts up using older CD-ROM drive software, one known problem occurs: the server may not be able to eject the CD-ROM disc as expected. To eject the disc, restart the server and push the open/close button on the CD-ROM drive as soon as possible.

To avoid this problem, insert a CD-ROM disc AFTER the server starts up.

Retrospect Remote Memory Problems

Workgroup Servers that include a DAT drive also include Retrospect Remote 2.1Ai backup software.

The Retrospect 2.1B Updater in the Fixes Folder on the Workgroup Server Software CD-ROM disc solves a problem in Retrospect 2.1Ai that occurs in the following rare circumstance: When your startup volume has between 2 and 3 gigabytes of available space, Retrospect reports that it does not have enough free hard disk space to launch.

Note: This problem in Retrospect 2.1A only occurs with a startup volume. Retrospect 2.1A has no problem backing up other volumes that are larger than 2 gigabytes.

If you encounter this problem with Retrospect 2.1A, use the 2.1B Updater in the Fixes Folder on the Workgroup Server Software CD-ROM disc.

Article Change History:

05 Jan 1996 - Corrected typographical error.

Support Information Services

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Tech Info Library Article Number:19023



Tech Info Library

SerialDMA & Serial Port Arbitrator Compatibility Issue (12/96)

Revised: 12/3/96
Security: Everyone

SerialDMA & Serial Port Arbitrator Compatibility Issue (12/96)

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Article Created: 6 December 1995
Article Reviewed/Updated: 3 December 1996

TOPIC -----

This article describes a compatibility issue when using a PCI-based Power Macintosh computer with the 7.5.2 Printing Fix 1.1 and Apple Remote Access (ARA) with some telecommunication applications, or Fax software.

DISCUSSION -----

System 7.5 Update 2.0
=====

The newer architecture of the SerialDMA included in System 7.5 Update 2.0 does not have the same problem, therefore you should install this update which upgrades your system to version 7.5.3. Also, the next version of ARA (Personal Server and Client) will have a new Serial Port Arbitrator that no longer exhibits this problem (there is no known date when a newer version of ARA will be available).

Explanation and Workaround for System 7.5.2
=====

Users of PCI-based Power Macintosh (7200, 7500, 8500, or 9500) computers and the 7.5.2 Printing Fix 1.1 may encounter problems. There appears to be a compatibility issue between the Serial Port Arbitrator extension (part of ARA) and the SerialDMA 2.0.2 extension (part of the printer update) if both load at start up. This issue may appear at computer start up or when attempting to dial out to an online service or using a telecommunication application.

This issue may also affect Global Village Fax features. As mentioned above the SerialDMA 2.0.2 extension conflicts with the Serial Port Arbitrator extension, which inhibits the ability to Fax when ARA is set to answer calls in the Remote Access Setup control panel. In addition, users should rename the SerialDMA 2.0.2

extension (for example, place a space in front, " SerialDMA 2.0.2") so this extension loads before the GlobalFax extension. Global Village is working on a solution to correct this, however, no date is known when this solution will be available.

Workaround

To avoid this conflict, try one of the following:

- Remove the Serial Port Arbitrator extension from the System Folder.
- If you are using Global Village Fax features, turn off the Fax Receive feature in the Global Village Fax Center whenever dialing out with online service software or telecommunication software.

For more information on the Serial Port Arbitrator and ARA, please refer to the Tech Info Library article titled, "Serial Port Arbitration and Apple Remote Access". Use the search string "Serial Port Arbitrator and ARA".

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

- 03 Dec 1996 - Corrected spelling.
- 02 Jul 1996 - Added Fax Doc word
- 14 May 1996 - Added System 7.5 Update 2.0 information.

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Tech Info Library Article Number:19026



Tech Info Library

Power Macintosh 5200/75 LC: Flashing Question Mark (12/95)

Revised: 12/11/95
Security: Everyone

Power Macintosh 5200/75 LC: Flashing Question Mark (12/95)

=====

Article Created: 06 December 1995
Article Reviewed/Updated: 11 December 1995

TOPIC -----

I have a Power Macintosh 5200/75 LC computer, and I am getting a flashing question mark at startup. What could be causing this?

DISCUSSION -----

There are a number of possible causes to the flashing question mark symptom that you are experiencing. Follow these steps to resolve this issue:

Step 1

Rule out causes such as: damaged or missing system software, SCSI configuration problems, third-party software conflict, or corrupted PRAM. If you need assistance with this, see Tech Info Library article, "Flashing Question Mark on the Screen: Causes and Cures."

If the symptom persists, perform step 2.

Step 2

Download the latest version of Drive Setup, which is available on the online services. Make sure you are using at least version 1.0.3. Copy it to a floppy disk or external volume.

Step 3

Start up from the system software CD-ROM disc and use Disk First Aid to check the hard disk. If Disk First Aid reports problems and can repair them, repair them and continue to step 4.

If Disk First Aid reports problems that it is unable to repair, take necessary recovery steps and reformat hard drive with Drive Setup 1.0.3.

IMPORTANT: If you reformat the hard drive, you will lose all the data on the disk. Be sure to make a complete backup of any data you wish to keep before reformatting.

Step 4

Quit Disk First Aid. Open Drive Setup 1.0.3 from a floppy disk or external volume.

Step 5

Select the internal IDE drive and select Update driver from the Functions menu.

Step 6

Perform a clean installation of the system software. If you need assistance with this, see Tech Info Library article, "System 7.5: Clean Install Procedure".

Step 7

If you continue to experience the flashing question mark at startup, contact an Apple-authorized service provider for additional assistance.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

11 Dec 1995 - Updated information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19027



Tech Info Library

Drive Setup 1.0.3: Read Me (12/95)

Revised: 12/11/95
Security: Everyone

Drive Setup 1.0.3: Read Me (12/95)

=====

Article Created: 06 December 1995
Article Reviewed/Updated: 11 December 1995

TOPIC -----

This is the Read Me file for Drive Setup 1.0.

DISCUSSION -----

What's New in Drive Setup 1.0.3?

- No changes to SCSI driver. This is the same SCSI driver that is included with Drive Setup 1.0.2.
- Installs updated IDE driver (ATA v1.12) for systems that were previously supported by previous versions of Drive Setup.
- Some Apple IDE hard drives require extra time to flush its caches at shut down and restart. This new IDE driver insures that the drive's caches are properly flushed.
- Corrects an issue with the PowerBook 190, 2300 and 5300 series of computers where, in some cases, the system will freeze after wake up.

Drive Setup 1.0.3 requires System Software 7.5 (or later) and is only supported for use with the following systems:

- Power Macintosh systems (including PowerPC-based Performa systems)
- Macintosh 580- and 630-series systems
- PowerBook 190, 2300, and 5300

Drive Setup does not currently support the Macintosh Processor Upgrade. If the upgrade is installed in a Macintosh 580- or 630-series system, use the "601 Processor Upgrade" control panel to turn the card off before using Drive Setup.

..TIL19028-Drive_Setup_1-0-3-Read_Me_12-95.pdf

Article Change History:

11 Dec 1995 - Updated information.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19028



Tech Info Library

Power Macintosh 7200 & 7500: Difficulty Mounting CDs (12/95)

Revised: 9/23/96
Security: Everyone

Power Macintosh 7200 & 7500: Difficulty Mounting CDs (12/95)

Article Created: 07 December 1995

TOPIC -----

I have a Power Macintosh 7200 series computer. When I hold down the C key and try to start up the computer using the system software CD-ROM disc, I get a flashing question mark. I am also having difficulty mounting other CD-ROM disks.

DISCUSSION -----

The Power Macintosh 7200 and 7500 series computers have a "kickstand" or bracket which prevents the internal component cage from opening. However, if this bracket is not secure, it can cause enough tension on the internal SCSI ribbon cable to pull it from the SCSI connector. This is the likely cause of the difficulties you are experiencing with CD-ROM discs.

To resolve this, snap the bracket securely into place and then reconnect the internal SCSI ribbon cable.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19029



Tech Info Library

Power Macintosh 7500 and 8500: Technical Info Update (12/95)

Revised: 5/21/96
Security: Everyone

Power Macintosh 7500 and 8500: Technical Info Update (12/95)

=====

Article Created: 07 December 1995

TOPIC -----

This article contains an update to the Technical Information booklet that came with your Power Macintosh 7500 or 8500 series computer.

DISCUSSION -----

The following table replaces the table in the section titled, "Assigning SCSI ID Numbers":

Begin_Table

SCSI bus	SCSI ID	Device
-----	-----	-----
Internal*	0	factory-installed hard disk
	1	available
	2	available
	3	factory-installed CD-ROM drive (optional)
	4	available
	5	available
	6	available
	7	Power Macintosh computer
External	0	available
	1	available
	2	available
	3	available
	4	available
	5	available
	6	available
	7	Power Macintosh computer

End_Table

*Although five or six SCSI ID numbers are available for assignment, only one other SCSI device can be connected to the internal SCSI chain because of space limitations.

The following table replaces the table in the section titled, "Audio and Telecommunication Devices":

Begin_Table

Device	Voltage	Current	Power
-----	-----	-----	-----
Microphone	+5 V	20 mA	100 mW
GeoPort telecom adapter	+5 V	500 mA	2.5 W
S-video input connector	+12 V	250 mA	3.0 W

Support Information Services

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Tech Info Library Article Number:19030



Tech Info Library

Performa & PowerBook: Global Village Modem Too Loud (4/96)

Revised: 4/15/96
Security: Everyone

Performa & PowerBook: Global Village Modem Too Loud (4/96)

=====

Article Created: 7 December 1995
Article Reviewed/Updated: 15 April 1996

TOPIC -----

I have a Macintosh Performa computer with a built-in Teleport Gold 11v modem, and I cannot disable the modem sound. I turned it off in the Teleport control panel and turned down the sound volume in the Sound control panel. However, when the modem dials, it is still loud. The same thing happens with my PowerBook 5300 series computer and PowerPort Mercury PC Card. What can I do?

DISCUSSION -----

In the Teleport (or PowerPort) control panel, there is a volume slider that you can use to adjust the speaker volume when the GlobalFax software is sending a fax. However, volume slider affects the modem volume for faxing only. If you are using another telecommunications program, you will have to adjust the modem volume in it. If you need assistance in configuring these settings, contact the software publisher.

If the communications application supports AT commands, then you can use them to modify the initialization or hangup strings. AT commands are a way of communicating directly with the modem. ATM0 turns off the modem sound; ATM1 turns it back on. The Ln commands set the volume from very low (L0) to loud (L3).

If the application supports an initialization string suggest that the customer use the ATM0 or ATL0 commands to turn off or turn down the speaker, respectively. If it also supports a "hangup string," use an ATM1 or ATL1, L2, or L3 command to re-enable the speaker.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

15 Apr 1996 - Updated information.

26 Mar 1996 - Added information about PowerBooks having the same problem.

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19031



Tech Info Library

Elementary Reference Bundle: Dinosaur Adventure Trouble (1/96)

Revised: 1/29/96
Security: Everyone

Elementary Reference Bundle: Dinosaur Adventure Trouble (1/96)

=====

Article Created: 7 December 1995
Article Reviewed/Updated: 29 January 1996

TOPIC -----

I have the Apple Elementary Reference bundle. I am having difficulty with the Dinosaur Adventure CD-ROM disc that came with my bundle.

When I launch the Dinosaur Adventure application, I get a message, "Could not find file 'KA Icons'. Please reinstall Dinosaur Adventure." There is no installer and the instructions state I can run the program from the disc directly without installing anything on to my hard drive.

The application launches fine if I double-click the Dinosaur Adventure application right after starting my computer. What is wrong?

DISCUSSION -----

You will receive this error message if you try to run the Dinosaur Adventure application while File Sharing is turned on in your Sharing Setup control panel. It takes a few minutes for file sharing to turn on when you first start your computer which is why you are able to launch the application right after turning on your computer.

Use the following procedure to make sure File Sharing is turned off before launching the Dinosaur Adventure application:

Step 1

Choose Control Panels under the Apple Menu.

Step 2

Double-click on the Sharing Setup control panel.

Step 3

If the button in the File Sharing section of the Sharing Setup control panel reads Start, go to Step 4.

If the button in the File Sharing section of the Sharing Setup control panel reads Cancel, click Cancel. Go to Step 4.

If the button in the File Sharing section of the Sharing Setup control panel reads Stop, click Stop. Go to Step 4.

Step 4

Close the Sharing Setup control panel.

Step 5

Open the Preferences Folder in the System Folder. If there is a file called KA Dino CD D Prefs in the Preferences Folder, drag it to the Trash and empty the Trash.

Step 6

Launch the Dinosaur Adventure application.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 9

Article Change History:

29 Jan 1996 - Added Info Alley information.

05 Jan 1996 - Corrected minor typo.

11 Dec 1995 - Clarified steps.

Support Information Services

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Tech Info Library Article Number:19032



Tech Info Library

Knowledge Adventure (12/95)

Revised: 12/7/95
Security: Everyone

Knowledge Adventure (12/95)

=====

Article Created: 7 December 1995

Knowledge Adventure

1311 Grand Central Avenue
Glendale, CA 91201

818-246-4811 Technical Support

800-469-3466 Customer Support

818-246-5604 FAX

818-246-4830 BBS

Internet:
support@adventure.com - Technical Support
info@adventure.com - Product Information

Company Profile:
Developers of multimedia CD-ROM based educational products like Dinosaur Adventure, 3D Body Adventure, and JumpStart series.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19033



Tech Info Library

Macintosh Quadra 950: ROM Socket (12/95)

Revised: 12/7/95
Security: Everyone

Macintosh Quadra 950: ROM Socket (12/95)

=====

Article Created: 07 December 1995

TOPIC -----

The Macintosh Quadra 950 logic board has ROMs that are soldered to the board, but the logic board also has a ROM socket. Why is this. Should I have something in the ROM SIMM socket?

DISCUSSION -----

The ROM socket is available so that an updated set of ROMs could be added. Many Apple logic boards have an empty ROM socket for possible ROM updates. However, if the ROMs are already soldered to the board, you do not need anything in the ROM socket.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19034



Tech Info Library

Megahertz Corporation (12/95)

Revised: 12/7/95
Security: Everyone

Megahertz Corporation (12/95)

=====

Article Created: 7 December 1995

Megahertz Corporation

605 North 5600 West
Salt Lake City, UT 84116

800-527-8677 - Sales

801-320-7777 - Support

World Wide Web: <http://www.megahertz.com>

Company Profile:

Megahertz Corporation specializes in the design, manufacture, and marketing of communications solutions for mobile computer users. The company currently produces a line of mobile communications products including credit-card sized PCMCIA land-line modems, land-line modems with the XJACK connector, cellular modems, Ethernet adapters with the XJACK connector and combination Ethernet Modems.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19036



Tech Info Library

FWB Hard Disk Toolkit: System 7.5.2 Incompatibility (6/96)

Revised: 6/5/96
Security: Everyone

FWB Hard Disk Toolkit: System 7.5.2 Incompatibility (6/96)

=====

Article Created: 08 December 1995
Article Reviewed/Updated: 04 June 1996

TOPIC -----

I have a PCI-based Power Macintosh computer which uses System 7.5.2. Recently, I've noticed that my hard disk has become locked, and I'm unable to write anything to the disk. I am using FWB Hard Disk Toolkit to mount an external drive. What could be going on?

DISCUSSION -----

Versions earlier than 1.8 of FWB Hard Disk Toolkit are incompatible with System 7.5.2 and higher. FWB does have a solution for users who are experiencing this problem. This solution is described in the Read Me included with the FWB utility, Unlock Volume.

Contact FWB's technical support center for additional assistance.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
04 June 1996 - Updated system version information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:19037



Tech Info Library

LaserWriter 16/600 PS: TCP/IP Configuration Guide (4/96)

Revised: 4/29/96
Security: Everyone

LaserWriter 16/600 PS: TCP/IP Configuration Guide (4/96)

Article Created: 8 December 1995
Article Reviewed/Updated: 29 April 1996

TOPIC -----

This article describes configuring TCP/IP communications to a LaserWriter Pro 16/600 PS.

DISCUSSION -----

To Find the IP Address and Other TCP/IP Configuration Information

The IP Address

To find the IP address use one of the choices below:

- Print a test page.
- Apple Printer Utility1.
- TELNET to printer and display the current configuration information.

Subnet and Default Gateway Displayed

To find the subnet and default gateway use one of the choices below:

- Use the Apple Printer Utility to display the Configuration Page.
- Use TELENET (option x) and connect to the printer to display the Configuration Page.

RARP and BOOTP

On startup, if the IP address is set to 0.0.0.0 (or has never been set), the LaserWriter 16/600 PS will issue BOOTP and RARP requests roughly every 5 seconds. If your printer has ROM version 1.0, these requests seem to be

continuous, while ROM version 2.0.x these requests seem to stop after 64 seconds, or 12 broadcasts.

Verifying the IP Address when using RARP or BOOTP

The Apple Printer Utility will correctly display the current IP address. Network management software may also display the current IP address.

Since the "permanent" address is still 0.0.0.0, printing a test page by restarting the printer will not display the served IP address. The test page will still report, "IP address: 0.0.0.0".

Configuration Switch and RARP or BOOTP

Does the configuration switch on the printer affect RARP and BOOTP? No, RARP or BOOTP work if the switch is set in up or down position.

How do I Manually Assign the IP Address

=====

If the "permanent" address at 0.0.0.0 can I use gleaning?

If the IP address has been set permanently, how do I change it?

You can use one of the following:

TELNET and use option x
apple printer utility

NOTE: RARP, BOOTP and IP gleaning do not work here.

Turning IP Off

=====

There is no way to completely turn off all IP functions on the printer. However, customers who ask, "How do I turn IP off," are actually asking for two different configurations.

1) Disable network configuration protocols (RARP, BOOTP, DHCP)

To prevent the printer from requesting network configurations from network servers with RARP, BOOTP, or DHCP, you should manually assign an address to the printer.

2) Keep IP hosts from printing to the printer

If you want to hide your printer from the TCP/IP network, and not let other hosts print to the printer, assign an IP address to the printer that is not in use. This will cut off all printing from outside the subnet. Local LPR clients will still be able to use the printer.

Support Issues

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Acquires Wrong Address

Because the printer is using a BOOTP or RARP server, the printer is in glean mode when the address is 0.0.0.0, some users may see this issue. Subnets with heavy ARP traffic or malfunctioning systems may accidentally configure the printer. The printer may accept the wrong configuration method. For example, the network administrator wanted the printer configured with RARP, but a BOOTP server responded more quickly. A user's printer unintentionally "steals" a number from a BOOTP server.

BOOTP Client Using Another Client's BOOT Address

This is a known problem. The BOOT client on the LaserWriter 16/600 PS may configure itself to the IP address assigned to another client. This issue is being investigated.

BOOTREQUEST Packet Is Interpreted as DHCPDISCOVER by a DHCP Server

This may be an issue with the BOOTREQUEST sent by the printer. The most likely cause is the DHCP server does not properly conform to RFC 1534. If you do a network trace, check for DHCP option 53 (message type). If the printer's BOOTREQUEST uses option 53, then the printer is out of specification.

Article Change History:

29 Apr 1996 - Minor typographical corrections.

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Tech Info Library Article Number:19038



Tech Info Library

Apple Internet Connection Kit and Static IP Address (12/95)

Revised: 12/8/95
Security: Everyone

Apple Internet Connection Kit and Static IP Address (12/95)

=====

Article Created: 8 December 1995

TOPIC -----

This article describes the procedure to use a static IP address with the Apple Internet Connection Kit (AICK).

DISCUSSION -----

Step 1

Configure the dialer to use your Internet Service Provider (ISP) with the define/modify provider menu command, then close the dialer WITHOUT dialing and connecting.

Step 2

If your Macintosh is running TCP/IP, open the TCP/IP control panel, select the Advanced command in the User Mode menu, then fill in the requisite information. Close the control panel.

Step 3

Open the dialer and connect to the ISP. The changes to the TCP/IP control panel will stay, as they are written to a part of the TCP prefs that the dialer does not overwrite.

Things to Avoid

Never have the MacTCP or TCP/IP control panel and the dialer open at the same time. Never have ConfigPPP and the dialer open at the same time.

Either of these combinations of operations will cause system and preferences corruption. Make sure you have quit one process before starting the next.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19039



Tech Info Library

QuickTime Conferencing: H.320 ISDN NuBus Card Read Me (2/96)

Revised: 2/15/96
Security: Everyone

QuickTime Conferencing: H.320 ISDN NuBus Card Read Me (2/96)

Article Created: 8 December 1995
Article Reviewed/Updated: 14 February 1996

TOPIC -----

This article contains the ReadMe file for the QuickTime Conferencing H.320 ISDN Nubus Card.

DISCUSSION -----

QuickTime Conferencing H.320/ISDN NuBus Card

H.320/ISDN Software

This interface software delivers full H.320/ISDN support to QuickTime Conferencing via a dedicated NuBus expansion bus card installed in a Power Macintosh 7100AV series or 8100AV series computer. This provides compatibility and interoperability with the worldwide ISDN network of videoconferencing centers and video-phones.

System Requirements

-
- Power Macintosh 7100AV series, 8100AV series computers, or 7100 series and 8100 series with AV card upgrade
 - System software version 7.5 or newer
 - 16 megabytes of DRAM (memory)
 - PlainTalk Microphone
 - Network ISDN connection
 - Handset

IMPORTANT NOTE: Some of Apple's newest computers utilize the PCI Expansion Bus and are not compatible with NuBus Expansion Bus cards.

Installing H.320/ISDN Software and Related Software

=====

- Install Macintosh System software, version 7.5 (or newer) or J-7.5.
- Install Network Software Installer, version 1.5 or newer.
- Install QuickTime Conferencing software.
- Install H.320/ISDN software.

Getting Help and Information

=====

The Apple Media Conference program includes the Apple Media Conference Guide, an Apple Guide help system that answers common questions about setting up and using Apple Media Conference. When you first open Apple Media Conference, you can also open Apple Media Conference Guide by clicking the Guide (question mark) button in the startup dialog. You can also choose Apple Media Conference Guide from the Guide menu at any time while you are using Apple Media Conference.

For detailed troubleshooting information, and tips on improving the performance of Apple Media Conference, refer to the Troubleshooting topic in Apple Media Conference Guide.

Troubleshooting

=====

- Local Macintosh sounds are disabled while in hands-free mode

When Hands-Free mode is selected, only audio from the remote connection is played. The Macintosh will not be able to play any local sounds or system beeps or sounds unless you switch to Handset mode or end the call.

- Audio is distorted when in hands-free mode

The H.320/ISDN card is optimized to process 22 kHz audio information. Verify that the sound output rate in the sound control panel is set to 22 kHz.

- Cannot hear audio when broadcasting

If other users cannot hear audio from your machine, open the Sound Settings dialog box and verify that Built-in is selected as your sound source device.

- Handset sound gain will not adjust with slider control

The sound gain control slider located in the Self View Window will only adjust the volume level of the computer's internal or external speakers. It has no affect on the handset sound gain.

- Making a LAN (Local Area Network) connection with PowerTalk and H.320

Although you are able to make a LAN connection through PowerTalk when the connection type selected is H.320 (for Wide Area Networks) it is highly recommended you switch your connection type from H.320 to MovieTalk Protocol before you attempt a LAN connection. Placing a LAN call when the connection type selected is H.320 may cause memory allocation problems with your computer. To change your connection type from H.320 to MovieTalk Protocol choose Preferences/Conference from the Settings menu and set "Connection type:" to MovieTalk Protocol.

- Formatting a floppy disk during a conference connection

Formatting a floppy disk will disconnect you from your conference connection. Do not format floppy disks during a conference connection.

- PowerTalk Catalog Browser with TCP/IP and H.320

The PowerTalk Catalog Browser does not operate in TCP/IP and H.320 environments. To place calls to TCP/IP and H.320 users through PowerTalk you must create business cards for those users. For assistance in creating PowerTalk business cards refer to the Using PowerTalk topic in Apple Media Conference Guide. Read the Getting Help and Information section of this document for information on Apple Media Conference Guide. To bypass PowerTalk hold down the option key when you choose Call from the File menu. You will then be presented with a dialog box for entering the information needed to place your TCP/IP or H.320 call.

- Turning off sound during a conference connection

If you turn off the sound in the Media Setup dialog box you may get a dialog box stating there has been an unexpected error System Error: -223. Click the button located in the dialog box to continue. The error will not affect your computer or your conference connection.

- Installing H.320 software and folder names

When you installed the QuickTime Conferencing software on your hard drive a folder named "QuickTime Conferencing" was created and several items were placed within it. If the name of this folder is changed before you install the H.320 software the H.320 software installer will place the Apple Media Conference Guide document in a new folder named "QuickTime Conferencing." Before you install the H.320 software make sure the name of the folder created by the QuickTime Conferencing software installer is "QuickTime Conferencing."

- Sound compression and ISDN, 1 channel connections

It is not recommended to select the Best Quality (G.722) compressor if you have selected ISDN, 1 channel or ISDN, 1 channel, 56k adaptation. The reduced

bandwidth capacity of ISDN, 1 channel may not have the ability to operate with Best Quality sound compression. Select the Best Efficiency (G.728) compressor if only one ISDN channel is available.

- H.320 software and Macintosh computers equipped with the PCI expansion bus

Some of the newest Macintosh computers have replaced the NuBus expansion bus with a faster expansion bus named PCI (Peripheral Component Interconnect). The H.320 software should not be installed on these computers. Installing the H.320 software may cause these computers to crash during boot up. Booting the computer while holding down the shift key and removing the "~H.320 Extension" file from the Extensions folder in the System Folder will allow the computer to boot properly.

- Typing below the bottom of the Shared Window in Apple Media Conference

When the bottom of the Shared Window is at or below the bottom of the screen do not type text below the bottom-visible edge of the Shared Window. Text which falls below the bottom-visible edge of the Shared Window may be lost.

- Record button appears in Self View window when connection type selected is H.320

Record does not operate when the connection type selected is H.320. If the sound source has been manually changed from "H.320 Card" to "Built-in" the record button will appear in the Self View window but will not operate. Changing the sound source back to "H.320 Card" will remove the record button.

- Error when disconnecting video or audio cables during a connection

Avoid 'hot plugging' video and audio cables while you have an active connection. This can temporarily confuse the QuickTime software and display error messages.

- Inconsistent behavior when using WindowShade product

Do not use the Windowshade option to hide windows in the Apple Media Conference application. The software may not realize that the window has been hidden and display error messages.

- Increasing memory allocated for the Apple Media Conference application

The system is optimized for ISDN connections and small LAN connections. If you receive low-memory warnings in Apple Media Conferencing you should increase the amount of memory allocated for the Apple Media Conferencing application. To do this, click once on the Apple Media Conferencing icon, choose the Get Info command from the File menu, and increase the value in the Preferred Size box.

- Calling TCP/IP users who use dynamic server-based addresses

If you are connecting using TCP/IP from a machine using a static IP address to a machine using MacIP (KIP) server supplied addresses, you must have a clear TCP/IP pathway between the Mac with the static address and the MacIP (KIP) server.

If you plan to use a MacIP server to allocate TCP/IP addresses, the MacIP requires a clear AppleTalk pathway from all Macs requiring an IP address to the MacIP server.

- Video image is distorted

Check that the Apple Media Conference software is configured for the video format supplied by your camera (NTSC, PAL, or SECAM). To change this setting, choose "Video Settings" from the "Settings" menu, switch to the page marked "Source", and select the video format from the "Format" pop-up menu.

- Audio and Video freezes when pasting images during a 1B connection

With a 1B channel connection (56K/64K), outgoing video and audio may stop during a shared window transfer. To restart video and audio, wait for the shared window transfer to complete, open up media settings, disable video and audio, press OK, then open up media settings again and re-enable video and audio.

- Pausing self-view window temporarily disables incoming video

If you pause the outgoing video and audio from your machine, your remote window may temporarily freeze. To recover from this problem, simply click anywhere inside the remote window and the video from the remote site will resume.

Article Change History:

14 Feb 1996 - Added additional troubleshooting steps.
08 Jan 1996 - Changed distribution status.

Support Information Services

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Tech Info Library Article Number:19040



Tech Info Library

QuickTime Conferencing: H.320 ISDN NuBus Card Troubleshoot 2/96

Revised: 2/14/96
Security: Everyone

QuickTime Conferencing: H.320 ISDN NuBus Card Troubleshoot 2/96

Article Created: 8 December 1995
Article Reviewed/Updated: 14 February 1996

TOPIC -----

This article contains common troubleshooting information taken from the Read Me for the QuickTime Conferencing software included with the H.320/ISDN Card.

DISCUSSION -----

- Local Macintosh computer sounds are disabled while in hands-free mode

When Hands-Free mode is selected, only audio from the remote connection is played. The computer will not be able to play any local sounds or system beeps or sounds unless you switch to Handset mode or end the call.

- Audio is distorted when in hands-free mode

The H.320/ISDN card is optimized to process 22 kHz audio information. Verify that the sound output rate in the sound control panel is set to 22 kHz.

- Cannot hear audio when broadcasting

If other users watching your broadcast cannot hear audio from your machine, open the Sound Settings dialog box and verify that Built-in is selected as your sound source device.

- Handset sound gain will not adjust with slider control

The sound gain control slider located in the Self View Window will only adjust the volume level of the computer's internal or external speakers. It has no affect on the handset sound gain.

- Making a LAN (Local Area Network) connection with PowerTalk and H.320

Although you are able to make a LAN connection through PowerTalk when the connection type selected is H.320 (for Wide Area Networks) it is highly recommended you switch your connection type from H.320 to MovieTalk Protocol before you attempt a LAN connection. Placing a LAN call when the connection type selected is H.320 may cause memory allocation problems with your computer. To change your connection type from H.320 to MovieTalk Protocol choose Preferences/Conference from the Settings menu and set "Connection type:" to MovieTalk Protocol.

- Formatting a floppy disk during a conference connection

Formatting a floppy disk will disconnect you from your conference connection. Do not format floppy disks during a conference connection.

- PowerTalk Catalog Browser with TCP/IP and H.320

The PowerTalk Catalog Browser does not operate in TCP/IP and H.320 environments. To place calls to TCP/IP and H.320 users through PowerTalk you must create business cards for those users. For assistance in creating PowerTalk business cards refer to the Using PowerTalk topic in Apple Media Conference Guide. Read the Getting Help and Information section of this document for information on Apple Media Conference Guide. To bypass PowerTalk hold down the option key when you choose Call from the File menu. You will then be presented with a dialog box for entering the information needed to place your TCP/IP or H.320 call.

- Turning off sound during a conference connection

If you turn off the sound in the Media Setup dialog box you may get a dialog box stating there has been an unexpected error System Error: -223. Click the button located in the dialog box to continue. The error will not affect your computer or your conference connection.

- Installing H.320 software and folder names

When you installed the QuickTime Conferencing software on your hard drive a folder named "QuickTime Conferencing" was created and several items were placed within it. If the name of this folder is changed before you install the H.320 software the H.320 software installer will place the Apple Media Conference Guide document in a new folder named "QuickTime Conferencing." Before you install the H.320 software make sure the name of the folder created by the QuickTime Conferencing software installer is "QuickTime Conferencing."

- Sound compression and ISDN, 1 channel connections

It is not recommended to select the Best Quality (G.722) compressor if you have

selected ISDN, 1 channel or ISDN, 1 channel, 56k adaptation. The reduced bandwidth capacity of ISDN, 1 channel may not have the ability to operate with Best Quality sound compression. Select the Best Efficiency (G.728) compressor if only one ISDN channel is available.

- H.320 software and Macintosh computers equipped with the PCI expansion bus

Some of the newest Macintosh computers have replaced the NuBus expansion bus with a faster expansion bus named PCI (Peripheral Component Interconnect). The H.320 software should not be installed on these computers. Installing the H.320 software may cause these computers to crash during boot up. Starting up the computer while holding down the shift key and removing the "~H.320 Extension" file from the Extensions folder in the System Folder will allow the computer to boot properly.

- Typing below the bottom of the Shared Window in Apple Media Conference

When the bottom of the Shared Window is at or below the bottom of the screen do not type text below the bottom-visible edge of the Shared Window. Text which falls below the bottom-visible edge of the Shared Window may be lost.

- Record button appears in Self View window when connection type selected is H.320

Record does not operate when the connection type selected is H.320. If the sound source has been manually changed from "H.320 Card" to "Built-in" the record button will appear in the Self View window but will not operate. Changing the sound source back to "H.320 Card" will remove the record button.

- Error when disconnecting video or audio cables during a connection

Avoid 'hot plugging' video and audio cables while you have an active connection. This can temporarily confuse the QuickTime software and display error messages.

- Inconsistent behavior when using WindowShade product

Do not use the Windowshade option to hide windows in the Apple Media Conference application. The software may not realize that the window has been hidden and display error messages.

- Increasing memory allocated for the Apple Media Conference application

The system is optimized for ISDN connections and small LAN connections. If you receive low-memory warnings in Apple Media Conferencing you should increase the amount of memory allocated for the Apple Media Conferencing application. To do this, click once on the Apple Media Conferencing icon, choose the Get Info

command from the File menu, and increase the value in the Preferred Size box.

- Calling TCP/IP users who use dynamic server-based addresses

If you are connecting using TCP/IP from a machine using a static IP address to a machine using MacIP (KIP) server supplied addresses, you must have a clear TCP/IP pathway between the Mac with the static address and the MacIP (KIP) server.

If you plan to use a MacIP server to allocate TCP/IP addresses, the MacIP requires a clear AppleTalk pathway from all Macs requiring an IP address to the MacIP server.

- Video image is distorted

Check that the Apple Media Conference software is configured for the video format supplied by your camera (NTSC, PAL, or SECAM). To change this setting, choose "Video Settings" from the "Settings" menu, switch to the page marked "Source", and select the video format from the "Format" pop-up menu.

- Audio and Video freezes when pasting images during a 1B connection

With a 1B channel connection (56K/64K), outgoing video and audio may stop during a shared window transfer. To restart video and audio, wait for the shared window transfer to complete, open up media settings, disable video and audio, press OK, then open up media settings again and re-enable video and audio.

- Pausing self-view window temporarily disables incoming video

If you pause the outgoing video and audio from your machine, your remote window may temporarily freeze. To recover from this problem, simply click anywhere inside the remote window and the video from the remote site will resume.

Article Change History:

14 Feb 1996 - Added additional troubleshooting.

08 Jan 1996 - Changed distribution status.

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Tech Info Library Article Number:19041



Tech Info Library

QuickTime Conferencing: Troubleshooting (12/95)

Revised: 12/8/95
Security: Everyone

QuickTime Conferencing: Troubleshooting (12/95)

=====

Article Created: 8 December 1995

TOPIC -----

This article contains common troubleshooting information taken from the Read Me file which is included with the QuickTime Conferencing software.

DISCUSSION -----

Apple Media Conference Guide contains more detailed information about the problems listed here, and other problems you may encounter.

- You see low memory warnings while using Apple Media Conference

Increase the amount of memory allocated for the Apple Media Conference program. To do this, quit Apple Media Conference, go to the Finder, click the Apple Media Conference program icon, choose Get Info from the File menu, and increase the value in the Preferred Size box. For more detailed instructions on increasing the memory allocated to a program, go to the Finder, open the Guide menu located in the upper-right-corner of your screen, choose Macintosh Guide, click the Topics button, click the Memory topic area, and double-click the "change a program's memory size" phrase.

- You see an error message when you plug or unplug video or audio cables during a connection

Do not plug or unplug camera, microphone, or other sound and video cables while you are connected to another caller, or viewing or sending a broadcast. This can temporarily disable the QuickTime software. You should always turn off your computer before you plug or unplug any cables.

- The video image is distorted

Make sure the settings are correct in the Video Settings dialog box. The

settings should specify the video format supplied by your camera (NTSC, PAL, or SECAM). To adjust the settings, choose Video Settings from the Settings menu, choose Source from the top pop-up menu in the Video Settings dialog box, and choose the correct video format (NTSC, PAL, or SECAM) from the Format pop-up menu.

Apple Media Conference Guide contains more detailed instructions on adjusting the video (and sound) settings.

If you are using a Power Macintosh 6100AV, 7100AV, or 8100AV computer, attach your display to the monitor port located on the AV video card instead of the monitor port located on the computer's logic board. (Shut down the computer and turn off the power before you change your display's connection.) See the manual that came with your computer for more information.

- Calling TCP/IP Users with Dynamic Server-Based Addresses

If you are connecting using TCP/IP from a machine using a static IP address to a machine using MacIP (KIP) server supplied addresses, you must have a clear TCP/IP pathway between the Macintosh computer with the static address and the MacIP (KIP) server.

If you plan to use a MacIP server to allocate TCP/IP addresses, the MacIP requires a clear AppleTalk pathway from all Macintosh computers requiring an IP address to the MacIP server.

- A Note Regarding Interoperability

QuickTime Conferencing is the foundation for a broad range of Apple and third-party video and document conferencing solutions.

QuickTime Conferencing supports open standards for interoperability, so developers can use it to create software that works with a variety of network transports, compression technologies, and media devices (cameras, microphones, and so forth). QuickTime Conferencing provides consistent standards that encourage software developers to create application programs that look and act the same from a user's point of view, regardless of the computer, network service, or devices being used.

For Power Macintosh 5200 LC and 5300 LC Users

Users of the Power Macintosh 5200 LC and 5300 LC series computers should note the following:

- Sound compression and sound sample rate

Sound compression is not available if the selected sound sample rate is 11.127 kHz. Sound compression is available if the selected sound sample rate is 22.255 kHz. The sound compression and sound sample rate settings are found in Sound

Settings under the Settings menu. For example, if the sound sample rate is set to 22.225 kHz and you wish to change it to 11.127 kHz you must make sure the sound compression is set to "None" or you will not be able to select 11.127 kHz.

- Large window sizes and low memory problems

You may encounter memory problems when using double size windows for the self view and remote view. Increasing the amount of application memory for Apple Media Conference from 3,000 kbytes to 4,000 kbytes will solve this problem. A description of changing the amount of memory for Apple Media Conference is described below in the Troubleshooting section of this document.

- PPCPlayThru extension conflict

If the PPCPlayThru extension is present in the Extensions folder of the System Folder the volume control in Apple Media Conference will not operate properly. Removing the PPCPlayThru extension will correct the problem.

- For At Ease 3.0 and At Ease Workgroups 2.0.3 Users

For QuickTime Conferencing to operate properly certain conditions under At Ease must be set properly.

- If the user is restricted to At Ease Panels, Apple Media Conference and MediaPlayer must be enabled under "Items for this User."

- File open and save privileges must be enabled under the "Security" setup. Both the user's folder and/or floppy should be set for these privileges. The user should also be allowed to perform screen captures.

- Apple Media Conference will not save preference settings based on individual users. Each individual user should check to make sure the settings are appropriate for their conferencing needs. To change the name of the user in Apple Media Conference choose Preferences/Conference from the Settings menu. Type your name in the user name box.

- Drag and Drop onto the desktop does not operate in the At Ease Panels level.

- You cannot share movies or sounds in the Shared Window in Apple Media Conference.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19042



Tech Info Library

Apple LaserWriter: Printing From UNIX (1/96)

Revised: 1/4/96
Security: Everyone

Apple LaserWriter: Printing From UNIX (1/96)

Article Created: 8 December 1995
Article Reviewed/Updated: 4 January 1996

TOPIC -----

This article provides guidelines for printing from a UNIX workstation to an Apple LaserWriter printer over a serial connection.

DISCUSSION -----

Step 1: Create PostScript Files

If the applications you are using do not generate PostScript files, or if you want to print plain text files, you need a tool to translate plain text into PostScript. TranScript is one such application from Adobe Systems, Inc., which does this. The TranScript software converts non-PostScript language files such as Tek 4014, Diablo 630, troff, ntroff, plot and ASCII into PostScript language files. TransScript is distributed by the Qualix Group.

Step 2: Create a Printer Description

Once you have text to PostScript software installed, set up an entry in the /etc/printcap file for the PostScript printer. Sample printcap entries can be found on the internet. One anonymous ftp site is "ftp.unt.edu" which contains the file printcap-city located in the /pub/unix directory. The entry should look similar to:

Begin_Table

```
#LASERWRITER PLUS (GENERIC) -----
lp|lw|ps|PostScript|LaserWriter|laserwriter|postscript|Apple:\
    :lp=/dev/lw:br#9600:\
    :fc#0000374:fs#0000003:xc#0:xs#0040040:rw:\
    :if=/usr/lib/psif:of=/usr/doctools/lib/psof:\
    :gf=/usr/lib/psgf:nf=/usr/doctools/lib/psnf:\
    :tf=/usr/lib/pstf:\
```

```
:vf=/usr/lib/psvf:\n:sd=/usr/spool/lpd0:lf=/usr/spool/lpd0/log:\n:mx#0:sf:sb:
```

End_Table

Step 3: Make Connection

Connect the printer to the workstation. Adjust printer and port communications settings appropriately.

Step 4: Check the Connection

• Send data to the printer using the commands your UNIX workstation requires. Here is a generic example, you may need to use a different command. This command does not print anything, it only checks the connection.

```
echo "Hello" > /dev/port &
```

After sending the command you should see the lights on the printer flash as the data is received. If you do not see the lights flash, there may a problem with the physical connection. You should check the cable, UNIX system serial port setup, or LaserWriter setup.

Step 5: Printing a PostScript File

• The final step is to print a PostScript file. If you have a PostScript file available, you should be able to print it with the following command:

```
cat filename > /dev/port &
```

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

04 Jan 1996 - Made changes for clarity.

Support Information Services

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Tech Info Library Article Number:19043



Tech Info Library

ARA 2.0.1 Client: LanRover/E or NetModem/E Issue (12/95)

Revised: 12/8/95
Security: Everyone

ARA 2.0.1 Client: LanRover/E or NetModem/E Issue (12/95)

=====

Article Created: 5 December 1995

TOPIC -----

I cannot connect to my LanRover/E v3.x or NetModem/E 3.5 using Apple Remote Access (ARA) v 2.0.1. Apple Remote Access v 2.0 connects fine. Do I need a special CCL file?

DISCUSSION -----

AppleTalk Remote Access 2.0.1 added a feature which lets remote Macintosh clients connect to ARA 1.0 and ARA 2.0 servers without setting the "ARA 1.0 compatibility" checkbox in the options window. The ARA 2.0.1 client identifies the type of server by sending two different link request packets, one for 2.0.x and one for 1.0, then decides the version by the server's response.

Because an ARA 1.0 link request packet is exactly the same as an error correction request packet, the modem on the Shiva Remote Access Server will reply positively to the ARA 1.0 link request. The client, seeing the positive reply, decides the server is set up for ARA 1.0 and begins to make an ARA 1.0 connection. Since the Shiva device is looking for an ARA 2.0 connection, the connection will fail.

Shiva is aware of this issue. Please contact Shiva's technical support staff for further assistance.

Support Information Services

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Tech Info Library Article Number:19045



Tech Info Library

MessagePad 120: Hardware Handshake Isn't on PC Cables (12/95)

Revised: 12/11/95
Security: Everyone

MessagePad 120: Hardware Handshake Isn't on PC Cables (12/95)

=====

Article Created: 11 December 1995

TOPIC -----

Is the PC compatible cable that shipped with the Apple MessagePad 120 2.0 devices a hardware handshaking cable? Is hardware handshaking required?

DISCUSSION -----

The PC to Apple MessagePad cable is not a hardware handshake cable. There is no need for it to be since both the MessagePad and the PC are capable of handling communication at 57,600 baud. At this data rate, there should not be any data overflow.

The above situation is slightly different than modem communications where the modem speed is slower than the serial port speed. For example, if the port is set for 57,600 baud and the modem is communicating at 28,800, the modem has to be able to compress the data 2:1 to stay up with the computer. If the data cannot be compressed this much, the modem must tell the computer to stop sending the data to prevent overflow. This is why you must use a cable that supports hardware handshaking.

Support Information Services

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Tech Info Library Article Number:19046



Tech Info Library

LaserWriter 16/600 PS: Lantastic Spooler Issues (12/95)

Revised: 12/11/95
Security: Everyone

LaserWriter 16/600 PS: Lantastic Spooler Issues (12/95)

=====

Article Created: 11 December 1995

TOPIC -----

I am having some difficulties with my LaserWriter 16/600 PS printer, which is connected to a MS-DOS Lantastic Server. When printing PCL (LaserJet emulation), the graphic information does not print, and the job either takes a long time to print, or does not print until a job is spooled.

DISCUSSION -----

When the Lantastic spooler gets corrupted, graphic information does not get sent to the printer. You need to contact Artisoft to get instructions on how to regenerate the spooler.

The LaserWriter 16/600 PS printer requires a CTRL-D at the end of a print job to flush the buffer and cause the job to print. The CTRL-D is not being placed at the ends of your print jobs, this is why it sometimes takes two tries to print. You can manually flush the printer but pressing the combination of CTRL-ALT-PRTSN keys.

Support Information Services

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Tech Info Library Article Number:19047



Tech Info Library

AppleVision 1710AV Display: Timing, Sync & Pixel Freqs (12/95)

Revised: 12/11/95
Security: Everyone

AppleVision 1710AV Display: Timing, Sync & Pixel Freqs (12/95)

=====

Article Created: 11 December 1995

TOPIC -----

I have a completely configurarble video card for a workstation that I want to use with the AppleVision 1710AV Display. However, I need some additional parameters for the video card. I need: sync frequencies, pixel frequencies, and timing information.

DISCUSSION -----

Here are the parameters you need.

Begin_Table

Mode	13-in. Color	16-in. Color	19-in. RGB	21" Color Two-Page	Units
Resolutions					
Hactive	640	832	1024	1152	pixels
Vactive	480	624	768	870	lines
Sync Frequencies					
Fhonzontal	34.97	49.70	60.24	68.70	kHz
Fvertical	66.67	74.55	74.93	75.00	Hz
Sync polarity	negative	negative	negative	negative	
Pixel Frequencies					

+=====+						
Pixel Rate	30.24	57.28	80	100.0	MHz	
+=====+						
Timing						
Information						
+=====+						
HSync Delay	64	32	32	32	pixels	
HSync Width	64	64	96	128	pixels	
HBlank	224	320	304	304	pixels	
VSync Delay	3	2	3	3	lines	
VSync Width	3	3	3	3	lines	
VBlanking	45	43	36	45	lines	
+=====+						

End_Table

NOTE:

Apple reserves the right to change these specifications without notification at any time, and will not guarantee that this will address all of the issues that may be involved with configuring this video card.

Support Information Services

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Tech Info Library Article Number:19048



Tech Info Library

QuickDraw 3D: Out of Memory Errors (12/95)

Revised: 12/11/95
Security: Everyone

QuickDraw 3D: Out of Memory Errors (12/95)

Article Created: 11 December 1995

TOPIC -----

Each time I attempt to open a QuickDraw 3D document I get an error message saying that there is not enough memory. However, based on the memory requirements for the application and the amount of memory being used by the system software, I should have enough memory available. What could be causing this error?

DISCUSSION -----

QuickDraw 3D is a shared library, which is a code fragment that can be used by any application. Because shared libraries can be used by different applications, they are loaded into the system heap. The result is that you need enough memory to open the application and to adjust for this increase in memory used by the system software. QuickDraw 3D requires a minimum of 16 MB of RAM.

Depending on the size of the document, the active system software heap may grow substantially in size. To prevent this error message, try reducing the preferred size of the application to the suggested size, or try reducing the size of the system software by turning off unused extensions and control panels using the Extensions Manager control panel.

Some applications which use shared libraries can get around this memory requirement by using virtual memory. However, using virtual memory with QuickDraw 3D is not recommended or supported; virtual memory will considerably decrease the performance of QuickDraw 3D.

Support Information Services

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Tech Info Library Article Number:19049



Tech Info Library

Color StyleWriter 2400: Prints Only Graphics, No Text (12/95)

Revised: 12/11/95
Security: Everyone

Color StyleWriter 2400: Prints Only Graphics, No Text (12/95)

=====

Article Created: 11 December 1995

TOPIC -----

I have a Color StyleWriter 2400 printer and I can print graphics, but I cannot print text. If I go into SimpleText and try to print, the printer goes through the motions but nothing prints out. I can perform a Self Test on the Printer, and in Finder, use the Print Window option, and the Color StyleWriter 2400 prints. I reinstalled the Mac OS following clean install instructions I received, but that did not help.

DISCUSSION -----

There are two cartridges for the Color StyleWriter 2400, a color cartridge and a black cartridge. If you are using the color cartridge and run out of black ink, you will be able to print color graphics and the icons, but the text will not be printed since there is not any ink left in the black ink cartridge. The easiest way to verify that you are out of black ink is to perform a self-test. If the Color StyleWriter 2400 prints a picture of the printer, but does not have the text for the printer's name then you know that you are out of black ink.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19050



Tech Info Library

Newton 2.0 OS: Trouble Beaming to 1.3 OS Device (12/95)

Revised: 12/11/95
Security: Everyone

Newton 2.0 OS: Trouble Beaming to 1.3 OS Device (12/95)

=====

Article Created: 11 December 1995

TOPIC -----

When attempting to Beam My Card (an option in the Routing button of the Names application), the MessagePad being beamed to presents a -48006 error if the MessagePad is using Newton 1.3 OS.

DISCUSSION -----

This is something that Apple is currently investigating. Here is a workaround, so you can beam cards between Newton 2.0 and 1.3 OS devices.

Step 1

On the Newton 2.0 OS device, open the Extras drawer and tap on Owner Info.

Step 2

Check the owner.

Step 3

Tap on the routing button, and then tap on "Beam". DO NOT tap on "Beam My Card."

Step 4

On the Newton 1.3 OS device, open the Extras drawer, and tap on "In Box".

Step 5

Tap the Receive button, then tap on "Beam".

Support Information Services

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Tech Info Library Article Number:19051



Tech Info Library

Drive Setup 1.0.3: May Report Incorrect Version (1/96)

Revised: 1/2/96
Security: Everyone

Drive Setup 1.0.3: May Report Incorrect Version (1/96)

=====

Article Created: 8 December 1995
Article Reviewed/Updated: 2 January 1996

TOPIC -----

This article describes an incorrect version number being reported when using Drive Setup 1.0.3.

DISCUSSION -----

The Drive Setup 1.0.3 software that ships with the PowerBook 2300c, and may be included in other systems with IDE disk drives, may show an incorrect version number of "1.12e3" in the Get Info window of the IDE disk drive. This incorrect version number was inadvertently left in the final version of Drive Setup 1.0.3 which has no affect on the software's functionality.

Article Change History:
02 Jan 1996 - Made minor technical update.

Support Information Services

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Tech Info Library Article Number:19053



Tech Info Library

CLW 12/600 PS: Windows 95 Problems w/ vecpd.386 (2/97)

Revised: 2/27/97
Security: Everyone

CLW 12/600 PS: Windows 95 Problems w/ vecpd.386 (2/97)

=====

Article Created: 11 December 1995
Article Reviewed/Updated: 27 February 1997

TOPIC -----

I have installed Windows 95 on my PC-compatible, and I am having some trouble printing to the Color LaserWriter 12/600 PS printer. I was able to print using Windows 3.11.

DISCUSSION -----

The Color LaserWriter 12/600 PS printer software for Windows 3.1x installs VECPD.386, a bidirectional parallel port driver that was not intended for Windows 95. If you upgrade to Windows 95, or install the Windows 3.1 printer software after installing Windows 95 the VECPD.386 file is installed. This file prevents the computer from being able to access the printer port properly. To prevent VECPD.386 from loading, remove the following line from the [386 enh] section of SYSTEM.INI and restart your computer:

```
device=vecpd.386
```

Article Change History:
27 Feb 1997 - Changed the article title.

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Tech Info Library Article Number:19054



Tech Info Library

System 7.5: AppleScript Automated Tasks Time Out Error (12/95)

Revised: 12/11/95
Security: Everyone

System 7.5: AppleScript Automated Tasks Time Out Error (12/95)

Article Created: 11 December 1995

TOPIC -----

I am trying to run several of the Automated Tasks included with System 7.5. Each task seems to start up fine, but after a minute or two an error appears that says "Apple Event Timed Out" with the option to Edit or Quit.

If I click on the Edit option I see lots of strange codes such as <<class fshr>> and <<class fsup>>. I have done some AppleScript programming and have opened the automated task scripts before but I have never seen these commands.

AppleScript is turned on in the Extensions Manager and other scripts that I have written run fine.

DISCUSSION -----

You are getting this time out error because the Finder Scripting Extension is either turned off in the Extensions Manager or some part of AppleScript is corrupted.

Open the Extensions Manager control panel and make sure that the Finder Scripting Extension has a checkmark next to it. If it is already on, reinstall AppleScript from your original system software disks or CD-ROM disc.

The strange codes you see are AppleScript commands that were written when the Finder Scripting Extension was loaded. When the Finder Scripting Extension is not loaded, the commands lose the natural language format you saw before causing these class formatting commands to appear instead.

The scripts you wrote earlier work because they do not access the Finder Scripting Extension.

Support Information Services

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Tech Info Library Article Number:19055



Tech Info Library

ImageWriter II & DOS Compatible Card: Condensed Print (1/96)

Revised: 1/3/96
Security: Everyone

ImageWriter II & DOS Compatible Card: Condensed Print (1/96)

Article Created: 12 December 1995
Article Reviewed/Updated: 3 January 1996

TOPIC -----

When I'm in the DOS environment on my DOS Compatible computer, and I print to the attached ImageWriter II as shown in the Read Me file, the printer prints in ultra-condensed mode with very thin characters. Why is this happening, and is there a workaround?

DISCUSSION -----

When printing from the DOS Compatibility Card, the information gets sent to the PC Print Spooler application on your Macintosh, and then on to the printer selected in Chooser. This condensed output occurs because of the way the ImageWriter II interprets the information it receives from the PC Print Spooler.

Workaround =====

Step 1 -----

In the PC Setup control panel, set COM1: to be the port where the printer is connected. This bypasses the PC Print Spooler and Chooser, and sends the data directly to the port you selected.

Step 2 (FOR MS-DOS ONLY) -----

Type the following at the command line:

```
MODE LPT1: = COM1:
```

Step 2 (FOR WINDOWS ONLY) -----

Go to the Printers control panel and set Epson LQ-2500 to COM1: instead of LPT1:

port.

IMPORTANT:

This workaround prevents you from printing in the Macintosh environment. In order to print from the Macintosh environment, you must go back to the PC Setup control panel and change COM1 back to None.

Article Change History:

03 Jan 1996 - Rewrote entire discussion area for technical accuracy.

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Tech Info Library Article Number:19057



Tech Info Library

AppleVision 1710AV Display: Shortened Startup Tone (2/97)

Revised: 2/5/97
Security: Everyone

AppleVision 1710AV Display: Shortened Startup Tone (2/97)

Article Created: 12 December 1995
Article Reviewed/Updated: 5 February 1997

TOPIC -----

I have an AppleVision 1710AV Display connected to my Macintosh computer. When I startup my computer, I sometimes only hear part of the startup tone. If I disconnect the audio cable from the computer to the display, I hear the entire tone. Is there something I can do to hear the complete tone?

DISCUSSION -----

When the Macintosh audio is connected to the AppleVision 1710AV Display, there is nothing you can do, that will allow you to always hear the complete startup tone. Because of the additional features in the AppleVision 1710AV Display, there is a slight delay in power reaching all the components. Depending on how quickly the speakers in the monitor are able to power up, you may hear a partial startup tone, no startup tone, or the entire startup tone.

There is nothing wrong with your monitor or your computer. If you want to hear the startup chime, unplug the sound out cable that connects from your computer to the AppleVision 1710AV Display. Once this cable is removed, you hear the chime from the built-in speaker of your computer. Until you reconnect the sound cable, all sound goes through the internal computer speaker.

Article Change History:
05 Feb 1997 - Added paragraph about disconnecting sound cable.

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Tech Info Library Article Number:19058



Tech Info Library

Newton 2.0 OS: How to Move All Application Data (12/95)

Revised: 12/12/95
Security: Everyone

Newton 2.0 OS: How to Move All Application Data (12/95)

=====

Article Created: 12 December 1995

TOPIC -----

Is there a way to move all of the data, for instance my Names, from a PC-card to the internal memory, or to a particular folder?

DISCUSSION -----

Yes you can move the data. Here are the steps you need:

Note:

This procedure moves all of the data. Do Not use this procedure if you only want to move some of the data.

Step 1

Open the Extras Drawer

Step 2

Choose the Storage folder. Do this by tapping on the folder tab.

Step 3

Tap on the Names icon.

Step 4

Tap on the folder button.

A slip appears with several options. You can file all of your names data in the internal memory or on a PC-card. In either location, you can store this data in a folder of your choice. This feature is supported on all of the built-in application's data, with the exception of Time Zones.

To move only certain names, refer to the topic "Filing multiple items and cards" in the "Organizing and Finding Information" section of the Apple MessagePad Handbook.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19059



Tech Info Library

Macintosh 5200 & 5300 Computers: Rattling Noise (12/95)

Revised: 12/14/95
Security: Everyone

Macintosh 5200 & 5300 Computers: Rattling Noise (12/95)

=====

Article Created: 14 December 1995

TOPIC -----

Recently my Macintosh Performa 5200 has started making a continuous rattling sound at startup. What could be causing this?

DISCUSSION -----

You likely have the Apple External Video Connector (M4099LL/A) installed in your computer. The ribbon cable of this connector can sometimes rise up and contact the exposed blades of the fan assembly, which causes this noise.

To resolve this issue, press the ribbon cable down flat, or (if the cable is long enough), fold it as recommended in the External Video Connector User's Guide.

Note that this symptom can occur in any of the following computers:

- Power Macintosh 5200/75 LC
- Power Macintosh 5300/100 LC
- Macintosh Performa 5200 series
- Macintosh Performa 5300 series

Support Information Services

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Tech Info Library Article Number:19061



Tech Info Library

Color StyleWriter Pro: Using Non-Apple Ink Cartridges (12/95)

Revised: 12/14/95
Security: Everyone

Color StyleWriter Pro: Using Non-Apple Ink Cartridges (12/95)

=====

Article Created: 14 December 1995

TOPIC -----

This article contains information on using Non-Apple labeled ink cartridges in the Apple Color StyleWriter Pro printer.

DISCUSSION -----

Apple Service and Support has received some warranty claims for Color StyleWriter Pro printers which were not functioning correctly. Apple's analysis of these printers indicate that they were damaged due to ink spraying onto the printhead circuit and causing it to short. Further analysis indicates this was caused by customers using ink cartridges in their printer which have a vent hole design that causes the ink to spray downward onto the printhead circuit.

Apple's current Color StyleWriter Pro Ink Cartridges are designed to prevent this from occurring; however, there are other non-OEM vendors selling replacement cartridges which use this design. To avoid possible damage to the printer, Apple recommends only using Apple-brand replacement ink cartridges with the Color StyleWriter Pro printer.

Support Information Services

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Tech Info Library Article Number:19062



Tech Info Library

CD-ROM Setup 5.1.2: Multisessions Create Multiple Icons (8/96)

Revised: 8/19/96
Security: Everyone

CD-ROM Setup 5.1.2: Multisessions Create Multiple Icons (8/96)

=====
Article Created: 14 December 1995
Article Reviewed/Updated: 19 August 1996

TOPIC -----

I am using CD-ROM Setup 5.1.2 on my Macintosh, with a Kodak CD Writer. I am creating multisession CD-ROM discs, and I just started using CD-ROM Setup 5.1.2. Previously, the disc displayed on the Macintosh desktop as a single icon. Now with CD-ROM Setup 5.1.2 installed, multiple icons for the disc appear on my desktop. The number of icons that appear are equivalent to number of sessions I placed on the CD-ROM Disc.

DISCUSSION -----

This is the normal behavior of multisession CD-ROM Discs. Multisession CD-R discs appear as multiple volumes on the Macintosh desktop. If you change the name of the session when you create a new partition, it has a different name on the desktop.

Article Change History:
19 Aug 1996 - Corrected misspelling.

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Tech Info Library Article Number:19063



Tech Info Library

System 7.x: Avoiding Memory Fragmentation (12/95)

Revised: 12/14/95
Security: Everyone

System 7.x: Avoiding Memory Fragmentation (12/95)

Article Created: 14 December 1995

TOPIC -----

Although I have over 20 MB of RAM, I sometimes get messages stating that there is not enough memory. Also, when I quit applications, I notice that the Largest Unused Block in the About This Macintosh window does not increase. Why does this occur, and how can I prevent it?

DISCUSSION -----

Provided the applications and extensions you use are functioning correctly, you are most likely experiencing the effects of memory fragmentation. Memory fragmentation occurs if you don't quit applications and desk accessories in exactly the reverse order in which you launched them.

Memory fragmentation can occur regardless of how much memory you have, but the less memory you have, the sooner you will experience the effects. It is similar to hard disk fragmentation, but files stored on a disk can easily be broken up into fragments if there is not enough contiguous space on the drive. However, programs that are loaded in memory cannot be fragmented and thus need a contiguous area of memory. Your computer may have several unused blocks of memory mixed in with the used blocks of memory, but it can only make the largest unused block available to programs.

To defragment memory, you can do one of the following steps:

Step 1

Quit all open applications and desk accessories and then open them again.

Open applications appear in the Application menu. To quit an application, select it from the Application menu and then choose Quit from the File menu. The Largest Unused Block in About This Macintosh will increase as more contiguous memory is made available, but it won't necessarily increase with each program you quit.

OR

Step 2

Restart your computer.

To avoid fragmentation again, be careful in planning the order in which you open and quit programs:

Step 1

Open first the applications and desk accessories you're least likely to quit.

Step 2

Open last those applications and desk accessories you're most likely to quit during a work session.

By opening and closing applications and desk accessories this way, the memory you free up will be contiguous with the rest of the Largest Unused Block. When you quit programs in random order, you're likely to have fragmented memory.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19064



Tech Info Library

AppleShare Client for Windows Manual Has Wrong Version (4/96)

Revised: 4/22/96
Security: Everyone

AppleShare Client for Windows Manual Has Wrong Version (4/96)

Article Created: 12 December 1995
Article Reviewed/Updated: 22 April 1996

TOPIC -----

In the "Getting Started with AppleShare Client for Windows" documentation, the version number is 1.0.1. Isn't the version number 1.0.2?

DISCUSSION -----

Yes the version is 1.0.2. In the final moments of finishing AppleShare Client for Windows 1.0.1, a fix was incorporated which changed the version to 1.0.2. Unfortunately, at that point in the process, the manuals were already printed.

The correct version number has been added in these online files:

PROBLEMS.WRI
USERINST.WRI
README.TXT

Also, the disk image files of AppleShare Client for Windows included on the AppleShare 4.2 CD are listed as version 1.0.1 rather than 1.0.2.

A documentation errata was included in the README.TXT file which reads as follows:

Documentation errata

Your documentation may refer to this product as AppleShare Client for Windows version 1.0.1. AppleShare Client for Windows 1.0.2 includes a recently developed change to ensure correct installation on systems running NetWare. This minor improvement is the only difference between the two versions.

Article Change History:
22 Apr 1996 - Added information on the AppleShare 4.2 CD.

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Tech Info Library Article Number:19065



Tech Info Library

Mail*Link Read Me and Open Transport Issue (1/96)

Revised: 1/4/96
Security: Everyone

Mail*Link Read Me and Open Transport Issue (1/96)

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Article Created: 14 December 1995
Article Reviewed/Updated: 4 January 1996

TOPIC -----

The Read Me file for Mail*Link Internet includes the following note:

"OpenTransport users: This gateway does not function correctly when used with Apple's OpenTransport. The gateway will connect one time but will not reconnect without a reboot. Apple is currently investigating the problem."

Has this issue been addressed with Open Transport (1.0.8 or 1.1) or will it require a revision to Mail*Link? Also, when can Mail*Link Internet be expected to work with PCI-based Macintosh computers like the Power Macintosh 7200, 7500, 8500, and 9500?

DISCUSSION -----

This issue will be fixed in Open Transport 1.1 which should be included with the next version of the system software and system software update.

The schedule for updating the gateway has not been determined at this time.

The workaround is to Open the Internet Key on the Key Chain, go to Preferences, go to SMTP/TCP, and click the "Ping before opening connection" checkbox to deselect it. This workaround text has been included in the latest Read Me.

Article Change History:
04 Jan 1996 - Changed fix will be in Open Transport 1.1.
20 Dec 1995 - Made correction.

Support Information Services

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Tech Info Library Article Number:19066



Tech Info Library

LW Select 360: Deactivate Sleep Mode W/ PostScript (12/95)

Revised: 12/15/95
Security: Everyone

LW Select 360: Deactivate Sleep Mode W/ PostScript (12/95)

Article Created: 15 December 1995

TOPIC -----

Is there a way to deactivate the sleep mode (part of the built-in Energy Star features) on the LaserWriter Select 360 from a Unix workstation?

DISCUSSION -----

Downloading the following PostScript code to the LaserWriter Select 360 disables the sleep mode. After downloading this PostScript code the printer will not go into energy saving mode until you change the TimeToStandby to some other setting, in a numeric unit representing minutes.

```
%=====
% Begin PostScript code
%
(%Engine%) << /Password 0 /TimeToStandby 0 >> setdevparams
%
% End PostScript code
%=====
```

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19069



Tech Info Library

Macintosh Sound Port: Can I Use 8 ohm Headphones? (12/95)

Revised: 12/15/95
Security: Everyone

Macintosh Sound Port: Can I Use 8 ohm Headphones? (12/95)

=====

Article Created: 15 December 1995

TOPIC -----

Can I safely use 8 ohm headphones with my Power Macintosh 7500 computer?

DISCUSSION -----

Yes, you can use a set of headphones with an impedance rating of 8 ohms on any Macintosh computer with a sound out port.

The lower impedance will not cause any problems for the computer or the headphones. However, the audio heard through the 8 ohm headphones may not be as loud as the audio you would hear through a pair of higher impedance headphones.

Support Information Services

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Tech Info Library Article Number:19070



Tech Info Library

At Ease 3.0.1 Updater: Read Me (12/95)

Revised: 12/20/95
Security: Everyone

At Ease 3.0.1 Updater: Read Me (12/95)

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Article Created: 15 December 1995
Article Reviewed/Updated: 20 December 1995

TOPIC -----

This article contains the ReadMe from the At Ease for Workgroups 3.0.1 Updater posted online.

DISCUSSION -----

Important Information about At Ease for Workgroups 3.0.1 Updater

Contents

Requirements for Updating

- Version 3.0 Already Installed
- Workgroup Version of At Ease
- Update Some or All Workstations
- Using an AppleShare Server for At Ease

Updating Procedure

- Installation Options
- Updating from the Floppy Disk
- Updating Over the Network
- Files the Updater Needs to Locate
- Use an Updated Copy of the Administration Program
- New Desktop Printer Extension

Changes in Version 3.0.1

- Launching Applications from Other Applications
- Log-in Procedure
- At Ease Setup Changes

Clarifications

- Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)
- CD-ROMs and At Ease

- Documents Created by Approved Applications
- Server Mounting in At Ease
- Disk Security
- At Ease and File Sharing
- Maximum Number of Connected Users on an At Ease Server
- Bypassing At Ease at Startup on Certain Power Macintoshes
- Incompatible System Extensions or Control Panels
- Users with Multiple Setups

Major Problems Corrected in Version 3.0.1

- Users Visible After Update from Version 2.x
- No Report of Damaged Preferences File at Log-in
- Faster Logging In or Out on Large Systems
- Documents Panel Remains Visible
- Setup Application Correctly Recognizes Setups
- Virex Incompatibility Corrected
- Items in the Apple Menu Remain Visible
- Servers Mount Correctly
- Import Users Function Works Correctly
- Middle Level Administration

The At Ease 3.0.1 Updater will update your current version of At Ease for Workgroups 3.0 to the latest version, 3.0.1. The changes in version 3.0.1 include enhancements for the networking environment and bug fixes. A detailed list of changes appears at the end of this document.

Requirements for Updating

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Version 3.0 Already Installed

You can only use the Updater application on a workstation that has version 3.0 installed. The Updater will not run if you have an older version (2.x or a lower number) installed. If you have an earlier version of At Ease for Workgroups, you should first update it to version 3.0, then use the Updater.

Workgroup Version of At Ease

Any workstation you update with the Updater must have At Ease for Workgroups installed. You should not use this Updater to update a workstation that has the non-workgroup version of At Ease installed. The updated software has not been tested with the non-workgroup version, and most changes in version 3.0.1 involve network enhancements that will not be used in the non-workgroup version.

In addition, the Updater application will not update the version of At Ease Setup (the administration program) for the non-workgroup product. If you use the Updater on a non-workgroup workstation, you may not be able to run your existing At Ease Setup (non-workgroups) application on that workstation.

Update Some or All Workstations

The databases used by At Ease 3.0 and 3.0.1 are fully compatible. That means

you can update some At Ease workstations on the network and not update others. To benefit from all the enhancements in version 3.0.1, however, you should update all of the workstations used by At Ease.

Using an AppleShare Server for At Ease

If your At Ease server is an AppleShare volume, all workstations must use version 3.0 (or 3.0.1). Any workstation that has an older version of At Ease will get a message reporting that the At Ease Preferences file is bad when it tries to access the server.

Updating Procedure

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Installation Options

There are two ways of updating one or more machines using At Ease for Workgroups—by using the Updater's floppy disk on each workstation or by installing the updated software over the network.

Updating from the Floppy Disk

Step 1

Turn off At Ease on each workstation that you are updating. (See the user's manual for instructions, if necessary.)

Step 2

Insert the Updater disk.

Step 3

Open the At Ease 3.0.1 Updater application.

Step 4

Click Begin in the greeting that appears.

Step 5

If the Updater cannot find a file it needs to update, a message appears asks you to locate that file. (If you cannot find the file, click Skip to cancel the update.)

Step 6

Locate the missing file and repeat the update procedure.

Updating Over the Network

Step 1

Copy the Updater application to an AppleShare server volume to which your workstations have access.

Step 2

Make sure the application is locked. (Select the Updater's icon, choose Get Info from the File menu, then click to place an X in the box labeled "Locked.")

Step 3

Turn off At Ease on each workstation you are updating.

Tip: Before updating any workstations on the network, you may want to turn At Ease off on machines you will be updating by using the Update Computers feature. Then, after you have updated your At Ease machines, you can turn At Ease on by using this same feature. (See the user's manual for instructions, if necessary.)

Note: After turning At Ease off, it is necessary to quit the At Ease setup application before using the update computer feature.

Step 4

Mount the server volume that contains the Updater application.

Step 5

Open the Updater application.

Step 6

Click Begin in the greeting that appears.

Files the Updater Needs to Locate

In most cases, the Updater will attempt to locate and update the At Ease and At Ease Startup files automatically. If it cannot find either of these files, it will ask you for the location of the missing file. If you cannot find these files, you can click the Skip button to stop the update, leaving your files as version 3.0.

Some administrators remove the administration program on certain workstations. For this reason, the Updater will display a message asking you to locate the setup program on your disk. If you cannot locate the program, click the skip button to bypass this request.

Use an Updated Copy of the Administration Program

Be sure to update the copy of At Ease Setup you use to administer At Ease to version 3.0.1. You should also remove any non-updated copies of this program from your hard disk (or disks). Do not leave multiple copies of the setup program on the workstations, because you may inadvertently open an old version of this program.

New Desktop Printer Extension

The Updater disk includes an Apple Extras folder. This folder contains a new version of the Desktop Printer Extension that fixes some problems that may occur when using the restricted Finder mode in At Ease.

The Desktop Printer Extension is used by printer drivers for some of the newest printers. You only need to install this extension (version 1.03) if you are using an earlier version of it. If the Desktop Printer Extension is not already in the Extensions folder inside your System Folder, do not install it. (Installing this extension will do nothing on computers that are not already using it, but it will occupy a small amount of memory.)

To install the extension:

Step 1

Open the Apple Extras folder on the Updater disk.

Step 2

Drag the Desktop Printer Extension icon to the System Folder on your hard disk.

Step 3

Click OK each time a message appears.

Changes in Version 3.0.1

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Launching Applications from Other Applications

Normally, for security reasons, At Ease will not allow applications to start, or sublaunch, other applications. You can allow users to sublaunch applications in At Ease in one of two ways: (a) by installing the sublaunched application in the user's setup; or (b) by using the Application Preferences command (in the Options menu) in At Ease Setup and putting an X in the box labeled "Can be launched by other applications" for each sublaunched application. Unfortunately, this process can be confusing.

Version 3.0.1 simplifies this procedure by providing one way to allow sublaunching for all applications. The User Settings dialog box (which you open by choosing User Settings in the Security menu) now contains a checkbox labeled "Always permit sublaunches." When this checkbox is selected, At Ease always allows applications to start other applications. (This setting takes precedence over any setting in the Application Preferences dialog box.)

By checking this option, an administrator does not have to worry about selecting individual applications for sublaunching. The checkbox can be best thought of as a "compatibility mode" feature that allows many applications to work better.

Log-in Procedure

To improve the log-in speed, At Ease no longer saves the panel or page information. Thus, when a user logs back into the panels environment, she or he will always be brought to the first page of the "brown" panel.

At Ease Setup Changes

When At Ease Setup starts up, it now checks the internal databases. This check can take a few seconds (when no users are logged in to the At Ease server) to almost a minute (on slow networks, when users are already logged into At Ease). A message advises you that this check is taking place.

Clarifications

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Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)

In the Read Me file for At Ease 3.0, the section titled "At Ease for Workgroups 3.0 and Kid Pix Studio" explains how to use At Ease 3.0 with Kid Pix Studio. The information for setting up subprograms with the Application Preferences command contains an error for the file "KPS 5." The file creator for "KPS 5" should be "Kîd5," not "Kîd4."

Note: The "î" character is generated by first typing Option-i, then immediately typing "i."

CD-ROMs and At Ease

An administrator can selectively allow CD-ROMs to be used on a workstation. This feature applies only to discs that can be loaded into the CD-ROM drive of the user's computer. It does not apply to discs in CD-ROM drives that are connected to an AppleShare file server. These drive appear to At Ease as AppleShare volumes, not CD-ROM drives.

Documents Created by Approved Applications

Documents that are available to users may be opened if the application that created the document is on the "approved" list in At Ease. The software creates this list by searching locations to which the users of a setup have access, including the setup folder, the Apple Menu Items folder, the Control Panels folder, and the Startup Items folder. Folders are searched only if the users of the setup have access to them.

If any documents (or stationery pads) exist in those locations, then the program assumes that the application that created them is also approved. For example, if the Apple Menu Items folder contains a SimpleText stationery pad, and users of that setup have access to "other items" in the Apple menu, those users will be able to open any SimpleText documents, no matter where the documents are located. This is true for both panels and for the restricted Finder.

Server Mounting in At Ease

The administrator can select whether users of a particular setup can either (a) start up with the last server volumes used or (b) use the Chooser's marked startup volumes instead. The program permits only one of these options for a given setup.

This feature can be set in At Ease Setup (Workgroups) by selecting a setup and then putting an X in the box labeled "Always remember the user's last-used AppleShare logins." When the checkbox is selected, any AppleShare volumes mounted at log-out will be remembered by At Ease and remounted the next time the user logs in. When the checkbox is not selected, any server volumes that were set in the Chooser to connect at startup will mount with the same privileges as were set with the Chooser. Because this feature operates on a user-by-user basis, the setting must always be the same for any user who belongs to multiple setups.

If a server has volumes (such as a CD-ROM drive) to which you want users to have access when they log in, you should leave the "remember" checkbox unselected and use the Chooser to set up the volumes to be mounted on each workstation. You must do this on each computer, because the AppleShare information is stored in the system folder of the workstation and not on the server volume.

Disk Security

The disk security in At Ease prevents users from starting up a workstation from a floppy disk and accessing the startup hard disk. This feature was introduced in At Ease 2.0; in Version 3.0, it is a box labeled "Lock Startup Volume" in the User Settings dialog box.

If At Ease detects that the security option cannot be used on a workstation, it dims the menu command. The two primary reasons why the Lock Startup Volume option cannot be used are:

- Unknown hard disk driver

If you have reformatted your startup disk with a non-Apple hard disk driver, the disk security option may not work with that driver. If the Lock Startup Volume checkbox is dimmed, please contact the driver software manufacturer to see if that disk driver is compatible with this At Ease feature.

- Non-partitioned IDE drives

Some Macintosh computer models use a hard disk drive mechanism called IDE (or ATA) for the startup disk. (Computers that use this drive type include the Power Macintosh 5200, 5300, and 6200, and the Macintosh PowerBook models 150, 190, and 5300.)

The security in At Ease requires that the startup hard disk drives are partitioned. All SCSI hard drives are partitioned at the factory, and in the future, the IDE drives will be partitioned. But for current Macintosh models with IDE drives that are not partitioned, the disk security will work only if the IDE drive is reformatted using a partitioned driver. One program that can partition these drives is Drive7, from Casa Blanca Works. (The IDE hard drive must be reformatted in order to partition it. You cannot just update the driver

on the disk.)

At Ease and File Sharing

Turning on file sharing on a computer using At Ease 3.0 or 3.0.1 is not recommended. At Ease attempts to turn off file sharing when a restricted Finder user starts up. You should be sure that file sharing is turned off (in the Sharing Setup control panel).

Maximum Connected Users on an At Ease Server

Because At Ease can open up to four files on the server for each machine that is in the login screen, it is possible that some versions of AppleShare will not allow as many machines to connect as it may indicate in the AppleShare Admin File Server Preferences dialog. Version 4.2 of AppleShare should eliminate this restriction.

Bypassing At Ease at Startup on Certain Power Macintoshes

Certain newer Macintoshes that use System 7.5.2 may allow the user to bypass At Ease by holding down the shift key at startup time. This problem has been fixed in System 7.5.3, but an easy workaround for the time being is to turn on the "Don't allow shift key at startup to disable extensions" checkbox in the setup application. You may need to do this on each machine that is having the problem.

Incompatible System Extensions or Control Panels

Sometimes incompatible system extensions or control panels can cause software problems. Restart while holding down the Shift key to temporarily turn off all system extensions.

If At Ease works normally after you do this, use the Extensions Manager control panel to turn off individual extensions and control panels. For detailed instructions, see the "Setting Options" topic of Macintosh Guide, available in the Guide menu.

If At Ease performs better when a particular extension or control panel is turned off, contact the software's manufacturer for information or an upgrade.

Users with Multiple Setups

If a user belongs to enough setups (specifically where the total length of the setups' names, plus 1 for each setup, exceeds 154 characters), other At Ease users may experience a system crash when logging in to At Ease. To correct this problem, you should shorten the names of the setups or reduce the number of setups to which this user belongs.

Major Problems Corrected In Version 3.0.1

=====

Users Visible After Update from Version 2.x

When users update from version 2.x to version 3.0, sometimes users that were already in At Ease did not show up in the setup application. The resulting display would show setups, but no users. Users should now appear after the automatic update from 2.x to this version (3.0.1).

No Report of Damaged Preferences File at Log-in

On certain network systems (especially if workstations are not turned off periodically), a message indicating that the application preferences may be damaged appeared when a workstation logged in—even though other computers would be working properly. Restarting the server would usually clear up this problem. This problem has been fixed in version 3.0.1.

Faster Logging In or Out on Large Systems

In server-based At Ease labs with many installed users, workstations would take an excessively long period of time to log in or out. In version 3.0.1, the log-in and log-out time has been lessened for very large networks.

Documents Panel Remains Visible

When a user was logged in, a message occasionally reported that the server had been disconnected. The documents panel would disappear and not reappear, even though the server volume was not actually disconnected. This problem has been corrected.

Setup Application Correctly Recognizes Setups

The problem in which the setup application interpreted one or more setups as locked (so that they could not be modified by the administrator) has been corrected.

Virex Incompatibility Corrected

The Virex application was not compatible with At Ease 3.0. If both were installed, the system would cause a crash at startup. This problem has been corrected.

Items in the Apple Menu Remain Visible

Occasionally some aliases in the Apple menu were deleted when a restricted Finder user returned to the log-in screen. This problem has been corrected.

Servers Mount Correctly

A problem that sometimes prevented server volumes selected in the Chooser from mounting when a user logged in has been corrected. (This feature only works if the user's setup has the "Always remember the user's last-used AppleShare logins" turned off. See the user's manual for instructions.)

Import Users Function Works Correctly

..TIL19071-At_Ease_3-0-1_Updater-Read_Me_12-95.pdf

A number of changes were made to the import users function, including correcting a problem that prevented cancellation of importing when many errors occurred.

Middle-Level Administration

Middle-level administrators can now add users to setups that they own.

Updated December 7, 1995

Article Change History:

20 Dec 1995 - Updated with latest version of ReadMe document.

Support Information Services

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Tech Info Library Article Number:19071



Tech Info Library

Apple Macintosh 7500/8500 CD-ROM: Telecom Installer (1/96)

Revised: 1/26/96
Security: Everyone

Apple Macintosh 7500/8500 CD-ROM: Telecom Installer (1/96)

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Article Created: 15 December 1995
Article Reviewed/Updated: 26 January 1996

TOPIC -----

When I try to install the Apple Telecom Software from the Apple Macintosh 7500/8500 CD-ROM disc v1.0.1, I get the following message, "The alias 'Apple Telecom Install' could not be opened, because the original item could not be found."

How do I install the software?

DISCUSSION -----

This error occurs because the alias to the Apple Telecom Installer, on the Apple Macintosh 7500/8500 CD-ROM disc v 1.0.1, is not linked to the correct file. To install the Apple Telecom software from this version of the CD follow this procedure:

From the Apple Macintosh 7500/8500 CD-ROM disc v 1.0.1:

Step 1

Open the Apple Extras folder.

Step 2

Open the Apple Telecom folder.

Step 3

Open a second Apple Telecom folder.

Step 4

Open the Apple Telecom Disk 1 folder.

Step 5

Double-Click the Installer icon. (You may have to scroll down the window, to locate the software.)

Step 6

Follow the installation directions presented on screen.

The Installer will guide you through the installation, and prompt you to restart the computer once the installation is completed.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 6

Article Change History:

26 Jan 1996 - Added Info Alley information; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:19072



Tech Info Library

AppleShare and Personal File Sharing: FAQ (11/96)

Revised: 11/25/96
Security: Everyone

AppleShare and Personal File Sharing: FAQ (11/96)

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Article Created: 18 December 1995
Article Reviewed/Updated: 25 November 1996

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) on both AppleShare and Personal File Sharing.

Questions in this FAQ:

- 1) What do I do if my users cannot see the server?
- 2) What do I do if my users cannot log on?
- 3) My users get disconnected unexpectedly. What can I do?
- 4) I selected inherited privileges over explicit, but it is not working. What can I do?
- 5) I lost (or forgot) my administrator's password. What can I do?
- 6) What can I do to speed up my server?
- 7) I cannot get into the Users and Groups control panel on the server. What can I do?
- 8) My server crashes continually. What can I do?
- 9) I cannot eject removable media. What can I do?
- 10) How do current AppleShare users upgrade to AppleShare 4.2?
- 11) Is AppleShare 4.2 compatible with Open Transport?
- 12) Does AppleShare 4.2 run on PCI-based Macintosh systems?

13) Will AppleShare 4.2 run on 68040 machines? Will it run on non- Workgroup Server platforms?

14) Where is the Owner Name and Macintosh Name found in the Sharing Setup control panel stored?

DISCUSSION -----

1) Question: What do I do if my users cannot see the server?

Answer: Check the following for a possible solution.

- Make sure file server application has been launched.
- Make sure something has been shared with the Admin program.
- Make sure the proper network driver is chosen in Network control panel.
- Check that network cable connections are securely attached.

2) Question: What do I do if my users cannot log on?

Answer: Check the following for a possible solution.

- Make sure the client user has the correct name and password.
- Make sure the caps lock key has not been pressed.
- Make sure that login is enabled for the user in the Admin program.
- Make sure something has been shared in the admin program and that the user has access to the shared item.

3) Question: My users get disconnected unexpectedly. What can I do?

Answer: Check the following for a possible solution.

- Check to be sure the server has not crashed.
- Check for network problems, for example look for termination issues with the network.

4) Question: I selected inherited privileges over explicit, but it is not working. What can I do?

Answer: Refer to the Apple Technical Info Library, and use the search string "inherit and explicit", to find the article, "AppleShare: Inherited Privileges Problem".

5) Question: I lost or forgot my administrator's password. What can I do?

Answer: Procedures vary depending upon which version of AppleShare File Server software being used. Refer to the Apple Technical Info Library and use the search string "appleshare and admin key" to find the article "AppleShare Admin: What To Do If You Lose the Password".

6) Question: What can I do to speed up my server?

Answer: Check the following for a possible solution.

- Make sure remote user activity meter is set to 100%, which lets the server access 100% of the available CPU cycles.
- Check to see if other applications are running on the server, like Apple Internet Router, Print Server, or an e-mail server. If possible transfer these applications to another computer. Remove third-party extensions from the computer to eliminate extension conflicts, or perform a clean system software installation if necessary. On AppleShare 4.0.x or 4.1 servers, you could experiment with different cache settings, as explained in the manual.
- Look for bottlenecks. If the server is using LocalTalk cabling, consider using Ethernet. Consider getting a higher performance hard disk drive or caching SCSI card. Consider upgrading to faster server hardware.
- There is no benefit in increasing RAM allocation to file server application in the Get Info window. The file server extension allocates the amount of memory it needs based on the number of concurrent users set in Admin program.
- Try adjusting Disk cache in the Memory control panel anywhere from 256K to 2048K. With AppleShare 3.0, there is no benefit to setting Disk cache above 2048K.

7) Question: I cannot get into the Users and Groups control panel on the server. What can I do?

Answer: To access users and groups information on an AppleShare server, you must use the Admin program. The Users & Groups control panel no longer works after AppleShare has been installed. If Apple Remote Access (ARA) is also installed on the server, you must use the AppleShare Admin program to change the users and groups information.

8) Question: My AppleShare file server crashes continually. What can I do?

Answer: Troubleshoot as you would any other system, for example, check for extension incompatibilities, SCSI bus, or corrupt software. Also make certain you at least have AppleShare v 3.0.1 of software.

If a clean installation of the system software and/or AppleShare software is required, BEFORE LAUNCHING THE ADMIN PROGRAM do the following to prevent loss of access privileges:

- Reset the server name in the Sharing Setup control panel. This can be any name, just do not leave the computer name field left blank.
- Restore the saved Users & Groups Data file to the Preferences folder in the System Folder.

These two items will prevent a new PDS file from being created, which would

cause all access privileges to be lost. The AppleShare PDS file is an invisible file at the root level of each shared volume which keeps track of the access privileges for that volume. The Users & Groups Data File is the file that keeps the information about users, groups, and the Admin key (password).

9) Question: I cannot eject removable media. What can I do?

Answer: Try one or more of the following:

- If no users are logged on, drag the icon to the trash.
- If users are logged on, select the UnMount Volume command from the Server menu of file server application.
- If you tried the above but are still having problems, check the SCSI driver versions, the latest are recommended.
- A freeware utility, UnmountIt, may or may not help to unmount removable volumes. Look for it on ftp.apple.com, or through user groups. Note, this utility is not supported by Apple.

10) Question: How do current AppleShare users upgrade to AppleShare 4.2?

Answer: Customers who purchased AppleShare 4.0, 4.0.1, 4.0.2 or 4.1 prior to September 1, 1995 will pay an upgrade fee plus shipping and handling. Customers who purchased AppleShare 4.0.2 or 4.1 on or after September 1, 1995 will receive the AppleShare 4.2 Update for just the cost of shipping and handling. Call the Apple Order Center for further upgrade information.

NOTE: AppleShare 4.2 is supported only on NuBus equipped Power Macintosh and Workgroup Server computers.

11) Question: Is AppleShare 4.2 compatible with Open Transport?

Answer: AppleShare 4.2 is not compatible with Open Transport. AppleShare 4.2.1 will run on NuBus PowerPC Workgroup Servers 6150/xx, 8150/xx & 9150/xx with the classic AppleTalk stack. (Performance with the classic stack is still faster than Open Transport on these computers. With a future release of Open Transport or AppleShare this may change.) AppleShare 4.2.1 will also run on Open Transport based Workgroup Servers 7250/120 and 8550/132.

12) Question: Does AppleShare 4.2 run on PCI-based Macintosh systems?

Answer: AppleShare 4.2 will NOT run on PCI-based Power Macintosh computers. An AppleShare 4.2.1 is supported on these computers.

13) Question: Will AppleShare 4.2 run on 68040 machines? Will it run on non-Workgroup Server platforms?

Answer: AppleShare 4.2 will NOT run on 68040 or earlier computers. AppleShare 4.2 will run on NuBus equipped Power Macintosh computers, but is only available

on Workgroup Servers or as an upgrade for previous owners of AppleShare 4.x.

14) Question: Where is the Owner Name and Macintosh Name found in the Sharing Setup control panel stored?

Answer: The Owner Name and Macintosh Name are stored in the System suitcase of the active System Folder.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

25 Nov 1996 - Updated Open Transport information.

19 Nov 1996 - Added question and answer #15.

03 Jun 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:19074



Tech Info Library

Apple MPEG Media System: Read Me File (8/96)

Revised: 8/19/96
Security: Everyone

Apple MPEG Media System: Read Me File (8/96)

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Article Created: 18 December 1995
Article Reviewed/Updated: 19 August 1996

TOPIC -----

This article contains the readme file for the Apple MPEG Media System Software.

DISCUSSION -----

Apple MPEG Media System (AMMS) Software 1.0

What is the Apple MPEG Media System Software?

The Apple MPEG Media System Software works in conjunction with the Apple MPEG Media System card to add functionality to your Apple Macintosh or Power Macintosh computer and allows the playback of MPEG-compressed digital video.

Requirements

The computer on which the software is to be installed must have an Apple MPEG Media System card installed in the LC processor-direct slot (PDS) and either the Apple Video System or the Apple TV/Video System installed in the video input slot. System 7.5 (which includes QuickTime 2.0 and the QuickTime Power Plug for Power Macintoshes) is required.

Contents

The Apple MPEG Media System Software CD consists of:

- MPEG Media Software - This folder contains system extensions that add

functionality to your computer for the support of MPEG video playback, including:

- Video Digitizer Update - This is the low level software interface to the video hardware for support of the Apple MPEG Media System card.
- AMMS MPEG Decoder - This is the hardware driver for the Apple MPEG Media System card.
- QuickTime 2.0 AMMS Update - This is an update to provide MPEG support within QuickTime 2.0.

- Video Software - This folder contains the Apple Video Player application and system extensions that allow you to view TV, external video, and MPEG digital video on your computer. This release adds MPEG video data support.

- CD-ROM Software - This folder contains updated system extensions that add functionality to your computer for the support of CD-ROM drives. This release adds support for MPEG video data as well as a wider variety of CD-ROM drives.

Installing the Apple MPEG Media System Software

To install the Apple MPEG Media System software:

- 1) Insert the Apple MPEG Media System Software CD into your CD-ROM drive with the disc label facing up.
- 2) Double-click on the "Installer" icon in the MPEG Media System Software v1.0 folder. The installer dialog will appear on your screen.
- 3) Click on the "Install" button. The software will be automatically installed.
- 4) When the installer has finished copying the software to your system, it will force a restart of the machine.

Notice:

The Apple MPEG Media System Software requires QuickTime 2.0 or greater.

Logic Board Reset Button

The "Apple MPEG Media System Installation Guide" instructs the person installing the Apple MPEG Media System card to press the reset button on the logic board before sliding the logic board back into the computer case. Occasionally, after installing new hardware in your computer, the computer will not reboot until the reset button has been pressed. Pressing this button will also reset the following System 7.5 system parameters to their default values. Any of these values that you have changed from their defaults will need to be reentered after pressing the reset button.

- system date and time
- mouse tracking

- master sound volume
- double click rate
- caret (insertion point) blink rate
- disk cache size
- menu blink
- auto key threshold and rate
- default boot device
- alert sound
- default hilite color
- default Appletalk (network) connecton

Limitations

- If the computer crashes or is turned off while the Apple Video Player is open, the Apple Video Player Prefs file may become corrupted. If the computer has problems loading VideoStartup at boot, drag the Apple Video Player Prefs file to the trash and reboot.
- The MPEG hardware only supports playback of one MPEG movie at a time. Some cosmetic problems may occur if multiple MPEG movies are opened at the same time.
- The Video and Audio of MPEG files may stutter momentarily when movie time location is changed during playback by using the slider control.
- Video capture of MPEG movies is not currently supported. Future software releases will include this functionality.
- The "Sharpness" slider does not affect MPEG movies in Apple Video Player.
- Some MPEG files, such as those which are playable by the Sparkle application, are not currently supported. Future software releases will support playback of these files.
- Apple Video Player was not designed to play QuickTime movies so movies containing a mix of MPEG and QuickTime data may not play properly in Apple Video Player.
- Changes made in the Finder (adding or deleting MPEG files) are not reflected in the Apple Video Player pop-up menu unless Apple Video Player is exited and restarted.
- Apple Video Player MPEG Movie Selector pull-down menu holds a maximum of 40 movies.
- Frame forward and frame backward buttons do not control MPEG movies as smoothly and accurately as with standard QuickTime movies.
- Multisession CD-ROM drives are required for playing MPEG movies form CD-ROMs. The Apple CD SC, CD SC+ and PowerCD are not multi-session drives and do not support MPEG.

- Some CD-i movies may not support chapter navigation.

Article Change History:

19 Aug 1996 - Changed misspelling.

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Tech Info Library Article Number:19075



Tech Info Library

Macintosh 5200, 5300, 6200, & 6300: Audio Sampling Rates (1/96)

Revised: 1/3/96
Security: Everyone

Macintosh 5200, 5300, 6200, & 6300: Audio Sampling Rates (1/96)

Article Created: 18 December 1995
Article Reviewed/Updated: 3 January 1995

TOPIC -----

I am using a sound editing application on my Macintosh Performa 5300 computer, but I am unable to get a sampling rate higher than 22.050 kHz. I have also noticed that 22.050 kHz is the only option available in the Sound control panel. Is there any way to get a higher sampling rate?

DISCUSSION -----

Many Macintosh computers support 44.100 kHz. However, the entry-level Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers with 16-bit sound only support 22.050 kHz audio.

Article Change History:
03 Jan 1996 - Corrected typo.

Support Information Services

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Tech Info Library Article Number:19077



Tech Info Library

Fax Viewer & Type 11 Error: Printing to StyleWriter (2/96)

Revised: 2/8/96
Security: Everyone

Fax Viewer & Type 11 Error: Printing to StyleWriter (2/96)

Article Created: 18 December 1995
Article Reviewed/Updated: 8 February 1996

TOPIC -----

When trying to print received Fax documents to a StyleWriter 1200 or Color StyleWriter 2400 from a Macintosh Performa 5300 with Fax Viewer v S1-2.1, I get a type 11 error. I do not think the computer model is the issue, but printing received Fax documents to a non-PostScript printer is. What can I do to print Fax documents to a non-PostScript printer

DISCUSSION -----

There was an issue with the Fax Viewer Application which would cause a type 11 error and crash when printing to the two printers you reported.

According to engineering, this issue was addressed with Apple Telecom 2.3. This software has been localized and should be available.

You should install the newer software to update the Fax Viewer program.

Article Change History:
08 Feb 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:19078



Tech Info Library

Macintosh PowerBook 2300 Series Computer Read Me (5/96)

Revised: 5/27/96
Security: Everyone

Macintosh PowerBook 2300 Series Computer Read Me (5/96)

Article Created: 18 December 1995
Article Reviewed/Updated: 26 May 1996

TOPIC -----

This article is the PowerBook 2300 series computer ReadMe.

DISCUSSION -----

Important Information About Your Macintosh PowerBook 2300 Series Computer
=====

Congratulations on purchasing your Macintosh PowerBook 2300 series computer. This document adds to and updates the information in the manuals that came with your computer. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

Contents

Tips

- Charging your battery
- Using the Battery Monitor in the Control Strip
- Using the trackpad
- Using a modem
- Using your PowerBook in SCSI disk mode
- Using multiple SCSI devices
- Using the Password Security control panel
- Printing
- Using MIDI with your PowerBook

Troubleshooting

- Problems starting your PowerBook

- Using an external monitor with your PowerBook
- Using video mirroring
- Using Drive Setup
- Using Acrobat Reader after installing QuickDraw GX
- Using Apple Remote Access
- Using a DigiSign Signature Card with PowerTalk
- AppleShare Displays Incorrect Information for Large Drives
- AppleShare Server Software
- Application Programs Using Sound
- Using QuickDraw GX with a Fax Modem
- Using PowerTalk and PowerTalk Direct Dialup Mail
- Using the Apple Internet Connection Kit
- Using the Japanese Language Kit
- Using the Chinese Language Kit

Important Information About Virtual Memory

Tips

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Charging your battery

You should connect the power adapter to your computer and let the battery charge overnight when you first unpack your computer. (The battery may have been depleted between the time it was charged at the factory and the time you purchased the computer.)

Using the Battery Monitor in the Control Strip

The estimated time remaining that is displayed in the Battery Monitor portion of the Control Strip depends on the charge remaining and the battery consumption rate. The battery consumption rate depends on the software and hardware features you are using.

- The battery icon in the Battery Monitor portion of the Control Strip may show the battery as charging even after the PowerBook has been plugged in for a while.

Using the trackpad

If the trackpad seems unresponsive, try the following in the order listed:

- 1) Put your PowerBook to sleep (by closing the display) and then wake it up (by pressing any key on the keyboard).
- 2) Press the reset button on the back of the computer.
- 3) Reset the parameter RAM (PRAM). (To reset PRAM, restart your Macintosh. Immediately after hearing the startup sound, press the Command, Option, P, and R keys simultaneously. For complete instructions on resetting PRAM, see the Troubleshooting chapter in your user's guide.)
- 4) Attach an external mouse.

Using a modem

-
- To improve modem performance, turn off LocalTalk in the Chooser.
 - When accessing the internet using the InterSLIP protocol, use the 14.4K baud rate rather than the 28.8K baud rate for better performance. The actual throughput at 14.4K baud is higher than at 28.8K baud.

Using your PowerBook in SCSI disk mode

- Using Norton Utilities Speed Disk or Disk Doctor from a desktop computer on your PowerBook while it is in SCSI disk mode may cause the desktop computer to crash or freeze. To avoid this problem, create an emergency startup floppy disk using Norton Utilities and then use that disk to startup your PowerBook.
- You cannot use password protection on your PowerBook while the PowerBook is in SCSI disk mode. Turn off password protection in the Password Security control panel before connecting your PowerBook in SCSI disk mode.

Using multiple SCSI devices

If you are using several SCSI devices in a chain and are having problems starting your computer, follow these steps:

1. Make sure all the SCSI devices are properly connected.
2. Make sure all the SCSI devices are plugged in to working power outlets and turned on.
3. Make sure the SCSI chain is terminated at the end.

If you still have problems starting your computer, try placing a terminator at the beginning and the end of the SCSI chain.

Using the Password Security Control Panel

The Password Security control panel provides security for information stored on your hard disk. To use this feature, you must enter a password and turn it on. If you forget or lose your password, you will not be able to access your hard disk. Should you lose your password, Apple may charge for assistance.

You cannot use your PowerBook in SCSI disk mode with password protection turned on in the Password Security control panel. You must turn it off before using your PowerBook in SCSI disk mode.

Printing

If you are printing on a network printer, make sure you have the same version of printer software as others on the network. If you are using a StyleWriter II on a network, make sure you use the StyleWriter printer driver that came with your computer. (Printer drivers are found in the Extensions folder).

Using MIDI with your PowerBook

To avoid errors in data transfer, turn off AppleTalk in the Chooser when using a MIDI interface connection (to the serial port) with your PowerBook.

NOTE: When AppleTalk is off, your LocalTalk and Ethernet connections will be unavailable, and you cannot use external devices, such as printers, that have AppleTalk or Ethernet connections. All these connections will be available when you turn AppleTalk on again.

Troubleshooting

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Problems starting your PowerBook

When you shut down the computer, be sure to wait at least 10 seconds before restarting. If you encounter a software problem that requires restarting (such as the pointer freezing), wait at least 10 seconds before restarting with the Command-Control-Power key combination.

If you see an error message (sad Mac icon) after you restart, press the reset button on the back of the computer to correct the problem.

Using an external monitor with your PowerBook

On some systems, the Monitors control panel does not include buttons named "Rearrange on Restart" and "Rearrange on Close" as described in Macintosh Guide.

Using Video Mirroring

Some application programs are not compatible with video mirroring, and may cause information to be displayed inconsistently.

Using Drive Setup

Make sure you only use the Drive Setup application program that comes with your PowerBook to update and partition hard disks. If you use an earlier version of Drive Setup (called Apple HD SC Setup) you might damage files or data on your computer.

Using Acrobat Reader after installing QuickDraw GX

Once you install QuickDraw GX, you need to reinstall Acrobat Reader on your computer in order to use it. Double-click the Acrobat Reader Installer icon in the Adobe Acrobat Reader folder (inside the Applications folder).

Using Apple Remote Access

Make sure you use only Apple Remote Access Client 2.0.1 (or later) or Apple Remote Access Personal Server 2.0.1 (or later) on your PowerBook. Earlier versions will not work. If you use the Personal Server, an ARA 1.0 call will not connect to your PowerBook.

Using a DigiSign Signature Card with PowerTalk

To use the Apple DigiSign Utility with PowerTalk, follow these steps:

- 1) Turn off processor cycling in the PowerBook control panel.
To see the option for processor cycling, hold down the option key while you select Custom in the PowerBook control panel.
- 2) Follow the steps for creating a Signer file.
If you need help, select "How do I obtain a valid Signer file?" in the Digital Signatures topic of the PowerTalk Guide.
- 3) Turn processor cycling back on in the PowerBook control panel.

AppleShare displays incorrect information for large drives

If you use file sharing to connect to a disk attached to another computer, and the shared disk is larger than 2 gigabytes (GB), the Get Info box for that disk shows an incorrect size. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

AppleShare Server software

Make sure you use only AppleShare server software version 4.2 or later on your PowerBook.

NOTE: This note is not part of the original Read Me, it is being added to correct information presented here. AppleShare 4.2 or later is not sold separately and is available when purchasing a Workgroup Server. Also AppleShare v 4.2 is not supported on these computers.

Application programs using sound

If you have application programs that make extensive use of sound, you should turn off virtual memory while using those programs. When virtual memory is turned on, it can compromise the programs' sound quality.

Some older versions of programs, especially games, may generate sounds that seem too slow or too fast. For best results with these programs, open the Sound control panel, choose Sound Out from the pop-up menu, and set the sample rate to 22.050 kHz.

Using QuickDraw GX with a fax modem

If you installed QuickDraw GX and you have a fax modem, you need a QuickDraw GX modem driver in order to send faxes. Contact the fax software manufacturer to obtain the QuickDraw GX driver.

If you have installed QuickDraw GX and do not yet have the QuickDraw GX modem driver, you can temporarily turn off QuickDraw GX and use your previous fax modem driver. To turn off QuickDraw GX:

- 1) Hold down the Space bar while you choose Restart from the Special menu to restart your PowerBook. Continue to hold down the Space bar until the Extensions Manager appears on the screen.
- 2) Click the QuickDraw GX extension to remove the check beside it.
This prevents the QuickDraw GX software from loading.
- 3) Click the close box in the Extensions Manager window to resume startup.

Your fax modem should work normally. You won't be able to use any QuickDraw GX features until you turn the extension back on again.

Using PowerTalk and PowerTalk Direct Dialup Mail

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Using the Apple Internet Connection Kit

The Apple Internet Connection Kit version 1.0 is incompatible with virtual memory (VM). If you want to use the Apple Internet Connection Kit version 1.0, first turn off VM in the Memory control panel.

Using the Japanese Language Kit

To use the Japanese Language Kit with your Macintosh PowerBook, make sure you use version 1.2 or later. In the United States, you can obtain an upgrade, with proof of purchase, by calling Apple Order Center. Customers outside of the United States should contact their local Apple-authorized dealer.

After you install the Japanese Language Kit 1.2, you need to replace an extension that gets installed with the software. Follow these steps:

- 1) Follow the instructions for installing the Japanese Language Kit 1.2 that came with the software.
- 2) After you see that the installation was successful, restart the computer with the Extensions off. To do this, hold down the shift key while you press the Restart button in the installer screen (or as you choose Restart from the Special menu).
- 3) Double-click the Apple Extras folder to open it.
- 4) Double-click the JLK 1.2 Update folder to open it.
- 5) Drag the file called "Font Extension 3" to the Extensions folder (inside the System folder) on your hard disk. Click OK if you see a dialog box asking if it is ok to replace this file.
- 6) Choose Restart from the Special menu.

Using the Chinese Language Kit

To use the Chinese Language Kit with your Macintosh, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, first install the World Script Updater 1.0. Then install the Chinese Language Kit version 1.1. Finally, install the Chinese Language Kit Updater to update your software to version 1.1.1.

To install the World Script Updater, follow these steps:

- 1) Double-click the Apple Extras folder to open it.
 - 2) Double-click the World Script Install folder to open it.
 - 3) Double-click the World Script Installer icon.
- Follow the instructions on the screen.

- 4) Follow the instructions that came with the language kit to install the language kit software.

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory may help you avoid running out of memory.

Your computer comes with virtual memory turned on. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems using certain programs, you may want to turn off virtual memory. You may also want to turn virtual memory off from time to time to extend work time while using the battery. You can turn virtual memory on and off in the Memory control panel. For specific information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. Then click "How do I use hard disk space as memory?" and "How do I manage Power Macintosh memory?"

For best performance, try setting virtual memory to no more than 150% of the amount of physical memory (RAM), or no more than 50% of your currently available hard disk space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (150% of 16, which is less than 50% of 50).

Note: You cannot set virtual memory to more than 1024 MB, even if you have 1 gigabyte (GB) or more available space on your hard disk.

To improve performance, you can also add physical memory (RAM) to your computer. See the user's manual that came with your computer for more information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

26 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:19080



Tech Info Library

Drive Setup: Cannot Update Driver or Other Options (2/97)

Revised: 2/28/97
Security: Everyone

Drive Setup: Cannot Update Driver or Other Options (2/97)

Article Created: 18 December 1995
Article Reviewed/Updated: 28 February 1997

TOPIC -----

This article describes a couple of issues where Drive Setup options may not be available.

While running the "four step" Install Mac OS application, on the Mac OS 7.6 CD-ROM, and performing the Update your hard disk driver option, a message appeared stating "This media is not partitioned, unable to update the driver."

Drive Setup cannot update the driver on some SCSI and IDE drives, the Update driver, Customize volume, and Test disk selections are dimmed; Initialization options are available. The dimmed options become available only after initializing the hard drive.

Why are these options not available with Drive Setup, and do I have to re-initialize the hard drive to make these options available?

DISCUSSION -----

There are several reasons why those options may not be available, depending on which computer you are using.

PowerBook Password Security

If you are using a PowerBook, you need to first disable the password protection feature in the Password Security control panel. Password security prevents Drive Setup from updating the driver.

Media Not Partitioned

The first IDE drives installed in Macintosh computers were initialized with the Internal HD Format 1.x utility, and did not have partitioning information.

Drives that show "Where: Macintosh HD, AT_0" in the volume's Get Info window are such drives. IDE drives partitioned with Drive Setup include partition information. This is why Apple's Internal HD Format utility does not recognize newer IDE drives. For more information search for the following Tech Info Library articles:

- "Internal HD Format: Cannot See IDE Drives"
- "Macintosh Desktop & PowerBook Computers: IDE Hard Drive"

When a volume is selected in Drive Setup, the application looks for partition information on the hard disk. If it finds this partition information, the option to update the disk's driver is available. If this partition information is absent, you have to re-initialize the hard disk to properly format it to include this partition information in order to access the other options.

WARNING:

Reformatting or re-initializing your hard drive erases all information on your disk. Make sure you have a backup of all files you may have created and any pre-installed software that came with your computer.

The latest version of Drive Setup is 1.2.2 and included with the Mac OS 7.6 CD-ROM disc. Drive Setup 1.2 is available at Apple Computer's software update locations. You use the Drive Setup or HD SC Setup programs to update your disk driver or to re-initialize a disk.

The following computers should use the Drive Setup program:

All computers with PowerPC microprocessors

- Macintosh LC 580 series
- Macintosh LC 630 series
- Macintosh LC 630 DOS Compatible
- Macintosh Quadra 630 series computers
- Macintosh Performa 580 series computers
- Macintosh Performa 630 and 640 series computers
- PowerBook 150 series computers
- PowerBook 190 series computers

All other computers should use HD SC Setup.

NOTE: Drive Setup does not work with PowerPC Upgrade Cards. You can use HD SC Setup to update your driver or initialize a disk, but you need to turn off the PowerPC upgrade card before using HD SC Setup.

NOTE: PowerBook 150 computers do not need to update the internal hard disk driver. That driver is contained in your computer's ROM. If you try using either utility program to update the driver, nothing will happen.

Article Change History:

- 28 Feb 1997 - Updated article with Mac OS 7.6 information.
- 25 Apr 1996 - Updated technical information.
- 15 Apr 1996 - Updated technical information.

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Tech Info Library Article Number:19083



Tech Info Library

Power Macintosh 7200 & 9500: Generic Icons on System CD (12/95)

Revised: 12/19/95
Security: Everyone

Power Macintosh 7200 & 9500: Generic Icons on System CD (12/95)

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Article Created: 19 December 1995

TOPIC -----

I have a Power Macintosh 7200, and I've noticed that some of the icons on the system software CD appear generic. What could be wrong?

DISCUSSION -----

Apple has determined that there is a problem with the desktop database files on the CD. This issue is cosmetic and should not affect the performance of the applications on the CD. Apple will address this issue on future versions of the system software CD.

Support Information Services

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Tech Info Library Article Number:19084



Tech Info Library

Power Macintosh 9500: Unable to Sleep (12/95)

Revised: 12/19/95
Security: Everyone

Power Macintosh 9500: Unable to Sleep (12/95)

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Article Created: 19 December 1995

TOPIC -----

I have a Power Macintosh 9500 and an AppleVision 1710AV Display. Whenever I select Sleep from the Special menu, the screen goes black for a few seconds and then the image comes back on the screen. This happens in every resolution. How can I get the computer to sleep?

DISCUSSION -----

You need an updated System Enabler for the Power Macintosh 9500. System Enabler 701 v1.1 corrects this issue and is available on the Power Macintosh 9500 CD v2.0 or later.

Support Information Services

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Tech Info Library Article Number:19085



Tech Info Library

Power Macintosh: Port in Use After Installing GeoPort (1/96)

Revised: 1/26/96
Security: Everyone

Power Macintosh: Port in Use After Installing GeoPort (1/96)

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Article Created: 19 December 1995
Article Reviewed/Updated: 26 January 1996

TOPIC -----

I have a Power Macintosh 7200/90 with a laser printer attached to the printer port (using LocalTalk) and a Color StyleWriter 2400 attached to the modem port. After installing the Apple Telecom software for the GeoPort, I get a "port in use" error message when printing the second page to the Color StyleWriter. Is there a problem with the serial ports on the computer?

DISCUSSION -----

There is not a hardware problem with the serial ports. The "port in use" message is the result of a software conflict between the Apple Telecom software and the printer driver.

The Apple Telecom software takes complete control of the modem port when installed on a Power Macintosh. It must do this to make applications recognize the external modem. Any data that is sent to the modem port is interpreted as data meant for a modem and is processed by the Apple Telecom software. The Apple Telecom software combined with the GeoPort adapter essentially create a software-based modem.

So, although you can disconnect the GeoPort Telecom Adapter and connect the printer to the modem port, the Telecom software is still installed. Because the Telecom software is still installed, it will send data out the modem port as if it was meant for the Telecom Adapter. The software expects to control the modem port whether or not an adapter is attached, and this results in the "port in use" error message or unusual printouts.

The only workaround is to de-install the Apple Telecom software using the installer application.

This article was published in the "Information Alley":

Volume II, Issue 18, Page 6

Article Change History:

26 Jan 1996 - Added Info Alley information; made minor technical updates.

05 Jan 1995 - Corrected typos.

Support Information Services

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Tech Info Library Article Number:19086



Tech Info Library

MAE 2.0 License Manager & su Command in Solaris 2.4 (12/95)

Revised: 12/19/95
Security: Everyone

MAE 2.0 License Manager & "su" Command in Solaris 2.4 (12/95)

Article Created: 19 December 1995

TOPIC -----

The license manager in MAE does not seem to let the use of the "su" command switch to a licensed MAE account.

For example, create two accounts on a SPARCstation, calling one "works" and the other "doesnt". Use the license manager and give "works" access to use MAE. Then if you login with the "works" account, MAE functions as it should. However, if you login with "doesnt" account and enter "su - works", your environment changes to the "works" account, but you will not be able to run MAE.

Is there a workaround for this other than having to log out and log back in as the other user?

DISCUSSION -----

We were able to run MAE with the "su - username" command successfully with the following extra settings before launching MAE under Solaris 2.4, as a reference we followed your example above:

Step 1

Login as "doesnt" from the initial Solaris Login session

Step 2

Launch /usr/openwin/bin/openwin

Step 3

Create two "cmdtool" windows, for example, cmdtool.1 and cmdtool.2

Step 4

On the cmdtool.2 window, enter the command:

```
% su - works
```

Then set the DISPLAY environment variable, and export it.

```
% DISPLAY=sparc5:0.0; export DISPLAY
```

Step 5

On the cmdtool.1 window, you need to disable X server access control, or assign server access to a host. In Solaris 2.4 by default the X server access control is enabled, and no hostname is authorized to run ANY X program EXCEPT running from the initial login shell. Therefore you need to use "superuser" to explicitly grant access or disable access control with one of the following commands:

```
% su (as a super user)
# /usr/openwin/bin/xhost + (disable access control)
```

Step 6

On the cmdtool.2 window, you can now launch MAE with the MAE binary full path, example command:

```
% /opt/apple/bin/mae
```

NOTE: In HP-UX by default the X server access control is also enabled, but the "localhost" and the real local hostname, for example "hp715", are automatically authorized by the X server. Therefore you do not have to run "xhost" to assign access for your local workstation.

Support Information Services

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Tech Info Library Article Number:19087



Tech Info Library

PowerBook: Miscellaneous Frequently Asked Questions (2/97)

Revised: 2/6/97
Security: Everyone

PowerBook: Miscellaneous Frequently Asked Questions (2/97)

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Article Created: 19 December 1995
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about miscellaneous topics concerning Macintosh PowerBook computers.

DISCUSSION -----

- 1) It has been determined that my PowerBook has a hardware problem and needs service. What are my service options?
- 2) How does Apple's PowerBook service mail-in program work?
- 3) Can I use my PowerBook on an airplane?
- 4) Are the airport X-ray machines dangerous to my computer?
- 5) What are the differences between active and passive-matrix displays? Which PowerBooks have which?
- 6) Should I always use the feet on the PowerBook?
- 7) When I am using the PowerBook with an external monitor can I close the display on the PowerBook?
- 8) Do I need a screen saver on my PowerBook?
- 9) What are the differences in PowerBook SCSI cables from Apple?
- 10) I am trying to connect a SCSI device to my PowerBook. However, when I start up the PowerBook, a diamond icon with a number appears on my screen.
- 11) I'm trying to connect my PowerBook as an external hard drive (SCSI Disk Mode) to another Macintosh. When I turn on my PowerBook, I get a flashing

question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.

12) What is SCSI disk mode?

13) Which PowerBook models can accomplish SCSI disk mode?

14) What are the instructions for connecting a PowerBook in SCSI disk mode?

15) Which PowerBook models can use an external monitor?

16) What should I use to clean the PowerBook?

17) Sometimes I can't seem to use my internal modem and print at the same time. Why is this?

18) Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

19) Is it safe to move my PowerBook while it is on?

20) Can I install a hard drive from my PowerBook Duo 280 into my PowerBook 140?

21) Where else can I go for answers?

22) Where I can get the latest Apple software updates online for my PowerBook?

DISCUSSION -----

1) Question: It has been determined that my PowerBook has a hardware problem and needs service. What are my service options?

Answer: You can contact the Apple Assistance Center at 800-SOS-APPL (800-767-2775) to arrange for repair at our repair center or you can contact the Apple Referral Center at 800-538-9696 to obtain a phone number for an Apple-authorized service provider in your area. Note that the Apple Assistance Center may wish to perform further troubleshooting, so you should have your PowerBook with you when you call.

2) Question: How does Apple's PowerBook service mail-in program work?

Answer: If the technical support representative at the Apple Assistance Center (800-767-2775) determines that there is a hardware problem with the PowerBook, Apple will have Airborne Express pick up the PowerBook the next business day. The fixed PowerBook will usually return within 2-3 business days. For example, if you call 800-SOS-APPL on a Monday, the PowerBook will be picked up on Tuesday, and will usually be back by Thursday or Friday. As long as the PowerBook is covered under warranty, the entire repair process is provided at no cost. If the PowerBook is not under warranty, shipping, labor, and parts costs will apply.

3) Question: Can I use my PowerBook on an airplane?

Answer: It is best to check with your airline to find out specific rules for your flight. Airline pilots have reported instrument interference from electronic devices used on airplanes. Be aware that if the PowerBook is moved or bumped while the hard drive is spinning, the hard drive can be damaged resulting in lost data.

4) Question: Are the airport X-ray machines dangerous to my computer?

Answer: The X-rays emitted from the machine are not at all dangerous to the computer. However, the metal rollers below the conveyor belt emit a magnetic field that could damage the data on the hard drive if the shielding is not adequate. We have never heard of a report of this being a problem in the United States, but in under-developed countries you might want to ask that the PowerBook be hand checked. Usually a security guard will require you to demonstrate that the computer is functional, so it is a good idea to have the PowerBook in sleep mode to make it quick.

You should be aware that the metal detecting batons used by some security guards emit a very strong, unshielded, magnetic field. You should avoid getting the computer and any magnetic media, such as floppy disks, near these devices.

5) Question: What are the differences between active and passive-matrix displays? Which PowerBooks have which?

Answer: Passive-matrix screens apply the electric field voltages along the edges of the screen, so that pixels appear light and dark at the intersection of rows and columns. Each pixel is passively responding to voltage differences applied along the horizontal and vertical edges of the screen. It is difficult to get a large number of crystals to line up quickly, and completely. So passive-matrix screens are relatively slow and provide less precise definition.

Active-matrix screens use a single transistor at every single pixel location. This provides a good strong source of electric field, and it only has to act on a very tiny region of liquid crystals. So they are quite fast and every crystal in a pixel is lined up perfectly.

The merits of the passive screen are lower cost and lower power usage. But the angle at which you can view the screen undistorted is smaller than for an active-matrix screen. Also, a passive-matrix screen is not as bright as its active-matrix counterpart.

You may experience submarining on a passive-matrix screen, meaning the pointer tends to disappear momentarily when you move it quickly across the screen until it catches up with the trackball. You may also notice speed trails, or shadowy, comet-like trails following the pointer or other objects you drag around the screen. They disappear as quickly as they appear, but some users find them distracting. Gray-scale passive-matrix screens are particular susceptible to these anomalies.

An active-matrix screen is brighter and provides better definition. The screen

is also less likely to distort when viewed at more extreme angles.

PowerBook computers with active-matrix screens:

170, 180, 180c, 250, 270c, 280, 280c, 540, 540c, 5300c, 5300ce, 2300c

PowerBook computers with passive-matrix screens:

100, 140, 145, 145B, 150, 160, 165, 165c, 190, 190cs, 210, 230, 520, 520c, 5300, 5300cs

6) Question: Should I always use the feet on the PowerBook computer?

Answer: Heat is dissipated through the bottom of the PowerBook and through the keyboard. If the feet are not used while the PowerBook is in use, it is possible that the PowerBook will overheat and shut off or even damage the hardware inside the computer. We recommend that you always use the elevation feet when using the PowerBook.

7) Question: When I am using the PowerBook with an external monitor can I close the display on the PowerBook?

Answer: As discussed above, heat is dissipated through the bottom of the PowerBook and through the keyboard. If the PowerBook display is active and the display is closed, it is possible that enough heat will be generated that the display will distort or warp. We recommend that you leave the display open by at least 1" for heat dissipation.

It is possible to use 200, 2300, 190, and 5300 series PowerBook computers in a mode that does not require the display to be open. To use the PowerBook computer in this mode, follow these steps.

Step 1

Connect the monitor to the PowerBook while the PowerBook computer is off.

Step 2

Close the display on the PowerBook computer.

Step 3

Using an external keyboard, press the power button. If you are not using an external keyboard, press the power button on the PowerBook computer's keyboard and quickly close the PowerBook computer's display.

Step 4

The computer will then start up as if the external monitor is the only display and the PowerBook display will not be active. Because the PowerBook display is not generating any heat, there is no danger of the display distorting if you leave it closed.

8) Question: Do I need a screen saver on my PowerBook?

Answer: Screen savers are generally for entertainment purposes and do not serve any protective function for PowerBook displays or the Cathode Ray Tube (CRT)-type monitors used with most desktop computers. However, if a PowerBook computer's screen is left on with the same image for several weeks, it is possible that the image will "burn" into the screen. Do not leave for a lengthy vacation and forget to turn your PowerBook off.

9) Question: What are the differences in the two PowerBook Small Computer Systems Interface (SCSI) cables made by Apple?

Answer: There are two PowerBook SCSI cables available from Apple:

The HDI-30 SCSI System Cable (M2538LL/A) - This cable is for attaching SCSI devices such as CD-ROM drives, Syquest drives, and scanners to the PowerBook computer.

The HDI-30 SCSI Disk Adapter Cable (M2539LL/A) - This cable is used to connect the PowerBook computer as a SCSI device to another Macintosh computer.

10) Question: I am trying to connect a SCSI device to my PowerBook computer. However, when I start up the PowerBook computer, a diamond icon with a number in the middle of it appears on my screen.

Answer: You are most likely using the wrong SCSI cable. You should be using the HDI-30 SCSI System Cable (M2538LL/A), which is a light gray color and only has 29 pins (there is a pin missing). You are probably using the HDI-30 SCSI Disk Adapter cable (M2539LL/A) which is dark gray and has all 30 pins. The HDI-30 SCSI Disk Adapter cable puts the PowerBook computer into SCSI disk mode allowing it to be attached to a desktop computer as a SCSI device and resulting in the diamond icon with the SCSI ID number in the middle appearing on the screen.

11) Question: I am trying to connect my PowerBook computer as an external hard drive (SCSI Disk Mode) to another Macintosh computer. When I turn on my PowerBook computer, I get a flashing question mark or a "Sad Mac" instead of the diamond icon with a SCSI ID number.

Answer: You may have the wrong cable. Use the Apple HDI-30 SCSI disk adapter cable, part number M2539LL/A, in conjunction with an Apple SCSI System Cable appropriate to your other Macintosh along with proper SCSI termination.

12) Question: What is SCSI disk mode?

Answer: SCSI disk mode is a method of connecting a capable PowerBook computer to another Macintosh computer so that it is accessed as if it were an external hard drive. This method can be preferable to file sharing because it is somewhat easier, and much faster.

13) Question: Which PowerBook computer models can accomplish SCSI disk mode?

Answer: The SCSI disk mode feature exists on all PowerBook computer models except the PowerBook 140, 145, 145B, 150, and 170 computers. The PowerBook 200 and 2300 series computers require a MiniDock to accomplish SCSI disk mode.

14) Question: What are the instructions for connecting a PowerBook computer in SCSI disk mode?

Answer:

Step 1

Make sure you have a PowerBook computer that is capable of SCSI disk mode and the HDI-30 SCSI Disk Adapter cable (M2539LL/A). You will also need an Apple terminator (M3503LL/A) and a SCSI system cable (M0206, or M2538LL/A if the other computer is a PowerBook).

Step 2

Use the PowerBook or PowerBook Setup control panel to set the PowerBook to a SCSI ID not currently in use on the SCSI chain of the other Macintosh.

Step 3

Shut down both computers.

Step 4

Connect the HDI-30 cable to the back of the PowerBook computer. Connect the terminator to the end of the HDI-30 cable. Connect the HDI-30 cable with terminator to the last SCSI device on the chain, if any. If you do not have any other external SCSI devices, connect the HDI-30 cable with terminator to the SCSI system cable, then connect the SCSI system cable to the back of the other Macintosh computer.

Your setup should look like this:

PowerBook -> HDI-30 SCSI Disk Adapter cable -> Terminator -> External SCSI chain
if there is one -> SCSI system cable -> Other Macintosh computer

Step 5

Turn on the PowerBook computer. After a moment you should see a SCSI symbol (diamond with the SCSI ID number in the middle) on the screen. If you have a 500 series PowerBook computer you may not see this icon until after the next step.

Step 6

Turn on the other Macintosh computer. After starting up, the PowerBook

computer's hard drive should appear on the desktop.

You can then transfer files back and forth as if the PowerBook computer were an external hard drive.

15) Question: Which PowerBook computer models can use an external monitor?

Answer: External video can be accomplished on all PowerBook computer models except the PowerBook 100, 140, 145, 145B, 150, and 170. The PowerBook 200 and 2300 series computers require a MiniDock or Duo Dock to use external monitors. External video on the PowerBook 190 computer is optional and can be upgraded after purchase.

16) Question: What should I use to clean the PowerBook computer?

Answer: Clean the computer's outside surfaces with a damp (not wet) cloth. Clean the screen with soft, lint-free paper or cloth and a mild glass cleaner. Do not spray the glass cleaner directly onto the screen. Sometimes humidity or condensation may cause moisture to gather on the trackpad (if your PowerBook model has a trackpad). If this happens, gently wipe the trackpad with a clean cloth before you use it.

To clean the trackball assembly, follow these steps:

Step 1

Remove the trackball retaining ring by turning it counterclockwise until it pops out (about 1/4 turn). You don't need tools for this, you can just press against the two small ridges on the ring with your fingernails.

Step 2

Lift the retaining ring and trackball out of its cavity.

Step 3

Locate the small rubber rollers at the left and bottom sides of the trackball cavity. Depending on your model, they may look like small rings or wheels.

Step 4

Use any reasonably clean, blunt object (such as your finger or a cotton swab) to wipe off the rollers. Do not use any liquid, including any amount of cleaning fluid or water, inside the computer.

Step 5

Locate the three white or red bearings located at approximately clockwise 4:00, 7:00, and 11:00 in all PowerBooks except the PowerBook 100, which has three black posts instead of bearings. Using a fingertip, dry cotton swab, or other blunt object, clean them of any debris.

Step 6

Replace the trackball and the retaining ring.

17) Question: Sometimes I cannot seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook computer models that have only one serial port (190, 200, 500, 2300, and 5300 series), the serial port is mapped as a modem port. Under normal conditions this is not a problem - the internal modem can be used at the same time as a serial device such as a printer is being used.

The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook computer is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there is an update.

18) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook computers with a single serial port (190, 200, 500, 2300, and 5300 series) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook computers:

- AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.
- If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.
- When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

19) Question: Is it safe to move my PowerBook computer while it is on?

Answer: If the hard drive is spinning and there is a jolt to the computer, the head can crash into the platter and cause the hard drive to be damaged. This is not likely to happen while, say, walking your PowerBook computer from the

kitchen to the living room. It is not suggested that you use the PowerBook computer in a truck traveling over a dirt road or other instances where jarring or bumping could occur.

In general, it is okay to transport PowerBook computers while they are asleep. When moving a sleeping computer, there is a slight danger of accidentally hitting a key that would wake up the computer and also power-up the hard disk. Make sure that your PowerBook computer is solidly closed so it cannot accidentally start up.

20) Question: Can I install a hard drive from my PowerBook 180c into my PowerBook 230 (Duo)?

Answer: No, all PowerBook 200 and 2300 series computers require a hard drive with a height of 17 millimeters (mm). All other PowerBook computers require a hard drive with a height of 19 mm.

Attempting to put a taller 19 mm hard drive into a PowerBook 200 or 2300 series computer will not work because the drive is physically too tall.

All PowerBook computers, except the 200 and 2300 series (Duos), can operate with either height drive, however they come with a 19 mm height hard drive. If you replace a hard drive with a different (shorter) height one it will require a different hard drive bracket. Apple does not offer any special brackets for swapping hard drives.

If you want to remove a hard drive from a PowerBook computer and install it in an external case, there are third party vendors that offer kits including cables and a power supply. Apple does not offer any such kits.

21) Question: Where else can I go for answers about PowerBook computers?

Answer: If you have not done so already, check the other PowerBook-related FAQ documents in Apple's Technical Information Library (TIL). This library is located on the Internet at <<http://til.info.apple.com/>> This is Apple's official tech support library and contains thousands of technical articles.

22) Where I can get the latest Apple software updates online for my PowerBook?

- On the Internet at the following sites:
 - Worldwide Web: <http://www.info.apple.com/swupdates>
 - ftp:
ftp://ftp.info.apple.com/Apple_Support_Area/Apple_SW_Updates/US/Macintosh/PowerBook/
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Article Change History:

06 Feb 1997 - Updated URL for PowerBook software

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Tech Info Library Article Number:19088



Tech Info Library

QuickTime Conferencing: ISDN Termination Type/Mode (12/95)

Revised: 12/19/95
Security: Everyone

QuickTime Conferencing: ISDN Termination Type/Mode (12/95)

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Article Created: 19 December 1995

TOPIC -----

This article describes an issue with ISDN lines and the line termination type/mode that is best suited to video teleconferencing.

DISCUSSION -----

If an ISDN line has been installed to do QuickTime Conferencing from a Macintosh with an installed H.320 card, be sure your ISDN provider has provided the correct line termination type/mode. The ISDN provider may supply your ISDN line with generic type/mode termination, when video conferencing type/mode termination is required.

To illustrate, an ISDN line to be used with QuickTime Conferencing was supplied, and after many attempts (different configurations, computers, H.320 cards, and phone numbers) this line would not work properly.

In an attempt to resolve this issue, the system was connected to a known working ISDN line to check the system's configuration and hardware, and everything worked properly. The ISDN provider, of the non-working line, was contacted and the line termination was changed from type/mode "D" (generic) to "A". The ISDN line now works properly.

Support Information Services

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Tech Info Library Article Number:19089



Tech Info Library

Power Macintosh: Built-in Ethernet 802.3u Compliant (12/95)

Revised: 12/19/95
Security: Everyone

Power Macintosh: Built-in Ethernet 802.3u Compliant (12/95)

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Article Created: 19 December 1995

TOPIC -----

Is the built-in Ethernet on the Power Macintosh 6100, 7100, 8100, 7200, 7500, 8500, and 9500 computers IEEE 802.3u compliant?

DISCUSSION -----

The built-in Ethernet, on the computers you mentioned, is not IEEE 802.3u compliant. IEEE 802.3u is the specification for Media Access Control (MAC) Parameters, Physical Layer, Medium Attachment Units, and Repeater for 100 Mbps Operation, Type 100BASE-T.

In order to be compliant with this specification, you will need to provide a Media Independent Interface (MII), which may have an auto-negotiation feature to determine speed capabilities of the device (host). Apple provides no such MII at this time. You will have to either purchase a card capable of auto-negotiation, or a hub capable of switching both 10BASE-T and 100BASE-T.

Support Information Services

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Tech Info Library Article Number:19090



Tech Info Library

PowerPC PowerBook Computers: Frequently Asked Questions (4/97)

Revised: 5/1/97
Security: Everyone

PowerPC PowerBook Computers: Frequently Asked Questions (4/97)

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Article Created: 19 December 1995
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about the PowerPC PowerBooks. This discussion includes the PowerBook 5300 series, 2300 series, 500 series upgraded to PowerPC, and 200 series upgraded to PowerPC.

DISCUSSION -----

- 1) What is different about the PowerPC PowerBooks compared to other PowerBooks?
- 2) I forgot the password that I entered into my Password Security control panel and now I cannot get into my computer. Is there anyway to bypass the password?
- 3) If the PowerBook 5300/2300/190 series computers do not come with system disks, how do I restore my software in the case of a hard drive crash?
- 4) Why is it that my Macintosh Quadra 800 seems faster than my PowerBook 5300 (or any PowerPC PowerBook) when running some applications?
- 5) How do the PowerBook 5300 series computers implement external video?
- 6) What is special about the SVGA display that comes with the PowerBook 5300ce computer?
- 7) Can the PowerBook 5300/190 series computers use two batteries simultaneously?
- 8) Does the PowerBook 5300ce computer support thousands of colors on both the internal display and an external monitor?
- 9) Will the RAM from my PowerBook 200/500 series computer be compatible if I upgrade to the PowerPC 603e processor?

10) Sometimes I cannot seem to use my internal modem and print at the same time. Why is this?

11) Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

12) I am trying to reset the parameter RAM (PRAM) on a PowerBook 5300 series computer but it does not seem to be working. What is the correct way to "zap" the PRAM on a PowerBook 5300 series computer?

13) Do the PowerPC PowerBook computers support PlainTalk Speech Recognition?

14) Can I use an external microphone with a PowerBook 5300 series computer?

15) I have hooked up an external CD-ROM drive to my PowerBook 5300 series computer and I am playing an audio CD. When I bring up the AppleCD Audio Player I can see the numbers moving but there is no sound coming through the speakers, although I can hear the sound of regular multimedia CD-ROM discs fine. Can I play an Audio CD through the internal speakers?

16) My PowerBook computer's display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

17) Do the PowerBook 5300 and 2300 series computers support the GeoPort?

18) Are Apple's current docking products, modems, and RAM still compatible with a PowerBook 200 series computer which has been upgraded to PowerPC?

19) Will my RAM and internal modem still be compatible after I upgrade my PowerBook 500 series computer to the PowerPC 603e processor?

20) Some PowerPC PowerBook computers come with 8, 16, 20, or 32 MB of RAM. Which models come with the RAM card slot filled?

21) What are the differences in the trackpads that come on the different PowerPC PowerBook computers?

22) Sometimes when I try to use the trackpad, the cursor jumps around uncontrollably. What causes this?

23) My PowerBook 5300 series computer will not turn on at all. There is no reaction whatsoever when I press the power button. Is there any thing I can try before I decide I have to have it serviced?

24) Where else can I go for answers about PowerBook computers?

25) Where can I get the latest software updates for my PowerBook?

DISCUSSION -----

1) Question: What is different about the PowerPC PowerBooks compared to other PowerBooks?

Answer: The PowerBook 5300, 2300, and upgraded 500/200 series PowerBook computers use a PowerPC 603e microprocessor which runs at 100 MHz (the PowerBook 5300ce runs at 117MHz). This processor is extremely fast compared to other PowerBook models (which use a 680x0 processor) when used with applications that are optimized for PowerPC. These applications are usually referred to as "native" or "fat binary." An application that is "fat binary" contains code for PowerPC and 680x0 processors. A native or fat binary application can run up to 5 times faster on a PowerPC processor than it would on a 680x0 processor. The PowerPC 603e also has an integrated FPU and a 32k cache.

2) Question: I forgot the password that I entered into my Password Security control panel and now I cannot get into my computer. Is there anyway to bypass the password?

Answer: The password protection software bundled with the 5300/2300/190 series PowerBook computers is driver level security and cannot easily be bypassed. In fact, you will not even be able to reformat the drive if you do not have the password. If you do forget the password, take the PowerBook to an Apple-authorized dealer. The dealer can call our dealer help line and get a special code to bypass the security and reset your password. The dealer may charge a fee for this service, since it is a software issue, not a hardware issue, and they will probably ask for some verification that the PowerBook is your computer.

3) Question: If the PowerBook 5300/2300/190 series computers do not come with system disks, how do I restore my software in the case of a hard drive crash?

Answer: The PowerBook 5300/2300/190 series computers come with a utility called Floppy Disk Maker that you can use to back up the bundled software on the hard drive and/or make a functional set of system disks.

A "full" backup will require between 22 and 24 high density floppy disks and back up the following software:

- Apple Remote Access (1 disk)
- PowerBook Extras (3 disks) - Includes Apple IR File Exchange, Disk Image Mounter, Floppy Disk Maker, Password Security, Eric's Ultimate Solitaire Sampler, Spin Doctor, Super Maze Wars, and HyperCard Player.
- PowerTalk (2 disks)
- QuickDraw GX (4 disks)
- System Software (11-13 disks)
- WorldScript (1 disk)

Note that Floppy Disk Maker will NOT back up the following software:

- Adobe Acrobat Reader
- MacLinkPlus

The appropriate company should be contacted if any of the above software is lost or damaged.

A "minimum" backup of the system software will require between 11 and 13 high density floppy disks and will create a full set of system disks.

The computer will prompt you to make these disks every time it is turned on until the disks are made.

4) Question: Why is it that my Macintosh Quadra 800 seems faster than my PowerBook 5300 (or any PowerPC PowerBook) when running some applications?

Answer: You will only see a performance increase on the PowerPC (PPC) PowerBook when using native (optimized for the PowerPC) application programs. If you are using older programs written for the 680x0 processor, the PPC PowerBook computer must translate every instruction into a PowerPC instruction before executing it. When the computer is running in this mode, it is said to be in emulation mode. Since the System 7.5 Finder is mostly 680x0 code, Finder operations such as opening and closing windows may not be much faster than a 68040 computer such as a Quadra 800.

5) Question: How do the PowerBook 5300 series computers implement external video?

Answer: The PowerBook 5300 series computers implement a Processor Direct Slot (PDS) video card. This video card provides an external video connector on the rear panel of the computer. This video card provides 8-bit color at resolutions up to 832x624 using 512k VRAM. This card can be replaced by a third-party video card that offers more colors at higher resolutions, networking cards, or other cards that typically run through a PDS slot.

6) Question: What is special about the SVGA display that comes with the PowerBook 5300ce computer?

Answer: The SVGA display that comes with the PowerBook 5300ce computer offers a higher screen resolution than any other previous PowerBook computer models. It displays 800x600 pixels at thousands of colors.

7) Question: Can the PowerBook 5300/190 series computers use two batteries simultaneously?

Answer: Yes, the PowerBook 5300/190 expansion bay (where the floppy disk drive normally is) can accept a battery. Since the expansion bay does not pass AC power through, any battery used through the expansion bay will require its own power supply for charging.

8) Question: Does the PowerBook 5300ce computer support thousands of colors on both the internal display and an external monitor?

Answer: No. The PowerBook 5300ce computer has 1 MB of Video Ram (VRAM) dedicated to the internal display providing thousands of colors at an 800x600 (SVGA)

resolution. Like all PowerBook 5300 series computers, the 5300ce computer comes with 512k VRAM for external monitors, providing 256 colors at an 832x624 resolution. The external video card can be upgraded to 1 MB VRAM with a third-party video card.

9) Question: Will the RAM from my PowerBook 200/500 series computer be compatible if I upgrade to the PowerPC 603e processor?

Answer: Yes, in fact you will automatically receive a 4 MB RAM upgrade since the PowerPC 603e logic board has 8 MB of RAM soldered on it, while the existing 200/500 logic boards have only 4 MB. So for instance, if you have a PowerBook 540c with 12 MB before the upgrade, you will have 16 MB after the upgrade.

10) Question: Sometimes I cannot seem to use my internal modem and print at the same time. Why is this?

Answer: On most PowerBook computer models that have only one serial port (190, 200, 500, 2300, and 5300 series computer), the serial port is mapped as a modem port. Under normal conditions this is not a problem - the internal modem can be used at the same time as a serial device such as a printer is being used. The exception to this is if you are using a communications program that does not use the Apple Communications Toolbox (CTB). If this is the case, you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to Internal, Compatible, or "Use internal modem instead of modem port". The location of this setting will depend on what version of the modem and system software you have. When the PowerBook is set like this, the serial port cannot be used with serial devices. However, it can be used with LocalTalk devices.

The vast majority of communications programs that are developed for Macintosh right now will use the CTB. If you find that you have an older communications program, contact the manufacturer to see if there's an update.

11) Question: Sometimes I get errors when printing to my StyleWriter (or any serial printer). Why is this?

Answer: As discussed in the previous question, a PowerBook with a single serial port (190, 200, 500, 2300, and 5300 series computers) introduces some variables to serial printing. Three things must be true to print to a serial printer with a single serial port PowerBook:

- * AppleTalk must be set to inactive in the Chooser or something other than LocalTalk must be selected in the Network control panel.

- * If you have an internal modem you will need to respectively set the PowerBook, PowerBook Setup, or Express Modem control panel to External, Normal, or uncheck "Use internal modem instead of modem port" (see above). The location of this setting will depend on what version of the modem and system software you have.

- * When selecting the serial printer in the Chooser, you must select the modem port or the combined printer/modem port. Do not select the printer port.

12) Question: I am trying to reset the parameter RAM (PRAM) on a PowerBook 5300 series computer but it does not seem to be working. What is the correct way to "zap" the PRAM on a PowerBook 5300 series computer?

Answer:

**** WARNING **** Be aware that resetting the PRAM will reset such settings as the sound volume, trackpad speed, and screen brightness to their default value, and will purge the contents of a RAM disk if you are using one.

To reset the PRAM on a PowerBook 5300 series computer, restart the computer and hold down the Command (Apple), Option, P, and R keys. Wait for the computer to make its startup chime twice. Then you may release the keys. At this point the computer may shut down or continue to start up. If it shuts down, use the small power button on the back to restart the computer.

13) Question: Do the PowerPC PowerBook computers support PlainTalk Speech Recognition?

Answer: PlainTalk Speech Recognition will work with a PowerBook 5300 or 2300 series computer if you install PlainTalk version 1.4.1 and the English Speech Recognition system extension version 1.5. You can only use Speech Recognition with the built-in microphone.

Step 1

Download the PlainTalk software from the Web at the following URL:

<http://speech.apple.com/speech/ptk/ptk.html>

Step 2

Install PlainTalk 1.4.1 (English Speech Recognition and Text-to-Speech).

Step 3

Replace the Speech Recognition extension 1.4.1 with version 1.5.

14) Question: Can I use an external microphone with a PowerBook 5300 series computer?

Answer: The audio input port on the PowerBook 5300 series computers is a line-level input. This means that it requires an audio signal with a strength of at least 1 volt peak-to-peak. The PlainTalk microphone will not work with any existing PowerBooks. If you want to use an external microphone, you will need a microphone that outputs a line-level signal. Note that battery powered microphones do not necessarily provide a line-level signal.

Alternatively, you can run a standard microphone through a stereo system or a pre-amp that outputs a line-level signal.

15) Question: I have hooked up an external CD-ROM drive to my PowerBook 5300 series computer and I am playing an audio CD. When I bring up the AppleCD Audio Player I can see the numbers moving but there is no sound coming through the speakers, although I can hear the sound of regular multimedia CD-ROM discs fine. Can I play an Audio CD through the internal speakers?

Answer: There is not a direct connection between the SCSI port and the speakers, so direct play-through of audio CDs is not readily possible. Typically, only Macintosh computers which have an internal CD-ROM drive can play-through audio CD sound to the internal speakers. You will need to connect external speakers to the external CD-ROM drive to hear the audio CD sound.

16) Question: My PowerBook computer's display is blurry or sometimes has shadowing and ghosting effects. What can I do to correct this?

Answer: The technology used on the passive-matrix displays is susceptible to shadowing and ghosting, since it does not individually address each pixel on the display. Gray-scale passive-matrix displays are particularly susceptible to these symptoms. The PowerBook 100, 140, 145, 145B, 150, 160, 165, 210, 230, 520, 190, and 5300/100 all use a gray-scale passive-matrix display.

Some suggestions to reduce the effects of the shadowing:

- * Adjust the brightness and contrast settings of the display. Usually a lighter contrast setting will look better.

- * Use a darker desktop pattern. The effects of the shadowing will not be as apparent with the darker background.

- * Open the Monitors control panel and select "Black & White" instead of 16 Shades of Gray.

Although these tips can help mitigate the effects of the shadowing, some amount of screen anomalies will always be present on gray-scale passive-matrix displays.

17) Question: Do the PowerBook 5300 and 2300 series computers support the GeoPort?

Answer: No, the PowerBook 5300 and 2300 series computers use a standard serial port with 8 pins. The GeoPort requires a ninth pin to draw power from the computer.

18) Question: Are Apple's current docking products, modems, and RAM still compatible with a PowerBook 200 series computer which has been upgraded to PowerPC?

Answer: Most, if not all docking products, internal modems, and RAM used with a PowerBook 200 series computer should still be compatible after the PowerPC 603e upgrade.

19) Question: Will my RAM and internal modem still be compatible after I upgrade my PowerBook 500 series computer to the PowerPC 603e processor?

Answer: The existing RAM card and internal modem should be compatible with the PowerPC 603e upgrade.

20) Question: Some PowerPC PowerBook computers come with 8, 16, 20, or 32 MB of RAM. Which models come with the RAM card slot filled?

Answer: Only the PowerBook 5300ce/117 32/1.1 GB and the PowerBook 2300c 20/1.1 GB come with RAM cards installed in their RAM slots. The 5300ce/117 32/1.1 GB comes with a 16 MB RAM card and 16 MB soldered on the logic board. The PowerBook 2300c 20/1.1 GB comes with a 12 MB RAM card and 8 MB on the logic board. All other models come with either 8 MB or 16 MB soldered on to the logic board, but no memory in the RAM card slot which is available for future expansion.

21) Question: What are the differences in the trackpads that come on the different PowerPC PowerBook computers?

Answer: The PowerBook 2300 and 190 series computers come with a "clickable" trackpad. With this kind of trackpad you can use the pad itself to click, double click, and drag, therefore never having to use the clicker. Because the PowerBook 5300 series computers were designed and implemented at an earlier date, they do not have the features of the clickable trackpad.

22) Question: Sometimes when I try to use the trackpad, the cursor jumps around uncontrollably. What causes this?

Answer: The trackpad works on a principal called coupling capacitance. As your finger moves over the surface, the trackpad evaluates the change in capacitance between two layers of measurement electrodes built into the surface of the trackpad.

The most common cause of a jumping trackpad cursor is moisture interference. If you have sweaty hands or if moisture collects on the pad, this may confuse the trackpad. Wiping off the trackpad with a cloth or tissue will usually fix this problem. If you find that it continues to get wet you may want to consider purchasing a teflon or mylar pad to fit over the pad to prevent the moisture from having direct contact with the pad. Before installing the pad, make sure the trackpad is clean. You can use a mild glass cleaner sprayed onto the cloth, not onto the trackpad itself.

Make sure only one part of your finger is touching the pad. You will not be able to use a pen or other object, it is designed to work with your finger. Also make

sure that you are not resting your wrist on or very close to the pad. The trackpad may interpret this as your wrist touching it and make the cursor move in that direction. If you suspect either of these is causing the cursor's behavior, try raising your wrist in the air and only touch the pad with the tip of your finger. If the symptom goes away then you know that one of the above is the cause and you should adjust the position of your wrist and or finger.

Oil or lotion can cause the same problem. Either do not use hand lotion, or consider purchasing a teflon or mylar pad to protect the pad. Before installing the teflon pad, make sure the trackpad is clean.

Jewelry may also cause interference. Try removing rings or bracelets and see if the jumping or erratic behavior disappears.

23) Question: My PowerBook 5300 series computer will not turn on at all. There is no reaction whatsoever when I press the power button. Is there any thing I can try before I decide I have to have it serviced?

Answer: It is possible that the power manager is corrupted and is not letting the PowerBook turn on. To reset the power manager, follow these steps:

Step 1

Remove the power adapter and battery from the computer.

Step 2

Push the reset button in the back of the computer and hold it for 30 seconds.

Step 3

Make sure the AC adapter is connected to a live AC outlet then connect the AC adapter to the back of the computer.

Step 4

Push the reset button in back again, but just briefly - the computer should power on. If it does not power on, push the main power button on the keyboard.

To prevent this from happening in the future, make sure the AC adapter is "live" at all times when connected to the PowerBook.

If the above procedure does not help, the PowerBook will need to be serviced.

24) Question: Where else can I go for answers about PowerBook computers?

Answer: If you have not done so already, check the other PowerBook-related FAQ documents in Apple's Technical Information Library (TIL). This library is available on the Internet at <<http://til.info.apple.com/>> and contains thousands of technical articles.

25) Where can I get the latest software updates for my PowerBook?

All Apple software updates are posted to the Internet, America Online and CompuServe:

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:19091



Tech Info Library

Color LaserWriter 12/600 PS: Using with NetWare 3.1x (12/95)

Revised: 12/19/95
Security: Everyone

Color LaserWriter 12/600 PS: Using with NetWare 3.1x (12/95)

=====

Article Created: 19 December 1995

TOPIC -----

This article contains information on how to setup a NetWare 3.1x server to print to an Apple Color LaserWriter 12/600 PS printer.

DISCUSSION -----

These instructions use the Apple Printer Utility, which comes with the Apple Color LaserWriter 12/600 PS printer. There are two versions of the Apple Printer Utility, one of a Macintosh computer, and another for Windows-based computers. You may use either version.

Setting Up the Color LaserWriter 12/600 PS Printer

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Step 1

Generate a startup page by turning the printer off, then back on.

Step 2

using the Supervisor account, Login to a Novell file server from a MS-DOS client.

Step 3

At the MS-DOS prompt, type PCONSOLE, and press Enter (or Return).

Step 4

Use the arrow keys to highlight Change Current File Server in the Available Options menu, and press Enter.

Step 5

If the Novell file server you want the Color LaserWriter 12/600 PS to connect to is not already listed, press the Insert key and select the file server you want to use.

Step 6

Under the Available Options menu, use the arrow keys to highlight Print Server Information and press Enter.

Step 7

Press the Insert key, then enter the PServer name (provided on the printer startup page), and press Enter.

Note:

PServer names with spaces will not work with a NetWare 3.x server. If the PServer name on the printer startup page has spaces, you need to follow the steps listed in the Verify or Change PServer Name section of this article to change or remove them.

Step 8

Under the Available Options menu, use the arrow keys to highlight Print Queue Information, and press Enter.

Step 9

In the Print Queue list, press the Insert key to create a new print queue on the NetWare server.

Step 10

At the prompt, type the new queue name and press Enter.

Note:

This is the descriptive name people will use to print to the Apple Color LaserWriter 12/600 PS printer.

Step 11

Select the name of the queue you specified in Step 10 and press Enter.

Step 12

Under the Queue Information menu, highlight Queue Servers and press Enter.

Step 13

In the Queue Servers list, press Insert and select the Color LaserWriter 12/600 PS printer's PServer name you entered in Step 7.

Step 14

Turn the printer off, then on. Give the printer a minute or so to attach to the server.

Step 15

Check that the printer is attached by going into the Queue Information menu, highlighting Currently Attached Servers, and pressing Enter. Whenever the PServer attaches to the NetWare 3.x server, the PServer name appears in the Currently Attached Servers list.

Troubleshooting Steps

=====

If the Color LaserWriter 12/600 PS printer does not attach to the NetWare file server, first verify the PServer name. If the printer still doesn't attach to the file server, check the routing.

Verify or Change PServer Name

Step 1

Run the Apple Printer Utility and select your Color LaserWriter 12/600 PS Printer in the Printer Selector window.

Note:

If your using the Windows version of the Apple Printer Utility, you will only see IPX printers on your network.

Step 2

Open up the Communication Configuration by clicking on the triangle to the left.

Step 3

Open up the NetWare Configuration by clicking on the triangle to the left it.

Step 4

Verify that the PServer option is marked; if not, mark it.

Step 5

Verify that the Print Server Name is the same as the PServer name you entered in step 7 of Setting Up the Color LaserWriter 12/600 PS Printer procedures above. If the name is not correct, follow the procedures in Setting Up the Color LaserWriter 12/600 PS Printer and enter the correct name.

Note:

If the PServer name contains a space, change it to an underscore, then modify the PServer name on the NetWare server.

Step 6

Click the Send button if it is highlighted. If the Send button is not highlighted, then you did not make a noticeable change to the printer name in Step 5.

Step 7

Choose Restart Printer from the Utilities menu. Give the printer a minute or so to attach to the server.

Step 8

Use PCONSOLE to verify that the Color LaserWriter 12/600 PS printer attached to the NetWare server.

Note:

You verify the printer is attached by going into the Queue Information menu, selecting the queue for your Apple Color LaserWriter 12/600, and choosing Currently Attached Servers. Whenever your Color LaserWriter 12/600 PS PServer attaches to the NetWare 3.x server, its PServer name appears in the Currently Attached Servers list.

Check Routing Issues

Step 1

Activate the TRACK ON option on the NetWare server.

Step 2

Turn the printer off, then on.

Step 3

Watch the router tracking screen for a "get nearest server" request from the Apple Color LaserWriter 12/600 PS printer. Pause the router tracking screen if needed. The get nearest server message should appear on the screen about the same time as the test page prints.

Step 4

If the PServer name does not appear on the screen, you probably have a routing problem.

Step 5

If the PServer name does appear on the screen, check the name and verify that it is the correct spelling.

Step 6

If the spelling is correct, go back and repeat/verify the Setting Up the Color LaserWriter 12/600 PS Printer procedures.

Step 7

If the spelling is not correct, go back and repeat the Verify or Change PServer Name procedures.

Support Information Services

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Tech Info Library Article Number:19093



Tech Info Library

Qdea (12/95)

Revised: 12/19/95
Security: Everyone

Qdea (12/95)

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Article Created: 19 December 1995

Qdea

6331 Hilton Court
Pine Springs, MN 55115

Telephone: 612-779-0955

Company Profile:

Develops and markets Macintosh file synchronization software for AppleTalk networks, called Synchronize Pro!

Support Information Services

Copyright 1995 Apple Computer, Inc.

Tech Info Library Article Number:19094



Tech Info Library

Power Macintosh 7500 & 8500: Using a DAV Card (12/95)

Revised: 10/14/96
Security: Everyone

Power Macintosh 7500 & 8500: Using a DAV Card (12/95)

=====

Article Created: 19 December 1995

TOPIC -----

I have a Power Macintosh 8500 computer with a third-party DAV (Digital Audio/Video) card installed. Ever since installing the DAV card the images on the screen appear distorted.

DISCUSSION -----

Apple is aware of and has resolved this DAV issue, which affects a small number of Power Macintosh 7500 and 8500 computers. For assistance resolving this issue, contact an Apple-authorized service provider.

Support Information Services

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Tech Info Library Article Number:19096



Tech Info Library

AppleVision 1710AV Display: Dots Per Inch (DPI) Settings (12/95)

Revised: 12/20/95
Security: Everyone

AppleVision 1710AV Display: Dots Per Inch (DPI) Settings (12/95)

=====

Article Created: 20 December 1995

TOPIC -----

This article provides a chart listing the Dots per inch (DPI) of the AppleVision 1710AV Display at all of its possible resolutions.

DISCUSSION -----

The following chart is for the AppleVision 1710AV Display. It shows the front of screen DPI when the display image is set up with a 300mm by 225mm raster image (Apple specifications). This size image leaves about 1/2 to 3/4-inch black border between the raster edge and the front bezel plastics. Most resolutions have the same horizontal and vertical DPI except the 1280x1024 resolution.

Begin_Table

Resolution	Dots per inch
-----	-----
640x480	54 (H & V)
800x600	68 (H & V)
832x624	70 (H & V)
1024x768	87 (H & V)
1152x870	98 (H & V)
1280x960	108 (H & V)
1280x1024	108 horizontal, 116 vertical
1600x1200	135 (H & V)

End_Table

Support Information Services

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Tech Info Library Article Number:19098



Tech Info Library

At Ease 3.0.x: Trouble Printing from DOS Environment (1/96)

Revised: 1/5/96
Security: Everyone

At Ease 3.0.x: Trouble Printing from DOS Environment (1/96)

Article Created: 20 December 1995
Article Reviewed/Updated: 5 January 1996

TOPIC -----

I am having problems when printing from my Power Macintosh 6100 DOS Compatible using At Ease 3.0.x. If I try to print a document from the DOS environment while At Ease is in the Restricted Finder, I get an error stating "DOS Compatibility error has occurred. Cannot create PC Print Spool file. Verify there is enough disk space." If At Ease is turned off, the computer prints with no problem.

DISCUSSION -----

In order to print from the DOS environment on a Macintosh computer with a DOS compatibility card, the At Ease user must have access to the PC Print Spooler Application.

Without access to this application, two different error messages may occur when trying to print from the DOS environment with At Ease turned on. The first one mentioned above occurs if the user launched the DOS card from At Ease's Restricted Finder. The second message "There is not enough memory to run PC Print Spooler" appears if the user launched the DOS card from the At Ease panels. In both cases, adding the PC Print Spooler to the DOS Environment user's setup allows the user to print.

The same is true for using the cross platform clipboard. The At Ease user must have access to the PC Clipboard application in order to copy and paste between the Macintosh environment and the DOS environment.

If you want to allow printing, and cross-platform copy and paste functionality for your DOS environment At Ease users, use At Ease Setup to add the applications PC Print Spooler and PC Clipboard to your setup.

Article Change History:
05 Jan 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:19099



Tech Info Library

PowerBook 500 Series: Read Me (12/95)

Revised: 12/20/95
Security: Everyone

PowerBook 500 Series: Read Me (12/95)

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Article Created: 20 December 1995

TOPIC -----

This article contains the ReadMe file included with the PowerBook 500 Series computers.

DISCUSSION -----

Important Information About Your
PowerBook 520, 520c, 540, or 540c Computer

Congratulations on purchasing your PowerBook 500 series computer. This document adds to and updates the information in the manuals that came with your computer. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

If you are using System 7.1, Read this Section
=====

The PowerBook 500 Series Disks

The PowerBook 500 series disks that came with your PowerBook contain system software for the PowerBook 520, 520c, 540, and 540c computers. If you ever need to reinstall system software, start by using the Install Me First disk.

System Enablers

The system software on your computer includes a System Enabler file that your computer uses when it starts up. If the System Enabler for the PowerBook 500 series is not present in the System Folder, your computer will not start up. If your computer does not start up, try reinstalling the system software, following the directions in the Getting Started manual that came with your computer. Be sure to use the PowerBook 500 series disks that came with your computer.

Reinstalling System Software

When reinstalling system software, always follow the directions in the Getting Started manual that came with your computer. Don't install system software files (especially control panels) by dragging icons; doing so can cause your computer to work improperly.

If you install your PowerBook 500 series system software onto a hard drive that will be used with other computers, select "newer" software when given a choice during the installation process.

Installing System 7.5

Your PowerBook comes with Macintosh System 7.5 on the hard disk ready to be installed. Macintosh System 7.5 includes system software version 7.5, QuickDraw GX, and PowerTalk. You install each of these components separately.

Macintosh System 7.5 is on your hard disk in a folder named System 7.5. For more information, see the Install 7.5 Read Me. Also see the Macintosh System 7.5 Upgrade Guide that came with your PowerBook.

You can install system software version 7.5 on a PowerBook with 4 MB of memory (RAM). However, you'll need more memory to use some application programs. Apple recommends that you expand your PowerBook's memory to at least 8 MB before you install System 7.5. You can purchase a memory expansion card at any Apple-authorized dealer.

Installing QuickDraw GX and PowerTalk

You need at least 8 MB of memory to install QuickDraw GX and PowerTalk. You cannot install QuickDraw GX and PowerTalk on PowerBooks with less than 8 MB of memory installed.

If you are Using System 7.5, Read this Section

=====

Using QuickDraw GX with a Fax Modem

If you installed QuickDraw GX and you have a fax modem, you need a QuickDraw GX modem driver in order to send faxes. Contact the modem vendor to obtain the QuickDraw GX driver.

If you have installed QuickDraw GX and do not yet have the QuickDraw GX modem driver, you can temporarily turn off QuickDraw GX and use your previous fax modem driver. To turn off QuickDraw GX:

Step 1

Hold down the Space bar while you choose Restart from the Special menu to restart your PowerBook. Continue to hold down the Space bar until the Extensions Manager appears on the screen.

Step 2

Click the QuickDraw GX extension to remove the check beside it.

This prevents the QuickDraw GX software from loading.

Step 3

Click the close box in the Extensions Manager dialog box to resume startup.

Your fax modem should work normally. You won't be able to use any QuickDraw GX features until you turn the extension back on again.

All PowerBook Users, Read this section

=====

Charging Your Battery

Apple recommends that you connect the power adapter to your computer and let the battery (or batteries) charge overnight when you first unpack your computer. (The battery may have been depleted between the time it was charged at the factory and the time you purchased the computer.)

If you have two batteries installed in your PowerBook, you can maximize battery life by swapping them approximately once a month. Before you can swap PowerBook 500 series batteries, you must either shut down the computer or connect the power adapter if the computer is on. Then simply remove both batteries and reinsert them on the opposite sides of the computer.

Battery Monitor in the Control Strip

The estimated time remaining for each battery that is displayed in the Battery Monitor module of the Control Strip depends on the charge remaining and the battery consumption rate. The battery consumption rate depends on the software and hardware features you are using.

If the Battery Monitor module in the Control Strip indicates that no battery is installed, but you can plainly see that a battery is installed, you may need to reset the battery. Before you can reset a battery, you must either shut down the

computer or connect the power adapter. Then remove and reinsert the battery you want to reset. After a few seconds, the Battery Monitor module should recognize the battery. If the problem persists, contact your Apple-authorized service representative.

Ethernet

When connected to an active Ethernet network, your PowerBook 500 series computer will not go to sleep automatically. You can still select manual sleep, however.

Sleep, External Monitors, and the Monitors Control Panel

Your Getting Started manual may state that your PowerBook will not sleep when an external monitor is connected. This is an error. Connecting an external monitor does not affect the computer's ability to sleep.

The Monitors Control Panel allows you to set the number of colors your monitors display and to indicate the positions of your monitors. Close the Monitors Control Panel before allowing your PowerBook to sleep.

Application Programs Using Sound

If you have application programs that make extensive use of sound, Apple recommends that you turn off virtual memory while using those programs. When virtual memory is turned on, it can compromise the programs' sound quality.

Some older versions of programs, especially games, may generate sounds that seem too slow or too fast. For best results with these programs, open the Sound control panel, choose Sound Out from the pop-up menu, and set the sample rate to 22.050 kHz.

Trying the Text-to-Speech Feature

Text-to-Speech has been installed on your hard drive. This software allows text to be spoken to you by your PowerBook. Text-to-Speech is made available through application programs whose manufacturers have chosen to incorporate it. You can try this feature out by following these steps:

Step 1

Double-click the SimpleText icon to open it (or choose Open from the File menu if you are already using SimpleText).

A new document called Untitled 1 appears on the screen.

Step 2

Type a short sentence, for example, "You're a great person."

Step 3

Choose Speak All from the Sound menu.

You can also have the computer speak a portion of your document. To do this, select the text you want to hear, and choose Speak Selection from the Sound menu.

Using Adobe Type Manager

In System 7.1 and 7.5, a folder named Fonts stores all screen and printer fonts.

Fonts you drag to the System Folder are automatically installed in the Fonts folder. If you use Adobe Type Manager, but are not getting smooth type on screen, you must move any PostScript printer fonts located in the Fonts folder to the Extensions folder. Please contact Adobe to obtain a new version of ATM that will allow you to use the Fonts folder (see details below).

A version of ATM is also installed if you install QuickDraw GX. It is called ATM GX. For more information on using ATM GX, see the Macintosh System 7.5 Upgrade Guide that came with your PowerBook.

A Gift to You from Adobe

Adobe Systems offers PowerBook computer owners a free copy of Adobe Type Manager (ATM) software. With ATM, you can use thousands of PostScript Type 1 fonts on screen. In addition, ATM software can be used with PostScript typesetters and with all Macintosh- supported printers, including the ImageWriter, StyleWriter, and LaserWriter. You also receive four free typefaces from the Adobe Garamond family. These Adobe Originals are a fresh treatment of popular typefaces.

You can receive the latest release of ATM—plus the Adobe Garamond typefaces—for a \$7.50 shipping and handling charge (\$30 outside the U.S. and Canada). Together, these products normally retail for \$346.

U.S. and Canadian residents, call

1-800-521-1976 ext. 4400, or fax 1-303-792-2231

Outside the U.S. and Canada, call

(303) 799-4000 ext. 4600.

In fax requests, please include your name, shipping address, daytime phone number and credit card information. Please allow 6-8 weeks for delivery.

... This information is not in the original Read Me file.

Note: According to Adobe, the offer mentioned above expired as of December, 1995. ...

Support Information Services

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Tech Info Library Article Number:19100



Tech Info Library

ASR Consulting Services (12/95)

Revised: 12/20/95
Security: Everyone

ASR Consulting Services (12/95)

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Article Created: 20 December 1995

Company Name

11422 Morning Glory Trail
Austin, Texas 78750

512-918-9227

Internet: <http://www.io.com/~asrcs/>
e-mail: asrcs@io.com

Company Profile:

ASR Consulting Services provides data recovery services on all types of HFS volumes and tape backup systems. ASR Consulting Services offers special pricing for Macintosh consultants, educational institutions, and non-profit organizations.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19101



Tech Info Library

Ethernet (Built-In) 1.0.2 Information Read Me (12/95)

Revised: 12/21/95
Security: Everyone

Ethernet (Built-In) 1.0.2 Information Read Me (12/95)

=====

Article Created: 20 December 1995

TOPIC -----

This article is the Ethernet (Built-In) 1.0.2 Information ReadMe.

DISCUSSION -----

Issue:

We have received many reports from customers describing problems transferring large files from the PCI-based Power Macintosh systems to a variety of AFP-based servers. The problem reports state that file transfers will stop and a -1072 error (ASP session closed) is generated. The reports also state that after the problem occurs, both AppleTalk and TCP/IP services are lost and the systems must be restarted to restore them. If Ethernet traces are taken, they show that the PCI-based Power Macintosh system disappears from the network.

Technical Description:

The cause of this problem is with the way arbitration is handled on the PCI bus in an ASIC. If there is a lot of PCI bus activity, then it is possible that the Ethernet DMA will start to transmit a packet and an underrun will occur because the DMA cannot get enough bandwidth on the PCI bus to transfer the entire packet to the Ethernet controller. If this underrun condition occurs more than 10 times, a bug in the Ethernet driver causes it to not recover the DMA buffers associated with the underrun packet. The driver only allocates 10 of these buffers and when they are gone the transmitter will no longer be able to send packets. This problem could also occur in some normal situations with a lot of disk activity.

Extent:

This bug is present in the built-in Ethernet drivers that ship with the Power Macintosh 7200, 7500, 8500, and 9500 systems. This driver is located in the "Extensions" folder in a file called "Ethernet (Built-In)". The first Power

..TIL19102-Ethernet_Built-In_1-0-2_Information_Read_Me_12-95_(TA34878).pdf

Macintosh 9500 systems shipped with version 1.0 of this file. The Power Macintosh 7200, 7500, and 8500 systems shipped with version 1.0.1 of this file. This file is for PCI-based Power Macintosh systems only.

Solution:

We have a new built-in Ethernet driver available that fixes this bug. The driver is located in version 1.0.2 of the "Ethernet (Built-In)" file. This file is also installed during the "QuickDraw 3D Accelerator Card" software installation process.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19102



Tech Info Library

Battery Technology, Inc. (12/95)

Revised: 12/20/95
Security: Everyone

Battery Technology, Inc. (12/95)

=====

Article Created: 20 December 1995

Battery Technology, Inc. (BTI)

5700 Bandini Blvd.
Commerce, CA 90040

800-982-8284

213-728-7874

213-728-7996 (Fax)

Company Profile: Make power supplies/AC adapters and batteries for Apple's PowerBook notebook computers. Products include: BTI Battery for PowerBook 100, BTI Charger For PowerBook 100 Batteries (MC-C10), BTI Mini AC Adapter, and the PowerCharger Plus.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19104



Tech Info Library

Power Macintosh 7500 & 8500: Video Player Resets Gamma (1/96)

Revised: 1/29/96
Security: Everyone

Power Macintosh 7500 & 8500: Video Player Resets Gamma (1/96)

Article Created: 20 December 1995
Article Reviewed/Updated: 29 January 1996

TOPIC -----

The Apple Video Player installed with the Power Macintosh 7500 and 8500 computers shows a TV option in the Controls window. However, when I click TV, I get a message stating "To use this feature you must have a TV tuner installed in your computer". I click OK, but I immediately notice the color and brightness change on my screen.

Why is this occurring?

DISCUSSION -----

The Apple Video Player installed on Power Macintosh 7500 and 8500 computers has an option for displaying input from a TV tuner. However, there are no hardware TV tuner options available from Apple for these computers. The Apple Video Player reports that it cannot use the TV option but it also resets the gamma settings in the Sound & Displays control panel to the default Mac Standard.

If you have set the Gamma setting to anything other than the default Mac Standard gamma in the Displays area of the Sound and Displays control panel, you will see the screen image change as the Apple Video Player resets the gamma to Mac Standard.

This issue has been investigated by Apple engineering and will be resolved in the next release of the Apple Video Player. For now, the only way to prevent Apple Video Player from resetting the gamma settings you originally changed is to avoid pressing the TV options button in the Apple Video Player Controls window.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 14

Article Change History:

29 Jan 1996 - Added Information Alley information.

05 Jan 1996 - Corrected minor typo.

Support Information Services

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:19105



Tech Info Library

Apple MessagePad: Word List Editing Problem (12/95)

Revised: 12/20/95
Security: Everyone

Apple MessagePad: Word List Editing Problem (12/95)

=====

Article Created: 20 December 1995

TOPIC -----

I have an Apple MessagePad 120 with the Newton 2.0 OS. When entering words in the Word List the caret does not hold the entry position for the next letters entered.

After I bring up the keyboard in any application, select the book to access the Word List, and type in a new word, I am unable to use the pen to move the caret. I must use the arrow keys. After using the arrow keys to get to a letter in the word, if I try to add a letter, it always puts it at the end of the word. What is wrong? How can I work around this?

DISCUSSION -----

This is a problem with the Word List and will be addressed in a future patch. The only way to edit a mistake in the middle of the word is to erase all the characters from the end of the word to the mistake and retype the last part of the word.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19106



Tech Info Library

Business Ed. Bundle: Trouble With South-Western Templates 12/95

Revised: 12/20/95
Security: Everyone

Business Ed. Bundle: Trouble With South-Western Templates 12/95

=====

Article Created: 20 December 1995

TOPIC -----

I have the Apple Business Education Bundle and am having difficulty opening some of South-Western Publishing's ClarisWorks Templates. When I double-click on either the Bonus Letter or Projected vs. Actual Sales items in Lesson 13 of the QuickCourse Solutions folder, I get a message stating "Please insert the disk: ClarisWorks Template." The options are Cancel or Open.

What should I do to open these files?

DISCUSSION -----

South-Western Publishing is aware of this issue and recommends clicking Cancel. You will receive the same error message again, but the files will open when you click Cancel the second time.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19107



Tech Info Library

AppleVision 1710AV: Frequently Asked Questions (1/97)

Revised: 1/29/97
Security: Everyone

AppleVision 1710AV: Frequently Asked Questions (1/97)

=====

Article Created: 20 December 1995
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This document contains the answers to the following frequently asked questions (FAQ) about the AppleVision 1710AV Display and the AppleVision 1710 Display. The only differences between the AppleVision 1710AV and AppleVision 1710 Display are the speakers and built-in microphone included on the AppleVision 1710AV Display.

1) I have not been able to resolve a conflict between the AppleVision 1710AV Display Enabler and the Now Toolbox init. My Now Startup Manager disables the Display Enabler every time. When this is disabled I cannot get any of my 1710AV software to work. Do I need a Display Enabler update?

2) When I startup my Power Macintosh 8100/100 with 1710AV display, the Conflict Catcher and QuickTime inits load, there is a 5 second pause, then the Display enabler loads, but wipes out the first two icons (Conflict Catcher and Quicktime) and the Mac OS logo before the rest of the icons load. How can I correct this problem?

3) I have an Macintosh Quadra 840AV with a Radius VideoVision installed. I have an AppleVision 1710AV Display on order that should be arriving soon. Will the AppleVision 1710AV Display work with the Radius hardware?

4) I have a Macintosh Performa 630CD and an AppleVision 1710AV Display. When the computer starts up, it hangs pauses at the Display Enabler init and then continues starting up with just the single progress bar, without the "Welcome to Macintosh" display. I have tried everything that I have seen posted in here including resetting the PRAM, working with the extensions manager, and so on. I downloaded Applevision 1.0.2. This did not help. How can I fix this?

5) I have a question about the Display enabler and AppleVision setup. At first I the problem was with Now Utilities, but after 5 days of running a clean system install with just one non apple control panel, 'FreePPP', my system is corrupt

again. When I remove Display enabler and AppleVision Setup control panel everything works fine. Is there something wrong with the software for the AppleVision 1710AV Display?

6) I am using a Power Macintosh 7500 computer with an AppleVision 1710AV Display. A few times, after I re-calibrated the monitor, the display acquired a lavender (purple) color. At other times, after re-calibration, I can see spirals of faint diagonal lines across the entire screen. These problems invariably go away after several re-calibrations. The only non-Apple extensions I am using are Adobe Type Manager, Connectix Speed Doubler, Berkeley Systems' After Dark, and Now Utilities FileSaver. Sometimes the monitor's color is fine. Why does it do this?

7) I have an AppleVision 1710AV Display and I have discovered that while I am using the computer and the screen is blank (that is, during startup, the screen saver is on, and so on) that there are a number of barely visible colored lines running diagonally across the screen. They run the length of the screen and start from one corner all the way until the opposite. I can only see them when the screen is black. Have you heard of this? Is it a known issue? If so, what can I do to correct it?

8) We have experienced some incompatibilities with the AppleVision 1710AV Display, some third party boards, and the internal video on the Macintosh II VX. Are there any known issues with a setup like this?

DISCUSSION -----

1) Question: I have not been able to resolve a conflict between the AppleVision 1710AV Display Enabler and the Now Toolbox init. My Now Startup Manager disables the Display Enabler every time. When this is disabled I cannot get any of my 1710AV software to work. Do I need a Display Enabler update?

Answer: First, there is a known problem with Now's Startup Manager and AppleVision Software (specifically the Display Enabler). The solution is to disable Now Startup Manager and use Extension Manager. Now is aware that they have a problem and are working on a fix for it. This fix did not make into Now Utilities 5.0.2.

Second, AppleVision Software requires Display Enabler 2.0. The Display Enabler extension is needed for any 040 or nubus based Macintosh.

2) Question: When I startup my Power Macintosh 8100/100 with 1710AV display, the Conflict Catcher and QuickTime inits load, there is a 5 second pause, then the Display enabler loads, but wipes out the first two icons (Conflict Catcher and Quicktime) and the Mac OS logo before the rest of the icons load. How can I correct this problem?

Answer: AppleVision Software requires Display Enable 2.0. The Display Enabler extension is needed for any 040 or nubus based Macintosh.

3) Question: I have an Macintosh Quadra 840AV with a Radius VideoVision installed. I have an AppleVision 1710AV Display on order that should be arriving soon. Will the AppleVision 1710AV Display work with the Radius hardware?

Answer: AppleVision Monitors were only qualified on the supported built-in monitor ports (for all 68040 and PPC Macintosh computers) and on the 24AC NuBus card and the ATI PCI card. The third-party would have to revise its software driver to work with our monitor and software.

4) Question: I have a Macintosh Performa 630CD and an AppleVision 1710AV Display. When the computer starts up, it pauses at the Display Enabler init and then continues starting up with just the single progress bar, without the "Welcome to Macintosh" display. I have tried everything that I have seen posted including resetting the PRAM, working with the extensions manager, and so on. I downloaded Applevision 1.0.2. This did not help. How can I fix this?

Answer: As it states in the Read Me: "With some system software and hardware configurations, your screen may not redraw correctly during the startup process. This will not affect display performance." This is refering to problems like the one above. When the Display Enabler is loading, the screen may redraw, leaving the user with only a thermal bar left with no welcome to Macintosh window.

5) Question: I have a question about the Display enabler and the AppleVision Setup control panel. At first, I the problem was with Now Utilities, but after 5 days of running a virtually clean system software with just one non-Apple control panel, 'FreePPP', my system is corrupt again. When I remove Display enabler and AppleVision Setup control panel everything works fine. Is there something wrong with the software for the AppleVision 1710AV Display?

Answer: AppleVision Monitors require both of these software components to be loaded and they also require that the ADB cable is connected to the monitor. Otherwise the user will only get 640x480.

6) Question: I am using a Power Macintosh 7500 computer with an AppleVision 1710AV Display. A few times, after I re-calibrated the monitor, the display acquired a lavender (purple) color. At other times, after re-calibration, I can see spirals of faint diagonal lines across the entire screen. These problems invariably go away after several re-calibrations. The only non-Apple extensions I am using are Adobe Type Manager, Connectix Speed Doubler, Berkeley Systems' After Dark, and Now Utilities FileSaver. Sometimes the monitor's color is fine. Why does it do this?

Answer: This is usually caused by an error in recalibration. You only need to recalibrate a couple of times to recover from this situation. However, if the problem continues to occur there may be a hardware problem. Since the color data is transmitted over ADB, you should also avoid pressing the keyboard or bezel buttons during the recalibration.

7) Question: I have an AppleVision 1710AV Display and I have discovered that while I am using the computer and the screen is blank (that is, during startup, the screen saver is on, and so on) that there are a number of barely visible colored lines running diagonally across the screen. They run the length of the screen and start from one corner all the way until the opposite. I can only see them when the screen is black. Have you heard of this? Is it a known issue? If so, what can I do to correct it?

Answer: The diagonal lines are caused by the redraw gun inside the monitor resetting. You will see this under two circumstances.

First, brightness and contrast are turned all the way up to full. You should turn brightness down to about 50% and leave contrast all the way to full and see if the lines go away. Brightness at 50% and contrast at 100% is the suggested viewing level to get the brightest, clearest picture.

Second, the diagonal lines may appear if there is an error in recalibration. If lowering the brightness does not help, recalibrate the monitor a few times. When an error in recalibration does occur the monitor is supposed to be reset to its previous setting. Unfortunately there is no sure way of catching all of the recalibration errors. You may have to recalibrate up to 4 times before the monitor's color settings get properly restored from a miscalibration.

8) Question: We have experienced some incompatibilities with the AppleVision 1710AV Display, some third party boards, and the internal video on the Macintosh II VX. Are there any known issues with a setup like this?

Answer: AppleVision Monitors were only qualified on the supported built-in monitor ports (for all 68040 and PPC Macs) and on the 24AC NuBus card and the ATI PCI card. The third-party would have to revise its driver to work with our monitor and software.

Article Change History:

29 Jan 1997 - Added AppleVision 1710 Display.

17 Apr 1996 - Minor typographical correction.

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Tech Info Library Article Number:19108



Tech Info Library

PowerBook 190 & 5300 Series: First Drag of Icon Slow (3/96)

Revised: 3/13/96
Security: Everyone

PowerBook 190 & 5300 Series: First Drag of Icon Slow (3/96)

Article Created: 20 December 1995
Article Reviewed/Updated: 13 March 1996

TOPIC -----

Immediately after my PowerBook computer starts up, the first time I drag an item, regardless of where it is, what it is, or what I'm doing with it (copying, moving, and so on), I get a clock on the screen and the computer waits about 15-30 seconds before it responds.

After the first drag, I do not get the delay again until I restart and try dragging something again. What is causing this and is there anything I can do to correct this issue?

DISCUSSION -----

Issue -----

This is caused by the Macintosh Easy Open (MEO) control panel. This occurs on PowerBook 5300 and 190 series computers running their original system software version 7.5.2.

Workaround -----

Disabling MEO in the Extension Manager control panel and restarting the computer prevents this issue from occurring.

Resolution -----

Installing either the PowerBook 5300 Software Update or the System 7.5 Update 2.0 will correct this issue making the workaround unnecessary.

Article Change History:
13 Mar 1996 - Added resolution information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:19110



Tech Info Library

AppleCD 600: Issues With CD Plus (CD+) Discs (8/96)

Revised: 9/27/96
Security: Everyone

AppleCD 600: Issues With CD Plus (CD+) Discs (8/96)

Article Created: 21 December 1995
Article Reviewed/Updated: 27 September 1996

TOPIC -----

When I play a CD Plus (CD+) format CD-ROM disc, I get a stuttering, or skipping sound from the computer, and sometimes the CD-ROM disc will not mount.

DISCUSSION -----

There are several things that you must consider regarding this issue.

CD-ROM Drives
=====

There is a known problem with early versions of quad-speed (4X) drives used by Apple that did not allow the drive to read multisession data CD-ROM discs. If you continue to have problems reading multisession CD-ROM discs after checking the issues below, see an authorized Apple service provider for further troubleshooting.

CD-ROM Setup Software
=====

The next is CD-ROM Setup software. You should install the latest version of CD-ROM Setup (this should be version 5.1.2 or greater), for complete compatibility with multisession data CD-ROM discs.

Titles Created with Apple Media Tool
=====

The third is CD-ROM Discs created with Apple Media Tool version 1.2 and below. Many of these titles have a problem known as the AMK Spinning Cursor Bug. This is fixed with the software of the same name posted in Apple SW Updates area of online services.

CD Plus Standards

=====

The next thing to know is that there is not yet a "CD Plus" or "Enhanced CD" standard. The final specification is to be completed by the end of 1995 by Apple, Microsoft, Sony, and Philips, so no CD-ROM discs currently on the market conform completely with the Blue Book standard, which is in its final revision. Even the name "CD Plus" will not be used, because of trademark conflicts.

Interactive Music Formats

=====

The last thing to know is that there are several formats of interactive music discs on the market.

- Yellow Book CD-ROM only.
- Yellow Book CD-ROM Hybrid with Red Book audio tracks that may damage audio players, or users ears.
- Hybrid discs with CD-ROM and Red Book audio tracks, known as a track 0 solution.
- Hybrid discs with Macintosh and Windows partitions - ISO-9660 compatible.
- Multisession CD-ROMs with separate CD-ROM and Red Book audio volumes.
- Blue Book standard discs by whatever name it is called. These CD-ROM discs will be stamped multisession discs with Red Book audio tracks.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

27 Sep 1996 - Clarified topic and discussion.

19 Aug 1996 - Corrected misspelling.

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Tech Info Library Article Number:19112



Tech Info Library

AppleVision 1710AV: Requires Multiple Sound Settings (12/95)

Revised: 12/21/95
Security: Everyone

AppleVision 1710AV: Requires Multiple Sound Settings (12/95)

=====

Article Created: 21 December 1995

TOPIC -----

I cannot hear any sounds from my Macintosh computer connected to my AppleVision 1710AV Display. If I use a tape player, instead of the computer as the sound source, I can hear the tape through the display. If I disconnect the external speaker connection, I can hear my computer through the internal speaker on the computer. How can I get the AppleVision 1710AV Display to play the computer sounds?

DISCUSSION -----

In the Sound & Display control panel, you must have both the AppleVision speakers AND external headphones checked in order to hear sound from the AppleVision 1710AV Display. If you only have one of these options checked, audio is not sent to the display.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19113



Tech Info Library

Video Out Default (PAL) Extension: Read Me (12/95)

Revised: 12/21/95
Security: Everyone

Video Out Default (PAL) Extension: Read Me (12/95)

=====

Article Created: 21 December 1995

TOPIC -----

This article contains the Video Out Default (PAL) extension ReadMe file. This extension is preinstalled on Power Macintosh 8500 computers purchased in countries that use the PAL standard.

DISCUSSION -----

Video Out Default (PAL)

This extension is intended for use on the Power Macintosh 8500 Series in countries that use the PAL television standard.

You do not interact directly with this extension. It works behind the scenes as part of your system software.

For countries that use the PAL television standard, this extension is preinstalled. However, should you wish to install it into a new System Folder, follow these instructions:

To Install Video Out Default (PAL):

Step 1

Drag the Video Out Default (PAL) icon from the CD to your hard disk's System Folder icon (do not open the System Folder).

Step 2

Click OK in the dialog box that appears.

Step 3

Restart your computer.

Why is this extension needed?

The Power Macintosh 8500 can detect whether or not a television is plugged in, but is not able to determine if the television uses the PAL or NTSC television standard. The system software normally assumes that an NTSC television is connected.

This extension alerts the system software that it should assume a PAL television is connected instead.

Support Information Services

Copyright 1995, Apple Computer, Inc.

Tech Info Library Article Number:19115



Tech Info Library

Apple Internet Dialer 1.0 Incompatible w/ Virtual Memory (9/96)

Revised: 9/4/96
Security: Everyone

Apple Internet Dialer 1.0 Incompatible w/ Virtual Memory (9/96)

=====

Article Created: 21 December 1995
Article Reviewed/Updated: 4 September 1996

TOPIC -----

Is the Apple Internet Dialer, which is part of the Apple Internet Connection Kit (AICK) 1.0, incompatible with virtual memory (VM)?

DISCUSSION -----

With AICK 1.1 and later, the Apple Internet Dialer is compatible with VM.

The Apple Internet Dialer, in AICK 1.0, is incompatible with virtual memory (VM). VM must be turned off for the dialer to make a functional PPP connection.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 12

Article Change History:
04 Sep 1996 - Change title to better reflect article.
12 Aug 1996 - Updated for AICK 1.1 Internet Dialer.
26 Jan 1996 - Added Info Alley information.

Copyright 1995-96, Apple Computer, Inc.

Tech Info Library Article Number:19117



Tech Info Library

Color LW 12/600 PS: Life of Consumables & Printer (3/97)

Revised: 3/20/97
Security: Everyone

Color LW 12/600 PS: Life of Consumables & Printer (3/97)

Article Created: 21 December 1995
Article Reviewed/Updated: 20 March 1997

TOPIC -----

What factors affect the life of the Color LaserWriter 12/600 PS and its consumables? How do I determine when to replace the consumable items?

DISCUSSION -----

The Color LaserWriter 12/600 PS DC controller maintains several non-volatile parameters which are used to signal various alert conditions to the user. The list of stored parameters includes the following:

Begin_Table

Parameter Description	Range of values
Print delivery counter	0 -100,000 (prints)
Number of delivered prints following cleaning belt out warning	0 - 500 (prints)
Photoconductor life check-use counter	0 - 18,000 (counts)
Number of delivered prints following oil out warning	0 - 50 (prints)

End_Table

In addition to the parameters listed above, the I/O controller maintains a separate page counter which generates the page count value listed on the startup page. The printer does not maintain any special counters for tracking the life expectancy of the complete print engine. The Color LaserWriter 12/600 PS user's

manual states that the minimum life expectancy is 5 years or 300,000 pages in black and white mode, and 150,000 pages in the full color mode. Many customers will get acceptable results well beyond these numbers as long as the printer is properly used and maintained according to the guidelines in the user's manual.

Fuser Assembly Life =====

Apple recommends that the fuser be replaced after 60,000 pages by the customer using the instructions located in the user's manual. The fuser is included as part of a special maintenance kit available from finished goods that includes a fuser, transfer drum cleaning assembly, separation discharge unit, ozone filter, and air filter. The finished goods part numbers for the maintenance kit are M3867G/A for 110V printers, and M4234G/A for 220V printers.

The fuser life does not vary depending on the type of printing (black and white, color) because each printed page is only fused once. The fuser and alert LED's on the printer status panel turn on after a sensing arm in the fuser cleaning web assembly drops through a notch cut into the cleaning web fabric and triggers a photosensor. Once the LED's turn on the printer will allow 500 pages to be printed before shutting down. Apple recommends that the fuser be replaced after 60,000 pages, however there is enough cleaning web fabric to allow the fuser to print as many as 100,000 pages before the LED's turn on. Testing has shown that after approximately 60,000 pages the print quality may begin to deteriorate due to toner and paper dust accumulation indicating the need for the maintenance kit.

Fuser Oil Life =====

The fuser oil used in the Color LaserWriter 12/600 PS is replenished from a user replaceable oil bottle. Each bottle contains enough oil for approximately 10,000 pages. The oil reservoir which is part of the fuser assembly contains a small plastic ball that floats on the surface of the oil. When the oil level drops to a predetermined level a photosensor is triggered a photosensor the oil low and alert LED's turn on. Once the LED's turn on the printer will allow 50 pages to be printed before shutting down.

Photoconductor Life =====

The photoconductor life counter maintained on the DC controller is used to determine when the photoconductor and alert LED's should be turned on. As soon as the counter reaches 3000 prints as specified in the DC controller microcode, the LED's turn on. The counter increments only when printing full color documents, not black & white pages.

The life of the photoconductor varies depending on the type of printing being done because the photoconductor makes four passes when in the full color mode, and only one pass when in the black and white mode. The life of the photoconductor also varies depending on whether the printing is continuous or

intermittent. During continuous printing the density calibration only has to be done once every 100 pages, however when the printer is operated intermittently the printer may have to perform the density calibration each time the printer is awakened from the sleep mode. Other mechanical areas of the printer such as the fuser assembly are not activated during the calibration process and therefore their life expectancy does not change significantly depending on the type of printing being done.

Apple recommends that the photoconductor be replaced only after the customer determines that the print quality is no longer acceptable. For some customers this may be as early as 4,000 pages, but for other customers it may be significantly longer. Customers should keep the startup and demo pages in a binder after a new photoconductor is installed. This allows customers to judge their print quality by printing and comparing future startup and demo pages with those in the binder. It's also helpful to put the date at the top when the pages are printed.

Toner Cartridge Life

=====

The life of each toner cartridge will vary significantly depending on the type of printing being done. Documents which contain large areas of color will use more toner than a black and white text document. On average each toner cartridge should last approximately 4,000 pages when printing documents with average page coverage of 5%.

The printer uses a sweeping blade and two clear windows integrated into each toner cartridge to determine the amount of toner left in each cartridge. A photosensor located on the print engine measures the amount of time that the toner blocks each window as the sweeping blade passes by. When the toner reaches a preset level the alert and corresponding toner LEDs turn on. A toner low alert condition will not shut down the printer, however the print quality may be affected.

Article Change History:

20 Mar 1997 - Changed distribution status.

Copyright 1995-97, Apple Computer, Inc.

Tech Info Library Article Number:19118



Tech Info Library

LaserWriter Select 360: Setting DTR to ON (12/95)

Revised: 12/21/95
Security: Everyone

LaserWriter Select 360: Setting DTR to ON (12/95)

=====

Article Created: 21 December 1995

TOPIC -----

I am trying to download a PCL typeface to the LaserWriter Select 360 printer, and in the printouts I am getting square blocks printed in place of the characters. If the printer is set to DTR, I am able to download the fonts correctly to the printer. If it's set to XON/XOFF, I cannot download the fonts. Is there a way of setting the serial port on the printer to DTR permanently?

DISCUSSION -----

The easiest way to solve this problem is by using Apple Printer Utility 2.0 to change the serial communication ports on the LaserWriter Select 360 (under the "Communication Configuration" section). You can set the flow control to DTR there.

IMPORTANT:

The thumbwheel switch on the back of the printer must be in position #8 in order for the following serial port parameters to take effect.

PostScript Code to Change to DTR

=====

If you don't have a Macintosh, then you can download the following PostScript to the printer (remember that PostScript IS CASE SENSITIVE). Again, you must have the thumbwheel switch in position #8 in order for the serial port parameters to take effect.

CAUTION:

If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

%=====

% Begin PostScript code

```
%  
(%Serial_NV)  
<< /FlowControl /Dtr  
>> setdevparams  
%  
% End PostScript code  
%=====
```

Other values for the port can be set by including the various key-value pairs outlined below within << >> setdevparams, for example:

```
%=====
```

```
% Begin PostScript code  
%  
(%Serial_NV)  
<<  
/Baud 9600  
/FlowControl /XonXoff  
/Interpreter /LaserJetIII  
>> setdevparams  
%  
% End PostScript code  
%=====
```

Key-value pairs for the LaserWriter Select 360 serial port

/Baud 9600

Default: 19200

Possible values: 300, 600, 1200, 1800, 2400, 3600, 4800, 9600, 19200, 38400, 57600.

Use: Designates the baud rate on the serial hardware.

/CheckParity true

Default: false

Possible values: true or false

Use: Designates whether or not the device will perform a parity check on incoming data. If the parameter is true, parity checking occurs. If it is false, there is no parity checking.

/DataBits 8

Default: 8

Possible values: 7 or 8

Use: Designates the number of data bits per byte transferred over the channel. If it is set to 7, the high bit of the byte is set to 0.

/Enabled false

Default: true

Possible values: true or false

Use: Indicates whether data arriving at the printer should be scheduled for execution. If it is true, data is executed. If it is false, data is not executed.

/FlowControl /Dtr

Default: /XonXoff

Possible values: /XonXoff and /Dtr

Use: Indicates the serial flow control method used between the host computer and the printer.

/HasNames /false

Default: /false

Possible values: true or false

Use: Indicates whether the printer supports named files. If the printer is not mounted, or if Type is /Communications, this value is false. This value is a read-only constant.

/Interpreter /LaserjetIII

Default: /PostScript

Possible values: /PostScript, /AutoSelect, or /LaserJetIII

Use: Indicates the type of executable job represented by the arriving data.

/On false

Default: true

Possible values: true or false

Use: Indicates whether or not the printer driver for the communications device is turned on and is able to receive and send data. If this value is false, data sent to the printer is lost.

/Parity /None

Default: /None

Possible values: /None, /Space, /Odd, /Even

Use: Indicates the type of parity to be used between the host computer and the printer.

/Protocol /Normal

Default: /Normal

Possible values: /Raw or /TBCP

Use: Indicates the type of communications protocol to be used.

- /Raw: Lets all data pass through unfiltered. Control characters such as End-of-file (CTRL-D) and status queries (CTRL-T) are passed through and not acted upon.
- /TBCP: tagged binary communication protocol.

/StopBits 1

Default: 1

Possible values: 1 or 2

Use: Indicates the number of stop bits to be transmitted by the serial hardware. Alternative settings are 1 and 2.

Support Information Services

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Tech Info Library Article Number:19119



Tech Info Library

AppleShare Workstation v 3.6.1 User's Guide (12/95)

Revised: 12/21/95
Security: Everyone

AppleShare Workstation v 3.6.1 User's Guide (12/95)

Article Created: 21 December 1995

TOPIC -----

This article is the AppleShare Workstation User's Guide.

DISCUSSION -----

Contents

=====

How to Use This Guide
System Requirements
Updating System Software
Installing Network Software
Installing AppleShare Workstation 3.6.1
Workstation Quick Reference

How to Use This Guide

=====

This guide describes how to upgrade your system software, networking software, and AppleShare Workstation software and also provides instructions on how to use your AppleShare Workstation software. Print a copy of this guide to have available for easy reference.

System Requirements

=====

To get the best performance from your AppleShare network, you'll need the following:

- System 7.5.1
- Network Software 1.5.1
- AppleShare Workstation 3.6.1

NOTE: If you have a PCI -- based Power Macintosh, System 7.5.2 and Open Transport are installed on your computer. All you need to do is install the workstation software; skip to the section "Installing AppleShare Workstation 3.6.1."

Updating System Software

=====

If you have System 7.5 (choose About This Macintosh from the Apple () menu to determine the version of system software your computer is running), you can update to System 7.5.1. The System 7.5 Update Installer is located on the AppleShare 4.2 CD-ROM disc; contact your AppleShare administrator for more information.

Installing Network Software

=====

To upgrade your Network Software to version 1.5.1:

- 1) Connect and log on to your server computer.
- 2) Open the Workstation Software 3.6.1 folder on your server.
- 3) Open the Network Software Installer folder.
- 4) Double-click the Installer icon; the Installer window appears.
- 5) Click Continue; a dialog box similar to the following one appears.
- 6) Verify that the correct destination disk is named in the Installer.
(If the wrong disk name is shown, click Switch Disk until the name of the correct destination disk appears.)
- 7) Click Install.
- 8) When you see a dialog box telling you that installation is complete, restart your computer.

Installing AppleShare Workstation 3.6.1

=====

You are now ready to complete the installation process by installing the latest workstation software.

- 1) Connect and log on to your server computer.
- 2) Open the Workstation Software 3.6.1 folder on your server.
- 3) Open the AppleShare Workstation folder.
- 4) Double-click the Installer icon; the Installer opens.
- 5) Verify that the correct destination disk is named in the Installer.
(If the wrong disk name is shown, click Switch Disk until the name of the correct destination disk appears.)
- 6) Click Install.
- 7) When you see a dialog box telling you that installation is complete, restart your computer.

Workstation Quick Reference

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This quick reference provides at-a-glance directions for the most common AppleShare operations.

Connecting to a file server

- 1) Choose the Chooser desk accessory from the Apple menu.
- 2) Make sure that AppleTalk is active (the Active radio button should be selected).
- 3) Select the AppleShare icon in the upper-left corner of the window.
If your network contains zones, they are listed in the lower-left corner of the window. When you select a zone, AppleShare file servers in that zone are listed in the upper-right portion of the window.
- 4) Select the name of the file server you want to use and click OK.
- 5) In the dialog box that appears, click Guest or Registered User, enter your name and password (if necessary), and then click OK.
- 6) Select the name of the volume you want. If you click the checkbox next to the name of a volume, you can connect to the volume automatically the next time (and anytime) you start up your computer.
- 7) Click OK and close the Chooser.

Disconnecting from a file server

To disconnect from a file server, drag the icon of the server volume to the Trash. Note that you are disconnected automatically from the server when you shut down your computer.

Selecting a print server

- 1) Choose the Chooser desk accessory from the Apple menu.
- 2) Make sure that AppleTalk is active (the Active radio button should be selected).
- 3) Select the LaserWriter or AppleTalk ImageWriter icon in the upper-left corner of the window.
If your network contains zones, they are listed in the lower-left corner of the window. When you select a zone, available printers in that zone are listed in the upper-right portion of the window.
- 4) Select the name of a print spooler you want to use and close the Chooser.

Usually, a spooler's name will be made up of the name of the printer it manages plus the word "Spooler." The print spooler you select will remain in effect until you change it.

About access privileges

Access privileges govern what you and other users of a file server can see or alter. The following lists the access privileges (See Folders, See Files, or Make Changes) that you must have in order to perform the listed actions:

Copy a file to a folder - Make Changes

Copy a file from a folder - See Folders, See Files
Copy a folder to a folder - See Folders, Make Changes
Copy a folder from a folder - See Folders
Create a file - See Folders, See Files, Make Changes
Create a folder - See Folders, Make Changes
Delete a file - See Files, Make Changes
Delete a folder - See Folders, Make Changes
Move a folder to a folder - See Folders, Make Changes
Move a folder from a folder - See Folders, Make Changes
Open and use a file - See Files
Save changes to a file - See Files, Make Changes

Finding out what privileges you have

There are three ways to find out your access privileges:

- Look at the folder icons; icons appear different according to your privileges for each folder.

Tabbed folder - You are the owner of the folder
Plain folder - You have some access privileges to the folder
Locked folder - You do not have any access privileges to the folder
Locked folder with arrow - You have Make Changes privilege to the folder

- View the access privilege icons in the top-left corner of the directory window of a folder. They can tell you what privileges you do not have.

A crossed out file icon means you can't see files.
A crossed out folder icon means you can't see folders.
A crossed out pencil means you can't make changes.

- Select the folder and choose Sharing from the File menu of the Finder. A window appears, showing you who owns the folder and what privileges you have for the folder.

Setting access privileges

-
- 1) Select a folder that you own on the file server and choose Sharing from the File menu.
 - 2) In the window that appears, click the checkboxes of the privileges you want to assign.
When a checkbox has an "X" in it, that privilege is selected.
To copy the privileges you selected to all folders within the folder, click the "Make all currently enclosed folders like this one" checkbox.
 - 3) Close the window and, in the alert box that appears, click Save.

Support Information Services

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Tech Info Library Article Number:19120



Tech Info Library

Photoflash: Opens and Quits Immediately (1/96)

Revised: 1/5/96
Security: Everyone

Photoflash: Opens and Quits Immediately (1/96)

Article Created: 22 December 1995
Article Change History: 5 January 1996

TOPIC -----

I use the PhotoFlash software on my Macintosh computer. Lately, when I double-click the application to open it, it begins to open and then immediately quits with no error message. I have tried the following but get the same failure:

- Reinstalled the PhotoFlash application
- Tried to launch it after booting with extensions off
- Made sure there is enough free memory available in the Finder before launching the application
- Adjusted the application's memory preference in the Get Info window
- Reset the PRAM

DISCUSSION -----

You may have a corrupted PhotoFlash preference file. Locate the PhotoFlash preference file in the Preferences folder of your System Folder. Drag the file to the Trash and choose Empty Trash from the Special menu.

The next time you launch PhotoFlash, it will create a new default preference file. Any changes you had made to your Preferences will have to be reset under the Edit menu.

If PhotoFlash still fails to launch, see TIL article "Macintosh: System Crashes and Basic Troubleshooting" for more help with troubleshooting extension conflicts and system software corruption.

Article Change History:
05 Jan 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library

Zenda Studio (3/96)

Revised: 3/1/96
Security: Everyone

Zenda Studio (3/96)

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Article Created: 22 December 1995
Article Reviewed/Updated: 1 March 1996

Zenda Studio

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San Francisco, CA 94107

415-777-9896 (Main)

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Internet: <http://www.zenda.com>

Company Profile:
Distributor of multimedia software products such as Travelrama and Wacky Jacks
edutainment CD-ROM.

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Tech Info Library Article Number:19124



Tech Info Library

Newton 2.0 OS: Error -48402 in Calls Application (1/96)

Revised: 1/5/96
Security: Everyone

Newton 2.0 OS: Error -48402 in Calls Application (1/96)

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Article Created: 22 December 1995
Article Reviewed/Updated: 5 January 1996

TOPIC -----

In the Calls application I wrote in my contact's name and when it was interpreted I selected the contact in the pick list. The contact's phone number was not automatically entered so I wrote it in and then tapped Place Call. An error message which read "Sorry, a problem has occurred. (-48402)" appeared. Now I cannot access that call, and after getting out of the Calls application I get the same error when I try to open it again.

DISCUSSION -----

If the phone number is not automatically entered into the Phone field, and you manually enter a phone number, you get the -48402 error. To prevent this error, make sure a number is entered in the name card*. If you tap Place Call and a number is already entered, such as a Work number, that number is used when you tap Place Call. If there is not a number entered, you have the opportunity to enter a number if it is not already on the call slip.

* Note: For an individual, you need a home number, not just a work number.

Getting Back Into Calls Application
=====

To get back into the Calls application, tap the Find button and find the name you used in the Calls application. A list of found items including the name card and the call appears on the Apple MessagePad. Tap the box next to the call, choose Delete from the Routing Slip.

Alternate Method

There is another method of removing the call information, however this method erases ALL Calls data, so do not use this method if you want to retain some of

your Calls data.

To get rid of the corruption you can also change to Storage view in the Extras drawer (tap on the pick list at the top of the Extras Drawer and choose Storage); tap the Calls icon to display soup information, and delete the soup.

Support Information Services

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Tech Info Library Article Number:19125



Tech Info Library

PowerBook 5300 & 190: Turns Off When In Target Disk Mode (1/96)

Revised: 1/2/96
Security: Everyone

PowerBook 5300 & 190: Turns Off When In Target Disk Mode (1/96)

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Article Created: 2 January 1996

TOPIC -----

When trying to use my PowerBook computer in Target (SCSI) Disk Mode I follow this procedure: connect the SCSI cables, turn on the PowerBook computer, wait for the lit grey screen on the PowerBook, and then turn on my desktop computer. As soon as the desktop computer powers on, the PowerBook computer immediately powers off. Why?

DISCUSSION -----

It is possible that the situation you are experiencing is a result of not deactivating the PowerBook Password Security software. When activating the PowerBook Password Security, a message appears which says, "Important: You must turn off password protection before using this PowerBook in SCSI disk mode."

The reason you need to turn off the PowerBook Password Security is that if the PowerBook is accessed by an unsupported computer (as in Target/SCSI Disk mode) the PowerBook computer will turn itself off for protection.

To correct the situation, you must follow these steps:

Step 1

Shut down both the PowerBook and Desktop computers and any other devices in the SCSI chain

Step 2

Disconnect the PowerBook SCSI cable from the back of the PowerBook.

Step 3

Power on the PowerBook computer.

Step 4

Open the Password Security control panel and set the Password Security to off instead of on.

Step 5

Shut down the PowerBook computer and reconnect the SCSI cable(s).

Step 6

Start up the PowerBook computer.

Step 7

Power on all other SCSI devices (if present). Then start up the desktop computer.

Support Information Services

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Tech Info Library Article Number:19127



Tech Info Library

PowerBook 5300, 2300, & 190 Recommended RAM Speed (1/96)

Revised: 1/2/96
Security: Everyone

PowerBook 5300, 2300, & 190 Recommended RAM Speed (1/96)

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Article Created: 2 January 1996

TOPIC -----

Do I need to buy a particular speed of memory for my PowerBook 5300 computer when I add a Random Access Memory (RAM) card?

DISCUSSION -----

The PowerBook 190, 5300 and (Duo) 2300 series computers use 70 nanosecond (ns) RAM on their logic boards and are designed to support 70ns RAM cards.

Support Information Services

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Tech Info Library Article Number:19128



Tech Info Library

Open Transport 1.1: General Information Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: General Information Q & A (3/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on general information for Open Transport 1.1.

DISCUSSION -----

Question: What is Apple Open Transport?

Answer: Apple Open Transport is the modern networking and communications subsystem for the Mac OS. Open Transport is based on industry standards and brings a new level of networking connectivity, control, and interoperability to Mac OS systems, while preserving and enhancing the hallmark of the Macintosh and Mac OS - built-in support for easy-to-use networking.

Question: What long-range Apple goals are advanced through Open Transport?

Answer: Apple believes that communications and collaboration technologies are integral and fundamental to personal and workgroup computing. With Open Transport our goal is to provide the foundation to make Mac OS the best desktop OS for multiprotocol networking, anywhere.

Question: What needs must be addressed to be "the best"?

Answer: Networking and communications technologies are mission critical - thus reliability is a base-level requirement. Organizations require interoperability in heterogeneous environments; full compliance with standards is necessary.

High performance is also key. Increasing file sizes - often related to the rich media types found in graphics and publishing, multimedia, video production, and technical markets - create a demand for effective use of higher bandwidth

communications technologies such as ISDN, FDDI, fast Ethernet and ATM.

Beyond these base-level requirements, network managers, end-users and developers each have additional needs.

- Network managers need networked systems to support a flexible model of administration that accommodates both centralized and decentralized management models.
- Users are typically more interested in communications as a basis for productivity applications. As such, they want networking that is easy to set up and easy to use. This becomes even more important when users are mobile, needing access to networking services from wherever they may be - without requiring complex reconfiguration for each connection type and location.
- Developers need to address the broadest possible markets with minimum incremental investment. In short, they need standards based, cross-platform APIs and development tools.

Question: What were some of the key goals driving the development of Open Transport?

Answer: Apple began with two key assumptions: that networking is inherently a multiplatform, multiprotocol proposition; and that customers should not have to start over to achieve networking interoperability. This led us to adopt five key design goals:

- Open Transport must protect customer and developer investments in existing network infrastructure and applications.
- Open Transport must be based on existing cross-platform industry standards.
- Open Transport must provide users with an easy to set-up, easy to use abstraction of the underlying complexity of multiprotocol networking.
- Open Transport must also provide a complementary abstraction of networking and communications services for applications developers.
- Open Transport must offer a flexible run time model - one that lets a specific protocol be configured and selected at run time, rather than linked at compile time.

Article Change History:

08 Mar 1996 - Changed distribution status.

04 Mar 1996 - Updated to latest information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19129



Tech Info Library

Open Transport 1.1: Key Features and Benefits Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: Key Features and Benefits Q & A (3/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on key features and benefits for Open Transport 1.1.

DISCUSSION -----

Question: How can Open Transport benefit users?

Answer: Open Transport provides individual computer users with many benefits. Two of the most immediately visible and important benefits relate to making networking more accessible - that is, easier to configure and easier to use.

For example, Open Transport makes it easy to switch from one network configuration to another. A computer user "on the go" might want to hook up to the Internet in various locations, each requiring a different network configuration. With Open Transport settings for each network location can be stored for easy access and use. Changed settings are available immediately - no reboot of the computer is required to use the new configuration.

Open Transport also integrates on-line help, based on Apple Guide technology, to make it easier for an individual to hook up to an network, with fewer demands on network manager and support resources.

Question: How can Open Transport benefit network managers and organizations?

Answer: Open Transport provides significant new flexibility in setting up network configurations; with Open Transport, the network manager can recommend or require configuration settings for users on the network, or allow users to determine their own settings.

Open Transport also improves support for centralized configuration management.

For example, Open Transport/TCP supports the Dynamic Host Configuration Protocol (DHCP), allowing network managers to administer addressing and other TCP/IP configuration information from a central server.

Question: How can Open Transport benefit developers?

Answer: Open Transport is designed to make it easier and more cost-effective to develop Mac OS-applications for a wide variety of customers and markets. With Open Transport, Mac OS has built-in networking and communications based on cross-platform industry standards including the POSIX compliant X/Open Transport Interface (XTI), UNIX STREAMs and Data Link Provider Interface (DLPI).

Applications written to support Open Transport can directly support a wide range of networking environments (serial, dial-up network, LAN, and WAN), and multiple protocols (AppleTalk, TCP/IP, serial, and others) from a common code base. This capability is sometimes referred to as transport independence.

Question: What is transport independence? Why is it important?

Answer: Different people judge networking in different ways. End-users focus on what they can do using the network, and tend to select applications based on functionality and ease of use. Network managers are interested in delivering reliable network services in a cost efficient manner. Developers want to create compelling functionality for users, but are strongly influenced by the availability of networking infrastructure.

Unfortunately, with current networking tools and systems developers are forced to tie their applications to specific network infrastructure requirements - driven by their API choices. This creates a potential conflict between individual and organizational needs. If network managers restrict protocols to control support costs, users may not have access to the applications they need. If user require specific applications they may increase support costs for the network manager by "dragging along" specific network infrastructure requirements. Developer are stuck in the middle, making decisions for both users and network managers by selection of an API at compile time.

Transport independence is a concept that breaks this undesirable linkage. When implemented, it allows developers to write to a uniform set of APIs, users to focus on selecting the best applications, and network managers to make independent decisions about network infrastructure, all on an ongoing basis.

Question: What benefits can be realized from transport independent applications?

Answer: For end-users, transport independence brings an increased freedom to select applications that meet their needs, without being concerned with the bits and bytes of networking protocols. For network managers, transport independence allows increased flexibility in designing and controlling infrastructure demands arising from support of end-user applications, that is, the freedom to manage the bits and bytes of networking protocols.

Developers who create transport independent applications will find access to broader markets with incremental resources; code written for the AppleTalk market, for example, can be delivered to TCP/IP markets as well.

Question: How does Open Transport enable transport independence?

Answer: Open Transport brings together four technologies to support the development and deployment of transport independent applications on Mac OS:

- a set of look-and-feel guidelines that promote consistency for configuration of network services across protocols,
- a unified set of cross-platform, standards based APIs for all networking and communications protocols; for example, applications can send and receive data over an AppleTalk LAN or the TCP/IP based Internet using the same programming interfaces,
- a dynamic link-and-load architecture and set of protocols; protocols are loaded and unloaded on demand, conserving system resources, and making it possible to substitute TCP for ADSP at application launch time (for example),
- an addressing and naming support tool box; for example, applications can open a communications end-point by name (that is, "seeding.apple.com" or "printer16:LaserWriter@sales"; Open Transport will automatically provide the appropriate name-to-address mapping services (that is, DNR, NBP, and so on).

Together these support the creation of transport independent applications on Mac OS.

Question: Are all Open Transport applications transport independent?

Answer: No. While Open Transport provides the necessary foundation, there are certain guidelines and programming practices required for developers to create transport independent applications. For example, most protocols have many features in common - but also some features that are protocol-specific. If an application depends on a protocol-specific feature, then it will depend upon that protocol as well.

In some cases it may be appropriate or desirable to develop a transport-specific application. For example, an Mbone client is currently only useful when communicating using TCP/IP.

Question: Does transport independence imply that an organization can offer "AppleTalk services" without supporting AppleTalk protocols?

Answer: For each service and network environment, protocol and services choices will be determined by a combination of factors; transport independence is only one of them.

This begins with both the client and the server implementations of the particular service of interest (file, print, e-mail, directory, security, back-up, calendar, and so on) supporting the Open Transport APIs. Next, both the client and server must have the protocol stack(s) of choice installed. Finally, the server application must include some administration utility to allow the network manager to specify the protocol(s) over which application and/or presentation layer services are to be provided.

The user experience for selecting the server (that is, "Choosing", or "name-binding") may vary depending on the underlying protocol. For example, AppleTalk offers a distinctive user experience through the "Chooser" and the underlying NBP/ZIP protocols. TCP/IP offers a substantially different model for name-to-address translation (DNS); NetWare/IPX still another (NDS).

Question: In addition to providing for transport independence, how is the Open Transport standards based architecture important?

Answer: Although it might seem that the use and support of standards based APIs is of direct interest only to developers writing applications code, Apple's adoption of a fully standards based architecture for networking also has important benefits for individual users, network managers, and organizations. Some of these include:

- Porting of network protocols, drivers, and applications from other platforms (especially UNIX) to Mac OS becomes easier, resulting in an even wider selection of networking software for the Mac OS,
- A larger developer community is focused on STREAMs than would be focused solely on the Mac OS, making it possible to leverage development efforts underway outside Apple - for example, Apple's demonstration of IPv6 (next generation TCP/IP) on the Macintosh platform in cooperation with Mentat Inc.,
- Developers experienced in writing high-performance, high-reliability networking hardware and software for UNIX systems can apply their expertise directly to the Mac OS, accelerating the availability of similar solutions for Mac OS customers.

Article Change History:

08 Mar 1996 - Changed distribution status.
04 Mar 1996 - Updated to latest information.

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Tech Info Library Article Number:19130



Tech Info Library

Open Transport 1.1: Component Technologies Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: Component Technologies Q & A (3/96)

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Article Created: 2 January 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on component technologies for Open Transport 1.1.

DISCUSSION -----

Question: What technology components comprise Open Transport?

Answer: Open Transport supports LANs and WANs and will integrate serial communications, modems, and remote (dial-up) networking in a consistent model for end-users, network managers, and developers. The Open Transport architecture consists of:

- standards based programming interfaces for applications developers and for network interface controller developers,
- a new cross-platform development model for integration of networking with the underlying operating system,
- a set of dynamic link-and-load memory management services,
- new implementations of Mac OS protocol stacks,
- new human interface applications and control panels, and
- a set of backward-compatibility support modules.

Question: What current Mac OS technologies and components will Open Transport replace?

Answer: When installed, Open Transport replaces the current Mac OS

implementations of AppleTalk and TCP/IP (including the protocols and the "Network", "MacTCP", and "Admin TCP" control panels).

Over time, Open Transport is also designed to replace the Connection Manager and the Communications Resource Manager of the current Communications Toolbox architecture.

Question: Does that mean that Apple is migrating serial communications away from the Communications Toolbox (CTB)?

Answer: Partially, but not entirely. The CTB File Transfer and Terminal Managers continue to be supported and will be preserved in the Copland OS release - although on new Open Transport/Serial underpinnings.

Over time, plans call for the CTB Connection Manager and its tools to be phased out in favor of Open Transport. In particular, while the Copland release of Mac OS is expected to provide support for the Connection Manager APIs, at this time Apple has no plans to port the existing Connection Manager tools to Copland. Thus, Apple recommends that developers plan their update to Open Transport/Serial (and away from CTB Connection Manager) to coincide with (or precede) the availability of the Copland OS release.

Question: What standards are implemented in the Open Transport architecture?

Answer: Open Transport brings standards based networking into Mac OS with support for:

- the X/Open Transport Interface (XTI), the POSIX compliant API for support of networking applications,
- the Datalink Provider Interface (DLPI), for development of network interface controller (NIC) drivers,
- a port of a UNIX System V release 4.2 compatible STREAMs environment for network protocol developers.

Question: Did Apple develop the STREAMs environment for Open Transport?

Answer: To maximize the stability, performance, and robustness of Open Transport, Apple selected Mentat Inc. - the leading supplier of high performance kernel-level network software - to supply the STREAMs environment for Open Transport.

Mentat Portable STREAMs (MPS) is an independent fast, full-featured, multiprocessor safe version of the UNIX System V Release 4 STREAMs environment. Its incorporation into Open Transport provides a reliable platform for protocol development, including Apple's own implementation of a STREAMs based AppleTalk stack. MPS also allows easy porting from other platforms of third party protocols. MPS is the same implementation of STREAMs found inside many industry standard UNIX operating systems, including those from IBM and OSF, as well as

other platforms such as Novell NetWare.

Question: Did Mentat supply other technology to Apple in connection with Open Transport?

Answer: Yes. Mentat supplied the source code base for Open Transport/TCP, and has worked closely with Apple on the development of an archetypal high-performance DLPI driver.

Mentat TCP (MTCP) is a robust implementation of TCP/IP that conforms with all industry standards, and is the basis of another leading workstation TCP stack. It makes a significant contribution to the performance and functionality of Open Transport/TCP.

Question: Is there more information available about Mentat Inc. and its products?

Answer: Mentat maintains a presence on the world wide web at:
<http://www.mentat.com>

Question: What dynamic link-and-load technology is used by Open Transport?

Answer: On 680x0 Mac OS systems, Open Transport uses the Apple Shared Library Manager (ASLM) 2.0. On PowerPC Mac OS systems, Open Transport is based on a combination of ASLM (for 680x0 applications) and the newer Code Fragment Manager, CFM (for PowerPC applications).

Question: Which protocols are supported by Open Transport?

Answer: Open Transport version 1.1 includes implementations of AppleTalk, and TCP/IP, and consistent API access to serial communications.

Apple and third parties are working to add support to Open Transport for Point to Point Protocol (PPP), NetWare (NCP/IPX), Windows 95 (SMB/TCP/NetBIOS), DECnet, LAT, and X.25. Some of these additional capabilities may be incorporated or bundled with future releases of Apple Open Transport.

Question: Are there any changes in AppleTalk or TCP/IP with Open Transport?

Answer: Yes. The new Open Transport/AppleTalk and Open Transport/TCP protocol stacks both have been implemented as Open Transport STREAMs modules and as native code on PowerPC Mac OS computers. They support the new XTI APIs, and their shared libraries can be dynamically loaded and unloaded as needed.

Both protocols also support dynamic reconfiguration (changed settings without requiring reboot), and feature new configuration applications offering Basic, Advanced, and Administrator tools. The new configuration applications - AppleTalk and TCP/IP - replace the older control panel implementations -

Network, MacTCP, and AdminTCP. For backward compatibility the new applications continue to be stored in the Control Panels folder.

Each protocol stack also offers addition protocol-specific feature enhancements.

Question: When should users update their systems to Open Transport?

Answer: With the availability of Open Transport v1.1, Apple encourages all Mac OS System 7.x users with systems meeting the minimum configuration requirements to take advantage of the increased performance and new features provided by System 7.5.3 and Open Transport v1.1.

Question: Does this mean that Apple expects everyone to stop using current AppleTalk and MacTCP?

Answer: Open Transport is designed to replace current AppleTalk (58.x) and MacTCP (2.0.x) on Apple Macintosh and Mac OS compatible systems meeting minimum configuration requirements. The transition will happen over time, as developers deliver Open Transport-ready and enhanced applications, as users gain experience with Open Transport, and as Apple continues to enhance Open Transport.

Open Transport is not designed to run on 68000 or 68020 Macintosh systems, which should stabilize on current versions of classic AppleTalk and MacTCP software. If Open Transport is installed on these systems, classic networking will still be selected and loaded at system start-up time.

Developers are strongly encouraged to begin all new development for Mac OS using Open Transport.

Question: What files are installed as a part of Open Transport?

Answer: When installed, Open Transport adds the following to the Control Panels Folder:

- AppleTalk - the control panel application replacing the classic Network control panel.
- TCP/IP - the control panel application replacing the classic MacTCP and AdminTCP control panels.

Open Transport adds the following files to the Extensions Folder:

- Shared Library Manager and Shared Library Manager PPC - extensions that implement the Apple Shared Library Manager for 680x0 and PowerPC, respectively.
- OpenTransportLib and Open Transport Library - shared libraries that implement core Open Transport services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

- OpenTptAppleTalkLib and Open Tpt AppleTalk Library - shared libraries that implement Open Transport AppleTalk protocols and services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

- OpenTptInternetLib and Open Tpt Internet Library - shared libraries that implement Open Transport TCP/IP protocols and services on PowerPC Mac OS systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.

- Open Transport 68K Library - shared library that implements core Open Transport on 680x0 systems.

- Open Tpt ATalk 68K Library - shared library that implements Open Transport AppleTalk protocols and services on 680x0 Mac OS systems.

- Open Tpt Inet 68K Library - shared library that implements Open Transport TCP/IP protocols and services on 680x0 Mac OS systems.

Depending on the specific system configuration, the following Extensions also may be installed:

- Ethernet (Built-In) - code resource to allow access to built-in Ethernet port.

- Serial (Built-In) - code resource to allow access to built-in serial port.

Open Transport documentation is also provided in electronic format:

- Open Transport Guide Additions - AppleGuide database that updates the Macintosh Guide with information about Open Transport (System 7.5 only);
- a User's Guide (in Acrobat Reader format) which parallels the printed manual;
- the Open Transport Read Me containing any late-breaking news,
- a text file called "Open Transport 1.1 Technical Info" which contains a distillation of this Q&A.

Article Change History:

08 Mar 1996 - Changed distribution status.

04 Mar 1996 - LUpdated to latest information.

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Tech Info Library

Open Transport 1.1: AppleTalk Features Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: AppleTalk Features Q & A (3/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on AppleTalk features for Open Transport 1.1.

DISCUSSION -----

Question: What are some of the upgraded features of Open Transport AppleTalk?

Answer: Open Transport/AppleTalk now includes new support for assigned (manually administered) protocol addresses. This allows AppleTalk nodes to be managed using protocol address as a unique identifier. It also may reduce the network traffic associated with AppleTalk's dynamic address assignment features (AARP).

Dynamic addressing continues to be available for those customers who prefer automated address allocation.

Question: AppleTalk preferences, such as the last used protocol address and the selected network interface, have been stored in persistent parameter RAM in the past. How does this relate to the new Open Transport network configurations and manual addressing?

Answer: Under the classic AppleTalk networking architecture, AppleTalk's ON/OFF state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name were saved in persistent memory (parameter RAM) for reuse at boot time. To ensure backwards compatibility, this information is still stored and retrieved on systems using Open Transport/AppleTalk.

However, there are some changes made with Open Transport to accommodate the expanded capabilities of multiple, saved configuration files, and required network settings.

- At boot time, Open Transport reads the current Open Transport/AppleTalk configuration file to determine if AppleTalk should be set to ON or OFF. This value will override the value saved in parameter RAM.
- If the network interface specified in the current AppleTalk configuration file is locked (that is, it is a required setting) and the specified port is not available or cannot be initialized, AppleTalk will not automatically switch to LocalTalk; instead AppleTalk will remain OFF. The user will receive notification in the event this occurs.

Question: What happened to the "Network" control panel?

Answer: The Network Control Panel has been replaced by the Open Transport/AppleTalk configuration utility (control panel). This change was made to reflect the function of the utility - to configure AppleTalk network connections.

Question: Are there other changes to the human interface for AppleTalk?

Answer: Yes. The AppleTalk configuration utility now provides basic troubleshooting information. For example, the Advanced and Administrator views provide access to the hardware (Media Access Control) address, current AppleTalk router address and the current AppleTalk network number range for the cable. Previously this information was only available through the use of router administration or protocol analysis software.

Question: Are there other changes to AppleTalk of interest?

Answer: Yes. Beginning with Open Transport/AppleTalk v1.1, AppleTalk now includes integrated support for both multinode and multihomed operation, accessible to developers at the API level. Configuration and use of the second, third, or more network interfaces or protocol addresses requires application program support.

Multihoming is the term applied to the capability to communicate using more than one network interface at a time using the same protocol. This term is taken from the idea that the workstation makes a "home" on more than one network at the same time.

Multinode is the term applied to the capability to communicate through more than one network protocol address at the same time on a given network interface, using a single protocol. This term is taken from the idea that the workstation or PC appears to outside parties to be multiple end-nodes on the network.

Question: Earlier information about Open Transport said that AppleTalk could be dynamically loaded and unloaded only as needed, similar to Open Transport/TCP. Is this feature available?

Answer: This capability has been removed from Open Transport at this time. It

was not technically feasible to provide this feature without creating compatibility problems with existing applications.

Question: Is Open Transport/AppleTalk "AppleTalk Phase 3"?

Answer: No. Open Transport/AppleTalk is a new, modern implementation of the AppleTalk Phase 2 protocol architecture for Mac OS - from the people who invented AppleTalk.

Article Change History:

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Tech Info Library

Open Transport 1.1: TCP/IP Features Q & A (7/96)

Revised: 9/23/96
Security: Everyone

Open Transport 1.1: TCP/IP Features Q & A (7/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on TCP/IP features for Open Transport 1.1.

DISCUSSION -----

Question: What are some of the features of Open Transport/TCP?

Answer: With the broad cross-platform adoption of TCP/IP - and the tremendous visibility of the Internet - Apple has made a significant investment in bringing a workstation-class implementation of TCP/IP protocols to Mac OS. As with Apple's earlier MacTCP, Open Transport/TCP is a full 32-bit stack.

Open Transport/TCP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies;
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol;
- IP multicast, for participation as an MBone client;
- simultaneous TCP connections limited only by installed memory and processor power, for increased functionality as a Internet or other TCP/IP network server;
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR);
- support for developer access to raw IP services, as well as TCP and UDP;

- Ethernet_SNAP and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts;
- implicit and explicit domain name search paths, for increased control of domain name resolution,
- multiple IP routers with fail-over, for increased robustness in mission critical applications.

Question: How does the new support for Dynamic Path MTU discovery work?

Answer: Open Transport/TCP sets the "don't fragment" bit in the IP datagram header on transmission unless the packet size is larger than the MTU for the network. Intermediate routers are required by current RFCs to send back an "ICMP can't fragment" error when presented with a "don't fragment" packet that cannot be forwarded without fragmentation with that MTU size. In that event, Open Transport/TCP moves to the next smaller MTU size for that path and re-sends the packet, again with the "don't fragment" bit set. This process automatically results in using the largest supported MTU size for off-subnet traffic.

Question: How does the new Open Transport/TCP domain name resolver (DNR) work?

Answer: The new DNR implements name-to-address (A), address-to-name (PTR), system CPU and OS (HINFO), and mail exchange (MX) queries. It does not implement negative caching, depending on a local full service resolver to provide this facility. The DNR will always request recursion, but will follow references if recursion is not available.

The DNR caches name-to-address and cname-to-name mappings. It does not cache host info (OS and CPU type information) nor does it cache Mail Exchange/Preference information. It does not save name server references after a query is resolved; further queries begin anew at the configured name servers.

Fully qualified domains names or FQDNs (those ending with a "."), and provisional FQDNs (those containing at least one "." internally but not ending with ".") are submitted for resolution without manipulation. Otherwise the name is assumed to be a partially qualified domain (PQDN).

The first - but optional - step in PQDN resolution is the use of an Implicit Search Path. To be used, Implicit Search must first be configured using the Advanced or Administrator view by entering values in the "Implicit Search Path: Starting Domain Name" and "Ending Domain Name" fields. When so configured the DNR will attempt to change the PQDN to a FQDN for resolution by concatenating the PQDN with domain names in the ancestor hierarchy delimited by the Starting and Ending Domain Name values (that is, searching for a PQDN of joe could result in a search for joe.hardware.support.apple.com, joe.support.apple.com and joe.apple.com). Implicit searching stops when the FQDN is resolved, or when the Ending Domain Name value has been tried and fails (that is, joe.com would not be tried, assuming an Ending Domain Name value of apple.com).

If the PQDN has not yet been resolved (including the case where an Implicit Search Path was not configured), explicit Additional Search Domains are searched. For each Search Domain configured, name server(s) are contacted in the order specified in the Name Servers field. If the name is resolved in the first search domain from which an answer is returned other Search Domains will not be checked. Note that at least one Search Domain (roughly equivalent to MacTCP's Default Domain) must be explicitly configured in order to resolve any PQDNs.

If an authoritative answer that the "name-does-not-exist" is returned, the DNR immediately begins the search in the next configured Search Domain. The search continues through the configured Search Domains.

The DNR has an overall time-out of 2 minutes, after which it will abandon the search.

Question: Does Open Transport/TCP support a local HOSTS file?

Answer: Open Transport/TCP supports one or more HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the domain name resolver's initial cache of information. The selected file is opened and parsed when Open Transport/TCP is initialized. As with MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified Domain Name, and where

```
<rr> = [<ttl>] [<class>] <type> <rdata> OR [<class>] [<ttl>] <type> <rdata>
```

The only <class> currently supported is IN (Internet Domain); <ttl>, time to live, indicates the record's configured lifetime in seconds; and <type> can be A (host address), CNAME (canonical name of an alias), or NS (name server). If <ttl> is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a value of minus-one (-1). \$INCLUDE and \$ORIGIN are not supported.

Open Transport/TCP is more stringent regarding the content and format of the HOSTS file than was MacTCP, which permitted violation of the PQDN requirement for <domain-name>. For instance, this format:

```
charlie    A 128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie    CNAME myhost.mydomain.edu
```

```
myhost.mydomain.edu A 128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

If a HOSTS file is used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, the Advanced or Administrator mode must be used to select the desired file. The text file must already exist; it could have been created with any text editor or word processor. The HOSTS file is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when connecting via Ethernet to the campus LAN and when dialing-in from a remote location.

Question: What are some of the changes to the human interface for Open Transport/TCP?

Answer: The Open Transport/TCP configuration application represents a complete overhaul of the human interface from the MacTCP software it replaces. In addition to generic new features noted elsewhere (multiple saved configurations, recommended and required settings, on-line documentation, and so on), key new features include:

- direct entry of IP addresses and subnet mask in standard "dot notation";
- explicit selection of desired configuration method, now including Manual, RARP, BootP, MacIP, and DHCP;
- support for attachment to networks using Classless InterDomain Routing (CIDR);
- support for multiple entries in the router, name server, and explicit domain search lists; and
- improved support for large AppleTalk networks when using MacIP server/gateways.

Question: Does Open Transport/TCP support MacTCP "Server" addressing?

Answer: MacTCP Server mode addressing is a combination of the Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. When Server mode is selected, MacTCP will use BootP to attempt to acquire an IP

address. If BootP fails to provide a valid address it then tries RARP. Whichever protocol is successful is stored as a preference, and is used first on next system startup. While this "fall-back" approach adds a degree of robustness from the users point of view, it also adds a degree of unpredictability from a network administrators point of view.

Based on customer feedback, Open Transport/TCP has been designed to allow a network administrator to explicitly specify the single method they prefer to use. Thus while both RARP and BootP are individually supported, Server mode does not appear as a choice in the Open Transport/TCP configuration utility.

Question: Does Open Transport/TCP support MacTCP "Dynamic" addressing?

Answer: No. MacTCP "Dynamic" mode addressing was based on an Apple-proprietary extension to TCP/IP protocols, which applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks. This made it very easy to set-up a Mac OS only TCP/IP network, but could create additional work for a network administrator in more typical heterogeneous TCP/IP networks.

The Internet community (the IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Apple has adopted the industry standard DHCP and dropped support for the earlier Apple "Dynamic" mode addressing with Open Transport/TCP.

Question: What is MacIP?

Answer: MacIP, sometimes also referred to as KIP (Kinetics Internet Protocol), is a protocol specification developed as a method for carrying TCP/IP traffic on AppleTalk only networks - originally these would have been LocalTalk networks. MacIP is today frequently used in conjunction with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services. MacIP specifies encapsulation of TCP/IP datagrams in AppleTalk packets for transmission over such connections.

Use of MacIP requires a gateway. AppleTalk encapsulated IP packets are sent to the gateway using AppleTalk protocols (DDP). The gateway strips off the encapsulation and places the IP packet on the TCP/IP LAN. When packets are destined for a MacIP end-node, the gateway provides the needed encapsulation services.

MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network, acting as a middleman between the MacIP end-node and the appropriate TCP/IP based hosts on the LAN or WAN.

Open Transport supports MacIP end-nodes. It is selected using the TCP/IP configuration utility by choosing "AppleTalk (MacIP)" in the "Connect via:" pop-up menu. The user (or network administrator) must also specify which zone contains the desired MacIP gateway. Once selected, TCP/IP will be encapsulated in AppleTalk and will be sent to the gateway via the NIC selected using the

AppleTalk configuration utility.

Question: How is MacIP support improved with Open Transport/TCP?

Answer: Open Transport/TCP offers new features in the human interface for selecting the MacIP server, including:

- AppleTalk zones are now displayed in a scrolling list in a movable window. This display is easier to view compared to MacTCP's pop-up menu, especially when there are a large number of zones in the network.
- The Zone list window now supports selection using the mouse, the arrow keys, and/or "type-select", allowing the user to more quickly select a specific zone from the list.
- There is an option to display only those AppleTalk zones containing MacIP servers. When selected, this creates a background search task which when completed filters the zone list display to show only those zones containing active MacIP servers.
- There is a short cut "Current Zone" option which causes the Mac to check the current AppleTalk zone for a MacIP server without requiring the user to select a specific zone. This can be a time-saver for the user and a potential bandwidth-saver on the network, especially when there are mobile users that connect in different locations to a enterprise-wide network for MacIP services.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

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- 20 May 1996 - Corrected reference to Ethernet SNAP.
- 08 Mar 1996 - Changed distribution status.
- 04 Mar 1996 - Updated to latest information.

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Tech Info Library

System 7.5 Update 2.0: What's New in This Update (1 of 3) (6/96)

Revised: 9/23/96
Security: Everyone

System 7.5 Update 2.0: What's New in This Update (1 of 3) (6/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 10 June 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

This file is one of several Read Me files that describe System 7.5 Update 2.0. This three-part document provides details about the changes provided by this software update.

Another Read Me file, "Installing This Update," summarizes the enhancements of this update and gives instructions for installing the update.

What's in this document (part 1 of 3)

- General information about the update
- Changes to the Finder
- Changes to Find File
- Changes to Standard File
- Changes to control panels
- Changes to Apple Guide
- Changes to Apple Menu Options

General information about the update
=====

System 7.5 Update 2.0 provides the enhancements introduced in System 7.5 Update 1.0, plus many more.

In this document:

- Indicates a change made in System Update 2.0 (7.5.3)

- Indicates a change made in System Update 1.0 (7.5.1)

This update installs the latest versions of all components (including any components that you disabled using the Extensions Manager) it finds on the disk it is updating. After you run the Installer, the updated components will be in the same folders as they were before you installed the update. For example, new versions of disabled extensions will be in the "Extensions (Disabled)" folder, and new versions of disabled control panels will be in the "Control Panels (Disabled)" folder.

The file called "System 7.5 Update" replaces the enabler on all computers capable of running system software versions 7.5 and/or 7.5.1. Computers that did not previously need an enabler to work with system software versions 7.5 and 7.5.1 still need the System 7.5 Update file since it contains most of the fixes delivered in this update.

The file called "System 7.5.2 Update" replaces the enabler file on all computers capable of running system software version 7.5.2.

This update includes all of the fixes included with the previously released 7.5.2 Printing Update, the PowerBook 5300 System Software Update, and the PowerBook 2300c Update. You do not need these updates if you install System 7.5 Update 2.0. If you previously installed any of these updates, you should install System 7.5 Update 2.0, since it contains additional fixes.

After you install the update, the About This Macintosh window says "System Software 7.5.3." The window also says "System 7.5 Update 2.0," to indicate the source of the system software.

Changes to the Finder =====

This update includes a new version of the Finder with the following changes:

- When you rebuild the desktop, comments typed in a file's Get Info window are no longer deleted. (Of course, if you delete the desktop database—for example, by making it visible using a utility and then moving it to the Trash—the comments will be lost because the Finder will have to build a new desktop at startup.)
- The Name field (used in Finder windows set to one of the list views) is wider, allowing you to see more characters in filenames.
- On PowerPC-based computers, icons are translucent while you drag them (rather than simply appearing as outlines). If you drag several icons at once, only the icon under the mouse will be translucent—the others will still be outlines.
- Copying large numbers of small files is faster. (Previous versions of the Finder updated the bar in the copy progress dialog box approximately thirty times per second; the new version updates the copy progress bar far less frequently.)
- The Finder Update file (once named PowerPC Finder Update) is now part of the

Finder. This update deletes all old versions of this file.

- When the Clipboard is active, the Clean Up Window command is dimmed. This eliminates a crashing bug in the Finder.
- The Finder flushes the processor's cache more intelligently, improving the Finder speed on all 68040- and PowerPC-based computers.
- Fixes a problem that caused an out-of-memory error when emptying the Trash if QuickDraw GX was installed.
- Fixes a problem that caused seemingly false out-of-memory messages when trying to open or close Finder windows. This problem sometimes occurred when the desktop had very few icons on it, a window with the Kind column was visible, and a large number of different kinds of documents had been displayed since the last restart.
- Fixes a problem introduced by the Finder that shipped with System 7.5 Update 1.0. The Find window of Find File will now be made active if Find File is already open and you choose Find from File menu (or Find File from the Apple menu).
- If you are trying to connect to your computer and your server password has expired or needs to be changed when you try to use an alias to connect to the server, you'll see a message that the password needs to be changed. (Prior versions told the user that the server couldn't be found.)
- File copies are now done asynchronously, which makes the CPU more available to other applications during copying. If another application is made active during a file copy, the computer does not slow down as much. This effect is most noticeable when using Apple Remote Access.
- Finder window titles are now erased before they are overwritten. (Previous versions rendered window titles unreadable in some circumstances.)

This new version of the Finder also includes the following fixes from the prior update's Finder:

- Corrects a problem at startup that could cause the Finder to open the same list of windows over and over again.
- With QuickDraw GX installed, AppleEvents or AppleScript scripts that send Print or Page Setup commands to the Finder are now handled correctly.
- When you try to make changes to a System or Applications folder that is protected by the General Controls panel, the Finder no longer claims there's an access privileges problem. The warning message now describes why the folder can't be changed and how to turn off folder protection.
- Fixes a problem that occurred the first time you started up your computer after installation (or any time you deleted the old Finder Preferences file). One symptom of this problem was a dialog box stating that the Network control panel could not be used.

- Fixes a problem that caused a crash if a sound and a control panel were both in the Startup Items folder and the sound was opened first. (Items in this folder are opened in alphabetical order.)
- The Finder no longer rebuilds the desktop if it finds a folder named Desktop at the root level; now it rebuilds the desktop only if it finds a file called Desktop.
- Improves the way the Finder handles server volumes that are unexpectedly disconnected while files from the server are still open. Now you can save the contents of most files by using the Save As command (in the File menu of most applications). Large files (those that don't fit entirely in memory) might be lost if the server disconnects unexpectedly. With some applications, however, you can copy the contents that are in memory and paste them into a new document, later merging this document with the original file on the server. (With prior versions of the Finder, this situation could lead to serious problems if the user tried saving the document after the server was disconnected.)
- Changes the way the Finder invokes the Find File extension (of System 7.5) instead of the built-in Find feature introduced in System 7.0. The Find File extension now contains a simple "flag" that tells the Finder to use the new Find File. If you disable or remove this extension, the Finder uses only the older built-in Find. This change enables users to choose between the full-scale Find File and its stripped-down version (the built-in Find command).
- Fixes a problem that caused an out-of-memory error if too many Get Info windows were open at the same time.
- Enables users to open a document that belongs to an already-running background-only application. (In previous versions, the Finder searched only through the list that showed up in the Application menu.)
- The Finder Update file was renamed. (It was previously known as the PowerPC Finder Update file.) This file handled Code Fragment Manager (CFM) error-reporting for missing dynamically linked libraries.
- Speeds up copying from servers by letting the server set its preferred block size for copy requests. (Previously, the Finder always requested 4.5K blocks of data from AppleShare or FileShare volumes.)
- Speeds up copying to and from servers by greatly reducing the number of times the Finder checks for user activity during copy operations.
- Speeds up the copying of small files by changing the way the Finder writes parts of the files. (Previously, the Finder rounded up the size of the file being copied to the minimum allocation block size, which, on a 2GB disk, is 64K.) Now the Finder rounds up small files to a multiple of the size of a disk sector (that is, to increments of 512 bytes).
- Fixes a problem in rebuilding the desktop that caused the Finder to skip applications if it encountered a background-only application while rebuilding the desktop database.

- Eliminates problems in opening some applications or having the wrong icon appear. These problems sometimes occurred when, during rebuilds of the desktop, the Finder included applications that did not have the necessary bundle resources. The Finder no longer includes applications that do not have the necessary bundle resources, eliminating confusion within the desktop database.
- The Finder now ignores aliases to applications when rebuilding the desktop database.

Changes to Find File

=====

- The following are the changes in Find File 1.1.2:
 - Includes a list of Shortcuts, available from the Guide menu (with the question-mark icon) when Find File is active.
 - Includes a new preference used in sorting by Kind, "Use full descriptions for found items," which gives more specific Kind descriptions. Using this checkbox results in slower sorts; not using it results in faster sorts but with less specific Kind descriptions.
 - Fixes a crashing bug that occurred if the same item was dragged to the same location before the Finder finished the earlier move.
 - Fixes a bug that allowed non-numeric data to be input into the Size search field.
 - Fixes a bug that allowed a pasted item to exceed the length of several search fields.
 - Fixes a bug that allowed too many digits to be entered in the Size search field.
 - Allows you to drag a volume icon onto the Location pop-up menu.
 - Fixes the zoom box on 68K systems.
 - Changes the alert message to be more informative when a server being searched is disconnected.
 - Changes the way the Found Items list displays items that are in the Trash after the Trash has been emptied.
 - Fixes a searching bug that occurred when the Kind requested was "font."
 - Fixes a crash that sometimes occurred when clicking the Stop button in the sorting dialog box. This dialog box now displays a spinner during a sort.
 - Fixes a memory bug that sometimes occurred after several consecutive searches.
 - Fixes a display bug with Found Items that occurred when using large font sizes.
 - Fixes the CD-ROM icon in the Drives pop-up menu.
 - Enables Find File to find invisible files, some of which you can move (such as the Desktop, Desktop DB, and the Desktop DF files).
 - The Clear menu item now deletes only the selected text. (The Clear key no longer deletes anything.)
 - Fixes a bug that occurred when dragging a file onto the Kind search field. Fonts and applications now show up as such, not as documents.
 - Fixes a crash that sometimes occurred when dragging an item from the Found Items window to the desktop.
 - Changes the prompt message when search fields are empty.
 - Cleans up Balloon Help.

- Includes a new preference to specify transliteration.
- Speeds up searches in 2-byte languages if no transliteration is necessary to perform the search.
- Fixes a bug where the filename input for 2-byte languages could exceed maximum length.

•The following are changes introduced with System 7.5 Update 1.0 (Find File 1.1.1):

- Fixes a drag problem with large groups of items. Now Find File displays a confirmation dialog box when you drag more than 50 items.
- Fixes a crashing bug when searching for items whose names contain "desktop." Find File no longer finds invisible desktop files unless explicitly requested.
- Fixes a bug that prevented exact-name matches with foreign file systems.
- Fixes the "spontaneous search" bug, whereby Find File could start searching without any criteria entered. Find File now displays an alert prompting for search information.
- Fixes a bug that sometimes prevented an item in the Found list from being selected by clicking its icon.
- Fixes a memory problem in sorting more than 1100 items.
- Fixes a highlighting problem with the Keyboard menu.
- Scroll bars are now properly drawn.
- Fixes a cosmetic problem with drag-selecting items in the Found list.
- Properly updates the path in the bottom of the Found list window after the user drags items from the list.
- Fixes a hanging bug that could occur when dragging a folder onto the search fields.
- Fixes a pop-up menu bug that sometimes showed the wrong value after switching to the Finder and back to Find File.
- Fixes the search when the Comments field is left blank.
- Fixes Balloon Help for the More Choices button.

Changes to Standard File

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- Fixes an occasional crash in Standard File that occurred when the data cache was not flushed before being disabled.
- Fixes a memory leak with some of the dialog boxes used for opening and saving documents in Standard File.
- Fixes a problem in the dialog box used for opening files that could allow the pop-up menu to be dimmed in Standard File.

Changes to control panels

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- PowerPC-based computers with PCI slots now use the Monitors & Sound control panel, instead of the Sound & Displays control panel, to control monitor and sound settings. (System Update 2.0 removes Sound & Displays.) You can do a custom installation to install the Sound control panel if you need it for older applications. (The Monitors & Sound control panel works only on PCI-based computers.)
- The Memory control panel now displays "Will be off after restart" if Virtual

Memory is turned off, as a reminder that just turning Virtual Memory off does not fully deactivate it.

- The Memory control panel now uses a larger default setting for the Disk Cache. After you install this update, the new setting will be used only if the Use Defaults button in the Memory control panel is clicked. The new default is 32K for each megabyte of physical RAM installed, up to a maximum of 4096K. (Virtual RAM is ignored for this calculation.) Thus, a computer with 16MB of physical RAM would use 512K for its default disk cache size, resulting in better performance for disk-intensive tasks than the original default of 96K.

- Fixes a bug in resizing a RAM disk in the Memory control panel while File Sharing is on.

- Fixes a problem in General Controls panel that caused problems with Retrospect Remote if either application or System Folder protection was turned on.

- Includes a new option in the General Controls panel: "Folder that is set by the application." Clicking this option sets the default folder to the folder containing the document being opened. Thus, when you open a document by double-clicking its icon, the default folder will be set to the folder containing the document (instead of to the Documents folder or to the folder containing the application that opened that document).

- Fixes a problem in General Controls panel that could hang the computer if Applications folder protection was turned on and there was a document or alias named "Applications" at the root level of the startup disk.

- Fixes a problem in the General Controls panel's folder-protection code that could cause folders to become invisible if Stuffit Spacesaver was installed.

- CloseView no longer uses key combinations that were already used by the Finder. The new key combinations for CloseView are:

- Command-Option-K: turns CloseView on or off
- Command-Option+= (the plus sign): increases magnification
- Command-Option-- (the minus sign): decreases magnification

- If CloseView is active, it remains active after you change your monitor's bit depth.

- CloseView no longer hangs the system if Balloon Help is on and an audio CD is inserted.

- Includes the following new international keyboard layouts:

- French Canadian
- ISO Canadian
- Spanish

- Installs the updated versions of the following international keyboard layouts if older versions are already installed:

- Dutch
- Flemish

- German

Changes to Apple Guide

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- This update includes Macintosh Guide 1.3 (and several new Guide Additions files), which provides updated onscreen help for system software.

- This update includes Apple Guide version 2.0.2, which includes the following improvements:

- Fixes problems with displaying coach marks in modal dialog boxes.
- Fixes a serious memory leak that occurred every time a Guide file was opened.
- Fixes a problem that caused every twenty-first index item to disappear when multiple additions were in use.
- Fixes a problem that occurred when Apple Guide encountered additions files that did not apply to the current configuration of hardware and system software (for example, if the QuickTime Guide were installed, but QuickTime was not installed or had been turned off with Extensions Manager).
- Defaults to US ASCII sorting only if the current script is Roman and the current language is English. (Apple Guide 1.2.5 defaulted to US ASCII on any Roman script system.)
- Fixes problems with coach marks on 68K machines. (Coach marks were sometimes drawn on the wrong menus.)
- Fixes a Look For problem in Japanese systems by first trying to use the script code from the current database.
- Fixes a bug in <Delete Index> that affected Japanese systems.
- Fixes problems with mixed-mode handling of installed coach and context handlers.
- Fixes a problem that sometimes caused Apple Guide to shut down completely on PowerPC-based computers. For example, if a PowerBook additions file was present on a PowerPC-based desktop computer, Apple Guide 1.2.5 would completely shut down because the additions file couldn't be used. Now, Apple Guide ignores the PowerBook addition and continues running.
- Fixes a problem that prevented Apple Guide 1.2.5 from starting up if QuickTime wasn't installed on the machine. This problem occurred only on PowerPC-based computers.
- Includes localizable error strings for use in various abort messages.

- This update also includes all the improvements to Apple Guide introduced with System 7.5 Update 1.0 (Apple Guide 1.2.5):

- Works faster than prior versions on all Mac OS-based computers.
- Is native on PowerPC-based computers, which also improves performance.
- Is compatible with At Ease.
- Makes additions files available in the Guide menu even if the application was opened with AppleScript.
- Fixes a memory leak of an international resource, which occurred every time a Guide file was opened.
- Makes windows redraw correctly after coach marks are drawn.
- Updates no more of the screen than it needs to.
- Properly draws coach marks in black and white and on a mirrored monitor.
- Keeps scroll bars active when they should be active.

Changes to Apple Menu Options

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- Includes Apple Menu Options v.1.1.2, which introduces the following changes:

- Has been largely rewritten for better performance and improved stability.
- Fixes a problem that could hang the computer when the Apple Menu Options preference file was dragged to the Trash.
- Fixes a problem that could hang the computer if there was a locked alias in the Recent Documents, Recent Applications, or Recent Servers folders. The new version ignores locked aliases.
- Moved a large 68K patch that caused a general slowdown on PowerPC-based computers. This patch is now active only while the mouse button is held down on the menu bar or in a menu.
- Increases the height of the editing field used for entering the number of documents, applications, and servers.
- Fixes a problem that could prevent the Recent Documents, Recent Applications, and Recent Servers folders from being deleted when tracking of those items is turned off.
- Fixes a problem that could cause Apple Menu Options to hang if its settings were changed and the System Folder was on a locked volume (such as a startup CD or locked floppy disk). The hang would occur when Apple Menu Options tried to write the new settings into the locked preferences file. The new version does not try to record new settings on a locked volume.
- Fixes a problem with sorting order; Apple Menu Options no longer uses the U.S. standard for modified Roman and Scandinavian alphabets.
- Prevents Apple Menu Options from deleting original files—it can now only delete aliases. (This change solves a problem that occurred when users saved documents directly into the Recent Documents folder. Once the document was saved, Apple Menu Options replaced the file with an alias to that file.)
- Fixes a problem that sometimes caused the contents of the Apple menu to show up in place of the proper contents for submenus.

- Incorporates all of the prior fixes to Apple Menu Options:

- Improves performance.
- Fixes a problem that could cause an application's menus to disappear.
- Fixes a problem that could leave the Apple menu highlighted if an application was opened from a submenu within the Apple menu.
- Shows non-AppleShare servers in the Recent Servers sub-menu.

Article Change History:

10 Jun 1996 - Removed keyword.

09 Apr 1996 - Added keyword.

01 Apr 1996 - Removed keyword.

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Tech Info Library

System 7.5 Update 2.0: What's New in This Update (2 of 3) (9/96)

Revised: 9/19/96
Security: Everyone

System 7.5 Update 2.0: What's New in This Update (2 of 3) (9/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

This file is one of several Read Me files that describe System 7.5 Update 2.0. This three-part document provides details about the changes provided by this software update.

Another Read Me file, "Installing This Update," summarizes the enhancements of this update and gives instructions for installing the update.

In this document:

- Indicates a change made in System Update 2.0 (7.5.3)
- Indicates a change made in System Update 1.0 (7.5.1)

What's in this document (part 2 of 3)

- Changes to SimpleText
- Changes to the Launcher
- Other new or changed components
- Miscellaneous fixes and enhancements
- Files no longer needed

Changes to SimpleText

=====

- Includes SimpleText version 1.3.1, which supports QuickDraw 3D.
- Includes the following enhancements introduced with the version of SimpleText

provided with System 7.5 Update 1.0:

- Large documents, PICT files, and page ranges (for example, pages 2 and 3 of a 5-page document) print correctly.
- Page Up, Page Down, and scrolling work better with Portable Digital Documents (PDDs) and other documents.
- Editing features (such as Cut, Copy, the forward delete key on extended keyboards, underlining, and selected text highlighting) work correctly.
- SimpleText documents that use system fonts now retain their fonts when opened on a computer with a different system font.
- Remote program linking (controlling SimpleText with AppleScript from another computer) is enabled by default.
- In the Don't Save/Save/Cancel dialog box, you can type "D" or Command-D for Don't Save.
- If you choose Quit with an unsaved document, and want to cancel the quit, you can do so by choosing Save in the Don't Save/Save/Cancel dialog box, then choosing Cancel in the Save dialog box.

Changes to the Launcher

=====

• This Update includes Launcher version 2.8 which incorporates minor "behind the scenes" changes not likely to be visible to users.

• Launcher version 2.8 also includes the following fixes and functionality, introduced in System 7.5 Update 1.0:

- Supports Macintosh drag and drop, making it easier to add or remove items.

To add an item: Open the Launcher and drag the item into the Launcher window or onto a category button. The system creates a new Launcher button for the item by placing an alias in the Launcher Items folder. The original item remains on your hard disk.

To remove an item from the Launcher: Hold down the Option key and drag the button out of the Launcher.

To move a Launcher button to a new category: Hold down the Option key and drag the button to a category button along the top of the Launcher window.

To open a file using the Launcher: Drag the file's icon onto a Launcher button that represents an application program. For example, you can open a SimpleText file by dragging its icon onto the SimpleText button. If the program the button represents can open the file, the button is highlighted when you drag the file to it.

To put a file into a folder: Drag the file's icon onto the Launcher button that represents the folder.

To resize the currently visible Launcher buttons: Hold down the Command key and click inside the Launcher window. Then choose a new size from the pop-up menu.

To open a category button's folder (located in the Launcher Items folder): Hold down the Option key and click the category button.

Other new or changed components

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- Includes Open Transport v.1.1, a major re-implementation of the network system software for use on all 68030-, 68040-, and PowerPC-based computers except the desktop 5200, 5300, 6200, and 6300 series computers. After an Easy Install, Open Transport will be active only if it was active before the update was installed (it cannot be active on desktop 5200, 5300, 6200, and 6300 series computers). For more information, see the Open Transport Information folder, inside the Apple Extras folder.
- Includes a small application called Network Software Selector (NSS), which enables users of 68030-, 68040-, and early PowerPC-based computers to choose between Open Transport and classic AppleTalk if both are installed. (You must restart the computer for the change to take effect.) PCI-based computers support only Open Transport.

NSS is in the Apple Extras folder; information on using it is built into the application. NSS is intended to ease the transition to Open Transport by allowing you to use the older networking software if there is a compatibility problem with an application and Open Transport. Once the problem is resolved, you should switch back to Open Transport.

Note: Because MacTCP is incompatible with Open Transport v.1.1, MacTCP is disabled any time Open Transport is selected using the Network Software Selector. (Open Transport uses the TCP/IP control panel instead of MacTCP.) If, however, you reselect classic AppleTalk, MacTCP is enabled again.

- For users of the older networking software, this update includes MacTCP 2.0.6, which

- shortens retransmission delays
- prevents potential out-of-memory errors
- makes configuring communications easier
- gives users more control over which servers to contact and in what order

- Includes SerialDMA 2.0.2 for use on all PowerPC-based computers, the Centris 660AV, Quadra 660AV, Quadra 840AV, as well as the corresponding Performa and Apple Workgroup Server products. SerialDMA provides a complete rewrite of the DMA serial driver which originally accompanied these computers, thus fixing the occasional system hang, communications timeouts, poor communications performance, and other glitches. The new SerialDMA 2.0.2 driver not only corrects these problems, but also exceeds the performance and reliability standards for serial communications on the Mac OS platform (providing support for speeds of up to 230,400 baud).

- SerialDMA 2.0.2 is native on the PowerPC-based computers.

- Includes a new version of Apple Modem Tool (1.5.5), which supports 115.2K and 230.4K connections on SerialDMA 2.0 machines.

- Includes the latest version of PC Setup (v1.0.7) for use with all DOS Compatible Mac OS computers.

- Includes Screen control panel version 1.0.7. This new version does not crash

if it's in the System Folder of a Macintosh SE during startup or when it's opened on any 68000-based Mac OS-based computer.

- Includes File Sharing 7.6.2, which includes several improvements over previous versions. Now, when file sharing is turned on, removable disks and CD-ROM discs will automatically be shared (except for audio CDs, which will no longer be shared). To eject a removable disk or CD-ROM disc, you no longer have to turn off File Sharing, as long as no other user is currently connected to the shared volume.

- Includes a faster version of the AppleShare Workstation client software. The new version performs read-ahead and write-behind caching, allowing the Finder to write to a local volume while reading from a remote volume (and vice-versa). The new version also briefly caches some information from the desktop database to avoid unnecessary hits to the disk.

- Includes Apple Video Player 1.4.

Miscellaneous fixes and enhancements

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- The Shut Down warning, which appears during startup if the computer was shut down improperly, dismisses itself after two minutes so that startup isn't delayed when no one is around to read the message. Note that this warning can be turned off completely in the General Controls panel.

- Includes Macintosh Easy Open 1.1.2, which fixes delays when dragging Finder folders.

- The dialog box displayed after the keyboard Power key is pressed dismisses itself (simulating a click on its Cancel button) after one minute.

- Fixes a problem with the Power key. In previous versions, if the Power key was held down just a little too long, the hardware could miss the release of the key. If the next key pressed was the Command key, the hardware would mistakenly think that Command-Power had been pressed and would bring up the programmer's window (or MacsBug if it was installed).

- Color Picker no longer crashes during startup. There is a problem with certain third-party SCSI drivers that mark the drive as removable at the beginning of startup and later mark it as non-removable. Because Color Picker creates an alias to itself during startup, the change to non-removable prevented the Color Picker alias from being resolved later. Color Picker now handles the failure to resolve this alias.

- Fixes a problem introduced by System 7.5 Update 1.0 that prevented 2-byte characters from being used when naming a DOS disk.

- Fixes a problem that allowed the Menu Manager to use an unlocked handle. This fix will eliminate some crash problems, especially when using certain pop-up menus.

- Changes several video drivers to provide better support for new monitors introduced since System 7.5 was released.

- Handles low-memory situations better than previous releases of Sound Manager.
- Fixes a problem that allowed the sound volume to be lower after restarting than it was before restarting; volume should now be properly preserved when restarting.
- The state of the Mute checkbox in the Sound control panel's Volume window is now preserved across restarts.
- Fixes a problem that allowed QuickDraw to leak about 50 bytes of memory in some isolated circumstances.
- Fixes a problem that allowed a nonexistent disk drive to show up in Disk First Aid.
- Fixes a crash problem in the Communications Toolbox that happens if there are more than about 600 zones on a single network. The new limit is just over 8000 zones.
- Fixes a problem on the 630 and 5200 series computers that would cause them to ignore the infrared remote control.
- Fixes a problem that made it take two attempts to unmute the sound using the infrared remote control on 630 and 5200 series computers.
- Presents a dialog box that advises users that audio CDs cannot be shared if an audio CD is selected and the "Share a Folder" or "Share a Folder (no Guest)" automated task is executed. (In the past, the system would hang in this situation.)
- Fixes a bug that caused the wrong font to be used in some cases.
- Fixes a problem that allowed a garbage pattern to be used when redrawing the pattern in a scroll bar.
- Fixes a problem with submenus drawn too large or not drawn at all.
- Fixes a problem that sometimes caused the startup progress bar to draw improperly.
- Fixes a problem in WorldScript Power Adapter that could cause text to wrap randomly in Text Edit fields, or to appear garbled.
- Plugged a small memory leak that sometimes occurred when resizing a window.
- The Power key can now be used to turn the computer off. To shut down the computer, press the Power key. When the dialog box appears, you can shut down your computer, restart your computer, put it to sleep (if it supports sleep), or cancel the shutdown. PowerBook 100 series computers do not have a Power key on their built-in keyboard, but if you attach an external keyboard, you can use the keyboard's Power key (as just described) to turn off the computer. This

functionality is not supported on the Macintosh Plus.

- The Synchronize Folders AppleScript automated task handles nested folders properly.
- A new AppleScript automated task-Share a Folder (No Guest)-lets you automatically share a folder with the Guest access disabled.
- Improves system stability when memory is very low.
- Fixes a potential crash problem when shutting down or restarting Japanese systems with QuickTime 2.0 installed.
- Fixes a potential crash problem when pasting large amounts of data.
- No longer opens the wrong original when you select an alias on the desktop of a disk other than the startup disk.
- No longer interferes with custom colors that some applications use in the Open and Save dialog boxes.
- Fixes a potential crash problem that occurs when Stickies opens with a "collapsed" note window.
- Fixes a problem that would allow the Options button in Sound control panel's Sound In window to be dimmed when it should be enabled.
- Fixes sound problems in the Jigsaw Puzzle (caused by a third-party extension).
- PowerTalk Catalogs Extension version 1.1.1 no longer displays an out-of-memory error when you open a catalog.
- PowerTalk AppleMail version 1.1.2 works better on systems with many fonts installed and defaults to "sender only" for mail replies.
- PowerTalk DigiSign Utility version 1.1.1 improves printing on HP DeskWriter C and 550-style printers.
- Direct Dialup version 1.1.1 works better when dialing using a long string and won't time out while sending a large letter or a letter with a large enclosure.
- Fixes a potential crash problem that occurs if both PowerTalk and At Ease are installed. While PowerTalk and At Ease no longer crash when used together, accessing all of Power Talk's functionality requires the Finder (open the Special menu in At Ease and choose Go To Finder).
- Command-Option-Space bar no longer changes the keyboard layout if multiple layouts are installed. This avoids a conflict with some popular games that used these keys for controls within the game, resulting in a seemingly random layout being selected once the game is finished (during the game, the selected layout would change any time the three keys were pressed at once). If you want this functionality restored, open the Keyboard control panel and click the checkbox

at the bottom. The conflict with certain games will exist as long as this box is checked.

- WindowShade version 1.3.1 fixes a potential crash problem that occurs when memory is very low.
- Macintosh Easy Open version 1.1.1 works better with drag-and-drop on document converters.
- Fixes a problem in the Menu Manager that could cause memory fragmentation within an application's heap.
- File Sharing no longer causes a crash when Find File is searching a remote volume using Apple Remote Access.
- Fixes a problem in file sharing that caused some files not to get copied. (The symptom of this problem was a dialog box stating that the file could not be copied because it couldn't be found.)

Files no longer needed

=====

The Update automatically deletes the files listed below—unless you renamed any of them, in which case, you should remove the files.

•• Several standalone files are now merged into the System 7.5 Update enabler or the System file. This update deletes the old (standalone) versions of the following files:

- 7.5.2 Printing Fix
- 040 VM Update
- 601 Processor Card Enabler
- 630 SCSI Update
- CFM Updater
- Color Classic Update
- Color Classic Update
- Display Enabler 2.0
- EM Sound Update
- MathLib
- Mount IDE Drive
- Network Software Installer (v1.5.1 and later)
- PowerBook 150 Update
- PowerBook 2300c Update
- PowerBook 5300/2300/190 Enabler
- PowerPC Enabler
- SCSI Manager
- SCSI Manager 4.3 (a renamed version of SCSI Manager)
- Serial Update 406
- SerialDMA
- Sound Manager
- System Enabler 406
- ThreadsLib
- Workgroup Server Enabler

•• Several standalone files have been merged into the System 7.5.2 Update

enabler. The update deletes the old (standalone) versions of the following files:

- 7.5.2 Printing Fix
- CFM Updater
- PowerBook 5300 Enabler
- PowerBook 5300/190 Enabler
- SerialDMA
- Sound Manager
- System Enabler 701
- ThreadsLib

•• Several standalone files have been merged into or been replaced by various other pieces of the system. The update deletes the old (standalone) versions of the following files:

- Sound & Displays (replaced by Monitors & Sound)
- Apple Multimedia Tuner (rolled into QuickTime 2.1)
- LaserWriter 8.0 (replaced by LaserWriter 8)
- PowerPC Finder Update (renamed in System 7.5 Update 1.0 and merged into the Finder)
- Finder Update (rolled into the Finder)

Article Change History:

19 Sep 1996 - Removed keyword.

09 Apr 1996 - Added keyword.

20 Mar 1996 - Added keyword.

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Tech Info Library

System 7.5 Update 2.0: What's New in This Update (3 of 3)(10/96)

Revised: 10/7/96
Security: Everyone

System 7.5 Update 2.0: What's New in This Update (3 of 3)(10/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 4 October 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

This file is one of several Read Me files that describe System 7.5 Update 2.0. This three-part document provides details about the changes provided by this software update.

Another Read Me file, "Installing This Update," summarizes the enhancements of this update and gives instructions for installing the update.

In this document:

- Indicates a change made in System Update 2.0 (7.5.3)
- Indicates a change made in System Update 1.0 (7.5.1)

What's in this document (part 3 of 3)

- Changes for PowerPC-based models
- Changes for PowerBook and Duo models
- Changes for other 68K-based models
- Changes for PC cards
- Changes for AppleVision monitors
- Changes related to printing
- Changes related to networking
- Known problems and their workarounds
- Tips

Changes for PowerPC-based models
=====

- PowerPC-based computers with PCI slots now use the Monitors & Sound control panel to control monitor and sound settings instead of the Sound & Displays control panel. (System Update 2.0 removes Sound & Displays.) You can do a custom installation to install the Sound control panel if you need it for older applications. (The Monitors & Sound control panel works only on PCI-based computers.)

- Includes native SCSI (not on desktop 5200, 5300, 6200, and 6300 series computers).

- Fixes a SCSI Manager problem that would hang any PowerPC-based computer if a Sony or WangDAT DAT drive was used with Retrospect.

- Fixes a problem on desktop 5200, 5300, 6200, and 6300 series computers running QuickTime 2.1 that would prevent sound from being heard in Fusion Recorder's Record window until either a recording was started or the TV volume in the Sound control panel was unmuted.

- Includes both native and 68K versions of common Modern Memory Manager routines, improving performance of emulated applications by speeding up calls to common routines. (System software version 7.5 and 7.5.1 included only the native implementations, while system software version 7.5.2 included both native and 68K versions.)

- Includes a rewritten fixed-point math library to provide better performance for QuickDraw, other parts of the system, and all applications that use this library. Because QuickDraw and other parts of the System use this library extensively, installing this update will cause noticeable performance gains.

- PowerPC-based computers with PCI slots might have a different physical Ethernet address after you install this update. The update fixes a bug that caused an incorrect physical Ethernet address to be used in environments where TCP/IP addresses are obtained using BootP, DHCP, or RARP. To see the new Ethernet address after you install the update, open the File menu in the AppleTalk or TCP/IP control panel and choose Get Info. If you install the update and are no longer able to use your TCP/IP-based applications, contact your network system administrator.

- On PowerPC-based computers (including those with PowerPC Upgrade cards) running system software version 7.5 or 7.5.1, this update introduces the Native Resource Manager. This version of the Native Resource Manager is slightly newer than the version released with system software version 7.5.2. The System 7.5.2 Update file includes the same improved version of the Native Resource Manager.

- Reduces times to open applications on PowerPC-based computers with virtual memory turned on. System 7.5.2 (not 7.5 or 7.5.1) would significantly slow down while opening certain applications, such as Microsoft Excel version 5.0, if virtual memory was turned on. With Update 2.0 installed, launch times should be about the same whether or not virtual memory is turned on.

- Fixes a bug affecting plug-ins that import from an application. This problem existed in all PowerPC-based computers running system software versions 7.1.2,

7.5, 7.5.1, and 7.5.2. and was originally fixed by the CFM Updater extension (distributed with QuickDraw 3D). Update 2.0 deletes this extension, which is no longer needed.

- Fixes a bug in starting up from removable media with virtual memory on. (Although this bug was fixed in 7.5.2, it still exists in 7.1.2, 7.5, and 7.5.1 PowerPC computers.)

- Fixes problems with the DR Emulator. (The DR Emulator works only on PCI-based computers and the PowerBook 2300, 5300, and 500 upgrade.)

- Fixes a problem in certain IDE drives that resulted in cached data not being written to the disk at shutdown.

- Fixes anti-aliasing errors for Kanji Type 1 fonts.

- Fixes a problem that resulted in off-white often being drawn as white. (This effect, while generally subtle, was significant enough for some applications to merit a fix.)

- Fixes a crash problem (a Type 11 error) in Native QuickDraw; this error occurred when using Quark XPress v3.1.1 with system software versions 7.5 and 7.5.1. System 7.5.2 corrected this problem. If you still have Type 11 errors when using Quark XPress 3.3.1 with System 7.5.3 on a PowerPC-based computer, try upgrading to QuarkXPress 3.3.2.

- Fixes a problem in the Dialog Manager that caused some applications to crash after a dialog box was dismissed.

- Supports DayStar Turbo 601 cards in a Macintosh IIci or IIsi.

- If you use Microsoft Office 4.2.1, you need the extension "Office 4.2x Update For Power Mac," version 1.0.1, and the Microsoft Office Manager control panel, version 4.2.1b. You can download these files from the Internet. Download the MC1164.HQX and MOMPATCH.HQX "patch" (update) files from Microsoft. The patches are available on the Internet at

<ftp://ftp.microsoft.com/softlib/mslfiles>

- Includes changes to native QuickDraw which speed up operations such as scrolling, image filtering, and pattern and text drawing. ("Native QuickDraw" refers to time-critical portions of QuickDraw that have been native since the initial release of PowerPC-based computers.

- Updates video software, thus prevent video scrambling during computer startup.

Changes for PowerBook and PowerBook Duo models
=====

- Contains a new version of password security software. The version that shipped with the PowerBook 5300 and the PowerBook 190 computers could lock out international users since the software to handle international keyboards does

not load until after the password is requested during startup. If the password contained a character that was not available on a U.S. keyboard, it could not be entered and the computer could not finish starting up. The new version of the password security software fixes this problem.

- Fixes a problem in the Assistant Toolbox that caused the Assistant Toolbox to be incompatible with Open Transport.

- Fixes a problem that prevented PowerBooks and PowerBook Duos from going to sleep if SimpleText or certain other applications were running in the background.

- Fixes problems with the DR Emulator. (The DR Emulator works only on PCI-based computers and the PowerBook 2300, 5300, and 500 upgrade.)

- PowerBook Duo docks: Pressing the eject button automatically opens items in the Shutdown Items folder and shuts down the computer. No dialog box appears.

- PowerBook 500 models: Improves trackpad performance.

- PowerBook 150: Extends battery life by reducing power requirements during sleep mode. It also prevents the system from freezing when you repeatedly use the internal modem without restarting the computer.

- PowerBook 150: Eliminates the need for the PowerBook 150 Update system extension. Installing Update 2.0 automatically removes this extension from the Extensions folder (inside the System Folder).

- PowerBook 150: Fixes a problem that prevented the internal IDE disk from appearing on the desktop. The problem occurred if the internal IDE disk was selected as the startup disk, and the Command-Shift-Option-Delete keys were held during startup (to start up from an external hard disk).

Changes for other 68K-based models

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- Quadra 900 and 950: Fixes a problem in the Sound control panel. Before this update, the External Line and Internal CD buttons in the Sound control panel were reversed, so that clicking the Internal CD button was interpreted as though the External Line button had been clicked (and vice-versa).

- Quadra 950: Fixes a problem with the Sound control panel. Before this update, clicking the Add button sometimes caused the computer to crash.

- Centris 660AV, Quadra 660AV, and Quadra 840AV: Includes Apple Video Player v.1.4, which replaces the Video Monitor application (which is no longer supported).

- Quadra 840AV, Quadra 660AV, and Centris 660AV: Includes new video software that prevents video scrambling during computer startup.

- Quadra 840AV, Quadra 660AV, and Centris 660AV: Fixes a problem in the Dialog Manager that caused some applications to crash after a dialog was dismissed.

- Performa 630, Quadra 630, and LC 630 with internal IDE drives: Fixes a problem that prevented the internal IDE disk from appearing on the desktop. The problem occurred if the internal IDE disk was selected as the startup disk, and the Command-Shift-Option-Delete keys were pressed during startup (to start up from an external hard disk).

- Quadra 700: Fixes a potential problem that could slow down the mouse or trackball.

- Quadra 840AV: Includes an updated Display Manager which ensures that a multi-sync monitor is set to the correct resolution when you restart the computer.

Changes for PC cards

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- Macintosh Easy Open version 1.1.1, which is installed with this update, fixes problems with cut and paste between Mac OS and PC applications on Mac OS-based computers with a PC card installed.

- Quadra 610 and Centris 610 computers with the 610 PC card installed receive PC Setup version 1.0.2 (software that was inadvertently not provided with the upgrade disks for System 7.5).

Changes for AppleVision monitors

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- If you use AppleVision software, use version 1.0.2 or later. Earlier versions of AppleVision are not compatible with System 7.5 Update 2.0.

- If you have a 1710AV monitor and a PCI-based computer, use AppleVision 1.0.4 and the Monitors & Sound control panel.

- If you have a 1710AV monitor and a non-PCI-based computer, use AppleVision 1.0.2, the Sound control panel, and the Monitors control panel.

Changes related to printing

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- Includes version 2.1.1 of the StyleWriter 1200 driver, which fixes a crash bug on System 7.5.2-capable computers.

- Includes the LaserWriter 8F (version 8.2.3F) driver, which supports all the fax options on the LaserWriter 16/600. The LaserWriter 8 (version 8.3.3) driver, which is also included in Update 2.0, does not support all these fax options.

- Supports QuickTime compressed images and ColorSync 2.0 through the LaserWriter 8 (version 8.3.3) driver.

- The LaserWriter 8 (version 8.3.3) and LaserWriter 8F (version 8.2.3) drivers contain fixes for two common printing problems found on PCI-based computers: freezing when trying to print to a printer that's busy, and freezing when trying

to print large documents or printing to LocalTalk-based printers.

- The LaserWriter 8F, version 8.2.3, printer driver provides the following enhancements (introduced in version 8.2):

- Improves the function of the Setup button in the Chooser; this button automatically looks for the selected printer, selects the appropriate PostScript Printer Definition (PPD) file, and configures the paper trays. (If you prefer to manually configure the PPD files and paper trays, you can do so by clicking the Setup button a second time.)

- Resets the destination in the Print dialog box to Printer instead of retaining the previous print job's destination. For example, if the previous destination was Fax, the destination automatically resets to Printer for the next job.

- Enables you to tab backwards through the fields in all print dialog boxes by pressing Shift-Tab.

Note: Installing the LaserWriter 8F version 8.2.3 printer driver removes the LaserWriter 8 Prefs file from your system. Thus, after you install, you need to set up your printer using the following steps:

1. Open the Chooser.
2. Click the LaserWriter 8 icon.
3. Click the printer you want to use.
4. Click the Setup button.

Changes related to networking

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On computers with 68030, 68040, or PowerPC processors, Easy Install automatically installs Open Transport networking software, which provides improved network flexibility and performance. Open Transport is available on all computers with 68030, 68040, or PowerPC processors except for the desktop 5200, 5300, 6200, and 6300 series computers. Open Transport will be active only if it was active before the update was installed (otherwise, classic AppleTalk is active). If your computer is not PCI-based, you can use the Network Software Selector (NSS) to switch between Open Transport and classic AppleTalk. You'll find the NSS utility in the Apple Extras folder after you install System 7.5 Update 2.0.

Switching from Open Transport to classic AppleTalk usually causes the network connection to revert to LocalTalk. After you switch networking software and restart your computer, you can use the Network control panel (classic AppleTalk) or the AppleTalk control panel (Open Transport) to reselect the desired network connection.

Depending on your system and networking needs, Open Transport may require 400K-1200K more RAM than classic AppleTalk. In many cases, you can reduce this amount by turning on Virtual Memory.

For more information, see the Open Transport Information folder, inside the Apple Extras folder.

Known problems and their workarounds

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- Apple Video Player displays an incorrect dialog box if it's opened on a computer that does not have video-in capability. Apple Video Player complains that the Video Startup extension was not installed properly instead of stating that video-in is required for this application to run.

- If, when you try to print, you see a message that your printing preferences are missing or damaged, open the Chooser and select a printer.

- Some versions of the LaserWriter driver (version 7.2 and earlier) and the QuickDraw GX printer drivers still have the problems that interfere with PCI-based computers trying to print on a busy printer or trying to print large documents. If you experience these problems, select the LaserWriter 8.3.2 driver from the Chooser.

- Two different control panels are named "Energy Saver." The older version worked by dimming the external screens of certain computers. The newer Energy Saver, which works differently, works only on PowerPC computers with PCI slots.

The universal System Folder that can be created by Update 2.0 contains only the newer Energy Saver. If your universal System Folder requires both versions of the Energy Saver, do the following:

1. Rename the newer Energy Saver.
2. Use Custom Install to install the older Energy Saver.

- The new minimum RAM disk size is 416K. If a smaller RAM disk exists during the installation of this update, it will be turned off and its contents lost when the computer is restarted. Therefore, before installing this update on a computer with a RAM disk smaller than 416K, move all the contents of the RAM disk to another disk.

- Digital audio recording and playback can occasionally "skip" if virtual memory is turned on. To reduce this skipping, turn off virtual memory.

- HyperCard version 2.3.3 or earlier does not record sound properly on computers with PCI slots. Other sound recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

- When used with SerialDMA, DOS Compatibility software will not be able to use hardware handshaking on the PC serial port.

- There is an incompatibility between AppleShare Workstation software version 3.6.1 and Connectix Speed Copy (part of Speed Doubler version 1.1 or earlier). Use the Extensions Manager to turn off Speed Copy before you install this update, and contact Connectix to get the latest version of Speed Doubler. (You can contact Connectix at <http://www.connectix.com>, 415-571-5100, or 800-950-5880.)

- If you have a PowerBook 190 with Open Transport active: If you are using the IR port and networking doesn't work after you restart the computer, try putting the computer to sleep and waking it up, or choose the printer/modem port and then switch back to the IR port.

- If you have a PCI-based Mac OS computer connected to a Novell Netware network: This update contains the Ethernet Compatibility extension version 1.0.3, which fixes a problem in the system shutdown code. To use this extension, you need to Custom Install the Ethernet Driver Update. A side effect of this fix is a two-minute delay in shutting down the computer.

- When using Drive Setup (version 1.0.4 or earlier) on some IDE hard drives, the "Update driver," "Customize volume," and "Test disk" options are dimmed. To use these options, back up all data on the IDE disk (onto another disk), and use Drive Setup to reinitialize the IDE disk.

- If you have a Macintosh Centris 660AV, Quadra 660AV, or Quadra 840AV, some system alert sounds may not play correctly with the alert volume turned down. To avoid the problem, keep the alert volume turned all the way up and adjust the Built-In system volume:

1. Open the Sound control panel.
2. Choose Volumes from the pop-up menu.
3. Adjust the volume.

- Speech version 1.4.1 can cause a Macintosh Plus (a model which does not support speech) to hang during startup. If your Macintosh Plus hangs during startup, do the following:

1. Restart the computer while holding down the Space bar.
2. When the Extensions Manager dialog box appears, turn off Speech.

- If your computer has a 68000 processor and the computer won't start up, try pressing the Shift key (to turn off extensions) while you restart. If there is a "Color StyleWriter 2000 CMM" file in your Extensions folder (inside the System Folder), take this file out of the Extensions folder and restart your computer. (To use the Color StyleWriter 2000 series printer, you need a 68020 or higher processor.)

Tips

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- Many LaserWriter LS users are unaware that this printer is supported by the LaserWriter 300 driver. To make this clear, future system releases will rename this driver to LaserWriter 300/LS. For now, you can either rename this driver or wait for a future release to do it for you. If you rename it, you must select the new name from the Chooser before you can print using this renamed driver.

- Recent-documents tracking (in Apple Menu Options) tracks all files that are opened—even those opened by an application as part of its launch sequence (such as drop-in filters used by desktop publishing packages). This tracking can significantly slow down the launching of these applications. To reduce this overhead you can:

- turn off "recent documents" tracking in the Apple Menu Options control panel
- turn off Apple Menu Options in the Extensions Manager

- This update resets all settings in the Apple Menu Options control panel to their default values. If you have made changes to Apple Menu Options, you will need to select them again after installing this update. If you have set Apple Menu Options to track more than ten items in any category, you may want to move

some of those aliases out of their folders before you install the update, which deletes all but the ten most recent items in each category.

Article Change History:

04 Oct 1996 - Removed keyword.

11 Jun 1996 - Corrected minor formatting error.

20 Mar 1996 - Added keyword.

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Tech Info Library Article Number:19136



Tech Info Library

MegaDial 1.0.1: Read Me (4/97)

Revised: 5/1/97
Security: Everyone

MegaDial 1.0.1: Read Me (4/97)

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Article Created: 2 January 1996

TOPIC -----

This article contains the ReadMe included with Cypress Research's MegaDial telephony software available online.

DISCUSSION -----

MegaDial 1.0.1 Late Breaking News and Notes

First, thank you for using MegaDial. We hope that it makes your traveling and telecommunicating easier. This is a combined upgrade/30-day demonstration version of MegaDial. If you've already bought MegaDial, just install this version over your current version. If you haven't, you'll receive a thirty day full-featured demonstration of how MegaDial can make traveling with a laptop easier.

To buy a full version of MegaDial:

Call 1-800-515-8111 (+1 510 732 3830 outside the US and Canada) 6 AM to 6 PM PST Monday through Friday.

If you have any problems with MegaDial, please contact us at +1 408 752 2700, on the Internet at tech@cypressres.com, or on AppleLink at CYPRESS.

Usage Hints/Important Notes

- Installing MegaDial To install MegaDial, insert the installer disk in your floppy drive and double click on the file named "Install MegaDial". Choose the hard disk you wish to install on, then install. After you restart your machine, you need to configure MegaDial. Just open the MegaDial control panel and choose the location you've set up your software to dial with (Home or Office). You'll be stepped through a configuration process. If you're using MegaPhone, you can configure MegaDial from the Quick Prefs window.

- I Didn't Get 30 Days to Try MegaDial: If you install this version of MegaDial

over a demo version of MegaPhone, you may not receive an entire 30 days of trial for MegaDial. Call +1 408 752-1700, ask for technical support, and a support representative will give you a code to enable one more 30 day demo.

- **Getting Notified:** By default, MegaDial will present you with a dialing window every time you dial. You can change this by opening the MegaDial control panel, clicking on the expand arrow in the lower left hand corner of the window, and choosing another option from the "Ask me when dialing" popup.

- **Having Problems?** If you have problems using MegaDial with a particular program, you can turn it off temporarily. Just go to the MegaDial control panel, click on the "More" arrow to display the expert panel, and uncheck "Watch Modem". Remember to turn it on when you're done with that program. Please report any incompatibilities to us immediately!

- **Using Apple Remote Access:** MegaDial works with Apple Remote Access, including with Dial Assist, although MegaDial will do much more than Dial Assist.

- **Why Don't I See the Dialing Dialog?** Some programs, including many fax software packages, Apple Remote Access and some versions of Prodigy, dial at a time when it is unsafe to present interface. MegaDial detects all of these cases, and transforms numbers quietly, even if the notification options suggest that interface should be presented. The first time MegaDial transforms numbers quietly, it will notify you to check your settings if the call doesn't go through properly.

- **I Still Don't See the Dialing Dialog!** Depending on how you received this copy of MegaDial, it may be a version which is designed to work only with MegaPhone. If you received this in with MegaPhone, this is the case. To check if this is the case, expand the MegaDial control panel. If the "Watch Modem" checkbox is grayed out, MegaDial will work only with MegaPhone. Call 1-800-515-8111 to purchase MegaDial or to have a 30 day demo enabled.

- **Credit Card Calling Doesn't Quite Work:** In different locations, the amount of time you have to wait for an automated response to dialing a credit card access number can vary (from 2 to 20 seconds!). MegaDial is programmed with a good value for most locations: 10 seconds. If you need to lengthen this time, dial the phone by hand and count the number of seconds until you hear an automated response, and divide this number by 2. Click on the Expert button in the control panel, and change the number of commas in the "Before Calling Card" field to match this number. Some modems support a special character which means "wait for credit card tone." Check your modem manual for more information, and type this instead, however, note that this character won't always work. In the United States, if you are using a carrier such as Sprint 800 or ATT 800, the pause before the phone number dialed is stored in the actual carrier entry, so you'll have to choose "Edit Carrier..." from the Long Distance popup menu in the control panel, and edit the actual carrier (use the same technique as above to determine how many commas to enter). The "After Calling Card" field is used by carriers like the MCI 800 numbers, and is placed after the calling card account and PIN and before the phone number dialed. See your manual for more information.

Known Issues

-Some fax software and other communications packages dial at a time when it is unsafe to check for dialing prefixes, carriers, and suffixes in the dialed number. For best results, be sure the phone numbers you've entered in the software packages don't include any prefixes, non-default carriers, or suffixes.

-If you use TCP/IP connections for America OnLine and use demand-based PPP or SLIP dialing software such as MacPPP, you should dial your provider to make the TCP/IP connection before attempting to connect to AOL, or MegaDial will choose an improper telephone number for your connection.

-MegaDial 1.0.1 will not intercept fax calls made by FaxPro 2.2.2.

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Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:19137



Tech Info Library

MegaPhone 1.0.2: Read Me (1/96)

Revised: 1/2/96
Security: Everyone

MegaPhone 1.0.2: Read Me (1/96)

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Article Created: 2 January 1996

TOPIC -----

This article contains the ReadMe included with Cypress Research's MegaPhone telephony software available online.

DISCUSSION -----

MegaPhone 1.0.2 Late Breaking News and Notes

First, thank you for using MegaPhone. We hope that it will make your time on the telephone more productive and enjoyable.

Please be sure to read the manual and the information below for useful tips on using MegaPhone. If you have any problems with MegaPhone itself, please contact technical support at +1 (408) 752-2700, on the Internet at tech@cypressres.com, or on AppleLink at CYPRESS. If you are having problems with your GeoPort Telecom Adapter or Apple software, please contact the Apple Assistance Center directly.

Major changes and fixes in this version

- Error -93 when sending to PowerTalk on machine with no network: Users not on a network that attempted to deposit voice messages into the PowerTalk In Tray would receive an error. This is fixed.
- Occasional corruption of contacts file: A contact in the contacts file would occasionally become corrupt causing problems for the entire file. This is fixed.
- Speed dial list was occasionally reset: Under some circumstances (especially if MegaDial was running from a disk other than the disk containing the system folder) the speed dial information was not saved correctly. This is fixed.
- Entering 1 multiple times quickly while retrieving a voice message sometimes caused a crash: While retrieving messages remotely, users could sometimes cause

their Macintosh to crash by entering 1 to delete a message multiple times in quick succession. This is fixed.

- New, Edit, and Delete buttons on Contacts window: Buttons for creating, editing, and deleting contacts have been added to the top of the Contacts window. This is in response to user requests for these buttons.
- Other minor interface problems corrected: Various redraw and update problems under rare conditions have been corrected.

We continue to improve MegaPhone, so if you find problems or have suggestions, please pass them along to us by calling us or sending electronic mail.

Usage Hints/Important Notes

- Installing MegaPhone: To install, double click on the file named "Installer". Choose the hard disk you wish to install on, then install. After you restart your machine, you can launch MegaPhone. Version 1.0.2 of MegaPhone is designed to work with Telephone Manager Version 2.0 or later from Apple Computer. This version of the Telephone Manager is installed by your Apple Telecom Software Installer. Before launching MegaPhone, please ensure that you have already installed this software from Apple Computer, Inc.

- If you are installing over a previous version of MegaPhone, you should not lose your preferences, contacts, voice messages, outgoing greeting, your call log, or your scheduled calls.

- Using MegaDial: MegaPhone works in conjunction with MegaDial to format your phone numbers in a canonical format so that they can be dialed properly from anywhere in the world. It also uses MegaDial to figure out the local time at any number you are calling and to look up area, country, and city codes. However, you must configure MegaDial for all these features to work. You can configure MegaDial by clicking the "Configure MegaDial" button in "Quick Prefs", by clicking the "Location" button in the main window of MegaPhone, or by selecting the MegaDial control panel in the Control Panels folder. MegaDial can also help you dial from your telecommunications and fax applications. For more information on MegaDial, you can call Cypress Research at +1 (408) 752-2700.

- If people you talk to are complaining of an echo, you should experiment with the placement of your microphone relative to your speakers. Because the GeoPort Telecom Adapter and some other devices MegaPhone uses provide a full duplex speaker phone, your microphone is not "cut out" while the other party is speaking. This means that they will hear themselves talking in a way that they are not used to on a telephone conversation. If you move your microphone farther from your speakers, this can greatly reduce this effect. Additionally, you can place your microphone behind the plane of your speakers so that the sound will not be directed at the microphone. This effect will be enhanced if you are in a room that does not absorb sound well. It may take some experimenting to optimally position your microphone and speakers, but you should be able to reduce this effect to an acceptable level.

- If you use RAM Doubler or Virtual Memory, you may experience a buzzing or breaking up of your phone conversations. Usually, this is only on your end of the conversation; the party you are talking to will not hear this. If you do

experience this, you should quit all other applications so more time can be given to process the sounds for your phone conversation. At this point, there is no other fix for this problem.

- To set incoming call options such as the ring sound, the number of rings after which your phone should be answered with voice messaging, call saver mode, etc. you must open the Express Modem control panel. See the Express Modem documentation for details.

- The call saver mode sets the number of rings after which your phone will be answered if there are new messages. For example, if your phone is normally answered after 4 rings, but you have the call saver mode set to 2 rings, MegaPhone will answer your phone after 4 rings for the first caller to leave a message and after 2 rings for all callers after that. More importantly, if you call in to retrieve your messages and you reach the 3rd ring, you know no one has left a message yet and can hang up, saving yourself a call charge.

- If you have Fax Terminal set to "Auto-Answer" incoming calls, there may be a brief delay when you answer a call manually with MegaPhone (e.g., by clicking the "Answer" button) while the Express Modem software listens for fax or modem tones. If it detects these tones, the call will be handled by the appropriate fax or data software, otherwise, you will be allowed to take the call. During this time, you will not be able to talk to the calling party. The time period is brief enough that the calling party will most likely not notice the delay. When you are able to talk to the calling party, MegaPhone will emit a brief chirping sound to alert you to begin talking. In fact, for all incoming calls (whether or not you have Fax Terminal set to "Auto-Answer") MegaPhone will emit the brief chirping sound when you can talk to the calling party. This is useful when you have MegaPhone in the background and have answered the call with the Telephone System Menu.

- If you have more than 400 contacts, we recommend that you not store them all in the MegaPhone contacts window and that you not auto-synchronize with your source for these contacts. Instead, you should only store your most active contacts in the MegaPhone contacts window so that you can use Speed Dial, call counting, etc. You should dial from your PIM for less frequently called numbers. If you use TouchBase Pro, you can dial using the "Dial Phone Number" menu item in the "Contacts" menu. Even if this contact is not in the MegaPhone contacts window, MegaPhone will still display the name in the main window while you are talking and will enter it in the call log. To configure this option in TouchBase Pro, ensure MegaPhone is launched, select "Dialing..." from the "Preferences" hierarchical menu in the "Edit" menu, select "⌘ Dialing" under "Use:", click OK, select the MegaPhone running on your Macintosh from the selection dialog that is presented, click OK. You are now configured to have TouchBase Pro use MegaPhone for dialing. If you decide to have more than 400 contacts in MegaPhone, we recommend that you increase the preferred memory requirement to at least 2MB.

- Before importing any contacts, be sure you have configured MegaDial. If you configure MegaDial after you import your contacts, each time you call a contact MegaPhone will treat it as an unknown contact because the number will not have been put in canonical format when you imported it.

- The call log is limited to 250 entries. After the call log has 250 entries, the next entry will replace the oldest entry in the log. If you would like to save your call log entries, open the call log window, and select "Export..." from the "File" menu to export the entries to a tab delimited text file.
- The number of voice messages is limited to 99. If you do not direct your messages to your PowerTalk In Tray, MegaPhone will stop taking messages once you have 99 messages. Given that messages can take up a lot of hard drive space, it is a good idea to delete messages you no longer need. If you want to save messages for a long time, we recommend that you drag them out of the voice messages folder and save them in another folder. You can always rename the file after you have dragged it out of the voice messages folder and can hear the message by double clicking on the file. You can locate your voice messages folder by opening the "Voice Messaging" panel of "Preferences" and looking at the path specified in the "Messages Folder" section.
- When using an AV monitor, on some Macintosh models, the sound control panel resets the sound input source to external microphone with "Playthrough" not checked and the alert volume to maximum. What you want in this case is for the sound input source to remain "AV Connector" with "Playthrough" checked and for the volume to remain where you left it. The best fix for this problem is to use and external microphone so the default setting will be correct. In general, to change the sound input source, open the Sound control panel, select the "Sound In" page from the popup menu, click the "Options" button and select the source you wish.
- If you record a voice messaging greeting and it appears to record but is silent, you may have your CD player selected as your sound input source. Before recording a greeting, open the Sound control panel, select "Sound In" from the popup menu, click the "Options..." button, then select "Microphone", "AV Connector", or another appropriate choice depending on your hardware configuration. Do not check the "Playthrough" checkbox. Be sure to set the source back to CD, if you want to listen to audio CDs on your Macintosh. If you receive or place a call while you are listening to a CD, the sound input will temporarily be switched to your phone so that you can converse with the other party. After the call, it will be switched back automatically. However, for recording your greeting, you must switch the source yourself.
- The DemoDialer Tool is a telephone tool that MegaPhone installs if it cannot use the tool you have selected as your default tool. For this version of MegaPhone, the default is the GeoPort Telephone Tool. The DemoDialer tool allows you to dial numbers by emitting the Touch Tone sounds through the Macintosh speaker and gives you access to various other features of MegaPhone. However, you cannot receive incoming calls or take voice messages with this tool because it does not provide any connection to a phone line. If MegaPhone indicates that it has switched to using this tool because an error has occurred, you may quit MegaPhone, fix the error condition, and re-start MegaPhone; it should then resume using the GeoPort Telephone Tool. If you need to manually change which tool is your default tool, you can do so in the General panel of Preferences.
- If you forget to purchase the full featured version of MegaPhone before the 30 trial period has expired, you can still call Cypress Research and purchase this

option. Once you do so, all data you entered into contacts, call log, etc. will still be available to you. It is not deleted.

- For information on site-licensing MegaPhone, please contact Cypress Research at +1 (408) 752-2700.

To purchase the full featured version of MegaPhone or MegaDial:
Call 1-800-515-8111 [+1 (510) 732-3830 outside the US and Canada].

8/3/95

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Support Information Services

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Tech Info Library Article Number:19138



Tech Info Library

System 7.5 Update 2.0: Overview and Installation Read Me (6/96)

Revised: 10/14/96
Security: Everyone

System 7.5 Update 2.0: Overview and Installation Read Me (6/96)

Article Created: 2 January 1996
Article Reviewed/Updated: 10 June 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

What is the Macintosh System 7.5 Update 2.0?

System 7.5 Update 2.0 is a set of system software enhancements that improves the reliability and performance of all computers running system software version 7.5, 7.5.1, or 7.5.2. You can install System 7.5 Update 2.0 even if you did not install Macintosh System 7.5 Update 1.0.

Before you install System 7.5 Update 2.0, review the next section, "What System 7.5 Update 2.0 Provides," which summarizes the fixes and new features delivered by this update. For a more detailed explanation of the changes in this release, see the three Read Me files named "New in This Update." (If you received the update on a CD or over a network, these Read Me files are in the same folder as this Read Me file. If you received this update only on floppy disks, the files are in the System Update Information folder on the first floppy disk.)

What System 7.5 Update 2.0 provides

- Installs the latest versions of all components (including any components that you disabled using the Extensions Manager) it finds on the disk it is updating.

After you run the Installer, updated components will be in the same folders as they were before you installed the update. For example, new versions of disabled extensions will be in the "Extensions (Disabled)" folder, and new versions of disabled control panels will be in the "Control Panels (Disabled)" folder.

- Fixes many problems that users and developers reported to the Apple Assistance Center, Developer Technical Support, and Apple's internal tracking systems.

Among these fixes are elimination of some Type 11 errors found on PowerPC-based computers, and corrections to the General Controls panel to eliminate conflicts with several third-party products.

- Improves performance by including an updated version of the Finder, which copies files faster than previous versions. Performance on PowerPC-based computers also improves because the update introduces several more native system software components, including Apple Guide, the Resource Manager, and the SCSI Manager.

- Introduces "translucent dragging" on PowerPC computers.

- Includes version 1.0.4 of Drive Setup, for use on IDE-capable, 68K-based computers and all PowerPC-based computers. The new version of Drive Setup fixes a problem with some IDE drives. If you use IDE (ATA) drives, you should update your drivers as part of the installation of this update. (If you have an IDE drive, see the section "Known Problems and Their Workarounds" at the end of the "New in This Update - 3" document for more information about Drive Setup.)

- In addition to updating system software for a single Mac OS computer, you can use this update to create a "universal" System Folder—a single System Folder that can be used with all Mac OS computers supported by the update. You can use this universal System Folder on an external hard disk or removable media drive to start up any model of Mac OS-based computer. For more information, including special installation instructions, see the section "Creating a 'Universal' System Folder," at the end of this document.

- On computers with 68030, 68040, or PowerPC processors, the update's Easy Install automatically installs Open Transport networking software, which provides improved network flexibility and performance. After you install the update, Open Transport will be active only if it was active before the update was installed. Open Transport is available on all computers with 68030, 68040, or PowerPC processors except for the desktop 5200, 5300, 6200, and 6300 series computers. On some computers, you can use the Network Software Selector (in the Apple Extras folder after you install the update) to switch between Open Transport and classic AppleTalk. Open Transport may require more RAM than classic AppleTalk. For more information, see the Open Transport Information folder, inside the Apple Extras folder.

- During an Easy Install, Text-to-Speech software is automatically installed. If you don't use this software, after you install the update you can use the Extensions Manager to turn off MacinTalk (version 2 or 3) and the Speech control panel.

- After you install the update, the About This Macintosh window says "System Software 7.5.3"; below that, the window says "System 7.5 Update 2.0," to indicate how the system software was installed.

- Includes many other previously released fixes, including those in the 7.5.2 Printing Update, the PowerBook 5300 System Software Update, and the PowerBook

2300c Update.

For more details on what has been fixed in this update, see the three Read Me files named "New in This Update."

Installing System 7.5 Update 2.0

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You can install the update from floppy disks, the CD, over a network, or from your hard disk. Install the update before you install other software included with the update (such as PowerTalk, QuickDraw GX, and so on).

Note: If your computer has a PowerPC Upgrade Card installed, make sure that the PowerPC processor is turned on when you install this update.

Note: If you are going to install Apple Remote Access Client 2.0.1 software (not included with the System 7.5 Update 2.0), install it before you install this update.

Installing System 7.5 Update 2.0 from the CD or from floppy disks

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Before you install System 7.5 Update 2.0, make sure that system software version 7.5, 7.5.1, or 7.5.2 is installed on your computer. (You can check by opening the Apple menu from the Finder and choosing About This Macintosh.)

You should use the Disk First Aid program (included with this update) to test and, if necessary, repair the disk on which you're going to install the update. For instructions on using Disk First Aid, see the manual that came with your computer.

To install the System 7.5 Update 2.0 from the CD or floppy disks, follow these steps:

1. Open the Extensions Manager control panel.
2. If your current system software is 7.5 or 7.5.1, choose "System 7.5 only" from the pop-up menu. If your current system software is 7.5.2, choose "System 7.5.2" from the pop-up menu.
3. If you have third-party peripherals that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, alternative input devices, network card drivers, and removable media.)
4. Restart your computer.
5. Insert the System 7.5 Update 2.0 CD or the first floppy disk.
6. Double-click the Installer icon to open it.
7. When you see the Installer's welcome screen, click Continue.

The Easy Install dialog box appears.

These instructions cover the Easy Install process. Easy Install automatically installs the files that your particular model of computer needs.

If you want to add specific components after using Easy Install, choose Custom Install from the pop-up menu at the top of the Easy Install dialog box, and see the instructions in the manual that came with your computer or system software upgrade.

8. Make sure that the destination disk indicated on the screen is the one on which you want to install the update. If it is not, click Switch Disk until the right destination disk appears.

9. Click Install.

10. Follow the instructions on the screen.

If you need to insert other floppy disks, onscreen messages tell you when to do so. It takes several minutes to complete the installation.

11. When the installation is complete, click Restart to restart your computer.

12. Use the Extensions Manager to turn on additional extensions (you'll need to restart your computer for the extensions to work). If you encounter problems, choose the set of extensions you chose before the installation (see step 2), restart your computer, then turn on extensions one at a time to determine if one of them is incompatible.

Installing System 7.5 Update 2.0 over a network or from a hard disk

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To update multiple computers over a network, you can create a "net install package," which makes updating networked computers faster and simpler. You can also put a net install package on your hard disk, and use the package to install the update on the same hard disk.

If you already have a net install package available, skip to "Step 2: Install the Update."

Step 1: Create a net install package for Update 2.0

To create a net install package from a CD, drag the entire System 7.5 Update 2.0 folder from the Update 2.0 CD to the server computer.

To create a net install package from the network, download the 7.5 Update 2.0 Net Install package to your hard disk.

To create a net install package from floppy disks, follow these steps:

1. Create a folder on the server called "System 7.5 Update Net Install."

2. Insert the first floppy disk.

3. Open the disk and drag the following items into the System 7.5 Update Net Install folder:

- the Installer
- the Install System 7.5 Update file

4. Close the disk and drag the disk's icon itself into the System 7.5 Update Net Install folder.

At this point, your System 7.5 Update Net Install folder should contain three items:

- a copy of the Installer
- a copy of the Install System 7.5 Update file
- a folder named "System 7.5 Update 2.0 - 1" that contains everything that was on the first floppy disk.

5. When the copy is complete, eject the disk (by dragging its icon to the Trash).

6. Do the following for each of the remaining installation disks:

- Insert the disk in the floppy disk drive.
- Drag the disk icon to the System 7.5 Update Net Install folder.
- Eject the disk when the copy is complete.

Note that all but the first two items (Installer and Install System Update) in your System 7.5 Update Net Install folder are folders that contain the contents of each corresponding disk.

IMPORTANT: Don't move or rename any file or folder inside the System 7.5 Update Net Install folder. If you do, the Installer won't work.

Step 2: Install the update

Before you install System 7.5 Update 2.0, make sure that system software version 7.5, 7.5.1, or 7.5.2 is installed on your computer. (You can check by opening the Apple menu from the Finder and choosing About This Macintosh.)

You should use the Disk First Aid program (included with this update) to test and, if necessary, repair the disk on which you're going to install the update. For instructions on using Disk First Aid, see the manual that came with your computer.

To use a net install package, follow the instructions below:

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1. Open the Extensions Manager control panel.

2. If your current system software is 7.5 or 7.5.1, choose "System 7.5 only" from the pop-up menu. If your current system software is 7.5.2, choose "System 7.5.2" from the pop-up menu.

3. If you have third-party peripherals that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, alternative input devices, network card drivers, and removable media.)

4. Restart your computer.

5. If necessary, connect to the server that contains the System 7.5 Update Net Install folder.

6. Open the System 7.5 Update Net Install folder.

7. Double-click the Installer icon to open it.

8. Read the first screen, then click Continue.

9. The Easy Install dialog box appears.

- To automatically install just the software your model of computer needs, click Install.

- To select specific items to install, see the instructions for custom installation in the manual that came with your computer.

10. When you see a message that the installation was successful, click Restart.

11. Use the Extensions Manager to turn on additional extensions (you'll need to restart your computer for the extensions to work). If you encounter problems, choose the set of extensions you chose before the installation (see step 2), restart your computer, then turn on extensions one at a time to determine if one of them is incompatible.

Creating a "universal" System Folder

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This section describes how to create a single System Folder that can start up any Mac OS computer introduced since the Macintosh Plus.

Overview

Only some users need a universal System Folder. You might want to create a universal System Folder if you

- start up different Macintosh models using removable media
- want to simplify support of multiple users by giving all users the same System Folder
- prefer to start up computers using an external startup disk

If you are responsible for only one computer, you shouldn't need to create a universal System Folder.

Requirements

To create a universal System Folder, you must start with System 7.5. The procedure will not work if you start with System 7.5.1 or 7.5.2. (You cannot install System 7.5 on a computer that requires 7.5.2 or greater.)

These steps assume you're not installing the software on your startup drive. A universal System Folder can be created on your startup drive, but you'll be forced to restart after each installation. By installing onto another drive, you

can avoid several restarts.

Instructions

1. Open the System 7.5 Installer (the Installer for version 7.5.0 of the system software).

2. When you see the Installer's welcome screen, click Continue.

3. Choose Custom Install from the pop-up menu in the upper-left corner of the dialog box.

4. Click Switch Disk until the name of the desired destination disk appears.

5. Click the triangle on the left side of the first item in the list.

6. Click the box next to "System for any Macintosh" to put an "X" in it.

7. In the list, click the triangle to the left of Utility Software, then click the box next to AppleScript to put an "X" in it.

If you are creating the universal System Folder on a disk that did not already have a System Folder on it, skip step 8.

8. If you are creating the universal System Folder on a disk with a System Folder on it, hold down the Command and Shift keys while pressing the K key. Click to select the button labeled Install New System Folder and then click OK.

9. Click Clean Install (or Install, if you skipped step 8) and wait for the installation to finish (inserting disks as needed).

If the destination disk had a System Folder on it, the contents of your old System Folder have been moved to a new folder titled Previous System Folder.

10. Insert the System 7.5 Update 2.0 CD or the first update floppy, disk and open the System 7.5 Update Installer.

11. When you see the Installer's welcome screen, click Continue.

12. Choose Custom Install from the pop-up menu in the upper-left corner of the dialog box.

13. Click Switch Disk until the name of the desired destination disk appears.

14. Click the Universal System Folder box to put an "X" in it.

If you don't see this option, make sure that you've done the previous steps correctly.

15. Click the Install button and wait for the installation to finish (inserting disks as needed).

Article Change History:

10 Jun 1996 - Removed keyword.

09 Apr 1996 - Added keyword.

20 Mar 1996 - Added keyword.

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Tech Info Library Article Number:19139



Tech Info Library

Apple MessagePad: Modem Enabler 1.0: Read Me (1/96)

Revised: 1/29/96
Security: Everyone

Apple MessagePad: Modem Enabler 1.0: Read Me (1/96)

=====

Article Created: 03 January 1996
Article Reviewed/Updated: 29 January 1996

TOPIC -----

This article contains the Read Me from the Modem Enabler 1.0, which is currently posted to Apple SoftWare Updates.

DISCUSSION -----

You need ModemEnabler 1.0 and a modem setup package in order to use a non-Apple modem with your MessagePad. ModemEnabler 1.0 and several modem setup packages are available in this folder. ModemEnabler 1.0 allows you to change modem settings on your MessagePad. A modem setup is a package that enables a MessagePad to configure and operate non-Apple modems. Each modem has its own modem setup package, which is typically provided by the modem manufacturer.

This Read Me document explains what you need to do before installing ModemEnabler 1.0 and modem setup packages, what to do to install them, and how to work with them after they are installed.

NOTE: ModemEnabler 1.0 is not recommended for use with the MessagePad 100 or the original MessagePad as modem and application compatability may vary.

BEFORE YOU INSTALL THE MODEM SOFTWARE

- Make sure you have the Newton Connection Kit.
- You must have 55K of available internal memory. (ModemEnabler 1.0 takes up 38K of internal memory storage once it's installed.)
- If you have a MessagePad 110, you must have the latest system software installed on your MessagePad--Newton System Update 1.3 (345025)--in order for modem setup packages to work properly. To check to see if your MessagePad has the correct version of software, tap Extras to open the Extras Drawer, then tap

Prefs. The system software version number is at the bottom of the screen.

INSTALLING MODEM ENABLER 1.0

WARNING: To properly install ModemEnabler 1.0, you must unlock the storage card lock switch on your MessagePad. (Slide the locking tab to the unlocked position so that a red strip is visible.) For more information, see the handbook that came with your MessagePad.

Install ModemEnabler 1.0 using the Newton Connection Kit. You can then move the storage card locking tab to the locked position.

INSTALLING MODEM SETUPS

WARNING: To properly install modem setup packages, you must unlock the storage card lock switch on your MessagePad. (Slide the locking tab to the unlocked position so that a red strip is visible.) For more information, see the handbook that came with your MessagePad.

Install one or more modem setups using the Newton Connection Kit. You can then move the storage card locking tab to the locked position.

There are four packages in the Modem Setup folder, two for the Motorola CELlect modem card and two for Hayes modems. The packages are described below.

- MotoCELlect Cellular--For use with the Motorola CELlect PCMCIA and Motorola CELlect pocket modems connected to any data-capable Motorola MC2 Microtac cellular phone.
- MotoCELlect 14.4--For use with the Motorola CELlect PCMCIA and Motorola CELlect pocket modems connected to standard telephone lines.
- Hayes Error-Correcting--For use with modems (including Hayes brand modems) that implement the complete Hayes command set.
- Hayes Compatible--For use with the majority of other modems that implement the basic Hayes commands but use a different set of commands for configuring features, such as error correction and flow control.

USING MODEM ENABLER 1.0 AND MODEM SETUPS

Once ModemEnabler 1.0 and one or more modem setup packages are installed, you can

- select modem setups that are right for your modem
- remove modem setups when you no longer need them

To select a modem setup, follow these steps:

1. Tap Extras to open the Extras Drawer, then tap Prefs.
2. Tap Modem.
3. Tap "Connect with." A list of modem setups installed on your MessagePad

appears.

4. Tap your choice in the list.

To remove a modem setup, follow these steps:

1. Tap Extras to open the Extras Drawer, then tap Prefs.

2. Tap Modem.

3. Tap Remove Modem Setup. A list of modem setups installed on your MessagePad appears.

4. Tap the modem setup you want to remove from the list.

A message appears telling you the selected modem setup was removed.

You can also remove ModemEnabler 1.0 at any time. Refer to the handbook that came with your MessagePad for information on removing software.

NOTE: If you remove ModemEnabler 1.0 from your MessagePad, you will not remove any modem setup packages.

MODEM COMPATABILITY ISSUES WITH MESSAGEPAD SOFTWARE

Modem compatabilty with internal MessagePad software will vary between modem vendors. The following software have known compatability issues with some third-party modems:

- Call slip on MessagePad 110 may not operate with some modems.
- Built-in Fax application requires modems to support Class One fax protocol.

COMPATABILITY ISSUES WITH SOFTWARE FROM OTHER SOFTWARE VENDORS

Apple Computer, Inc. tries to ensure that application programs from other software vendors are compatible with our software. However, the following products have compatability issues with ModemEnabler 1.0:

Notify! Newton

- When using the MotoCELLect Cellular setup on a MessagePad 110, The "Modem Setup" string should be set to "&F1e0s12=12&c1\q1\x0\n7" for most TAP servers.
- When using the MotoCELLect 14.4 setup on a MessagePad 110, The "Modem Setup" string should be set to "&Fe0s12=12&c1\q1\x0\n7" for most TAPservers.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 15

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online

services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

29 Jan - 1996 - Added Information Alley information.

Support Information Services

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Tech Info Library Article Number:19140



Tech Info Library

Power Macintosh: PCI Card Power Requirements (6/96)

Revised: 6/6/96
Security: Everyone

Power Macintosh: PCI Card Power Requirements (6/96)

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Article Created: 3 January 1996
Article Reviewed/Updated: 3 June 1996

TOPIC -----

I am adding PCI cards to my Power Macintosh computer and would like to know how many I can add and what the power requirements are for the PCI slots.

DISCUSSION -----

The Power Macintosh 7200, 7500 and 8500 computers have three expansion slots, which use the industry standard Peripheral Component Interface (PCI) bus. These computers provide a total of 50 watts of power for the three expansion slots. Both 5 volts and 3.3 V are supplied; the total power at both voltages must not exceed the 50 W maximum.

The Power Macintosh 9500 has six PCI slots supported by two Bandit custom ICs: one for PCI slots 1-3 and the other for PCI slots 4-6. The computer provides a total of 90 W of power for the six expansion slots. Both 5 V and 3.3 V are supplied; the total power at both voltages must not exceed the 90-W maximum.

The Power Macintosh 7200, 7500, 8500 and 9500 computers accept standard PCI cards as defined by the PCI Local Bus Specification, Revision 2.0. The cards are required to use the 5 V signaling standard and to use the standard ISA fence described in this specification.

Article Change History:
03 Jun 1996 - Modified to better facilitate searching.
05 Jan 1996 - Corrected minor typo.

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Tech Info Library Article Number:19141



Tech Info Library

Power Macintosh 7200: Simultaneous Sound Output (1/96)

Revised: 1/30/96
Security: Everyone

Power Macintosh 7200: Simultaneous Sound Output (1/96)

Article Created: 3 January 1996
Article Reviewed/Updated: 30 January 1996

TOPIC -----

I have a Power Macintosh 7200 series computer which is connected to a monitor with built-in speakers. I would like to play audio through the computer's internal speakers while playing audio through my monitor's speakers. I think I have everything set up properly in the Sound control panel, but each time I restart the computer, sound is no longer played through the computer's internal speaker. I only get sound out of the monitor's speakers. What is the proper way to set this up so that the settings will remain?

DISCUSSION -----

To have sound output through both the internal speakers of the Power Macintosh 7200 and the monitor's speakers, follow these steps:

Step 1

Connect an audio cable from the sound output port on the computer to the sound input port on the monitor.

Step 2

Select Volumes from the pop-up menu in the Sound control panel.

Step 3

Deselect (uncheck) both the "Built-in" and "Built-in Headphones" Mute checkboxes.

Step 4

Follow steps 2-3 each time you restart the computer.

When speakers or headphones are plugged into the sound output port on a Power Macintosh 7200 series computer, the computer mutes the built-in speaker by default during startup. This is normal for the Sound control panel to behave in this manner, and the only workaround is to change the settings after restarting the computer.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 13

Article Change History:

30 Jan 1996 - Added Info Alley info.

05 Jan 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:19142



Tech Info Library

Macintosh Performa: Available Power Macintosh Upgrades (4/97)

Revised: 4/8/97
Security: Everyone

Macintosh Performa: Available Power Macintosh Upgrades (4/97)

Article Created: 6 January 1995
Article Reviewed/Updated: 8 April 1997

TOPIC -----

I have a Macintosh Performa computer, and I want to upgrade my computer to the PowerPC processor. What are my options?

DISCUSSION -----

Overview

There are two possible ways to upgrade Macintosh Performa computers:

- Add a Macintosh Processor Upgrade card (part M3397LL/A, discontinued), which includes a PowerPC 601 chip. This option applies to the Macintosh Performa and Quadra 630 series and the Macintosh Performa and LC 575, 577, and 578 computers.
- Install the Power Macintosh 5300/6300 Logic Board Upgrade (M4447LL/A), which includes a PowerPC 603e chip. This option applies to the Macintosh Quadra and Performa 630 series and the Macintosh 5200CD and 6200CD series computers.

Both upgrades must be performed by qualified Apple-authorized service providers. Service providers can also provide specific availability and pricing information.

Macintosh Processor Upgrade

The Macintosh Processor Upgrade (discontinued) involves removing the existing Motorola 68040 microprocessor (which is socketed) and replacing it with a card that lays flat over the logic board. Once installed, the 68040 is inserted in the card. The card covers the LC-compatible processor-direct slot, so additional expansion cards cannot be used. However, it leaves the communications slot available, and you will have access to your RAM sockets.

The main advantage of this upgrade is that it provides access to PowerPC technology, while still retaining the functionality of the Motorola 68040 chip that originally came with the computer. It is a low-cost solution that should appeal to people who have a large investment in conventional software, who do not plan on upgrading all of their software immediately, or who are using "mission-critical" software that requires the 68040 chip.

Its disadvantage is that, like all upgrade cards, it is not a fully integrated solution because it still retains the original logic board. So its performance will likely not be as fast as a logic board replacement.

Power Macintosh 5300/6300 Logic Board Upgrade

The Power Macintosh 5300/6300 Logic Board Upgrade (part M4447LL/A) replaces the entire logic board of the computer and replaces it with the logic board of the Power Macintosh and Performa 5300/6300 series computer. This logic board includes a PowerPC 603e chip with a 100 MHz clock speed. It has two SIMM sockets, in which you can install memory. It increases the total memory capacity of the computer to 64 MB of RAM. It also supports 16-bit sound input (at 22 KHz) and output. Note that this upgrade does not include RAM so you must retain any memory that you had installed in your computer originally or purchase additional memory separately.

Besides the additional system features, you will also experience better performance than with the Macintosh Processor Upgrade. By not utilizing an upgrade card, you can continue to use the LC-compatible processor-direct slot.

Notes:

The following computers are in the Macintosh 630CD family: LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, and Performa 638.

The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

The following computers are in the Macintosh 6200CD family: Performa 6200, 6214, 6216, 6218, 6220, and 6230.

Article Change History:

08 Apr 1997 - Updated with availability information.
06 Jun 1996 - Clarified memory section for 5300 upgrade.
18 Jan 1996 - Corrected upgrade part number.

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Tech Info Library Article Number:19143



Tech Info Library

Apple Internet Connection Kit 1.0 Read Me (5/96)

Revised: 5/24/96
Security: Everyone

Apple Internet Connection Kit 1.0 Read Me (5/96)

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Article Created: 3 January 1996
Article Reviewed/Updated: 24 May 1996

TOPIC -----

This article is the Apple Internet Connection Kit 1.0 (AICK) ReadMe file.

DISCUSSION -----

Read Me
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Before you install the Apple Internet Connection Kit, read the following information.

Getting Help Installing and Using Your Internet Connection Kit

Apple will assist you with the installation and setup of the Apple Internet Connection Kit. Our specially trained telephone support staff can assist you with information on:

- Installation
- Registration
- Configuration

Once you have selected an Internet Service Provider, and registered with them, they will be able to assist you with:

- Basic Product Use
- Applications Questions or Issues
- Billing Issues
- Connection questions and problems

If you are accessing the Internet over a LAN, contact your Network Administrator for help in setup and use.

..TIL19144-Apple_Internet_Connection_Kit_1-0_Read_Me_5-96_(TA34914).pdf

Telephone support is available Monday through Friday (excluding Holidays) from 6 A.M. to 6 P.M. Pacific Standard Time. In Canada*, hours are 8 A.M. to 8 P.M. Eastern Standard Time. If you need support with getting started with your kit, call us at 1-800-SOS-APPL (1-800-767-2775). In Canada, call 1-800-263-3394.

Apple provides an excellent on-line reference source for technical information: The Apple Tech Info Library. You can search through thousands of articles on Apple products, past and present, updated regularly by Apple Support personnel. The Apple Technical Information Library (TIL) is available on the Internet (<http://www.info.apple.com/til.html>), AppleLink (Support -> Tech Info Library), and CompuServe (GO APLTIL).

System Requirements

- Power Macintosh or Macintosh computer with 68030 or greater CPU
- Mac OS 7.5 or greater
- 8 MB RAM
- 17 MB hard disk space

Open Transport Users

Open Transport v1.0.6 ships as a built-in component of Mac OS system software (System Software 7.5.2 with System Enabler 1.1) on the Power Macintosh 7200, 7500, and 8500 models. Software on newly manufactured Power Macintosh 9500 systems is updated as well. The Apple Internet Connection Kit requires Open Transport 1.0.7 or later. You must upgrade your networking software before installing the Apple Internet Connection Kit.

If you have a Power Macintosh 9500 without this update, you will need to contact the Apple Order Center to obtain the System 7.5.2 Version 2 CD-ROM disc for Power Macintosh 9500. This CD-ROM disc includes System Enabler 1.1 and Open Transport 1.0.6. This update is strongly recommended for all Power Macintosh 9500 customers.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

The "For PCI based Macs" folder on the Apple Internet Connection Kit CD includes a patcher to upgrade Open Transport 1.0.6 to 1.0.7.

Additional information about Open Transport can be retrieved via the Internet from <ftp://seeding.apple.com/ess/public/opentransport/>

Installation Instructions

To install the Apple Internet Connection Kit on your hard drive, double-click on the Installer file and then follow the instructions on your screen. Click on the Apple Internet Dialer icon from the Internet Kit window in the Launcher. Should you not desire to use the Launcher interface for accessing the applications in the kit, open the General Controls control panel, and click "off" the "Show Launcher at startup time".

Installation on an External drive with a System Folder

If you install the Internet Connection Kit on an external drive that has a System Folder on it, the System Preferences, and startup files will be installed in the external System Folder, leaving the startup volume untouched.

ISP Registration Requires You to Write Down Important Information

You will be asked to write down your username and password after registering with an Internet Service Provider. You can easily retain this information on your computer by:

- 1) Command-shift-3 will do a screen shot of what is on your monitor screen, will then be saved on your hard drive with the name "Picture 1", and can be opened with any application such as SimpleText.
- 2) You can select the text, and copy it into your Scrapbook.
- 3) Write the information down on a piece of paper.

If you forget to write it down, you will need to contact your ISP to get that information, should you need it. Apple will not be able to assist you with recapturing this information.

Connecting to a News Server for the First Time

Connecting to a news server for the first time can take from one minute to more than 30 to download the newsgroups, depending on your ISP's configuration. Your ISP provides you access to a news server, and depending on the number of newsgroups supported, the initial connection could be quite lengthy. Subsequent connections are likely to be much quicker.

Backup Your ISP Information

Once you have successfully registered with an ISP, it is recommended that you backup the preferences and settings in case you need to restore them. You can do this by launching the Dialer, and selecting "Backup ISP Information..." from the File menu.

SLIP

The Apple Internet Dialer is configured to use MacPPP, it will not work with InterSLIP. If you need to use SLIP, contact your ISP for instructions as how to manually configure and setup your system using the SLIP software.

Low on RAM?

If you are attempting to run several internet applications simultaneously, and are getting "Not Enough Memory to Run ..." you can either:

- Turn on Virtual Memory (VM) by opening the Memory control panel, and clicking on the radio button which activates VM.
NOTE: For best performance, never set VM to more than twice the amount of physical RAM (if you have an 8 MB system, VM should be no more than 16 MB).
- Decrease the number of Extensions in your System Folder.

- Purchase more RAM.

MacPPP Version

Apple Internet Connection Kit requires version 2.1.4 of MacPPP. If you previously had a different version of MacPPP installed on your machine, you should replace it with the version provided in your package. There is a version available on the Internet called MacPPP v 2.2 that is not compatible with the Internet Connection Kit, and should not be used with this product.

Restoring Your LAN Configuration

If you inadvertently installed the Dialup configuration over your existing Internet LAN configuration, you can restore your settings by doing the following:

- 1) Open the Internet Connection Kit folder.
- 2) Open the folder called "Backup Folder".
- 3) Open your System Folder along side of the Backup Folder.
- 4) Replace all items in your System Folder with those of the same names in the Backup Folder.
- 5) Reboot your machine.

QuickTime Conferencing

If you install QuickTime Conferencing after installing your Internet Connection Kit, a file called SNMP TCP/IP Transport will be installed in the Extensions folder. It is incompatible with MacPPP, and can cause your system to freeze at restart. If you encounter any problems, hold down the Shift key upon restart, and remove SNMP TCP/IP Transport from your System Folder. Contact your Network Administrator to see if you need this file.

What is Installed in Your System Folder?

After doing an Easy Install, Apple Internet Connection Kit puts the following items in various places your System Folder:

- AppleGuide 1.2.5
- ObjectSupportLib 1.1 (AppleScript document)
- Config PPP ver 2.1.4 Control Panel
- PPP 2.1.4 extension and PPP Preferences (Preference Folder)
- MacTCP 2.0.6, MacTCP Prep, MacTCP Token Ring extension, Hosts file (are installed if you do not have Open Transport).
- Internet Config extension
- Internet Dialer Folder (Preferences Folder)
 - Modem Information
 - Internet Dialer Prefs
 - reg server
- Launcher 2.8, and Launcher Preferences
- QuickTime 2.1, Apple MultiMedia Tuner 2.0, QuickTime Musical Instruments, QuickTime PowerPlug
- Sound Manager 3.1, Sound control panel 8.0.5
- RealAudio Daemon

- Netscape preferences (Preferences Folder)
- Additional Fonts

Article Change History:

24 May 1996 - Updated for technical accuracy.

10 May 1996 - Change title to show version 1.0.

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Tech Info Library Article Number:19144



Tech Info Library

Newton 2.0 OS: Determining Size and Number of Faxes (1/96)

Revised: 1/3/96
Security: Everyone

Newton 2.0 OS: Determining Size and Number of Faxes (1/96)

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Article Created: 3 January 1996

TOPIC -----

I have a Apple MessagePad 120 with the Newton 2.0 OS. How many fax messages can I receive? Also, what is the maximum size for fax documents?

DISCUSSION -----

The number and the size of fax documents vary. There are two factors that determine these numbers on your Apple MessagePad.

- Free Heap Space:

This is the amount of memory available to the system software to run the Newton. It will determine how large in size the page can be. On average, a fax page takes about 40 KB.

NOTE :

If you have trouble receiving a fax, try disabling some of the packages on your Newton MessagePad.

- Available Storage Space:

This is the amount of memory you have available on the internal store or a PC card, if you have one. This determines the number of pages you can receive.

Support Information Services

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Tech Info Library Article Number:19146



Tech Info Library

Newton 2.0 OS: BackDrop To Do List Isn't Updated (1/96)

Revised: 1/30/96
Security: Everyone

Newton 2.0 OS: BackDrop To Do List Isn't Updated (1/96)

=====
Article Created: 3 January 1996
Article Reviewed/Updated: 30 January 1996

TOPIC -----

I set the Backdrop to Dates, and I view "Today's Agenda". When I turn off my Apple MessagePad, then turn it on the following day, the date is correct but the unchecked items in the To Do list do not roll over.

DISCUSSION -----

This issue is known and being investigated by Apple. The workaround when this occurs is to select Show Today.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 17

Article Change History:
30 Jan 1996 - Added Information Alley information.

Support Information Services

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Tech Info Library Article Number:19147



Tech Info Library

System 7.5.2: Custom Install on Power Mac 7500 & 8500 (1/96)

Revised: 1/3/96
Security: Everyone

System 7.5.2: Custom Install on Power Mac 7500 & 8500 (1/96)

Article Created: 3 January 1996

TOPIC -----

This article lists the custom install options available on the Apple Macintosh CD containing System 7.5.2 that ships with the Power Macintosh 7500 and 8500 computers.

DISCUSSION -----

Here are the installation options made available when you choose Custom Install from the pop-up menu in the upper left corner of the system software Installer.

- System Software
 - Macintosh System Software
 - Minimal Macintosh System Software
- Printing
 - ImageWriter
 - LaserWriter
 - StyleWriter Family
 - LaserWriter 8
 - LaserWriter 300
- Networking Software
 - File Sharing
 - AppleTalk
 - TCP/IP
- Utility Software
 - AppleGuide
 - AppleScript
 - ColorSync
- Multimedia Software
 - CD-ROM

- QuickTime
- Text-To-Speech
- Video Player
- Compatibility Software
 - Macintosh Easy Open
 - PC Exchange
- Fonts
 - Chicago
 - Courier
 - Geneva
 - Helvetica
 - Monaco
 - New York
 - Palatino
 - Symbol
 - Times
- Apple Menu Items
 - Calculator
 - Chooser
 - Control Panels Alias
 - Find File
 - Graphing Calculator
 - Jigsaw Puzzle
 - Key Caps
 - Note Pad
 - Scrapbook
 - Stickies
 - • Shutdown
- Control Panels
 - Apple Menu
 - Color
 - Control Strip
 - Date & Time
 - Desktop Patterns
 - File Sharing Monitor
 - General Controls
 - Keyboard
 - Labels
 - Launcher
 - Macintosh Easy Open
 - Map
 - Memory
 - Mouse
 - Numbers
 - PC Exchange
 - Sharing Setup
 - Sound & Displays
 - Startup Disk
 - Text

- Users & Groups
 - Views
 - WindoShade
- WorldScript
 - WorldScript I
 - WorldScript II
- Energy Saver Software

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19148



Tech Info Library

System 7.5.2: Custom Install on Power Mac 7200 & 9500 (1/96)

Revised: 1/3/96
Security: Everyone

System 7.5.2: Custom Install on Power Mac 7200 & 9500 (1/96)

Article Created: 3 January 1996

TOPIC -----

This article lists the custom install options available on the Apple Macintosh CD containing System 7.5.2 that ships with the Power Macintosh 7200 and 9500 computers.

DISCUSSION -----

Here are the installation options made available when you choose Custom Install from the pop-up menu in the upper left corner of the system software Installer.

- System Software
 - Macintosh System Software
 - Minimal Macintosh System Software
- Printing
 - ImageWriter
 - LaserWriter
 - StyleWriter Family
 - LaserWriter 8
 - LaserWriter 300
- Networking Software
 - File Sharing
 - AppleTalk
 - TCP/IP
- Utility Software
 - AppleGuide
 - AppleScript
 - ColorSync
- Multimedia Software
 - CD-ROM

- QuickTime
- Compatibility Software
 - Macintosh Easy Open
 - PC Exchange
- Fonts
 - Chicago
 - Courier
 - Geneva
 - Helvetica
 - Monaco
 - New York
 - Palatino
 - Symbol
 - Times
- Apple Menu Items
 - Calculator
 - Chooser
 - Control Panels Alias
 - Find File
 - Graphing Calculator
 - Jigsaw Puzzle
 - Key Caps
 - Note Pad
 - Scrapbook
 - Stickies
 - • Shutdown
- Control Panels
 - Apple Menu
 - Color
 - Date & Time
 - Desktop Patterns
 - File Sharing Monitor
 - General Controls
 - Keyboard
 - Labels
 - Launcher
 - Macintosh Easy Open
 - Map
 - Memory
 - Monitor
 - Mouse
 - Numbers
 - PC Exchange
 - Sharing Setup
 - Sound
 - Startup Disk
 - Text
 - Users & Groups
 - Views

- WindowShade

Support Information Services

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Tech Info Library Article Number:19149



Tech Info Library

Floppy Disk Maker: Starting New Backup After Interrupting 1/96

Revised: 1/5/96
Security: Everyone

Floppy Disk Maker: Starting New Backup After Interrupting 1/96

=====

Article Created: 3 January 1996
Article Reviewed/Updated: 5 January 1996

TOPIC -----

I was using the Floppy Disk Maker software that came with my PowerBook computer to make a set of backup System software disks. I had to stop the procedure in the middle of the process. Now I want to make another set, but the only option I get is Resume when I launch the Floppy Disk Maker. How can I create a new backup set?

DISCUSSION -----

If the Floppy Disk Maker software that ships with the PowerBook 190, 2300c, and 5300 series computers is interrupted during the disk duplicating process, "resume" is the only option available until you complete the original backup.

You can reset Floppy Disk Maker by dragging the Floppy Disk Maker Preferences file from the Preferences folder of your System Folder to the Trash. The next time you launch Floppy Disk Maker, the choices for Minimum or Full Set backup will be available.

Article Change History:
05 Jan 1996 - Added Keyword.

Support Information Services

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Tech Info Library Article Number:19150



Tech Info Library

HyperCard 2.3.3: Read Me (1/96)

Revised: 1/3/96
Security: Everyone

HyperCard 2.3.3: Read Me (1/96)

=====

Article Created: 3 January 1996

TOPIC -----

This article contains the ReadMe included with HyperCard 2.3.3 software update posted online.

DISCUSSION -----

WELCOME TO HYPERCARD 2.3.3
=====

Please read this entire "Read Me" file. It contains important information regarding this update. We recommend that you print a copy.

This update disk fixes a problem that occurs when a color stack is created, using HyperCard 2.3, on one Macintosh computer with a PowerPC microprocessor and crashes when run on another Power Macintosh with a PowerPC microprocessor.

The HyperCard 2.3.3 Update corrects a bug that causes a crash when:

- 1) A stack is created in HyperCard 2.3 on a Macintosh with a PowerPC microprocessor
- 2) Color Tools are opened from the Color menu item
- 3) The color resources ARE installed into the new stack
- 4) The stack is then launched on a different Macintosh with a PowerPC microprocessor

The bug does not affect stacks running on Macintosh computers with a 680x0 microprocessors.

The bug does not affect stacks created on a Macintosh computer with a PowerPC

microprocessor and then launched on a 680x0 microprocessor.

This bug does not affect stacks that do not use Color Tools.

The enclosed HyperCard 2.3.3 Update disk contains two stacks; an updated version of "Color Tools" (version 2.3.3) as well as a stack entitled "Update Existing Colored Stacks".

Stack #1 - Color Tools (Version 2.3.3)

Replace your old version of Color Tools by placing the Color Tools (version 2.3.3) stack into your HyperCard 2.3 folder on your hard drive.

Stack #2 - Update Existing Colored Stacks

If you have any stacks created with HyperCard 2.3 that are affected by the bug mentioned above, you can use the "Update Existing Colored Stacks" to repair those stacks so that they will no longer crash when running on another Macintosh Computer with a PowerPC microprocessor.

To repair a color stack created with HyperCard 2.3:

Step 1

Click on the "Repair Stack" button

Step 2

Locate the color stack you wish to update

Step 3

Select "Open" from the dialog box

Step 4

Your stack will be repaired automatically

CHANGES TO THE HYPERCARD REFERENCE MANUAL

=====

On page 6-33 the Reference Manual describes using "LinkTo" as follows:

"2. With the Button Tool still selected, double-click the button you want to link.

The Button Info dialog box appears."

While the Button Info dialog box does appear, the problem is that the Button

Info dialog box does not display the "LinkTo..." button unless the option key is held down while double-clicking the button you want to link.

On page 3-22 the Reference Manual describes using " Effects" as follows:

"1. Choose the Button Tool and double-click the Next button.

The Button Info dialog box appears

2. Click the Effect button."

While the Button Info dialog box does appear, the problem is that the Button Info dialog box does not display the "Effect..." button unless the option key is held down while double-clicking the button you want to add an effect to.

On page 6-37 the Reference Manual describes using " Effects" as follows:

"2. Double click the Button

The Button Info dialog box appears

3. In the Button Info dialog box, click Effect."

While the Button Info dialog box does appear, the problem is that the Button Info dialog box does not display the "Effect..." button unless the option key is held down while double-clicking the button you want to add an effect to.

Pages 2-29, 4-20, 6-3, 6-17 of the HyperCard Reference Manual shows an incorrect depiction of the Button Info dialog box when a button is Option-Double Clicked. On these pages, the position of the "LinkTo..." and "Effect..." buttons are transposed with the "Icon..." and "Contents..." buttons in the Button Info dialog box.

NOTE: Appendix B, page 141 of the Getting Started Guide documents the replacement of the "LinkTo..." and "Effect..." Buttons with the "Tasks..." button in HyperCard 2.3.

Support Information Services

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Tech Info Library Article Number:19151



Tech Info Library

Power Macintosh 8500: Video Output Hardware Zoom (4/96)

Revised: 4/17/96
Security: Everyone

Power Macintosh 8500: Video Output Hardware Zoom (4/96)

Article Created: 3 January 1996
Article Reviewed/Updated: 14 February 1996

TOPIC -----

I've heard that the Power Macintosh 8500 computer has a hardware zoom option, but I am unable to find any mention of it in the literature that came with my computer.

DISCUSSION -----

The Power Macintosh 8500 includes a high performance chip set, which is capable of doubling the size of the video image displayed when outputting video to television. This feature could be useful for viewing video because movies will appear to be played back at full screen. These resolutions do not affect the actual data being displayed, but they do magnify the size of the image.

Follow these steps to enable resolution doubling:

Step 1

Follow the instructions in your User's Guide to display video on television.

Step 2

At the Finder, select the Monitor Resolution module (checkerboard) in the Control Strip. (Or, you can change the resolutions using the Sound & Displays control panel.)

Step 3

Select 256x192 for hardware doubled underscan (leaves a border like a computer display) or 320x240 for hardware doubled overscan (full frame, picture goes to edge like a television display)

Article Change History:

17 Apr 1996 - Updated technical info.

05 Jan 1996 - Corrected minor typo.

Support Information Services

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Tech Info Library Article Number:19152



Tech Info Library

Macintosh Performa: Using Auto Power On/Off Control Panel (1/96)

Revised: 1/19/96
Security: Everyone

Macintosh Performa: Using Auto Power On/Off Control Panel (1/96)

Article Created: 4 January 1996
Article Reviewed/Updated: 19 January 1996

TOPIC -----

I just installed the Auto Power On/Off control panel from a System 7.5 CD on my Macintosh Performa 5300CD. It appears to be working properly, but since this software did not come with my computer, I am wondering if I can safely use this control panel.

DISCUSSION -----

The Auto Power On/Off control panel can be used to turn the computer ON and OFF at specified times. It can only be used on computers, including many Macintosh Performa computers, that can be turned off using the Shut Down command (soft power off) and that have the "Cuda" ADB controller chip. A complete listing of compatible computers is in the Tech Info Library article, "Energy Saving Control Panels: Description & Compatibility."

Although the Auto Power On/Off control panel is compatible with many Macintosh Performa computers, it is not bundled with them. Many Macintosh Performa computers include modems and MegaPhone software, which allow you to use your computer as an answering machine. If you have installed Auto Power On/Off, it is possible for your computer to be inadvertently shut down while your computer is set to answer phone messages. To avoid this, Macintosh Performa computers do not ship with the Auto Power On/Off control panel.

Article Change History:
19 Jan 1996 - Clarified information.

Support Information Services

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Tech Info Library Article Number:19154



Tech Info Library

PowerBook: Turns On Automatically If AC Power Used (3/97)

Revised: 3/10/97
Security: Everyone

PowerBook: Turns On Automatically If AC Power Used (3/97)

Article Created: 4 January 1995
Article Reviewed/Updated: 10 March 1997

TOPIC -----

I have a Macintosh PowerBook computer. If I have it plugged into the AC adapter and I select Shut Down from the Special menu, it powers off, but then powers right back on even though I have not touched any keys.

If AC adapter is not plugged in, the computer will Shut Down normally. However, as soon as the AC adapter is plugged in, it will power back on. What is wrong? Why does it restart itself automatically like this?

DISCUSSION -----

The symptoms you describe could occur on a Macintosh PowerBook 190, 1400, 3400, or 5300 series computer. The situation you describe is often caused by a corruption of the power manager controller on the logic board or corrupted Parameter RAM (PRAM) which can cause it to restart continually like this. It has been successfully resolved in some cases by one of the following three procedures:

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

All of the following Power Manager Reset procedures for all of the Macintosh PowerBook computers will permanently remove a RAM disk, if present, and all of its contents. Resetting the Parameter RAM will reset some settings you have selected for networking other services back to the factory defaults.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

Reset the Parameter RAM (PRAM)
=====

Reset/zap the Parameter RAM (PRAM) from shutdown state. Resetting ("Zapping") the Parameter RAM (PRAM) when the computer is shutdown also resets the power

manager.

Step 1

Unplug the AC adapter.

Step 2

Power on the computer while it is running from the battery only.

Step 3

Immediately after you press the power key, hold down Option, Command (Apple), P, and R.

Step 4

Keep holding down these four keys until you have heard the startup chime at least one additional time after the initial startup chime*.

(If your PowerBook computer emits multiple chimes when you are holding down the Option-Command-P-R keys, skip to Step 7.)

Unlike other PowerBook models, often these PowerBook computers will be only emit a single startup chime. Then the screen goes dark/blank and the green sleep light stays on solid (not blinking on and off like it does when the computer is in Sleep mode).

Step 5

Press the Reset button (on the back of the PowerBook) one more time and the PowerBook starts up after a brief pause.

NOTE:

If the PowerBook powers off and the sleep display light stays a solid green - no blinking, press the reset button once.

Step 6

If the PowerBook does not turn on from the Reset button, turn the PowerBook on by pressing the Power-On key in the upper right corner of the keyboard.

Step 7

After the computer has started up select Shut Down from the Special menu.

Step 8

Plug in the AC adapter. If the computer remains shutdown, you will know that you have successfully reset the PRAM and power manager and your computer should now function normally. If the computer powers on when you plug in the AC adapter, you need to reset the power manager.

Reset The Power Manager

=====

Step 1

Remove the battery.

Step 2

Disconnect the AC Adapter from the PowerBook and unplug it from the wall outlet.

Step 3

Press and hold the Reset button for one minute. The Reset button is located behind the port access door on the back of the unit below the video connector.

Step 4

Plug the AC Adapter into the wall outlet.

Step 5

Plug the AC Adapter into the PowerBook. It should now behave normally when you choose Shut Down from the Special menu.

If it does not, ...

Step 6

If the computer powers on when you plug in the AC adapter, you need to bring your computer to an authorized Apple dealer or call 800-SOS-APPL to check on your service options.

Have the Backup Battery Removed

=====

Have an authorized Apple Service technician remove all power from the computer for approximately 15 minutes.

Step 1

Remove the main battery(ies) and AC Adapter.

Step 2

Disconnect the backup battery.

Step 3

Wait 15 minutes and then retest for original problem.

IMPORTANT NOTE: Removal of the backup battery should only be done by an authorized Apple service provider because the backup battery is not a user-accessible part. Be advised that if an end user attempts to perform this procedure and in the process damages any components, any damage incurred will not be covered under warranty. If you do not have access to a local service provider, you can call 800-SOS-APPL to have your PowerBook computer sent in for repair at the Apple Service Center.

This article was published in the Information Alley on 11 March 1997.

Article Change History:

10 Mar 1997 - Added list of more computers that experience the same symptoms.

16 Sep 1996 - Added more detailed information.

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Tech Info Library Article Number:19155



Tech Info Library

PowerBook: About PC Card Modem Files Read Me (1/96)

Revised: 5/2/97
Security: Everyone

PowerBook: About PC Card Modem Files Read Me (1/96)

Article Created: 4 January 1996
Article Reviewed/Created: 1 May 1997

TOPIC -----

This Readme file is pre-installed on the hard drives of most Macintosh PowerBook computers which have the capability of using PC Card modems.

DISCUSSION -----

=====

ABOUT PC CARD MODEM FILES

=====

The PC Card Modem Files folder contains modem connection files for various PC Card modems that will work with several application programs. If your modem file is not included, please contact your communications software manufacturer to see if your modem is supported.

Using a PC Card Modem

=====

Follow these steps as a guideline for setting up communications programs to use the Communications Toolbox.

Note: The files listed below were designed to work with the United States phone system. These files may or may not work properly outside of the United States.

To select the correct modem file for your PC Card modem, follow these steps:

Step 1

Insert your PC Card modem.

Step 2

Click the Edit Local Setup button.

Step 3

Select the port that your PC Card modem is in. You should see either upper or lower PC Card slot listed. If you don't, make sure your modem is properly inserted. The upper and lower PC Card slots will appear in the dialog box only when a PC Card modem is inserted.

Step 4

Choose your modem from the Modem Type pop-up menu. If your PC Card modem is not listed, try Generic PC Card Modem or Hayes Basic. If that doesn't work, you may need to create a new modem type.

Using Apple Remote Access with a PC Card Modem

=====

Apple Remote Access (ARA) uses modem files (sometimes called connection scripts or CCLs) to get the best performance from some modems. Follow these steps to select your modem file:

Step 1

Insert your PC Card modem.

Step 2

Open the ARA application program.

Step 3

Open Remote Access Setup.

Step 4

Choose your modem from the Modem pop-up menu. If your PC Card modem is not listed, check in the ARA Connection Files folder. If the file for your modem appears, drag it to the Extensions folder (inside the System Folder). If the file for your modem is not listed, try using an existing modem file from the pop-up menu (such as a different model from the same manufacturer). If this doesn't help, you may need to get a connection script from your PC Card manufacturer.

Step 5

Choose the port that your PC Card modem is in. You should see either upper or lower PC Card slot listed. If you don't, make sure your modem is properly inserted. If you insert the PC Card modem in the other slot, you need to reselect the modem port before you can use ARA.

Using AppleLink with a PC Card Modem

=====

To use AppleLink with a PC Card modem, follow these steps after you have installed the AppleLink software:

Step 1

Insert your PC Card modem.

Step 2

Open the AppleLink Connection Files folder (inside the PC Card Modem Files folder in the Apple Extras folder on your hard disk).

Step 3

Drag the icon for the PC Card Modem (USA) file to the Connection Files folder (inside the AppleLink folder). If a dialog box appears advising you that older files with the same name already exist, click OK.

Step 4

Open the AppleLink application program.

Step 5

Choose Set Up Connection from the Network menu.

Step 6

Choose CommToolbox from the Connection Port pop-up menu.

Step 7

Choose Serial Tool from the Method pop-up menu.

Step 8

Select the Upper Slot or Lower Slot icon in the Current Port window. The modem must be inserted to display its icon in the window. You must always insert the modem in the same slot, or you'll need to set up the modem again for the other slot.

Step 9

Choose PC Card Modem (USA) from the Connection File pop-up menu.

Article Change History:

01 May 1997 - Removed out dated on line references.

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Tech Info Library Article Number:19156



Tech Info Library

Business Education Bundle v3.3: Contents (3/96)

Revised: 3/13/96
Security: Everyone

Business Education Bundle v3.3: Contents (3/96)

Article Created: 4 January 1996
Article Reviewed/Updated: 13 March 1996

TOPIC -----

This article lists the software contents of the Business Education Bundle.

DISCUSSION -----

The Business Education Bundle is a Education market product comprising a collection of software CD-ROM discs, manuals, and curriculum guides. There are three parts to this bundle. The (basic) Business Education Bundle includes a computer, software CD-ROM discs, and curriculum materials. The Teacher Kit (T1538LL/B) includes manuals and textbook teacher guides. The Student Kit (T1800LL/A) contains instructional manuals for students. The Teacher and Student kits are sold separately as additions to the (basic) Business Bundle and contain no software so it is recommended not to order them without the basic Bundle.

Here is the content of the Business Education Bundle (v3.3):

- Bundle Users manual(s): None
 - Curriculum Guide: 1
- Table of Contents:
- Welcome and Introduction,
 - Tips to Get Started,
 - Becoming Familiar with the Curriculum Materials,
 - Using the Curriculum Materials in Your Classroom or Business Lab,
 - How the Software Fits Into Your Curriculum,
 - Appendix A: Resources for Using Technology in Business Education,
 - Appendix B: Technical Assistance Numbers for Third Party Developers
- Student Textbook Kit (manuals from South-Western Publishing):
 - ClarisWorks 4.0 Macintosh Quick Course
 - Computer Applications
 - Official Courseware: WordPerfect 3.5

- Automated Accounting 6.0

- 6 CDs:

1 Business Education (v3.3): These items are installed into a Business Education Applications Folder

- Automated Accounting (v6.0.1) - South-Western Publishing (800) 543-0453]
- American Heritage Dictionary (v3.0.1) - SoftKey Int'l. (404) 428-0008]
- Correct Grammar (v3.2.2) - SoftKey Int'l. (404) 428-0008]
- ClickArt Business Illustrations (v n/a) - T/Maker Company (415) 962-0195]
- Apple Font Pack - Apple Computer - (800) 767-2775
- Clarisworks Samples Files
- Teacher Templates
- Computer Applications Templates
- Clarisworks Templates
- WordPerfect Course Documents

1 Clarisworks (v4.0) - Claris - Tech Support (408) 727-9054

1 Claris Impact (v2.0) - Claris - Tech Support (408) 727-9054

1 The 1995 Grolier Encyclopedia (v7.0.4) - Mindscape - Tech Support (415) 898-5157

1 1995 Time Almanac (v1.0) - Compact Publishing - Tech Support (202) 244-4770

1 Novell WordPerfect (v3.5) - WordPerfect Corp - Tech Support (800) 228-2875

Article Change History:

13 Mar 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19157



Tech Info Library

LaserWriter 8.2.3f: Read Me (1/96)

Revised: 1/4/96
Security: Everyone

LaserWriter 8.2.3f: Read Me (1/96)

=====

Article Created: 4 January 1996

TOPIC -----

This article contains the ReadMe file included with the LaserWriter 8.2.3f software posted online.

DISCUSSION -----

About the LaserWriter 8 Fax Printer Driver Version 8.2.3f

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference.

The software on this disk includes version 8.2.3f of the Apple LaserWriter 8 fax printer driver, which works with the LaserWriter Select 360f, LaserWriter Pro 810f, and the LaserWriter 16/600 PS Fax. This document includes information about the software, as well as about several of the printers.

About the LaserWriter 8f Printer Driver

When you set up your printer, you install the LaserWriter 8 printer driver and the fonts and printer software that you need. When you install the fax card option, you also must install the LaserWriter 8 fax printer driver to enable the printer's faxing capabilities. Both drivers are installed in the Extensions folder in your System Folder. They provide identical printing capabilities. To use the fax capabilities of your printer, you should open the Chooser and select the fax driver whenever you want to use the printer for faxing.

Installing the Printer Driver Software

The manual that comes with your printer contains detailed installation instructions. You cannot install the software by dragging icons; you must use

the Installer program as described in the printer manual.

IMPORTANT Before installing the printer software, you should restart your system with all Extensions turned off. To do this, hold down the Shift key while you restart your computer.

The Installer places the following files in the System Folder on your hard disk:

- LaserWriter 8f is placed in the Extensions folder.
- The PostScript Printer Description (PPD) files that are used by LaserWriter 8 are in the Printer Descriptions folder located in the Extensions folder.
- The Apple Printer Utility and Read Me information are placed in the Apple LaserWriter Software folder.
- The LaserWriter Fax Utility and LaserWriter Fax Log are installed in a folder called LaserWriter Fax Software (placed within the System Folder).
- The Chooser 7.3 desk accessory is placed in your Apple Menu Items folder if you have an older version.
- The PrintMonitor 7.1.2 is placed in your Extensions folder if you have an older version.

About PPD Files

The LaserWriter 8f driver uses PostScript Printer Description (PPD) files to determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle. Installing the fax card software for the printer installs an additional PPD that supports the faxing capabilities of the printer.

To take full advantage of your printer's features, click the Setup button in the Chooser when selecting your printer for the first time or after installing an additional option. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer. The driver will automatically select the PPD that supports the faxing capabilities of your printer.

About Creating EPS Files

You can create an Encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, an extremely large file may be created.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you

print.

- When you create EPS files with preview information included, other applications that create their own PostScript code may not display the EPS file accurately on the screen.

About the LaserWriter Fax Utility and the Apple Printer Utility

Installing the LaserWriter Fax printer driver software installs the LaserWriter Fax Utility, which you should use to configure the faxing capabilities of the printer.

When you installed the LaserWriter 8 driver and printer software, the Installer placed the Apple Printer Utility program in a folder named "Apple LaserWriter Software." The Apple Printer Utility program is designed to configure your LaserWriter printer.

Using a Hard Disk to Store Fax Data

If a hard disk is attached to your printer, you can use it to hold incoming fax data before it is printed, and to hold outgoing fax data before it is transmitted. (By default, fax jobs are stored in printer RAM.)

Because more space is typically available on a hard disk than in RAM, storing fax data on a hard disk allows you to receive and transmit longer faxes without having to divide them up into smaller transmissions.

To configure your printer to use an attached hard disk to store fax jobs, open the Apple Printer Utility and choose Send PostScript File from the File menu. Select the file "UseDiskForFax" in the LaserWriter Fax Software folder in the System Folder, click Add, then click Send.

To configure your printer to use RAM to store fax jobs, open the Apple Printer Utility and choose Send PostScript File from the File menu. Select the file "UseRAMForFax" in the LaserWriter Fax Software folder in the System Folder, click Add, then click Send.

After downloading either file to the printer, you must restart the printer for the change to take effect.

IMPORTANT If you use a hard disk to hold fax data and you later want to disconnect the hard disk from the printer, be sure to configure the printer to use RAM to store fax jobs before you remove the hard disk. Otherwise, your printer will take a little longer to start up the first time when it detects that the hard disk has been removed.

Using the LaserWriter 8 Fax Printer Driver With LaserWriter Printers

=====

When using the LaserWriter 8.2.3f driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- The LaserWriter 8.2.3f driver allows some printers to print using a larger imageable print area on the page. If your printer does so, you may find that text in some documents reflows or is clipped to fit the new imageable area. To maintain your document format when printing to different printer models, deselect the Larger Print Area option in the Page Setup Options dialog box.
- Some older printers with small amounts of memory will not print documents containing large numbers of fonts unless the Unlimited Downloadable Fonts option is selected in the Page Setup Options dialog box. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup Options dialog box and print again.
- Printing multiple documents with the Finder may not work if the documents have been created by different application programs.
- If you encounter a time-out (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.
- Note the following when you create rotated text, saved as a PICT file, and import it into a document as a graphic: Though you may position rotated text in the frame so that parts of it should not be visible and should not print (is clipped), the text will still appear on the printed document.

LaserWriter 16/600 PS

- If Tray Switching is turned on and you have installed the optional 500-sheet feeder, and it contains the same paper size as the 250-sheet feeder, you should set up the driver to use the 500-sheet feeder as the preferred paper source for optimal printing performance. See the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

LaserWriter Pro 810

- With some graphics programs, bitmapped graphics will be reduced by 25% in size when printed with the Precision Bitmap Alignment option in the Page Setup Options dialog box.
- When you create a PostScript file with a LaserWriter Pro 810 selected as the printer and send the file to a printer that uses PostScript Level 1, a PostScript error will occur.

LaserWriter Pro 600 and 630

- You cannot use Auto Select as the Paper Source in the Print dialog box to print envelopes from the optional envelope feeder.

- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image.

LaserWriter II NT and II NTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup Options dialog box, a PostScript error results.
- Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter IIg and IIx

- When you select paper sources from the First From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter IIx/IIg printers to be more compatible with other Apple LaserWriter printers. If your legal-sized documents no longer fit on the page, select Larger Print Area in the Page Setup Options dialog box.
- Some form-printing programs cannot print forms using the Layout settings in the Page Setup dialog box.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.1.1 or later.

Using the LaserWriter 8 Driver With Application Programs

=====

Some application programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that result in printing problems. If you experience problems with a program, contact the publisher of the program. In some cases a newer version of the program may be available.

The following list describes some special cases that you should be aware of when working with some application programs. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- With many programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.

Aldus Freehand 4.0

- Documents do not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- EPS files created using the LaserWriter 8 driver from within Freehand cannot

be used in other programs.

Aldus PageMaker 5.0

- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if fonts Geneva, New York or Monaco are used.

CricketDraw III 2.01

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, underlined TrueType fonts may not print.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Freehand 5.0

- When you are printing with Freehand 5.0, make sure to set the Output Device Setup in the Print Options dialog box to "Use defaults." If you have a PPD selected, the QuickDraw GX driver will only print a blank page.

Informed Manager 1.4

- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

Lotus 1-2-3 1.1

- Text printed with the Outline or Shadow text style appears filled with gray.

MacDraft 3.01 and earlier versions

-
- When you print using the Cut Marks option, a PostScript error results.

Microsoft PowerPoint 3.0

-
- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

-
- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Painter 2.0

-
- When you print using the Invert option, images do not print inverted correctly.

PixelPaint Pro 3.0

-
- When you print using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3

-
- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

RagTime 3.2

-
- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

-
- Use ReadySetGo! version 6.0 with the LaserWriter 8 printer driver; earlier versions will not work.
 - You cannot print documents that use pen patterns.

SoftWindows

-
- When you print with Autosend on, don't select the option to print before the print job has finished spooling to the Macintosh, or PostScript syntax errors will occur.

Studio/8 & Studio/32

-
- When creating an EPS file with these programs and the LaserWriter 8 driver, you must select the QuickDraw Printer option.

WordPerfect 3.0

-
- When you select the Unlimited Downloadable Fonts option and print rotated text in Watermark, the entire document rotates when printed.

How to Get Updated Printer Software

If you need to update your printer software and you have an AppleLink account, you can obtain the latest versions of the LaserWriter 8 software from AppleLink.

Follow this path to locate the LaserWriter 8 software:

Apple Products
Apple Software Updates
Macintosh
Printing Software

The latest LaserWriter 8 software is also available from Apple's ftp site on the Internet. The path is:

/ftp/dts/mac/sys.soft/laserwriter.8.2/.

Printing With QuickDraw GX

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Using Manual Feed

- If you select manual feed, and the printer still prints from the cassette, try to print by selecting Automatic Paper Feed from the GX Print dialog box first. Then, print again by selecting Manual Feed.

Freehand 5.0

- When you print with Freehand 5.0, make sure to set the Output Device Setup in the Print Options dialog box to "Use defaults." If you have a PPD, selected the QuickDraw GX driver will only print a blank page.

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Support Information Services

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Tech Info Library Article Number:19158



Tech Info Library

Power Macintosh 7100: NuBus Power Requirements (1/96)

Revised: 1/4/96
Security: Everyone

Power Macintosh 7100: NuBus Power Requirements (1/96)

Article Created: 4 January 1996

TOPIC -----

What are the power requirements of the NuBus slots in the Power Macintosh 7100?

DISCUSSION -----

The power budget for each NuBus slot is 13.9 watts, for a total of 41.7 watts, and the power budget for each NuBus card is as follows:

Begin_Table

Voltage (V)	Maximum current (A)	Maximum capacitance (mF)
+5	2.0	1513
+12	0.175	536
-12	0.15	698

End_Table

These NuBus power requirements also apply to the Macintosh IIVx and the Macintosh Quadra 650, which both share a common case design with the Power Macintosh 7100.

Support Information Services

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Tech Info Library Article Number:19159



Tech Info Library

Color LaserWriter 12/600 PS: Quark Xpress Pantone Colors (1/96)

Revised: 1/26/96
Security: Everyone

Color LaserWriter 12/600 PS: Quark Xpress Pantone Colors (1/96)

Article Created: 4 January 1996
Article Reviewed/Updated: 26 January 1996

TOPIC -----

I am using QuarkXPress and printing on the Color LaserWriter 12/600 PS. I am using the Color LaserWriter 12/600 PS Pantone files for QuarkXPress, and the printing result is what I expect (the colors are similar). Problems start to arise when I have the file printed by a printing firm, because the Color LaserWriter 12/600 PS pantone color percentage values are different from the ones normally used in the Pantone specification. Is there a utility or a way to convert the LaserWriter Color 12/600 PS Pantone color values into true pantone values?

DISCUSSION -----

You are correct that the values in the Quark Xpress Pantone files for the Color LaserWriter 12/600 PS are different than those specified by the Pantone specification. The CMYK values provided in the Pantone specification are more or less "starting points" for color matching. Since there are a very large number of variables in color matching (type of paper, lighting condition, different toner/inks, characteristics of various print engines, and so forth), desktop publishing professionals by requirement have to fine tune their printers or color values in order to get the output they desire.

The Pantone CMYK values in the Quark document for the Color LaserWriter 12/600 PS are fine-tuned ONLY for the Color LaserWriter 12/600 PS printer. It appears you are trying to use the Color LaserWriter as a color proofer, which is NOT what the printer was really designed for. There are much more expensive color proofing devices available that are designed specifically for this need.

There are no utilities available for converting the Quark Pantone values to the Pantone specification, nor is there a "formula" for calculating the difference. Pantone most likely measured each individual color and determined what CMYK values on the Color LaserWriter 12/600 PS printer most closely matched their colors.

If you use a Pantone swatch, the colors on the swatch should be very close to those produced by the Color LaserWriter 12/600 PS Printer using the "PANTONE for Color LW 12/600 PS" files. Your final output should be exactly the same as the Pantone swatch. Printers adjust their ink values so that the colors match the Pantone swatch books. Since Pantone swatch colors fade over time, you should use a recent swatch book for color matching.

This article was published in the "Information Alley":
Volume II, Issue 18, Page 16

Article Change History:

26 Jan 1996 - Added Info Alley information; made minor technical changes.

Support Information Services

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Tech Info Library Article Number:19160



Tech Info Library

PowerBook: Password Security Frequently Asked Questions (3/96)

Revised: 3/28/96
Security: Everyone

PowerBook: Password Security Frequently Asked Questions (3/96)

Article Created: 4 January 1996
Article Reviewed/Updated: 28 March 1996

TOPIC -----

This article answers some frequently asked questions (FAQ) about the PowerBook password protection software.

The following questions are answered in this FAQ:

- 1) What do I do if I forget my password? Is there a way to bypass it?
- 2) I activated password protection on my PowerBook computer. Now when I try to access it, it does not recognize my password. I know I am entering the correct password. I also see an arrow in the password field. What does the arrow mean?
- 3) I opened the password Security control Panel and clicked the ON radio button and I get a message that says "You must turn off password protection before using this PowerBook in SCSI disk mode. I am not trying to use SCSI disk mode. What should I do?
- 4) I am at the password entry screen and the OK button is dim (greyed out) and there is no cursor in the window so I can't enter my password.

DISCUSSION -----

1) Question: What do I do if I forget my password? Is there a way to bypass it?

Answer: If you forget your password you cannot bypass the system by booting with extensions off or booting from the Disk Tools disk because the password is written to your drive at the driver level. Your only option is to take your PowerBook with your proof of purchase (receipt) to an authorized Apple service center where a technician has the means to bypass the security on the system. The Apple technicians at 800-SOS-APPL CANNOT help you bypass the password for security reasons.

2) Question: I activated password protection on my PowerBook computer. Now when I try to access it, it does not recognize my password. I know I am entering the correct password. I also see an arrow in the password field. What does the arrow mean?

Answer: The arrow indicates the caps lock key is down. Since password protection is case sensitive, simply releasing the caps lock key causes the arrow will disappear and solve the problem.

3) Question: I opened the password Security control Panel and clicked the ON radio button and I get a message that says "You must turn off password protection before using this PowerBook in SCSI disk mode. I am not trying to use SCSI disk mode. What should I do?

Answer: Simply press the ok button or return. This is just a general warning message. Once you press OK the password entry screen will come up.

4) Question: I am at the password entry screen and the OK button is dim (greyed out) and there is no cursor in the window so I can't enter my password.

Answer: You will not get a blinking cursor in the password entry area. Simply enter the password and you will see security dots (bullets) appear in the window (•). This is to prevent someone from reading your password when you enter it. Once these dots appear in the window the OK button will darken and you can complete the process of activating your password.

This article was published in the Information Alley on 27 March 1996.

Article Change History:

28 Mar 1996 - Corrected format.

27 Mar 1996 - Added Info Alley publication date.

21 Mar 1996 - Added info about forgotten passwords.

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Tech Info Library Article Number:19161



Tech Info Library

Macintosh Computers: Personal LW SC & IIsC Printing Issue (1/97)

Revised: 1/29/97
Security: Everyone

Macintosh Computers: Personal LW SC & IIsC Printing Issue (1/97)

Article Created: 4 January 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

I have a Macintosh computer and an Apple Laserwriter IIsC. When I print to a LaserWriter IIsC (SCSI) printer from a variety of applications the fonts seem to overflow the area that is designated for the text. It looks fine on the screen, but this problem happens every time I print to this pritner.

Other printers accessed over LocalTalk or EtherTalk work fine. I have no extra SCSI devices (internal or external). I am not using any font management software like ATM or Suitcase. I am using true type fonts. Helvetica and Times are the two fonts that I use the most. What's wrong?

DISCUSSION -----

Issue

All Macintosh computers, including PowerBook computers, have a compatibility issue with Personal LaserWriter SC driver version 7.0.1 (included with System software 7.1.1 and 7.5) or earlier versions.

When printing from a Macintosh computer using System Software 7.5.2 or newer to a LaserWriter IIsC or Personal LaserWriter SC, the line layout is very poor and definitely not "what you see is what you get" (WYSIWYG).

Workaround

The only workaround is to use QuickDraw GX. The LaserWriter IISC GX printer driver is used for both models of LaserWriter SC (the Personal LaserWriter SC and the LaserWriter IIsC).

Article Change History:
29 Jan 1997 - Revised to include all Macintosh computers.

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Tech Info Library Article Number:19162



Tech Info Library

Workgroup Server 7250/120: Description (9/96)

Revised: 9/10/96
Security: Everyone

Workgroup Server 7250/120: Description (9/96)

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Article Created: 5 January 1996
Article Reviewed/Updated: 10 September 1996

TOPIC -----

This article provides a description of the Workgroup Server 7250/120.

Important Note:

In September of 1996, a new product with the same name, Workgroup Server 7250/120, was introduced which has an 8x-speed CD-ROM drive and a 2 GB hard drive instead of a quad-speed CD-ROM drive and a 1.2 GB hard drive.

DISCUSSION -----

The Workgroup Server 7250/120 is an affordable and versatile member of the PowerPC processor-based Workgroup Server family from Apple. It delivers the file and print, database, Internet, and applications server capabilities that meet the needs of medium-sized workgroups in education, business, and publishing. And it's ideal for workgroups that use both Macintosh and Windows software-based computers.

Apple Workgroup Servers are highly reliable, affordable, high-performance systems with large storage capacity that provide organizations with faster, more efficient shared network services and secure centralized storage. The Workgroup Server 7250/120 not only meets these criteria, but also runs the familiar graphical interface of the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 120-megahertz PowerPC 601 processor with 32K on-chip cache and 256K level 2 memory cache, the Workgroup Server 7250/120 delivers outstanding performance. And for easy, flexible expansion, the Workgroup Server 7250/120 features three PCI slots that let you add capabilities by installing any of a variety of cards.

To make sure that network administrators can work as efficiently as possible, and that users get the most out of all that power and capacity, the Workgroup

Server 7250/120 offers a choice of three software bundle solutions. The Applications Server Solution provides a variety of useful Apple and third-party software for administration, reliability, productivity, and performance. The AppleShare Server Solution includes all of the software that comes with the Applications Server, plus a new version of AppleShare file and print server, remote administration software from Santorini, and Apple Remote Access MultiPort Server software. And the Apple Internet Server Solution comes with all the software you need to create a presence on the World Wide Web-quickly and easily. No matter which option you choose, the Workgroup Server 7250/120 also includes AppleShare Client for Windows software, so Windows users on the network can access networked printers and files stored on a Workgroup Server running AppleShare file and print software.

So if you want a server that can accommodate today's budget and expand to handle tomorrow's demands, the Workgroup Server 7250/120 is the server you've been waiting for.

Features

Expansion and storage

- Three PCI (Peripheral Component Interconnect) slots for expansion cards
- Internal 1.2 GB, 5400-rpm hard or 2 GB, 4500-rpm* hard disk drive and room for one additional storage device
- Internal quadruple-speed or 8x-speed CD-ROM drive*
- One SCSI DMA bus to support up to seven devices (three internal, four external)
- Eight ports to support a wide range of peripherals

* The 2 GB, 4500-rpm hard disk drive and 8x-speed CD-ROM drive are available in models M5482LL/A, M5483LL/A, and M5484LL/A; not in the earlier configurations.

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with PCI card)

Power, speed, and memory

- 120-MHz PowerPC 601 RISC processor with floating-point processor and 32K on-chip cache
- 256K level 2 cache
- 16MB of RAM, expandable to 256MB

Fast, easy setup

- Comes with System 7.5.3 software installed
- Includes AppleShare 4.2.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows

Bundled software

- Includes a variety of software for administration, reliability, productivity, and performance

Service and support

- Hardware troubleshooting for the life of the server; 90 days of assistance for Apple-branded software (phone support)
- One-year, on-site hardware warranty providing two-business-day response
- Additional service and support available

Ordering Information

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Workgroup Server 7250/120 Applications Server Solution

(16 MB/2GB/CD)

Order No. M5482LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 7250/120 AppleShare Server Solution

(16 MB/2GB/CD)

(AppleShare Server Solution)

Order No. M5483LL/A

- Identical to Order No. M5482LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 7250/120 Internet Server Solution for the World Wide Web

(16 MB/2GB/CD)

Order No. M5484LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Apple Internet Server Solution CD (WebSTAR; PageMill; MacDNS; HomeDoor; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; customizable WWW pages and forms; AppleScript and useful scripting additions; AppleSearch; Apple RAID). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.
- Includes WebMaster Macintosh by Bob LeVitus and Jeff Evans

Included with all Workgroup Servers:

- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. 168-pin DIMMs are required. Check with your Apple reseller for details.

**ALL PRODUCTS BELOW THIS LINE WERE DISCONTINUED WHEN THE ABOVE PRODUCTS WERE
INTRODUCED**

Workgroup Server 7250/120 Applications Server Solution (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4335LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 7250/120 AppleShare Server Solution (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4336LL/A

- Identical to Order No. M4335LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 7250/120 Internet Server Solution for the WWW (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4337LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Apple Internet Server Solution CD (WebSTAR; PageMill; license for MacDNS domain name server software; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; customizable WWW pages and forms; AppleScript and useful scripting additions; AppleSearch; Apple RAID; AppleShare Client for Windows). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

- 10 Sep 1996 - Added ordering information .
- 09 Sep 1996 - Added new model information.
- 26 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:19163



Tech Info Library

Workgroup Server 7250/120: Technical Specifications (9/96)

Revised: 9/9/96
Security: Everyone

Workgroup Server 7250/120: Technical Specifications (9/96)

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Article Created: 5 January 1996
Article Reviewed/Updated: 9 September 1996

TOPIC -----

This article provides the technical specifications for Workgroup Server 7250/120 products.

Important Note:

In September of 1996, a new product with the same name, Workgroup Server 7250/120, was introduced which has an 8x-speed CD-ROM drive and a 2 GB hard drive instead of a quad-speed CD-ROM drive and a 1.2 GB hard drive.

DISCUSSION -----

Technical Specifications
=====

Microprocessor -----

- PowerPC 601 RISC processor running at 120-MHz
- Integrated floating-point unit and 32K on-chip cache
- 256K level 2 cache

Memory -----

- 16 MB of RAM, expandable to 256 MB

Storage -----

- Internal 1.2 GB or 2 GB, 4500-rpm* hard disk drive; supports one additional storage device
- One AppleCD 600i CD-ROM drive (up to 600KB/s data-transfer rate) or 8x-speed CD-ROM drive (up to 1.2 MB/s data-transfer rate)*
- One Apple SuperDrive 1.4 MB floppy disk drive that reads, writes, and formats Mac OS, Windows, MS-DOS, and OS/2 disks

* The 2 GB, 4500-rpm hard disk drive and 8x-speed CD-ROM drive are available in models M5482LL/A, M5483LL/A, and M5484LL/A; not in the earlier configurations.

Bundled software/Server Solutions CD

----- Administrative software

- Server Manager—remote AppleShare server management tools (with AppleShare Server Solution only) (one user license)
- FileWave—automated software and data distribution (10 user license)
- netOctopus—setup assessment and configuration file editing (10 user license)
- Adobe Acrobat Reader—viewing application for portable document format (PDF) files (10 user license)

Reliability software

- Apple RAID Software—data mirroring to protect against drive failures (RAID 1) (license for server)
- Virex—automated virus screening and virus check software (license for server)
- Retrospect Remote—automated backup software (DAT configurations only) (3 user license)

Productivity software

- AppleShare Client for Windows—enables Windows clients to connect to an AppleShare server (site license for network)
- 4-Sight FAX—lets you send and receive faxes from your desktop (10 user license)
- Now Contact—provides contact management tools (10 user license)
- Now Up•to•Date—handles group scheduling (10 user license)
- Viper Instant-Access—provides a cross-platform information retrieval system (10 user license)

Performance software

- Apple RAID Software—optimizes performance of multiple hard disks through disk striping (RAID 0) (license for server)
- Skyline/Satellite—enables monitoring of the network and server traffic over time (console and monitoring station license)

NOTE: The only software bundled with the 7250/120 Apple Internet Server Solution is Apple RAID Software, AppleShare Client for Windows, and the Internet Server Solution CD.

Networking

- ##### -----
- Built-in Ethernet with 10Base-T and AAUI
 - Two serial ports for LocalTalk
 - Supports TCP/IP networking software with Apple Open Transport software

Displays

- ##### -----
- Supports up to 14-inch Apple displays at up to millions of colors; 16- and 17-inch Apple displays at up to thousands of colors
 - Supports most third-party displays as well as VGA and SVGA monitors

Video support

- Built-in 1 MB VRAM display support

Interfaces

- Three PCI expansion slots
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- On-board Ethernet using either AAUI-15 or RJ-45
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- SCSI DMA bus supports up to four external and three internal SCSI devices
- 16-bit stereo sound input and output ports

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

- System software includes CloseView and Easy Access, and provides the ability to substitute visual cue for beep. These built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Keyboard and mouse

- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Electrical requirements

- Line voltage: 100 to 270 V AC, RMS single phase
- Frequency: 50 to 60 Hz, single phase
- Power: 150 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Operating environment

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116.6 degrees F
(-40 degrees to 47 degrees C)
- Relative humidity: 5% to 95% noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

- Height: 6.5 in. (15.6 cm)
- Width: 14.37 in. (36.5 cm)
- Depth: 16.93 in. (43.0 cm)
- Weight: 22 lb. (9.97 kg)—varies based on internal devices installed

Regulatory approval

- FCC Class B

Ordering Information

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Workgroup Server 7250/120 Applications Server Solution

(16 MB/2GB/CD)

Order No. M5482LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 7250/120 AppleShare Server Solution

(16 MB/2GB/CD)

(AppleShare Server Solution)

Order No. M5483LL/A

- Identical to Order No. M5482LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 7250/120 Internet Server Solution for the World Wide Web

(16 MB/2GB/CD)

Order No. M5484LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Apple Internet Server Solution CD (WebSTAR; PageMill; MacDNS; HomeDoor; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; customizable WWW pages and forms; AppleScript and useful scripting additions; AppleSearch; Apple RAID). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.
- Includes WebMaster Macintosh by Bob LeVitus and Jeff Evans

Included with all Workgroup Servers:

- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

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A variety of memory expansion kits are available. 168-pin DIMMs are required.

Check with your Apple reseller for details.

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INTRODUCED**
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Workgroup Server 7250/120 Applications Server Solution (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4335LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 7250/120 AppleShare Server Solution (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4336LL/A

- Identical to Order No. M4335LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 7250/120 Internet Server Solution for the WWW (Discontinued)

(16 MB/1.2GB/CD)

Order No. M4337LL/A

- 256K level 2 cache, 1.4 MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Apple Internet Server Solution CD (WebSTAR; PageMill; license for MacDNS domain name server software; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; customizable WWW pages and forms; AppleScript and useful scripting additions; AppleSearch; Apple RAID; AppleShare Client for Windows). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

- 09 Sep 1996 - Added new products.
- 17 Apr 1996 - Added user licenses information for bundled software.
- 26 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:19164



Tech Info Library

Workgroup Server 8550/132: Description (3/97)

Revised: 3/3/97
Security: Everyone

Workgroup Server 8550/132: Description (3/97)

Article Created: 5 January 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article describes the Workgroup Server 8550/132.

DISCUSSION -----

The Workgroup Server 8550/132 is the most powerful member of the PowerPC processor-based Workgroup Server family from Apple. It delivers file and print, database, Internet, and communications capabilities that meet the needs of growing workgroups in education, business, and publishing. And it's ideal for workgroups that use both Macintosh and Windows software-based computers.

Apple Workgroup Servers are highly reliable, high-performance systems with large storage capacity that provide organizations with faster, more efficient shared network services and secure centralized storage. And the Workgroup Server 8550/132 not only meets these criteria, but also runs the familiar graphical interface of the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 132-megahertz PowerPC 604 processor with 32K on-chip cache and 512K level 2 memory cache, the Workgroup Server 8550/132 delivers all the performance benefits of state-of-the-art RISC technology. And for easy, flexible expansion, the Workgroup Server 8550/132 features three PCI slots that let you add capabilities by installing any of a variety of cards.

To make sure that network administrators can work as efficiently as possible, and that users get the most out of all that power and capacity, the Workgroup Server 8550/132 offers a choice of three software bundle solutions. The Applications Server Solution provides a variety of useful Apple and third-party software for administration, reliability, productivity, and performance. The AppleShare Server Solution includes all of the software that comes with the Applications Server, plus a new version of AppleShare file and print server, remote administration software from Santorini, and Apple Remote Access MultiPort Server software. And the Apple Internet Server Solution comes with all the

software you need to create a presence on the World Wide Web-quickly, easily, and affordably. No matter which option you choose, the Workgroup Server 8550/132 also includes AppleShare Client for Windows software, so Windows users on the network can access net-worked printers and files stored on a Workgroup Server running AppleShare file and print software.

So if you need a high-performance server for a demanding workgroup, we have the solution-the powerful and expandable Workgroup Server 8550/132.

Features

Expansion and storage

- Three PCI (Peripheral Component Interconnect) slots for expansion cards
- Internal 2GB, 7200-rpm hard disk drive, with bracket and cable for a second drive
- Internal quadruple-speed CD-ROM drive
- Internal DDS-2 digital audio tape (DAT) drive (some configurations)
- Two SCSI DMA buses to support up to eight devices and transfers up to 10MB/s (internal only)
- Eight ports to support a wide range of peripherals

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with PCI card)

Power, speed, and memory

- 132-MHz PowerPC 604 RISC processor with floating-point processor and 32K on-chip cache on an upgradable CPU card
- 512K level 2 cache
- 24MB of RAM, expandable to 512MB

Fast, easy setup

- Comes with System 7.5.3 software installed
- Includes AppleShare 4.2.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows

Bundled software

- Includes a variety of software for administration, reliability, productivity, and performance

Service and support

- Hardware troubleshooting for the life of the server; 90 days of assistance for Apple-branded software (phone support)
- One-year, on-site hardware warranty providing two-business-day response
- Additional service and support available

Article Change History:

03 Mar 1997 - Added keyword.

..TIL19165-Workgroup_Server_8550-132-Description_3-97_(TA34931).pdf

26 Feb 1996 - Changed distribution status.

08 Jan 1996 - Added keyword.

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Tech Info Library Article Number:19165



Tech Info Library

Workgroup Server 8550/132: Technical Specifications (3/97)

Revised: 3/3/97
Security: Everyone

Workgroup Server 8550/132: Technical Specifications (3/97)

Article Created: 5 January 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article provides the technical specifications of the Workgroup Server 8550/132.

DISCUSSION -----

Technical Specifications
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Microprocessor

- PowerPC 604 RISC processor running at 132-MHz, located on upgradable CPU card
- Integrated floating-point unit and 32K on-chip cache
- 512K level 2 cache

Memory

- 24MB of RAM, expandable to 512MB

Storage

- Internal 2GB hard disk drive, with bracket and cable for a second drive
- One DDS-2 DAT drive—4GB uncompressed, 14GB compressed (some configurations)
- One AppleCD 600i CD-ROM drive (up to 600KB/s data-transfer rate)
- One Apple SuperDrive 1.4MB floppy disk drive that reads, writes, and formats Mac OS, Windows, MS-DOS, and OS/2 disks

Bundled software/Server Solutions CD

Administrative software

- Server Manager—remote AppleShare server management tools (with AppleShare Solution only) (one user license)
- FileWave—automated software and data distribution (10 user license)
- netOctopus—setup assessment and configuration file editing (10 user license)
- Adobe Acrobat Reader—viewing application for portable document format (PDF) files (10 user license)

Reliability software

- Apple RAID Software—data mirroring to protect against drive failures (RAID 1) (license for server)
- Retrospect Remote—automated backup software (DAT configurations only) (10 user license)
- Virex—automated virus screening and virus check (license for server)

Productivity software

- AppleShare Client for Windows—enables Windows clients to connect to an AppleShare server (site license for network)
- 4-Sight FAX—lets you send and receive faxes from your desktop (10 user license)
- Now Contact—provides contact management tools (10 user license)
- Now Up•to•Date—handles group scheduling (10 user license)
- Viper Instant-Access—provides a cross-platform information retrieval system (10 user license)

Performance software

- Apple RAID Software—optimizes performance of multiple hard disks through disk striping (RAID 0) (license for server)
- Skyline/Satellite—enables monitoring of the network and server traffic over time (console and monitoring station license)

NOTE: The only software bundled with the 8550/132 Apple Internet Server Solution for the World Wide Web is Apple RAID Software, AppleShare Client for Windows, and the Internet Server Solution CD.

Networking

- Built-in Ethernet with 10Base-T and AAUI
- Two serial ports for LocalTalk
- Supports TCP/IP networking software with Apple Open Transport

Displays

- Supports up to 14-inch Apple displays at millions of colors; 16- and 17-inch Apple displays at up to millions of colors
- Supports most third-party displays as well as VGA and SVGA monitors

Video support

- Built-in 2MB VRAM display support

Interfaces

- Three PCI expansion slots

- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- On-board Ethernet using either AAUI-15 or RJ-45
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Two SCSI DMA buses supporting up to eight SCSI devices and transfers up to 10MB/s (internal bus only)
- 16-bit stereo sound input and output ports
- DB-15 video port for display support

Clock/calendar

- Custom integrated circuit with long-life lithium battery

Disability access

- System software includes CloseView and Easy Access, and can substitute visual cue for beep. Built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Keyboard and mouse

- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Electrical requirements

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

ADB power requirements

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA; keyboard draws 25 to 80 mA (varies with keyboard model used)

Operating environment

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116.6° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

- Height: 14 in. (35.6 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)
- Weight: 25 lb. (11.3 kg)—varies based on internal devices installed

Regulatory approval

- FCC Class A

Ordering Information

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Workgroup Server 8550/132 Applications Server Solution

(24MB/2GB/CD/DAT)

Order No. M4342LL/A

- 512K level 2 cache, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 8550/132 AppleShare Server Solution

(24MB/2GB/CD/DAT)

Order No. M4340LL/A

- Identical to Order No. M4342LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 8550/132

(24MB/2GB/CD)

Order No. M4343LL/A

- AppleShare Server Solution without a DAT drive or Retrospect Remote software

Workgroup Server 8550/132 Internet Server Solution for the WWW

(24MB/2GB/CD)

Order No. M4341LL/A

- 512K level 2 cache, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3
- Apple Internet Server Solution CD (WebSTAR; PageMill; license for MacDNS domain name server software; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; cus-tomizable WWW pages and forms; AppleScript and scripting additions; AppleSearch; Apple RAID; AppleShare Client for Windows). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.

Included with all Workgroup Servers:

- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Workgroup Server 8550/132 Logic Board Upgrade

Order No. M4607LL/A

- Upgrades a Workgroup Server 80, 8150, or 8150/110 to a Workgroup Server 8550/132
- Includes Apple RAID Software, AppleShare 4.2.1 Update Kit, and System 7.5.3 software. Additional RAM is required

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. 168-pin DIMMs are required. Check with your Apple reseller for details.

Article Change History:

03 Mar 1997 - Added keyword.

17 Apr 1996 - Added user license information for bundled software.

26 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:19166



Tech Info Library

Personal Internet Solution Bundle & Global Village Issue (1/96)

Revised: 1/8/96
Security: Everyone

Personal Internet Solution Bundle & Global Village Issue (1/96)

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Article Created: 5 January 1996

TOPIC -----

I received my new Personal Internet Solution Bundle with an external Global Village Gold II modem. How can I use this modem for Faxing with the software provided?

DISCUSSION -----

The Personal Internet Solution Bundle does not include Global Village modem software. The bundle only comes with the CCL, or modem script, for connecting a Global Village Gold II modem with the Internet. Because this modem was to be used with bundled Internet-specific software, the Global Village software was not going to be needed.

If you want to send Faxes, contact Global Village technical support to obtain TelePort/GlobalFax software. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19167



Tech Info Library

Power Mac 5200: Ext. Video Doesn't Support 12-in. RGB (1/96)

Revised: 1/8/96
Security: Everyone

Power Mac 5200: Ext. Video Doesn't Support 12-in. RGB (1/96)

=====

Article Created: 8 January 1996

TOPIC -----

Can I use an Apple 12-in. RGB display with the Power Macintosh 5200 External Video Connector?

DISCUSSION -----

No, the Power Macintosh 5200 series External Video Connector (P/N M4099LL/A) does not support the Apple 12-in. RGB display.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19169



Tech Info Library

Apple Media Tool 2.0: Description (1/96)

Revised: 1/29/96
Security: Everyone

Apple Media Tool 2.0: Description (1/96)

Article Created: 8 January 1996
Article Reviewed/Updated: 29 January 1996

TOPIC -----

This article describes the features of the Apple Media Tool 2.0.

DISCUSSION -----

With Apple Media Tool software, you can create dynamic multimedia projects for business, education, entertainment, and the home. And you can share them with almost anyone, because finished projects can run on both Macintosh and Windows software-based systems.

The Apple Media Tool makes development of sophisticated multimedia titles easy. Its visual authoring environment lets you assemble graphics, text, sound files, and QuickTime and QuickTime VR movies into exciting, interactive multi-media programs. It's so easy to use, you don't need to write programming code or deal with a complex user interface.

Navigating with the intuitive Browser, you import the media elements you need for each screen, then assign actions that allow users to interact with them. You can create any number of links between different screens, giving users nearly unlimited options for exploring the subject matter. If you like, you can add music or other sounds that will play without interruption as users move from screen to screen.

Apple Media Tool helps you create higher-quality projects because you can focus on content and flow instead of on writing scripts. You can even reuse the structure of a project with different content. You can also assign each part of a project to the person best qualified to create it, then integrate everyone's work into a polished multimedia project.

Previous versions of Apple Media Tool have won numerous accolades, including the 1993 MacUser Editor's Choice Award for Best New Multimedia Software. Version 2.0 brings an enhanced user interface and many other features to this already

popular software.

For complex projects requiring advanced interactive features, Apple also offers the Apple Media Tool Programming Environment (must be purchased separately). Using its object-oriented programming language and application framework, programmers can optimize and extend projects created with the Apple Media Tool.

New features in version 2.0

- Use intuitive Browser for easy project navigation
- Build QuickTime VR movies into projects without scripting
- Enable hypertext linking
- Create flipbook animation from PICT file
- Apply continuous sound throughout a project
- Prioritize first, second, and third run-time bit-depth choices
- Use custom color palettes for each screen
- Record and automate projects with AppleScript
- Customize features and projects with Apple Media Tool Programming Environment (sold separately)
- No licensing fees

Media formats supported

- QuickTime and QuickTime VR movies
- PICT graphics
- SND, AIFF, and WAV sound files
- RTF text files (including hypertext files)

To create a simple interactive multimedia title

- Open new project
- Create and position screens
- Name screens
- Connect screens (thereby creating a project map)

To add new media to a project

- Add a media object (movie, graphic, text, or sound) from Media menu
- Drag and drop media onto project screen

To add interactivity to a project

- Within the Browser, select an object (such as movie, graphic, text, or sound) within a screen
- Select event (such as Mouse down)
- Select desired action (for example Command, Effect, Link) associated with the event
- To test interactivity, select Run in Window menu

To create a cross-platform run-time title

- Save the project as a text file
- Open Runtime Maker

..TIL19170-Apple_Media_Tool_2-0-Description_1-96_(TA34936).pdf

- Check Windows run-time box
- Select and open project file (this simultaneously creates run-time files for both Macintosh and Windows software-based systems)

Features

=====

Ease of use

- Lets you "drag and drop" media objects on to screens
- Displays a map of all project screens and the links between them
- Allows you to assign interactive actions (such as responses to mouse clicks) through simple menu choices
- Lets you integrate QuickTime VR movies without scripting

Support for multiple technologies

- Enables you to deliver the same multimedia content for both Mac OS-based and Windows software-based systems
- Supports popular sound, graphics, text, and video formats (including QuickTime VR)
- Works with AppleScript to automate parts of a project and create links to other applications
- Lets you use hypertext to link keywords to other media objects

Efficiency

- Allows creative team members to work simultaneously on various aspects of the same project, reducing overall production time
- Stores media separately from the application, facilitating easy content substitution and reducing application size
- Features an intuitive user interface and Browser that let you create projects quickly
- Runs completed projects faster than many other multimedia tools

Extensibility with Apple Media Tool Programming Environment

- Allows programmers to customize Apple Media Tool features and optimize Apple Media Tool projects
- Supports extensions to the Internet and interactive television
- Supports extensions for database access and links to other programs

Ordering Information

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Apple Media Tool

Order No. 412000Z

- One CD-ROM containing the following software:
 - Apple Media Tool
 - Runtime Maker
 - QuickTime
 - QuickTime for Windows

- Getting Started guide
- Apple Media Tool User's Guide

For more information or to order Apple Media Tool, call Claris at 1-800-544-8554 in the U.S. or 1-800-361-6075 in Canada. In other countries contact your Apple or Claris representative.

The Apple Media Tool Programming Environment is sold separately and available through the Apple Developer Catalog. Also available is an Apple Media Tool Demo CD that includes a limited version of the Apple Media Tool, several sample projects, and electronic documentation (including source-code samples) for the Apple Media Tool Programming Environment.

To order the Programming Environment or the Demo CD, call 1-800-282-2732 in the U.S., 1-800-637-0029 in Canada, or 1-716-871-6555 from other countries. You can also send a fax message to 1-716-871-6511. Site licensing for Apple Media Tool software is available. Please contact Claris for details.

Product specifications are subject to change. Check with your Claris reseller for the most current information about product specifications and configurations.

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Volume II, Issue 19, Page 18

Article Change History:
29 Jan 1996 - Added Information Alley information.

Support Information Services

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Tech Info Library Article Number:19170



Tech Info Library

Apple Media Tool 2.0: Specifications (1/96)

Revised: 1/8/96
Security: Everyone

Apple Media Tool 2.0: Specifications (1/96)

Article Created: 8 January 1996

TOPIC -----

This article provides the specifications for the Apple Media Tool 2.0.

DISCUSSION -----

New features in version 2.0

- Use intuitive Browser for easy project navigation
- Build QuickTime VR movies into projects without scripting
- Enable hypertext linking
- Create flipbook animation from PICT file
- Apply continuous sound throughout a project
- Prioritize first, second, and third run-time bit-depth choices
- Use custom color palettes for each screen
- Record and automate projects with AppleScript
- Customize features and projects with Apple Media Tool Programming Environment (sold separately)
- No licensing fees

Media formats supported

- QuickTime and QuickTime VR movies
- PICT graphics
- SND, AIFF, and WAV sound files
- RTF text files (including hypertext files)

System requirements

- To develop Apple Media Tool titles, you will need:
 - A Macintosh system with a 68030 or later processor, or a Power Macintosh system

- 8MB of total RAM (12MB recommended)
 - 5MB of available RAM (8MB recommended)
 - A hard disk drive with at least 10MB of available space
 - A CD-ROM drive
 - A display (color recommended)
 - System software version 7.1 or later
 - QuickTime 2.1 or later software
- To play Apple Media Tool titles on a Macintosh system, you will need*:
- A Macintosh system with a 68020 or later processor, or a Power Macintosh system
 - 2MB of available RAM
 - A hard disk
 - System software version 7.1 or later
 - QuickTime 2.1 or later software
- To play Apple Media Tool titles on a Windows software-based system, you will need*:
- A computer with an 80386 or later processor
 - 2MB of available RAM
 - Graphics and sound support
 - Windows 95 or Windows 3.1 software
 - QuickTime for Windows 2.0.3 or later software

* System requirements for playback systems can vary considerably depending on the specific Apple Media Tool project file being played.

Support Information Services

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Tech Info Library Article Number:19171



Tech Info Library

PwrBk 5300 & 190: GSM & Nokia Cellular Phone Card Issue (1/96)

Revised: 1/18/96
Security: Everyone

PwrBk 5300 & 190: GSM & Nokia Cellular Phone Card Issue (1/96)

Article Created: 8 January 1996
Article Reviewed/Updated: 18 January 1996

TOPIC -----

I live in New Zealand and I am having trouble sending and receiving faxes using my cellular phone with my PowerBook 5300 series computer. I am using a Nokia DTP-2 PC Card. Are you aware of any issues in using the Groupe Speciale Mobile (GSM) Connection kit with Macintosh PowerBook 5300 series computers, particularly with faxing?

DISCUSSION -----

Issue
=====

Yes, there is an issue involving using the GSM Connection kit 1.1 and Nokia phone with a PowerBook 190 or 5300 series computer. There is a local hardware flow control problem in the PC Card driver, an extension that comes with the PowerBook 190 and 5300 series system software. Since the default setting of the GSM connection is hardware flow control the fax breaks after sending a small amount of data.

Note: Installing the Apple Telecom Software 2.3 does not fix this issue.

Background
=====

The basis of this issue is that New Zealand uses a different type of cellular phone system than is used in the United States. New Zealand uses both Advanced Mobile Phone Service (AMPS) cellular (analog) and Groupe Speciale Mobile (GSM) cellular (Digital).

Digital GSM is not widely used yet in the United States, but it is in New Zealand, Asia, Australia, Europe, and South Africa. GSM is now known as Global System for Mobile Communications which is a set of standards specifying the

infrastructure for a digital cellular service. AMPS is essentially synonymous with analog cellular radio.

Apple R&D in France wrote the "GSM Connection Kit for Macintosh," the part number is either M4130Z/A or M3925Z/B. Version is 1.1 works fully with the PowerBook 500 series computers, but is not entirely functional with the PowerBook 190 or 5300 series computers. It does not work sending or receiving faxes with the PowerBook 190 or 5300 series computers.

Resolution
=====

A new version of the GSM Connection Kit version 1.2 (part number M3925Z/C) has been written to solve the issue with using GSM on a PowerBook 5300 or 190 series computer. The 1.2 version has been released especially to allow faxing capabilities on PowerBook 5300 and 190 series computers. It corrects a regression within the PC Card driver installed on these computers. In previous versions, instead of returning an alert it just crashed the system. The fix has been implemented in version 1.2 of the PCMCIA GSM extension which contains the fax components.

Article Change History:
18 Jan 1996 - Added info about GSM 1.2.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19172



Tech Info Library

Macintosh Performa: Editing Received Faxes (1/96)

Revised: 1/8/96
Security: Everyone

Macintosh Performa: Editing Received Faxes (1/96)

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Article Created: 8 January 1996

TOPIC -----

I am using the Global Village software that was included with my Macintosh Performa computer to receive faxes. However, I am not sure how to edit them once I receive them. How can I do this?

DISCUSSION -----

Saved faxes are stored as PICT documents, which are pictures containing a bitmap of the received fax. Although you may see letters and words when you view the fax, you are really just seeing a picture of a collection of dots. You cannot edit a PICT document using a word processing program. Instead, you must edit the fax as you would a picture or other graphic.

If you use the Global Village Fax Center to save the fax, you can modify the fax using a graphic application, such as the paint module in ClarisWorks, Microsoft Works, or WordPerfect Works.

Additionally, you could purchase optical character recognition (OCR) software which could convert an incoming fax into text, which you could then edit in a word processing application. Contact Global Village for additional information about OCR software.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19173



Tech Info Library

PowerBook 190 & 5300: Third-Party Video Cards (1/96)

Revised: 1/8/96
Security: Everyone

PowerBook 190 & 5300: Third-Party Video Cards (1/96)

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Article Created: 8 January 1996

TOPIC -----

Has any third-party company released or is going to release a video upgrade option for the Powerbook 5300 and/or Powerbook 190 to support 16 bit video out capabilities?

DISCUSSION -----

We know of two companies that currently have these types of products or have announced that they will in the near future. Focus Enhancements, Inc. has a video card upgrade for the PowerBook 5300 series computers. Newer Technology is planning on releasing a video card in December 1995.

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendors for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19174



Tech Info Library

Color LaserWriter 12/600 PS: Color Files Won't Print Gray 10/96

Revised: 10/23/96
Security: Everyone

Color LaserWriter 12/600 PS: Color Files Won't Print Gray 10/96

Article Created: 8 January 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

Is there any way to print a color image in grayscale on an Apple Color LaserWriter 12/600 PS? My only options in the dialog box are Black and White, or Color/Grayscale. Even if I select Black and White, the image prints in color.

DISCUSSION -----

There is no way to print a color image in grayscale on the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printer if the image is an Encapsulated PostScript (EPS) file, or the application you are printing from generates its own PostScript.

Applications like Adobe Illustrator and Aldus Freehand generate their own PostScript, therefore if any color is used in the document, the application generates calls to PostScript color operators. When the document is sent to the printer, the driver recognizes the data is already PostScript and forwards it to the printer unchanged. Thus, the printer driver is never used to generate the PostScript and driver settings such as Black & White are bypassed. The Color LaserWriter 12/600 PS printer directly executes the PostScript coming into the input stream and since it encounters a color operator, prints the document in color.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 12

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS to the discussion.
30 Jan 1996 - Added Information Alley information.
16 Jan 1996 - Added information on why it will not print grayscale.

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Tech Info Library Article Number:19175



Tech Info Library

Power Macintosh 7500 & 8500: Frequently Asked Questions (5/96)

Revised: 5/17/96
Security: Everyone

Power Macintosh 7500 & 8500: Frequently Asked Questions (5/96)

Article Created: 8 January 1996
Article Reviewed/Updated: 16 May 1996

TOPIC -----

This document contains the answers to frequently asked questions (FAQ) about Power Macintosh 7500 and 8500 series computers.

Questions answered in this FAQ:

-
- 1) Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I see errors that an FPU is not installed.
 - 2) What causes Type 10 and 11 errors?
 - 3) I need to run DOS software on my Power Macintosh 7500 or 8500 series computer. What are my options?
 - 4) I have an old program which tells me to turn off 32-bit addressing. But I do not see this as an option in my Memory control panel. Why?
 - 5) How can I get the built-in Ethernet address for my computer?
 - 6) Can I add level-2 processor cache to my computer? Is it a SIMM or DIMM?
 - 7) Can I add Video RAM (VRAM) to my computer?
 - 8) I have an old program that requires less than 256 colors to be on. But the Monitors control panel settings don't show anything less than 256. What can I do?
 - 9) At startup time, my monitor flashes off and back on again. Why?
 - 10) I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I use?

11) I can't see a restart button on the computer. What do I use to restart my Power Macintosh 7500 or 8500 if the screen is frozen?

12) I am trying to connect to my internet service provider (ISP) using SLIP/PPP software. What do I need to know?

13) I am trying to get the Video Player software that comes with my Power Macintosh 8500 to work. When I launch it, a message appears:

"Apple Video Player could not find the necessary video hardware. Make sure that your computer has video input capabilities and that you are not running any other video applications."

14) Can NuBus cards be used with these Power Macintosh computers?

DISCUSSION -----

1) Question: Does my Power Macintosh have an FPU (Floating Point Unit/Math coprocessor)? I see errors that an FPU is not installed.

Answer: All PowerPC processor chips, which all Power Macintosh computers use, have an integrated FPU. You may be seeing the "FPU not installed" error for two reasons:

- You are running "conventional" software in 68K emulation. This operating mode does not provide access to the computer's floating point unit. Thus, the program does not work. See if there is an upgrade to a PowerPC native version of the program. Certain software "bridges" exist to allow conventional software access to the PowerPC microprocessor's FPU. See the Redgate Communications area to search for such products.

- You are using software, in either emulation or native mode, which is simply failing. Since the PowerPC supports pipelining instructions, a number of errors are occurring simultaneously. They eventually percolate out as an "FPU not installed" error. An error did occur, but it has nothing whatsoever to do with the need for a floating point unit. You should apply standard troubleshooting steps to resolve this issue. Standard troubleshooting information can be found in the online Apple Tech Info Library.

2) Question: What causes Type 10 and 11 errors?

Answer: Answer: A Type 10 error seen on a Power Macintosh 7500 or 8500 series computer is going to occur under the same circumstances as an FPU error. Due to the changes and enhancements in the 680x0 emulator, there are instances where an FPU error will be returned as a type 10 error. Follow the same troubleshooting steps you would when troubleshooting an FPU error.

Type 11 errors are typically due to one of a variety of factors:

- Font problems: you are using a bad font.
- Incompatible software running in emulation.

- SCSI chain problems: bad driver or cable.
- Cache SIMM problems (if you have installed one on your Power Macintosh computer).
- RAM problems: bad RAM has been installed.

For steps on how to troubleshoot such problems, see the referenced article in the online Apple Technical Info Library (on Compuserve and the World Wide Web)

- Use the search string "type 11 power" to locate the article "Power Macintosh: Meaning of Error Type 11."
- Use the search string "sys7 extension troubleshoot" to locate the article "Troubleshooting Macintosh System 7 INIT Conflicts"

3) Question: I need to run DOS software on my Power Macintosh 7500 or 8500 series computer. What are my options?

Answer: With a Power Macintosh 7500 or 8500 series computer, there are several ways to accomplish this.

- Apple offers two PC Compatibility cards featuring either a Pentium 100-megahertz processor on a 12-inch card (M4092LL/A) or a 586 100-megahertz processor on a 7-inch card (M4091LL/A). These PC Compatibility Cards let you run MS-DOS and Windows applications directly on your Power Macintosh computer. You can switch instantly between Mac OS, Windows, and MS-DOS environments with a single keystroke.

- Orange Micro has announced a version of their Orange PC card for PCI based Power Macintosh computers. The Orange PC cards use an expansion slot inside of your Power Macintosh 7500 or 8500 series computer. You can get more information by contacting Orange Micro directly. Their phone number is 714-779-2772.

- Reply, Inc. has also announced a version of their DOS on Mac card for PCI based Power Macintosh computers. The Reply cards use an expansion slot inside of your Power Macintosh 7500 or 8500 series computer. You can get more information by contacting Reply directly. Their phone number is 800-801-6898.

- You can use Insignia Solutions' SoftWindows emulator. This is a Macintosh application which emulates a PC DOS/Windows environment. You can get more information, such as pricing, performance, system requirements, and compatibility information from Insignia by calling them at 800-848-7677.

4) Question: I have an old program which tells me to turn off 32-bit addressing. But I do not see this as an option in my Memory control panel. Why?

Answer: All Power Macintosh computers run only in 32-bit memory addressing mode. There is no way to turn this off. Check with the vendor for a 32-bit compatible version of the software.

5) Question: How can I get the built-in Ethernet address for my computer?

Answer: The Apple LAN Utility version 1.0b4e1 can obtain the built-in Ethernet address for the Power Macintosh 7500 and 8500 series computers. While this utility is not supported by Apple, it is available in the Apple Software Updates area of the online services we post to (pathname: Macintosh -> Unsupported -> Apple LAN Utility 1.0b4e1)

6) Question: Can I add level-2 processor cache to my computer? Is it a SIMM or DIMM?

Answer: You can add a level-2 processor cache to the Power Macintosh 7500 or 8500 series computers. The cache is a 160 pin DIMM (dual in-line memory module), 11ns. Apple currently sells a 256K level-2 cache card for use in the Power Macintosh 7500 series computer (The Power Macintosh 8500 series computer features a standard 256K cache):
M3808LL/A 256K L2 cache (for Power Mac 7200 and 7500 series).
Check with third-party vendors for compatible cache cards that they may offer.

7) Question: Can I add Video RAM (VRAM) to my computer?

Answer: You can increase your VRAM to 2 MB or 4 MB from the 2 MB it originally shipped with. The VRAM DIMMs must be 1 MB, 112-pin fast-paged mode, with 70ns RAM access time or faster. Do not use 256K VRAM SIMMs.

8) Question: I have an old program that requires less than 256 colors to be on. But the Monitors control panel settings don't show anything less than 256. What can I do?

Answer: The built in video will not support less than 256 colors or greys. If you have a program that requires black and white, 4, or 16 colors to run, then you will not be able to run these programs. Check with the software vendor for availability of a compatible version. You could also check with video card vendors to see if any offer support for less than 256 colors.

9) Question: At startup time, my monitor flashes off and back on again. Why?

Answer: The software video driver for the monitor is loading up. This is normal and is answered in the Power Macintosh 7500/8500 Read Me file.

10) Question: I have a GeoPort Telecom Adapter. What version of the Apple Telecom software should I use?

Answer: You should use at least the Apple Telecom 2.1 that is in the Apple Telecom folder inside of the Apple Extras folder on your hard drive (and on your backup CD if you have removed it). Megaphone 1.0.2 is also provided in this folder. The current Apple Telecom 2.3 is compatible, but adds no additional functionality for the Power Macintosh 7500 or 8500 series computers.

11) Question: I cannot see a restart button on the computer. What do I use to restart my Power Macintosh 7500 or 8500 if the screen is frozen?

Answer: The reset command is a keyboard shortcut identical to the Macintosh Quadra 605 and Macintosh LC computers. The key combination is Command-Control-Power. In addition to the keyboard power button, the Power Macintosh 7500 and 8500 series computers also have a power button on the bottom front left panel (below the speaker panel).

If these do not restart or shut down the computer, it may be necessary to disconnect the power from your Macintosh computer. This can be done by turning off the power strip or by disconnecting the cable from the outlet or the back of the computer.

12) Question: I am trying to connect to my internet service provider (ISP) using SLIP/PPP software. What do I need to know?

Answer: Check the Open Transport FAQ for more detailed information. Make sure you have at least Open Transport 1.0.7 (1.0.6 is what originally came with your Power Macintosh 7500 or 8500 series computer). Version 1.0.8 is the current version. Both are available in the Apple Software Updates area on the online services to which Apple posts its software.

Also make sure you are using the TCP/IP control panel and not trying to get MacTCP to work. MacTCP is not compatible with the Power Macintosh 7500 or 8500 series computers.

13) Question: I am trying to get the Video Player software that comes with my Power Macintosh 8500 to work. When I launch it, a message appears:

"Apple Video Player could not find the necessary video hardware. Make sure that your computer has video input capabilities and that you are not running any other video applications."

Everything is correctly connected. I just installed Adobe Premiere and I am having problems with it also. This is the first time I have tried the Video Player application. I even made sure that QuickTime and QuickTime PowerPlug were turned on in the Extensions Manager.

What steps do I need to take to use my Apple Video Player software?

Answer: Apple Video Player 1.3 comes preinstalled on the Power Macintosh 7500 and 8500 series computers. There are two things that may cause this error message to appear on a Power Macintosh 7500, or 8500.

QuickTime 2.0.9 Not Installed

Apple Video Player requires QuickTime 2.0.9 or later and QuickTime PowerPlug 2.0.9 or later to run.

During the installation of a multimedia application, such as Adobe Premiere, the preinstalled versions of the QuickTime extensions may have been replaced with earlier versions. Many games and multimedia CD-ROM discs will install QuickTime software into your System Folder. Make sure your extension folder contains version 2.0.9 or later of the QuickTime extensions by following these steps:

Step 1

Open the Extensions folder in your System Folder on your hard drive.

Step 2

Locate QuickTime and QuickTime PowerPlug in your Extensions folder and click once on each while holding the down the shift key on your keyboard.

Step 3

Under the File menu, choose Get Info. Confirm that the version number is 2.0.9 or 2.1. If it is not, drag the two extensions to the trash and reinstall your multimedia software using the Custom install feature of the Macintosh CD that came with your computer.

QuickTime 2.1 and MoviePlayer 2.1 are available from online services.

Plaintalk Speech Recognition Turned On

If you have recently installed Plaintalk Speech Recognition software on your computer, this error will appear if you have Speakable Items turned on and then launch Apple Video Player.

Conversely, if you have Apple Video Player running and you try to turn Speakable Items on in the Speech Setup Control Panel, a message appears stating "Speakable items could not run because an unexpected error occurred. Restarting your computer or reinstalling the Speech Recognition software may correct this problem."

Because both applications need to access the digitizing hardware, you cannot use Apple Video Player and Speech Recognition simultaneously on the Power Macintosh 7500 or 8500. Engineering is aware of this issue and plans to update the error message to be more descriptive in subsequent releases of the Apple Video Player.

These articles can help you locate the QuickTime software update mentioned here:

14) Question: Can NuBus cards be used with these Power Macintosh computers?

Answer: NuBus cards cannot be used in this Power Macintosh. However, to preserve your investment in NuBus technology, a NuBus expansion chassis for PCI will be available from Second Wave, Inc. This chassis will enable you to continue to use your existing NuBus cards in Power Macintosh systems with PCI slots.

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

16 May 1996 - Updated DOS compatibility information
09 Apr 1996 - Removed keyword.
01 Apr 1996 - Added keyword.

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Tech Info Library Article Number:19176



Tech Info Library

Macintosh Performa 6290CD: Specifications (4/97)

Revised: 5/1/97
Security: Everyone

Macintosh Performa 6290CD: Specifications (4/97)

Article Created: 8 January 1996
Article Reviewed/Updated: 29 April 1997

TOPIC -----

This article provides technical specifications for the Macintosh Performa 6290CD.

Note: The Macintosh Performa 6290CD is similar to the Macintosh Performa 6300CD, but it differs in both the memory configuration and the software bundle.

DISCUSSION -----

Hardware
=====

Microprocessor

- PowerPC 603e processor running at 100 MHz
- Integrated floating-point unit
- 40 MHz, 64-bit bus
- 256K Level 2 cache
- 32K internal cache

Memory

- Comes with 8 MB of RAM (uses one SIMM socket)
- Can be expandable to 64MB of RAM using two 32 MB SIMMs
- Uses 72-pin, noncomposite, 80-nanosecond or faster DRAM SIMMs

Storage

- Internal 1.2 GB hard disk drive
- Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS

disks

- Internal, quadruple-speed AppleCD 600i CD-ROM drive

Modem

- Global Village 28.8 kbps fax modem
- Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Monitor (Apple Multiple Scan 14 Display)

- Comes standard with an Apple 14-inch RGB color display (12.4-inch diagonal viewable image size)
- 0.28-mm dot pitch
- Non-Interlaced
- Tilt-and-swivel base
- Shadow mask picture tube
- Multiple Scan
- Stereo speakers
- Meets the strictest international magnetic-field emissions requirements (SWEDAC MPR II)

Display Support

- Apple displays up to 15 inches through a 1 MB DRAM video buffer (independent of system RAM)
- Wide range of VGA and SVGA displays from other vendors

Colors and Resolutions

Begin_Table

Resolution	Max. Bit Depth	Max. Number of Colors
-----	-----	-----
640 x 480	16	32,768
800 x 600	8	256
832 x 624	8	256

End_Table

Interfaces

- Apple Desktop Bus port for mouse, keyboard, and other devices
- Monitor port (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- Serial port (RS-232/RS-422) for an AppleTalk network connection, other networking or communications equipment, or a printer
- SCSI interface port for connecting as many as five external SCSI devices, such as disk drives or CD-ROM drives
- LC processor-direct expansion slot
 - Compatible with most Macintosh Performa 400 and 500 series; Performa 630; Macintosh Quadra 605; and Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630 processor-direct cards

- Can be used for an Apple MPEG Media System card or other specialized card
- Communications slot for a 28.8-kbps fax/data/voice modem (used by Global Village modem)
- Video slot for optional Apple Video System (NTSC, PAL, and SECAM video input)
- Dedicated connector and infrared remote receiver for optional internal Apple TV/Video System (provides TV tuner and video input)

Sound

- Stereo 16-bit sound
- Built-in speaker
- Sound-output port
- Sound-input port (can be used to connect the Apple PlainTalk microphone included with the computer)
- Front headphone jack and volume control

Communications

- Global Village 28.8-kbps fax/data/voice/modem
- Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)
- Megaphone software lets users turn their Macintosh Performa 6300CD into a speakerphone and digital answering Machine; included fax software allows users to send and receive fax communications

Keyboard

- Provides adjustable keyboard slope
- Includes function keys, numeric keypad, cursor arrow keys, and special screen-editing keys

Mouse

- Round shape fits contour of the palm of the hand
- Large button allows easy clicking and dragging

Electrical Requirements

=====

Main Unit

- Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- Frequency: 50 to 60 Hz
- Power: 55 W maximum

Monitor

- Line voltage: 90-132, 198-260 V
- Frequency: 47-63 Hz
- Power: 90 W maximum

Size and Weight

=====

Main Unit

- Height: 4.3 in. (10.95 cm)
- Width: 12.6 in. (32.0 cm)
- Depth: 16.5 in. (41.9 cm)
- Weight: 19 lb. (8.6 kg)

Monitor

- Height: 16.7 in. (42.4 cm)
- Width: 15.9 in. (40.5 cm)
- Depth: 17.8 in. (45.2 cm)
- Weight: 31.0 lb. (14 kg)

Operating Environment

=====

Main Unit

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95%, noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Monitor

- Operating temperature: 10 to 40 degrees C (50 to 104 degrees F)
- Storage temperature: 0 to 60 degrees C (32 to 140 degrees F)
- Relative humidity: 20% to 95%
- Maximum altitude: 10,000 ft. (3000 m)

Bundled Software

=====

System Software

- Mac OS 7.5.1 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, and Macintosh PC Exchange software

Disability Access

- CloseView software magnifies image up to 16 times
- Easy Access software for sequential combination keys, and cursor control from the numeric keypad
- "Visual beep" replaces audible system alerts

Pre-installed software

- Acrobat Reader
- The American Heritage Dictionary
- At Ease
- ClarisWorks
- ClickArt Performa Collection
- Connectix Desktop Utilities
- Eric's Solitaire Sample
- Espresso
- Global Fax
- Global Fax Tour
- Lode Runner
- MacGALLERY Clip Art Treasure Pak
- MacLinkPlus/Easy Open Translators
- Megaphone
- Megaphone Tour
- Quicken
- WealthBuilder
- The Writing Center
- Zoop

CD-ROM titles

- Grolier Multimedia Encyclopedia
- TIME Almanac Reference Edition
- 3D Atlas
- The Family Doctor
- Smithsonian's America
- Jump Start 1st Grade
- Making Music by Voyager
- My First Incredible, Amazing Dictionary

Article Change History:

28 Apr 1997 - Removed out dated on line references.

20 Mar 1996 - Corrected typo.

06 Feb 1996 - Updated information.

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Tech Info Library Article Number:19179



Tech Info Library

PCI-Based Power Macintosh: LAT Compatibility (1/96)

Revised: 1/8/96
Security: Everyone

PCI-Based Power Macintosh: LAT Compatibility (1/96)

Article Created: 8 January 1996

TOPIC -----

This article describes an update on the status of LAT compatibility with the PCI-based Power Macintosh computers, the 7200, 7500, 8500, and 9500.

DISCUSSION -----

There have been reports of compatibility problems with the PCI-based Power Macintosh computers and LAT that were initially believed to be related to Open Transport. Further investigation by the Open Transport team and DEC's PATHWORKS team has revealed there was an obscure bug between LAT and the Time Manager that manifested itself on some of these new computers. Open Transport was not the reason LAT did not function properly. The problem has been resolved in an update of LAT available from Digital.

For PCI-based Power Macintosh computers with Open Transport you must have Open Transport v1.0.6 or later. With this setup, most of PATHWORKS works properly, including DECnet. The problem was with LAT.

Do not use Easy Install for PATHWORKS v1.3; perform a Custom Install, and deselect MacTCP and LAT. If you have included them by mistake, they can remove after restarting your Macintosh. DO NOT open the LAT Tool or LAT control panel before removal. LAT v1.3 crashes PCI-based Power Macintosh computers, and these computers come with Open Transport TCP/IP, so MacTCP is not needed and should not be installed.

For LAT functionality, you need to update to LAT v1.3.1, which comes from Digital. LAT v1.3.1 also requires Open Transport v1.0.6 or greater.

Support Information Services

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Tech Info Library Article Number:19180



Tech Info Library

Regency Software (1/96)

Revised: 1/8/96
Security: Everyone

Regency Software (1/96)

=====

Article Created: 8 January 1996

Regency Software

1110 N. 2nd Street
El Cajon, CA 92021

800-943-6463

619-588-2227 FAX

Company Profile:

Software developer specializing in the legal practice management software package "Legal Mind". Includes client management, billing, general and trust accounting, accounts receivable, accounts payable, and full report generation.

Support Information Services

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Tech Info Library Article Number:19183



Tech Info Library

PowerBook 190 & 5300: HD Target Mode Or SCSI Disk Mode (1/96)

Revised: 1/8/96
Security: Everyone

PowerBook 190 & 5300: HD Target Mode Or SCSI Disk Mode (1/96)

=====

Article Created: 8 January 1996

TOPIC -----

The Powerbook 5300 and 190 series computers have HD Target Mode and not SCSI Disk Mode. What is the difference?

DISCUSSION -----

The Powerbook 5300 and 190 series computers do not have internal SCSI hard drives, but instead have IDE internal hard drives. Therefore it would not be correct to call it SCSI Disk Mode. Although, the operation is the same.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19184



Tech Info Library

PowerBook 5300 System Update: Frequently Asked Questions (2/97)

Revised: 2/6/97
Security: Everyone

PowerBook 5300 System Update: Frequently Asked Questions (2/97)

Article Created: 9 January 1996
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article answers the following frequently asked questions (FAQ) about the PowerBook 5300 System Software Update.

- 1) What is the PowerBook 5300 System Software Update?
- 2) What changes and Enhancements were made?
- 3) Who Needs To Install This Software?
- 4) Who Does NOT Need To Install This Software?
- 5) How Can I Tell If I Already Have The New Software?
- 6) Which Computers Can Utilize This Software Update?
- 7) How should I install the PowerBook 5300 software update?
- 8) Do I need all the disks that are posted online?
- 9) Where and how can I get the PowerBook 5300 software update?
- 10) On what date was the PowerBook 5300 Software Update made available?

DISCUSSION -----

- 1) Question: What is the powerbook 5300 System Software Update?

Answer: The PowerBook 5300 System Software Update offers better system performance for the PowerPC microprocessor. It is a revision to the system software which shipped with early model Macintosh PowerBook 5300 and 190 series

computers. By making this system update available to customers free of charge, Apple is demonstrating its commitment to promoting the highest level of system software reliability.

2) Question: What changes and enhancements were made?

Answer: Several significant improvements were made:

- Improved emulator performance
- Integration of Finder 7.5.4 which optimizes caching to improve performance
- Native resource updates to improve system level performance
- An improved PC Card modem extension for faxing and an improved application launch process which increases the launch speed of applications including Microsoft Word and Excel

3) Question: Who needs to install this software?

Answer: This software update is only useful for Macintosh PowerBook 5300 and 190 series computer owners who purchased their computers prior to mid-January 1996.

4) Question: Who does not need to install this software?

Answer: The software included in this PowerBook System Software Update is already pre-installed on every PowerBook shipped since mid-January, including the PowerBook 5300, 2300 and 190 series, as well as the PowerBook 500 PowerPC upgrade and PowerBook Duo PowerPC Upgrade.

These new disk images can only provide system software installation for the PowerBooks mentioned above. You cannot install this software on any other PowerBook computers.

5) Question: How can I tell if I already have the new software?

Answer: You can tell the difference between the most recent system software and earlier versions by checking the system enabler version in the "About This Macintosh..." Window. Any customer with a system enabler version earlier than 1.2 could benefit from this update.

6) Question: Which computers can utilize this software update?

Answer: The following Macintosh Products can utilize this system software:

- Macintosh PowerBook 5300 Series Computers
- Macintosh PowerBook 190 Series Computers

- Macintosh PowerBook 2300 Series Computers
- Macintosh Computers with the PowerPC Logic Board Upgrade for the PowerBook 500 Series
- Macintosh Computers with the PowerPC Logic Board Upgrade for the PowerBook Duo Products

7) Question: How should I install the PowerBook 5300 software update?

Answer: Apple strongly recommends that you do a "clean" installation to update the system software for your PowerBook computer. You can initiate this procedure by pressing the Command-Shift-K keys at the main window of the Installer. Then select the option to "Install New System Folder", then click OK.

After the computer has restarted, move the following items from the Previous System Folder to the same location in the System Folder:

ATM Font Database
Claris folder
DataViz folder
Launcher Items folder
MacLinkPlus Setup (in the Control Panels folder)
MacLinkPlus for Easy Open (in the Extensions folder)

Note: Some of these items may not be present on your particular PowerBook computer model.

For more information, also see "Reinstalling System Software" in the chapter on diagnostic techniques in the manual that came with your PowerBook computer.

8) Question: Do I need all the disks that are posted online?

Answer: No, if you still have the disk images that were originally included on your PowerBook computer's hard drive when it was purchased, you only need to download and decompress disk images 1,8,10,11,12 and 13.

The complete set is 14 disks, #1-13 system install, #14 is Disk Tools.

9) Question: Where and how can I get the PowerBook 5300 software update?

Answer: You can get the PowerBook 5300 software update using one of the following methods:

- The following Apple SW Updates area on the Internet:
ftp://ftp.info.apple.com/Apple_Support_Area/Apple_SW_Updates/US/Macintosh/PowerBook/PB_5300_SW_Update/
- Apple provides a choice of CD-ROM or Floppy disk set at no charge to

customers via 1-800-273-4035 fulfillment line.

- Contact 800-SOS-APPL, the phone tree will allow customers to route themselves to obtain the update or callers can be transferred to the fulfillment group by SOS-APPL agents.
- Available to Apple's System 7.5 Volume License Maintenance customers through their standard fulfillment process. The license agreement and instructions are available at <http://www.macos.apple.com/pbupdate.7.5.2>

10) Question: On what date was the PowerBook 5300 Software Update made available?

Answer: It was made available on January 9, 1996.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

06 Feb 1997 - Updated to current ftp locations.

02 Jul 1996 - Added Fax Doc word

15 Feb 1996 - Gave more detailed explanation for how to install.

Support Information Services

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Tech Info Library Article Number:19185



Tech Info Library

PowerBook 5300 System Update: Frequently Asked Questions (2/97)

Revised: 2/6/97
Security: Everyone

PowerBook 5300 System Update: Frequently Asked Questions (2/97)

Article Created: 9 January 1996
Article Reviewed/Updated: 2 July 1996

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For more information, also see "Reinstalling System Software" in the chapter on diagnostic techniques in the manual that came with your PowerBook computer.

8) Question: Do I need all the disks that are posted online?

Answer: No, if you still have the disk images that were originally included on your PowerBook computer's hard drive when it was purchased, you only need to download and decompress disk images 1,8,10,11,12 and 13.

The complete set is 14 disks, #1-13 system install, #14 is Disk Tools.

9) Question: Where and how can I get the PowerBook 5300 software update?

Answer: You can get the PowerBook 5300 software update using one of the following methods:

- The following Apple SW Updates area on the Internet:
ftp://ftp.info.apple.com/Apple_Support_Area/Apple_SW_Updates/US/Macintosh/PowerBook/PB_5300_SW_Update/
- Apple provides a choice of CD-ROM or Floppy disk set at no charge to

customers via 1-800-273-4035 fulfillment line.

- Contact 800-SOS-APPL, the phone tree will allow customers to route themselves to obtain the update or callers can be transferred to the fulfillment group by SOS-APPL agents.
- Available to Apple's System 7.5 Volume License Maintenance customers through their standard fulfillment process. The license agreement and instructions are available at <http://www.macos.apple.com/pbupdate.7.5.2>

10) Question: On what date was the PowerBook 5300 Software Update made available?

Answer: It was made available on January 9, 1996.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

06 Feb 1997 - Updated to current ftp locations.

02 Jul 1996 - Added Fax Doc word

15 Feb 1996 - Gave more detailed explanation for how to install.

Support Information Services

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19185



Tech Info Library

Using TCP/IP to Access a Remote AppleTalk Network (1/96)

Revised: 1/9/96
Security: Everyone

Using TCP/IP to Access a Remote AppleTalk Network (1/96)

=====

Article Created: 9 January 1996

TOPIC -----

Is it possible to use a TCP/IP network to connect to an Apple Remote Access (ARA) Server and have the access to the server I would have if I dialed the ARA Server direct?

I have a dial up, modem-based PPP connection to a local internet service provider (ISP), and I want to access an ARA server in another state. The server has a dedicated Internet connection and it's own unique IP address and domain name. One solution, of course, is to dial up the server, but that is an expensive call. What I want to do is use my PPP-TCP/IP connection so that I can establish a TCP/IP connection to an ARA server and then use ARA to access the remote AppleTalk network to mount a shared volume on my desktop.

DISCUSSION -----

There is a product that can do what you want, but it's not ARA. The product was developed at the University of Melbourne in Australia and can be downloaded from the Internet with ftp from the following address:

[munnari.oz.au](ftp://munnari.oz.au)

Look in the mac directory for ARNS (A Remote Network Server). We do not believe there are any commercial products that are in its class of functionality.

The client software can run on any Macintosh with classic networking, that is MacTCP. A new icon, IP Remote, appears in the Network control panel, for example like EtherTalk & Remote Only. Clicking on IP Remote presents a login dialog to appear requesting the IP address of the ARNS server, your user name and password. ARNS is being updated to work with Open Transport but is not compatible yet.

The server software can run on a Macintosh, or a UNIX workstation. Refer to the ftp site for more server information.

ARNS is like ARA in remote only mode, where your Macintosh is either on a local AppleTalk network or a remote AppleTalk network. Your computer cannot be on both AppleTalk networks simultaneously.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

Support Information Services

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Tech Info Library Article Number:19186



Tech Info Library

MacDNS 1.0: Importing Existing BIND Zones (3/96)

Revised: 3/29/96
Security: Everyone

MacDNS 1.0: Importing Existing BIND Zones (3/96)

Article Created: 9 January 1996
Article Reviewed/Updated: 29 March 1996

TOPIC -----

Is it possible to import existing BIND files containing DNS information for my zone, rather than having to input the host and IP address data by hand?

DISCUSSION -----

MacDNS supports importing existing BIND files, although there are a few issues associated in doing this. Here are the steps to follow:

Step 1

After downloading the appropriate resource database files for a particular zone with ftp from a UNIX DNS server, be sure that the file is saved in generic text format.

Step 2

Edit the downloaded text file, be sure the Start of Authority (SOA) resource record is at the beginning of the file.

IMPORTANT: Do not have comments (";") or \$ORIGIN listed at the top of the file.

Begin_Table

Below is an example of a proper SOA resource record:

```
company.com.  IN SOA  host.company.com.  root.host.company.com. (
    19950927  ; serial number
    21600    ; secondaries refresh (6 hours)
    3600     ; secondaries retry (1 hour)
    3600000  ; secondaries expire (41 days)
    108000 ) ; minimum default TTL (30 hours)
```

Once edited, save the file again as text.
End_Table

Step 3

With MacDNS active, choose Message Log from the Window Menu and set the Log Threshold to Microscopic. This will assist in debugging if a problem occurs importing the file.

Step 4

Choose Open Zone File from the File menu, to open the SOA resource record file. MacDNS will import the resources. If at any point MacDNS does not import successfully, check the Message log for help in determining the failure point.

Step 5

Once imported, choose Set Zone Information from the Hosts menu and verify that the information is correct.

At this point, MacDNS is the primary name server for that zone. The PTR Records are internally created by MacDNS.

Article Change History:

29 Mar 1996 - Made correction to example.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19189



Tech Info Library

Power Macintosh 8500: Noise in Audio Recording (1/96)

Revised: 1/30/96
Security: Everyone

Power Macintosh 8500: Noise in Audio Recording (1/96)

=====

Article Created: 9 January 1996
Article Reviewed/Updated: 30 January 1996

TOPIC -----

I was recording from a cassette deck to my Power Macintosh 8500 series computer. I had the RCA jacks from the cassette deck connected to the computer's RCA audio input jacks, and I noticed that there was a humming noise in the recording. How can I avoid this noise in future recordings?

DISCUSSION -----

When connecting external audio devices (such as a CD-ROM player, cassette deck, mixing boards, and so on) to the RCA audio input jacks on the Power Macintosh 8500 computer, you may create a ground loop between the audio device and the computer.

A ground loop occurs when you connect two devices together with different ground points. Both devices must have the three-prong plug for this to happen. To avoid ground loops, many consumer electronics only have two-prong plugs.

The loop most commonly goes from one device to the other along the audio cables and then returns through the ground wire. The difference in potential between the two grounds in the ground loop results in an audible noise or hum.

To eliminate this noise, disconnect the audio device from the computer. If the noise disappears, plug the power cords from the computer and the other devices into the same power strip. This places all of the equipment at the same ground potential and eliminates the loop.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 13

Article Change History:
30 Jan 1996 - Added Info Alley information.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19191



Tech Info Library

Apple Disability Solutions: MAP and Third-Party Products (7/96)

Revised: 7/23/96
Security: Everyone

Apple Disability Solutions: MAP and Third-Party Products (7/96)

=====

Article Created: 9 January 1996
Article Reviewed/Updated: 23 July 1996

TOPIC -----

This article describes the Mac Access Passport (MAP) and provides examples of the third-party companies and products contained in it.

DISCUSSION -----

Mac Access Passport Database
=====

Mac Access Passport (MAP) is a database that includes descriptive information about more than 100 Macintosh solutions for individuals with disabilities. Each record in MAP contains a product description and developer contact information.

MAP includes information on tools for individuals with physical motor impairments, blindness, hearing and speech difficulties, and learning disabilities. The database can be searched by keywords, product name, developer name, disability type, and description text. MAP is based on the Macintosh FileMaker Pro search engine by Claris Corporation.

You can view the Mac Access Passport on the WWW at <http://www2.apple.com/disability/welcome.html>. You can download the Mac Access Passport database from [ftp.info.apple.com](ftp://ftp.info.apple.com) or [ftp.apple.com](ftp://ftp.apple.com). Or you can request a copy by calling Apple's Worldwide Disability Solutions Group at 800-600-7808 (voice), or 800-755-0601 (TTY).

The following information is distributed by Apple Computer's Worldwide Disability Solutions Group. Mention of a particular product does not represent an endorsement, either expressed or implied, by Apple Computer, Inc.

Learning and Speaking Disability Solutions
=====

Special Education Software

There are over 1,300 educational software programs available for the Macintosh, ranging from those that teach adverbial clauses to ones that help students explore the anatomy of a whale. Some software comes alive with dazzling color, animation, and stereo sound; other programs are more basic by comparison, incorporating traditional teaching strategies such as drill-and-practice and memorization.

Without knowing more about a particular student (What are his reading skills? spelling skills? comprehension skills? What are her academic and personal goals? interests? abilities?) it's difficult to recommend specific software.

But it is possible for teachers and parents to make that decision once they have enough information about what software is available. Below are four companies that offer a wide selection of educational software for the Macintosh. We encourage you to contact them to find out about their various Macintosh education software solutions.

Broderbund Software
500 Redwood Blvd.
P.O. Box 6121
Novato, CA 94948
800-521-6263

Don Johnston, Inc.
P.O. Box 639
1000 N. Rand
Wauconda, IL 60084
800-999-4660

Edmark Corp.
P.O. Box 3218
Redmond, WA 98073
800-426-0856

Wings for Learning/Sunburst
101 Castleton Street
Pleasantville, NY 10570
800-321-7511

Dyslexia

The Macintosh is favored by many people with learning disabilities because the software is so easy to use- all Macintosh software works essentially the same way. So once you learn one program, the next one will seem very familiar. This fundamental consistency eliminates frustration for a lot of people.

In addition to the Macintosh's ease-of-use, there is software that can help you structure and organize your ideas, check your spelling as you type (using your own list of frequently misspelled words), and analyze your written documents for grammatical errors. There is even some software that can anticipate the word

you're about the type, and type it for you!

When it comes to managing your daily activities, personal information management software can help manage different areas of your life: keeping an updated TO DO list, maintaining your address book, and scheduling and reminding you of upcoming appointments.

Aldus Consumer Div.
5120 Shoreham Place
San Diego, CA 92122
800-888-6293
TouchBase Pro and DateBook Pro

Baseline Publishing
1760 Moriah Woods, Ste. 5
Memphis, TN 38117-7118
901-682-9676
Thunder 7

Don Johnston, Inc.
P.O. Box 639
1000 N. Rand
Wauconda, IL 60084
800-999-4660
Co: Writer

Speech Communication

Every Macintosh has speech capability built-in, which means a Macintosh PowerBook-in addition to doing everything that a Macintosh regularly does- can travel with you, helping you communicate with others. A PowerBook is small and lightweight, so it can be carried around in a backpack or easily attached to a wheelchair, making it a versatile communication tool.

Using "text-to-speech" software, the Macintosh can create synthetic speech from typed-in words, allowing your PowerBook to speak out loud any word or phrase. The Macintosh also has the ability to record and playback a person's own voice (somewhat like a tape recorder), which results in a very high-quality sound.

Special software can help you manage computerized speech so that you can access the appropriate words on demand. Libraries of pictures, symbols, and graphics are often used to build "picture communication boards," enabling speech samples to be selected quickly and easily.

Don Johnston, Inc.
P.O. Box 639
1000 N. Rand
Wauconda, IL 60084
800-999-4660
Talk:About and Write:OutLoud

Mayer-Johnson Co.
P.O. Box 1579

Solana Beach, CA 92075
619-481-2489
Speaking Dynamically

Physical Disability Solutions =====

Keyboards -----

There are dozens of different kinds of keyboards for the Macintosh. Depending on your personal abilities and preferences, any of a number of them may be appropriate.

The right keyboard for you may be the kind that looks like a traditional keyboard, but has large, touch-sensitive keys to help make typing easier. Or maybe your keyboard is the kind that has only seven keys and uses a typing technique called "chording," originally designed for one-handed typists. The Apple Adjustable Keyboard, another possibility, splits into two sections and conforms to the natural position of your arms to make typing comfortable.

Other products include switch-operated, on-screen keyboards that let you type with almost any part of your body, and "smart" keyboards that allow you to customize each key's position, size, and function. We suggest you contact the following companies to learn about, and perhaps sample, their keyboard products.

Don Johnston, Inc.
P.O. Box 639
1000 N. Rand
Wauconda, IL 60084
800-999-4660
Ke:nx and Ke:nx On:Board

IntelliTools
5221 Central Avenue. Suite 205
Richmond, CA 94804
800-899-6687
IntelliKeys

TASH, Inc.
Unit 1-91 Station St.
Ajax, ON L1S 3H2
CANADA
905-686-4129
MacMini Keyboard

Pointing Devices -----

You can fine tune your mouse's sensitivity to a degree by using software that comes with your Macintosh. But this kind of refinement may not adequately address your needs. You may need an altogether different kind of pointing device.

If so, there are many from which to choose: head-controlled mice, trackballs (in effect a mouse turned upside down), joysticks, mice of different sizes and speeds, writing pads that function as mice, touch-sensitive screens that act as mice, and even remote-controlled mice.

Another solution is Easy Access, a software program that comes with every Macintosh. The Mouse Keys feature of Easy Access lets you manipulate the screen cursor with the numeric keypad part of the keyboard instead of using the regular mouse. Mouse Keys also makes it easier to make fine adjustments of the cursor position, a feat that is often difficult using a regular mouse. Because the PowerBook does not have a built-in numeric keypad, PowerBook users need an additional extension, MouseKeys for PowerBook, to emulate the numeric keyboard on the standard PowerBook keyboard.

How do you determine which pointing device is the most appropriate for your needs? First you need to find out what's available (beyond the contacts listed below). Try visiting your local newsstand and browsing through a computer magazine devoted to Macintosh technology; there you'll find new and different pointing devices being advertised regularly.

Edmark
P.O. Box 3218
Redmond, WA 98073
800-426-0856
Mac TouchWindow

Kensington Microware
2855 Campus Drive
San Mateo, CA 94403
800-535-4242
TurboMouse

Logitech, Inc.
6565 Kaiser Drive
Fremont, CA 94555
800-231-7717
MouseMan

Input Systems

With the right hardware and software, a Macintosh can become a powerful system for learning, working, and playing. But that won't matter to you until you're able to find a way to control the computer... your way.

Keyboards and mice are traditionally used to control personal computers. Although you may not be able to use these devices, you can choose between a number of alternatives, including: a voice recognition system that allows a person to control the computer by talking to it; an on-screen keyboard that facilitates typing without physically touching the keys; and a head-controlled keyboard/mouse that lets a person type using head movements.

There are, in fact, a number of possibilities that will allow people to use a Macintosh for whatever they want. Contact the following companies to learn more about their access products.

Articulate Systems, Inc.
600 West Cummings Park
Suite 4500
Woburn, MA 01801
800-443-7077
PowerSecretary

Madenta Communications
9411A 20 Avenue
Edmonton, AB T6N 1E5
Canada
800-661-8406
Doors

Origin Instruments
854 Greenview Drive
Grand Prairie, TX 75050
214-606-8740
HeadMouse

Visual Disability Solutions
=====

Speech and Braille

The Macintosh was the first truly graphics-based personal computer, which helps account for a common misconception that it's inaccessible to people who cannot see. In fact, when used with innovative software programs the Macintosh is fully accessible to blind individuals.

When it comes to navigating the Macintosh's screen, software called outSPOKEN gives audio cues to on-screen visual images such as icons, windows, menus, and cursor location (the numeric keypad replaces the need for a mouse). outSPOKEN is compatible with virtually all Macintosh applications, so blind people can use a Macintosh just as sighted people do- in the office, at home, at school, anywhere. Another program called Duxbury Braille Translator converts text to Braille and formats printing on a Braille embosser.

For more information, contact the following companies:

Berkeley Systems
2095 Rose Street
Berkeley, CA 94709
510-540-5535
510-540-5115 - fax
510-540-0709 - TTY
e-mail: access@berksys.com
outSPOKEN

Duxbury Systems, Inc.
435 King Street
Littleton, MA 01460
508-486-9766
Duxbury Braille Translator

Telesensory
455 North Bernardo Avenue
Mountain View, CA 94043
800-537-3961
Braille Embossers

Magnification

There are several things that can be done to enlarge the images on the Macintosh computer's screen. One solution, CloseView, is software that magnifies the screen image up to 16 times its regular size. CloseView works with virtually all Macintosh software, and is free- it's included as part of the Macintosh's system software. (An enhanced version of this software, called inLARGE, is also available as a separate product from Berkeley Systems.)

Other magnification solutions range from monitors that display images in multiple resolutions to magnification lenses that attach to the outside frame of the Macintosh's monitor. You may also want to consider using software that reads text aloud, so that instead of looking at the words on your computer, you can listen to them. Contact the companies below to learn more about their access products for people with vision impairments.

Berkeley Systems
2095 Rose Street
Berkeley, CA 94709
510-540-5535
510-540-5115 - fax
510-540-0709 - TTY
e-mail: access@berksys.com
inLARGE

New Concepts Marketing
P.O. Box 261
Port Richey, FL 34673
800-456-7097
Magnification Lenses

Sigma Designs, Inc.
47906 Bayside Parkway
Fremont, CA 94538
510-77000100
Multiple Resolution Monitors

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for

additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the "Information Alley":
Volume II, Issue 19, Page 4

Article Change History:

23 Jul 1996 - Fixed minor spelling error.

30 Jan 1996 - Added Info Alley information; made minor technical updates.

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Tech Info Library Article Number:19193



Tech Info Library

DOS Compatibility Card: No Video When Changing OS (1/96)

Revised: 1/9/96
Security: Everyone

DOS Compatibility Card: No Video When Changing OS (1/96)

=====

Article Created: 9 January 1996

TOPIC -----

I have a DOS Compatibility Card in my Macintosh computer, and when I press the Command/Return key combination on my keyboard to change to MS-DOS/Windows, the screen dims, but I don't get the MS-DOS prompt. Why?

DISCUSSION -----

The most common cause of this is the video cable. If the DOS Compatibility Card video cable is not securely fastened to monitor cable and DOS Compatibility Card, or you do not have the DOS Compatibility Card video cable connected properly, the screen dims, but you will not see the MS-DOS prompt.

You should check the cable connections, and then restart your Macintosh computer. If you do not restart your computer, the monitor will not sync properly. This is because when the PC Setup control panel loads it determines what monitor is connected. When it cannot determine what monitor is connected, the PC Setup control panel defaults to an Apple 16-in. Display setting.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19194



Tech Info Library

PowerBook 5300: Can The Hard Drive Be Partitioned? (1/96)

Revised: 1/12/96
Security: Everyone

PowerBook 5300: Can The Hard Drive Be Partitioned? (1/96)

=====

Article Created: 9 January 1996
Article Reviewed/Updated: 12 January 1996

TOPIC -----

Is hard drive partitioning a supported option with the Macintosh PowerBook 5300 series computers?

DISCUSSION -----

Partitioning either SCSI or IDE Apple hard drives is now supported using the Drive Setup utility posted online. This is discussed in the Drive Setup Guide that is included with the application.

The following is a copy of the Drive Setup Guide statement.

Drive Setup can initialize, partition, and test all of the following:

- Most Apple-qualified SCSI internal drives
- Some Apple-qualified IDE/ATA drives, except an IDE/ATA drive in a PowerBook expansion bay (PC Card, or PCMCIA drives)
- Some 3.5" and 5.25" magneto-optical drives manufactured by Sony, Ricoh, and Fujitsu
- Some 3.5" and 5.25" removable devices manufactured by Syquest and Bernoulli

If you have a CD-ROM drive, it will appear in the Drive Setup List of Drives, but you cannot mount, initialize, partition, or test a CD-ROM disc.

**** Important Note ****

To find out if a particular model of drive is supported by Drive Setup, and for any other information about the drive, contact the drive's manufacturer.

Apple Computer has not evaluated the drives or devices of manufacturers other than Apple, and makes no representations or warranties regarding their compatibility, functionality, or country certification requirements. All understandings, agreements, or warranties, if any, take place directly between the manufacturer and the prospective user.

Mention of non-Apple products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple Computer shall not be liable for the accuracy of any information regarding non-Apple products, or for any damages resulting from the use of such information.

How to Use The Drive Setup Guide

If you would like to look this up in the Drive Setup Guide launch the Drive Setup application then use the following path: Pull down AppleGuide menu (Question Mark icon) in the upper right corner of the Menubar, select Drive Setup Guide, select General and then select storage devices.

These articles can help you locate the Drive Setup 1.0.3 software mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

12 Jan 1996 - Corrected minor typo. Added online availability information.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19195



Tech Info Library

Third-Party DNS Servers for Macintosh Computers (1/96)

Revised: 1/10/96
Security: Everyone

Third-Party DNS Servers for Macintosh Computers (1/96)

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Article Created: 10 January 1996

TOPIC -----

This article provides information on two third-party DNS servers for Macintosh computers.

DISCUSSION -----

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

MIND by Acme Technologies

=====

MIND was the first DNS server available for Macintosh. It has been successfully running on hundreds of sites since its initial beta release in February 1995. Acme Technologies has recently acquired the product and will release a new version soon. You'll be able to download and use the existing beta version until the new one is ready. For more information use the URL below:

<http://mind.acmetech.com/at/mind/>

Features

- Two-way zone transfers (it will function as a secondary DNS automatically)
- Remote monitoring and configuration. Edit hosts files or watch the logs from anywhere on a TCP/IP network.
- Full caching support.
- Plus all the existing features.
- Serve name to address and address to name mapping.
- Supports: \$ORIGIN, \$INCLUDE, SOA, MX, A, CNAME, HINFO, PTR, and TXT records.

- One-way Zone transfers (will act as primary). MIND will function perfectly well as a secondary DNS, but since it can't request a zone transfer from another server, it must be manually synchronized with the primaries.

QuickDNS by Men and Mice

=====

Men & Mice have released QuickDNS Lite and QuickDNS Pro, two new Internet Domain Name Servers for the Macintosh. QuickDNS is currently the only commercially available Domain Name Server for the Macintosh. For more information use the URL below:

<http://www.menandmice.com/QuickDNS/QuickDNS.html>

QuickDNS Pro

QuickDNS Pro is a new fully featured Internet Domain Name Server for the Macintosh. QuickDNS Pro does recursive lookups, zone-transfers and can act as a primary and/or secondary server for an unlimited number of domains.

QuickDNS Pro ships with a program to edit domain information, QuickDNS Admin. QuickDNS Admin is a domain editor which can be used to create, edit, delete and verify domains, import RFC-files (Unix-format) and view the status of QuickDNS Pro.

Running an Internet connection no longer requires a Unix-system. Although WWW, FTP and Mail Servers have been available for the Macintosh, a Domain Name Server has been the missing link for those who want to run a Macintosh only Internet connection.

Every domain on the Internet requires DNS service. The DNS is the invisible service that all the other Internet programs rely on. Every company connected to the Internet has at least one DNS to say who's who on the network.

General features of QuickDNS Pro:

- Recursive name service
- Primary name service
- Secondary name service (available Feb.'96)
- Domain editor - For creating and editing domain information
- Accelerated for Power Macintosh
- Eliminates the need for DNS running on a UNIX server
- Load balancing - A Round robin assignment of IP addresses to the single machine name spreads the load among multiple servers (that is, supports Redundant Array of Inexpensive Computers (RAIC))
- Serves an unlimited number of secondary and primary domains
- Imports RFC-files (Unix-format domain information)
- Fully interrupt-driven operation
- Keeps millisecond-accurate statistics about each name server queried and uses them to tune server performances
- Wildcard support in queries

- Smart cache maintenance
- Logging

QuickDNS Lite

QuickDNS Lite is a caching-only name server that gives a recursive name service to a network. It can not be used to create or modify domains and it can neither be a primary, nor a secondary name server. Installation of QuickDNS Lite is plug and play.

QuickDNS Lite is a perfect bundle with all Internet Servers. QuickDNS Lite running on the same machine as a WWW, Mail or FTP server can increase performance and robustness of the server.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19196



Tech Info Library

Acme Technologies (1/96)

Revised: 1/10/96
Security: Everyone

Acme Technologies (1/96)

=====

Article Created: 10 January 1996

Acme Technologies

54 Fairfield Ave., Suite 1
Norwalk, CT 06854

203-857-0631

203-857-0641 - FAX

For sales information: sales@acmetech.com
All other inquiries to: support@acmetech.com

Company Profile:
Makers of Internet software products for Macintosh.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19197



Tech Info Library

Men and Mice (1/96)

Revised: 1/10/96
Security: Everyone

Men and Mice (1/96)

=====

Article Created: 10 January 1996

Men and Mice

Taeknigardur
107 Reykjavik
ICELAND

+354 525 4938 (8:00 - 18:99 GMT)

+354 525 4991 - FAX

Internet: info@menandmice.com

AOL: MenAndMice

Company Profile:
Makers of Internet and other software for Macintosh computers.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19198



Tech Info Library

Workgroup Server 9150: Stereo Sound and Audio Devices (1/96)

Revised: 1/10/96
Security: Everyone

Workgroup Server 9150: Stereo Sound and Audio Devices (1/96)

Article Created: 10 January 1996

TOPIC -----

This article describes stereo sound and audio devices you can use with a Workgroup Server 9150.

DISCUSSION -----

Your server can play and record stereo sound from a variety of sources. To provide or reproduce stereo sound, you can connect audio devices to the line input or sound input ports, and to the sound output port on the server. You can also use the server's internal CD-ROM drive to play audio compact discs (CDs).

The server's line input ports accepts an audio connector known as a RCA type (phono) plug. The server's sound ports accept an audio connector known as a stereo miniplug. This connector is the type used on headphones for a personal tape player, for example. If your equipment uses a different type of connector, you can purchase an adapter at an electronics supply store.

Connecting an Audio Device

To play or record sound with your server, you can attach a microphone, amplifier, tape recorder, or a pair of speakers. Follow these steps to connect an audio device to the server.

IMPORTANT: The Workgroup Server 9150 is designed to work as a server, and it is not designed for use with speech recognition systems. Do not use the Apple PlainTalk Microphone with your server.

- 1) Make sure that the audio device has a cable with a stereo miniplug connector or, if you're using the line input ports, RCA connectors.
- 2) Place the audio device near the server.
- 3) Shut down the server and turn off the audio device.

4) Attach the cable to the audio device and to the sound port on the server.

5) Turn on the server and the audio device and begin working with sound.

Support Information Services

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Tech Info Library Article Number:19199



Tech Info Library

Open Transport: User Configuration Not Available (1/96)

Revised: 1/10/96
Security: Everyone

Open Transport: User Configuration Not Available (1/96)

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Article Created: 10 January 1996

TOPIC -----

I am running Open Transport 1.0.6 on my computer, and I need to set the AppleTalk address manually. The option for User Configuration in the AppleTalk control panel, when set to Ethernet, is dimmed.

DISCUSSION -----

This option is not available in Open Transport 1.0.7 or lower, but it is available in Open Transport 1.0.8 and higher in Advanced User Mode.

Support Information Services

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Tech Info Library Article Number:19200



Tech Info Library

CLW 12/600 PS & CLW12/660 PS: Configuring For Solaris (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS & CLW12/660 PS: Configuring For Solaris (10/96)

Article Created: 10 January 1996
Article Reviewed/Updated: 21 August 1996

TOPIC -----

This article provides information on configuring the Apple Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers to a Solaris workstation.

DISCUSSION -----

Overview of Solaris Printing

Solaris 2.3, 2.4 and 2.5 printing use lp printing available with UNIX System 5. Solaris includes two utilities that add BSD features to the lp printing system.

- lpsystem - register remote systems with the print service.

This utility supports System V network printing and provides compatability with BSD network printing (lpd)

- lpr - send job to the printer.

This utility is actually version of lp that supports lpr flags, for backwards compatability to SunOS 4.x

The following instructions are provided for Solaris (SunOS 5.x) system administrators. SunOS 4.x (sometimes called Solaris 1.x) are in the Color LaserWriter 12/600 PS manual. SunOS 4.x is a version of BSD UNIX and uses lpr for printing.

Before configuring the Solaris system, the Color LaserWriter 12/600 PS needs to be installed on the Ethernet network and assigned an IP address. See your Color LaserWriter 12/600 PS User's Guide for detailed instructions.

Apple Computer supports printing only from Solaris 2.x over ethernet using TCP/IP and lp to the Color LaserWriter 12/600 PS printer. Alternative forms of printing with other protocols, such as PAP in Appletalk, or physical connections

such as direct parallel connections are possible, but not supported by Apple Computer Inc.

Steps for Solaris:
=====

Step 1

Login as root

Step 2

Run admintool

Step 3

Select "print manager"

Step 4

From the "Edit" Menu select "Add Printer"

Step 5

Select "Add access to remote printer"

Step 6

Set the "Printer Name"

The printer name is the name of the printer queue referred to in lp command. For example, if you create a printer queue called "colorlw", you would print with the using the following:

```
lp -d colorlw <filename>
```

Step 7

Set the "Printer Server"

Use the hostname or IP address of the printer. The hostname should be entered in the /etc/hosts file, NIS database or DNS.

Step 8

Verify or change "Print Server OS" to "BSD"

Click "add" when done. The new printer appears in the Print manager window.

Step 9

Change the file contents to PostScript.

Select "edit" -> "modify" -> "name of printer"

Change the "file contents" to "PostScript" and click apply. The default is "any"

Click "apply" to save changes.

Setting the "file contents to PostScript" allows all files to print to the Color Laserwriter correctly. Without making this change, text jobs sent to the printer using lp and lpr will not print.

Printing from Specific Applications

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The Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers accept only PostScript print jobs. If configured properly, Solaris converts text jobs to a basic PostScript job that results in plain, portrait, courier text output.

- Printtool: Openwindows tool for printing files

Printtool creates PostScript jobs and will work normally. Users can type in path names or use drag and drop icons from the file manager to the icon well. The default format will product 2-UP landscape output that has been "prettied" in the mp utility.

- MAE: The virtual Macintosh

MAE produces PostScript using lprwriter. Set lprwriter to "lp -d <printer queue name>" If AppleTalk is supported on the Ethernet, MAE users can use LaserWriter driver and print using AppleTalk as well. MAE users can load the Color LaserWriter Software into MAE, but should be aware that ColorSync 2.0 will NOT cailibrate color when printing using lprwriter. MAE users MUST use the Laserwriter 8.3 driver and print using AppleTalk.

- lp - send requests to an LP print service

lp is the standard line command used for printing files in System V UNIX.

For example:

lp -d colorlw <filename>

- lpr - send job to the printer

Although Solaris is System V, an lpr utility is provided. The lpr command is a front end to lp and is not a normal version of lpr. However the differences should not affect the use of the Color LaserWriter 12/600 PS printer.

Example print command:

lpr -P colorlw <filename>

For more information on configuring printing in Solaris, you should consult the Solaris documentation that came with your workstation. For more information on UNIX printing in general, you should consult a UNIX system administration book such as the "UNIX System Administration Handbook" by Evi Nemeth, Garth Snyder, Scott Seebastian, Trent R. Hein.

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS printer.

21 Aug 1996 - Removed unnecessary steps.

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Tech Info Library Article Number:19201



Tech Info Library

Apple Telecom Software 2.3.2: Read Me (5/96)

Revised: 10/14/96
Security: Everyone

Apple Telecom Software 2.3.2: Read Me (5/96)

Article Created: 10 January 1996
Article Reviewed/Updated: 27 May 1996

TOPIC -----

This article contains the ReadMe included with the Apple Telecom Software v2.3.2 posted online.

DISCUSSION -----

Apple Telecom Software
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This software runs on the following machines with their respective Express Modem internal modems:

- PowerBook 160, 165, 165c, 180, 180c, using an internal Apple PowerBook 14.4 Modem Card.
- PowerBook Duo 210, 230, 250, 270c, 280, 280c, 2300c, using an internal Apple PowerBook Duo 14.4 Modem.
- PowerBook 520, 520c, 540, 540c (with or without PowerPC processor upgrade), using an internal Apple PowerBook Express Modem II Card.
- LC 575, Macintosh Quadra, LC, Performa 630, using an internal Macintosh Express Fax/Modem (for the United States and Japan only).

Installing over an older version of the software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

Note: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to

the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

Preferred CCL scripts for Apple Remote Access

ARA 1.0: Express Modem ARA 1.x (in Extensions folder in System Folder)

ARA 2.0: Express Modem ARA 2.x (in Extensions folder in System Folder)

Note: These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide.

Two additional, optional connection (CCL) files, named Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG, are installed as well. When you use them, the Express Modem transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as a GeoPort Telecom Adapter), you should select one of these connection files in the Apple Remote Access Setup control panel.

Note: The Express Modem ARA 1.x/CNG and Express Modem ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex greyscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

Note: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

Auto-answer setting

If Fax Terminal is set to Auto-answer, the Manual Receive is disabled.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript® printers.

Troubleshooting

Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the Express Modem to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this

suppresses the CARRIER message).

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying incoming calls

When answering your phone line, the Express Modem will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application, we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

Removing fax storage folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

What goes where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- Express Modem Read Me
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- Modem AT Command Set
- Express Modem ARA 1.x/CNG (optional, transmits data calling tone)
- Express Modem ARA 2.x/CNG (optional, transmits data calling tone)

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- Express Modem ARA 1.x (Apple Remote Access 1.0 CCL)
- Express Modem ARA 2.x (Apple Remote Access 2.0 CCL)

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

GeoPort Telecom Adapter ReadMe

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Software included in the GeoPort Telecom Adapter Kit

Apple Telecom Software

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 7200 series, 7500/100, 8100 series, 8500/120, and 9500 series.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.x software on Macintosh systems equipped with an Express Modem card.

Note: For Power Macintosh 7200 series, 7500/100, 8500/120, and 9500 series, version 2.1 or higher of Apple Telecom Software is required. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any LocalTalk devices attached to the printer port (serial devices can remain attached).

Important If you select "Sleep" from the Special Menu available on some Power Macintosh models while there is an active GeoPort connection, the GeoPort Telecom Adapter will automatically disconnect the call without warning. When a Power Macintosh 7200 series model is in the low-power mode, the GeoPort Telecom Adapter will wake up the machine if the telephone rings and the machine is awaiting an incoming call. The monitor will remain in the low-power mode. While a connection is open via a GeoPort Telecom Adapter, your Power Macintosh will not enter the low-power mode, but the monitor will dim the screen.

MegaPhone (for United States, Canada, and Japan only)

This is a screen-based telephone application that delivers full support of the telephony capabilities of the Apple Telecom 2.x software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information, and voice-mail functions.

The GeoPort Telecom Adapter Kit also includes a free 30-day trial of call logging, MegaDial dialing manager, intelligent synchronization with directory information (saving telephone numbers to a PowerTalk catalog, for example), and other extended capabilities.

See also: the MegaPhone electronic manual included on Disk 3 (Telecom Applications).

Note: MegaPhone is not installed by the Apple Telecom Installer program. You must install it separately.

SITcomm SE/GTA (for United States and Canada only)

This is a terminal emulator application. With SITcomm SE/GTA (Special Edition for GeoPort Telecom Adapter), your Macintosh can communicate with a variety of other computers, linked by serial cables or by telephone lines.

With SITcomm you can exchange information with:

- A colleague who is using another computer with similar communications

software.

- Text-based information and electronic mail services, such as CompuServe or MCI Mail.
- Your company or school's remote minicomputer or mainframe.

See also: the SITcomm SE electronic manual included on Disk 4 (Telecom Applications).

Note: SITcomm is not installed by the Apple Telecom Installer program. You must install it separately.

Note: SITcomm (Disk 4) is not included with free upgrades. You can order the full upgrade, including SITcomm SE and the Apple Telecom User's Guide manual, by calling the Apple Order Center. Ask for the Apple Telecom software version 2.x upgrade for use with your GeoPort Telecom Adapter.

Upgrading from previous releases of GeoPort Telecom Adapter software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

Note: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version; you may delete them.

Connection (CCL) scripts for Apple Remote Access

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)
ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center.

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select one of these connection files in the Apple Remote Access Setup

control panel.

Note: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Remote Access Dial Back

If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex greyscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

Note: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you

are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript® printers.

Troubleshooting

Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying incoming calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to

determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone), we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing fax storage folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Using a Centris 660av or Quadra 660av/840av

If you are using a Centris 660av or Quadra 660av/840av and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with the GeoPort Telecom Adapter. To change this setting, open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a blacklisting error message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

Clicking sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660av/840av). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

What goes where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter ReadMe
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)
- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- Modem AT Command Set

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- AudioTuneUp (9500 series only)
- Express Modem Tool
- Fax Extension

- Fax Sender
- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)
- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension (660/840AV and 6100/7100/8100 series only)
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:

27 May 1996 - Updated for technical accuracy.

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Tech Info Library Article Number:19202



Tech Info Library

Power Macintosh 7500 & 8500: Vertical Lines Follow Cursor (1/96)

Revised: 3/21/96
Security: Everyone

Power Macintosh 7500 & 8500: Vertical Lines Follow Cursor (1/96)

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Article Created: 10 January 1996

TOPIC -----

I have a Power Macintosh 7500 series computer, and I have recently noticed that two vertical lines appear to be following the cursor. What could cause this, and how can I resolve it?

DISCUSSION -----

Improper installation of VRAM on Power Macintosh 7500 and 8500 series computers causes these symptoms. If you have 2 MB of VRAM installed, you must install the VRAM DIMMs into the slots labeled 1. For example:

1	_____	1 MB VRAM DIMM
2	_____	
1	_____	1 MB VRAM DIMM
2	_____	

Also, you cannot install 3 MB of VRAM. The Power Macintosh 7500 and 8500 series computer allow only for 2 and 4 MB VRAM configurations.

Support Information Services

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Tech Info Library Article Number:19204



Tech Info Library

Grolier's Encyclopedia: Errors and Lockups When Searching (1/96)

Revised: 1/12/96
Security: Everyone

Grolier's Encyclopedia: Errors and Lockups When Searching (1/96)

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Article Created: 10 January 1996
Article Reviewed/Updated: 12 January 1996

TOPIC -----

When attempting to search on the Grolier's Encyclopedia CD (version 7.0.4) that was included with my Macintosh computer, my computer locks up or displays a Type 11 error. How can I prevent this from happening?

DISCUSSION -----

The Grolier's application requires that a printer is chosen in the Chooser. If a printer is not selected, the application cannot access necessary resources in the System file. To avoid these lock-ups and errors you must open the Chooser and select any printer driver.

These errors can occur on some PowerPC based Power Macintosh or Macintosh Performa series computer that have not yet had a printer chosen in the Chooser. Apple has verified that this error occurs on Power Macintosh 5200CD, 6200CD, 5300CD, 6300CD, 7200, 7500, 8100, 8500 and 9500 computers using System 7.5.x.

Apple has notified Mindscape (the distributor of the Grolier's Encyclopedia) of this issue.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Note:

The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

Article Change History:

12 Jan 1996 - Updated information.

Support Information Services

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Tech Info Library Article Number:19205



Tech Info Library

PowerBook 200 & Dock: MacTCP Has No Icons When Removed (1/96)

Revised: 1/10/96
Security: Everyone

PowerBook 200 & Dock: MacTCP Has No Icons When Removed (1/96)

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Article Created: 10 January 1996

TOPIC -----

When my PowerBook 200 Series (Duo) is in the Dock, connect to Ethernet, and EtherTalk is selected in the MacTCP control panel. When I then remove the PowerBook from the Dock, the MacTCP control panel will show no network interface icons when opened.

If the PowerBook is reconnected to the same AppleTalk network with either LocalTalk, or Apple Remote Access (ARA), MacTCP will work properly. Reconfiguring MacTCP, however, is difficult because no zones are available to select a different MacIP server.

PowerBook 200 Series computers using the Ethernet icon in the MacTCP control panel do not operate this way. Why does this happen?

DISCUSSION -----

The problem is the MacTCP control panel's inability to properly handle the disappearance of the Ethernet card. While the PowerBook 200 Series is docked with the EtherTalk icon selected in the MacTCP control panel, TCP/IP is being encapsulated in AppleTalk through an Ethernet card. When the PowerBook is removed from the Dock, the card is no longer available.

Some software recognizes that network configurations can change when a PowerBook 200 Series is not in the Dock, and adjust accordingly. For example AppleTalk, controlled by the Network control panel, automatically changes to LocalTalk Built In. MacTCP, however, maintains its last setting and works with whatever AppleTalk interface is selected in the Network control panel. This is why the PowerBook functions properly when connected to the network with the same MacIP server through either LocalTalk, or ARA.

Ordinarily on desktop systems, when the MacTCP control panel is opened, it presents a list of icons. If AppleTalk is turned on, IP is represented by either a LocalTalk, EtherTalk, TokenTalk, or Remote Only icon -- this depends on

which network interface is available. When the Ethernet card is not accessible by the PowerBook, the MacTCP control panel does not display EtherTalk. Although MacTCP may continue to work (as described above), it does not display an icon for the AppleTalk connection being used, and because the PowerBook has no Token Ring or Ethernet cards, no other icons are displayed.

If you want or need to have the correct icon displayed, go to the Network control panel, and reselect the AppleTalk connection. MacTCP will note the change in AppleTalk configuration, and refresh its icons when opened again.

Support Information Services

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Tech Info Library Article Number:19206



Tech Info Library

Sierra On-Line

Revised: 1/11/96
Security: Everyone

Sierra On-Line

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Article Created: 9 January 1996

Sierra On-Line

P.O. Box 53210
Bellevue, WA 98015

800-757-7707 (Direct Sales Line)

800-743-7725 (Sales and Tech Support)

206-644-4343 (Main Telephone Number)

206-562-4223 (FAX)

900-370-5583 (Automated Hint Line)

Company Profile: Makers of computer adventure games and educational programs.

Support Information Services

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Tech Info Library Article Number:19207



Tech Info Library

AICK: Config PPP Does Not Have Enough Script Lines (1/96)

Revised: 1/11/96
Security: Everyone

AICK: Config PPP Does Not Have Enough Script Lines (1/96)

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Article Created: 11 January 1996

TOPIC -----

I am trying to get my Config PPP control panel connectscript to work with the Chameleon server software my local service provider (ISP) running. I do not seem to have enough script lines available for the logon script. I was given 9 lines but my Config PPP only has 8 lines.

DISCUSSION -----

The Apple Internet Connection Kit (AICK) dialer (Apple Internet Dialer) is an alternate user interface for configuring MacPPP, MacTCP, Open Transport's TCP/IP control panel, and some parameters in Internet Config. Configure your internet parameters in one place, rather than four.

MacPPP 2.1.4 (included with AICK) and FreePPP 1.0 are both derived from an earlier version of MacPPP - MacPPP 2.1.2SD. The documentation included with FreePPP and in particular the file Installing MacPPP provides the extra details you may need to configure AICK to work with your ISP.

You can put more than one command per line in both MacPPP and the AICK dialer, thereby working around the 8 line limit in many cases. With this information you and your provider should be able to come up with a script that works. Fax or email your ISP the Installing MacPPP document and then ask them to save the "recipe" you discover.

Support Information Services

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Tech Info Library Article Number:19208



Tech Info Library

LaserWriter: How to Check ROM Version (1/96)

Revised: 1/12/96
Security: Everyone

LaserWriter: How to Check ROM Version (1/96)

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Article Created: 12 January 1996

TOPIC -----

This article describes how to check the ROM version of your PostScript printer.

DISCUSSION -----

The version of ROM in your printer is printed on the startup page, vertically on the right margin.

You can also use the Apple Printer Utility to check what version of the IOP ROM the LaserWriter has installed:

Step 1

Launch the Apple Printer Utility, select the zone in which the LaserWriter is located, click to select the printer, click Open Printer.

Step 2

Click the arrow to the left of Printer Information, you will see the version of ROM and, depending on the type of LaserWriter, the version of PostScript ROMs also.

Support Information Services

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Tech Info Library Article Number:19209



Tech Info Library

Installer & Problem With Disk Error Message (7/96)

Revised: 7/31/96
Security: Everyone

Installer & "Problem With Disk" Error Message (7/96)

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Article Created: 15 January 1996
Article Reviewed/Updated: 31 July 1996

TOPIC -----

When I try to install the Apple Internet Connection Kit (AICK) on my Macintosh Performa computer, the message "There is a problem with the disk you are installing onto" appears.

I have reinitialized my hard drive and restored a new System Folder, but get the same failure. What might be causing this? I have no other SCSI devices attached.

DISCUSSION -----

Here are a couple troubleshooting procedures which should resolve this issue:

First

A new System Folder on a Macintosh Performa computer has Folder Protection enabled in the General Controls control panel by default. This setting causes this installer, and possibly others like a StyleWriter or Color StyleWriter installer programs to fail.

Disable Folder Protection in the General Controls control panel and then install AICK or other software.

Second

Remove the Launcher from the control panels folder and restart.

Article Change History:

31 Jul 1996 - Added second procedure.
09 May 1996 - Changed title and made article more generic.

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Tech Info Library Article Number:19211



Tech Info Library

PowerBook 190 & 5300 Series: Is NSI 1.5.1 Needed (1/96)

Revised: 1/16/96
Security: Everyone

PowerBook 190 & 5300 Series: Is NSI 1.5.1 Needed (1/96)

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Article Created: 16 January 1996

TOPIC -----

Do I need to install Network Software Installer (NSI) 1.5.1 on my PowerBook 5300cs?

DISCUSSION -----

The component software (except for AppleTalk v58.1.5) in NSI 1.5.1 is included with System 7.5.2 on PowerBook 190 and 5300 series computers, so you do not need to install NSI 1.5.1. The only exception, AppleTalk v58.1.6 which supports IRTalk is installed on the PowerBook 190 and 5300 series computers. IRTalk is a built-in infrared technology implementation.

NOTE: IRTalk is an option on the PowerBook 190 series computers. (Macintosh PowerBook Infrared Upgrade Kit Order No. M4071LL/A.)

Support Information Services

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Tech Info Library Article Number:19215



Tech Info Library

ColorSync 2.0: Tektronix Printer Profile Compatibility (1/96)

Revised: 1/16/96
Security: Everyone

ColorSync 2.0: Tektronix Printer Profile Compatibility (1/96)

Article Created: 16 January 1996

TOPIC -----

With ColorSync 2.0, I cannot access the ColorSync Printer profile, Tek Phaser 540 Plus, using the Filter Module in Adobe Photoshop. The profile does show up if I choose the Acquire command in the File menu in Photoshop.

I called Tektronix and downloaded ColorSync profile (540+ 16x16) from their ftp site to try it. Tektronix has ColorSync profiles for the Tektronix Phaser 140, 220i, 240, 340, and 540. The Tek Phaser 540 Plus printer profile was placed in the ColorSync Profiles folder along with Color LaserWriter 12/600 PS Profile. The Color LaserWriter 12/600 PS Profile does show up in the ColorSync Filter dialog box, however, the Tek Phaser 540 Plus Profile does not. What is wrong?

DISCUSSION -----

The problem is not with the profile or with ColorSync. It is a limitation of how the Plug-ins/Photoshop 3.0 work currently. A workaround is provided below.

We spoke with engineering and they verified what is stated in the ReadMe for the Plug-ins:

To use the Filter Module:

1. ...
2. ...
3. Click the "OK" button to start filtering.

Note: Due to limitations of the Photoshop Filter Module API, the ColorSync Filter Module can only match images from/to the same color space. Therefore, it cannot match an RGB image for a CMYK device, and vice versa.

So in other words, the color space for the profile MUST match the color space of the current image in Photoshop in order for the profiles to show up in the Color Match - ColorSync Filter dialog. Color matching using the Filter plug-in can only be performed on "like" color spaces, for example image = RGB and device profile = RGB. With regard to why the Color LaserWriter 12/600 PS profile shows up in the Filter plug-in and the Tektronix 540P does not, this is because the LaserWriter 12/600 PS profile is defined in the RGB space while the Tektronix profile is defined in CMYK. It is possible to change the color space of the image in Photoshop by selecting a different color space (for example CMYK color) from the Mode menu, however, you will be using Adobe's proprietary color space conversion.

A better workaround would be to use the ColorSync Export-to-TIFF filter which enables you to convert between color spaces accurately by using input and output profiles. Once exported, you can then re-open the TIFF image (which was exported) and directly print it -- since color space conversion of the TIFF image to CMYK has already been performed.

Future versions of Photoshop will most likely become fully ColorSync 2.0 compatible.

Support Information Services

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Tech Info Library Article Number:19216



Tech Info Library

Newton Backup Utility: How to Expand SYSUPDT.EX (12/96)

Revised: 12/17/96
Security: Everyone

Newton Backup Utility: How to Expand SYSUPDT.EX (12/96)

=====

Article Created: 16 January 1996
Article Reviewed/Updated: 17 December 1996

TOPIC -----

I am running Windows 95 and am unable to expand the SYSUPDT.EX_ included on DISK1 of the Newton Backup Utility. There is no equivalent expand program included with Windows 95.

Is there another way to expand the SYSUPDT.EX_ under Windows 95?

DISCUSSION -----

The third-party utilities WinZip or PK Zip for Windows 95 will expand the files on the Newton Backup Utility disk. You can also use Microsoft's expand.exe utility. If you have Windows 95 on CD-ROM disc, there is a directory called OTHER\OLDMSDOS on the disc and located in this directory is expand.exe. Copy expand.exe from this directory to any location in the path statement to make it available for expanding the Newton file.

Microsoft Technical Support said if you have Windows 95 on floppy disks, you can copy expand.exe from another computer. This is not a copyright violation since it is included on the Compact Disc version of Windows 95.

Article Change History:
17 Dec 1996 - Added third-party utilities.

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Tech Info Library Article Number:19217



Tech Info Library

System 7.5 Update 2.0: What's Inside Control Panels? (3/96)

Revised: 9/23/96
Security: Everyone

System 7.5 Update 2.0: What's Inside Control Panels? (3/96)

=====

Article Created: 16 January 1996
Article Reviewed/Updated: 20 March 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

Macintosh System 7.5.3
What's Inside the Control Panels Folder?

About this document

If you're curious about the contents of the Control Panels folder, this document provides a brief description of each control panel. You can use these descriptions to help determine which control panels you may need and which ones you may not need.

What is a control panel?

A control panel is a small piece of software that allows you to change your computer's settings to meet your needs. For example, you can change the pattern or color of your computer's desktop using the Desktop Patterns control panel.

You can use the Extensions Manager control panel to turn off any control panel you don't need on your computer.

Depending on the type of computer you have, the contents of your Control Panels folder may vary. You might have control panels that were added by third-party applications, and you don't need all the control panels described below. For complete instructions on using control panels, see Macintosh Guide, available in the Guide (question mark) menu when the Finder is the active program.

Apple Menu Options: You can turn the submenus available in the Apple menu (for

recently used documents, programs and servers) on or off. You can also set the number of items that will appear in the menus. Works on all Mac OS-based computers that use System 7.5.

AppleTalk: You can specify AppleTalk settings (such as connection port and zone) for use with Apple's Open Transport networking. When you install Open Transport, the Network and MacTCP control panels are replaced with the AppleTalk and TCP/IP control panels. Works on all Mac OS-based computers that support Open Transport.

ATM GX: Makes your Type 1 fonts look sharp and clear at any point size—both on your screen and on paper. Improves the output of QuickDraw printers, such as the ImageWriter and StyleWriter series. Works on all Mac OS-based computers that use System 7.5

Auto Power On/Off: You can specify dates and times for your computer to automatically turn on or off, set a warning interval before turning off, and specify that your computer automatically restart after a power failure. Works only on computers that can be turned on from the keyboard (does not work on Macintosh PowerBook 500 models).

AutoRemounter: You can turn off the Losing Network Services message that appears when your PowerBook sleeps. You can also automatically reconnect your computer to any shared disks that were disconnected when your PowerBook went to sleep. Works on all Macintosh PowerBooks except models 100, 140, 145, 145B, and 170.

Brightness: You can adjust screen brightness. Works on Mac OS-based computers with onscreen brightness control, such as the Macintosh Classic and Classic II.

Button: You can disable the built-in volume and contrast buttons on the front of your computer. Useful in classroom situations with young students. Works on the Macintosh Performa and Macintosh LC 500 series of computers.

Cache Switch: You can turn processor caching for 68040-based Mac OS-based computers on or off. For compatibility reasons, processor caching may need to be turned off for some applications. Works on all 68040-based Mac OS computers, such as the Macintosh Quadra, Macintosh Centris, and Performa 400/500 models.

Color: You can set the color of highlighted text and window borders. Works on all Mac OS-based computers that use System 7.5 and have a color monitor.

CloseView: You can magnify your computer display for easier viewing. Works on all Mac OS-based computers except PowerPC-based models.

ColorSync System Profile: Part of the ColorSync system that provides consistent color across various types of equipment (printers, scanners, monitors, and so on). In the control panel, you can view and select ColorSync profiles. Works on all Mac OS-based computers that support ColorSync.

Control Strip: You can display or hide the Control Strip, and specify a font for Control Strip menus. With the Control Strip, you can control a variety of settings directly from your desktop, such as sound volume, monitor resolution, file sharing, and so on. Works with all Mac OS-based computers that use System

7.5.

Date & Time: You can set the date, time, and time zone on your computer. You can also set how dates and times are displayed. Works with all Mac OS-based computers that use System 7.5.

Desktop Patterns: You can change the pattern or color of your computer's desktop. Works with all Mac OS-based computers that use System 7.5.

Easy Access: You can press keys used in keyboard combinations one at a time (Sticky Keys), move the pointer using the numeric keypad (Mouse Keys), and set typing speed with audible response (Slow Keys). Works on all Mac OS-based computers that use System 7.5.

Extensions Manager: You can turn your computer's system extensions on or off. Extensions include items in the Extensions folder, control panels, and other startup programs in the System Folder. Works on all Mac OS-based computers that use System 7.5.

File Sharing Monitor: When file sharing is turned on, this control panel displays a list of users who are connected to your computer. Works on all Mac OS-based computers that use System 7.5.

General Controls: You can set various options, including desktop hiding, Launcher visibility at startup, folder protection to prevent folders and files from being deleted, insertion point blinking rate, menu selection blinking, and the default folder that appears in the Save dialog box. Works on all Mac OS-based computers that use System 7.5.

Keyboard: You can set the repeat rate and delay before repeat for your keyboard. Also lets you switch keyboard layouts. Works on all Mac OS-based computers that use System 7.5.

Labels: You can customize the color and text of file labels. (You can see labels in the Finder.) Works on all Mac OS-based computers that use System 7.5.

Launcher: You can open the Launcher window, where you can easily find and open programs. You can add items to the Launcher by placing an alias to your favorite applications, files, or folders in the Launcher Items folder in the System Folder.

MacTCP: You can control how your computer is connected to network services (such as the Internet) that use TCP/IP protocol. Works on Mac OS-based computers that use System 7.5. Does not work with Open Transport.

Macintosh Easy Open: You can customize the way a Mac OS or DOS/Windows document is translated, so you can open a document when you do not have the application that was used to create the document. Works on Mac OS-based computers that use System 7.5.

Map: You can locate popular cities around the world, and display longitude and latitude coordinates and local time. Lets you set the location of your computer. Works on all Mac OS-based computers that use System 7.5.

Memory: You can control memory settings, including disk cache, virtual memory, and RAM disk configuration. Works on all Mac OS-based computers that use System 7.5. Do not remove this control panel if you use a RAM disk.

Monitors: You can set the number of colors or shades of gray that are displayed. Sets monitor resolution for multiple scan monitors. On some Mac OS-based computers, the Monitors control panel is replaced by the Monitors & Sound control panel.

Monitors & Sound: A combined control panel that replaces the separate Sound and Monitors control panels. (It also replaces the Sound & Displays control panel.) You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on.) Works on PowerPC-based computers with PCI slots.

Mouse: You can set the tracking speed and double-click speed for your mouse. Works on all Mac OS-based computers that use System 7.5.

Network: You can choose between network options installed on your computer. Typical choices are LocalTalk, Ethernet, or Token Ring. Works on all Mac OS-based computers that use System 7.5. Does not work with Open Transport.

Numbers: You can control how numbers and currencies are displayed on your computer (for example, where decimal points appear). Works on all Mac OS-based computers that use System 7.5.

PC Exchange: Allows your Mac OS-based computer to read files from ProDOS and MS-DOS disks. You can specify the Mac OS application program used to open a DOS document. You can also use SyQuest and Bernoulli disks on your desktop. Works on all Mac OS-based computers that use System 7.5.

PC Setup: You can set options for the DOS Compatibility Card. Works on all Mac OS-based computers that support the DOS Compatibility Card.

Power Macintosh Card: Used with 68040-based Mac OS computers that have an expansion card with a PowerPC processor. You can select which processor to use. Works on all Mac OS-based computers with a Power Macintosh Upgrade card.

PowerBook: You can set PowerBook-specific items, including hard disk sleep, system sleep, and screen dimming. You can also set processor cycling and (on certain computers) reduced processor speed. Controls backlight intensity and built-in video. Works on all Macintosh PowerBooks.

PowerBook Display: You can duplicate the images on your PowerBook display on an external monitor. Useful for controlling a presentation from your PowerBook while displaying the presentation on a large room monitor. Works on the Macintosh PowerBooks 160, 165c, 180, 180c, 200, and 500 models.

PowerBook Setup: You can set a unique SCSI ID number for your PowerBook when

you're using SCSI disk mode. You can also specify a Normal or Compatible modem setting for your PowerBook. Use Normal for communication applications that are compatible with the Macintosh Communications Toolbox. Use Compatible for communication applications that are not compatible with the Communications Toolbox. Works on all Macintosh PowerBook 200 and 500 models.

PowerTalk Setup: You can turn collaboration services on or shut them off after a period of inactivity. You can also access your Key Chain. Works on all Mac OS-based computers that support PowerTalk.

Screen: You can control brightness and contrast for a built-in monitor. Works on all Mac OS-based computers with built-in monitors, such as the Macintosh Performa 400/500 models.

Serial Switch: Provides compatibility for some applications that use the printer or modem port. You can set the serial port option to Faster or More Compatible. Works on Macintosh IIfx and Macintosh Quadra 950 computers.

Sharing Setup: You can set file sharing options and specify a network name for your computer. Works on all Mac OS-based computers that use System 7.5.

Sound: You can set the alert sound and volume and specify a sound input and sound output source for your computer. On PowerPC-based computers with PCI slots, this control panel is replaced by the Monitors & Sound control panel.

Sound & Displays: A combined control panel that replaces the separate Sound and Monitors control panels. You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on). Works on PowerPC-based computers with PCI slots.

Speech: You can set options for hearing text read aloud by the computer. If you have Speakable Items software and a PlainTalk-compatible microphone, you can set options for giving spoken commands to the computer. Works on all Macintosh 660AV and 840AV computers. Also works on all PowerPC-based AV computers.

Startup Disk: You can select the disk used to start up your computer. Works on all Mac OS-based computers that use System 7.5.

TCP/IP: You can specify TCP/IP settings for use with Apple's Open Transport networking. When you install Open Transport, the Network and MacTCP control panels are replaced with the AppleTalk and TCP/IP control panels. Works on all Mac OS-based computers that support Open Transport.

Text: You can select from the text features for the script systems installed on your computer. Works on all Mac OS-based computers that use System 7.5.

Trackpad: You can set how far the pointer moves when you move your finger on the trackpad, and how fast you double-click. Works on all Macintosh PowerBook 500/5000 models.

Users & Groups: You can specify who can access your computer's hard disk when file sharing is turned on. Works on all Mac OS-based computers that use System 7.5.

Views: You can customize how information is displayed in Finder windows. Works on all Mac OS-based computers that use System 7.5.

WindowShade: You can set whether to hide a window by clicking on its title bar. Works on all Mac OS-based computers that use System 7.5.

Article Change History:

20 Mar 1996 - Added keyword.

08 Mar 1996 - Updated with latest information.

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Tech Info Library Article Number:19218



Tech Info Library

System 7.5 Update 2.0: What's Inside Extensions Folder? (8/96)

Revised: 8/5/96
Security: Everyone

System 7.5 Update 2.0: What's Inside Extensions Folder? (8/96)

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Article Created: 16 January 1996
Article Reviewed/Updated: 5 August 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

Macintosh System 7.5.3
What's Inside the Extensions Folder?

About this document

If you're curious about the contents of the Extensions folder, this document provides a brief description of each extension. You can use these descriptions to help determine which extensions you may need and which ones you may not need.

What is an extension?

An extension is a small file that changes how your computer operates. Unlike a control panel, you typically do not have any direct interaction with an extension. An extension makes the appropriate changes when you start your computer and remains active until you shut down your computer.

Depending on the type of computer you have, the contents of your Extensions folder may vary. You might have extensions that were added by third-party applications, and you don't need to have all the extensions described below. You can use the Extensions Manager control panel to turn off any extension you don't need.

9500 Guide Additions: Adds step-by-step instructions for using features specific to the Power Macintosh 9500 to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the

Finder is active.

A/ROSE: Allows communication between your computer's main logic board and NuBus cards that run the Apple Real-Time Operating System. Examples of such NuBus cards include the Apple Token Ring 4.16 NB card and the Apple Serial NB card.

About Apple Guide: Provides information about how to use Apple's onscreen help system. You can access About Apple Guide from the Guide (question mark) menu when the Finder is active.

AppleCD Audio Player Guide: Provides step-by-step instructions for using the AppleCD Audio Player. You can access the AppleCD Audio Player Guide from the Guide (question mark) menu, after you install and open AppleCD Audio Player.

Apple CD-ROM: Enables your computer to use an Apple CD-ROM drive.

Apple Color Printer: Enables your computer to print documents on an Apple Color Printer.

Apple Color SW Pro CMM: Contains color-matching information used by ColorSync 2.0 to maintain consistent color between documents.

Apple Guide: Adds Apple Guide functionality to your computer. Apple Guide is Apple's integrated onscreen help system.

Apple Photo Access: Part of the CD-ROM software for viewing Kodak PhotoCDs.

AppleScriptLib: Provides native support for AppleScript on PowerPC-based computers.

AppleScript: Enables automation of repetitive tasks in applications that support it.

AppleShare: Gives you access to shared disks on the network.

AppleTalk ImageWriter: Enables your computer to print documents on a networked ImageWriter II.

AppleVision Guide Additions: Adds step-by-step instructions to Macintosh Guide about how to use AppleVision displays with your computer. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Assistant Toolbox: This is the base extension for AutoRemounter. AutoRemounter works on Macintosh PowerBook computers and allows file synchronization, battery management, and easy mobile computing. It also provides support for a persistent RAM disk and deferred printing.

Audio CD Access: Lets you play audio CDs on your internal or external CD-ROM drive. Requires the AppleCD Audio Player or equivalent application to control the audio CD.

AV Guide Additions: Adds step-by-step instructions to Macintosh Guide about how to use AV monitors with your computer. You can access Macintosh Guide from the

Guide (question mark) menu when the Finder is active.

AV Setup: Used to control AppleVision displays.

Caps Lock: Enables Caps Lock on a Macintosh PowerBook. (PowerBook keyboards don't have a Caps Lock key.) When Caps Lock is turned on, an "up" arrow appears in the menu bar next to the Guide (question mark) menu. (Not needed on Macintosh PowerBook 500 series computers, which have a Caps Lock key.)

Clipping Extension: Lets you use the drag-and-drop feature to create clipping files on your desktop.

Color Picker: Presents a standard interface for color selection. Applications can use this tool to let you choose colors.

Color SW 2000 Series CMM: Color-matching information used by ColorSync 2.0 to maintain consistent color between documents printed on a Color StyleWriter 2000 series printer and other color devices.

Color SW 2400: Enables your computer to print documents on a Color StyleWriter 2200 or Color StyleWriter 2400.

Color SW Pro: Enables your computer to print documents on a Color StyleWriter Pro.

ColorSync: Matches colors on your display with the closest matching colors on your printers, scanners, and other devices.

EM Extension: Works with the Extensions Manager control panel, which lets you specify which extensions are turned on when you start your computer.

Energy Saver Guide Additions: Adds step-by-step instructions for using Energy Saver to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Ethernet (Built-In): Used by Open Transport to allow access to the built-in Ethernet port on your computer.

EtherTalk Phase 2: Lets you connect your computer to an Ethernet network.

File Sharing Extension: Enables your computer to share files and folders with other computers on your network.

Find File Extension: Lets you search for files and view the results in a single window. If you turn off this extension and choose Find from the File menu, you'll get the System 7.1 Find dialog box instead of the Find File window.

Finder Help: Provides Balloon Help support for the Finder.

Finder Scripting Extension: Allows you to use AppleScript to automate tasks in the Finder.

Foreign File Access: Enables your computer to work with CD-ROM discs whose

contents don't use the standard Mac OS file system (for example, ISO 9660 or High Sierra formats).

Graphics Accelerator: Provides video acceleration for the PCI video card.

High Sierra File Access: Part of the CD-ROM software that lets you view CDs with High Sierra file systems.

IIci/IIsi Monitors: Describes the capabilities of the built-in video card for the Macintosh IIci and IIsi. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

ImageWriter: Enables your computer to print documents on an ImageWriter or ImageWriter II connected to a serial port.

ImageWriter LQ: Enables your computer to print documents on an ImageWriter LQ connected to a serial port.

ISO 9660 File Access: Part of the CD-ROM software that lets you view CDs with ISO 9660 file systems.

LaserWriter: (version 7.2) Enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter 300: Enables your computer to print documents on a Personal LaserWriter 300, LaserWriter Select 300, or a Personal LaserWriter LS.

LaserWriter 8: (version 8.x) A PostScript level II print driver that enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter IISC: Enables your computer to print documents on a LaserWriter IISC connected to a SCSI port. Replaced by Personal LaserWriter SC.

LW Select 310: Enables your computer to print documents on a LaserWriter Select 310.

MacinTalk Pro: Lets your computer read text documents in human-like voices. Older computers (with 68030 or 020 processors) should use MacinTalk 3 instead.

MacinTalk 3: Lets your computer read text documents in human-like voices. Used by MacinTalk version 3. Computers with 68040 or PowerPC processors should use MacinTalk Pro instead.

Macintosh Guide: Contains step-by-step instructions for working in the Finder. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

MacTCP Token Ring Extension: Enables you to connect to a Token Ring network using TCP/IP protocol.

Mailbox Extension: Supports your PowerTalk mailbox. Enables the Mailbox icon to appear on your desktop.

Monitors & Sound Guide Additions: Adds step-by-step instructions for using the Monitors & Sound control panel to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

My Speech Macros: Supports the Speech Macro Editor.

Network Extension: Lets you set Personal File Sharing from the Finder.

Network Guide Additions: Adds step-by-step instructions for using your computer's network to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

ObjectSupportLib: A library developers use to support AppleScript on PowerPC-based computers.

Open Transport Guide Additions: Adds step-by-step instructions for using Open Transport to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Open Tpt AppleTalk Library: Used by Open Transport for the AppleTalk communication protocol.

Open Tpt Internet Library: Used by Open Transport for the TCP/IP communication protocol.

Open Transport Library: Used by Open Transport.

OpenTptAppleTalkLib: Used by Open Transport for AppleTalk communication protocol.

OpenTptInternetLib: Used by Open Transport for the TCP/IP communication protocol.

OpenTransportLib: Used by Open Transport.

PB 500 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 500 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 190 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 190 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 2300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 2300 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 5300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 5300 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Personal LaserWriter SC: Enables your computer to print documents on a Personal LaserWriter SC or a LaserWriter IISC.

Portable StyleWriter: Enables your computer to print documents on a Portable StyleWriter.

PowerBook Guide Additions: Adds PowerBook-specific topics to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PowerBook Monitors Extension: Describes the PowerBook built-in display. If you remove this file, your computer can still use the PowerBook video card and you can still select the number of colors your screen can display, but certain options (such as gamma settings) may not be available.

PowerPC Monitors Extension: Supports the AudioVision 14 monitor.

PowerTalk Extension: Supports PowerTalk services. Includes information used by the PowerTalk key chain.

PowerTalk Guide: Provides step-by-step instructions for using PowerTalk. You can access the PowerTalk Guide from the Guide (question mark) menu, after you install PowerTalk.

PowerTalk Manager: Manages your PowerTalk mailbox and services.

Printer Descriptions: Contains descriptions for all printers that use the LaserWriter 8 printer software.

Printer Share: Provides the ability to share non-network printers (for example, the StyleWriter II) across a network.

PrintMonitor: Controls the printing process when background printing is activated.

Quadra AV Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Centris AV computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

Quadra Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Macintosh Centris computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

QuickTime: Provides built-in multimedia support for applications.

QuickTime PowerPlug: Provides native support of QuickTime for PowerPC-based computers when used in combination with QuickTime 2.0. This extension must be used in addition to QuickTime 2.0.

QuickTime Musical Instruments: Supports 30 Roland Standard MIDI sound samples that can be accessed by QuickTime applications with no additional MIDI equipment.

Scripting Additions: Extends the AppleScript language with special features, such as finding the date or time of day. With scripting additions installed, AppleScript acts as if these features are part of the language. Scripting additions are required only when a script uses them.

Serial (Built-In): Used by Open Transport to allow access to the built-in serial port on your computer.

Shared Library Manager: Provides native support for Open Transport.

Shortcuts: Explains common keyboard equivalents and other shortcuts to use in the Finder. You can access Shortcuts in the Guide (question mark) menu when the Finder is active.

SimpleText Guide: Provides step-by-step instructions for using SimpleText. You can access the SimpleText Guide from the Guide (question mark) menu, after you open SimpleText.

Speech Guide Additions: Adds step-by-step instructions for using speech recognition to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Speech Recognition: Provides support for speech recognition.

SR Monitor: Used to monitor and interpret speech.

StyleWriter II: Enables your computer to print documents on a StyleWriter II. Replaced by StyleWriter 1200.

StyleWriter 1200: Enables your computer to print documents on a StyleWriter, StyleWriter II, or StyleWriter 1200.

SystemAV: Used for audio-video input.

System Speech Rules: Supports voices and speech dialects.

TokenTalk Phase 2: Used by the Apple Token Ring card.

TokenTalk Prep: Supports TokenTalk Phase II.

Tutorial Items: Provides instructions for learning basic skills on your computer. You can access the tutorial from the Guide (question mark) menu when the Finder is active.

Video Guide Additions: Adds step-by-step instructions for using video to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Video Startup: Used by the Apple Video Player.

WorldScript Power Adapter: Supports language kit software on PowerPC-based computers.

Article Change History:

05 Aug 1996 - Removed keyword.

14 May 1996 - Updated reference to Assistant Toolbox

09 Apr 1996 - Added keyword.

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Tech Info Library Article Number:19219



Tech Info Library

System 7.5 Update 2.0: What's Inside the System Folder? (7/96)

Revised: 7/3/96
Security: Everyone

System 7.5 Update 2.0: What's Inside the System Folder? (7/96)

=====

Article Created: 16 January 1996
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article contains one of several ReadMe documents installed with System 7.5 Update 2.0.

DISCUSSION -----

Macintosh System 7.5.3
What's Inside the System Folder?

About this document

If you're curious about the contents of the System Folder, this document provides a brief description of what's inside.

Depending on the type of computer you have, the contents of the System Folder may vary. You might have items that were added by third-party applications, and you don't need all the items described below.

Finder: Displays the desktop area, where you work with files and disks, and keeps track of your files.

Apple Menu Items folder: When you place an item (folder, application, or document) in this folder, it appears in the Apple menu. To create submenus, you can place folders inside of folders.

Clipboard: Temporarily stores the last item you cut or copied from a document.

Control Panels folder: Contains individual control panels. You use control panels to adjust your computer's settings. See the "About the Control Panels" document in the Apple Extras folder for more information.

Control Strip Modules folder: Contains modules used by the Control Strip. The

Control Strip works on Macintosh PowerBooks and Mac OS-based computers that support AppleVision displays.

Extensions folder: Contains individual extensions that modify the operation of your computer. Unlike a control panel, an extension works automatically, without your intervention. See the "About the Extensions Folder" document in the Apple Extras folder for more information.

Fonts folder: Contains font suitcases or individual font files. You can place up to 128 suitcase or font files in this folder. PostScript fonts are not included in the 128 file limit. Font suitcases can hold any number of font files, up to a limit of 16 MB.

Launcher Items folder: Contains files, folders, and applications that appear in the Launcher window.

Macsbug: A debugger used by programmers to help diagnose problems with programs, extensions, and so on. Unless you're programming, you don't need Macsbug.

Note Pad: Stores text placed on the Note Pad. (The Note Pad is available in the Apple menu.)

Preferences folder: Contains preferences files created by individual applications. A preference file determines application settings.

PrintMonitor Documents folder: Contains printer files of documents waiting to be printed (if background printing is on in the Chooser).

Scrapbook: Stores items placed in the Scrapbook. (The Scrapbook is available in the Apple menu.)

Shutdown Items folder: Contains applications or scripts that run automatically when you shut down your computer. You can add or remove items from this folder.

Startup Items folder: Contains applications or scripts that run automatically when you start your computer. You can add or remove items from this folder.

System file: Contains some system-wide resources, such as sounds and keyboard layouts.

Universal Enabler: Provides additional system software for your computer.

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

02 Jul 1996 - Added Fax Doc word

20 Mar 1996 - Added keyword.

08 Mar 1996 - Updated with latest information.

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Tech Info Library Article Number:19220



Tech Info Library

KidSoft (1/96)

Revised: 1/16/96
Security: Everyone

KidSoft (1/96)

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Article Created: 15 January 1996

KidSoft

10275 North De Anza Blvd.
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Company Profile:
Distributor of children's educational and entertainment software.

Support Information Services

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Tech Info Library Article Number:19221



Tech Info Library

PowerShare: Error Code 83 Meaning (1/96)

Revised: 1/16/96
Security: Everyone

PowerShare: Error Code 83 Meaning (1/96)

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Article Created: 16 January 1996

TOPIC -----

This article describes what the PowerShare error code 83 means.

DISCUSSION -----

The PowerShare error code 83 is an internal error: rServerNumbersSame. Somehow two replicas of the Folder Directory (dNode #2) are using the same server number (which forms the top half of creationIDs). This is a bad error which causes the replication between the two replicas to fail.

To fix the error, a user should remove the copy of the folder directory from the server reporting the error. Then re-create the copy once the server log indicates that the removal has completed successfully.

Support Information Services

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Tech Info Library Article Number:19222



Tech Info Library

Newton 2.0 OS: New Modem Setup Choices (1/96)

Revised: 1/17/96
Security: Everyone

Newton 2.0 OS: New Modem Setup Choices (1/96)

Article Created: 17 January 1996

TOPIC -----

There are several different modem setups available in the Newton 2.0 OS preferences. What kinds of modems are they for and how do they compare with the modem setups included with previous Newton Modem Enabler 1.0?

DISCUSSION -----

There are eight different choices for modem setups in the Newton 2.0 OS. The different setups are described below. If the setup had a different name in the Newton 1.x OS, it is listed after the description. New setups are also labelled after the description.

- Newton Modem -- For use with the either the external Newton modem or the PCMCIA Newton modem.
- Moto Cellular -- For use with the Motorola CELlect PCMCIA and Motorola CELlect pocket modems connected to any data-capable Motorola MC2 Microtac cellular phone. Connection speed is locked to 4800 baud. Formerly MotoCELlect Cellular in the Newton 1.x OS.
- Moto Cellular Fast -- Same as above but connection speed is 9600 baud. New for Newton 2.0 OS.
- Moto Landline -- For use with the Motorola CELlect PCMCIA and Motorola CELlect pocket modems connected to standard telephone lines. Formerly MotoCELlect 14.4 in the Newton 1.x OS.
- Hayes 28.8 -- For use with Hayes compatible 28.8 modems. New for Newton 2.0 OS.
- Hayes EC -- For use with modems (including Hayes brand modems) that implement the complete Hayes command set. Formerly Hayes Error-Correcting in the Newton 1.x OS.

- Hayes Compatible -- For use with the majority of other modems that implement the basic Hayes commands, but use a different set of commands for configuring features, such as error correction and flow control.
- Hayes Basic -- For use with Hayes compatible modems that do not support features such as error correction or data compression. This setup can also be used when the other Hayes setups fail. New for Newton OS 2.0.

Support Information Services

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Tech Info Library Article Number:19223



Tech Info Library

Apple Media Tool 2.0: Runtime For Windows No Sound Card (1/96)

Revised: 1/17/96
Security: Everyone

Apple Media Tool 2.0: Runtime For Windows No Sound Card (1/96)

Article Created: 17 January 1996

TOPIC -----

How can I create a Runtime for Windows in Apple Media Tool 2.0 that will work on a computer that does not have a sound card?

DISCUSSION -----

How To Edit The PROJ.INI File

The below file is the PROJ.INI file that is created with Runtime Maker 2.0 that can be opened with SimpleText and edited in the following way:

Step 1

Find ;REQUIRE SOUND=yes or no.

Step 2

Remove the semicolon - that is a comment.

Step 3

Put No after the = sign and save the file.

Contents Of The PROJ.INI File

The PROJ.INI file contains this information:

```
[Media]
;Media Folder=
;TRANSPARENCY=driver or bitmap
```


;REQUIRE SOUND=yes or no

[FONT]

Chigago=System

Courier=Courier New

Geneva=Arial

Helvetica=Arial

Monaco=FixedSys

New York=Arial

Symbol=Symbol

Times=Times New Roman

Palatino=Times New Roman

Osaka=ÇlÇr ñæí©

[SIZE]

;HEAP=640

;STACK=64

;MINIMUM RAM FOR BIT DEPTH 8=4096

;MINIMUM RAM FOR BIT DEPTH 16=4096

;MINIMUM RAM FOR BIT DEPTH 32=4096

Support Information Services

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Tech Info Library Article Number:19224



Tech Info Library

PowerBook 5300 Series: Wide Black Bands on the Screen (1/96)

Revised: 1/17/96
Security: Everyone

PowerBook 5300 Series: Wide Black Bands on the Screen (1/96)

=====

Article Created: 17 January 1996

TOPIC -----

Why are there two wide (about 1/4 inch) black bands (borders) across the top and bottom of my PowerBook computer's display? I can still see the menu bar and the Trash.

DISCUSSION -----

There are two cases where black bands can occur on the screen of PowerBook 5300 computers as you describe.

1) A Macintosh PowerBook 5300c computer with 512K of Video RAM (VRAM). The model that comes with 8 MB of RAM on the Logic Board does have the same display as the 5300c which has 1 MB VRAM, so it will display thousands of colors. When "Thousands" are checked in the monitor control panel, the display reduces from 640x480 to 640x400 just like on the PowerBook 540c, 270c, and 2300c computers. This causes black bands on the top and bottom of the screen.

2) A Macintosh PowerBook 5300ce computer used with a 13" or 14" monitor. If mirroring is turned on, the internal display will have to reduce from 800x600 down to 640x480 and will cause a black band to appear around the outside edge of the screen.

Support Information Services

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Tech Info Library Article Number:19225



Tech Info Library

Newton 2.0 OS: Cannot Backup System Update (1/96)

Revised: 1/17/96
Security: Everyone

Newton 2.0 OS: Cannot Backup System Update (1/96)

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Article Created: 17 January 1996

TOPIC -----

Sometimes when I do a card backup on my Apple MessagePad 120 running Newton OS 2.0, it fails with a message that says, "The system update could not be backed up."

DISCUSSION -----

This is a known issue relating to memory management. If you experience this error message, you can simply reset the Apple MessagePad and then do the backup after the card is mounted.

How to Reset the Apple MessagePad

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You need to perform a "soft" reset. A Soft Reset resets the Newton OS. It does NOT erase any data or handwriting training on the Apple MessagePad. However, you should check the Time in the Date and Time Prefs preferences file. The clock in the Apple MessagePad may lose some time when you press the Reset button.

Step 1

Press and release the Reset button in the battery compartment for two seconds.

Step 2

If the Apple MessagePad is on, it restarts itself. If the Apple MessagePad is off, it turns itself on.

Support Information Services

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Tech Info Library Article Number:19226



Tech Info Library

MAE 2.0: Technical Note 1 of 3 (6/96)

Revised: 6/25/96
Security: Everyone

MAE 2.0: Technical Note 1 of 3 (6/96)

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Article Created: 17 January 1996
Article Reviewed/Updated: 25 June 1996

TOPIC -----

This article is the Macintosh Application Environment (MAE) 2.0 technical note.

DISCUSSION -----

Table Of Contents

-
- The MAE Desktop and the Finder
 - File System

See Also

-
- MAE 2.0 FAQ (Frequently-Asked Questions), available on
<http://www.mae.apple.com> or via anonymous ftp from [ftp.support.apple.com](ftp://ftp.support.apple.com)
in directory /pub/mae/info/FAQ/2.0.
 - MAE 2.0 README.TXT (on MAE 2.0 product CD-ROM)

The MAE Desktop and the Finder

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Support for MacsBug, Drag and Drop

Both MacsBug (a popular tool for debugging Macintosh applications) and Drag and Drop (a utility to assist Macintosh application launching) are not supported under MAE. Attempts to use either of these applications will have unpredictable results.

Distributing Common Extensions, Control Panels, Preferences, etc.

When MAE is started for the very first time for a particular user, it creates a

System Folder in the user's \$HOME directory by copying the files located in apple/sys directory. These system files can then be customized by the user to suit their particular MAE environment. If numerous users will be utilizing the same mail application, meeting planner or other productivity application, it is likely that one or more files will need to be added to their System Folder. By adding these files (typically Extensions and Control Panels) to the apple/sys directory (in their respective folders), a new System Folder can be created for each new user that already contains the necessary files. This way, only the application may need to be copied to the user's \$HOME directory. In a similar fashion, you can distribute preset Preferences files as well. Note that this method of distributing common resources does not populate existing System Folders.

For example, you might wish to place all the necessary Extensions and Control Panels in the apple/sys directory for a network-based mail application, and include the Preferences file for that application. This would ensure that the user already had the proper name and location of the mail server as well as any additional system resources required by the application.

Using Global Fonts to Minimize Disk Usage

By default, MAE users do not share their individual Fonts directories. Since each user must be able to modify the directory (for both adding and deleting fonts), management of the Fonts directory as a modifiable shared resource would be difficult. As an alternative, have the system administrator create a globally accessible Fonts directory which is read-only and allow only the superuser to add or delete fonts. In this manner, the directory can be populated with many fonts that would otherwise be duplicated for each user, thus preserving more disk space. Once this has been done, each user can delete their private Fonts directory and create a symbolic link to the shared Fonts directory (using `ln -s').

Icon Placement When Resizing Windows

Whenever the display window for the MAE desktop is resized, all icons are aligned on the right side of the window. The Trash will be moved to the lower right corner and the startup drive (which always appears as "/" in MAE) will appear on top. Any other icons, including the user's home directory, are placed below and to the left of the startup drive. To avoid the loss of any custom icon placement you can iconify MAE if more workstation desktop space is desired.

Flashing Menu Bar After Exporting to X

If text is selected from an open application such as "Note Pad" and exported to X (using the "Export to X" key from the MAE toolbar), the Finder menu bar may flash or disappear when returning focus to MAE. If this happens, clicking on the Macintosh Desktop within MAE will restore the menu bar.

Rebuilding the Desktop

If MAE is started with the -rebuild option, MAE will search for files in the System Folder and appledir. If you have applications and documents that are not in these directories, they will revert to generic icons until they are used

again by the Finder. This is different from native Macintosh behavior and was implemented to prevent MAE from potentially trying to resolve icons for multiple remotely-mounted file systems, which could take a great deal of time. However, you can put symbolic links into a directory of your choosing and have those file systems searched during a Desktop rebuild. To do this, start MAE with the `-applepath <dir>` option, where `<dir>` is the full pathname of the directory. For example, if your symbolic links are located in a directory whose path is `/usr/joe/rebuild`, you can start MAE with

```
mae -rebuild -applepath /usr/joe/rebuild
```

Files that are contained within folders that have been assigned a label from the Finder (for example, "Hot") will revert to an unlabeled state when the Desktop is rebuilt. This behavior does not occur with files that are located on the Desktop itself.

Creating Aliases by Dragging Files to the MAE Desktop

When you drag an item to the MAE desktop, MAE creates a Macintosh alias to the item; the item itself remains in its original location. The name of the alias is the name of the original item plus the word "alias"; it is displayed in italics. For example, if you drag a file called "My.file" to the desktop, MAE creates an alias called "My.file alias." You can open the original item by double-clicking its alias on the desktop. If you delete the alias by dragging its icon to the Trash, the original item is not deleted. (For more information about aliases, see "Creating an Alias" in the MAE USER'S GUIDE, Appendix A.)

Aliases themselves are treated no differently from other items; dragging an alias to the desktop creates an alias to the alias to appear on the desktop. For example, if you drag an alias called "Status.report alias" to the desktop, MAE creates an alias called "Status.report alias alias."

Because this treatment of aliases differs from standard Macintosh procedure, it can confuse experienced Mac users. For example, in a Macintosh, to bring an alias of an item to the desktop, you select the item, make an alias using the MAKE ALIAS entry in the finder's FILE menu, then drag the alias to the desktop. The same sequence of events in MAE causes a second-level alias to appear on the desktop, and leaves the first-level alias in the same folder as the original item. The alias on the desktop appears to function normally, but it actually refers to the first-level alias, not to the original item. If you delete the first-level alias ("Status.report alias"), you will no longer be able to use the second level alias on the desktop ("Status.report alias alias") to refer to the original item.

Aliases and Multiple UNIX File Systems

If an item that is the target of an alias is moved to a different file system, the linkage between the alias and the original item is broken; double-clicking the alias will no longer open the original item. MAE displays an alert box, telling you that it cannot locate the original item. For example, if you create an alias to a file located in `/usr`, and then drag the file to your home directory, MAE won't be able to open the file when you double-click its alias. Similarly, if you select the alias, choose Get Info from the File menu, and

click the Find Original button, MAE displays an alert box, telling you that the command could not be completed because the original item could not be found.

If the Message "~ not found" Appears When You Launch a UNIX Command

MAE allows you to add options and arguments to a UNIX command when you launch the command from the MAE desktop. When you hold down the Control key while you double-click a UNIX file, the command-launch dialog box appears. You can add options and arguments to the command by typing them in the command-launch dialog box. (See "Adding Command Options when Opening a UNIX Command File" in the MAE USER'S GUIDE.) However, some special symbols commonly used in UNIX commands are not treated by MAE in the same way they are in UNIX, and should not be included in the command-launch dialog box. These include the tilde (~) character and environment variables such as \$HOME.

Changing the Font Size on the Desktop

Use the Views Control panel to select the size of the desktop font used for filenames.

Find File

The Finder's Find File utility may find the same file more than once if it traverses symbolic links. Because it reports the actual path, rather than the symbolic path, you may see items repeated with the same pathname.

Remote mountpoints will be searched by the Finder's Find File utility, even though the option in that utility says "Find items on Local Disks". MAE treats all UNIX mount points as local. The "mounted servers" option refers to AppleShare servers mounted via the Chooser.

File System

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Application Location for Optimal Performance

To obtain the best possible performance from your Macintosh applications with MAE, you can place all applications in one central directory on a local disk. By doing this, you will decrease the time it takes to load the application into memory, as applications located from remote volumes will be subject to network performance. Even if you are not able to store the applications locally, placing them in a single directory will enable MAE to better associate documents with their creator applications. This is performed the very first time MAE is launched, and is referred to as 'rebuilding the desktop.' For more information on this strategy (and usage of the '-applepath' command line switch), please refer to Tech Note #2, available via FTP or via WWW.

File Type of UNIX Files

An MAE Get Info operation on a UNIX file, either a text file or a binary file, shows the type of file as "MAE Helper Document". This is normal MAE behavior, to support UNIX file launching.

How does MAE handle case-sensitive MAE file names?

MAE has two modes of treatment for file names:

- Case-insensitive (the default mode).
- Case-sensitive, selected by the -caseon option on the MAE command line.

In the default (Case-insensitive) mode, MAE behaves like a Macintosh. The file name "a" is treated the same as the file name "A". If you have a file named "a" and try to save a new file named "A", MAE will ask you to confirm that you want to replace the file, as in MacOS. If two UNIX files "a" and "A", are in the same directory, MAE will see only one of them.

When MAE is executed with the -caseon option, file name treatment is case-sensitive. The files "a" and "A" are treated differently. You can have both a file named "a" a new file named "A" in the same directory. Both files will show up in the Standard File dialogs.

Because the determination of case sensitivity is happening at the lowest level of the file system, the Finder and all applications share the file view described above.

Installation onto AFS filesystems (HP)

On HP-UX systems, MAE installation may fail with the error message "Read-only filesystem". Also, a bug in the MAE installer is sensitive to extremely large AFS file systems.

A simple workaround to circumvent these difficulties: install MAE on a local or NFS volume, then copy the entire result - the apple directory, and the System Folder and .mac folders, if they exist - to AFS.

AppleSingle and AppleDouble File Formats

By default, MAE stores files in the UNIX file system in a format called "AppleSingle", which is unlike MacOS files, which have both resource and data forks. In AppleSingle-format files the resource fork information is prepended to the data fork, creating one file -- a larger file that you see in UNIX.

This explains why using MAE to copy files from a CD or from network-based volumes can result in source and destination files of different sizes, as viewed by the UNIX file system.

If this behavior is unacceptable, you can force MAE to default to saving files as AppleDouble by adding the -filedouble option to the MAE command line. This forces MAE to keep MacOS files as separate data and resource forks. From MAE, it will appear as one file, but within UNIX, you will see a file name 'name' (data fork) and '%name' (resource fork). The file 'name' will then be the same size in UNIX as the Finder reports.

Also, UNIX applications may fail to recognize MAE AppleSingle files, because

they see them as corrupted. This "corruption" can occur in a number of different ways. For example, under FileShare, if a UNIX file is dragged from a Macintosh to MAE, the file will be written by MAE in AppleSingle format, which may make it unusable. This occurs because the Macintosh doesn't know anything about UNIX files, so when it sends one to MAE, MAE thinks it's a Macintosh file and writes it to disk accordingly.

This situation does not occur between two MAE sessions that are sharing files, since MAE recognizes UNIX files for what they are and does not store "resource" information about them. When dragging a UNIX file between two MAE sessions, MAE correctly treats the file as a UNIX file.

Using ftp utilities such as Fetch from MAE can also be problematic. When "getting" a file, Fetch will pass the file to MAE to be written to disk. This works fine for Macintosh files since they will be written as AppleSingle files. However, when "getting" a UNIX file, MAE will likewise write this file as an AppleSingle file, which can make it unusable by UNIX applications.

Text files are handled differently by MAE. Text files are always written by MAE in AppleDouble format to facilitate reading and writing by both Macintosh and UNIX applications (newline characters are automatically translated by MAE; they are stored on disk as UNIX newlines). So in the examples above, when dragging a text file from a Macintosh to MAE or when Fetch gets a file using ftp "Text" mode (that is, ASCII mode), MAE will write the file in AppleDouble format.

NOTE: Fetch 3.0 and higher will not work with MAE 2.0.2, use version 2.x.x.

As a rule of thumb, it's best to use UNIX to work with UNIX files and MAE to work with Macintosh files. If your environment requires the same (non-text) files to be regularly handled by both MAE and UNIX, then you're probably a candidate for running MAE in AppleDouble mode, by launching it with the -filedouble option.

If this behavior is unacceptable, you can force MAE to default to saving files as AppleDouble by adding the -filedouble option to the MAE command line. This forces MAE to keep MacOS files as separate data and resource forks. From MAE, it will appear as one file, but within UNIX, you will see a file name 'name' (data fork) and '%name' (resource fork). The file 'name' will then be the same size in UNIX as the Finder reports.

Space for /users (HP)

On HP Series 700 workstations the capacity of /users may need to be increased to provide space for an MAE System Folder for each user. When this necessitates the creation of a new file system, the new file system must support long file names.

The process below copies the contents of /users to a new MAE-compatible file system:

- Log on as superuser
- If /users is a MOUNTED FILE SYSTEM, create a new mount point /users.temp

and remount /users on /users.temp. If /users is IN THE ROOT FILE SYSTEM, change the name of /users to /users.temp by using the command

```
mv /users/users.temp
```

- To create a new file system, start SAM (System Administration Manager) by typing the command

```
sam &
```

- Use SAM to perform these steps:

- 1) Select "Disks & File Systems" -> "CD-ROM, Floppy and Hard Disks"
- 2) Select the new SCSI Drive, highlight 'Action' and select 'Add a Hard Disk'
- 3) Select 'Modify Defaults' and select "Use Long File Names" (See NOTE)
- 4) Select OK and mount the new File system to /users
- 5) exit SAM

NOTE: The "Use Long File Names" option results in a file system that will support file names longer than 14 characters. The SAM default supports file names only up to 14 characters, and prevents MAE from properly creating long Macintosh file names on that file system.

- Now copy the contents of /users.temp to the new file system as follows:

```
cd /users.temp  
find . -print -depth | cpio -pdumv /users
```

- Before proceeding, verify that the contents of /users are the same as the contents of /users.temp.
- If /users.temp is a MOUNTED FILE SYSTEM, unmount it. If /users.temp is IN THE ROOT FILE SYSTEM, remove it with the command

```
rm -rf /users.temp
```

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25 Jun 1996 - Updated Fetch information.

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MAE 2.0: Technical Note 2 of 3 (1/96)

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TOPIC -----

This article is the Macintosh Application Environment (MAE) 2.0 technical note.

DISCUSSION -----

Table Of Contents

- Networking
- Floppy Disks and CD-ROMs

See Also

- MAE 2.0 FAQ (Frequently-Asked Questions), available on
<http://www.mae.apple.com> or via anonymous ftp from [ftp.support.apple.com](ftp://ftp.support.apple.com)
in directory /pub/mae/info/FAQ/2.0.
- MAE 2.0 README.TXT (on MAE 2.0 product CD-ROM)

Networking

Selecting AppleTalk Zones

Under some circumstances, a user of MAE may not be able to select a different default AppleTalk zone even though there may be others available. For example, if two or more copies of MAE are executing on the same physical workstation, none of the MAE users will be able to change zones. Another possible scenario is that AppleTalk has not shut down properly (that is, it was still up even after all copies of MAE were shut down). To ensure that AppleTalk is not currently running, execute the command ``appletalk -D'`. (For more information on usage of the ``appletalk'` command, reference the next topic.)

Using the `appletalk' Unix Command

As part of the MAE v2.0 distribution, Apple includes a utility to assist in management and diagnosis of problems with the AppleTalk services that are part of MAE. With this utility you can stop or start AppleTalk services independent of MAE, as well as obtain detailed information on the AppleTalk services currently executing on that workstation. For more information, reference Chapter 5 of the `MAE System Admin Guide', a DocViewer document included with your CD-ROM distribution of MAE.

(Sun only) File Modes For Non-le0 Interfaces

By default, device drivers used for LAN interfaces under Solaris are designated as read-only for the superuser (root). As MAE allows any non-privileged user to bring up AppleTalk (which is normally done the first time MAE is started on each workstation), it is necessary that the file permissions be changed to world-readable. The MAE v2.0 installation script automatically changes the permission for the device `le0'; all others need to be made world-readable before MAE will be able to use those devices.

Personal File Sharing and MAE

For some system administrators, providing MAE users with the capability of sharing Unix directories via AppleShare File Sharing may present a possible security risk. To prevent this from happening, remove the file named `File Sharing Extension' from the Extensions folder located inside the apple/sys directory. Now, when the System Folder for the new user is created, the Extension will not be present. This will prevent the user from sharing directories on the workstation.

Remote (Network) File System Performance and Timeouts

When a user's System Folder or Apple directory (appledir) resides on a network file system (for example, NFS), performance will be affected by the configuration and by the loads on the file servers involved. In some cases, this affects MAE behavior. For example, to avoid "hanging" forever because of communication failure with an NFS host (a problem in MAE 1.0), MAE v2.0 periodically reviews ongoing file operations and will abort any file system operation that loses communication for a specified threshold time (called the "File System Timeout"). This timeout is ten seconds by default. This means that if MAE waits for a response from an NFS-mounted file system for more than the timeout, MAE gives up on the access and returns failure. If the operation is non-critical (for example, a directory listing), MAE treats that file system as inaccessible. If the access is critical to MAE's operation (such as the Finder) then MAE will hang.

In configurations with heavy network traffic (resulting in slow network response), MAE's default timeout setting may be too short. If so, you may see an error such as "... because the disk `/' cannot be found." Using the -fstimeout option at startup will increase the amount of time that MAE will wait before giving up on a remotely-mounted filesystem and help to prevent MAE from hanging. For example, you can start MAE with the command `mae -fstimeout 30' which sets the timeout to 30 seconds. This value should be sufficiently high for networks

where response time is variable due to heavy loads. If -fstimeout is set to 0, the heartbeat function is disabled and MAE will wait indefinitely for a remote file system (this is identical to MAE v1.0).

If network response time is still affecting the performance of MAE after you increase the value of -fstimeout, consider putting the System Folder or Apple directory (appldir) on a local volume.

Appletalk Options

The following AppleTalk command options are missing from the man pages:

appletalk - enables you to configure and display AppleTalk network interfaces

-b hardware-interface Identifies the hardware interface that EtherTalk is to use. The value of hardware-interface is a string, such as le0 through le9 for Solaris, lan0 through lan9 for HP-UX, that identifies the Ethernet hardware on a computer that has more than one Ethernet card. This option must be used with the -u option. The default hardware interface is le0 for Solaris and lan0 for HP-UX. Only interfaces 0 through 9 are supported.

-u Makes AppleTalk active and stores the state of AppleTalk in PRAM. AppleTalk will stay active until an appletalk -D is issued.

(Sun only) Unloading AppleTalk streams modules on Solaris systems

On Solaris systems, the AppleTalk stream driver 'atalk' and three other AppleTalk stream modules, 'at_atp', 'adsp' and 'at_sig', are dynamically loaded into the system when MAE starts up. The driver and the modules will not be unloaded until the workstation is rebooted. If a 'modunload' command is issued on any one of the stream module, it will cause the system to crash.

Problems posting articles or sending mail using NewsWatcher

Users are able to browse and select news groups to read, but are unable to post. This is due to an incompatibility between NewsWatcher and MAE 2.0.

MacTCP Ping

MacTCP ping does not work correctly on HP-UX and Solaris. As a workaround, use the UNIX 'ping' command.

Floppy Disks and CD-ROMS

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(HP only) Using Older (Single Speed) CD-ROM Drives

There may be a problem using older HP CD-ROM drives (single speed Toshiba XM-3301TA) in conjunction with an HP Model 715 workstation. Typically, this is manifested as a problem where MAE cannot mount a CD-ROM. HP's Support Center has verified that there is a known SCSI timing problem when the older drives are

used with a Model 715. As a workaround, HP has suggested either (1) another SCSI device is placed between the 715 and the CD-ROM player, or (2) usage of a SCSI cable greater than one meter and less than six meters.

MAE and Microsoft Office

Microsoft has instituted a new diskette format (known as DMF -- Distributed Media Format) that permits distribution of software on a smaller number of diskettes. This is accomplished by using a format of 1.6M which cannot be used by current PC-compatible (360K/720K/1.4M) or Apple (400K/800K/1.4M) floppy drives unless read by the installer program. The special installer modifies the hardware floppy driver to support the new format. MAE does not use standard Macintosh drivers to support floppy drives. As a result, the installer cannot be run from disks that support DMF.

To properly install MS Office for use with MAE, you can do one of the following:

- 1) Install from a CD
- 2) Install from a diskette set that does not use DMF
- 3) Install using a DMF diskette set onto a native Macintosh and use AppleShare to transfer the files to MAE.

When running the install, select a new folder when asked to specify the directory for installation. The directory created will then be the installation folder, and the install will proceed normally. Lastly, when asked to update Excel graphs, select 'No.'

(Sun only) Problems Using MS-DOS or Solaris File System Disks on MAE

If you insert a floppy disk formatted for MS-DOS or Solaris into a Sun workstation and try to mount it in MAE by clicking the Mount Floppy/CD button, MAE displays an alert box. The alert box appears because Solaris mounts the floppy disk before MAE has the opportunity to mount it. Thus, MAE is not able to access the floppy disk. (The icon for the floppy disk appears on your Solaris desktop.) As a result, you can not reformat MS-DOS disks as Macintosh disks, and can not use them on the MAE desktop. You have several options for dealing with this situation. If you want to use the files on the disk, the contents of the disk will show up as UNIX files in /floppy in your Solaris file system. If you don't want to use the files on the disk, and you want to format it as a Macintosh disk, you can eject the disk, insert it into a Macintosh computer, and reformat it as a Macintosh disk using the Macintosh computer. If you don't want to use the files on the disk, and you want to format it as a UNIX disk, you can try to reformat the disk on a UNIX workstation that is not running the Solaris File Manager.

(Sun only) If you cannot access the files on an MAE CD mounted remotely on a Sun workstation

You may have a problem accessing the files on a remotely-mounted MAE CD-ROM disc if the disc was mounted on a Sun workstation by using the Solaris Volume Manager. There are two possible solutions to the problem:

1) You can quit the Solaris Volume Manager and explicitly mount the MAE CD-ROM disc by using a command such as mount(1). You should then be able to access the files on the CD-ROM disc in order to perform a remote installation.

2) You can copy the MAE files from the CD-ROM disc to a directory on the Sun workstation and then access the files by remotely mounting the directory. For more information about remotely installing MAE, see Chapter 1 in the MAE USER'S GUIDE.

(Sun only) If the Message "fd0: read failed" Appears

When you try to mount a floppy disk on MAE, you may see the message "fd0: read failed" on your Sun console. This message alerts you that Solaris is unable to read certain sectors on the floppy disk. Try another floppy disk, or try the same disk on a different workstation. (If the disk does not contain data that you need, you may want to reformat the disk, and then try mounting it again with MAE.)

(Sun only) If MAE Displays an Alert Box about the Solaris Volume Manager

When you try to mount a floppy disk in MAE running on a Sun workstation, MAE may display an alert box that contains the message: "You will not be able to use Macintosh floppies with MAE because the Solaris Volume Manager is not available now." If this alert box appears, use the ps (1) command to see if the process "vold" (/usr/sbin/vold) is running on your workstation.

If "vold" IS NOT running, start the "vold" process as the root user and try mounting the floppy disk again. (You may want to edit the appropriate Solaris configuration files so that "vold" starts automatically when you start up your workstation. For instructions, see the Solaris documentation.)

If "vold" is running, and you see an error message such as "/dev/volctl: Permission denied" on your console, the problem is with Solaris. As root, check the access permissions on the file named in the error message (for example, /dev/volctl). If necessary, change the permissions for the file by using the chmod (1) command and give yourself access to the file. (If the file is a symbolic link, you will need to change the access permissions on the file to which the link points.) After changing the access permissions, try mounting the floppy disk on MAE again.

(Sun only) Unable to access the floppy drive

Be certain the permissions on the floppy device file symlinked to /dev/rdiskette are readable and writable by you.

In addition, software products that do not currently support the Solaris Volume Manager will conflict with MAE, which does use the Volume Manager. Until software products that are incompatible with the Volume Manager are upgraded to support it, you can work around this conflict by turning the Volume Manager on when using floppies or CDs in MAE and off when using other software. This work-around is only necessary when accessing a Macintosh floppy or CD since MAE doesn't use the Volume Manager until you try to access a Macintosh disk. Beware, too, that some software disables Volume Manager control at the device level by

changing your /etc/vold.conf file, rather than starting or stopping the Volume Manager's vold process.

(Sun only) If Solaris Displays the "Unlabeled Floppy" Dialog Box on Your Console

When you insert and try to mount a Macintosh floppy disk on MAE, Solaris displays the "Unlabeled Floppy" dialog box if you didn't install the Solaris Volume Manager Extensions when you installed MAE. (See Chapter 1 of the MAE USER'S GUIDE for more information.) Click Cancel in the dialog box (do NOT click Cancel & Eject). The floppy disk icon should appear on your MAE desktop. To avoid this problem, you should eject disks that have been mounted on the MAE desktop by using MAE capabilities only. For example, drag the disk icon to the Trash or choose Eject Disk from the Special menu.

(Sun only) If MAE Hangs When a Mounted Floppy Disk Has Been Ejected

If a Macintosh disk is somehow ejected without MAE being notified (for example, by typing "eject floppy" in a Solaris shell window or by clicking Cancel & Eject in the dialog box described earlier), MAE may hang until it is able to use the disk again. Reinsert the disk and type "volcheck" in a Solaris shell window. This step should allow MAE to continue to use the floppy disk on the MAE desktop. To prevent this situation, run the MAE Installer as root and install the Solaris Volume Manager Extensions package (according to the instructions in "Macintosh Application Environment: Installing and Setting Up").

(Sun only). If You Have Problems Using MS-DOS (Including Windows) or Solaris File System Disks on MAE

If you insert a floppy disk formatted for MS-DOS or Solaris into a Sun workstation and try to mount it in MAE by clicking the Mount Floppy/CD button, MAE displays an alert box. To use MS-DOS files on MAE running on Solaris, use the capabilities provided by Solaris. (For example, do not use Macintosh PC Exchange or other Macintosh applications that read MS-DOS disks.)

Follow these steps:

- 1) Insert the disk that contains the MS-DOS files that you want to use.
- 2) In a Solaris window, type "volcheck floppy". The files on the disk will appear in the /floppy/<floppyname> directory on your UNIX file system.
- 3) To use the files on the MAE desktop, double click /, then double-click the folder called "floppy," and then double-click the folder called "<floppyname>."

Problems Using Floppy Disks Remotely

Although Some X Terminals export floppies as NFS file systems, thus providing a convenient workaround, MAE does not in general provide remote floppy support . For example, you can start MAE on a workstation and display it remotely (using the -display option) on another workstation on the network. If you display MAE remotely, you can use only floppy disks that are inserted in a floppy drive

attached to the workstation where you started MAE, not where you are displaying it.

Floppy drives and performance

Floppy drives are much slower than hard disk, and leaving a floppy in an Xterminal drive can slow down MAE. Since MAE periodically scans the directory(ies) which are displayed in open Finder windows, leaving a floppy in the drive when the Finder has your home directory displayed in a window will effect performance. Solution: don't leave floppies in the Xterminal's drive.

(HP only) Floppy drives on HP "Envizex" Xterminals

Some HP "Envizex" Xterminals come with floppy drives. MAE is not able to directly access floppies in these drives: the Xterminal software, in cooperation with the host UNIX system, controls the hardware. MAE has no way to load executable code into the Xterminal to control the device without changing the operation of the drive. Thus, only MS-DOS floppies are accessible through the Xterminal's floppy drive. They are mounted by the host system software via NFS, and are accessable as \$HOME/floppy. If you are having problems using the floppy drive, contact your system administrator, or consult HP's documentation (for example, "HP ENWARE X Station Software 5.1, Technical Reference", chapter four "Using the X Station's Hardware Accessories").

MAE produces spurious dialog boxes when MOUNT button is pressed

Launching an application and then IMMEDIATELY clicking on the MOUNT button on the MAE Toolbar, with a valid MAE floppy in the drive, can cause various spurious dialog boxes to appear in the MAE window. If this happens, wait for the application to finish launching, then press the MOUNT button again. Dismiss the remaining dialog boxes.

(Sun only) MAE hangs when MOUNT button is pressed

If MAE seems to hang just after you click on the "mount" button in the toolbar, with a valid MAE floppy in the drive, type the following in a Solaris shell window:

```
volcheck floppy ; eject ; volcheck floppy
```

This should unstick the Solaris Volume Manager, and allow you to continue.

Support Information Services

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TOPIC -----

This article is the Macintosh Application Environment (MAE) 2.0 technical note.

DISCUSSION -----

Table Of Contents

- Printing
- Keyboard and Display
- Other

See Also

- MAE 2.0 FAQ (Frequently-Asked Questions), available on
<http://www.mae.apple.com> or via anonymous ftp from [ftp.support.apple.com](ftp://ftp.support.apple.com/pub/mae/info/FAQ/2.0)
in directory /pub/mae/info/FAQ/2.0.
- MAE 2.0 README.TXT (on MAE 2.0 product CD-ROM)

Printing

=====

MAE's support for UNIX printers is very general; it is designed to work on a wide variety of workstations and system types. This flexibility makes it impossible for MAE to troubleshoot every possible printing configuration. Chapter 4 of the MAE USER'S GUIDE, "Printing in MAE," gives a comprehensive description of techniques related to printing. This section lists some commonly-encountered printing errors. If you encounter a printing problem that is not covered, your system administrator should be able to help you.

How to Cancel Printing (Sun and HP)

When you print a Macintosh file on MAE, a printing status dialog box appears for several seconds (depending on the size of the file). While the status dialog box is on the screen, you can cancel printing by holding down the Command key and pressing the period (.) key until the "canceling printing" dialog box appears. To cancel printing after the status dialog box has disappeared, use UNIX commands, such as `lprm(1)` or `cancel(1)`. For more information, see the appropriate manual pages (man pages) that came with your workstation or consult your system administrator.

If the Printer Does Not Print Anything

Check the X window in which you started MAE. MAE will display any error or status messages in the window. The error messages can provide useful information about why printing isn't working. Also check the following:

- 1) Verify that the printer is turned on and properly connected to the network. (For example, check for loose connections.)
- 2) Verify that UNIX printing has been configured correctly on your workstation.
- 3) Verify that you have correctly set up a print command by using the Chooser (available in the Apple menu on the MAE desktop). For example, make sure that you did not accidentally type the wrong printer name in the Setup Print Command dialog box. For information about setting up a print command, see Chapter 4 in the MAE USER'S GUIDE.
- 4) Be sure you are looking for the printout at the correct printer. You may have recently changed the print command to print to a different printer, or the default UNIX printer may have changed. Some workstations use a UNIX environment variable to specify the default printer. If the environment variable has been changed, or if you are running MAE on a different workstation, you may be printing to a different printer without knowing it. (For this reason, the "MAE USER'S GUIDE" recommends that you specify a particular printer when you set up a print command.)
- 5) Verify that the print queue contains your print request. Use `lpstat` or `lpq` to check status. Also make sure that the print spooling system isn't jammed.
- 6) Verify that the print command that you specified in the Chooser actually works if you type it directly into a UNIX command window. This step lets you know whether your UNIX printing is working correctly.
- 7) Try printing the same file to another printer. This step helps you determine whether the problem resides with the spooling system or with a particular printer.
- 8) Try printing the file a second time, but this time click the Options button in the Print dialog box and choose "Print detailed report" in the PostScript Errors pop-up menu. This option prints any PostScript errors that may have occurred. You can also print a cover page before

printing the file. (Select the "Before" radio button in the dialog box.) If the cover page prints, you will know that the file is making it to the printer.

The Printed Page Contains "%!PS-Adobe-3.0" and Other Miscellaneous Text

Sometimes when you print a file, the page contains "%!PS-Adobe3.0" followed by other miscellaneous text. This means that the PostScript program is being printed as text, instead of being executed as code. This situation may occur if you are trying to print your file on a non-PostScript printer. (If this is the case, try printing your file on a PostScript printer.) The situation also may occur if your UNIX printing does not recognize the PostScript identifier "%!PS-Adobe-3.0," which appears on the first line. See your system administrator for help.

Only part of your document was printed

Printing can generate large PostScript files. If you do not have enough free disk space, only a portion of your document may be printed.

Keyboard and Display

=====

Dynamic Screen Resizing and Application Windows

A popular feature of MAE is the ability to dynamically resize the X11 window (and thus, the Macintosh Desktop) while it is active. When resizing occurs, MAE sends an AppleEvent to all active applications indicating that the Desktop size has changed. Some older applications do not support this AppleEvent and will continue to behave as though the Desktop were the same size as when the application was launched. Apple DocViewer, which is supplied with MAE v2.0, is an example of an application that does not presently handle this AppleEvent.

Colormap Sharing Between MAE and X Applications

If "Map X Windows to MAE palette" is enabled from within the "MAE General" Control Panel, MAE will try and share as many colors as possible with other X applications. If an X application modifies an entry in the colormap that is being shared with MAE, you may see a temporary change in how that color displays within MAE. To prevent this from happening, change the selection in the "MAE General" Control Panel to "Allow colormap flash" and reboot. This will cause a color "flash" when changing focus between MAE and other X windows but preserves the colormaps for each environment.

Modifier Map Sharing Between MAE and X Applications

Every keystroke that occurs in an X environment is inspected by X so that it can catch the keystrokes that invoke X operations. To accomplish this, the X environment uses a "modifier map" -- a keyboard translation table.

While the X window containing MAE is the active window, MAE modifies this keyboard map, so that keystrokes meaningful to MAE are passed to MAE by the X

environment for processing, even if they would normally have meaning to the X environment itself. This means that while MAE is active, keystrokes are processed as specified in the 'MAE Keyboard' Control Panel. For example, if the <META> key is mapped to the MAE <Command> key, the X environment will pass on to MAE those <META> keystrokes that occur MAE has focus. Typing Meta-Q in the MAE environment will therefore quit a Macintosh application even though Meta-Q would normally be interpreted by the X environment as a CLIENT_KILL (which would terminate MAE).

As soon as MAE is no longer the active window, the original modifier map is restored and all keystrokes function as defined for the X environment. This restoration, however, is not reliable under all circumstances. For example, pushing an MAE session over the network to a server running X11R6 can result in unpredictable results.

One solution to this problem is to disable MAE's ability to change the modifier keys. This can be done either by setting an environment variable

```
set TBNOMODMAP=1
```

or by starting MAE with the -nomodmap option.

IMPORTANT: Be careful if you choose to disable the modifier mapping; keystrokes intended for MAE may be trapped by the X Window Manager with unexpected results.

Full-screen MAE displays

To arrange for full-screen MAE display without a window manager running, use the -geometry command line option specifying the screen size. Under a window manager, this may not produce the desired effect because of borders, titlebars, etc. For this case, it is best to not specify a geometry and let the window manager do its stuff by using the Maximize button or window menu option. To get the full Macintosh experience under HP VUE, set the X resource Viewwm*mae*clientDecoration to none and start MAE with the geometry set to the full screen size.

Question: If I have a small MAE window and I press the mwm Maximize/Restore button twice, why doesn't it restore the size?

Answer: Due to optimizations, MAE resizes only to widths of 32-pixel multiples. The maximized size is probably not the correct size, so MAE downsizes slightly. When the Maximize/Restore button is next pressed, the window manager correctly notes that the window is not full size, and Maximizes it. To get a smaller size, resize manually.

Question: If I resize my MAE window a little wider, why is there a gray strip on the right side?

Answer: Due to optimizations, MAE only resizes to widths of 32-pixel multiples. If the window is resized less than 32-pixels, MAE doesn't recognize the size change, doesn't inform the window manager, and doesn't change its internal size.

Any resize beyond this point will correct the appearance. This will be corrected in a later version.

Improper toolbar selections while launching from an off-line disk hang MAE

When you launch from an off-line volume -- for example, when you double-click on an icon from a floppy that has been ejected, an insert-media dialog is displayed. If you inadvertently select the wrong button on the MAE Toolbar, (that is, if you click Super Select, X import, or X export instead of the Mount Floppy/CD button), MAE hangs and must be killed. This bug in MAE 2.0 is under investigation.

Other
=====

(HP only) MAE and asecure

In order to use sound with MAE under HP-UX, HP's audio server (Aserver) must be authorized for each user. This is usually performed with the HP utility 'asecure'. If a user is not properly authorized to use the audio server, MAE will issue an error message at startup. Although sound will not be possible, MAE will otherwise continue to function normally. Under some circumstances, it may be desired that MAE bypass its normal check for the presence of Aserver. To do this, set the environment variable 'TB_SOUND_OVERRIDE_CHECK=1' to allow sound to be produced. Although the error messages will still be produced at startup, MAE will ignore them and produce sound. Note that this will not override the security features of the server, but will override MAE's check to see if the asecure feature is installed. For more information on Aserver and asecure, reference your HP documentation.

Usage of 'TZ' Environment Variable

Several routines within MAE use the value specified by the environment variable 'TZ', which declares the time zone for a particular workstation. Failure to define and assign a value to this variable prior to executing MAE may result in an error.

As an example for ksh, you can set this variable with the command

```
export TZ=PST8PDT
```

if you are located in the Pacific time zone. For more information, reference the appropriate man pages for your OS.

MAE and Globetrotter's FLEXwrap Utility

If you wish to use MAE with the FLEXwrap utility from Globetrotter, you must use a feature of FLEXwrap that is not enabled by default. Failure to enable this feature will result in the inability to execute a Macintosh 'Restart' from the Finder.

To enable the feature, perform the following steps:

- 1) In the apple/bin directory, rename `mae' to `mae.orig'.
- 2) Create a symlink named `mae' to FLEXwrap's fwrapper program in the apple/bin directory.
- 3) When the installer for FLEXwrap is run, there is an option to specify a value for `argv[0]'. Give it the full path name to `mae.orig' (as created in Step 1, above).
- 4) If you had previously run the FLEXwrap installer, you can edit the license manager file (default `license.dat') and replace the `w_binary=' entry with `w_argv=' and point it to the full path of `mae.orig'.

Example: MAE is installed into /opt/apple and FLEXwrap is installed into /opt/flex/flexwrap. apple/bin/mae is renamed to apple/bin/mae.orig and a symbolic link named mae is created that points to the location of the fwrapper program, which is /opt/flex/flexwrap/sun4_u5/fwrapper. Since an entry for MAE already exists in the license.dat file for FLEXwrap, the entry specifying f_binary=/opt/apple/bin/mae is replaced with f_argv=/opt/apple/bin/mae.orig. For more information on FLEXwrap, refer to that product's documentation or contact Globetrotter for assistance.

MAE users wishing to utilize FLEXwrap must contact their Apple sales representative for licensing issues prior to implementing FLEXwrap.

(HP only) HP-UX 9.0.1 and STREAMS/UX

On HP-UX, MAE requires that STREAMS/UX be installed if you are planning to run AppleTalk. The v2.0 CD contains packages for both 9.0.3 and 9.0.5 of HP-UX. If you are running 9.0.1, you can use the STREAMS/UX package for 9.0.3. Please note that MAE does not support sound if used with 9.0.1.

Applications and Processor Performance

MacOS applications, whether they are running on MAE or on a Macintosh, normally dispatch each `event' as it occurs from a main program loop. Examples of events are mouse movement, screen update, etc. To await the next event, Macintosh programs normally use WaitNextEvent, which waits for an event or the expiration of a timeout while yielding processing time to other Macintosh programs. While WaitNextEvent is waiting and provided no events need attention, MAE will sleep, imposing a negligible load on the processor.

Some applications (SimpleText is among the popular examples) increase responsiveness, at the cost of higher processor load, by using very short timeouts while waiting for events. Running under MAE, such programs use the processor heavily. Programs with longer timeout values, such as MacWrite II, operate nicely in the MAE environment.

MAE and Meeting Maker XP

If you install Meeting Maker XP for use with MAE, you should remove the extension titled `Meeting Maker XP Extension' from the Extensions folder. It is not compatible with MAE and will be disabled when MAE is started. The extension is used to alert a user of a message when Meeting Maker XP is not active. To

receive such messages, leave Meeting Maker XP running.

Using FETCH (an FTP Utility)

Using Fetch to "get" and "put" non-text Macintosh files from or to UNIX filesystems requires special care to insure the files are transferred in a usable state by MAE (that is preserving their AppleSingle format).

When doing a GET of a non-text Macintosh file, always select "binary" transfer mode. When doing a PUT of a non-text Macintosh file, always select "AppleSingle" as the file format when prompted by the dialog. Macintosh and UNIX text files should always be transferred by selecting "text" (ASCII) transfer mode.

For complete instructions about using Fetch, read the online "Fetch Help".

If you use Fetch, please honor its license by paying the shareware fee.

Using SOFTWAREFPU (Floating Point Unit Extension)

This extension simulates the FPU co-processor chip found in some Macintoshes and integrated into certain 68K CPU's. It is only useful for (the very few) Macintosh applications that require this FPU.

Complete instructions about using SoftwareFPU are included with the utility.

If you use SoftwareFPU, please honor its license by paying the shareware fee.

Using DISINFECTANT (Virus Utility)

MAE is susceptible to the same viruses that plague the Macintosh. However, there is no need to scan your entire UNIX filesystem for Macintosh viruses. When scanning with Disinfectant, hold down the Option key and press the "Scan" button, this will display a dialog that will allow you to limit the scope of the search.

For complete instructions about using Disinfectant, please read the online "Disinfectant Help".

Support Information Services

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Tech Info Library Article Number:19229



Tech Info Library

Color LW 12/600 PS: Transparencies From UNIX Workstation (1/96)

Revised: 1/29/96
Security: Everyone

Color LW 12/600 PS: Transparencies From UNIX Workstation (1/96)

Article Created: 18 January 1996
Article Reviewed/Updated: 29 January 1996

TOPIC -----

I have a Color LaserWriter 12/600 PS printer and only UNIX workstations on a TCP/IP LAN. How do I "tell" the printer to use transparent (OH-film) paper? Is this possible through PostScript code or a utility?

DISCUSSION -----

The Color LaserWriter 12/600 PS automatically detects when you are printing on transparencies from the multipurpose tray, so you merely need to send a job to and print from that paper source.

If your client does not allow convenient selection of that paper source, place your transparencies in the multipurpose tray, pull out the built-in paper cassette a few inches (you do not have to remove it), and the printer will default to printing on "paper" in the multipurpose tray.

You do not need to send the Color LaserWriter 12/600 PS PostScript code to tell it you are printing to transparencies because it uses a photosensor to detect the presence of the special transparencies. The printer does this by looking for a reflection from the white rectangle at the leading edge of the transparency. When the white rectangle is detected the printer enters into transparency mode.

When the Color LaserWriter 12/600 PS is in the transparency mode an extra transfer drum rotation is added to the end of the printing process during which the transfer drum and fuser rotational speed is cut in half to improve the toner fusing characteristics.

Using Transparencies

When using transparencies, make sure you:

- Use only transparencies designed for use with the Color LaserWriter

12/600 PS (Apple part number M3876G/A).

- Insert Color LaserWriter transparencies as shown in the manual, other orientations may cause jams.
- Print only from the multipurpose tray.

PostScript Code

To select the multipurpose tray with PostScript, include one of the following code segments with the print job.

CAUTION: If you choose to use the PostScript code provided in this article, you assume all risks involved in making these changes. PostScript code, if not entered correctly, can place the LaserWriter into a condition requiring service.

1) setpapertray is a PostScript Level 1 command that can be used on any PostScript printer:

Begin_Table

```
%=====
% Begin PostScript Code
%
statusdict begin 1 setpapertray end
%
% End PostScript Code
%=====
```

End_Table

2) currentpagedevice is PostScript Level 2 code that can only be used on a PostScript Level 2 printer. InputAttribute 1 is the multipurpose tray; 0 is the paper cassette; 2 is the optional universal cassette.

Begin_Table

```
%=====
% Begin PostScript Code
%
currentpagedevice /InputAttributes get 1 get
dup null eq
{ pop }
{ dup length 1 add dict copy
  dup /InputAttributes
  1 dict dup /Priority [1 0 2] put
  put setpagedevice
} ifelse
%
% End PostScript Code
```

%=====

End_Table

This article was published in the "Information Alley":
Volume II, Issue 19, Page 11

Article Change History:

29 Jan 1996 - Added Info Alley information; made minor technical updates.

Support Information Services

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Tech Info Library Article Number:19231



Tech Info Library

Apple Keyboard Home Keys: Position of Bumps (1/96)

Revised: 1/18/96
Security: Everyone

Apple Keyboard Home Keys: Position of "Bumps" (1/96)

=====

Article Created: 18 January 1996

TOPIC -----

Why do the keyboards for Macintosh computers in the United Kingdom (UK) put the home key "bumps" on the D and K keys? Touch typists in the UK are taught to use the F and J keys as the home keys.

A blind user gets a bit confused when he tries to find the home keys, he can tell that they aren't on the F and J keys because his hands are too far apart.

DISCUSSION -----

The keyboards in the U.S. also have these "bumps" on the D and K keys. We have checked with engineering for information on why the D and K keys are used while other companies use the F and J keys. There is no standard, such as ISO or ANSI, that specifies which keys should have these "bumps," or that they should have the "bumps" at all.

At some time in Apple's history it was decided to put the "bumps" on the D and K keys and it has stayed that way ever since. We checked a number of different Apple keyboards and they all had the "bumps" on the D and K, even our Apple IIe. Apple is not going to change the location of the "bumps" on future revisions of the keyboard as the location of the "bumps" on the Apple keyboard has become Apple's standard.

We do not receive many questions about this, but I understand how it could be a source of frustration for a user that is blind and accustomed to the "bumps" being on the F and J keys on other types of keyboards. A possible solution for this user would be to swap positions of the keys. The keycaps on the keys can be carefully pried up and off of the keyswitch and then swapped over to the other keyswitches.

Support Information Services

..TIL19233-Apple_Keyboard_Home_Keys-Position_of_Bumps_1-96_(TA34988).pdf

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Tech Info Library Article Number:19233



Tech Info Library

Newton 2.0 OS: Error -48200 Trying to Print (1/96)

Revised: 1/22/96
Security: Everyone

Newton 2.0 OS: Error -48200 Trying to Print (1/96)

=====

Article Created: 22 January 1996

TOPIC -----

With my Apple MessagePad 120 using the Newton 2.0 OS, if I do a "selected" find, specifying the Dates application and a date range, and then try to print any of the items I get a -48200 error. What am I doing wrong?

DISCUSSION -----

This is a problem with the Dates application and affects both trying to print or fax the found items. However mailing or beaming the found items works correctly.

Workaround
=====

Step 1

Open the Dates application

Step 2

Use find to locate the information you are looking for.

Step 3

Print the information.

This will be fixed in a future System Update.

Support Information Services

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Tech Info Library Article Number:19235



Tech Info Library

MAE: Installing MAE Patch 2 on Solaris (1/96)

Revised: 1/22/96
Security: Everyone

MAE: Installing MAE Patch 2 on Solaris (1/96)

Article Created: 22 January 1996

TOPIC -----

This article describes how to install Patch 2 for MAE on a SPARCStation running Solaris 2.3, 2.4 and 2.5.

DISCUSSION -----

Download the appropriate file for your workstation.

NOTE: The tar files are compressed internally and did not require further compression using `compress' or a similar utility.

Extracting the Patch Files From the Downloaded File

Place the tar file anywhere. Extract it by running the following command:

```
% tar xovf maepatch2.0.2.sun.tar
```

The extracted files will be placed in a new directory named "maepatch2.0.2.sun". Once the extraction is complete, you can delete the downloaded file maepatch2.0.2.*.tar.

Preparing For Patch Installation

Before you run the patch installer, make backup copies of two directories: your system folder (normally in your home directory, in the directory "System Folder"), and the directory ".mac" within your home directory. In the event that patch installation results in an inoperable copy of MAE, you will be able to reconstruct your original MAE environment, from these saved copies, by removing the damaged apple directory, reinstalling MAE 2.0, and restoring your saved copies of the System Folder and .mac.

Important Information For AppleTalk Users

..TIL19236-MAE-Installing_MAE_Patch_2_on_Solaris_1-96_(TA34991).pdf

If you have more than one copy of MAE on any workstation, you must update all copies of MAE with this patch at the same time. The AppleTalk driver in MAE 2.0.2 is not compatible with older versions of MAE (2.0 or 2.0.1). This applies to multiple copies of MAE on the same workstation only.

If you are executing MAE v2.0 (or v2.0.1) on Solaris v2.3 and are using AppleTalk, you must install Solaris jumbo patch #101306-10 or its equivalent before you install MAE v2.0.2. Please contact your local Sun support channel for more information.

Important: Run Under the Appropriate Login Account

The account used to install the patch must have read/write privileges to all files in your apple directory; you can best accomplish this by running the patch installer under the same account originally used to install MAE 2.0. This patch includes new version of AppleTalk kernel modules as well as new version of various files from your apple directory. In order to install the patched version of the AppleTalk kernel modules, you must run the patch installer as root (superuser).

Applying the Patch

After you are appropriately logged in, cd into the newly created "maepatch2.0.2.sun" directory. Apply the patch by running the "PATCH.SH" program as follows:

```
% cd maepatch2.0.2.sun
% ./PATCH.SH
```

PATCH.SH will lead you through the installation process. You will have a choice of 'Easy' or 'Custom' installation as well as 'Remove'. Easy installation patches both your Apple directory and the AppleTalk kernel modules; Custom installation gives you the opportunity to patch only one or the other. If your copy of MAE is on a central server, serving many workstations, you will have to patch JUST the copy of MAE on the server, and JUST the AppleTalk kernel modules, on the workstations.

Remove will delete the MAE components from your system (but not any System Folders located in a \$HOME directory). See the FAQ for more information on removal of MAE.

Reinstalling Custom Resources

The patch will replace several files in your System Folder. If you have installed any custom sounds or applications that have modified resources within the file 'System' in the System Folder, you will be able to use your backed-up copy of System to help you reinstall the custom resources, after patch installation is complete. If you are not sure if any application has done this, refer to that application's documentation.

Support Information Services

..TIL19236-MAE-Installing_MAE_Patch_2_on_Solaris_1-96_(TA34991).pdf

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Tech Info Library Article Number:19236



Tech Info Library

MAE: Where to Find MAE Patch 2 (1/96)

Revised: 1/22/96
Security: Everyone

MAE: Where to Find MAE Patch 2 (1/96)

Article Created: 22 January 1996

TOPIC -----

This article describes how to obtain MAE Patch 2 to upgrade MAE from 2.0.x to 2.0.2.

DISCUSSION -----

How to Download MAE 2.0.2

There are two sites to locate the latest patch. Connect to one of the following locations to get the appropriate tar file (sun, hp, or hp10):

- ftp.support.apple.com (130.43.6.3)
- www.mae.apple.com (17.255.216.51)

These patches can be obtained from the following directory on the server:

/pub/mae/patches/mae_patch_2.0.2

IMPORTANT: Make sure you use FTP "binary transfer" mode to get the following files.

/pub/mae/patches/mae_patch_2.0.2/README.PATCH.MAE2.0.2 - This file contains complete details on what is contained in the patch release as well as how to download and install the patches.

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.hp.tar - The most recent incremental update for MAE 2.0 running HP-UX 9.x on HP Series 700 workstations.

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.hp10.tar - The most recent incremental update for MAE 2.0 running HP-UX 10.01 on HP Series 700 workstations.

..TIL19237-MAE-Where_to_Find_MAE_Patch_2_1-96_(TA34992).pdf

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.sun.tar - The most recent incremental update for MAE 2.0 running on Sun SPARC workstations.

Download the appropriate file for your workstation. Please note, the tar files are compressed internally and did not require further compression using 'compress' or a similar utility.

Extracting the Patch Files From the Downloaded File

Place the tar file anywhere. Extract it by running the following command:

On HP-UX 9.x Workstations:

```
% tar xovf maepatch2.0.2.hp.tar
```

On HP-UX 10.01 Workstations:

```
% tar xovf maepatch2.0.2.hp10.tar
```

On Sun Workstations:

```
% tar xovf maepatch2.0.2.sun.tar
```

The extracted files will be placed in a new directory named "maepatch2.0.2.sun", "maepatch2.0.2.hp", or "maepatch2.0.2.hp10" depending on your system type. Once the extraction is complete, you can delete the downloaded file maepatch2.0.2.*.tar.

Support Information Services

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Tech Info Library Article Number:19237



Tech Info Library

MAE 2.0: Installing MAE Patch 2 on HP-UX 9.0.x & 10.01 (5/96)

Revised: 5/13/96
Security: Everyone

MAE 2.0: Installing MAE Patch 2 on HP-UX 9.0.x & 10.01 (5/96)

Article Created: 22 January 1996
Article Reviewed/Updated: 13 May 1996

TOPIC -----

This article describes how to install Patch 2 for MAE on a HP (Hewlett Packard) workstation running HP-UX 9.0.x and 10.01.

DISCUSSION -----

Download the appropriate file for your workstation. It is important to download the patch that is associated with the version of hp-ux ('maepatch2.0.2.hp.tar' for hp-ux v9.0.x and 'maepatch2.0.2.hp10.tar' for hp-ux v10.01) Note: the tar files are compressed internally and did not require further compression using 'compress' or a similar utility.

NOTE: As of April 1996, HP-UP 10.1 is not supported with MAE 2.0.2..

Extracting the Patch Files From the Downloaded File

Place the tar file anywhere. Extract it by running the following command:

On HP-UX 9.x Workstations:
% tar xovf maepatch2.0.2.hp.tar

On HP-UX 10.01 Workstations:
% tar xovf maepatch2.0.2.hp10.tar

The extracted files will be placed in a new directory named "maepatch2.0.2.hp" or "maepatch2.0.2.hp10" depending on your system type. Once the extraction is complete, you can delete the downloaded file maepatch2.0.2.*.tar.

Preparing For Patch Installation

Before you run the patch installer, make backup copies of two directories: your system folder (normally in your home directory, in the directory "System

Folder"), and the directory ".mac" within your home directory. In the event that patch installation results in an inoperable copy of MAE, you will be able to reconstruct your original MAE environment, from these saved copies, by removing the damaged apple directory, reinstalling MAE 2.0, and restoring your saved copies of the System Folder and .mac.

Important Information For AppleTalk Users

If you have more than one copy of MAE on any workstation, you must update all copies of MAE with this patch at the same time. The AppleTalk driver in MAE 2.0.2 is not compatible with older versions of MAE (2.0 or 2.0.1). This applies to multiple copies of MAE on the same workstation only.

Important Information For HP-UX Version 10.01 Users

The MAE binaries for HP-UX v9.x and v10.01 are not interchangeable. If you are installing this patch to allow MAE to run on an HP-UX 10.01 system, you should be aware that the updated binaries will no longer function on a 9.x system. If you have multiple workstations sharing the same binary directory (appldir), you may wish to reinstall MAE from the CD-ROM onto a 9.x system. The patch can then be safely applied to both systems, creating updated executables for each environment.

Below are instructions for installing MAE 2.0.2 for use with HP-UX 10.01:

- For a new installation of MAE for HP-UX 10.01, first install MAE v2.0 as distributed on the CD-ROM but do not install AppleTalk (you can do this by performing a custom installation (as detailed in the 'MAE User's Guide')). After you have installed MAE 2.0 from the CD-ROM, you can apply the MAE 2.0.2 patch by executing ./PATCH.SH as distributed with the patch. Note that the STREAMS package is not required for HP-UX 10.01.
- HP-UX 10.01 was not supported in versions 2.0 and 2.0.1. As a result, upgrade instructions are not included here.
- If you are upgrading from MAE v1.0, first rename any existing MAE v1.0 (or MAE v1.0a) System Folders. Next, install MAE v2.0 as distributed on the CD-ROM but do not install AppleTalk (you can do this by performing a custom installation as detailed in the 'MAE User's Guide'). This will create a new System Folder to which you can manually drag/copy any resources (Extensions, Fonts, Preferences, etc.) from your old MAE v1.0 System Folder. You can now safely apply the MAE 2.0.2 patch by executing ./PATCH.SH as distributed with the patch.
- To remove MAE except for the AppleTalk components, use the Remove feature of the installer supplied with the MAE v2.0 CD-ROM and/or the 2.0.2 patch distribution. Note that the 2.0.1 patch does not have any removal capabilities and that the 2.0.2 patch will ONLY remove previously-installed 2.0.2 components. Then remove the AppleTalk components utilizing the Remove feature of MAE 2.0.2.

The device files for HP-UX 10.01 have also changed. As a result, the

`macdisks.HPUX' file will require modifications to function with your existing devices. This is true even if you had previously made these changes for an HP-UX 9.x system. Note that using the `default' convention will not work for HP-UX 10.01; you need to explicitly specify the path to the device. Examples are provided in the updated file installed by the patch (when installing for HP-UX 10.01).

Important: Run Under the Appropriate Login Account

The account used to install the patch must have read/write privileges to all files in your apple directory; you can best accomplish this by running the patch installer under the same account originally used to install MAE 2.0. This patch includes new version of AppleTalk kernel modules as well as new version of various files from your apple directory. In order to install the patched version of the AppleTalk kernel modules, you must run the patch installer as root (superuser).

Applying the Patch

After you are appropriately logged in, cd into the newly created "maepatch2.0.2.hp" or "maepatch2.0.2.hp10" directory. Apply the patch by running the "PATCH.SH" program as follows:

On HP-UX 9.x Workstations:

```
% cd maepatch2.0.2.hp
% ./PATCH.SH
```

On HP-UX 10.01 Workstations:

```
% cd maepatch2.0.2.hp10
% ./PATCH.SH
```

PATCH.SH will lead you through the installation process. You will have a choice of `Easy' or `Custom' installation as well as `Remove'. Easy installation patches both your Apple directory and the AppleTalk kernel modules; Custom installation gives you the opportunity to patch only one or the other. If your copy of MAE is on a central server, serving many workstations, you will have to patch JUST the copy of MAE on the server, and JUST the AppleTalk kernel modules, on the workstations.

Remove will delete the MAE components from your system (but not any System Folders located in a \$HOME directory). See the FAQ for more information on removal of MAE.

Reinstalling Custom Resources

The patch will replace several files in your System Folder. If you have installed any custom sounds or applications that have modified resources within the file `System' in the System Folder, you will be able to use your backed-up copy of System to help you reinstall the custom resources, after patch installation is complete. If you are not sure if any application has done this, refer to that application's documentation.

Article Change History:

13 May 1996 - Added HP-UX 10.1 note.

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Tech Info Library Article Number:19238



Tech Info Library

MAE 2.0.2: README.PATCH.MAE2.0.2 (1/96)

Revised: 1/22/96
Security: Everyone

MAE 2.0.2: README.PATCH.MAE2.0.2 (1/96)

Article Created: 22 January 1996

TOPIC -----

This is the README.PATCH.MAE2.0.2 for /pub/mae/patches/mae_patch_2.0.2 12/21/95 file.

DISCUSSION -----

License Statement

=====

THIS PATCH IS COVERED BY THE "SOFTWARE LICENSE FOR MACINTOSH APPLICATION ENVIRONMENT PATCH" (see the file /pub/mae/patches/mae_patch_license.txt on the FTP server ftp.support.apple.com). PLEASE READ THE LICENSE CAREFULLY BEFORE DOWNLOADING THIS SOFTWARE. BY DOWNLOADING AND/OR USING THIS SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THE LICENSE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE, YOU ARE NOT AUTHORIZED TO DOWNLOAD THIS SOFTWARE.

Incremental Update For Apple's MAE 2.0 Product

=====

The files in this directory allow you to update your purchased copy of MAE 2.0 (or patched version 2.0.1) to version 2.0.2 for free. By applying the latest patch, you will update your copy of MAE 2.0 with the bug fixes from all prior patches. As the patches are cumulative, there is no need to install any previous patch prior to installing the most current one.

IMPORTANT: MAE must NOT be running while you apply this patch. You will need to have approximately 25MB of available disk space to install the patch. After the patch installation is complete, however, your patched copy of MAE 2.0.2 will require about the same amount of disk space as MAE 2.0 (or 2.0.1). The 25MB requirement permits the patch installer to back up your copy of MAE, for safety, during the patch installation process.

MAE 2.0.2 (Patch Release "2")

(Found in /pub/mae/patches/mae_patch_2.0.2)

Get the file "README.PATCH.MAE2.0.2" for Patch "2" information and installation instructions. This patch (MAE 2.0.2) is the second released patch to MAE 2.0. It introduces the changes listed below. (The number in parenthesis indicates at which patch level the bug was fixed):

Changes in MAE 2.0.2

-
- (2) (HP only) HP-UX Version 10.01 -
HP-UX Version 10.01 can now be used with MAE. IMPORTANT: Be sure to read the file `README.PATCH.MAE2.0.2' on the FTP server prior to installing this patch to support HP-UX Version 10.01.
 - (2) (Sun only) FDDI Support -
FDDI interfaces are now supported.
 - (2) (Sun only) Ethernet Interfaces other than `le'
MAE now supports Ethernet interfaces on Solaris such as qe. Previously, only le devices were supported.
 - (2) Multiple Ethernet Interfaces -
AppleTalk can now be used on any available (and supported) network interface. The Network Control Panel has been updated to add this functionality.
 - (2) Persistent TIVs -
Persistent TIVs are no longer truncated during shutdown.
 - (2) Locking Mechanism for System Folder Updates -
The updater utility for System Folders (part of the patch mechanism) no longer bypasses the file integrity lock if MAE is running. This only occurred under isolated circumstances.
 - (2) (HP only) Automounter Directory
The automounter directory for HP-UX (default /tmp_mnt) is now properly statused.
 - (2) (Sun only) Solaris 2.4 and Automounted Directories
MAE no longer truncates its internal filesystem list when executed in an environment with multiple remotely-mounted volumes. This symptom did not manifest itself under Solaris 2.3.
 - (2) (Sun only) Sun 5 Keyboard -
The 0 (zero) key on Sun's Type 5 keyboard now functions properly.
 - (2) Command line options -
MAE will no longer exhibit random errors at startup based on the number of arguments supplied in the command line.
 - (1) Updated man Page -

The online manual pages now reflect changes and features of MAE 2.0 that were omitted from the man pages supplied with the MAE 2.0 distribution.

- (1) Network Control Panel -
Opening the Network Control Panel will no longer result in an error message.
- (1) (Sun only) Attention Packets -
Urgent ADSP messages are now delivered promptly to the MAE process. Previously, there was a delay in delivering these messages.
- (1) (Sun only) ADSP Close -
Custom applications that send ADSP close packet now work correctly.
- (1) Utilization of Selected AppleTalk Zone -
A previously-selected AppleTalk zone is now being used as the default zone. In addition, a list of eligible devices is presented when selecting a network resource (e.g., printer). This problem only occurred under isolated circumstances.
- (1) File Transfers Under TCP -
Fetch or other applications now pull large (>100K) files utilizing TCP correctly. (Smaller files were not affected.)
- (1) Saving Documents When Using MacinTax -
MacinTax is now able to save documents.
- (1) (HP only) Users' Guide Updated -
The online Users' Guide for MAE now reflects features and changes present in v2.0 which were omitted from the MAE 2.0 distribution.
- (1) Debugging Options -
Additional command line options have been added to assist in debugging MAE 2.0 problems.
- (1) (Sun only) Support for CacheFS -
New functionality was added to support CacheFS, a new filesystem introduced with Solaris 2.4.
- (1) Support For AFS (Andrew File System) -
Additional features have been added to support local cells for AFS.
- (1) Other fixes
Various minor bugs in MAE 2.0 are corrected in MAE 2.0.1

How To Download and Install MAE 2.0.2 =====

On the FTP server ftp.support.apple.com (130.43.6.3), get the appropriate tar file (sun, hp, or hp10) from the directory

/pub/mae/patches/mae_patch_2.0.2

IMPORTANT: Make sure you use FTP "binary transfer" mode to get the files.

/pub/mae/patches/mae_patch_2.0.2/README.PATCH.MAE2.0.2 - This file.

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.hp.tar - The most recent incremental update for MAE 2.0 running HP-UX 9.x on HP Series 700 workstations.

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.hp10.tar - The most recent incremental update for MAE 2.0 running HP-UX 10.01 on HP Series 700 workstations.

/pub/mae/patches/mae_patch_2.0.2/maepatch2.0.2.sun.tar - The most recent incremental update for MAE 2.0 running on Sun SPARC workstations.

Download the appropriate file for your workstation. Note: the tar files are compressed internally and did not require further compression using `compress` or a similar utility.

Extracting the Patch Files From the Downloaded File

=====

Place the tar file anywhere. Extract it by running the following command:

On HP-UX 9.x Workstations:

% tar xovf maepatch2.0.2.hp.tar

On HP-UX 10.01 Workstations:

% tar xovf maepatch2.0.2.hp10.tar

On Sun Workstations:

% tar xovf maepatch2.0.2.sun.tar

The extracted files will be placed in a new directory named "maepatch2.0.2.sun", "maepatch2.0.2.hp", or "maepatch2.0.2.hp10" depending on your system type. Once the extraction is complete, you can delete the downloaded file maepatch2.0.2.*.tar.

Preparing For Patch Installation

=====

Before you run the patch installer, make backup copies of two directories: your system folder (normally in your home directory, in the directory "System Folder"), and the directory ".mac" within your home directory. In the event that patch installation results in an inoperable copy of MAE, you will be able to reconstruct your original MAE environment, from these saved copies, by removing the damaged apple directory, reinstalling MAE 2.0, and restoring your saved copies of the System Folder and .mac.

Important Information For AppleTalk Users

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If you have more than one copy of MAE on any workstation, you must update all copies of MAE with this patch at the same time. The AppleTalk driver in MAE 2.0.2 is not compatible with older versions of MAE (2.0 or 2.0.1). This applies to multiple copies of MAE on the same workstation only.

If you are executing MAE v2.0 (or v2.0.1) on Solaris v2.3 and are using AppleTalk, you must install Solaris jumbo patch #101306-10 or its equivalent before you install MAE v2.0.2. Please contact your local Sun support channel for more information.

Important Information For HP-UX Version 10.01 Users

=====

The MAE binaries for HP-UX v9.x and v10.01 are not interchangeable. If you are installing this patch to allow MAE to run on an HP-UX 10.01 system, you should be aware that the updated binaries will no longer function on a 9.x system. If you have multiple workstations sharing the same binary directory (appledir), you may wish to reinstall MAE from the CD-ROM onto a 9.x system. The patch can then be safely applied to both systems, creating updated executables for each environment.

Below are instructions for installing MAE 2.0.2 for use with HP-UX 10.01:

- For a new installation of MAE for HP-UX 10.01, first install MAE v2.0 as distributed on the CD-ROM but do not install AppleTalk (you can do this by performing a custom installation (as detailed in the 'MAE User's Guide')). After you have installed MAE 2.0 from the CD-ROM, you can apply the MAE 2.0.2 patch by executing ./PATCH.SH as distributed with the patch. Note that the STREAMS package is not required for HP-UX 10.01.
- HP-UX 10.01 was not supported in versions 2.0 and 2.0.1. As a result, upgrade instructions are not included here.
- If you are upgrading from MAE v1.0, first rename any existing MAE v1.0 (or MAE v1.0a) System Folders. Next, install MAE v2.0 as distributed on the CD-ROM but do not install AppleTalk (you can do this by performing a custom installation as detailed in the 'MAE User's Guide'). This will create a new System Folder to which you can manually drag/copy any resources (Extensions, Fonts, Preferences, etc.) from your old MAE v1.0 System Folder. You can now safely apply the MAE 2.0.2 patch by executing ./PATCH.SH as distributed with the patch.
- To remove MAE except for the AppleTalk components, use the Remove feature of the installer supplied with the MAE v2.0 CD-ROM and/or the 2.0.2 patch distribution. Note that the 2.0.1 patch does not have any removal capabilities and that the 2.0.2 patch will ONLY remove previously-installed 2.0.2 components. Then remove the AppleTalk

components utilizing the Remove feature of MAE 2.0.2.

The device files for HP-UX 10.01 have also changed. As a result, the 'macdisks.HPUX' file will require modifications to function with your existing devices. This is true even if you had previously made these changes for an HP-UX 9.x system. Note that using the 'default' convention will not work for HP-UX 10.01; you need to explicitly specify the path to the device. Examples are provided in the updated file installed by the patch (when installing for HP-UX 10.01).

Important: Run Under The Appropriate Login Account

=====

The account used to install the patch must have read/write privileges to all files in your apple directory; you can best accomplish this by running the patch installer under the same account originally used to install MAE 2.0. This patch includes new version of AppleTalk kernel modules as well as new version of various files from your apple directory. In order to install the patched version of the AppleTalk kernel modules, you must run the patch installer as root (superuser).

Applying The Patch

=====

After you are appropriately logged in, cd into the newly created "maepatch2.0.2.hp", "maepatch2.0.2.hp", or "maepatch2.0.2.hp10" directory. Apply the patch by running the "PATCH.SH" program as follows:

On HP-UX 9.x Workstations:

```
% cd maepatch2.0.2.hp
% ./PATCH.SH
```

On HP-UX 10.01 Workstations:

```
% cd maepatch2.0.2.hp10
% ./PATCH.SH
```

On Sun Workstations:

```
% cd maepatch2.0.2.sun
% ./PATCH.SH
```

PATCH.SH will lead you through the installation process. You will have a choice of 'Easy' or 'Custom' installation as well as 'Remove'. Easy installation patches both your Apple directory and the AppleTalk kernel modules; Custom installation gives you the opportunity to patch only one or the other. If your copy of MAE is on a central server, serving many workstations, you will have to patch JUST the copy of MAE on the server, and JUST the AppleTalk kernel modules, on the workstations.

Remove will delete the MAE components from your system (but not any System Folders located in a \$HOME directory). See the FAQ for more information on removal of MAE.

Reinstalling Custom Resources

=====

The patch will replace several files in your System Folder. If you have installed any custom sounds or applications that have modified resources within the file 'System' in the System Folder, you will be able to use your backed-up copy of System to help you reinstall the custom resources, after patch installation is complete. If you are not sure if any application has done this, refer to that application's documentation.

Review the FAQ and Tech Notes

=====

Included with the tar distribution are the most recent versions of the MAE Frequently-Asked Questions and Technical Notes files. Review these documents carefully for any important information that may apply to you. In addition, these files are regularly updated by MAE Engineering and made available on ftp.support.apple.com as well as via the Web at <http://www.mae.apple.com/>.

Support Information Services

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Tech Info Library Article Number:19239



Tech Info Library

LaserWriters: Use Bindery Emulation Under Netware 4.x (1/96)

Revised: 1/22/96
Security: Everyone

LaserWriters: Use Bindery Emulation Under Netware 4.x (1/96)

=====

Article Created: 22 January 1996

TOPIC -----

We have an Apple LaserWriter 16/600 PS on our Ethernet network and I want to set it up to print under Novell NetWare 4.1. I've set up the printer using the included Windows utilities as a NetWare PSERVER. The instructions in the included manual explain using the NetWare utility PCONSOLE to make the printer available under NetWare. The manual tells me to change PCONSOLE to bindery emulation, but I would like to set it up as an NDS object. Do I have to configure the printer in bindery emulation mode?

DISCUSSION -----

According to Novell, setup requires switching to bindery mode in PCONSOLE. Here's some information from Novell's Network Support Encyclopedia about this:

"Network-direct print devices and their installation programs are designed to look in the NetWare 3.1x bindery for network printing information. In order for these devices to work on your NetWare 4 network, you should use the bindery emulation mode when installing them."

For additional information, please contact Novell, Inc. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19240



Tech Info Library

NetWare Client for Mac OS 5.1: ReadMe File (1/96)

Revised: 1/22/96
Security: Everyone

NetWare Client for Mac OS 5.1: ReadMe File (1/96)

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Article Created: 22 January 1996

TOPIC -----

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information. This article is the NetWare Client for Mac OS 5.1 Read Me file.

DISCUSSION -----

ReadMe File
NetWare Client for Mac OS 5.1
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Welcome to the new release of NetWare Client for Mac OS 5.1. This ReadMe file contains information about known anomalies and, when available, workarounds for these problems. This readme file contains two sections. The first section covers NetWare Client for Mac OS workstation software, and the second section covers NetWare Client for Mac OS server software (NLMS).

CLIENT WORKSTATION SOFTWARE NOTES -

MacIPX 1.3

PROBLEM #1: MacIPX may display an error message containing the error code -94 when trying to use the Ethernet 802.3 frame type with certain Ethernet adapters.

SOLUTION: Install AppleTalk version 58 or later on your workstation. To obtain AppleTalk version 58 or later, contact the manufacturer of your Ethernet adapter. You can also obtain AppleTalk from Apple's Network Software Installer,

version 1.3 or later.

PROBLEM #2: Some third-party applications use their own IPX protocol stacks, and do not use MacIPX. MacIPX may not function properly in their environments, depending on how MacIPX is configured.

SOLUTION: Contact the application vendor and request a version of the application that works with MacIPX. If none is available, you can configure MacIPX to use a network interface setup that is different than the network interface setup used by the other IPX protocol stack. For example, if the application's IPX protocol stack is using the Ethernet 802.3 frame type, you can configure MacIPX to use a different frame type such as 802.2. If this solution is impractical in your situation, you can configure MacIPX to use the LocalTalk network interface rather than the interface in use by the other IPX stack (such as Ethernet). However, this solution requires you to install and configure a MacIPX gateway somewhere on your network. Instructions for MacIPX gateway installation and configuration are located in the NetWare operating system documentation.

PROBLEM #3: Applications using MacIPX cannot locate any services when MacIPX is configured to use the AppleTalk interface.

SOLUTION: Ensure that MacIPX is using a valid MacIPX Gateway and that the Gateway is running on a NetWare server that will reply to Get Nearest Server requests.

PROBLEM #4: MacIPX may not work with some versions of Apple's Power Macintosh 9500.

SOLUTION: The Operating System and Open Transport software components found on the early releases of the Power Macintosh 9500 are incompatible with MacIPX. In the U.S., you can obtain later revisions of this software by ordering an "update" CD for the Power Macintosh 9500 through 1-800-SOS-APPLE. For customers outside of the U.S., please contact your local Apple sales office.

PROBLEM #5: Applications using MacIPX may experience a loss of connectivity when running on Power Macintosh 7200, 7500, 8500, and 9500s.

SOLUTION: There is no solution at this time. Connectivity can be restored on a temporary basis by restarting the Macintosh. As of this writing, Novell believes the problem may be related to the level of traffic on the network. Novell and Apple are working together to determine if the problem is in Open Transport or in MacIPX.

NetWare Client 2.0

PROBLEM #1: Read/Write performance may be slower than other NetWare Client platforms especially over wide area links. The NetWare Client for Mac OS does not currently support burst mode.

SOLUTION: There is no solution at this time.

..TIL19242-NetWare_Client_for_Mac_OS_5-1-ReadMe_File_1-96_(TA34997).pdf

PROBLEM #2: The Macintosh client does not provide an Abort, Retry, Cancel mechanism. If servers or network links are too slow, connections may be dropped by the client.

SOLUTION: There is no solution at this time.

PROBLEM #3: On 7200/90 systems using Ethernet, mounting volumes may be slower than normal because of problems with large packets. The problem is that larger packets cannot be reliably sent. Performance will be increased if the Maximum Packet Size is adjusted in the Advanced Options dialog box of the NetWare Client Control Panel. Novell and Apple are working together to address the problem and a solution is expected in the near future.

SOLUTION: Our experience suggests that a setting of 1100 bytes will speed mounting.

NetWare Directory Browser 1.0

PROBLEM #1: Several beta sites reported a crash while using Apple Guide with the NetWare Directory Browser. Apple Guide would crash when attempting to display a coach mark around something other than a menu title.

SOLUTION: The cause of this problem has been isolated to Apple Guide version 1.2.5 on PowerPC-based systems. If the Apple Guide version 1.2.5 extension is replaced with an older (1.2) or newer (1.2.7) version, the problem does not occur. Our assumption is that Apple Guide 1.2.5 must have some bad Mixed Mode Manager calls. Older versions weren't native (no Mixed Mode Manager calls at all), and newer versions must have caught and fixed the bug.

NetWare File Access 1.0 (NFA)

PROBLEM #1: File creation times are not preserved when the files are copied to NFA volumes and when operated on by certain applications. This causes problems for applications such as installers that require that file creation times be preserved.

SOLUTION: NFA can set a file or directory's creation time only if the user is supervisor equivalent. This is due to a problem in the NetWare server. To work around the problem, either log on as the server administrator or use AppleShare to mount volumes for which you require that creation dates be preserved (for example, if you are moving an installer and its files to a NetWare server). An update release will contain patches for the problem on existing servers and a new NFA that will take advantage of the fixes.

NetWare Object Assistant 1.0

No known problems.

NetWare Print Access 1.0 (NPA)

PROBLEM #1: Some PostScript downloading or LaserWriter utilities may not recognize or use NetWare Print Queues selected using the NetWare Print Chooser. Normally they should respond with a "Printer not found" message.

SOLUTION: Use a utility that communicates with the printer currently selected in the Chooser, such as Adobe SendPS. Such utilities generally work with NetWare Print Access on the printer or queue most recently selected in the NetWare Print Chooser.

PROBLEM #2: Error code -8993 occurs when printing in the background with NPA using the LaserWriter/PSPrinter 8.x driver.

SOLUTION: This problem is rare, and thought to be a result of the driver timing out due to not getting enough processor time. If you experience this problem, switch to foreground printing, or try to avoid intensive activity on your workstation when background printing is in progress.

PROBLEM #3: When using the NetWare Print Chooser to select LaserWriter/PSPrinter 8.1.2 or higher, the following alert may appear when Setup is started:
"Autosetup failed, reverting to manual setup."

SOLUTION: This alert indicates that the driver is looking for information about the target printer's installable options. NPA does not have this information. Click OK and manually indicate the printer's installed options, to the best of your knowledge.

PROBLEM #4: When using the LaserWriter driver versions 8.0, 8.2, or 8.2.2 to print, the Macintosh workstation sometimes hangs.

SOLUTION: Some versions of Apple's LaserWriter 8 driver have a bug which causes a hang when it tries to download a variation of the Helvetica font. To verify that this is the problem, turn background printing off in NetWare Print Chooser and print. Watch to see if the Macintosh hangs while displaying the message "Creating Screen Font: Helvetica" or "Downloading Helvetica-Oblique."

To work around this issue:

1) choose another print driver. LaserWriter versions 7.x, 8.1.1, and 8.3 do not suffer from this problem.

OR

2) after selecting the driver in the NetWare Print Chooser, use the "Setup" button to select a PPD file for the printer. This allows NPA to tell the driver that Helvetica is already present on the printer so that it isn't downloaded.

OR

3) after selecting the object in the NetWare Print Chooser, check the "Assume Standard Fonts" box under the "NetWare Options..." button. This allows NPA to tell the driver that Helvetica is already present on the printer so that it isn't downloaded.

PROBLEM #5: When printing in the background, the following message may appear:

There is not enough memory to print "<document>" from "<application>" on printer "<printer>." Do you want PrintMonitor to adjust its memory size and try again?

SOLUTION: Some versions of Apple's PrintMonitor allocate by default too little memory to accommodate NetWare Print Access. To correct this problem, you can click the "Adjust Memory Size" button in the above alert; you may be required to select this option two or more times successively before you can successfully print.

Alternatively, you can select the "Cancel Printing" option and manually adjust PrintMonitor's memory size. Click on the PrintMonitor application in the System:Extensions folder and select "Get Info" from the file menu. In the "Memory Requirements" area, set "Preferred size:" to at least 120K. Then try printing again.

PROBLEM #6: Two short (less than 60 character) print job notification messages appear in rapid succession referring to one job.

This may happen when print notification is turned on and printing to a queue (or referenced printer object) without being logged into the server where the queue physically resides.

SOLUTION:

- 1) Turn off notification
- 2) Log into the matching server

PROBLEM #7: Jobs from QuarkExpress, Adobe Photoshop, or other applications which have the option of sending the data in binary format will not print successfully with a PostScript error or images may print with artifacts or noise.

SOLUTION:

- 1) Many Macintosh applications that output graphics have the option in the application's Page Setup or Print dialog window to send the data in either Binary or ASCII format. Choose ASCII format.
- 2) If your printer supports it, have the network administrator set up the Printer object to support binary communications over a non-binary communications channel. Netware Print Access will then encode the binary data properly.

NetWare Print Chooser 1.0

PROBLEM #1: If you run NetWare Print Chooser concurrently with Apple's Chooser, the two applications may compete for ownership of the print drivers and thereby lead to serious problems, including crashes.

SOLUTION: Run only one chooser at a time.

PROBLEM #2: In the case where a NetWare Directory Services print queue object has multiple AppleTalk network address attributes with different NBP types--for example, the spooler is advertised by more than one ATPS spooler--NetWare Print Chooser may not enable all of the appropriate AppleTalk print drivers in the driver list.

SOLUTION: Such Directory Services objects may be rare at your site, in which case you would seldom encounter this problem. If the situation does arise, you will simply be limited in your choice of print drivers.

PROBLEM #3: When you first add a print driver extension to your Extension folder, the icon for that driver may not show correctly in NetWare Print Chooser.

SOLUTION: NetWare Print Chooser gets its icons from the desktop database. Eventually the desktop will get updated and the correct icons will display. If you wish to accelerate this process, try opening the Extensions folder on your desktop, forcing Finder to acknowledge that icon. The next time you run NetWare Print Chooser, it will show the correct icon.

PROBLEM #4: If you log out of the tree while NetWare Print Chooser is still running and then proceed to switch drivers and/or setup driver options, you may experience problems or even crash.

SOLUTION: The best thing to do is to quit the application before logging out of the tree.

PROBLEM #7: With GX installed, NetWare Print Chooser does not allow you to select a print driver.

SOLUTION: This version of NetWare Print Chooser does not support GX. You must remove GX from your system if you wish to use NetWare print services.

NetWare UAM 5.00

No known problems.

NetWare Volume Mounter 1.0

PROBLEM #1: Workstations using System 7.1 may find that the NetWare Volume Mounter does not stagger the windows, but stacks new windows directly on top of old ones.

SOLUTION: There is no solution at this time. To work around this problem move the windows off of each other manually.

Remote Console 1.0

No known problems.

~NetWare Aliases 1.1

PROBLEM #1: Aliases made to a file or folder on a network volume mounted with NetWare Volume Mounter will not resolve correctly in System 7.1.1 if the volume is already mounted via AppleShare. Aliases to a volume will resolve correctly in all cases.

SOLUTION: Upgrade to System 7.5.

SERVER SOFTWARE NOTES -

PINSTALL.NLM and NWCMAcc.NLM 1.0

PROBLEM #1: There are several ways to change the volume name displayed on the workstation when mounting a server volume. One way is through the set commands in MACFILE.NLM. (Type "MACFILE HELP" in the NetWare server's system console when MACFILE.NLM is loaded for more information.) Another way is through AFPCON.NLM when using NetWare for Macintosh. Volume name changes will not take affect dynamically. The indiscriminate changing of Macintosh volume names with these utilities and with AFPCON can result in unexpected volume names. (Last saved wins).

SOLUTION: There is no solution at this time. To work around this issue, remount the volume on the workstation to see the new volume name.

PROBLEM #2: NWCMAcc.NLM can incorrectly identify message and client files that do not belong to the product. This is due to the simplistic key off of the LANGUAGE.4 file name. For example NWCMAcc will locate the NetWare for Macintosh installation directory as a source.

SOLUTION: There is no solution at this time.

MACFILE.NLM 1.0

PROBLEM #1: When MACFILE.NLM is loaded for the first time, or a volume is mounted for the first time after MACFILE.NLM has been loaded, or the desktop database for a volume is being rebuilt, the server may abend with the message, "Subdirectory was deleted during FindDirectoryEntry."

SOLUTION: Try turning file compression off when MACFILE.NLM is loading for the first time, when a volume is mounting for the first time after MACFILE.NLM has been loaded, or when MACFILE.NLM is performing a periodic rebuild. Periodic rebuilds occur every 24 hours by default if AFP.NLM is also loaded.

PROBLEM #2: If a volume is dismounted while MACFILE.NLM is rebuilding a desktop database, error messages indicating that MACFILE.NLM cannot find files on the volume will be displayed.

SOLUTION: Wait to dismount a volume until rebuilding is complete.

PROBLEM #3: Only a few items at a time are removed at MACFILE.NLM load time from a trash can abandoned by a crashed Macintosh.

SOLUTION: Unload and reload MACFILE.NLM again with the empty option. For example: LOAD MACFILE EMPTY

CDROM Support

PROBLEM #1: When using NFA to mount NetWare volumes, you can not choose to mount an HFS formatted CD that is mounted on the server via the HFSCD.NLM.

SOLUTION: There is no solution at this time. To work around this problem, you can find the migrated directory/file structure of the CD by mounting the NetWare volume the CD was migrated to (usually SYS). The folder will have the name of the CD that was mounted through HFSCD.NLM. Some problems with using this workaround include not being able to launch certain applications on CDs that require a hard coded directory path, where the CD name is at the top of this path.

PROBLEM #2: CDROM.NLM will only work with ISO 9660 CDs.

SOLUTION: There is no solution at this time. CDs mounted with the CDROM.NLM will work normally when mounted through NFA, but you can not use CDROM.NLM to mount HFS formatted CDs.

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Tech Info Library Article Number:19242



Tech Info Library

Macintosh Performa 6290CD: Description (4/97)

Revised: 5/1/97
Security: Everyone

Macintosh Performa 6290CD: Description (4/97)

Article Created: 23 January 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article provides a description of the Macintosh Performa 6290CD.

Note: The Macintosh Performa 6290 is similar to the Macintosh Performa 6300CD, but it differs in both the memory configuration and the software bundle.

DISCUSSION -----

The most powerful and versatile Macintosh Performa system ever created brings you increased system speed and enhanced communications performance.

The Apple Macintosh Performa 6290CD computer uses a state-of-the-art PowerPC 603e processor running at 100 megahertz to deliver up to 50 percent higher performance than previous 603-based systems.

The Performa 6290CD will meet your needs well into the future, not only with its leading-edge performance, but also with a 1.2-gigabyte hard drive--large enough to store applications and information for years to come.

This affordable system includes multimedia features that are expensive add-ons with other computers. A quadruple-speed CD-ROM drive accesses CD-based data quickly and plays audio and video segments smoothly. Stereo 16-bit sound provides high-quality audio playback, while an audio-input port lets you record your own sounds. Adding advanced multimedia options is easy. You can plug in a video-input card, a video-output interface box, an internal TV tuner, and other optional devices.

The Performa 6290CD also comes with special features for telephony. The high-speed (28.8 kilobits per second) modem works with the Apple PlainTalk microphone (included with the computer) and special software to let you use the computer as a speak-erphone and an answering machine.

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The 6290CD is a complete, ready-to-use multimedia system. Packed in one box are the computer (with Apple System 7.5 software already loaded), a color display, a keyboard, a mouse, an internal modem, and a microphone. Also included are more than a dozen home, education, and home-business programs, plus a collection of multimedia reference CDs.

Features

=====

Power and Speed

- PowerPC 603e processor running at 100 MHz
- Integrated floating-point unit
- 40 MHz, 64-bit bus
- 256K Level 2 cache
- 32K internal cache

Display

- 14" flat square shadow mask CRT
- .28 mm dot pitch
- Resolutions from 640x480 to 832x624

Video support

- Apple displays up to 15 inches through a 1 MB DRAM video buffer (independent of system RAM)
- Wide range of VGA and SVGA displays from other vendors
- Offers 16-bit color for display of up to 32,768 colors on monitors using 640x480-pixel resolution
- Provides 8-bit color for display of 256 colors on monitors using 800x600-pixel or 832x624-pixel resolution

Memory

- Comes with 8 MB of RAM
- Can be expandable to 64 MB of RAM using two 32 MB SIMMs
- Uses 72-pin, noncomposite, 80-nanosecond or faster DRAM SIMMs

Expansion

- Apple Desktop Bus port for mouse, keyboard, and other devices
- Monitor port (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- Serial port (RS-232/RS-422) for an AppleTalk network connection, other networking or communications equipment, or a printer
- SCSI interface port for connecting as many as five external SCSI devices, such as disk drives or CD-ROM drives
- LC processor-direct expansion slot
 - Compatible with most Macintosh Performa 400 and 500 series; Performa 630; Macintosh Quadra 605; and Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630 processor-direct cards

- Can be used for an Apple MPEG Media System card or other specialized card
- Communications slot for a 28.8-kbps fax/data/voice modem (used by Global Village modem)
- Video slot for optional Apple Video System (NTSC, PAL, and SECAM video input)
- Dedicated connector and infrared remote receiver for optional internal Apple TV/Video System (provides TV tuner and video input)

Audio System

- Stereo 16-bit sound
- Built-in speaker
- Sound-output port
- Sound-input port (can be used to connect the Apple PlainTalk microphone included with the computer)
- Front headphone jack and volume control

Bundled software

=====

System Software

- Mac OS 7.5.1 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, and Macintosh PC Exchange software

Pre-installed software

- Acrobat Reader
- The American Heritage Dictionary
- At Ease
- ClarisWorks
- ClickArt Performa Collection
- Connectix Desktop Utilities
- Eric's Solitaire Sample
- Espresso
- Global Fax
- Global Fax Tour
- Lode Runner
- MacGallery Clip Art Treasure Pak
- MacLinkPlus/Easy Open Translators
- Megaphone
- Megaphone Tour
- Quicken
- WealthBuilder
- The Writing Center
- Zoop

CD-ROM titles

- Grolier Multimedia Encyclopedia

- TIME Almanac Reference Edition
- 3D Atlas
- The Family Doctor
- Smithsonian's America
- Jump Start 1st Grade
- Making Music by Voyager
- My First Incredible, Amazing Dictionary

Configuration and Ordering Information

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Macintosh Performa 6290CD 8/1.2GB/4xCD/28.8

-
- Macintosh Performa 6290CD computer with 8 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1.2 GB hard disk drive
 - Global Village 28.8 Internal modem
 - Apple Multiple Scan 14" Display
 - AppleDesign Keyboard
 - Apple PlainTalk microphone
 - Order number M4727LL/A

Optional Enhancements

- Apple MPEG Media System
- Order No. M4243LL/A

- Apple Video System
- Order No. M2894LL/C

- Apple TV/Video System
- Order No. M2896LL/C

- Apple Presentation System
- Order No. M2895LL/A

- Apple Ethernet LC Thin Coax Connection
- Order No. M33462Z/A

- Apple Ethernet LC Twisted-Pair Card (for use with a 10 Base-T compatible hub)
- Order No. M2460Z/A

- Apple Ethernet LC Card (transceiver required)
- Order No. M0443LL/C

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

..TIL19244-Macintosh_Performa_6290CD-Description_4-97.pdf

28 Apr 1997 - Removed out dated on line references.

29 Oct 1996 - Added Ethernet LC Card and Twisted-Pair Order info.

05 Aug 1996 - Corrected modem information.

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Tech Info Library Article Number:19244



Tech Info Library

Performa 640/ LC 630 DOS Compatible: Error 003 and 005 (2/97)

Revised: 2/3/97
Security: Everyone

Performa 640/ LC 630 DOS Compatible: Error 003 and 005 (2/97)

Article Created: 23 January 1996
Article Reviewed/Updated: 3 February 1997

TOPIC -----

When attempting to use the program, PRO_ORG.EXE (which is installed during the Sound Blaster installation) on a Macintosh Performa 640 DOS Compatible computer, you may get an error stating, "Error 003: Hardware Testing Fails." The Macintosh LC 630 DOS Compatible displays a similar error, "Error 005: Hardware Testing Fails" when using this program as well.

DISCUSSION -----

The Macintosh Performa 640 and LC 630 DOS Compatible computers use the Cyrix 486 DX2 Processor in the DOS Environment. With this processor, the computer has a Write Back feature enabled in the AUTOEXEC.BAT with the line:

C:\APPLE\WB.EXE

This allows the processor to write to the hard drive in the background while the user is performing other tasks.

However, the PRO_ORG.EXE program appears not to be compatible with the Write Back feature, which causes these errors. You should contact the developer of Sound Blaster, Creative Labs, for additional information.

In the interim, the workaround is to disable the Write Back feature, which may decrease performance.

To disable the Write Back feature, follow these steps:

Step 1

Edit the AUTOEXEC.BAT file

EDIT AUTOEXEC.BAT

Step 2

REM the line:

C:\APPLE\WB.EXE

To look like this:

REM C:\APPLE\WB.EXE

Step 3

Save the changes and exit EDIT

Step 4

Switch to the Mac Environment

Step 5

Go to the PC Setup control panel

Step 6

Select Shut Down PC

Step 7

Select Restart PC

Now the PRO_ORG.EXE program should work.

NOTE: PC Setup 1.5 enables the Write Back feature and offers no way to turn it off. Apple is investigating a solution to the issue for those who need the use of the FM Pro Organ. This can also affect Power Macintosh 6100 computers with the DOS Compatibility Card.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

03 Feb 1997 - Added note regarding PC Setup version 1.5.

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Tech Info Library Article Number:19245



Tech Info Library

LaserWriter 8 Driver: Printing an EPS File (1/96)

Revised: 1/23/96
Security: Everyone

LaserWriter 8 Driver: Printing an EPS File (1/96)

Article Created: 23 January 1996

TOPIC -----

I print an EPS file with the LaserWriter 8 printer driver options, I then click the Save button, and a dialog box appears with EPS and font options as shown below:

Begin_Table

Option Format: PostScript print
 EPS Mac standard preview
 EPS Mac enhanced preview
 EPS no preview

Font Options: No fonts
 All fonts

End_Table

I want to print to an EPS file with all fonts included and then import the EPS file into Quark Express. In order to ensure the import is correct a preview of the EPS file in Quark Express should be available after importing. With the options listed above it seems this would be possible, however, I cannot get Quark Express to work this way.

How does preview in EPS files work? What are the differences between standard and preview format? What format should I use to enable standard Macintosh applications preview the content of a EPS file?

DISCUSSION -----

We have enclosed a description of all of the options when you select a destination of Save to disk. The EPS Standard Preview contains an equivalent 72 dots per inch (dpi) bit image copy of the original applications image. The Enhanced Preview is a copy of the file as originally generated by the

application. Quark XPress can import and print EPS, but it has an issue displaying these images -- an issue Quark intends to resolve. They could not provide a time frame for when the fix will be available, so you may wish to check back with them periodically.

Being able to import and/or display EPS files are options you will find in some but not all applications. It is up to the discretion of the developer to support or not support this feature.

In a EPS file, the PostScript is stored in the data fork, and the screen image is stored as a PICT resource #256. For a third-party application to display the EPS file, the application must look for the PICT resource to read and display the image. Again, not all applications support this feature.

Included below are descriptions of the Save options

The LaserWriter 8 dialog offers many options including the ability to select a Destination that specifies where to send the driver's output:

- Printer: send to hardcopy printer.
- File: send to a disk file.

If you are using LaserWriter 8f or Fax PPD, another Destination becomes available:

- Fax: send to a fax-capable output device for fax transmission.

After selecting the Save you are given a choice of formats in which to save the file:

PostScript Job

A copy of the driver's PostScript output, exactly as it would have been sent to the output device. The file is formatted for the currently targeted output device with whatever features and options are currently in effect, and conforms fully to Adobe Document Structuring Convention (DSC).

EPS Mac Standard Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, along with an equivalent 72-dpi bit image in the resource fork for displaying the page on the Macintosh screen. The bit image is obtained by playing back and rasterizing the 'PICT' resource representing the page in the document's spool file, as originally generated by the client program.

EPS Mac Enhanced Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, along with an equivalent 'PICT' resource in the resource fork for displaying the page on the Macintosh screen. This is a copy of

the same 'PICT' representing the page in the document's spool file, as originally generated by the client program.

EPS No Preview

A single page image (typically an illustration) in Encapsulated PostScript form in the file's data fork, but without an associated preview image in the resource fork. This form is intended for transfer to other, non-Macintosh platforms.

Font Inclusion controls the inclusion of downloadable fonts in the PostScript output file:

None

Includes no fonts; assume all needed fonts are already available on the target device. In place of the fonts themselves, the PostScript output will include a DSC %%IncludeFont comment for each font used in the document.

All

Include all fonts used in the document that are available on the host Macintosh.

All But Standard 13

Include all fonts used in the document that are available on the host Macintosh, except the core set of thirteen standard typefaces that are built into virtually all PostScript printers (Times-Roman, Times-Bold, Helvetica-Bold, Helvetica-Oblique, Helvetica-BoldOblique, Courier, Courier-Bold, Courier-Oblique, Courier-BoldOblique, and Symbol).

ASCII/Binary

Specifies whether to save the output file in 7-bit ASCII or 8-bit binary format:

ASCII Save file in 7-bit ASCII format.

The resulting file contains no characters outside the range 32-127 (\$20-\$7F). In particular, it contains no control characters, and thus is suitable for transmission across ASCII-transparent communication channels such as asynchronous serial.

Binary Save file in 8-bit binary format.

The resulting file is typically smaller than the corresponding file in ASCII format (particularly if it contains sampled image data), but is suitable for transmission only across 8-bit-transparent communication channels.

Level 1 Compatible/Level 2 Only

Specifies the level of PostScript compatibility for the output file:

Level 1 Compatible: Compatible with all PostScript devices.

The file includes code to test the level of the device's PostScript interpreter and emulate the effects of Level 2 features on devices that do not support them directly. Level 2 features that cannot be emulated efficiently in Level 1 are suppressed.

Level 2 Only: Compatible with PostScript Level 2 devices only.

Assumes the availability of all Level 2 features and generates no level-checking or emulation code. The file may include Level 2 features (such as data compression for sampled images) that cannot be emulated efficiently in Level 1. Output files in Level 1 Compatible format tend to be larger than Level 2 Only files, both because of the additional emulation code they contain and because they cannot take advantage of Level 2 data-compression techniques. Files in Level 2 Only format are smaller, but will typically cause PostScript errors when printed on a Level 1 device.

The default setting is Level 1 Compatible.

Support Information Services

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Tech Info Library Article Number:19247



Tech Info Library

ClarisWorks: Only One User Can Open Server Based Document (1/96)

Revised: 1/23/96
Security: Everyone

ClarisWorks: Only One User Can Open Server Based Document (1/96)

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Article Created: 23 January 1996

TOPIC -----

When more than one user attempts to open the same ClarisWorks 4.0 document that resides on an AppleShare server, the error message "That file is in use by another application" appears. Other applications allow multiple users to access the same document although some only allow the second user read-only access.

Why does ClarisWorks not allow simultaneous multiple user access to the same document?

DISCUSSION -----

Claris support informed us when a ClarisWorks file that resides on a AppleShare server is opened by an AppleShare client, ClarisWorks locks the file so no other client can open it. This is how ClarisWorks handles files that reside on a server.

For more information on this, contact Claris technical support.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a Claris' address and phone number.

Support Information Services

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Tech Info Library Article Number:19248



Tech Info Library

Control Strip 1.3: Read Me (1/96)

Revised: 1/24/96
Security: Everyone

Control Strip 1.3: Read Me (1/96)

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Article Created: 23 January 1996

TOPIC -----

This article contains the ReadMe included with Control Strip software v1.3. This software is available online as part of the Display Software version 2.0.

DISCUSSION -----

About the Control Strip

The Control Strip is a new way of controlling certain settings from your desktop without opening control panels. You can change the following settings with the Control Strip:

- Monitor BitDepth lets you change the number of colors on your screen.
- Monitor Resolution lets you change the size of the screen.
- Sound Volume lets you change the volume of the system sound.

When you start up your Macintosh after installing Display Software 2.0, you will notice the Control Strip at the lower-left edge of your screen. (Note: on some models you will see different modules in the Control Strip.)

IMPORTANT Although the Control Strip appears on top of other applications' windows, you must be in the Finder to use it. If the Control Strip doesn't seem to be responding, return to the Finder by choosing Finder from the Application menu.

Using the Control Strip Modules

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Changing the number of colors displayed

The BitDepth module changes the number of colors displayed on your monitors. To change the number of colors, press the BitDepth module and choose the number of colors you want from the menu. (The monitors are identified by the same numbers used in the Monitors control panel.) The change takes effect immediately.

Changing the screen size

Resolution changes the screen size of Apple Multiple Scan monitors. (Other monitors have a fixed screen size.) To change the screen size, press the Resolution module and choose the screen size you want from the menu. (The monitors are identified by the same numbers used in the Monitors control panel.) The change takes effect immediately.

Note: Some applications do not support resolution switching from the Control Strip.

If resolution switching does not work, try quitting the application, changing the resolution, and then restarting the application.

Changing the sound volume

Sound Volume changes the volume of the system beep. To change the beep volume, press the Sound Volume module and choose the volume you want from the menu. The softest setting is 1, and 7 is the loudest. You hear the system beep at the new volume. If you choose a setting of 0, sound is muted.

Note: You cannot use Sound Volume to change the volume of sound from a CD or a CD-ROM. To change the volume of sound from a CD-ROM, you must use the AppleCD Audio Player (located in the Apple menu).

Working With the Control Strip

You can move, collapse, and expand the Control Strip, and you can change the order of the modules.

- To move the Control Strip, hold down the Option key on your keyboard and drag the tab at the right end of the Control Strip. The Control Strip always stays on the left or right edge of your screen. If you drag more than halfway across the screen, the Control Strip moves to the other edge. If you have more than one monitor, you can drag the Control Strip to the left or right edge of the other monitor.

- To make the Control Strip shorter or longer, drag the tab to the left or right.

- To see hidden modules when the Control Strip is not expanded to its full size, click the right and left arrows.

- To collapse the Control Strip to its smallest size, click the tab or the box. To expand the collapsed Control Strip to its original size, click the tab.

- To move a module to a new position in the Control Strip, hold down the Option key on the keyboard and drag the control to where you want it.

Configuring the Control Strip

With the Control Strip control panel, you can show and hide the Control Strip and choose a keyboard command to show/hide the Control Strip. You can also choose the font that appears in the Control Strip menus.

- To show the Control Strip, click Show Control Strip. To hide the Control Strip, click Hide Control Strip.
- To turn on a keyboard command for showing and hiding the Control Strip, click "Hot key to show/hide." The keyboard command for showing and hiding the Control Strip appears in the "Current hot key" window.
- To change the keyboard command, click "Define hot key." A box appears. Press the keys you want to use, then click OK. You must include either the `⌘` (Command) key or a function key (F1-F15). You can also include other keys.
- To change the font that appears in the Control Strip menus, choose a font from the Font pop-up menu and a size from the Size pop-up menu.

January 1996

Support Information Services

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Tech Info Library Article Number:19249



Tech Info Library

Display Software 2.0: Read Me (1/96)

Revised: 1/24/96
Security: Everyone

Display Software 2.0: Read Me (1/96)

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Article Created: 23 January 1996

TOPIC -----

This article contains the ReadMe on the Apple Multiple Scan Display Software 2.0 available online.

DISCUSSION -----

Apple Multiple Scan Display Software 2.0

The Display Software 2.0 package includes the following features:

- Display Enabler 2.0
- ColorSync 2.0 and ColorSync profiles
- Control Strip 1.3 with Monitor Resolution, BitDepth, and Sound Volume features
- Energy Saver 1.1

You can use this software to change the resolution of your monitor, adjust the number of colors it can display, and control your monitor's energy-saving features.

System Requirements

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To use Display Software 2.0, you need:

- A computer with version 7.1 or later of the Mac OS software
- Any Apple Multiple Scan Display

Display Software 2.0 does not work with PowerBook 100 series computers or with PowerBook Duo computers other than the 280 and 280c. To use Display Software 2.0 with the PowerBook Duo 280 and 280c, you must connect the PowerBook to a Duo Dock.

How to Install Display Software 2.0

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To install Display Software 2.0, follow these steps:

Step 1

Insert the Display Software disk into a disk drive.

Step 2

Double-click the Installer icon to open it. A welcome message appears.

Step 3

Click OK.

Step 4

Make sure the disk named in the Installer window is the disk on which you want to install the software. If not, click Switch Disk until the correct name appears.

Step 5

Click Install to begin installation.

Step 6

When installation is finished, follow the instructions on the screen to begin using your new software.

Step 7

Be sure to read the file About Control Strip to learn about your new software.

Using ColorSync System Profiles

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With ColorSync, different Apple monitors can display colors in a consistent way. You can also fine-tune the way your monitor displays color.

To set a ColorSync profile for your monitor, follow these steps:

Step 1

Open the ColorSync System Profile control panel.

Step 3

Click Set Profile.

Step 3

In the dialog box that appears, locate the files that have the name of your monitor. Click the profile you want.

Note: If you have an Apple Multiple Scan 14 Display, you were previously instructed to use the profile for the Apple Multiple Scan 15 Display. You now have choices specifically for your monitor.

About the ColorSync choices

The ColorSync choices let you choose from several white point settings for your monitor. White point is a measure of the color content of light.

- 9300 is the standard for most computer monitors and high-definition television (HDTV).
- D50 is the standard for most graphic art work.
- D65 approximates the color of light from the midday sun.

Configuring Your Monitors

The features of the Monitors control panel have not changed. To learn more about the Monitors control panel, see the documentation or online help that came with your computer or your system software. (Some models come with a different control panel for configuring monitors.)

Tip: To set the screen resolution and configure your video card, you click the Options button in the Monitors control panel. To see more choices, hold down the Option key on your keyboard as you click the Options button.

At the bottom of the control panel, you can choose whether to change the settings when you close the control panel or when you restart your computer.

Saving Energy

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Your Multiple Scan Display is designed to save energy by putting itself to sleep when you are away from the computer for a while. You can control this feature using the Energy Saver control panel. The Energy Saver control panel has not changed.

Using the Control Strip

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The Control Strip is a new way of changing certain settings from your desktop without opening control panels. With the Control Strip, you can change the number of colors on your screen, the resolution (size) of the screen, and the volume of the system sound.

To learn more about the Control Strip, read the file About Control Strip included in this package.

Troubleshooting

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This section lists solutions to potential problems with your new display software.

I'm trying to change the monitor resolution, and I don't see the resolution I want.

You can see additional resolution choices in the Monitors control panel if you hold down the Option key on your keyboard while you click the Options button in the control panel. In the list that appears, click the resolution you want. (Some models come with a different control panel for configuring monitors. See the on-screen help that came with your computer.)

Note: Some of the items in this list will not work properly with your monitor. If you choose a resolution that doesn't work with your monitor, you may see a message, or your monitor may go blank or show static. After approximately 15 seconds, your monitor should revert to a usable resolution. If it does not, restart your computer.

After I change the screen resolution, a window is stuck, halfway off the screen, or missing.

Try one of the following:

- If you changed the resolution in the Monitors control panel, make sure the control panel is closed before trying to use another window.
- Quit the program whose window is missing and then open it again.
- If the program has a Windows menu, use it to hide the problem window and then show it again.
- Go back to the resolution you were using, close the window, change the resolution, and then reopen the window.
- If you have problems with a particular program, contact the publisher of that program. Not all programs take advantage of the Multiple Scan Display's new features.

If you choose the 800 x 600 (72 Hz) resolution on a Multiple Scan 14 Display, a software problem may prevent you from seeing the whole screen. Use the 60 Hz setting instead.

After I change the number of colors displayed on the screen, the colors don't look right.

Try one of the following:

- Quit the program you're running and start it again.
- Go back to the number of colors you were using.

After I change the screen resolution, icons move.

Changing the screen resolution affects how information can be displayed on your screen. The display software may automatically reposition icons after you change the screen resolution.

After I attached a new monitor to my computer, the new monitor's screen is blank or shows "garbage" or "snow."

The computer may not have recognized the monitor. Try the following: Turn off the computer and disconnect the new monitor. Start the computer with no monitor attached. Wait a minute or so for the computer to finish turning itself on. Turn off the computer again and reattach the new monitor.

My monitor does not go to sleep.

Some monitors, computers, and video cards do not support the Energy Saver feature. See the documentation that came with your monitor and video card for more information.

If you have a Power Macintosh 9500, you can get an upgrade to your software that allows your monitor to work with Energy Saver. Call the Apple Service and Support number found in the service and support information that came with your computer.

When I use both Energy Saver and a screen saver program, the screen freezes.

The screen saver program may be conflicting with Energy Saver. Turn off either the screen saver program or the Energy Saver control panel.

My monitor starts up in black and white.

If you've just installed a new video card such as the Macintosh 24AC, the monitor will start up in black and white the first time you start the computer. Switch it to color after startup.

If your Multiple Scan 15 Display is connected to a Macintosh Quadra 610, 650, 700, or 950, a Macintosh LC 475 or a Power Macintosh 6100, the monitor may start up in black and white. Switch it to color after startup.

I see two resolution options labeled 640x870 (75 Hz).

If you're using the Macintosh 24AC video card, you may see two apparently identical resolution selections. The first option sets your monitor to display millions of colors, and the second option sets your monitor to display 256 colors.

When I change resolutions, the monitor goes blank.

If your monitor is connected to the Macintosh 24AC video card, the monitor may go blank for 15 seconds when you select a resolution that does not work with your monitor. Try selecting another resolution.

The image is too small.

If you're using a Multiple Scan 1705 connected to the Macintosh 24AC video card, the image may appear too small at the resolution 1024 x 768 (60 Hz). Try a different resolution.

IMPORTANT Some programs and video cards do not take advantage of the Multiple Scan Display's new features. If you experience problems with your application programs or video cards, contact the publisher or manufacturer.

January 1996

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19250



Tech Info Library

Acrobat Reader Fonts & QuickDraw GX Turned On/Off (1/97)

Revised: 1/6/97
Security: Everyone

Acrobat Reader Fonts & QuickDraw GX Turned On/Off (1/97)

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Article Created: 23 January 1996
Article Reviewed/Updated: 3 January 1997

TOPIC -----

I am using Adobe's Acrobat Reader on my Macintosh computer. I get font related error messages at startup after I switch between QuickDraw GX and standard QuickDraw.

DISCUSSION -----

Acrobat Reader versions earlier than 2.0.1 are incompatible with QuickDraw GX. Acrobat Reader versions 2.0.1 and later are compatible with QuickDraw GX but the correct fonts must be installed before restarting with QuickDraw GX active. Similarly, if the you want to turn QuickDraw GX off and Acrobat is already installed, the corresponding fonts will need to be installed before restarting with QuickDraw GX turned off.

If the correct fonts for QuickDraw GX are not installed before restarting, the computer will produce the message "The installed substitute fonts are designed for use with Standard QuickDraw. Please remove them and install the QuickDraw GX versions".

If the correct fonts for non-QuickDraw GX are not installed before restarting, the computer will produce the message "The installed substitute fonts are designed for use with QuickDraw GX. Please remove them and install the standard versions".

If the Acrobat Reader program is launched while either of the incorrect fonts are present the error message, "The current versions of system software, ATM, and substitution fonts required to run Acrobat Reader are not synchronized. Please re-install Acrobat Reader to correct this problem" will appear.

Switching between the contexts of having QuickDraw GX on or off and using Acrobat Reader can be done in one of two ways:

- Restart the computer in the desired mode (QuickDraw GX on or off) and run the Acrobat Reader installer. The installer will recognize that QuickDraw GX is on or off and will install the proper fonts into the Fonts folder. After running the installer, you will need to restart once more.
- Keep a separate folder containing both the GX and non-GX versions of the fonts that Acrobat Reader installs. When you want to switch QuickDraw GX on or off, drag (or hold down the Option key and drag to copy) the appropriate fonts into the Fonts folder. After restarting, the correct fonts will be installed and Acrobat Reader will function correctly. This method is preferable to the first since it only requires one restart.

The installed fonts for the QuickDraw GX environment:

- Adobe Sans MM (TrueType suitcase)
- Adobe Serif MM (TrueType suitcase)

The installed fonts for the standard QuickDraw environment:

- Adobe Sans MM (bitmapped font suitcase)
- Adobe Serif MM (bitmapped font suitcase)
- AdobeSanMM (PostScript font)
- AdobeSerMM (PostScript font)

NOTE: Although the two versions of the "Adobe Sans MM" and "Adobe Serif MM" suitcases have the same name, Acrobat Reader will only recognize the fonts from the correct environment. That is, you cannot keep the two PostScript fonts and the two TrueType suitcases in the Fonts folder and have Acrobat Reader automatically recognize the correct one whether QuickDraw GX is on or off.

Macintosh Performa 6360 and 6400 Computers

Performa 6360 and 6400 computers come with Adobe Acrobat Reader pre-installed. This version of Acrobat Reader does not include the GX-compatible fonts referred to in this article. There is not a regular Adobe Acrobat installer on the computer's CD-ROM or on hard disk; Adobe Acrobat is part of the Restore All Software bundle.

If you experience this font error as described above after installing QuickDraw GX 1.1.3, obtain a copy of Acrobat Reader (their web site is <http://www.adobe.com>) and install it. Also turning off the ATM control panel with the Extensions Manager control panel will stop this error.

As described above once you have installed the QuickDraw GX Acrobat fonts, and turn GX off, you will get an error message stating, "The installed substitution fonts are designed for use with QuickDraw GX. Please remove them and install the standard QuickDraw versions." Follow the workarounds above for switching between QuickDraw GX and Standard QuickDraw.

Article Change History:

03 Jan 1997 - Added Performa 6360 and 6400 information, changed title.

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Tech Info Library Article Number:19251



Tech Info Library

MegaPhone & GeoPort: Telephone Manager, Telephone Tool Msg 2/96

Revised: 2/8/96
Security: Everyone

MegaPhone & GeoPort: Telephone Manager, Telephone Tool Msg 2/96

Article Created: 24 January 1996
Article Reviewed/Updated: 8 February 1996

TOPIC -----

1) I have a GeoPort Telecom Adapter connected to my Power Macintosh computer, and MegaPhone has been working properly. I had to reinstall system software and now I get this error message when I try to start MegaPhone: "Telephone Manager 2.0 (or later) is required. Please install the software before launching Megaphone."

TelePhone Manager 2.1 is in my Extensions folder and I can send and receive faxes fine. What is wrong?

2) Sometimes when opening MegaPhone, I have received a message saying the "GeoPort Telephone Tool could not be configured. DemoDialer Telephone Tool has temporarily been selected. You will not be able to make or receive calls with this tool.; invalid telephone terminal (configuration problem)."

What can cause this message and how do I correct it? Again, I have the GeoPort Telephone Tool in my Extensions folder.

DISCUSSION -----

1) "Telephone Manager 2.0 (or later) is required. Please install the software before launching Megaphone."

The Telephone Manager is installed by the Apple Telecom 2.x software installer. In addition to the visible extension and control panel, the installer also modifies resources in the System suitcase file. If you reinstall the system software, these resources will be absent from the new System suitcase and the Telephone Manager will not be recognized.

You are able to send faxes because the current fax software does not access the Telephone Manager. Most current data communications software titles do not access the Telephone Manager either.

To resolve this, you need to perform an Easy Install of the Apple Telecom software. This will add the necessary resources to the System suitcase file.

2) "GeoPort Telephone Tool could not be configured. DemoDialer Telephone Tool has temporarily been selected. You will not be able to make or receive calls with this tool.; invalid telephone terminal (configuration problem)."

The two main reasons for this second message to appear is if you do not have the GeoPort Telecom Adapter connected to the GeoPort itself or the GeoPort Telephone Tool is actually missing. In some cases, corrupted Telecom software or preference file could cause a similar message.

Follow these steps to troubleshoot this message:

Step 1

With the power off to the computer, make sure the GeoPort Telecom Adapter is connected to either the printer or the modem port. If you have a Macintosh Quadra 840AV or 660AV computer, you must use the modem port.

Disconnect and reconnect the cable to make sure it is in snugly. Confirm the adapter is connected by sending a fax or connect with a data communications program.

Step 2

Make sure that GeoPort Telephone Tool is in the Extensions folder of the System Folder, if it is not, reinstall the Apple Telecom software.

If the tool is installed and you are able to fax or connect to an online service drag the MegaPhone Prefs file to the Trash. The MegaPhone Prefs file can be located by the path:

System Folder -> Preferences Folder -> Cypress -> MegaPhone Prefs

A new copy of the MegaPhone Prefs will be created the next time you open MegaPhone.

Step 3

If you still get the message, drag both the Telephone Manager and the GeoPort Telephone Tool to the Trash and perform an easy install from the Apple Telecom disks.

Article Change History:

08 Feb 1996 - Added second error message and troubleshooting.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19253



Tech Info Library

Newton 2.0 OS: Alarm Volume Setting Muted (1/96)

Revised: 1/24/96
Security: Everyone

Newton 2.0 OS: Alarm Volume Setting Muted (1/96)

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Article Created: 24 January 1996

TOPIC -----

When I use the Prefs in the Extras draw to adjust the alarm volume to zero, then back to a different volume, the volume on the entire MessagePad gets muted. The Newton device then will not allow me adjust the volume, even though I change the setting in the Extras drawer.

DISCUSSION -----

This is a problem with the Alarm volume setting. The workaround is to turn the MessagePad off and back on. Next, open the Extras drawer and adjust the volume. The sound should return.

This will be fixed in a future System Update.

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Tech Info Library

Macintosh and NetWare Remote Access (1/96)

Revised: 1/24/96
Security: Everyone

Macintosh and NetWare Remote Access (1/96)

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Article Created: 24 January 1996

TOPIC -----

This article describes Macintosh and NetWare remote access. This information is taken from Novell Technical Information Document ID 350124, revision 1, dated 29 June 1994. This information is being provided by as information only. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

DISCUSSION -----

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ISSUE

Assuming the user is using a dial in method (no WAN support at the remote site) there are two classes of dial up solutions:

1) Accessing the network as a Macintosh client workstation

a) Using ARA (AppleTalk Remote Access) the user (with ARA client support -- available in the modem software, for example) can dial into an ARA server. An ARA server can be a NetWare file server with NetWare Connect loaded with ARA support. But there are other ARA server solutions available.

After "connecting" to the ARA server, the user is then able to access all the services of that network as if the client were really physically resident on that LAN. However, be aware this solution can yield poor performance depending on the speed of the modem link.

b) Using Faralon's Timbuktu Remote, the remote Macintosh user can dial into a locally connected Macintosh (with the Timbuktu Host module operational) and gain access to the network. However in contrast to the ARA solution, the Timbuktu solution allows the remote user to essentially take control of the local Macintosh. For example when saving a file in the Timbuktu environment, the user is actually saving the file to locally connected Macintosh's disk, not to the remote disk.

2) Accessing the network as a DOS client

a) Using OnLAN/Mac and the NetWare Access Server (NAS), the remote Macintosh client can dial into the NAS, take control of one of the 16 available NCP/IPX sessions and access the network as if the remote Macintosh client were really a locally connected DOS client. At this point, the remote OnLAN/Mac Macintosh client will show a main program window with a DOS prompt and an operating system that essentially is MS DOS. From within this program, users can run DOS software (like the NetWare LOGIN.EXE or LOGOUT.EXE utilities for example) as if they were a locally connected DOS client.

b) Using Argosy's RunPC/Remote, the remote Macintosh client can dial into a locally connected DOS client. This solution is similar to the Timbuktu solution in that the remote client takes control of the local client. But in this case the local client is a DOS workstation, not a Macintosh.

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Tech Info Library

Macintosh: S-Video Port Confused with the ADB Port (1/96)

Revised: 1/24/96
Security: Everyone

Macintosh: S-Video Port Confused with the ADB Port (1/96)

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Article Created: 24 January 1996

TOPIC -----

The mouse or keyboard on my new Macintosh computer does not work. I have tried different mice, different keyboards, and different ADB cables. I have tried starting up from my system software CD and startup floppy disk, and still get no response from either my keyboard or mouse. I know I am connected properly because the cable fits in the port.

What is wrong?

DISCUSSION -----

Since you have tested for bad cables, mouse devices, keyboards, and software, make sure you are connected to the actual ADB port and not just a port into which the cable fits.

Many new Macintosh computers come with AV capabilities or installable AV options. The S-Video port on computers with AV capabilities has seven instead of four pins but an ADB cable will fit in this port. You may have attached your mouse or keyboard to this S-Video port. The icon next to the S-Video port is a box with an S in it or a Camera outline with an S in it.

Make sure the ADB cable is connected to the ADB port. The graphic next to the ADB port has a vertical line that connects with two dots to the left and one dot to the right:

Begin_Graphic

```
•--|  
  |--•  
•--|  
  |
```

End_Graphic

If an AV video card is added to the following computers, the S-Video port could be mistaken for an ADB port:

Macintosh LC 580
Macintosh LC 630
Macintosh Quadra 630
Power Macintosh 5200/75 LC
Power Macintosh 5300/100 LC
Power Macintosh 6300/100 LC
Macintosh Performa 580
Macintosh Performa 630 series
Macintosh Performa 640CD DOS Compatible
Macintosh Performa 5200 series
Macintosh Performa 5300 series
Macintosh Performa 6100 series
Macintosh Performa 6200 series
Macintosh Performa 6300CD

The following computers have an S-Video port built-in:

Macintosh 660 AV
Macintosh 840 AV
Power Macintosh 6100 AV Series
Power Macintosh 7100 AV Series
Power Macintosh 8100 AV Series
Power Macintosh 7500
Power Macintosh 8500

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Tech Info Library

Apple System Profiler 1.0: What Information Does it Show? (7/96)

Revised: 7/3/96
Security: Everyone

Apple System Profiler 1.0: What Information Does it Show? (7/96)

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Article Created: 24 January 1996
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article describes the Apple System Profiler 1.0 which is an application included with System 7.5.3 and the System 7.5 Update 2.0.

DISCUSSION -----

Apple System Profiler is a new tool that will allow you to gather information about the configuration of your Macintosh system. In addition, the information it reports may be needed if you place a call to the Apple Assistance Center (AAC).

If you have one of the computers listed below, you should install the Apple System Profiler on your computer now. Double-click on the Apple System Profiler Installer located in your Apple Extras folder. The Apple System Profiler will be installed in the Apple Menu on your computer.

The Apple System Profiler 1.0 is compatible with the following computers running System 7.5.3:

Power Macintosh 9500, 8500, 7500, 7200, 8100, 7100 and 6100 series.
PowerBook 5300, 2300 and 190 series.
Performa 5200, 5300, 6200 and 6300 series.

The utility gathers, summarizes, and delivers key pieces of system configuration information such as processor clock speed, disk cache size, and Apple and non-Apple installed extensions. After you install the application and run it, a profiler "code" is generated. If you call the AAC, the support technician can use this code to determine the configuration of your machine. This information will help reduce the amount of time needed to gather configuration information on your computer.

There are six information sets available under the Select menu. The information

gathered by each set is:

System Overview:

Customer Care Code: (code for AAC agent to determine configuration)
Machine: (type of computer including processor speed)
Machine ID: (unique ID indicating computer type)
Finder: (version)
System: (version)
Processor: (type)
Active Enabler: (enabler name, version)
Memory Installed: (RAM Installed)
Virtual Memory: (on or off)
Total Memory: (including virtual)
Disk Cache: (on or off, amount)
AppleTalk: (version, on or off (Open Transport or AppleTalk Phase))
File Sharing: (on or off)
Startup Device: (SCSI bus number of startup device, SCSI ID number of startup device, device name)
Chosen Printer: (chooser selection's driver version and zone location)

Volume Information:

Number of Volumes Found
List of Volume Names, clicking on each volume name gives this information:
Name: (volume name)
Kind: (hard disk, CD-ROM)
Size: (total size)
Space Available: (free space left)
Bus: (SCSI Bus number)
ID: (SCSI ID number)
Mounted: (yes or no)
Write Protected: (yes or no)
Where: (Driver and version number)

Device Information:

Total SCSI Buses Found: (number of buses)
Number of SCSI Devices Found on each bus
List of SCSI ID Numbers: (type of device assigned to each number) clicking on each device name gives this information:
Device Type: (hard drive, CD-ROM Drive)
Bus: (SCSI Bus number)
ID: (SCSI ID number)
Capacity: (total formatted storage space)
Vendor: (manufacturer's name)
Product ID: (unique drive identification code)
Revision Number: (ROM Revision)
Interface Type: (SCSI, SCSI-2)
Removable Media: (yes or no)
HFS Partitions: (number of partitions)

Control Panel Information:

Lists total Control Panels found with version numbers in parenthesis, bullets to the left of each control panel indicate that it is enabled

Shows: All Control Panels, Apple Only, Non-Apple

Clicking on each control panel in the list reveals its location on the volume

Extension Information:

Lists total Extensions found with version numbers in parenthesis, bullets to the left of each extension indicate that it is enabled

Shows: All Extensions, Apple Only, Non-Apple

Clicking on each extension in the list reveals its location on the volume

System Folder Information:

Lists all folders found which contain a System and Finder, indicates the startup System Folder with a Macintosh icon

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Tech Info Library

QuickDraw 3D Glossary of Terms - P to S (1/96)

Revised: 1/25/96
Security: Everyone

QuickDraw 3D Glossary of Terms - P to S (1/96)

Article Created: 17 November 1995
Article Reviewed/Updated: 25 January 1996

TOPIC -----

This article is a glossary of terms for QuickDraw 3D.

DISCUSSION -----

parallel projection: A method of projecting a model onto a viewing plane that uses parallel projectors. See also oblique projection, orthographic projection. Compare perspective projection.
parameterization A parametric function that picks out all points on a geometric object, such as a pixmap or a surface. Compare surface parameterization.

parametric curve: Any curve whose points are described by one or more parametric functions. A two-dimensional parametric curve can be described by the parametric functions $x = x(t)$ and $y = y(t)$. A three-dimensional parametric curve is described by the parametric functions $x = x(t)$, $y = y(t)$, and $z = z(t)$. Compare B-spline polynomial, nonuniform rational B-spline (NURB).

parametric equation: See parametric function.

parametric function: A function of one or more parameters (often denoted by s and t or u and v).

parametric point: A position in two- or three-dimensional space picked out by a parametric function. Defined by the TQ3Param2D and TQ3Param3D data types. Compare point, point object, rational point.

parent class: The class (if any) of which a given class is a subclass. In other words, a class' parent class is the class immediately above that class in the QuickDraw 3D class hierarchy. For example, the shape class is the parent class of the light class. Also called a base class or a superclass.

patch: A portion of a surface defined by a set of points. Compare NURB patch.

perspective foreshortening: A feature of perspective projections wherein the size of a projected object varies inversely with the distance of the object from the center of projection.

perspective projection: A method of projecting a model onto a viewing plane that uses nonparallel projectors. Compare parallel projection.

Phong illumination: A method of calculating the illumination of a point on a surface based on both diffuse reflection and specular reflection. Compare Lambert illumination, null illumination.

Phong illumination shader: An illumination shader that implements a Phong illumination model. Compare Lambert illumination shader, null illumination shader.

Phong shading: A method of shading surfaces in which the incident light color and intensity are calculated for a series of points along each edge of a polygon and then interpolated across the entire polygon. Compare constant shading, Gouraud shading.

pick: (n.) See pick object. (v.) To determine whether a specified object is close enough to a pick geometry for a hit to be recorded.

pick data structure: A data structure that contains basic information about a pick object. Defined by the TQ3PickData data type.

pick detail: See hit information mask.

pick geometry: The geometric object used in any picking method.

pick hit: See hit.

pick hit list: See hit list.

picking: The process of identifying the objects in a view that are close to a specified geometric object.
picking flag A binary flag in a group state value that determines whether a group is eligible for picking. Compare drawable flag, inline flag.

picking ID: An arbitrary 32-bit value that you can use to determine which object was selected by a pick operation.

picking ID style: A type of style object that determines the picking ID of an object or group of objects in a model.

picking loop: A section of code in which all picking takes place. A picking loop begins with a call to the Q3View_StartPicking routine and should end when a call to Q3View_EndPicking returns some value other than kQ3ViewStatusRetraverse. A picking loop is a type of submitting loop. See also bounding loop, rendering loop, writing loop.

picking parts style: A type of QuickDraw 3D object that determines which parts

of a geometric object (for instance, a mesh) are eligible for inclusion in a hit list.

pick object: A QuickDraw 3D object that is used to select geometric objects in a model that are close to a specified geometric object. A pick object is an instance of the TQ3PickObject class.

pick origin: A point in space that determines the origin of sorting hits. Compare metric pick object.

pick parts mask: A value that indicates the kinds of objects placed in a hit list.

picture area: The portion of a window occupied by a viewer object that contains the displayed image.

pixel image: See pixmap

pixel map: See pixmap

pixmap: A two-dimensional array of values, each of which represents the color of one pixel. Defined by the TQ3Pixmap data type. See also bitmap, storage pixmap.

pixmap draw context: A draw context that is associated with a pixmap.

pixmap draw context data structure: A data structure that contains information about a pixmap draw context. Defined by the TQ3PixmapDrawContextData data type.

pixmap texture object: A texture object in which the texture is defined by a pixmap.

planar: Contained completely in two dimensions (as, for example, a circle). See also spatial.

plane constant: The value d in the plane equation $ax+by+cz+d = 0$.

plan elevation projection: See top elevation projection.

plane equation: An equation that defines a plane. A plane equation can always be reduced to the form $ax+by+cz+d = 0$. Defined by the TQ3PlaneEquation data type.

point: A dimensionless position in two- or three-dimensional space. Defined by the TQ3Point2D and TQ3Point3D data types. Compare parametric point, point object, rational point.
point light A light source that emits rays of light in all directions from a specific location.

point light data structure: A data structure that contains information about a point light. Defined by the TQ3PointLightData data type.

point object: A dimensionless position in three-dimensional space, with an optional set of attributes. Defined by the TQ3PointData data type.

point of interest: The point in world space at which a camera is aimed. The

point of interest and the camera location determine the viewing direction.

point pick object: See window-point pick object.

polar coordinate system: A system of assigning planar positions to objects in terms of their distances (r) from a point (the polar origin, or pole) along a ray that forms a given angle (q) with a coordinate line (the polar axis). The polar origin has the polar coordinates $(0, q)$, for any angle q . Compare Cartesian coordinate system, spherical coordinate system.

polar axis: A fixed ray that radiates from the polar origin, in terms of which polar coordinates are determined. Also called the initial line.

polar origin: The point in a plane from which the polar axis radiates. Also called the pole.

polar point: A point in a plane described using polar coordinates.

pole: See polar origin.

polygon: A closed plane figure. See general polygon, simple polygon.

polygon mesh: A mesh whose faces are composed of polygons.

polyhedron: A solid figure composed of faces.

postmultiplied: A term that describes the order in which matrices are multiplied. Matrix $[A]$ is postmultiplied by matrix $[B]$ if matrix $[A]$ is replaced by $[A] \times [B]$. Compare premultiplied.

premultiplied: A term that describes the order in which matrices are multiplied. Matrix $[A]$ is premultiplied by matrix $[B]$ if matrix $[A]$ is replaced by $[B] \times [A]$. Compare postmultiplied.

primitive: See geometric primitive.

private: See opaque.

projection: (1) A method of mapping three-dimensional objects into two dimensions. See also parallel projection, perspective projection. Compare camera object. (2) The image on the view plane that results from mapping three-dimensional objects into two dimensions.

projection plane: See view plane.

projective transform: See frustum-to-window transform.

projector: A ray that intersects both a point on an object in a model and the view plane, thereby projecting the object in the model onto the view plane.

prototype: The object (or collection of objects) represented in a model. Compare model, synthetic. prototypical Of or pertaining to a prototype. Compare model, synthetic.

proxy display group: See I/O proxy display group.

quaternion: A quadruple of floating-point numbers that obeys the laws of quaternion arithmetic. Defined by the TQ3Quaternion data type.

quaternion transform: A type of transform that rotates and twists an object according to the mathematical properties of quaternions.

QuickDraw: A collection of system software routines on Macintosh computers that perform two-dimensional drawing on the user's screen.

QuickDraw 3D: A graphics library developed by Apple Computer, Inc., that you can use to create, configure, render, and interact with models of three-dimensional objects. You can also use QuickDraw 3D to read and write 3D data.

QuickDraw 3D class: A structure for the data that characterize QuickDraw 3D objects, together with a set of methods that operate on that data. Compare QuickDraw 3D object. See also child class, leaf class, parent class.

QuickDraw 3D class hierarchy: The hierarchical arrangement of QuickDraw 3D object classes.

QuickDraw 3D object: Any instance of a QuickDraw 3D class. See also object type.

QuickDraw 3D Object Metafile (3DMF): An extensible file format defined by Apple Computer, Inc., for storing 3D data and interchanging 3D data between applications.

QuickDraw 3D Pointing Device Manager: A set of functions that you can use to manage three-dimensional pointing devices.

QuickDraw 3D shading architecture: An environment in which shaders can be applied at various stages in the imaging pipeline.

radius vector: The ray that radiates from the polar origin and that forms a given angle with the polar axis (or two given angles with the x and z axes). A polar or spherical point lies at a given distance along the radius vector. See also polar coordinate system, spherical coordinate system.

rasterization: The process of determining values for the pixels in a rendered image. Also called scan conversion.

rational point: A dimensionless position in two- or three-dimensional space together with a floating-point weight. Defined by the TQ3RationalPoint3D and TQ3RationalPoint4D data types. Compare point.

ray: A point of origin and a direction. Defined by the TQ3Ray3D data type.

real: See prototypical.

rectangle pick object: See window-rectangle pick object.

reference count: The number of times a shared object is being accessed.

render: To create an image (on the screen or some other medium) of a model.renderer See renderer object.

renderer object: A QuickDraw 3D object that you can use to render a model—that is, to create an image from a view and a model. A renderer object is an instance of the TQ3RendererObject class.

rendering: The process of creating an image (on the screen or some other medium) of a model. See also rasterization.

rendering loop: A section of code in which all rendering takes place. A rendering loop begins with a call to the Q3View_StartRendering routine and should end when a call to Q3View_EndRendering returns some value other than kQ3ViewStatusRetraverse. A rendering loop is a type of submitting loop. See also bounding loop, picking loop, writing loop.

retained mode: A mode of defining and rendering a model in which the graphics library (for instance, QuickDraw 3D) maintains a copy of the model. See also immediate mode.

retained object: An object that is defined and rendered in retained mode. See also immediate object.

RGB color space: A color space whose three components measure the intensity of red, green, and blue.

RGB color structure: A data structure that contains information about a color. Defined by the TQ3ColorRGB data type.

right-handed coordinate system: A coordinate system that obeys the right-hand rule. In a right-handed coordinate system, positive rotations of an axis are counterclockwise. Compare left-handed coordinate system.

right-hand rule: A method of determining the direction of the positive z axis (and thereby the front of a planar surface). According to the right-hand rule, if the thumb of the right hand points in the direction of the positive x axis and the index finger points in the direction of the positive y axis, then the middle finger points in the direction of the positive z axis. Compare left-hand rule.

rotate: To reposition an object by revolving (or turning) each point of the object by the same angle around a point or axis.

rotate-about-axis transform: A type of transform that rotates an object about an arbitrary axis in space by a specified number of radians at an arbitrary point in space.

rotate-about-axis transform data structure: A data structure that contains information on a rotate transform about an arbitrary axis in space at an

arbitrary point in space. Defined by the `TQ3RotateAboutAxisTransformData` data type.

rotate-about-point transform: A type of transform that rotates an object about the x, y, or z axis by a specified number of radians at an arbitrary point in space.

rotate-about-point transform data structure: A data structure that contains information on a rotate transform about an arbitrary point in space. Defined by the `TQ3RotateAboutPointTransformData` data type. rotate button A button in the controller strip of a viewer object that, when clicked, puts the cursor into rotate mode. Subsequent dragging of the cursor in the picture area causes the displayed object to rotate in the direction in which the cursor is dragged. Compare camera angle button, distance button, move button, zoom button.

rotate transform: A type of transform that rotates an object about the x, y, or z axis at the origin by a specified number of radians.

rotate transform data structure: A data structure that contains information about a rotate transform. Defined by the `TQ3RotateTransformData` data type.

rotation: A transform that causes an object to revolve around a point or an axis. Compare rotate-about-axis transform, rotate-about-point transform, rotate transform.

scalar product: See dot product.

scale: To reposition and resize an object by multiplying the x, y, and z coordinates of each of its points by values d_x , d_y , and d_z . Compare differential scaling, uniform scaling.

scale transform: A type of transform that scales an object along the x, y, and z axes by specified values.

scan conversion: See rasterization.

scene: A combination of objects, lights, and draw context.

screen coordinate system: See window coordinate system.

screen space: See window coordinate system.

screen-space picking: The process of testing whether the projections of three-dimensional objects onto the screen intersect or are close enough to a specified two-dimensional object on the screen.

screen-space subdivision: A method of subdividing smooth curves and surfaces. In this method, the renderer subdivides a curve (or surface) into polylines (or polygons) whose sides have a maximum length of some specified number of pixels. Compare constant subdivision, world-space subdivision.

serpentine: Said of a trigridd in which quadrilaterals are divided into triangles in an alternating fashion.

set: See set object.

set object: A collection of zero or more elements, each of which has both an element type and some associated element data. A set object is an instance of the TQ3SetObject class.

shader: See shader object.

shader object: A type of QuickDraw 3D object that you can use to manipulate visual effects that depend on the illumination provided by a view's group of lights, the color and other material properties (such as the reflectance and texture) of surfaces in a model, and the position and orientation of the lights and objects in a model. A shader object is an instance of the TQ3ShaderObject class. shading parameterization A surface uv parameterization used when shading a surface.

shadow-receiving style: A type of QuickDraw 3D object that determines whether or not objects in a model receive shadows when obscured by other objects in the model.

shape: See shape object.

shape object: A type of QuickDraw 3D object that affects how and where a renderer renders an object in a view. A shape object is an instance of the TQ3ShapeObject class.

shape part: See shape part object.

shape part object: A distinguishable part of a shape object. A shape part object is an instance of the TQ3ShapePartObject class. See also mesh part object.

shared object: A QuickDraw 3D object that may be referenced by many objects or the application at the same time. A shared object is an instance of the TQ3SharedObject class.

side elevation projection: A type of elevation projection in which the view plane is parallel to a side of the object being projected.

simple polygon: A closed plane figure defined by a list of vertices (that is, defined by a single contour). Defined by the TQ3PolygonData data type. See also general polygon.

smooth shading: See Gouraud shading, Phong shading.

space: (1) See coordinate system. (2) The two- or three-dimensional extent defined by a coordinate system.

spatial: Contained completely in three dimensions (as, for example, a box). See also planar.

specular coefficient: A measure of an object's level of specular reflection.

specular color: The color of the light of a specular reflection.

specular control: See specular reflection exponent.

specular exponent: See specular reflection exponent.

specular highlight: A bright area on an object's surface caused by specular reflection.

specular reflection: The type of reflection that is characteristic of light reflected from a shiny surface. Compare diffuse reflection.

specular reflection coefficient: See specular coefficient.

specular reflection exponent: A value that determines how quickly the specular reflection diminishes as the viewing direction moves away from the direction of reflection.

spherical coordinate system: A system of assigning spatial positions to objects in terms of their distances from the origin (r) along a ray that forms a given angle (q) with the x axis and another angle (f) with the z axis. Compare Cartesian coordinate system, polar coordinate system. spherical point A point in space described using spherical coordinates.

spot light: A light source that emits a circular cone of light in a specific direction from a specific location. See also fall-off value, hot angle, outer angle.

spot light data structure: A data structure that contains information about a spot light. Defined by the TQ3SpotLightData data type.

standard I/O library: A collection of functions that provide character I/O and file manipulation services for C programs. Compare UNIX storage object.

standard surface parameterization: A parametric function that maps the unit square to an object's surface. Compare custom surface parameterization, natural surface parameterization.

storage object: A QuickDraw 3D object that represents any piece of storage in a computer (for example, a file on disk, an area of memory, or some data on the Clipboard). A storage object is an instance of the TQ3StorageObject class.

storage pixmap: A two-dimensional array of values contained in a storage object, each of which represents the color of one pixel. Defined by the TQ3StoragePixmap data type. See also bitmap, pixmap.

stream file: A metafile that contains no internal references. In other words, a file object that does not contain a table of contents and in which any references to objects are simply copies of the objects themselves. See also normal file, stream file.

stream mode: The mode in which a stream file is opened. See also database mode, normal mode.

string: See string object.

string object: A QuickDraw 3D object that contains a sequence of characters. A string object is an instance of the TQ3StringObject class. See also C string object.

style: See style object.

style object: A type of QuickDraw 3D object that determines some of the basic characteristics of the renderer used to render the curves and surfaces in a scene. A style object is an instance of the TQ3StyleObject class.

subclass: See child class.

subdivision method: A method of subdividing smooth curves and surfaces. See constant subdivision, screen-space subdivision, world-space subdivision.

subdivision method specifier: An indicator of the number of parts into which a smooth curve or surface is to be subdivided.

subdivision style: A type of QuickDraw 3D object that determines how a renderer decomposes smooth curves and surfaces into polylines and polygonal meshes for display purposes.

subdivision style data structure: A data structure that contains information about the type of subdivision of curves and surfaces used by a renderer. Defined by the TQ3SubdivisionStyleData data type. submit To make an object (or group of objects) eligible for drawing, picking, writing, or bounding box or sphere calculation. Compare submitting loop.

submitting loop: A section of code in which all submitting takes place. Compare bounding loop, picking loop, rendering loop, writing loop.

superclass: See parent class.

surface-based shader: A shader that affects the surfaces of geometric objects based on their material properties, position, and orientation (and other factors). Compare view-based shader.

surface parameterization: A parametric function that picks out all points on a surface. See also custom surface parameterization, natural surface parameterization, standard surface parameterization.

surface normal: See normal vector.

surface shader: A shader that is applied when calculating the appearance of a surface. Compare texture shader.

surface tangent: A pair of vectors that indicate the directions of changing u and v parameters on a surface. Defined by the TQ3Tangent2D data type.

surrounding light: See ambient light.

synthetic: Not real, as for example the objects in a model. Compare prototypical.

synthetic camera: See camera object.

Article Change History:

25 Jan 1996 - Divided article to fit size limitation.

Support Information Services

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Tech Info Library

AppleVision 1710 Displays: Calibration Message (4/96)

Revised: 4/17/96
Security: Everyone

AppleVision 1710 Displays: Calibration Message (4/96)

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Article Created: 25 January 1996
Article Change History: 17 April 1996

TOPIC -----

How do I stop my AppleVision 1710AV or AppleVision 1710 from displaying the calibration message every two weeks?

DISCUSSION -----

You need to set the preferences in either the AppleVision Setup control panel, or the Sound & Displays control panel, dependent upon the System Software installed on your Macintosh computer. For more information on setting the preferences refer to your "AppleVision 1710AV Display User's Guide" or "AppleVision 1710 Display User's Guide."

Here are the steps to follow:

Step 1

Either open the AppleVision Setup control panel or press any of the buttons on the left side of the display.

Step 2

If your computer is equipped with the Sound & Displays control panel, double-click on the AppleVision 1710AV Display listed in the Display field.

Step 3

Click the Color button to open the control panel to the Accurate Color window.

Step 4

Click the Preferences button in the bottom left corner of the Accurate Color window to open the Preferences window.

Step 5

On the left side of the Preferences window is an Auto Recalibrate section, with a series of checkboxes, which determine when the display will recalibrate. Click the top four checkboxes to deselect them (an X no longer appears).

Your display will no longer display the "time to recalibrate" message every two weeks.

Article Change History:

17 Apr 1996 - Added Step 2 to discussion.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19260



Tech Info Library

AICK Installer: QuickDraw GX and Acrobat Reader Fonts (1/96)

Revised: 1/25/96
Security: Everyone

AICK Installer: QuickDraw GX and Acrobat Reader Fonts (1/96)

=====

Article Created: 25 January 1996

TOPIC -----

After I installed the Apple Internet Connection Kit (AICK) and then restarted my computer, an error dialog appeared with this message, "The installed substitution fonts are not designed to work with QuickDraw GX." What is wrong?

DISCUSSION -----

This error occurs if AICK is installed when QuickDraw GX is already installed on your computer. There is a compatibility issue between QuickDraw GX, and the Adobe Acrobat Reader and accompanying fonts which AICK installs.

A solution is to install Acrobat Reader from a different source. The Acrobat Reader installer checks to see if QuickDraw GX is installed and then installs the appropriate fonts. Acrobat Reader is included on most new system CD-ROM discs, or it may be downloaded from an online source.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19262



Tech Info Library

System 7.5.x: Restarting from the Extensions Manager (1/96)

Revised: 1/25/96
Security: Everyone

System 7.5.x: Restarting from the Extensions Manager (1/96)

=====

Article Created: 25 January 1996

TOPIC -----

This article describes how to restart your Macintosh computer from the Extensions Manager control panel.

DISCUSSION -----

If you interrupt the startup process by holding down the space bar to access the Extensions Manager, you can force your computer to restart immediately by holding down the command key while clicking the Extensions Manager's close box. The computer will restart and load the extensions that were selected when you clicked the close box.

This can be a useful procedure because some items like RAM Doubler, NOW Toolbox, and At Ease Startup require a full restart to load after being turned on in the Extensions Manager.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19264



Tech Info Library

Newton 2.0 OS: Deleting a Backup from a PC Card (1/96)

Revised: 1/25/96
Security: Everyone

Newton 2.0 OS: Deleting a Backup from a PC Card (1/96)

=====

Article Created: 25 January 1996

TOPIC -----

I have a MessagePad 120 which has recently been upgraded to the Newton 2.0 OS. I created a backup on my card and now I want to delete it. When I select the PC card, all I see is "Erase," "Restore," and "Backup," but no "Delete Backup."

DISCUSSION -----

Previously using the Newton 1.x OS, the Erase option only erases the card. With the Newton 2.0 OS, if you tap Erase, you get additional options such as Entire Card, Backup Only, and Information Only.

You should select Backup Only. When you do, the rest of the information and packages are protected.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19266



Tech Info Library

WiggleWorks: Splash Screen Displays Improperly (1/96)

Revised: 1/25/96
Security: Everyone

WiggleWorks: Splash Screen Displays Improperly (1/96)

Article Created: 25 January 1996

TOPIC -----

When I launch WiggleWorks on my Macintosh computer with System 7.5.2, the splash screen only displays a horizontal bar with the animation partially visible. I have tried disabling virtual memory, and selecting System 7.5.2 extensions only in the Extensions Manager, but it is still not working.

DISCUSSION -----

The problem you are encountering is caused by the Control Strip software that came with your Multiple Scan Display. This issue may occur on any Macintosh computer on which you launch WiggleWorks while the Control Strip is showing on the screen. You can see the full WiggleWorks splash screen by hiding the Control Strip before you launch the Wiggleworks application:

Step 1

Under the Apple Menu choose Control Panels.

Step 2

Double-click on the Control Strip control panel. Click the radio button next to Hide Control Strip. Close the Control Strip control panel.

Note: You can also click the Define hot key... button to set a key combination that hides and shows the Control Strip whenever you press those keys regardless of what application you are in.

Step 3

Launch WiggleWorks.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19268



Tech Info Library

Newton Backup Utility: Fails Using System 7.1.2 (1/96)

Revised: 1/26/96
Security: Everyone

Newton Backup Utility: Fails Using System 7.1.2 (1/96)

=====

Article Created: 26 January 1996

TOPIC -----

I am having problems using the Newton Backup Utility on my Power Macintosh computer using System 7.1.2.

DISCUSSION -----

This is a known issue, but there are workarounds that can solve this problem.

Symptoms

=====

Extensions Off

If you attempt to launch Newton Backup Utility on a Macintosh computer that uses System 7.1.2 (early Power Macintosh computers) with extensions off the application starts, then stops without any messages. Newton Backup Utility does not launch successfully.

Extensions On

If you have extensions on a dialog appears explaining it cannot find AppleScriptLib. If you install AppleScriptLib from the 7.1.2 CD, a new dialog appears explaining it cannot find DragLib.

Workarounds

=====

Install System 7.5 or later

System 7.5 and later includes updated versions of the AppleScriptLib, ObjectSupportLib, and Macintosh Drag and Drop extensions.

Install Updated Extensions

Use the latest versions of these extensions:

- AppleScriptLib (v1.1 or better)
- ObjectSupportLib (v1.0.2 or better)
- Macintosh Drag and Drop (v1.1 or better)

The AppleScriptLib and ObjectSupportLib ships with System 7.5 CD and the Macintosh Drag and Drop extension can be downloaded from the Internet and online services.

Install the 68K Version

Use Custom install to install the 68K version of Newton Backup Utility on your Power Macintosh instead of the PowerPC native version. The downside of using the non-native software is that it runs a little slower.

IMPORTANT:

You must throw away any previous versions of Newton Backup Utility before installing the 68K version. If you do not remove previous versions, the Newton Backup Utility will still fail.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19269



Tech Info Library

PCI-Based Power Macintosh Computers: Two Ethernet Ports (6/96)

Revised: 6/27/96
Security: Everyone

PCI-Based Power Macintosh Computers: Two Ethernet Ports (6/96)

Article Created: 26 January 1996
Article Reviewed/Updated: 27 June 1996

TOPIC -----

My PCI-based Power Macintosh computer has two Ethernet ports. Can I use both of them at the same time or does one port takes priority if I have two active connections?

DISCUSSION -----

The Power Macintosh 7200, 7500, 7600, 8500, and 9500 series computers have a built-in Ethernet port (comprised of one Ethernet controller chip) which accepts either a 10baseT cable or the Apple Ethernet (AAUI) adapter for thicknet or thinnet cables. The Ethernet port has two connectors but operates only one of them at a time. If devices are plugged into both connectors, the system defaults to the 10baseT connection.

Note: This information is taken from the Power Macintosh 7500/8500 Developer Notes.

Article Change History:
27 Jun 1996 - Added additional computers.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19270



Tech Info Library

PCI-Based Power Macintosh: -50 Error When Ejecting CD (5/96)

Revised: 5/28/96
Security: Everyone

PCI-Based Power Macintosh: -50 Error When Ejecting CD (5/96)

Article Created: 26 January 1996
Article Reviewed/Updated: 28 May 1996

TOPIC -----

I have a recent Power Macintosh computer, and I have noticed that my system software CD-ROM disc mounts even if I do not have CD-ROM software loaded. I can do this even if I use the system software CD from an older Power Macintosh computer. However, I sometimes get a -50 error when I attempt to eject the CD-ROM disc. What could be causing this to happen?

DISCUSSION -----

During the startup process, the computer checks all available SCSI volumes, including the CD-ROM drive. If the CD-ROM disc contains the ".AppleCD" driver, it will be loaded and used by the computer to access the CD-ROM drive in lieu of the CD-ROM software that would have loaded if the extensions were not off. This works fine for most purposes.

However, some newer CD-ROM drives need slightly different information than those that shipped with earlier Power Macintosh computers to eject a CD-ROM disc. For example, your computer may have a quadruple-speed (4x) CD-ROM drive, but the system software CD-ROM disc you inserted may load a CD-ROM driver for a double-speed (2x) CD-ROM drive.

This causes the -50 error, which indicates that the internal parameters being used to eject the CD are incorrect. You should be able to eject the CD-ROM disc if you restart the computer again, and press the eject button on the CD-ROM drive before the computer displays "Welcome to Macintosh".

Article Change History:
28 May 1996 - Updated technical information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19271



Tech Info Library

Pwr Mac 5200/5300/6200/6300: Sound Issue w/Spin Doctor1.2 (1/96)

Revised: 1/26/96
Security: Everyone

Pwr Mac 5200/5300/6200/6300: Sound Issue w/Spin Doctor1.2 (1/96)

=====

Article Created: 26 January 1996

TOPIC -----

I have a PowerBook computer with the PowerBook Mobility Bundle, which includes the game, Spin Doctor v1.2. I tried to use that game on my Macintosh Performa 5215, but I notice that when I turn the sound all the way down using the "-" key, I can no longer use the sound. I should be able to turn the sound back up using the "+" key, but this does not work. I have tried quitting the application and relaunching the game, but I still do not hear sound. How do I correct this problem?

DISCUSSION -----

Callisto Corporation (the developer of Spin Doctor) states that this is a known issue with the native version of Spin Doctor (v1.2) on the Power Macintosh and Performa 5200, 5300, 6200, 6300 series computers*. However, this problem does NOT occur with the Spin Doctor Challenger game that is included with the Macintosh Performa 630 and 6100 series computers. To correct this problem, follow these steps:

Step 1

Delete the Spin Doctor Settings preference file. You can find it at the following path:

System Folder -> Preferences -> Spin Doctor Settings

Step 2

Select the preferred sound level from the Sound control panel before relaunching Spin Doctor.

Spin Doctor will now match the settings on the Sound control panel.

*The following computers will be affected by this issue:

- The Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- The Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.
- The Macintosh Performa 5300CD and Power Macintosh 5300/100 LC
- The Macintosh Performa 6300CD

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19272



Tech Info Library

Newton 2.0 OS: Creating Custom Worksites For Dialing (1/96)

Revised: 1/26/96
Security: Everyone

Newton 2.0 OS: Creating Custom Worksites For Dialing (1/96)

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Article Created: 26 January 1996

TOPIC -----

I live in a city that has multiple calling zones. Sometimes I have to enter the area code, but not the "1" in front of the phone number. Is there an easier way to do this than using the assist button?

DISCUSSION -----

Yes, you can create custom worksites for special calling requirements. The worksite can be selected in a call slip, and is in effect until a different worksite is chosen. This is easier than editing the information using the assist button in a call slip.

Creating a Custom Worksite
=====

Step 1

Open the Extras Drawer

Step 2

Choose the Setup folder. Do this by tapping on the folder tab.

Step 3

Tap on the Owner Info icon.

Step 4

Tap New. A new list appears.

Step 5

Tap Worksite. An Untitled Worksite slip appears.

Step 6

Enter a name in the Worksite field.

TIP:

Use a name that will help you remember how the Worksite functions.

Step 7

Enter the number that you want to precede the phone number, into the Dialing Prefix field.

For example, if you want the area code 555 to precede the phone number you are dialing, enter 555 into the Dialing Prefix field.

You can create worksites for each special calling requirement you have.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19273



Tech Info Library

Newton 2.0 OS : Maximum Number of Folders (1/96)

Revised: 1/26/96
Security: Everyone

Newton 2.0 OS : Maximum Number of Folders (1/96)

=====

Article Created: 26 January 1996

TOPIC -----

How many folders can I set up on my Apple MessagePad 120 with the Newton 2.0 OS?

DISCUSSION -----

Using the Newton 2.0 OS, each application (such as Notes, Names, and Calls) can have 12 folders that show up only in that application.

Additional folders can be added, but they will be global folders and will show up everywhere.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19274



Tech Info Library

Scholastic SuperPrint: Clip Art Files Manual Error (1/96)

Revised: 1/26/96
Security: Everyone

Scholastic SuperPrint: Clip Art Files Manual Error (1/96)

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Article Created: 26 January 1996

TOPIC -----

The manual for Scholastic SuperPrint that came with my Apple Early Language Connections bundle states it comes with 33 clip art galleries (page 29), 19 frames (page 32), and 19 scenes (page 33).

When I compare what is actually on my hard drive to what the documentation shows I see the following:

- 18 clip art galleries not 33.
- 10 frames not 19.
- 10 scenes not 19.

DISCUSSION -----

The discrepancy between the actual number of files installed and the number listed in the manual is a documentation problem. SuperPrint includes 18 clip art galleries, 10 frames, and 10 scenes. A separate product called SuperPrint Graphics Pack contains the additional graphics.

The Early Language Connections bundle contains both SuperPrint and the SuperPrint Graphics Pack. When both these products are installed there are 33 clip art galleries, 19 frames, and 19 scenes.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19275



Tech Info Library

Power Macintosh: Developer's Can Test for Power Clean Code 1/96

Revised: 1/29/96
Security: Everyone

Power Macintosh: Developer's Can Test for Power Clean Code 1/96

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Article Created: 29 January 1996

TOPIC -----

As I buy more and more Power Macintosh computers with PowerPC 603, 603e, and 604 processors for my business, I am seeing more incidents of incompatibilities and poor performance. According to the Developer Technotes (pasted below), this could be a result of applications being compiled with compilers that do not generate Power Clean code.

Excerpt from Developer Technical Notes:

"The first generation Power Macintosh computers used the PowerPC 601 microprocessor, a microprocessor that bridged the new PowerPC architecture with the POWER architecture from which it descended. The PowerPC 601 implemented most of the old POWER instruction set as well as the newer PowerPC instruction set. Later versions of the microprocessor, namely the PowerPC 603 and 604, only implement the PowerPC instruction set, hence the term "power clean." Because of the differences in instruction set implementation, a possibility exists for incompatibility and poor performance, particularly in the area of compilers. Newer compilers, designed for the PowerPC instruction set, do not generate the old POWER instructions. However, compilers designed for the POWER instruction set are also being used to compile programs for the PowerPC instruction set. Most of those compilers have the option to suppress the generation of offending instructions. For example, the IBM xLc C compiler and the xLCC++ compiler have the option -garch=ppc. Developers using these compilers should verify that the options are in effect for all parts of their code. To be on the safe side, you should contact your compiler vendor to make sure that the compiler you are using does not generate POWER instructions."

Is there a utility available from Developer Technical Support that could help identify whether or not an application, extension, or control panel, uses old PowerPC 601 instructions not supported on the PowerPC 603, 603e, and 604 processors?

DISCUSSION -----

Apple is not aware of any end-user application or utility that can tell if a computer is running PowerPC 601 specific code. However, the developer of your application can check their code to be sure it is "Power Clean" using a Macintosh Programmer's Workshop (MPW) tool called DumpPEF. Developers should be using MPW version 2.0 or later. Here is more information from Developer Technical Support regarding this topic:

"The latest pre-release MPW DumpPEF tool (version 2.0b1 from E.T.O. #15) has an option, -w601, to scan for PowerPC 601 specific instructions. It is one way to test if your code is affected. Be aware, however, that DumpPEF cannot always distinguish between code and data and may flag POWER opcodes that are really data. You should check all warnings from DumpPEF to be sure they are not spurious. Even if the tool finds valid POWER opcodes, there is no guarantee the instructions are part of an executable code path. You should, of course, test your application on 603/604 hardware as soon as it is available."

This means the MPW tool DumpPEF version 2.0 or later will identify 601 specific instructions. If DumpPEF finds no 601 specific instructions, your code is considered Power Clean. Even if DumpPEF finds 601 instructions, your code may still be clean; you have to examine further the 601 code in question to ensure that DumpPEF is not reporting a 'false positive' due to reading data as code.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19276



Tech Info Library

Apple LaserWriter Printers: MIB Support (1/96)

Revised: 1/29/96
Security: Everyone

Apple LaserWriter Printers: MIB Support (1/96)

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Article Created: 29 January 1996

TOPIC -----

I am using Hewlett Packard (HP) K200 UNIX servers, and I would like the Simple Network Management Protocol (SNMP) Management Information Block (MIB) information for the following Apple LaserWriters:

LaserWriter 16/600 PS
LaserWriter Select 360
LaserWriter IINT
LaserWriter IINTX
LaserWriter Pro 630

DISCUSSION -----

The printers you listed have no SNMP MIB agents. As a matter of fact, the only printer in your list that supports TCP/IP is the LaserWriter 16/600 PS printer.

The only printer Apple has shipped that is SNMP compliant is the LaserWriter Pro 810 with its Virtual Printer Technology (VPT). VPT is SNMP compliant with MIB II, Character MIB, and RS-232 MIB.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19279



Tech Info Library

Power Macintosh 5200: Tinted Video (1/96)

Revised: 1/29/96
Security: Everyone

Power Macintosh 5200: Tinted Video (1/96)

Article Created: 29 January 1996

TOPIC -----

I have a Power Macintosh 5200 computer, and lately I've noticed that the monitor appears to flicker intermittently. Also, the monitor appears to be discolored. What could be causing this?

DISCUSSION -----

Verify that environmental interference is not the cause of the flickering and discoloration. To do this, try the following suggestions; be sure to look for improvements and changes after following a suggestion:

- Change the location and/or rotate the computer.
- Remove metal objects from the area.
- Look for other environmental influences (power lines, generators, refrigerators, air conditioners).
- Check fluorescent lighting fixtures and transformers, which are also common sources of interference.

If the symptoms you are experiencing do not appear to have an environmental cause, contact an Apple-authorized service provider for additional assistance.

The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19280



Tech Info Library

How Support Professional Differs From Free WWW Access (11/96)

Revised: 11/27/96
Security: Everyone

How Support Professional Differs From Free WWW Access (11/96)

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Article Created: 30 January 1996
Article Reviewed/Updated: 27 November 1996

TOPIC -----

Why should I subscribe to Apple's Support Professional program when I can find some of the same information on Apple's World Wide Web (WWW) page at www.info.apple.com? How do the two services compare to each other?

DISCUSSION -----

Apple's Support Professional Product
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Apple's Support Professional Solution Series is a new approach to the delivery of vital Macintosh support information. Combining CDs, Support Notice! email service on important support issues, product and technology teleconferences, and fax transmissions, Support Professional is a comprehensive solution that helps you assist Macintosh users more efficiently and cost effectively.

With Support Professional, support administrators can reduce training costs, improve response time, and manage support resources more efficiently. It frees you to spend more time analyzing long-term support needs and strategies instead of dealing with day-to-day crises. It also provides information on new products and technologies and their impact on your support operations.

Both the Support Professional Solution 500 Series and 700 Series offer a wide variety of essential Apple technologies.

The quarterly Support Briefing System brings you a CD-based presentation on the latest Apple technologies. Each CD mailing is followed by teleconferences where your questions are answered by Apple engineers, third-party engineers, and other subject-matter experts.

The Support Information System (SIS), based on AppleSearch technology, gives you access to Apple's extensive support resources for fast, thorough problem

resolution. You can set up an information server for your organization that supports natural-language or Boolean searches of Apple's Support Library and other Wide Area Information Server (WAIS) libraries. You can also store your organization's own support information. The SIS includes bimonthly CDs containing a wealth of information on Apple products, including product specifications, a current Apple software archive for disaster recovery and testing purposes, configuration and compatibility information, Apple's Technical Information Library (Apple's official technical support database), software updates, and Apple product manuals. Also included are archives of all previous program and support information.

The Skill Module System features modular, self-paced training for your help-desk staff, technology coordinators, and other support personnel.

If you choose the Support Professional Solution 700 Series, you'll also get direct, unlimited access to senior Apple support engineers through the Support Professional Escalation Line. Your designated contact people will have toll-free access—with a 60-second target response time—from 7:00 a.m. to 7:00 p.m. Central Time, Monday through Friday. (Upgrade options are available for extended hours.)

Ordering Information

If you would like to receive ordering information and/or a free Support Professional Preview Kit on the Support Professional program, you may call 1-800-745-2775 between the hours of 7 a.m. and 10 p.m. Central Time.

The Internet - Apple Support & Information Web

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The Apple Support & Information Web provides a wide range of services. The URL (universal resource locator) is: <http://www.info.apple.com> (IP address is: 204.96.16.2). The focus is support information, but it's also a part of the greater Apple web site.

1) Apple Technical Information Library

The public subset of the Apple Tech Info Library, which is the Apple Assistance Center's official technical support database. Over 13,000 articles on Apple products, past and present can be searched by simply typing a word or several words into a text field and clicking a search button. The information is indexed by a Wide Area Information Server (WAIS) which is updated daily with new and revised information.

2) Apple Software Updates

All "freely" distributed Apple software updates, including printing software, system updates, network software updates and utilities are published to several ftp sites. Compared to commercial online services, an ftp site handles three to four times the file transfers in a given period.

This area points to the Apple Software Updates library on <ftp.info.apple.com>

(formerly ftp.austin.apple.com). This library contains all free software updates. This is the same software that is posted to American Online, CompuServe, and the Support Professional CD's and ftp site.

3) Apple Product and Support Information

A variety of information is posted, including:

- How to contact Apple Support by telephone, fax and online services.
- Apple fee-based support programs and services information.
- Top Ask Apple FAQ's, covering top questions and answers on Apple products.*
- Apple Press Releases and selected new product information.
- Apple product datasheets in both text and Adobe Acrobat format.
- All issues of the "Information Alley," Apple Support's daily electronic magazine, focusing on answering the questions asked of the Apple Assistance Center.

* Also available in the Tech Info Library by using the keyword, kfaq.

Comparison Chart

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	Support Pro	Apple Support & Info Web
	-----	-----
Apple Tech Info Library	Yes*	Yes
Apple Software Updates	Yes@	Yes
Apple Product Datasheets	Yes&	Yes
Apple White Papers	Yes	Yes
Information Alley	Yes	Yes
Apple Fax Documents	Yes	Yes
Top Tech Info Library articles	Yes	Yes
Apple Corporate Timeline	No	Yes
Press Releases	No	Yes
Apple Software Archive f	Yes	No
Apple Product Manuals	Yes	No
Support Notice! email service \$	Yes	No
Skill Module Developer Kit	Yes	No
Skill Module Library	Yes	No
Support Briefing CD	Yes	No
Support Briefing Teleconference#	Yes	No
Phone Escalation Support (700 series)	Yes	No

* Includes the most complete Apple Tech Info Library containing "restricted access" articles, and is pre-indexed for use with AppleSearch (client & server included with Support Professional).

@ Included on the bimonthly CD-ROM discs AND through a Support Library Remote server accessible with Apple Remote Access or FTP clients, password protected only for Support Professional subscribers.

& Support Professional subscribers receive them via fax and through the Apple

Tech Info Library.

£ Complete backup of all Apple software on one CD for disaster recovery.

\$ Includes proactive email messages on hot and emerging Apple product issues, announcements about new software update postings.

Subscribers can participate in a quarterly teleconference with Apple product managers and engineers to learn about new products and technologies that Apple is working on.

Article Change History:

27 November 1996 - Updated with current information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19281



Tech Info Library

Apple MessagePad 120: Determining RAM Size (2/96)

Revised: 2/6/96
Security: Everyone

Apple MessagePad 120: Determining RAM Size (2/96)

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Article Created: 30 January 1996
Article Reviewed/Updated: 6 February 1996

TOPIC -----

Is there a way to determine how much RAM is in my Apple MessagePad 120?

DISCUSSION -----

There is no way to determine the RAM configuration without powering on the Apple MessagePad 120.

You can check the RAM configuration by tapping the information icon in the Extras drawer. The total of Used, Free, and System RAM installed will equal 1MB or 2MB.

Step 1

Turn on your Apple MessagePad 120

Step 2

Tap Extras

Step 3

Tap the information icon ('i' in the lower left corner)

Step 4

Tap Memory Info

Step 5

Add the System RAM Installed, Used and Free numbers. This is the total flash RAM installed.

Example:

```
System RAM:  512k
           Used:  952k
           Free:  409k
           Total: 1873k (2MB)
```

Article Change History:

06 Feb 1996 - Corrected Type of RAM.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19282



Tech Info Library

Infrared Remote Control: Functions & Troubleshooting (1/96)

Revised: 1/30/96
Security: Everyone

Infrared Remote Control: Functions & Troubleshooting (1/96)

=====

Article Created: 30 January 1996

TOPIC -----

This article provides information on the infrared remote control functions, and also provides troubleshooting tips.

DISCUSSION -----

An infrared remote control is included with all Macintosh computers that include a television tuner or tuner module. It is also included with the Apple TV/Video System. There are two remote control models, both offer identical functions:

- A thin, credit-card type remote with a raised-bubble control pad
- A larger, standard-type remote control similar to those included with many televisions and VCR players.

CONTROLS

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- Power: Turns the computer on and off. When turning the computer off using the remote control, you must quit all applications currently running before the shut down is completed. Quitting applications is performed automatically. However, you must respond to any dialogs that may appear during the shut down process.

- Muting: When using the Apple Video Player or AppleCD Audio Player, turns the sound off and on. The word "Muting" appears in Apple Video Player's video window, except when playing MPEG movies. The Sound control panel also indicates that you have muted the sound.

- Volume +, Volume -: Two buttons. Increases or decreases the volume for Apple Video Player or AppleCD Audio Player.

- Channel +, Channel -: Two buttons. Changes the programmed television channels in Apple Video Player in ascending or descending numerical order.

- Display: Toggles the video window in the Apple Video Player between the current size and the largest size.
- TV/Video/Mac: Toggles between the Apple Video Player window and other Macintosh applications currently running. If Apple Video Player is not running, it is launched.
- Stop/Eject: Press once to stop the currently playing audio CD. Press again to eject the audio CD. Also ejects a Video CD when in the Apple Video Player.
- REV: To go to the previous track on an audio CD.
- FWD: To go to the next track on an audio CD.
- Play/Pause: Play or pause an audio CD.

What to Do if the Remote Does Not Work

=====

- Make sure you have answered all dialogs or error messages that are on your computer screen.
- Check the remote control with another Macintosh computer that uses a remote control. Try powering on/off the computer. Some Sony television sets also work since they use the same type of remote control signal. If your remote control can power on/off another device the problem is unlikely to be the remote control unit.
- Make sure you have the Video Startup extension installed in your Extensions folder. If you do not have this extension in your Extension folder, only the Power button on the remote control works.
- Make sure you are using the remote control in close proximity to the black infrared receiver window in your Macintosh computer. Also make sure nothing is obstructing the infrared receiver window.
- The thin, credit-card type remote is shipped with a clear plastic tab that protects the battery during shipping. Remove this tab if present.
- The checkbox labeled "Disable Remote Control" may be selected in Apple Video Player. Choose Preferences from the Setup menu and deselect this box. Having this option selected disables ALL remote control functions, including Power, regardless of whether Apple Video Player is currently running. After shut down, however, the remote will still be able to power on the computer. The other functions remain disabled after starting up until "Disable Remote Control" is deselected in Apple Video Player, or the Video Player Prefs file is thrown away, and Apple Video Player is restarted.
- The remote control may have a dead battery.

Thin Remote Control

Insert a pen tip into the small round hole on the back of the remote control, then move it to the right to allow the battery compartment to slide freely outward from the bottom of the remote.

Replace the battery with a 3-volt lithium cell (type CR2025). These batteries are available wherever camera, watch, and calculator batteries are sold.

Larger Remote Control

Slide the battery cover off with your thumb. Replace the batteries with fresh AA batteries.

Remote Control Works in Some Applications

=====

- Try using it to control AppleCD Audio Player functions. If it works properly with AppleCD Audio Player, it may be that only the application Apple Video Player is not working properly.
- Trash the Apple Video Player Prefs file from the Preferences folder, inside your System Folder, and restart the computer.
 - If Apple Video Player still does not work after throwing away the preferences, reinstall Apple Video Player and the Video Startup extension.

NOTE:

Make sure to throw away the old versions of Apple Video Player and the Video Startup extension before installing new versions.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19283



Tech Info Library

Drive Setup 1.0.x: How to Partition Your Hard Drive (5/96)

Revised: 5/6/96
Security: Everyone

Drive Setup 1.0.x: How to Partition Your Hard Drive (5/96)

Article Created: 30 January 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

Drive Setup Guide has a step-by-step walk-through of how to partition my hard drive, but I am not able to finish the walk-through because the drive being partitioned is the startup volume. I tried starting from the System CD-ROM disc that came with my computer to free the hard drive for partitioning. However, the Apple Guide extension is not part of the startup software on the CD-ROM disc and Drive Setup Guide is not available.

How do I partition the hard drive with Drive Setup?

DISCUSSION -----

Follow these steps to partition your hard drive:

WARNING: Partitioning your hard drive will erase all the information on the disk. Make sure you have all your information backed up so you can restore your hard drive after it has been partitioned.

Step 1

Startup from the System CD-ROM disc or from another startup disk other than the one being partitioned.

Step 2

Double-click on Drive Setup, located on either the startup CD-ROM disc or floppy disk.

Step 3

Select the name of the disk to be partitioned from the device list provided in Drive Setup's first window.

Step 4

Click the "Initialize..." button.

WARNING: This process will erase everything on the drive being partitioned. Be sure this is the drive you want to partition.

Step 5

Click the "Custom Setup..." button.

Step 6

Click the pop-up menu next to the words "Partitioning Scheme" and select "Current Volumes"--the topmost item in this menu. From the list of items provided, select the number of HFS (Hierarchical File System) partitions that you wish to create. Eight partitions is the maximum.

Step 7

A graphical representation of the partitioning option you selected will appear in the window. If you wish to customize the size of an individual partition, move the mouse cursor to the small rectangle on the border between two partitions. The pointer will then change to two arrows indicating that you are now in the correct position to modify the partition size. Click and hold the mouse button to increase or decrease the partition size by sliding the rectangle up and down, respectively. The exact partition size will be indicated in the "Volume Info" section of the window.

Step 8

Click the "OK" button to accept the partitioning scheme you have configured. You will then be returned to the previous window, where your partitioning scheme will be summarized.

Step 9

Click the "Initialize" button. The drive will be partitioned accordingly, erasing all data stored on it in the process. Partition names will by default be titled, "Untitled x" where "x" represents the partition number. You can rename the partitions after initialization is completed and you have quit Drive Setup. If, thereafter, you wish to startup the computer from one of the partitions, you will have to install system software on that partition.

This article was published in the Information Alley on 02 May 1996.

Article Change History:

06 May 1996 - Added alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19286



Tech Info Library

PowerPC Platform: An Overview (3/97)

Revised: 3/24/97
Security: Everyone

PowerPC Platform: An Overview (3/97)

Article Created: 30 January 1996
Article Reviewed/Updated: 24 March 1997

TOPIC -----

This article provides an overview of the PowerPC Platform (PPCP) (formerly known as CHRP).

DISCUSSION -----

This information is taken from "PowerPC Microprocessor Common Hardware Reference Platform: A System Architecture", which is available from the PPCP Web Site:

<http://chrp.apple.com/>

What is PPCP?

=====

The PowerPC Platform (PPCP) architecture specification provides a comprehensive computer system hardware-to-software interface definition, combined with minimum system requirements, that enables the development of and software porting to a range of compatible industry-standard computer systems from portables through servers. These systems are based on the PowerPC microprocessor, as defined in The PowerPC Architecture. The definition supports the development of both uniprocessor and multiprocessor system implementations.

A key attribute and benefit of the architecture is the ability of hardware platform developers to have degrees of freedom of implementation below the level of architected interfaces and creating an opportunity for adding unique value. This flexibility is achieved through architecture facilities including:

- device drivers
- Open Firmware (OF)
- Run-Time Abstraction Services (RTAS)
- hardware abstraction layers.

Though the PowerPC microprocessor is the most widely used RISC processor,

substantial legacy software exists and a mechanism for running the bulk of this legacy software is a requirement. The system address map has been defined with a specific objective of assisting efficient x86 emulation. Additionally the PowerPC microprocessors support Bi-Endian operation which is a key attribute important to running the supported operating systems and applications. Bi-Endian capability is not available in the current IBM PC compatible x86-based system architecture.

The architecture combines leading-edge IBM PC and Apple Macintosh technologies to create a superior personal computing platform. By design, it supports a wide range of computing needs including personal productivity, engineering design, data management, information analysis, education, desktop publishing, multimedia, entertainment, and database, file, and application servers. The architecture effectively leverages industry-standard I/O through the PCI bus while accommodating legacy I/O from both the IBM PC compatible and the Apple Macintosh domains.

This approach provides several key benefits for system manufacturers and end customers:

- systems can be designed and manufactured to enable the customer a choice of operating system support
- smooth application, operating system and customer system transitions are enabled by accommodation for legacy software, I/O devices, and peripherals.

This architecture helps protect the customer's investment while moving to more advanced portable, desktop and server computing platforms. Systems based on this architecture are expected to offer price/performance advantages and to address the expected growth in computing performance and functionality.

Article Change History:

24 Mar 1997 - Updated for technical accuracy.

Copyright 1996-1997, Apple Computer, Inc.

Tech Info Library Article Number:19287



Tech Info Library

PowerPC Platform: Macintosh Technology (3/97)

Revised: 3/24/97
Security: Everyone

PowerPC Platform: Macintosh Technology (3/97)

Article Created: 30 January 1996
Article Reviewed/Updated: 24 March 1997

TOPIC -----

This article provides an overview of the Macintosh technology involved in the PowerPC Platform (PPCP) (formerly known as CHRP).

DISCUSSION -----

This information is taken from "Macintosh Technology in the Common Hardware Reference Platform", which is available from the PPCP Web Site:

<http://chrp.apple.com/>

Apple Computer and the PowerPC Platform

The PowerPC Reference Platform (PReP), Apple RISC architecture, and IBM RISC server systems were used in the development of the PowerPC Platform (PPCP) architecture. The objective was to reduce the porting effort of operating systems and applications coming from each of these environments. The information below describes the relationship of the Apple RISC architecture to the PPCP architecture and of the PowerPC Reference Platform to this architecture. The PowerPC Reference Platform used IBM RISC client and server information.

Many components of the second-generation Power Macintosh architecture are included for compatibility with the desktop products based on that architecture. Features of the second generation Power Macintosh are listed below:

- Based on the PowerPC microprocessor family for main system processing. The instruction set of the Motorola 68LC040 is supported through a built-in emulation system.
- Use of the PCI bus to support all I/O and system expansion. Other buses (such as NuBus, SCSI and IDE) are supported by means of bridge ASICs connected to the PCI bus.

- Use of Open Firmware for system startup and to allow use of expansion cards from other architectures. While the Mac OS continues to be the principal operating system for Power Macintosh computers, Open Firmware lets other operating systems that are ported to the PowerPC instruction set take control of the computer.
- Function of processor bus coherency. Memory systems connected directly to the PowerPC bus, including main RAM and all levels of cache, belong to a single coherency domain.
- Support for both Big-Endian and Little-Endian addressing modes. Besides the support for both modes built into the PowerPC processor, storage subsystems such as frame buffers are accessible to software through both big-endian and little-endian apertures.
- Support for Macintosh-style I/O such as ADB, SCC and LocalTalk.
- Support for PowerPC-native interrupts and native device drivers.

Apple is currently designing computers that will comply with the PowerPC Platform specification. The following table lists the general characteristics of first- and second-generation Power Macintosh computers and the currently-projected characteristics of Power Macintosh computers that comply with the PowerPC Platform specification.

Begin_Table

PPCP-Macintosh feature comparison

Feature =====	First-Generation Power Macintosh =====	Second-Generation Power Macintosh =====	PPCP Spec. Power Macintosh =====
Processor Type	PowerPC 601	PowerPC 601, 603 or 604	All PowerPC Models
Processor Upgrade	None	By replacing processor subsystem card	By replacing processor subsystem card
External Cache	Up to 1MB	Up to 4MB	Up to 4MB
RAM expansion	32-bit SIMM	64-bit DIMM	64-bit DIMM
Maximum RAM	72-264 MB	1 GB-1.5 GB	To be determined
NVRAM	Macintosh PRAM	8 KB	8 KB

Support for 21-inch monitors	None, 16 bpp, or 24 bpp	16 bpp or 24 bpp	16 bpp or 24 bpp
Sound	Macintosh 16-bit, 44.1 MHz, stereo input and output	Macintosh 16-bit, 44.1 MHz, stereo input and output	Macintosh and SoundBlaster- compatible stereo input and output
Internal hard disk	160 MB to 1 GB	250 MB to 2 GB	To be determined
Additional internal drives	One 5.25-inch, one or two 3.5-inch	One 5.25-inch, one or two 3.5-inch	To be determined
SCSI buses	1 internal, 1 external	1 fast internal, 1 external	To be determined
IDE bus	No	No	Yes
Floppy disk format	MFM or GCR	MFM or GCR	MFM only
Ethernet	AAUI	AAUI or 10BaseT	10BaseT
GeoPort serial ports	2	2	1-2
x86- compatible RS-232 serial ports	None	None	0-2
IEEE P1284 parallel ports	None	None	In some models
NuBus slots	1-3	None	None
PCI slots	None	3-6	3-6
ISA slot	None	None	None

End_Table

Article Change History:

24 Mar 1997 - Updated for technical accuracy.

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Tech Info Library Article Number:19288



Tech Info Library

Abacus Research and Development, Inc.

Revised: 1/31/96
Security: Everyone

Abacus Research and Development, Inc.

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Article Created: 31 January 1996

Abacus Research and Development, Inc. (ARDI)

1650 University Blvd. NE
Suite 4-101
Albuquerque, NM 87102
U.S.A.

505-766-9115 (Main Phone)

505-766-5153 (Main FAX)

Internet: <http://www.ardi.com>

Company Profile: Software, specializing in Macintosh emulation software, including Executor Mac emulator Version 2.0 for IBM-Compatibles which allows most Macintosh 6.x and many System 7.x programs to operate on a PC.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19289



Tech Info Library

PowerBook 2300c: Modem Installation & Compatibility (6/96)

Revised: 6/10/96
Security: Everyone

PowerBook 2300c: Modem Installation & Compatibility (6/96)

=====

Article Created: 31 January 1996
Article Reviewed/Updated: 10 June 1996

TOPIC -----

My authorized Apple service technician installed an Express Modem. Now my PowerBook Duo computer starts up with the "death chimes" error chord. What is wrong? Which modem can I use in a PowerBook (Duo) 2300c or a PowerBook 200 series computer that has been upgraded to a 2300 series logic board (M3171LL/A)?

DISCUSSION -----

Apple Express Modem
=====

The Apple Express Modem for the PowerBook Duo series computers will work in the Macintosh PowerBook 2300c or a 200 series computer that has been upgraded with a PowerPC logic board as long as you install the current version of the Apple Telecom Software (Express Modem).

The current version of the Apple Telecom Software is 2.3.2. It is available online in all of the Apple Software updates areas. Versions earlier than 2.3.2 of the Telecom/Express Modem software may cause error chords at startup after installation or may significantly slow down modem performance.

If you have installed a version of the Apple Telecom Software earlier than version 2.3.2, you will need to remove it.

Step 1

Authorized Apple Service technicians ** need to reset the Power Manager by removing the internal back up battery for approximately 15 minutes.

** Caution ** If you are NOT an authorized Apple Service technician, please note that removing the internal backup battery is not a simple procedure and is not

recommended. No instructions for this procedure will be provided to end users by Apple. If anything is damaged in your attempt to remove the battery, the damaged parts will not be covered under warranty. **

Step 2

Startup the computer with extensions off by holding down the SHIFT key during startup.

Step 3

Remove the old Express Modem software from the Hard Drive and System folder.

Step 4

Install Apple Telecom Software 2.3.2.

Global Village Modem

=====

Global Village Mercury modem for the Duo series will need a software update. You will need to contact Global Village for more information.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Global Village, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

These articles can help you locate the software update mentioned here:

- Where To Find Apple Software Updates
Lists online services for "free" Apple software updates.
- Obtaining Apple Product Support in the USA
Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech. Info. Library.

Article Change History:

10 Jun 1996 - Added information about upgraded 200 series computers.
20 Feb 1996 - Added "death chime" to make searching easier.
15 Feb 1996 - Changed title to be more descriptive.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19290



Tech Info Library

AppleVision 1710 Display: Description (1/96)

Revised: 1/31/96
Security: Everyone

AppleVision 1710 Display: Description (1/96)

=====

Article Created: 31 January 1996

TOPIC -----

This article contains a description of the AppleVision 1710 Display.

DISCUSSION -----

Description
=====

The AppleVision 1710 is a superior quality color display that's perfect for business tasks such as desktop publishing, working with spreadsheets, and creating presentations. It combines multiple scan capabilities with the next generation Trinitron tube, and offers a host of advanced Apple DigitalColor technology-- features setting a new standard in clarity, color accuracy, and viewing flexibility. And it features plug-and-play compatibility with DOS and Windows software- based computers as well as Macintosh and Power Macintosh systems. Everyone wants accurate color on their monitor and the Apple Digital Color technology features of the AppleVision 1710 let it offer truly unprecedented image quality. It includes internal self-calibration technology-- eliminating the need to spend time and money to maintain accurate calibration. In addition, the AppleVision 1710 provides automatic screen-to-print matching using Apple's unparalleled ColorSync 2.0 technology. It can also be adjusted to compensate for many of the effects of ambient lighting and CRT phosphor aging. And its intuitive Macintosh software provides control over all screen functions, including geometry, brightness, contrast, and variable color temperature. Sony Trinitron screens have long been known for their outstanding image quality, and the screen of the AppleVision 1710 is no exception. In fact, it represents the next generation of Trinitron technology, featuring not only an incredibly vivid, sharp picture, but also a design that reflects the light in the room away from your eyes. And its multiple scan technology gives you the flexibility you need, letting you view more than two full pages of information at a time at an impressive 1,280 by 1,024 pixels. Yet even with all of these features, the AppleVision 1710 remains affordable making it the perfect choice for anyone whose work requires a vivid, accurate, and flexible color viewing solution.

Features

=====

Outstanding Image Quality

- Features next-generation Trinitron technology for clear, sharp pictures and vivid color
- Provides outstanding color matching and extremely accurate on-screen color representation
- Adjusts luminance and color temperature to provide outstanding image quality in any ambient light
- Keeps colors accurate and balanced over time, even as the CRT ages

Advanced Functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes—up to 1,280 by 1,024 pixels
- Features a built-in intelligent feedback loop to ensure that your monitor remains calibrated
- Provides advanced but easy-to-use software control over all screen functions

Compatibility

- Works with MS-DOS and Windows software-based systems, as well as with the full line of Macintosh and Power Macintosh computers
- Supports plug-and-play connection to both Apple computers and PCs running MS-DOS and Windows software

Ordering Information

AppleVision 1710 Order No. M3322LL/A

- AppleVision 1710
- AppleVision software
- PC adapter
- Integrated, attached video and Apple Desktop Bus cable
- Power jumper cable
- Ambient light wand
- User's guide
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Support Information Services

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Tech Info Library Article Number:19292



Tech Info Library

AppleVision 1710 Display: Technical Specifications (1/96)

Revised: 1/31/96
Security: Everyone

AppleVision 1710 Display: Technical Specifications (1/96)

=====

Article Created: 31 January 1996

TOPIC -----

This article contains the technical specifications of the AppleVision 1710 Display.

DISCUSSION -----

Picture Tube

- 17-in. (diagonal) Trinitron CRT
- 16.1 in. (diagonal viewable image size)
- 0.26-mm stripe pitch (0.25-mm grille pitch)

Resolution/Screen Refresh Rate

Macintosh computers:

- 640 by 480 pixels at 67 Hz
- 832 by 624 pixels at 75 Hz
- 1,024 by 768 pixels at 75 Hz
- 1,152 by 870 pixels at 75 Hz
- 1,280 by 1,024 pixels at 75 Hz

PC-compatible systems:

- 640 by 480 pixels at 60 Hz to 75 Hz
- 800 by 600 pixels at 60 Hz to 75 Hz
- 1,024 by 768 pixels at 60 Hz to 75 Hz
- 1,280 by 1,024 pixels at 60 Hz to 75 Hz

Scanning Rates

- 30 kHz to 80 kHz (horizontal)
- 40 Hz to 120 Hz (vertical)

Apple DigitalColor Technology Features

- Self-calibration against factory measurements
- Adjustment for ambient lighting
- Adjustment for CRT phosphor aging

Screen Treatment

- Antistatic, antiglare coating

Digital Controls

- Brightness
- Contrast
- Horizontal size and centering
- Vertical size and centering
- Convergence
- Rotation
- Pincushion
- Completely variable white-point selection: 4,100 deg. K to 9,300 deg. K
- Power switch

Connector

- 15-pin DSub connector for Macintosh systems
- 15-pin DSub mini-adapter for PCs

Degauss Circuitry

- Automatic at power up

Electrical Requirements

- Line voltage: 90 to 264 V AC
- Frequency: 47 to 63 Hz, single phase
- Power: 150 W (maximum) when operating; less than 11 W in standby mode; 0 W in suspend mode and when CPU is in energy-saver mode

Environmental Requirements

- Temperature: 50 to 104 deg F (10 to 40 deg C)
- Humidity: 10% to 80%, noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and Weight

- Height: 16.8 in. (42.7 cm)
- Width: 16.2 in. (41.1 cm)
- Depth: 17.6 in. (45.2 cm)
- Weight: 49 lb. (23 kg)

Agency Approvals

- FCC Part 15 Class B
- CISPR 22 Class A (EN5008211)—complies with European EMC directive

- DOC Class B
- MPR II
- VCCI Class 2
- CE Mark
- EPA Energy Star compliant
- IEC 950
- UL1950
- CSA 950
- EN60950

System Requirements

- Power Macintosh, Macintosh Quadra, Macintosh Centris, Macintosh II (with video card), and PowerBook computers*
- System software version 7.1 or later

* Not all models and configurations are capable of driving the monitor to the highest resolution it supports.

Ordering Information

AppleVision 1710 Order No. M3322LL/A

- AppleVision 1710
- AppleVision software
- PC adapter
- Integrated, attached video and Apple Desktop Bus cable
- Power jumper cable
- Ambient light wand
- User's guide
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Support Information Services

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Tech Info Library Article Number:19293



Tech Info Library

Newton 2.0 OS: Use Only Apple Logo Flash Memory Cards (1/96)

Revised: 1/31/96
Security: Everyone

Newton 2.0 OS: Use Only Apple Logo Flash Memory Cards (1/96)

=====

Article Created: 31 January 1996

TOPIC -----

What third-party PC flash memory cards work with my Apple MessagePad 120 using Newton 2.0 OS?

DISCUSSION -----

Only Flash Storage Cards that have the Apple logo on them are supported.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19295



Tech Info Library

Apple Video Player: Errors When Freezing or Copying Image 1/96

Revised: 1/31/96
Security: Everyone

Apple Video Player: Errors When Freezing or Copying Image 1/96

=====

Article Created: 31 January 1996

TOPIC -----

When I try to capture a large (640x480) image in the Apple Video Player on my computer by pressing command-C, I get an error message that says "An error occurred while trying to copy the video display to the clipboard."

I have also received the message, "An error occurred while trying to freeze the video display" when I click the Freeze button.

How can I fix this?

DISCUSSION -----

Apple Video Player is running out of memory as it copies your image to the clipboard. You can increase the preferred memory size for this application through the Get Info window. Follow these steps to do this:

Step 1

Locate the Apple Video Player application on your hard drive. Make sure it is not running as you will not be able to change the memory partition if it is.

Step 2

Click Apple Video Player once to highlight it. Under File choose Get Info.

Step 3

In the bottom of the Get Info window, adjust the Preferred size by double-clicking in the Preferred size box and typing in a higher number.

The size that you set depends on the complexity and size of the image you are trying to copy to the clipboard. Try increasing in 100K increments.

Support Information Services

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19296



Tech Info Library

PCI Power Macintosh: Can't Use Modem With Extensions Off 4/96

Revised: 4/10/96
Security: Everyone

PCI Power Macintosh: Can't Use Modem With Extensions Off 4/96

Article Created: 31 January 1996
Article Reviewed/Updated: 10 April 1996

TOPIC -----

If I startup my Power Macintosh 7200 running System 7.5.2 with extensions off, I cannot use my modem or print to my serial printer. I know that on older computers, it was possible to do this. What changed?

DISCUSSION -----

The Power Macintosh 7200, 7500, 8500, and 9500 series computers all use the Apple Shared Library Manager (ASLM) extension which contains code for many system resources. If your computer is started with the extensions off, the Shared Library Manager is disabled, making system resources unavailable to execute serial communications. Other software which depends on ASLM would include QuickTake camera software and GeoPort software.

To avoid this, you need to update to System 7.5.3 using System 7.5 Update 2.0, which is available on the online services. In System 7.5.3 the serial ports will remain available in this disabled environment. Serial attached (non-AppleTalk) printers will function normally. Basic modem communications programs, such as MacTerminal, SITcomm, and White Knight, should also be usable.

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
10 Apr 1996 - Removed keyword.
13 Mar 1996 - Added info about update.

09 Feb 1996 - Updated with future fix information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19297



Tech Info Library

Cyrillic Language Kit: Troubleshooting Common Issues (1/96)

Revised: 1/31/96
Security: Everyone

Cyrillic Language Kit: Troubleshooting Common Issues (1/96)

Article Created: 31 January 1996

TOPIC -----

This article contains information taken from the Cyrillic Language Kit manual concerning issues you may encounter while working in Cyrillic.

DISCUSSION -----

- I see odd characters that I cannot read in some of my file and folder names.

The font your system is using for file and folder names may not contain any Cyrillic characters. Cyrillic names cannot be properly displayed unless your system uses a font that contains Cyrillic characters. Choose Latinski in your Views control panel. Follow these steps to set the Views control panel:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Open the Views control panel.

Step 3

Press the "Font for views" pop-up menu.

Step 4

Choose Latinski (or any other Cyrillic font you prefer).

Step 5

Close the Views control panel.

The Latinski font contains Cyrillic characters as well as the most commonly used Roman characters. You can usually view Cyrillic and Roman file and folder names correctly by setting the Font for views to Latinski.

If you still see odd characters on your screen, read on.

- I changed my Views control panel to the Latinski font, but I still see odd characters in my Cyrillic application program.

Your system may not recognize your Cyrillic program as Cyrillic. To register a program:

Step 1

Open the Cyrillic Language Register. You'll find the Cyrillic Language Register in the Apple Extras folder on the hard disk where you installed the kit.

Step 2

Click the Register Application button. A list of application programs and folders appears.

Step 3

Select the application program you want to register.

Step 4

Click the Register button.

Now you can open your program and begin working.

You can also use a short-cut method to register your programs. If the program you want to register is open, quit it. Drag the program's icon to the icon for the Cyrillic Language Register. When the Language Register icon is highlighted, release the mouse button. A message confirms that the program is registered.

- I changed my Views control panel to the Latinski font, and now I cannot read some of my non-Cyrillic file and folder names.

If you have file or folder names that contain non-English Roman characters, such as accents or umlauts, they will not be correctly displayed after you change the Views control panel to the Latinski font. A few other characters, such as typographic quotation marks and ellipses, also will not be correctly displayed. This is because the Latinski font does not have a complete set of Roman characters, only the most commonly used ones.

In the Views control panel, choose a font that will correctly display your non-Cyrillic file and folder names. Then use non-Cyrillic names for all your files and folders, even those that contain Cyrillic.

Setting the Views control panel to Latinski is necessary only to read Cyrillic file and folder names. If you don't set the Views control panel, you will still see Cyrillic correctly displayed within your application programs. You can write and print in Cyrillic; remember to give your files non-Cyrillic names.

- I changed my Views control panel to the Latinski font, but I still see odd characters in my Application menu.

Not all the problems of working in multiple languages on one computer have been solved. Unfortunately, the Application menu cannot display Cyrillic names, even after you set your Views control panel to a Cyrillic font. The names of your Cyrillic application programs will not be correctly displayed in the Application menu and in certain dialog boxes.

Icons appearing in the Application menu next to each program's name will help you to identify your Cyrillic programs.

- I cannot edit a Cyrillic file or folder name.

You may have a non-Cyrillic keyboard selected in the Keyboards menu. Pull down the Keyboards menu and select a Cyrillic keyboard.

- I reinstalled one of my Cyrillic application programs. Do I need to re-register it in Cyrillic?

If the name of your program changes, you must re-register it.

- I cannot work in Cyrillic with my usual application program.

Your application program may not be completely compatible with other scripts. If it is not, it will not automatically switch to a Cyrillic font when you select a Cyrillic keyboard, or it may not let you see all the Cyrillic fonts in the font menu.

- Since I installed the Cyrillic Language Kit, unwanted keyboard layouts appear in my Keyboards menu. How do I remove them?

To remove unnecessary keyboard layouts, open the System file in the System folder. Select the unnecessary keyboard layouts and drag them to the Trash or into a temporary folder.

- Since I installed the Cyrillic Language Kit, I can no longer work with some of my other application programs, even in Roman.

This may be caused by a lack of memory. The Cyrillic Language Kit, when installed, is automatically loaded in memory at startup along with system software. Your system software takes up more space in memory, and the amount of

memory available for programs decreases.

Support Information Services

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Tech Info Library Article Number:19298



Tech Info Library

Mindscape (4/96)

Revised: 4/30/96
Security: Everyone

Mindscape (4/96)

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Article Created: 31 January 1996
Article Reviewed/Updated: 30 April 1996

Mindscape

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Company Profile:

International developer and publisher of multimedia consumer software for the education, entertainment, and information markets. Products include CardShop Plus, Miracle Piano Teaching System, and Mavis Beacon Teaches typing. Mindscape also supports the 1995 Grolier's Multimedia Encyclopedia, version 7.02 which is bundled with some Macintosh Performa computers.

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Tech Info Library Article Number:19299



Tech Info Library

QuickTake 100: Compatible With QuickTake 150 Software? (1/96)

Revised: 1/31/96
Security: Everyone

QuickTake 100: Compatible With QuickTake 150 Software? (1/96)

=====

Article Created: 31 January 1996

TOPIC -----

Can the QuickTake 150 software for either Windows or Macintosh be used with the QuickTake 100 digital camera?

DISCUSSION -----

Yes, the QuickTake 100 camera can be accessed by the Quicktake 150 software in both environments.

Support Information Services

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Tech Info Library Article Number:19300



Tech Info Library

Scribe Printer: Where to get Ribbon Cartridge (2/95)

Revised: 2/5/96
Security: Everyone

Scribe Printer: Where to get Ribbon Cartridge (2/95)

=====

Article Created: 5 February 1996

TOPIC -----

Where can I get a replacement ribbon cartridge for the Apple Scribe thermal printer?

DISCUSSION -----

Apple no longer sells replacement ribbon cartridges for the Scribe printer. However, here are two third-party sources which usually have the ribbon cartridges in stock:

- Sun Remarketing
- APS Technologies

Another third-party source for the ribbon cartridges is Shreve Systems, which sometimes has these in stock.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19301



Tech Info Library

AppleShare 4.2 to 4.2 v1.0.2 Patch: Read Me File (1/96)

Revised: 2/5/96
Security: Everyone

AppleShare 4.2 to 4.2 v1.0.2 Patch: Read Me File (1/96)

=====

Article Created: 5 February 1996

TOPIC -----

This article is the AppleShare 4.2 to 4.2 v1.0.2 Patch ReadMe file.

DISCUSSION -----

This patch updates AppleShare 4.2 to AppleShare 4.2 v1.0.2. This patch is only required for the U.S. version of AppleShare 4.2.

The following items have been fixed:

- Some sites that installed 4.2 over a previous version of AppleShare experienced problems because only one remote user at a time was able to run a particular application on the server.
- With the same application on two client machines, it was not possible to access the same file on a mounted volume at the same time. This was reported with multiple users trying to access the same HyperCard stack.
- If a file on a read access volume (both "See Folders" and "See Files" are selected, but not "Make Changes") was opened by an application other than the Finder, it was possible to make changes to the file and then save it back to the file server.
- Under certain timing-dependent conditions, the modification date on a file could be changed when moving the file to the server.

Installation Instructions

On a system with AppleShare 4.2 already installed, complete the following steps to upgrade to AppleShare 4.2 v1.0.2.

- 1) Launch the application named "File Server Ext 4.2->4.2 v1.0.2".

2) Click on the "Patch" button.

3) Navigate to your extension folder and select the file named "File Server Extension".

4) When the Save dialog is presented, select "Save" with the default name.

5) Select "Replace" when prompted to overwrite the old version of the File Server Extension.

The patch will only apply to an unmodified version of AppleShare 4.2. If any changes have been made with ResEdit, the patch will not apply.

Support Information Services

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Tech Info Library Article Number:19302



Tech Info Library

PowerBook: Wrong Resolution In Monitors Control Panel (1/96)

Revised: 2/5/96
Security: Everyone

PowerBook: Wrong Resolution In Monitors Control Panel (1/96)

=====

Article Created: 5 February 1996

TOPIC -----

Why does the Monitors control panel on my Macintosh PowerBook 2300c still show 640x480 as the screen resolution in the Options after I switch to thousands of colors? Shouldn't it be 640x400?

DISCUSSION -----

A Macintosh PowerBook 2300c, 5300c (with 512k VRAM), or 540c (with the PowerPC upgrade) computer running System 7.5.2 will display the behavior you describe. That is, when you switch to thousands of colors in the Monitors control panel, the display resolution switches to 640x400 but the resolution listed in the Options portion of the control panel still shows 640x480.

The same situation is true in some older model Macintosh PowerBook computers with color active-matrix screens. It is normal for the display to switch to the 640x400 mode when in thousands of colors because 512k VRAM is not enough to display the same bit depth at 640x480.

Changes in the Display Manager in System 7.5.2 cause the Monitors control panel to retrieve the wrong string of display information and thus report a resolution 640x480 instead of 640x400.

This is a cosmetic anomaly that does not affect performance. It will be fixed in the next system software update. Macintosh PowerBook computers running system software versions later than 7.5.2 should not experience this issue.

Support Information Services

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Tech Info Library Article Number:19303



Tech Info Library

PC Card Support for Desktop Macintosh Computers (1/96)

Revised: 2/5/96
Security: Everyone

PC Card Support for Desktop Macintosh Computers (1/96)

=====

Article Created: 5 February 1996

TOPIC -----

This article lists a third party solution that provides PCMCIA (also called PC card) support for desktop Macintosh computers.

DISCUSSION -----

Software Architects' PowerCard is a SCSI PCMCIA adapter which will work on most desktop Macintosh computers. The device accepts PCMCIA Type I, II, and III storage cards (including SRAM, flash RAM, and hard disk cards). It has a SCSI-2 interface, and is compatible with SCSI Manager 4.3.

In addition, it ships with Dayna Communications' DOS Mounter software, plus Software Architects' own driver; the combination makes it possible for users to mount DOS-formatted PCMCIA cards.

This article provides information about non-Apple products. Apple Computer, Inc. is not responsible for its content. Please contact the vendors, Software Architects or Dayna Communications, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Support Information Services

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Tech Info Library Article Number:19304



Tech Info Library

Patch Kit for NetWare for Macintosh 4.1 (1/96)

Revised: 2/7/96
Security: Everyone

Patch Kit for NetWare for Macintosh 4.1 (1/96)

=====

Article Created: 5 February 1996

TOPIC -----

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

DISCUSSION -----

NOVELL TECHNICAL INFORMATION DOCUMENT

TITLE: Patch Kit for NetWare for Macintosh 4.1
README FOR: 41MAC5.EXE

NOVELL PRODUCTS and VERSIONS:
NetWare for Macintosh 4.10

ABSTRACT:
This patch kit contains all patches for NetWare for Macintosh 4.10.

DISCLAIMER

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SYMPTOM:

ATPS.NLM v4.11 Pre-Release

Changes from v4.10:

- 1) The print server no longer sends a PAP EOF after detecting "%EOF" in binary PostScript data streams. Fixes SPD #94829.
- 2) No longer output a warning message about bindery logins failing unless operating in bindery mode. Fixes SPD #104688.
- 3) Fixed a problem where the spooler might report a "queue not found" error (820) if disabled. Fixes SPD #84177.
- 4) Supported the decoding of escaped special characters in PostScript ADSC comments. Fixes SPD #82435.
- 5) Fixed problem with hanging due to missing font list file. Fixes SPD #84171.
- 6) Added some new messages; should go through a translator pass when possible.
- 7) Enhanced the prefix() routine which turns .PRS into .PRI files to handle procsets commented by "%Begin/EndResource: procset".
- 8) To avoid DS synchronization problem, the print server should retry attempts to attach to the queue if "object not found" is returned.
- 9) Implemented "two strikes" feature for bad PostScript which causes the printer to reboot. The printer server put a job on user hold if it experiences a PAP time-out twice in a row.
- 10) Set necessary DS API flags so that ATPS can use queue alias objects transparently.
- 11) If the "*Product" keyword appears more than once in a PPD file, use the first instance.
- 12) Fixed a problem parsing info from PPD files in Macintosh format (i.e., with carriage return terminated lines).
- 13) Added an option to support LaserWriter 8/PSPrinter installable option queries. Parse the queries from the spooler's PPD file and use them to query the printer to get the answers. Requires that server and user PPD files agree on the installable options.
- 14) To support configurations where there is no query source, added spooler config option so the administrator can define installable options at the spooler. The keyword "PPD Option=<option>/<value>" may be added to the *.SPL file.
- 15) Added an option to support PostScript printers that do not reliably echo back PAP EOF's, which can cause a the printer server to hang. Adding "Verify Completion=No" to the *.PRN file causes the printer server to close the PAP connection as soon as all data is sent.
- 16) Refresh ImageWriter query information and status periodically, similarly to

PostScript queries.

17) If a spooler is being disabled, don't stop NBP advertising until all jobs are complete. Otherwise, LaserWriter driver PAPStatus() calls fail and printing is aborted.

18) Added support for parsing title and user from GDT Softworks PowerPrint drivers. Improved DeskWriter support.

19) Add short delay in responding to product queries to work around LW 7.2 set-up timing bug.

20) Support new "RBIAppleDevice" query made by LaserWriter 8.3 and "GXIsBinaryOK?" query to be made by future versions of GX.

21) Added spooler support for DeskWriter 540, 600, 660C.

ATPSCon 4.11 Pre-Release

9/18/95

Changes from 4.10 version of ATPSCon:

1) Fixed a problem where quick configuration files discarded by the the user would still be reported to ATPS for enabling.

2) Fixed a problem where quick configuration overwrote exisitng configuration files without telling ATPS to disable them.

3) Restored old functionality which allowed quick configurations to access an existing queue

4) Support display and selection of DS print queue alias objects

AFP 4.10a Pre-Release

8/10/95

Changes from 4.10 version of AFP:

1) Fixed server ABEND problem caused when the Desktop Database Rebuilder is executed.

2) Fixed a volume rename problem. If a volume was originally titled User_Disk, and then was changed to UserDisk, after the desktop was rebuilt, it showed up as UserDiskK.

3) Fixed a problem when volume names are similar and have a period in the name, the wrong volume mounts on the desktop.

APPLETLK 5.00e Release

Changes from 5.00 version of APPLETLK:

- 1) Fixed multiple abend problems.
- 2) Fixed printing problems seen with prior versions of AppleTalk ver 5.00b & 5.00c.

MAC.NAM 4.10a Pre-Release

8/29/95

Changes from version 4.10 of MAC.NAM:

- 1) Fixed a problem where the Macintosh name space should truncate names longer than 31 instead of 32 characters. The Macintosh system only supports 31 character file names.

SOLUTION:

Update server with all files.

Self-Extracting File Name: 41mac5.exe

Begin_Table

Files Included	Size	Date	Time
..\			
41MAC5.TXT	(This file)		
41MAC5.TXT	7262	1-4-96	11:42:56 am
ADSP.MSG	10614	9-1-95	12:15:12 pm
ADSP.NLM	80850	12-1-95	9:39:24 am
AFP.NLM	61786	8-10-95	10:09:58 am
AFPCON.NLM	16455	8-10-95	10:10:12 am
APPLETLK.MSG	35716	8-14-95	1:08:30 pm
APPLETLK.NLM	372309	11-20-95	11:16:02 am
ATPS.MSG	22771	9-18-95	8:24:28 pm
ATPS.NLM	149739	12-6-95	3:03:34 pm
ATPSCON.MSG	20941	9-19-95	8:03:10 pm
ATPSCON.NLM	80777	9-19-95	8:03:22 pm
AURP.NLM	80749	9-6-95	11:39:44 am
MAC.NAM	16195	11-14-95	4:20:08 pm
OS2.NAM	18040	11-22-95	11:20:04 am
STREAMS.NLM	63344	1-27-95	5:03:34 pm
VREPAIR.NLM	51690	8-28-95	3:53:10 pm
V_MAC.NLM	12267	8-28-95	3:53:18 pm
V_OS2.NLM	13164	8-28-95	3:53:36 pm

End_Table

Installation Instructions:

• MSG File installation Instructions:

- 1) Copy all MSG files to the F:\SYSTEM\NLS\4 directory

• MAC.NAM Installation Instructions:

- 1) Backup all volumes containing the Macintosh name space.
- 2) Update MAC.NAM, in the NWSERVER directory on the servers DOS partition.
- 3) Update V_OS2.NLM & VREPAIR.NLM located under F:\SYSTEM.
- 4) Reboot server to load the new MAC.NAM
- 5) Run Vrepair on all volumes that contain the MAC name space.

Copy all other NLMs to F:\SYSTEM.

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Tech Info Library Article Number:19305



Tech Info Library

LaserWriter 4/600 PS: Performing Memory Upgrades (2/96)

Revised: 2/6/96
Security: Everyone

LaserWriter 4/600 PS: Performing Memory Upgrades (2/96)

=====

Article Created: 5 February 1996

TOPIC -----

I have a LaserWriter 4/600 PS printer and I want to add additional memory. What do I need and how do I do it?

DISCUSSION -----

The LaserWriter 4/600 PS printer comes with 2MB of RAM pre-installed. An Apple-authorized service provider can install a 4MB memory expansion card (M4166G/A). The memory expansion card is designed specifically for the LaserWriter 4/600 PS. The printer is not equipped with industry-standard SIMM slots for installing additional memory.

The memory expansion card attaches to the I/O board on the printer, which requires the removal of the LaserWriter cover. Since removing the cover on a LaserWriter printer is not usually considered end-user replaceable part, Apple recommends you have the upgrade performed by an Apple-authorized service provider.

Support Information Services

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Tech Info Library Article Number:19306



Tech Info Library

MacX 1.5: Using MacX 1.2 Fonts (2/96)

Revised: 2/6/96
Security: Everyone

MacX 1.5: Using MacX 1.2 Fonts (2/96)

=====

Article Created: 6 February 1996

TOPIC -----

I am trying to use MacX 1.2 fonts with MacX 1.5 but these fonts do not work. Is there a work around or solution for this?

DISCUSSION -----

MacX 1.5 does not support the compiled fonts in MacX 1.2. To add fonts to MacX 1.5 the fonts must be BDF or PCF format.

As of February 1996, MacX 1.5 does not support either compressed (.pdf.Z, .bdf.Z, or .spd), or outline formats. You can access these fonts from the Font server.

The MacX 1.5 manual contains a complete description on the installation and addition of Fonts to the MacX 1.5 Fonts list. You can either add fonts to an existing directory, or add a complete directory to the font path.

A complete description of this process is in the "MacX User's Guide," Chapter 9, page 103-104.

Support Information Services

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Tech Info Library Article Number:19307



Tech Info Library

Support Professional Preview CD: New ARA Telephone Number (2/96)

Revised: 2/6/96
Security: Everyone

Support Professional Preview CD: New ARA Telephone Number (2/96)

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Article Created: 6 February 1996

TOPIC -----

Effective February 6, 1996, the Support Professional Preview CD has a new telephone number for dialing into the Support Information Server with the included Apple Remote Access (ARA) Client.

DISCUSSION -----

The Support Professional Preview CD includes trial versions of Support Professional software. This software enables you to remotely access a Support Information Server and initiate a search (Macintosh client only).

The SIS Sampler READ ME (path: Support Pro -> Trial Software -> SIS Folder), included on the Preview CD, has been slightly modified and will be included in the next revision of the Preview CD. The primary change to the SIS Sampler READ ME is the existence of a new phone number to connect to the remote Support Information Server. The old phone number is listed in the "Configuring Apple Remote Access Client" section of the READ ME file. Please change the phone number in this section to 1-512-908-8198. Also, if you use the SIS Sampler Access file (also on the Preview CD) to connect, please update the file with the new phone number (1-512-908-8198).

If you would like to receive Support Professional Solution Series ordering information and/or a free Support Professional Preview Kit on the Support Professional program, you may call 1-800-745-2775 between the hours of 7 a.m. and 10 p.m. Central Time.

Support Information Services

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Tech Info Library Article Number:19308



Tech Info Library

PCI-Based Power Macintosh: Issue with SCSI ID 5 (4/96)

Revised: 4/18/96
Security: Everyone

PCI-Based Power Macintosh: Issue with SCSI ID 5 (4/96)

=====

Article Created: 6 February 1996
Article Reviewed/Updated: 18 April 1996

TOPIC -----

This article describes an issue affecting SCSI ID 5 on the following Power Macintosh series computers:

Power Macintosh 7200/75
Power Macintosh 7200/90
Power Macintosh 8500/120
Power Macintosh 9500/120
Power Macintosh 9500/132

DISCUSSION -----

On previous PCI-based Power Macintosh computers, there was an issue affecting SCSI ID 5, which may cause the computer to lock-up or the light on the SCSI 5 device to remain on constantly. The symptoms were most apparent when using array software, a scanner (when scanning), or a CD-ROM drive (without a CD-ROM disc inserted).

The issue was fixed in the SCSI Manager and was included in System 7.5.3. Newer PCI-based Power Macintosh computers which ship with System 7.5.3 should not have this problem, and previous PCI-based Power Macintosh computers can upgrade to System 7.5.3 by installing System 7.5 Update 2.0, which is available on the online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

18 Apr 1996 - Updated technical information.

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Tech Info Library Article Number:19309



Tech Info Library

Macintosh Computers: Testing Complete Error Message (2/96)

Revised: 2/6/96
Security: Everyone

Macintosh Computers: Testing Complete Error Message (2/96)

=====

Article Created: 6 February 1996

TOPIC -----

I just purchased a refurbished Macintosh computer. However, when I start up the computer, I get a message stating, "Unit passed, disconnect cables and send to packing." Following that message I hear an alert sound for about 20 seconds, and then another message appears stating, "Testing complete: connect all cables before clicking OK."

I've tried clicking OK, and I'm able to use the computer, but this happens each time I start up my computer. What could be going on?

DISCUSSION -----

It appears that a diagnostic program was mistakenly left active on your computer. Follow these steps to remove the program:

Step 1

Open the hard drive.

Step 2

Locate the Banzai folder and drag it to the Trash.

Step 3

Open the System Folder.

Step 4

Locate the Startup Items folder and drag it to the Trash.

Step 5

Empty the Trash.

An empty Startup Items folder will reappear in the System Folder after restart. However, the Launcher will no longer automatically launch after restart. To re-enable this function, select "Show Launcher at system startup" in the General Controls control panel.

This issue may affect any of the following refurbished Macintosh computers:

- Performa 6200 and 6100 series
- LC 580
- Performa 575, 577, 578
- Performa 630, 631, 636, 637, 638
- Power Macintosh 6100, 7100, 8100, 9500

Note:

The following computers are in the Macintosh 6100CD series: Macintosh 6100, Macintosh 6100 DOS Compatible, Performa 6110, Performa 6112, Performa 6115, Performa 6117, and Performa 6118.

The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

Support Information Services

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Tech Info Library Article Number:19310



Tech Info Library

MAE 2.0: Versions Supported, OS and MAE Patch Required (5/96)

Revised: 5/13/96
Security: Everyone

MAE 2.0: Versions Supported, OS and MAE Patch Required (5/96)

Article Created: 6 February 1996
Article Reviewed/Updated: 13 May 1996

TOPIC -----

This article discusses the compatibility of MAE with both Hewlett Packard (HP) HP-UX, and Sun Solaris, as well as any relevant patches that MAE requires for compatibility.

DISCUSSION -----

IMPORTANT NOTE: Installation of any other OS patches (beyond those required for MAE to function properly) is at the sole discretion of the customer. Apple Computer, Inc. makes no recommendations regarding the administration and maintenance of workstations on which the MAE product is installed.

However, in some cases, there are known issues that are addressed by a specific patch from the respected company and Apple recommends to have these systems patched to allow MAE to operate properly.

Current Versions Supported

HP-UX: 9.0.1, 9.0.3, 9.0.5, 9.0.7, 10.01 (MAE Patch 2 required for 10.01)
Solaris: 2.3, 2.4, 2.5

NOTE: As of April 1996, HP-UX 10.1 is not supported with MAE 2.0.2.

How Do I Determine Which OS Patches Are Installed

To determine which OS patches have been installed, use the following commands:

- For HP-UX:

what /HP-UX

- For Solaris

showrev -p

STREAMS (HP-UX only)

=====

MAE 2.0.x supports AppleTalk, which requires STREAMS (standard interfaces for I/O within the UNIX Kernel and between the kernel and user level). STREAMS is required on HP-UX 9.0.x. It is not required on HP-UX 10 and Solaris 2.x, as it is built into the OS.

HP-UX 9.0.1, 9.0.3: /cdrom/STREAMS/3STREAMS.TAR

HP-UX 9.0.5, 9.0.7: /cdrom/STREAMS/5STREAMS.TAR

Install all four file sets by using the /etc/update command:

/etc/update -rs /cdrom/STREAMS/3STREAMS.TAR '*'

or

/etc/update -rs /cdrom/STREAMS/5STREAMS.TAR '*'

OS Patches for HP-UX

=====

NOTE: HP patches tend to change often, and therefore this list may show outdated versions. The latest patch list can be found at the following URL:

<http://support.mayfield.hp.com/>

Patch levels used to validate MAE v2.0.2 with HP-UX 9.0.3, 9.0.5, 9.0.7 (HP-UX 10 requires no patches) are as follows:

PHKL_6760 Mega-Kernel Patch. Originally noted as PHKL_4605

PHNE_6707 Networking Patch. Originally noted as PHNE_3939

PHSS_4341 Audio Patch

PHSS_4568 X Server Patch. Originally noted as PHSS_4485 (This patch is not necessary for 9.0.7)

Known issues related to patch level:

PHNE_6707 Networking Patch. HP-UX 9.0.7, MAE 2.0.x freezes the HP-VUE Environment at startup

OS Patches for Solaris

=====

NOTE: Solaris patches tend to change often, and therefore this list may show outdated versions. The latest patch list can be found at the following ftp site:

sunsolve.sun.com.

Patch levels used to validate MAE v2.0.2 with Solaris 2.3 and 2.4 (Version 2.5 requires no patches) are as follows:

101318-75 Solaris 2.3 only, Jumbo patch for kernel
101907-09 Solaris 2.4 only, Jumbo patch for volume manager (Originally 102077)

Known issues related to patch level:

101945-36 Non-networked SPARC. Solaris 2.4 only, apply if MAE hangs at startup.
101907-05 Volume Manager Patch. Solaris 2.4 only, apply if CD/floppies do not mount, and macdisks.Solaris is configured correctly.

MAE Patches Required
=====

The current patch for MAE is Patch 2. This brings the version of MAE up to 2.0.2. The patch can be found at one of the following:

- www.mae.apple.com
- ftp.support.apple.com

It is recommended to upgrade to version 2.0.2, and is required for HP-UX 10.01. This Patch adds these features to MAE:

HP-UX Version 10.01 - (HP only)

HP-UX Version 10.01 can now be used with MAE. IMPORTANT: Be sure to read the file `README.PATCH.MAE2.0.2' on the FTP server prior to installing this patch to support HP-UX Version 10.01.

FDDI Support - (Sun only)

FDDI interfaces are now supported.

Ethernet Interfaces other than `le' - (Sun only)

MAE now supports Ethernet interfaces on Solaris such as qe. Previously, only le devices were supported.

Multiple Ethernet Interfaces

AppleTalk can now be used on any available (and supported) network interface. The Network Control Panel has been updated to add this functionality.

Persistent TIVs

Persistent TIVs are no longer truncated during shutdown.

Locking Mechanism for System Folder Updates

The updater utility for System Folders (part of the patch mechanism) no longer bypasses the file integrity lock if MAE is running. This only occurred under isolated circumstances.

Automounter Directory - (HP only)

The automounter directory for HP-UX (default /tmp_mnt) is now properly statused.

Solaris 2.4 and Automounted Directories - (Sun only)

MAE no longer truncates its internal file system list when executed in an environment with multiple remotely-mounted volumes. This symptom did not manifest itself under Solaris 2.3.

Sun 5 Keyboard - (Sun only)

The 0 (zero) key on Sun's Type 5 keyboard now functions properly.

Command line options

MAE will no longer exhibit random errors at startup based on the number of arguments supplied in the command line.

Updated man Page

The online manual pages now reflect changes and features of MAE 2.0 that were omitted from the man pages supplied with the MAE 2.0 distribution.

Network Control Panel

Opening the Network Control Panel will no longer result in an error message.

Attention Packets - (Sun only)

Urgent ADSP messages are now delivered promptly to the MAE process. Previously, there was a delay in delivering these messages.

ADSP Close - (Sun only)

Custom applications that send ADSP close packet now work correctly.

Utilization of Selected AppleTalk Zone

A previously-selected AppleTalk zone is now being used as the default zone. In addition, a list of eligible devices is presented when selecting a network

resource (e.g., printer). This problem only occurred under isolated circumstances.

File Transfers Under TCP

Fetch or other applications now pull large (>100K) files utilizing TCP correctly. (Smaller files were not affected.)

Saving Documents When Using MacinTax

MacinTax is now able to save documents.

Users' Guide Updated - (HP only)

The online Users' Guide for MAE now reflects features and changes present in v2.0 which were omitted from the MAE 2.0 distribution.

Debugging Options

Additional command line options have been added to assist in debugging MAE 2.0 problems.

Support for CacheFS - (Sun only)

New functionality was added to support CacheFS, a new file system introduced with Solaris 2.4.

Support For AFS (Andrew File System)

Additional features have been added to support local cells for AFS.

Other Fixes

Various minor bugs in MAE 2.0 are corrected in MAE 2.0.1

Article Change History:

13 May 1996 - Added HP-UX 10.1 note.
26 Mar 1996 - Corrected information.

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Tech Info Library Article Number:19311



Tech Info Library

HyperCard 2.3.5 Stacks: Read Me Files (2/96)

Revised: 2/7/96
Security: Everyone

HyperCard 2.3.5 Stacks: Read Me Files (2/96)

Article Created: 7 February 1996

TOPIC -----

This article contains the three ReadMe files from the 2.3.5 versions of HyperCard stacks Audio Help, Color Tools, and Power Tools posted online.

DISCUSSION -----

Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with the Audio Help stack. The Audio Help stack contains the Audio Palette, which gives HyperCard the ability to record new sounds and use them in your stacks.

CHANGES IN THE AUDIO HELP STACK

The following changes were made to the Audio Palette to make it work properly on newer Macintosh models, including the Power Macintosh 7200, 7500, 8500, and 9500, and to make it conform to Apple's guidelines for sound input.

- The Audio Palette now records at the following qualities: Good (22 kHz, 6-to-1 compression), Better (22 kHz, 3-to-1 compression), and Best (22 kHz, no compression). This is a change from older versions of the Audio Palette, which recorded at Good and Best qualities and had a different idea of Good quality (11 kHz, no compression).
- There is now a one-to-one correspondence between compression and quality settings. "No compression" is synonymous with "Best quality," "3-to-1 compression" with "Better quality," and "6-to-1 compression" with "Good quality."
- You can still open and edit sounds recorded with the old Audio Palette at its "Good" quality. When you do this, the new Audio Palette displays the quality as "Other".
- From a script, you can still set the "speed" property of the Audio Palette to

"11k". This will allow you to use the old "Good" quality. When you do this, the new Audio Palette displays the quality as "Other".

- The Audio Palette has a new property, "quality". From a script, you can set this property to "Good", "Better", or "Best".
- The documentation in the Audio Help stack has been updated to reflect the changes in the Audio Palette.

Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with the Color Tools stack. The Color Tools give HyperCard the ability to display and edit color images.

CHANGES IN THE COLOR TOOLS STACK 2.3.5

- The Color Tools now work more reliably on Macintosh systems that have the Japanese Language Kit or the Chinese Language Kit installed.
- The "Redraw Screen" command now works properly with stacks that have been colorized with other versions of the Color Tools.
- The "Compact Color Database" command now works properly with colorized cards and backgrounds whose IDs are greater than 32767.

CHANGES IN THE COLOR TOOLS STACK 2.3.3

- A problem was fixed that prevented stacks colorized with Color Tools 2.3 on a Macintosh computer with a PowerPC microprocessor from being used on a different Macintosh computer with a PowerPC microprocessor.

Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with the Power Tools stack. The Power Tools stack contains many useful tools that can help you to create or enhance your own HyperCard stacks.

CHANGES IN THE POWER TOOLS STACK

- The Super Grouper tool now works more reliably with a wider range of stacks.
- Starting with HyperCard 2.3, the option that allows the Picture XCMD to display a picture from the clipboard requires that the word "clipboard" be quoted, as follows:

Picture "From The Clipboard","clipboard"

The documentation in the Power Tools stack has been updated to reflect this change.

Support Information Services

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Tech Info Library Article Number:19313



Tech Info Library

QuickTime 2.1: Stereo MIDI Files Play Back In Mono (2/96)

Revised: 2/7/96
Security: Everyone

QuickTime 2.1: Stereo MIDI Files Play Back In Mono (2/96)

=====

Article Created: 7 February 1996

TOPIC -----

I'm using QuickTime v2.1, QuickTime Musical Instruments v2.1, and Apple Movie Player v2.1 to create stereo MIDI file movies. When I try to play these stereo MIDI files back, they are in mono. What is wrong?

DISCUSSION -----

QuickTime 2.0 and 2.1 preserve MIDI panning information in the file, but the internal synthesizers playback in mono. If you play files through external synths that have stereo capability, you will get stereo output.

Future versions of QuickTime, scheduled for release in the second calendar quarter, should support stereo internal synths.

Support Information Services

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Tech Info Library Article Number:19314



Tech Info Library

Power Macintosh 9500: Using a Epson Stylus Color Printer (2/96)

Revised: 2/8/96
Security: Everyone

Power Macintosh 9500: Using a Epson Stylus Color Printer (2/96)

=====

Article Created: 8 February 1996

TOPIC -----

This article describes how to resolve printing issues when printing from a Power Macintosh 9500 to an Epson Stylus Color printer.

DISCUSSION -----

In order to successfully print from a Power Macintosh 9500 series computer to an Epson Stylus Color printer, follow these steps.

Step 1

Use the latest Epson printer driver. The drivers are posted on CompuServe, on Epson's BBS, and on Epson's web page:

<http://www.epson.com>

According to Epson, you can use version 2.0.3AE for serial connections and use version 2.0.2 for LocalTalk connections. Note that there are several versions of the Epson Stylus Color printer, and each has a slightly different driver. Contact Epson to verify which driver is recommended for your printer.

Step 2

Upgrade the firmware on the printer's motherboard. Contact Epson to identify the ROM size and upgrade it to the proper version.

Step 3

Upgrade to Open Transport v1.0.8, which is available on the online services.

Step 4

Install the System 7.5.2 Printing Fix 1.1, which is also available on the online

services.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Support Information Services

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Tech Info Library Article Number:19317



Tech Info Library

Apple Color StyleWriter 1500: Description (3/96)

Revised: 3/22/96
Security: Everyone

Apple Color StyleWriter 1500: Description (3/96)

Article Created: 9 February 1996
Article Reviewed/Updated: 22 March 1996

TOPIC -----

This article contains the description for the Apple Color StyleWriter 1500 printer.

DISCUSSION -----

Description
=====

The Apple Color StyleWriter 1500 offers a complete solution for easy and affordable color printing on Macintosh or PowerBook computers. This innovative ink-jet printer is perfect for home, education, and small-business users who require color printing capabilities at an affordable price.

Designed to fit easily into even the smallest of work spaces, the Apple Color StyleWriter 1500 provides a convenient, quiet, personal printing option—but one with advanced features. It produces output with impressive quality, offering laser-quality, 720- by 360-dpi resolution with edge smoothing on black-and-white pages, and 360- by 360-dpi resolution on pages containing color or gray-scale images. It prints quickly—3 pages per minute for black-and-white pages in normal mode and 0.3 page per minute for color. And it takes advantage of Apple's advanced ColorSync color-matching capabilities, so that the colors in your printed output match as closely as possible the colors on your display.

To support its performance, the Color StyleWriter 1500 provides native PowerPC software to speed the processing and printing of complex documents. And if you're looking for a direct-connect networking alternative, the Color StyleWriter 1500 can be used with the StyleWriter EtherTalk Adapter, for connection to an EtherTalk network.

In addition to performance, the Color StyleWriter 1500 also rates high on convenience and flexibility. It comes complete with all of the cables and ink

cartridges you need (color and black) and offers plug-and-play connection to virtually any Macintosh computer. It can be set up and installed easily. For flexible document design, the Color StyleWriter 1500 printer offers 64 available TrueType fonts for a wide range of type styles and sizes. And it can print not only on plain paper but also on a wide range of media, including glossy and premium paper, envelopes, transparencies, labels, and back-print film.

So if you want convenient color printing capabilities—at an affordable price—the Color StyleWriter 1500 is your ideal printing solution.

Features

=====

Outstanding print quality at an affordable price

- Produces great-looking documents contain-ing color images at 360 by 360 dots per inch
- Offers laser-quality printing by smoothing the edges of text and line art using 720 by 360 dots per inch for crisp black-and-white pages
- Supports ColorSync color-matching technology, ensuring the closest possible match between the colors you see on the screen and the colors that print
- Is priced low enough to make color accessible even to home users

Versatility, flexibility, and convenience

- Provides fast output up to 3 pages per minute for black and white—in both the ink-saving draft mode and the sharp-quality normal mode
- Takes advantage of the high performance of PowerPC processor-based computers to speed the processing and printing of complex documents
- Features a small, sleek design that fits on virtually any desktop
- Offers the option of printing on a wide range of media, including plain paper, transparencies, glossy and premium paper, back-print film, labels, and envelopes
- Automatically turns itself on when it receives a document and turns itself off when it finishes printing
- Gives you a choice of 64 scalable TrueType fonts for printing in any size and in a variety of styles
- Can be used with the StyleWriter EtherTalk Adapter, for direct connection to an EtherTalk network

Ease of use

..TIL19320-Apple_Color_StyleWriter_1500-Description_3-96_(TA35062).pdf

- Comes with everything you need to get started right away; includes all necessary cables and both black and color ink cartridges
- Supports plug-and-play connection to virtually any Macintosh, PowerBook, or Power Macintosh computer
- Provides "desktop printing"; you can print files by simply dragging them onto a desktop printer icon
- Lets you print two or four reduced-size pages on a single sheet of paper, saving paper, ink, and time for review of multipage documents
- Allows you to place watermarks in the background of your documents quickly and easily

Ordering Information

=====

Apple Color StyleWriter 1500

Order No. M4428LL/A

- Apple Color StyleWriter 1500 printer
- Apple Color StyleWriter 1500 software
- StyleWriter Series Black Ink Cartridge
- Apple Color StyleWriter Color Ink Cartridge
- High-speed serial cable
- AC power adapter
- User's guide

Apple Color StyleWriter 1500 Color Ink Cartridge

Order No. M4609G/A

Apple StyleWriter Black Ink Cartridge

Order No. M8041G/C

Optional StyleWriter EtherTalk Adapter

Order No. M4775LL/A

Media

Letter-size transparency	M2658G/A
Letter-size premium paper	M2952G/A
Letter-size glossy paper	M3655G/A
Letter-size back-print film	M2953G/A
A4-size transparency	M1959G/A
A4-size premium paper	M2951G/A
A4-size glossy paper	M3656G/A
A4-size back-print film	M2954G/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

22 Mar 1996 - Reviewed.

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Tech Info Library Article Number:19320



Tech Info Library

Apple Color StyleWriter 1500: Technical Specifications (3/96)

Revised: 3/22/96
Security: Everyone

Apple Color StyleWriter 1500: Technical Specifications (3/96)

=====

Article Created: 9 February 1996
Article Reviewed/Updated: 20 March 1996

TOPIC -----

This article contains the Technical Specifications for the Apple Color StyleWriter 1500 printer.

DISCUSSION -----

Technical Specifications
=====

Print Method:
- Thermal ink jet

Print Quality:
- 720 by 360 dpi for edge smoothing on black-and-white documents
- 360 by 360 dpi for color and gray-scale documents

Interfaces:
- High-speed serial (885 Kbps)
- Optional direct network connection through the Apple StyleWriter
 EtherTalk Adapter

Speed:
- Up to 3 pages per minute for black-and-white normal mode
- Up to 0.3 page per minute for color and gray scale
- Actual speed depends on the documents printed and the Macintosh used

Fonts:
- TrueType font support
- Adobe PostScript font support when used with Adobe Type Manager software

Typefaces included with Apple Color StyleWriter 1500:

Begin_Table

- ITC Avant Garde	- Helvetica Compressed	- Old English Text
- ITC Bookman	- Helvetica Narrow	- Onyx Narrow
- Chicago	- ITC Lubalin Graph	- Oxford
- Courier	- Lucida Bright	- Palatino
- Delphian	- ITC Machine	- Swing
- ITC Garamond Narrow	- Monaco	- Symbol
- Geneva	- Nadianne	- Times
- Helvetica	- New Century Schoolbook	- ITC Zapf Chancery
- Helvetica Black	- New York	- ITC Zapf Dingbats
		- Zeal

End_Table

Ink Cartridges:

- Color Ink Cartridge—all-in-one print head and color ink tanks (cyan, magenta, and yellow)
- Black Ink Cartridge for black-and-white printing

Paper Capacity:

- Multipurpose tray that accommodates up to 100 sheets of paper or 15 envelopes

Print Materials:

- 16- to 24-lb. (60 to 90 g/m²) bond or copier paper
- Paper: U.S. letter, U.S. legal, A4, executive, and envelopes (#10 business and #6)
- Most letterhead and colored stock, labels, and envelopes
- For superior graphics and imaging results, Apple recommends Apple premium or glossy paper and Apple back-print media

Printable Surface:

- Maximum printable line: 8.0 in. (20.3 cm)
- Minimum margins: 0.25 in. (0.63 cm)

Size and Weight:

- Height: 6.9 in. (17.6 cm)
- Width: 13.7 in. (34.8 cm)
- Depth: 8.5 in. (21.5 cm)
- Weight: 5.5 lb. (2.5 kg)

Power Requirements:

- U.S./Japan: 100 to 120 V AC; 48 to 62 Hz
- Europe/Australia: 220 to 240 V AC; 48 to 62 Hz

Power Consumption:

- Operating mode: 22.6 W (maximum) at 120 V and 220 V

Operating Environment:

- Temperature: 59 to 86 deg. F (15 to 30 deg. C)
- Humidity: 10% to 80% noncondensing

System Requirements:

- An Apple Macintosh personal computer with a 68020 or later processor, Power Macintosh system, or PowerBook computer, with at least 4MB of RAM (5MB recommended) and a hard disk drive. Requires Color QuickDraw. Color QuickDraw first shipped with the Macintosh II, and is in every Macintosh II class computer, which includes the SE/30. This EXCLUDES the Macintosh Plus, Macintosh Classic, Macintosh SE, and Macintosh PowerBook 100 (they will not print in color).
- System software version 7.1 or later
- Supports Quickdraw GX

Ordering Information

=====

Apple Color StyleWriter 1500

Order No. M4428LL/A

- Apple Color StyleWriter 1500 printer
- Apple Color StyleWriter 1500 software
- StyleWriter Series Black Ink Cartridge
- Apple Color StyleWriter Color Ink Cartridge
- High-speed serial cable
- AC power adapter
- User's guide

Apple Color StyleWriter 1500 Color Ink Cartridge

Order No. M4609G/A

Apple StyleWriter Black Ink Cartridge

Order No. M8041G/C

Optional StyleWriter EtherTalk Adapter

Order No. M4775LL/A

Media

Letter-size transparency	M2658G/A
Letter-size premium paper	M2952G/A
Letter-size glossy paper	M3655G/A
Letter-size back-print film	M2953G/A
A4-size transparency	M1959G/A
A4-size premium paper	M2951G/A
A4-size glossy paper	M3656G/A
A4-size back-print film	M2954G/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

20 Mar 1996 - Added QuickDraw GX support

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Tech Info Library Article Number:19321



Tech Info Library

PowerBook: Generic System 7.5.2 Software Installer Icon (2/96)

Revised: 2/9/96
Security: Everyone

PowerBook: Generic System 7.5.2 Software Installer Icon (2/96)

=====

Article Created: 9 February 1996

TOPIC -----

I am trying to reinstall my System 7.5.2 software on my PowerBook 190, 2300c, or 5300 series computer. I have started from the Disk Tools disk that came with my PowerBook, but when I double-click the System Software installer alias on the Disk Tools disk, I get a message, saying the original item cannot be found. I also notice that the alias is a generic document icon. What is wrong? How can I fix this?

DISCUSSION -----

The System Software installer alias on the Disk Tools disk is an alias to the System Software installer application on the hard drive of your PowerBook. The path the alias follows can be lost if you rename your hard drive to something other than Macintosh HD, or if you move the System Software Installer application out of the System Software Images folder. Even if you name your hard drive back to Macintosh HD or put the System Software installer back into the System Software Images folder, the alias will still be unable to open the application.

You can work around this issue by double-clicking the System Software installer application on your PowerBook's hard drive instead of double-clicking the alias on the Disk Tools disk. If you have not relocated any folders on your hard drive, the application can be found on the hard drive by following the path:

Hard Drive -> Utilities -> Floppy Disk Maker -> Disk Images -> System Software Images -> System Software Installer

You can also fix the unresolved alias on the Disk Tools disk by following this procedure:

Step 1

Before inserting the disk into your floppy drive slide the plastic write protect

tab in the upper left corner, of the bottom of the disk (side with the silver disk in the center) to cover the hole. Insert the floppy disk into your floppy drive.

Step 2

Locate the System Software Installer application on your hard drive. If you have not relocated any folders on your hard drive, it can be found by following the path:

Hard Drive -> Utilities -> Floppy Disk Maker -> Disk Images -> System Software Images -> System Software Installer

You can also use Find... under File to locate the application.

Step 3

Click the System Software Installer application once to highlight it. Under File, choose Make Alias.

Step 4

Drag the alias you have just created to the Disk Tools disk. When asked if you want to replace items with the same name, click OK. When the file is finished being copied you should have the alias in both the Disk Tools disk and the System Software Images folder. You can drag the alias from the System Software Images folder to the Trash.

Step 5

Drag the Disk Tools disk icon to the Trash to eject it. Lock the floppy disk by sliding the write protect tab back to cover the hole in the corner.

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Tech Info Library Article Number:19322



Tech Info Library

Apple Color StyleWriter 2500: Description (4/96)

Revised: 4/12/96
Security: Everyone

Apple Color StyleWriter 2500: Description (4/96)

Article Created: 9 February 1996
Article Reviewed/Updated: 12 April 1996

TOPIC -----

This article contains the description for the Apple Color StyleWriter 2500 printer.

DISCUSSION -----

Description
=====

The Apple Color StyleWriter 2500 is a compact, elegantly designed ink-jet printer that provides outstanding performance for both color and black-and-white printing. It's ideal for home, education, and small-business users who require convenient, superior-quality color capability without com-promising true black text.

With its 720- by 360-dpi resolution for both color and black and white and its support for ColorSync color-matching technology, the Color StyleWriter 2500 easily prints high-quality text and images. It even features optimal ink density, which automatically adjusts the ink saturation to provide the best possible output on a variety of media (papers, transparencies, and back-print film). And the speed of this printer is also a strong point: the Apple Color StyleWriter 2500 prints up to 5 pages per minute for black and white and up to 0.66 page per minute for color.

Whether you use the Color StyleWriter 2500 to print your household budget, your child's latest art project, a class handout, or a customer presentation, you'll appreciate the quality and convenience of this printer's fast-drying, water-resistant ink. And you'll find the Apple Color StyleWriter 2500 equally convenient to own. It's extremely simple to set up and can be shared over a network in several ways. Through Apple's ColorShare technology, the Color StyleWriter 2500 can be shared with others over a LocalTalk, EtherTalk, or TokenTalk network. Or you can choose to add the optional LocalTalk module or the

..TIL19323-Apple_Color_StyleWriter_2500-Description_4-96.pdf

StyleWriter EtherTalk Adapter, for direct connection to a LocalTalk or EtherTalk network.

So if you want outstanding print quality and color capability—in a convenient, flexible printer—the Apple Color StyleWriter 2500 is the printer for you.

Features

=====

Outstanding print quality

- Prints Macintosh documents in millions of vibrant colors at high resolution—up to 720 by 360 dots per inch; to ensure consistent high-quality results, the printer automatically chooses the optimal ink density for the paper you're using
- Gives you a choice of 64 scalable TrueType fonts for printing in any size and in a variety of styles
- Allows you to combine vivid color images with true black text on the same printed page
- Uses Apple's ColorSync technology to ensure the closest possible match between the colors you see on your display and the colors printed in your documents

Convenience

- Takes advantage of the high performance of PowerPC processor-based computers to speed the processing and printing of complex documents
- Features a small, sleek design that fits on virtually any desktop
- Prints quickly (up to 5 pages per minute in black-and-white; 0.66 page per minute in color)
- Offers the option of printing on a wide range of media, including plain, premium, and glossy paper, transparencies, back-print film, and envelopes
- Automatically turns itself on when it receives a document and turns itself off when it finishes printing

Ease of use

- Supports plug-and-play connection to virtually any Macintosh, PowerBook, or Power Macintosh computer
- Is easy to set up and install
- Provides "desktop printing"; you can print files by simply dragging them onto a desktop printer icon

..TIL19323-Apple_Color_StyleWriter_2500-Description_4-96.pdf

- Allows you to place watermarks in the back-ground of your documents quickly and easily
- Lets you print two or four reduced-size pages on a single sheet of paper, saving paper, ink, and time for review of multipage documents

Ordering Information

=====

Apple Color StyleWriter 2500

Order No. M4236LL/A

- Apple Color StyleWriter 2500 printer
- Apple Color StyleWriter 2500 software
- Apple Color StyleWriter 2500 Color Ink Cartridge (includes print head, color ink tank [cyan, magenta, and yellow], and black ink tank)
- Serial cable
- AC power adapter
- User's guide

Apple Color StyleWriter 2500 Color Ink Cartridge

Order No. M3328G/A

-2,000 pages at 7.5% coverage

Apple High-Performance Black Ink Cartridge (Optional - Not Included)

Order No. M3240G/A

-900 pages at 5% coverage

Replacement Tanks (for Color Ink Cartridge)

- Apple Color StyleWriter Color Ink Tank
Order No. M3329G/A
- Apple Color StyleWriter Black Ink Tank
Order No. M3330G/A

Media

- | | |
|----------------------------------|----------|
| - Letter-size premium paper | M2952G/A |
| - Letter-size premium plus paper | M4792G/A |
| - Letter-size glossy paper | M3655G/A |
| - Letter-size transparency | M2658G/A |
| - Letter-size back-print film | M2953G/A |
| - A4-size premium paper | M2951G/A |
| - A4-size premium plus paper | M4791G/A |
| - A4-size glossy paper | M3656G/A |
| - A4-size transparency | M1959G/A |
| - A4-size back-print film | M2954G/A |

Optional LocalTalk Module

Order No. M3458G/A

Optional Apple StyleWriter EtherTalk Adapter

Order No. M4775LL/A

Article Change History:

12 Apr 1996 - Added availability information to ink tanks.

22 Mar 1996 - Reviewed.

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Tech Info Library Article Number:19323



Tech Info Library

Apple Color StyleWriter 2500: Technical Specifications (1/97)

Revised: 1/15/97
Security: Everyone

Apple Color StyleWriter 2500: Technical Specifications (1/97)

=====

Article Created: 9 February 1996
Article Reviewed/Updated: 15 January 1997

TOPIC -----

This article contains the technical specifications for the Apple Color StyleWriter 2500 printer.

DISCUSSION -----

Technical Specifications
=====

Print method:
- Thermal ink jet

Print quality:
- 720 by 360 dpi with ink density optimization for a variety of paper types

Interfaces:
- High-speed serial (RS-422)
- Optional LocalTalk Module
- Optional direct connection to an EtherTalk network through the Apple StyleWriter EtherTalk Adapter

Speed
- Up to 5 pages per minute for black and white
- Up to 0.66 page per minute for color

Actual speed depends on the documents printed and the Macintosh used

Fonts

- TrueType font support (see below for the 64 TrueType fonts available with the Apple Color StyleWriter 2500)

- Adobe PostScript font support when used with Adobe Type Manager software
Ink cartridges

Typefaces included with Apple Color StyleWriter 2500:

Begin_Table

- | | | |
|-----------------------|--------------------------|---------------------|
| - ITC Avant Garde | - Helvetica Compressed | - Old English Text |
| - ITC Bookman | - Helvetica Narrow | - Onyx Narrow |
| - Chicago | - ITC Lubalin Graph | - Oxford |
| - Courier | - Lucida Bright | - Palatino |
| - Delphian | - ITC Machine | - Swing |
| - ITC Garamond Narrow | - Monaco | - Symbol |
| - Geneva | - Nadianne | - Times |
| - Helvetica | - New Century Schoolbook | - ITC Zapf Chancery |
| - Helvetica Black | - New York | - ITC Zapf Dingbats |
| | | - Zeal |

End_Table

Color Ink Cartridge (includes print head cartridge, color ink tank [cyan, magenta, and yellow], and black ink tank)

- Color tank approximately 100 pages at 7.5% coverage
- Black tank approximately 40 pages at 5% coverage
- Cartridge approximately 2000 pages at 7.5% coverage

Color and Black Ink Tanks

- 100 pages each at 7.5% coverage
- High-Performance Black Ink Cartridge for black-and-white printing
- 900 pages at 5% coverage

Optional Color PhotoGrade Ink Cartridge

- approx. 45 pages per cartridge

Print materials

- 16- to 24-lb. (60 to 90 g/m²) bond or copier paper
- Paper: U.S. letter, U.S. legal, A4, and envelopes (#10 business and #6)
- Most letterhead and colored stock, labels, and envelopes
- For superior graphics and imaging results, Apple recommends Apple premium, premium plus, glossy, and back-print film
- For fast dry time and vibrant colors on overhead transparencies, Apple recommends Apple color ink-jet transparencies

Paper capacity

- Multipurpose tray that accommodates up to 100 sheets of paper or 15 envelopes

Printable surface

- Maximum printable line: 8.1 in. (20.6 cm)
- Minimum margins: 0.2 in (0.5 cm) left and right; 0.1 in. (0.3 cm) top;

0.28 in. (0.7 cm) bottom

Size and weight

- Height: 8.3 in. (21.1 cm)
- Width: 14.4 in. (36.5 cm)
- Depth: 9.2 in. (23.4 cm)
- Weight: 6.9 lb. (3.2 kg)

Power consumption

- Operating mode: 27.6 W (maximum)

Operating environment

- Temperature: 59 to 86 deg. F (15 to 30 deg. C)
- Humidity: 10% to 80% noncondensing

Power requirements

- U.S./Japan: 120 V, 60 Hz
- Europe/Australia: 220 to 240 V, 50 Hz

System requirements

- An Apple Macintosh or PowerBook personal computer with a 68020 or later processor, a Power Macintosh system, or another Mac OS-based personal computer with 5MB of RAM. Requires Color QuickDraw. Color QuickDraw first shipped with the Macintosh II, and is in every Macintosh II class computer, which includes the SE/30. This EXCLUDES the Macintosh Plus, Macintosh Classic, Macintosh SE, and Macintosh PowerBook 100 (they will not print in color).
- System software version 7.1 or later
- Supports QuickDraw GX

Ordering Information

=====

Apple Color StyleWriter 2500

Order No. M4236LL/A

- Apple Color StyleWriter 2500 printer
- Apple Color StyleWriter 2500 software
- Apple Color StyleWriter 2500 Color Ink Cartridge (includes print head, color ink tank [cyan, magenta, and yellow], and black ink tank)
- Serial cable
- AC power adapter
- User's guide

Apple Color StyleWriter 2500 Color Ink Cartridge

Order No. M3328G/A

-2,000 pages at 7.5% coverage

Apple High-Performance Black Ink Cartridge (Optional - Not Included)

Order No. M3240G/A

—900 pages at 5% coverage

Color PhotoGrade Print Kit (Optional - Not Included)

Order No. M5577LL/A

Replacement Tanks (for Color Ink Cartridge)

- Apple Color StyleWriter Color Ink Tank

Order No. M3329G/A

- Apple Color StyleWriter Black Ink Tank

Order No. M3330G/A

Media

- Letter-size premium paper M2952G/A
- Letter-size premium plus paper M4792G/A
- Letter-size glossy paper M3655G/A
- Letter-size transparency M2658G/A
- Letter-size back-print film M2953G/A
- A4-size premium paper M2951G/A
- A4-size premium plus paper M4791G/A
- A4-size glossy paper M3656G/A
- A4-size transparency M1959G/A
- A4-size back-print film M2954G/A

Optional LocalTalk Module

Order No. M4615ZM/A

Optional Apple StyleWriter EtherTalk Adapter

Order No. M4775LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

15 Jan 1997 - Added Color PhotoGrade Print Kit.

25 Jun 1996 - Corrected LocalTalk option part number.

10 Jun 1996 - Removed keyword.

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Tech Info Library Article Number:19324



Tech Info Library

System 7.5.x: Must Choose Printer to Use Ofoto 2.0.x (2/96)

Revised: 2/9/96
Security: Everyone

System 7.5.x: Must Choose Printer to Use Ofoto 2.0.x (2/96)

Article Created: 9 February 1996

TOPIC -----

I have recently upgraded to System 7.5.1 on my Macintosh computer. When I try to access any of the functions like Preview or Autoscan in Ofoto 2.0.x, I get a message that says "Couldn't complete the last command because of a Mac OS error. Result Code = -39".

I have received this same error when using the Extensions Manager to disable all extensions not necessary to run Ofoto.

DISCUSSION -----

You must have a printer selected in the Chooser in order for Ofoto to run properly. Follow these steps to select a printer:

Step 1

Choose the Chooser under the Apple Menu.

Step 2

Click to select your printer's driver in the left side of the Chooser.

Step 3

Click to select the modem or printer port on the right side of the Chooser, or select the name of your AppleTalk printer.

Step 4

Click the close box in the upper left corner of the Chooser.

You can now use all of Ofoto's functions.

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Tech Info Library Article Number:19325



Tech Info Library

Apple Color OneScanner 600/27: Technical Specifications (9/96)

Revised: 8/1/96
Security: Everyone

Apple Color OneScanner 600/27: Technical Specifications (9/96)

=====

Article Created: 12 February 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article contains the Apple Color OneScanner 600/27 technical specifications.

DISCUSSION -----

Technical Specifications
=====

General

- Scanner type: Single-pass, 27-bit scanning
- Color capabilities: Recognizes up to 134 million colors internally and 16.7 million externally
- Optical scanning resolution: 300- by 600-dots per inch, 2400- by 2400-interpolated resolution
- Maximum scan area: 8.5 by 11.5 in. (21.6 by 29.2 cm)
- Scanning engine speed: Full-page scan, less than 20 seconds; preview scan, less than 6 seconds
- Interface: SCSI-2
- File formats: Supports PICT, TIFF, JPEG, EPS, Photoshop 2.5, and BMP; compatible with most popular word processing, presentation, Image-editing, and page-layout software for the Macintosh
- Illumination: Cool-scanning Xenon bulb

Optional accessories

- Automatic Document Feeder with 20-page capacity (M4526G/A)

OneScanner Dispatcher software

- Controls scanning, OCR, editing, printing, faxing, copying, archiving, and retrieving images
- Supports Drag and Drop

Additional software

- Xerox TextBridge 3.0 OCR software
- Photoshop plug-in acquire scan module

ColorSync 2.0 Architecture

- Matches colors from scanned input to display to printed output
- Provides automatic color matching
- Works with color-capable Macintosh computers and color input and output devices that take advantage of ColorSync

Electrical Requirements

=====

- Line voltage: 100/120/200/220/240 V AC + 10%
- Frequency: 50 to 60 Hz, single phase
- Power: 28 W (maximum)

Environmental Requirements

=====

- Temperature: 50 to 104 deg. F (10 to 40 deg. C)
- Humidity: 10% to 80%, noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and Weight

=====

- Height: 3.1 in. (7.9 cm)
- Width: 11.3 in. (28.7 cm)
- Depth: 16.3 in. (41.4 cm)
- Weight: 13.2 lb. (6.0 kg)

System Requirements

=====

- System software version 7.5 or later

..TIL19327-Apple_Color_OneScanner_600-27-Technical_Specifications_9-96.pdf

- At least 8MB of RAM (12MB required to use OneScanner Dispatcher and TextBridge OCR software simultaneously)
- At least a 13-in. display (640x480), or PowerBook capable of displaying a 640x480 resolution.

Ordering Information

=====

Apple Color OneScanner 600/27

Order No. M4496LL/A

- Apple Color OneScanner 600/27
- OneScanner Dispatcher software
- Xerox TextBridge 3.0 OCR software and user's guide
- Photoshop plug-in acquire scan module
- User's guide
- Limited warranty

Automatic Document Feeder

Order No. M4526G/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

- 01 Aug 1996 - Added display/resolution requirements.
- 26 Jul 1996 - Minor change to doc feeder order number.
- 21 May 1996 - Added part number for document feeder

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Tech Info Library Article Number:19327



Tech Info Library

Apple Color OneScanner 600/27: Description (3/96)

Revised: 3/28/96
Security: Everyone

Apple Color OneScanner 600/27: Description (3/96)

Article Created: 12 February 1996
Article Reviewed/Updated: 28 March 1996

TOPIC -----

This article contains the Apple Color OneScanner 600/27 description.

DISCUSSION -----

Description
=====

The Apple Color OneScanner 600/27 is a highly affordable, highly capable scanner that lets you enhance your documents and presentations with high-quality color images for maximum impact. And it makes not only scanning but also a variety of related functions easier than ever before.

With its 300- by 600-dot-per-inch optical resolution and bit depth of 27 bits, the Apple Color OneScanner 600/27 provides images with impressive quality. Its color capabilities are equally impressive: It recognizes up to 134 million colors internally and supports ColorSync 2.0 color matching, so the image you see on the display or on printed output accurately and vividly reproduces the quality of the original scan.

But high-quality images are only part of the OneScanner story. The OneScanner Dispatcher software that comes with this scanner brings a new level of ease to scanning and document handling. This software makes it simple to use the Apple Color OneScanner 600/27 in conjunction with your Mac OS computer, fax modem, and printer, enhancing your productivity by letting you handle a variety of document processing activities in an intuitive, integrated fashion. In addition, to ensure that you get the most out of your scanner, the Apple Color OneScanner 600/27 includes two other useful software packages. Xerox TextBridge 3.0 optical character recognition (OCR) software lets you scan printed pages directly into your computer as text files that you can edit and format—eliminating the need for time-consuming rekeying of text. It features an impressive accuracy rate of up to 98.5 percent. The second software tool, a Photoshop acquire module, lets

..TIL19328-Apple_Color_OneScanner_600-27-Description_3-96.pdf

you scan directly into Adobe Photoshop and Photoshop plug-in compatible software.

But for all of its impressive capabilities and unprecedented ease of use, the Apple Color OneScanner 600/27 remains highly affordable. So whether you're a teacher working with your students to create a newsletter, a freelance graphic designer producing a brochure, or someone who simply wants to jazz up your annual holiday form letter, the Apple Color OneScanner 600/27 is the perfect scanner to meet your needs.

Features

=====

Ease of use

- Provides automated, single-pass scanning
- Comes with OneScanner Dispatcher software, which provides a variety of integrated functions like scanning, optical character recognition (OCR), editing, printing, faxing, copying, archiving, and retrieving images in one easy-to-use interface

Image quality

- Offers 300- by 600-dot-per-inch optical (2400- by 2400-interpolated) resolution at 27 bits
- Recognizes more than 134 million colors internally and 16.7 million externally
- Features a cool-scanning Xenon bulb that provides daylight balanced illumination for better image quality and protects valuable originals from heat damage
- Supports ColorSync 2.0 color matching, for excellent color fidelity from original scanned image to screen image to printed image Value-added software
- Includes industry-leading Xerox TextBridge 3.0 OCR software (in Japan, eTypist 1.0), which lets you scan printed pages directly into your computer as digital files—eliminating the need for time-consuming and error-prone rekeying
- Comes with a Photoshop acquire scan module, which lets you scan directly into Photoshop and compatible software Compatibility
- Supports PICT, TIFF, JPEG, EPS, Photoshop 2.5, and BMP formats
- Is compatible with most popular word processing, presentation, Image-editing, and page-layout software for the Macintosh

Ordering Information

=====

Apple Color OneScanner 600/27

Order No. M4496LL/A

- Apple Color OneScanner 600/27
- OneScanner Dispatcher software
- Xerox TextBridge 3.0 OCR software and user's guide
- Photoshop plug-in acquire scan module
- User's guide
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:19328



Tech Info Library

AICK 1.0: Claris Emailer Lite and LAN Configuration (2/96)

Revised: 2/12/96
Security: Everyone

AICK 1.0: Claris Emailer Lite and LAN Configuration (2/96)

=====

Article Created: 12 February 1996

TOPIC -----

This article describes a configuration issue with Claris Emailer Lite, a part of the Apple Internet Connection Kit (AICK) 1.0, when connecting to the Internet through a Local Area Network (LAN).

DISCUSSION -----

Claris Emailer Lite will load some of its parameters from the pre-configured Internet Config database. The Internet Config database is the Internet Preferences file in the Preferences folder. When used in a dialup configuration, the Apple Internet Dialer populates the Internet Config database with appropriate entries. However, when used in a LAN configuration, the required fields (email address, pop server, and so on) are not entered into the database, and this information cannot be edited using the Emailer Lite application.

The Internet Config application, distributed with AICK (in the Internet Utilities folder), can be used to set these needed preferences. The Internet Config application has clear and extensive balloon help if it's unclear what to enter in the fields. Once you have made the entries in Internet Config application, Claris Emailer Lite loads these parameters from the Internet Config database the next time Emailer Lite is launched.

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Tech Info Library Article Number:19330



Tech Info Library

Performa: No Volume Control With Some Applications (2/96)

Revised: 2/12/96
Security: Everyone

Performa: No Volume Control With Some Applications (2/96)

=====

Article Created: 12 February 1996

TOPIC -----

I have a Macintosh Performa computer, which included Sesame Street Numbers and Power Pete in the software bundle. However, I have noticed that when I open either of these applications, I can no longer adjust the sound using the front panel volume buttons.

DISCUSSION -----

It appears that this symptom only occurs if the Video Startup extension is installed or active when you attempt to use either Sesame Street Numbers or Power Pete. Once you quit those applications, you can control the volume normally again.

At this time, the only way to avoid this is to disable the Video Startup extension using the Extensions Manager control panel.

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Tech Info Library Article Number:19331



Tech Info Library

StyleWriter EtherTalk Adapter: Description (5/96)

Revised: 5/14/96
Security: Everyone

StyleWriter EtherTalk Adapter: Description (5/96)

Article Created: 12 February 1996
Article Reviewed/Updated: 14 May 1996

TOPIC -----

This article contains the StyleWriter EtherTalk Adapter product description.

DISCUSSION -----

Product Description
=====

The StyleWriter EtherTalk Adapter is a simple, compact device that lets you connect your Apple ink-jet printer directly to an EtherTalk local area network (LAN). It's the ideal way to share a single printer among multiple computers on an EtherTalk network.

Designed for convenience, the StyleWriter EtherTalk Adapter is small enough to make it easy to place, and is also extremely simple to set up. It connects directly to the printer's high-speed serial port and requires no additional software. With both 10Base-T and 10Base-2 connectors built in, it supports Apple Macintosh, Power Macintosh, and PowerBook computers; Apple EtherTalk networks; and Apple ink-jet printers, including the StyleWriter (1), StyleWriter II (1), StyleWriter 1200 (1), Color StyleWriter 1500, Color StyleWriter 2200, and Color StyleWriter 2500, as well as the Color StyleWriter 2400 (2). And the StyleWriter EtherTalk Adapter features easy-to-read LEDs that display your network connection status for easy troubleshooting.

These days, most organizations—and particularly schools—are feeling an economic pinch. The StyleWriter EtherTalk Adapter makes printing much more economical by allowing one printer to serve a number of people over a high-speed network. In fact, an EtherTalk connection can provide performance up to four times faster than a LocalTalk connection, making printer sharing more practical.

So if you own—or are about to buy—an Apple ink-jet printer, and you want to get the best possible shared performance from it, the StyleWriter EtherTalk Adapter

is the product for you.

Notes:

(1) - The StyleWriter 1200, StyleWriter and StyleWriter II printers require StyleWriter 1500 print driver version 2.2 or later.

(2) - Requires printer driver version 1.6.1 or later.

Features

=====

Ease of use

- Offers easy installation
- Provides easy-to-read LEDs that let you see your network connection status at a glance
- Uses standard Apple ink-jet printer drivers
- Supports connection to either 10Base-T or 10Base-2 cabling

Performance

- Lets you print up to four times faster than you can with a LocalTalk connection

Affordability and convenience

- Allows a single Apple ink-jet printer to be shared simply
- Features a convenient, attractive, and compact design

Ordering Information

=====

Apple StyleWriter EtherTalk Adapter

Order No. M4775LL/A

- StyleWriter EtherTalk Adapter
- User's guide
- AC power adapter
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

14 May 1996 - Added StyleWriter and StyleWriter II to article.

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Tech Info Library Article Number:19332



Tech Info Library

StyleWriter EtherTalk Adapter: Technical Specifications (5/96)

Revised: 5/14/96
Security: Everyone

StyleWriter EtherTalk Adapter: Technical Specifications (5/96)

Article Created: 12 February 1996
Article Reviewed/Updated: 14 May 1996

TOPIC -----

This article contains the StyleWriter EtherTalk Adapter technical specifications.

DISCUSSION -----

Technical Specifications
=====

Product description

An external EtherTalk network printer adapter that directly connects Apple ink-jet printers to an EtherTalk local area network.

Printers supported

- Color StyleWriter 2500 (QuickDraw and QuickDraw GX)
- Color StyleWriter 2400 (QuickDraw and QuickDraw GX) (2)
- Color StyleWriter 2200 (QuickDraw and QuickDraw GX)
- Color StyleWriter 1500 (QuickDraw and QuickDraw GX)
- StyleWriter (QuickDraw) (1)
- StyleWriter II (QuickDraw) (1)
- StyleWriter 1200 (QuickDraw) (1)

Notes:

- (1) - The StyleWriter 1200, StyleWriter and StyleWriter II printers require

StyleWriter 1500 print driver version 2.2 or later.

(2) - Requires printer driver version 1.6.1 or later.

Protocol

- EtherTalk

Interface

- 10Base-T (Twisted Pair, RJ-45) or 10Base-2 (Thin Net, Thin Coax, BNC) connectors
- High-speed (up to 885 Kbps) serial (RS-422) to printer

Power

- External power adapter

Requirements

Apple StyleWriter or Color StyleWriter printer; 10Base-T or 10Base-2 cables suitable for your EtherTalk network; StyleWriter printer driver version 1.6.1 or later

Size and weight

- Height: 1.2 in. (30 mm)
- Width: 2.9 in. (75 mm)
- Depth: 4.5 in. (115 mm)
- Weight: 0.24 lb. (110 g) (excluding AC power adapter)

Ordering Information

=====

Apple StyleWriter EtherTalk Adapter

Order No. M4775LL/A

- StyleWriter EtherTalk Adapter
- User's guide
- AC power adapter
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

14 May 1996 - Added StyleWriter and StyleWriter II to list.

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Tech Info Library Article Number:19333



Tech Info Library

Apple PCI Token Ring Card: Description & Specifications (5/96)

Revised: 5/30/96
Security: Everyone

Apple PCI Token Ring Card: Description & Specifications (5/96)

Article Created: 14 February 1996
Article Reviewed/Updated: 30 May 1996

TOPIC -----

This article provides the description and specifications for the Apple PCI Token Ring Card.

DISCUSSION -----

Features
=====

The Token Ring Solution for PCI Macintosh, The Apple PCI Token Ring Card, provides Apple Workgroup Servers and Power Macintosh models equipped with a Peripheral Component Interconnect (PCI) slot with the ideal Token Ring connectivity solution for all of your networking needs. It supports a wide range of protocols, including AppleTalk, TCP/IP, and IPX, allowing the use the Apple PCI Token Ring Card with other network systems, such as Netware and AIX.

NOTE: The Apple PCI Token Ring Card supports IPX protocols. However, as of April 1996, the MacIPX control panel from Novell depends on NuBus specific APIs to locate networking cards. Therefore, the curent MacIPX software does not support the Apple PCI Token Ring Card.

High Performance

Featuring a compact (6.88-inch) design, the Apple PCI Token Ring Card provides exceptional performance at a highly affordable price. When used with network software that has been optimized for maximum performance, this card offers a cost-effective, flexible Token Ring solution for connecting Power Macintosh computers to Apple Workgroup Servers and other PCI-equipped personal computers or to mainframes. The Apple PCI Token Ring Card offers access to a variety of network services such as file servers, client/server applications, mainframe services, electronic mail, and databases.

- Offers optimal efficiency in client and server environments through its use of the high-performance IBM chip set
- Allows concurrent execution of multiple networking protocols to optimize network performance
- Ships with Apple Open Transport architecture and DLPI network driver software
- Supports full 32-bit bus mastering data interfaces for maximum throughput
- Can be used in configurations ranging from an individual card in a single system to multiple-card, server-based configurations
- Supports PCI bus speeds of up to 132 megabytes per second

Full Compatibility

The Apple PCI Token Ring Card uses the IBM Token Ring chip set, which ensures its compatibility and inter-operability with all IBM Token Ring networks that operate at 4 or 16 megabits per second. Used in conjunction with a Power Macintosh with the DOS Compatibility Card* installed or a Power Macintosh running Insignia Solutions SoftWindows DOS/Windows emulation software, this card can provide a seamlessly integrated cross-platform solution to all of your application and networking needs.

* The Apple PCI Token Ring Card is not compatible with Apple's PCI DOS Compatibility Card.

- Works with the following Macintosh and Performa models with a PCI slot:
 - Power Macintosh 7200/120 computers
 - Power Macintosh 5400 Performa computers
 - Power Macintosh 7500, 7600, 8500, and 9500 series computers
 - Workgroup Server 7250
 - Workgroup Server 8550 series computers
- Complies with IEEE 802.5 and 802.2 standards
- Uses the IBM Token Ring chip set, which provides complete compatibility with IBM environments
- Supports a variety of popular networking protocols, including AppleTalk, TCP/IP, IPX, SNA, and OSI
- Easily integrates into multi-vendor environments
- Adapts to any standard Token Ring cabling environment
- Offers compatibility with any Intel or DEC Alpha systems equipped with a PCI local bus slot

Easy Installation

This convenient, easy-to-install card requires no configuration, features superior network performance, and affords the flexibility of connection to both LAN and mainframe-based services. So if your goal is seamless inter-operability in multi-vendor environments, Apple PCI Token Ring Card can help you to achieve it.

- Installs quickly and easily in a single step
- Ships with multilingual software, which makes it ready for use with

different language versions of the system software

- Provides automatic sensing of Token Ring network speed: automatically inserts at 4 or 16 megabits per second, as appropriate

Specifications

=====

System Requirements

- One available PCI slot
- IBM Type 3 cabling (unshielded twisted pair) or IBM Type 1 cabling (shielded twisted pair) with use of an external adapter
- Industry-standard Token Ring Multistation Access Unit (MAU)

Connector

- RJ-45 connector for attaching to Type 3 cabling

Transmit/Receive Data Rate

- 4- or 16-megabit-per-second maximum data rate

Environmental Requirements

- Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- Humidity: 25% to 95% noncondensing at a temperature range of 25 to 40 degrees C

Power Dissipation

- Rated at 4 W, maximum 5 W, average 3.5 W
- Maximum current draw is 1 amp at 5 volts

Token Ring Controller

- IBM Token Ring Controller 73G2692

Standards Compliance/Agency Approvals

- FCC Class A, CE Mark, VCCI
- PCI 2.1 compatible, IEEE 802.5 and 802.2

Article Change History:

30 May 1996 - Updated 7200 compat info.

14 May 1996 - Updated with more detailed compatibility info.

19 Apr 1996 - Added note on MacIPX software.

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Tech Info Library Article Number:19334



Tech Info Library

Apple MessagePad 130: Description (3/96)

Revised: 3/14/96
Security: Everyone

Apple MessagePad 130: Description (3/96)

Article Created: 12 February 1996
Article Reviewed/Updated: 14 March 1996

TOPIC -----

This article contains the Apple MessagePad 130 product description.

DISCUSSION -----

Description
=====

The MessagePad 130 personal digital assistant (PDA) makes your information as mobile as you are.

It makes your information easy to communicate and easy to view. The MessagePad 130 runs the award-winning Newton 2.0 operating system, and features user-controllable back-lighting for on-demand use and a nonglare screen that works in any lighting condition.

With its additional system memory, the MessagePad 130 offers improved performance with communications solutions such as Internet Protocol (IP) applications and wireless LANs, as well as improved multitasking support.

It has a built-in notepad, to-do list, datebook, telephone log, and address file for organizing personal and business affairs, as well as Pocket Quicken (U.S. only) to help organize personal and business expenses.

You can enter information in many ways: as digital ink, printed text, hand-drawn graphics, or with an on-screen keyboard. Improved recognition software quickly transforms your hand-writing into typed text. There's even an optional external keyboard.

Pen-based navigation and data entry make finding information easy and fast.

The MessagePad 130 can receive wireless messages and alphanumeric pages, and can

..TIL19335-Apple_MessagePad_130-Description_3-96.pdf

send and receive faxes and electronic mail.

It also lets you exchange information with either Mac OS- or Windows-based computers using the included Newton Backup Utility, or optional Newton Connection Utilities and Newton Press software.

Your MessagePad 130 can also be customized with software applications that put critical information at your fingertips, no matter where you are.

Features

=====

Built-in organization functions

- Helps you plan monthly, weekly, and daily activities using the calendar, and manage priorities using the To Do List
- Allows free-form notes, outlines, lists, and phone logs
- Includes customizable name and address files for colleagues and friends, using various business-card formats
- Offers an assortment of information and productivity tools such as time-zone maps, a calculator, and currency exchange
- Includes Pocket Quicken (U.S. only), which puts current information about your cash, checking, savings, and credit-card accounts at your fingertips

Built-in communications

- Actively assists you in making phone calls, faxing, printing, finding information, and sending and receiving electronic mail
- Uses an optional wired or wireless modem to send and receive faxes and electronic mail
- Prints formatted letters and notes using Apple printers or serial or parallel printers with the optional Print Pack
- Lets you beam notes, messages, packages, schedules, and business cards via built-in infrared communications
- Backs up all data onto your personal computer and installs software on your MessagePad 130 using the included Newton Backup Utility

Expandable functions

- Using the optional Newton Connection Utilities, lets you import and export information from your Mac OS- or Windows-based computer, and backs up and synchronizes files with your computer

..TIL19335-Apple_MessagePad_130-Description_3-96.pdf

- Works with PC cards and serial peripherals such as keyboards, modems, pagers, and wireless communications and storage products
- Offers a large selection of productivity, finance, time and billing, information management, reference, electronic document publishing, and entertainment software

Ordering Information

=====

MessagePad 130 2.5MB

Order No. H0188LL/A

- MessagePad 130 personal digital assistant with Newton 2.0 operating system
- Telescoping Pen
- Batteries
- Newton Backup Utility software for Mac OS- and Windows-based computers
- Serial cables for Mac OS- and Windows-based computers
- Pocket Quicken software (U.S. only)
- Complete setup, learning, and reference documentation
- Limited warranty

Accessories

=====

- The MessagePad 130 with Newton 2.0 operating system is compatible with most accessories available for the MessagePad 110 and MessagePad 120 with Newton 1.x or 2.0 operating system. Please see the MessagePad Accessories data sheet for detailed information.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:19335



Tech Info Library

Apple MessagePad 130: Technical Specification (3/96)

Revised: 3/12/96
Security: Everyone

Apple MessagePad 130: Technical Specification (3/96)

Article Created: 12 February 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

This article contains the Apple MessagePad 130 technical specifications.

DISCUSSION -----

Technical Specifications
=====

Newton Intelligence
=====

Newton Recognition Architecture

- Recognizes handwriting—printed, cursive, or a mixture of the two—with the assistance of a 93,000-word, built-in word list
- Lets you add up to 1,000 words
- Includes four pop-up keyboards: typewriter, numeric, phone, and time/date
- Recognizes graphics and symmetrical objects

Newton Information Architecture

- Object-oriented database stores, finds, and links information and provides a flexible view of this data
- Newton Toolkit lets you easily create custom applications using its flexible graphical toolbox
- Architecture lets you easily share data across applications

Newton Communications Architecture

- Provides built-in support for serial communications, PC card modems, sending and receiving faxes, and electronic mail
- Provides a single interface for modular, object-oriented communications services
- Provides improved performance with Internet communications applications and multitasking support
- Supports new communications capabilities through its modular design
- Supports Class II Fax

Intelligent Assistance Architecture

- Helps users complete repetitive tasks in multiple categories, including communications, scheduling, finding, and reminding functions
- Contains smart defaults to reduce complexity
- Works in and between applications
- Supports third-party extensions

MessagePad Hardware Architecture

- ARM 610 RISC processor at 20 MHz
- Apple custom system ASIC
- Low-power, transfective LCD display with EL backlight (320 by 240 pixels) 3.8 in. by 2.8 in. (9.6 cm by 7.2 cm)
- Nonglare writing surface
- Telescoping pen
- 8MB of ROM; 2.5MB RAM (1,199K of system RAM; 1,361K of nonvolatile user RAM)
- One PC Card Type II slot with 325 mA capacity
- LocalTalk and RS-232-compatible serial port
- Low-power, half-duplex, infrared transceiver that works at up to 38.4 Kbits/sec within 3.28 ft. (1 m)
- Protective, removable lid

Communications capabilities

=====

- Prints using a variety of serial, parallel, and network printers
- Receives and stores wireless messages using optional messaging cards*
- Communicates via e-mail or taps into on-line services and the Internet with optional wired or wireless modem cards and software
- Provides faxing with optional fax modem (automatic cover-page generation, post-formatting)
- Beams notes, name cards, appointments, and packages at up to 38.4 Kbits/sec within 3.28 ft. (1 m) using high-speed infrared technology
- Automatically dials phone calls with assistance from intelligent auto-dialing (DTMF or modem dialing)*
- Connects to cellular or GSM phones for wireless data and fax communications

*This service may not be available in all countries.

Size and weight

=====

- Length: 8.0 in. (20.32 cm)
- Width: 4.0 in. (10.16 cm)
- Height: 1.2 in. (2.9 cm)
- Weight: 1.0 lb. (0.48 kg) without batteries

Operating environment

=====

- Temperature: 32° to 104° F (0° to 40° C)
- Storage temperature: -4° to 117° F (-20° to 47° C)
- Transit temperature: -4° to 149° F (-20° to 65° C) for up to 72 hours
- Relative humidity: 20% to 90% noncondensing

Power requirements

=====

- Power adapter
 - Universal, 100 to 240 V AC, 50/60 Hz
 - Four plug configurations: U.S., U.K., Europe, and Australia
- Battery type: AA (LR6) alkaline or NiCd Battery Pack
- Lithium cell: DL2032 (3 V nominal)
- Built-in fast charger for optional NiCd Battery Pack
- Power source: four AA alkaline batteries (included), optional power adapter, and optional NiCd Rechargeable Battery Pack

Computer connectivity requirements

=====

- Works with PC-compatible computers with 80386DX or later processors

running Windows version 3.0 or later

- Works with Mac OS-based computers with 68030 or later processors and system software version 7.1 or later

Printer support

=====

- Offers built-in printer support for Apple LaserWriter Plus (and other PostScript-equipped LaserWriter printers), Personal LaserWriter LS, and Personal LaserWriter 300, as well as StyleWriter I and II printers
- Works with most popular PC printers, including the Hewlett-Packard LaserJet II DeskJet 500, Canon BubbleJet 10e, and Epson LQ and FX, using the optional Newton Print Pack

Fax machine support

=====

- Supports Group 3 and Class II Fax machines

Ordering Information

=====

MessagePad 130 2.5MB

Order No. H0188LL/A

- MessagePad 130 personal digital assistant with Newton 2.0 operating system
- Telescoping Pen
- Batteries
- Newton Backup Utility software for Mac OS- and Windows-based computers
- Serial cables for Mac OS- and Windows-based computers
- Pocket Quicken software (U.S. only)
- Complete setup, learning, and reference documentation
- Limited warranty

Accessories

=====

- The MessagePad 130 with Newton 2.0 operating system is compatible with most accessories available for the MessagePad 110 and MessagePad 120 with Newton 1.x or 2.0 operating system. Please see the MessagePad Accessories data sheet for detailed information.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:19336



Tech Info Library

QuickTime for Windows 2.0.3: Removal Instructions (2/96)

Revised: 2/13/96
Security: Everyone

QuickTime for Windows 2.0.3: Removal Instructions (2/96)

Article Created: 13 February 1996

TOPIC -----

This article contains instructions for removing QuickTime for Windows 2.0.3 from your PC-compatible computer.

DISCUSSION -----

Removing QuickTime for Windows 2.0.3

Step 1

Delete the QuickTime for Windows program group in Program Manager.

Step 2

Remove the driver named [MCI] QuickTime for Windows from the Drivers control panel.

Step 3

In WIN.INI, remove the following lines under the section labelled [Extensions]

```
mov=C:\WINDOWS\PLAYER.EXE ^.mov  
pic=C:\WINDOWS\VIEWER.EXE ^.pic
```

Step 4

In WIN.INI, remove the following lines under the section labelled [mci extensions]

```
mov=QTWVideo  
pic=QTWVideo
```

jpg=QTWVideo

Step 5

In WIN.INI, remove the following lines under the section labelled
[embedding]

PlayerFrameClass=QuickTime Movie, QuickTime Movie, c:\windows\player.exe,
picture
ViewerFrameClass=QuickTime Picture, QuickTime Picture, c:\windows\viewer.exe,
picture

Step 6

Delete the following files from the C:\Windows directory:

PLAYENU.DLL
VIEWENU.DLL
PLAYER.EXE
VIEWER.EXE
README.EXE
MCENU.HLP
PLAYENU.HLP
VIEWENU.HLP
CGMINIVW.HLP --> This file does not always exist
QTW.INI
SAMPLE.MOV
*.QTW

Step 7

Delete the following files from the C:\WINDOWS\SYSTEM directory:

MCIQTENU.DLL
QTIMCMGR.DLL
QTIM.DLL
QTOLE.DLL
QTHNDLR.DLL
MCIQTW.DRV
QTNOTIFY.EXE
*.QTC
QTMOVIE.VBX
QTPIC.VBX

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19337



Tech Info Library

AppleVision 1710 Display: Requires Video Signal for Power (1/97)

Revised: 1/28/97
Security: Everyone

AppleVision 1710 Display: Requires Video Signal for Power (1/97)

=====

Article Created: 13 February 1996
Article Reviewed/Updated: 28 January 1997

TOPIC -----

I have had my AppleVision 1710 Display replaced twice already, and neither unit powers on. I have been testing the displays before I connecting them to my Macintosh. Is there something wrong with the AppleVision 1710 Displays?

DISCUSSION -----

Both the AppleVision 1710 Display and the AppleVision 1710AV Display require a video signal before powering on. Since you have not been connecting them to your Macintosh, the power LED hasn't been activated.

To properly test the AppleVision 1710 Display, you need to connect the video cable to your computer, connect the ADB cable from your Macintosh to the display, in order to get resolutions greater than 640x480, and power on your computer and display.

Article Change History:
28 Jan 1997 - Added computer power requirements.

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Tech Info Library Article Number:19338



Tech Info Library

Apple Remote Access MultiPort Server 2.1 Patch: Read Me (2/96)

Revised: 2/14/96
Security: Everyone

Apple Remote Access MultiPort Server 2.1 Patch: Read Me (2/96)

=====

Article Created: 14 February 1996

TOPIC -----

This article contains the ReadMe file for the Apple Remote Access MultiPort Server 2.1 patch.

DISCUSSION -----

Changes in Version 2.1 of the Apple Remote Access MultiPort Server

=====

- MultiPort Server v2.1, unlike unupdated v2.0.1 software, supports ARA 1.0 clients. Customers, however, are encouraged to have ARA 1.0 clients upgrade to the current client software. Future Apple Remote Access products will not support ARA 1.0 clients.
- Previous versions of the MultiPort server did not correctly respond to SNMP queries. This problem has been corrected with v. 2.1.
- When using 28.8 modems, the server would sometimes start resending data needlessly resulting in a dramatic drop in throughput. This problem has been corrected with v. 2.1.
- Computers running System Software version 7.5.1 and 7.5.2 occasionally experienced a crash in the Port Configuration Window in the Remote Access Administration program. This was due to a bug that has been corrected in System Software version 7.5.3 and above. The MultiPort Server Installer adds a system extension to correct this bug even with the earlier systems. The extension does not run if the bug is not present.
- It is normal for some corrupted packets to pass the data integrity checks in the dial-up protocol. With earlier versions of the server, however, corrupted packets caused occasional crashes. This problem has been corrected with v. 2.1.
- Sorting of the network zone lists for networks with a large number of zones

(500 and over) has been significantly speeded up.

- Reliability of the server when using 3rd party security modules has been improved.
- Reliability of the serial drivers for the Apple Serial NB card has been improved.

Installation Instructions

=====

The patch applications on this disk allow you to upgrade ARA MultiPort Server 2.0.1 or 2.0.1 RevB to ARA Multiport Server 2.1. Here is the procedure to follow:

1) Identify which version of the ARA MultiPort Server you have installed. To do so:

1. Open the System Folder.
2. Open the Extensions folder.
3. Click Apple Remote Access MP.
4. Choose Get Info from the File menu.

If the version is ARA MultiPort Server 2.0.1 or 2.0.1 RevB, continue with this procedure. To upgrade an earlier version, obtain the ARA Multiport Server 2.1 Installer diskettes and do a full installation.

2) Choose Restart from the Special menu. After hearing the startup chime, hold down the Shift key. This restarts your Mac OS computer with all system extensions turned off.

3) If you are upgrading from version 2.0.1, open the folder ARA MP 2.0.1->2.1 Patch. If you are upgrading from version 2.0.1 RevB, open the folder ARA MP 2.0.1 RevB->2.1 Patch. The steps to follow are identical for both versions, but you must use the correct patch applications for the upgrade to be successful.

4) Double-click the application icon labeled Part I.

5) Click Patch in the screen that appears.

6) Follow the screen prompts to complete Part I of the upgrade. You will be asked to locate and then patch the following files: Apple Remote Access MP, Call Back Client, Call Back Server, and Link Tool Manager. All of these files should be in the Extensions folder inside the System Folder.

7) Click OK in the dialog box that appears to tell you that Patch I was completed successfully.

8) Double-click the application icon labeled Part II.

9) Click Patch in the screen that appears.

10) Follow the screen prompts to complete Part II of the upgrade. You will be asked to locate and then patch the following files: Modem Link Tool MP, SNB Driver, SNMP Remote Access Agent, and XLT Library. All of these files should be in the Extensions folder inside the System Folder. Finally, you will be asked to locate and patch the Remote Access Manager. This should be in the Remote Access MP Folder, located at the root level of your startup disk.

11) The upgrade is now complete. Restart your Macintosh to use your new software.

Note: Several new modem CCLs are also included on this disk. Simply drag them to the System Folder if you want to use them.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19341



Tech Info Library

Apple Displays: Type of Phosphor Used (2/96)

Revised: 2/14/96
Security: Everyone

Apple Displays: Type of Phosphor Used (2/96)

Article Created: 14 February 1996

TOPIC -----

What type of phosphor is used in the Multiple Scan 17 Display?

DISCUSSION -----

The type of phosphor that is used in most of Apple's displays is Aluminized P22 Medium-short persistence. This is for both Trinitron and "standard" CRT type displays.

Examples of:

Trinitron Displays - Multiple Scan 17 Display, Multiple Scan 20 Display, AppleVision 1710 Display, AppleVision 1710AV Display.

"Standard CRT" Displays - Multiple Scan 15 Display, Multiple Scan 14 Display, Multiple Scan 1705 Display.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19343



Tech Info Library

Apple PCI Token Ring Card: Software & Configuration (4/97)

Revised: 4/9/97
Security: Everyone

Apple PCI Token Ring Card: Software & Configuration (4/97)

=====

Article Created: 14 February 1996
Article Reviewed/Updated: 04 April 1997

TOPIC -----

This article describes installing and configuring the software needed for the Apple PCI Token Ring Card.

DISCUSSION -----

Hardware
=====

PCI-Based Power Macintosh Compatibility

The Apple PCI Token Ring Card will work with and is supported by:

Power Macintosh 7200/100 and 7200/120 computers
Power Macintosh 5400 Performa computers
Power Macintosh 7500, 7600, 8500, and 9500 series computers
Workgroup Server 7250
Workgroup Server 8550 series computers

Incompatible With DOS Compatibility Card

At this time, the PCI Token Ring card is not compatible with the PCI DOS Compatibility card. Apple Engineering is investigating this issue.

Software
=====

Installing the Software

This section provides instructions for installing the software in a Macintosh computer. You can also use the Apple PCI Token Ring Card with other network

systems, such as Netware and AIX. Be sure to see the documentation that comes with your computer for details about installing and setting up the card's driver software. To use your Apple PCI Token Ring Card with a Macintosh computer, that computer must have system software version 7.5.3 (or a later version) and at least 8 megabytes (MB) of random-access memory (RAM).

System 7.5.3 Installer

If your computer does not already have system software version 7.5.3 (or a later version) installed, you must install this version before using the PCI Token Ring Card. A CD-ROM containing version 7.5.3 is included with the card.

Step 1

Quit any open applications or desk accessories.

Step 2

Insert the CD-ROM disk in your Macintosh and double-click the disk's icon to open it.

All system software files are compressed. The Installer program will expand them during installation. Do not drag them to your hard disk.

Step 3

Double-click the Install System Software folder to open it.

Step 4

Double-click the Install System Software icon to open it.

Step 5

When you see the Installer's welcome screen, click Continue.

The Easy Install dialog box appears. These instructions cover the Easy Install process, which is suitable for most Macintosh users. If you know exactly which components of system software you want to install, you can use the Custom Install option (by choosing Custom Install from the pop-up menu, then selecting the items you want to install).

Step 6

Make sure the destination disk indicated on the screen is the one on which you want to install system software.

If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

Step 7

Click Install.

The Installer updates the software in the System Folder on your hard disk.

Step 8

Follow the instructions on the screen.

On-screen messages report the installation status. The installation procedure

may take several minutes.

Step 9

When installation is complete, restart your computer.

If for some reason the procedure was not successful, try the procedure again.

Token Ring Driver Installer

To install the card's Token Ring driver software on your Macintosh computer, you need to use the Installer program on the Network Driver Installer disk, included with your card. For safety, make sure the Installer disk is locked before you use it. To lock a disk, slide the tab on the back side so that the square hole is open. Keep the installer disk after installation in case you need to reinstall Token Ring software some time in the future. To install the driver software:

Step 1

Insert the Network Driver Installer disk in your Macintosh and double-click the disk's icon to open it.

Step 2

Open the Installer program, review the welcome screen, and click Continue.

The Easy Install dialog box appears.

Step 3

Make sure that the disk indicated on the Installer's dialog box is your current startup disk, and click Install.

If you see a message indicating that the software cannot be installed while other programs are running, click Continue.

Step 4

When you see a message reporting that the installation was successful, click Restart.

Before you can use services on a Token Ring network, you need to select the Token Ring network connection for your startup disk. Move ahead to the Configuration section of for more information.

Configuration

=====

Configuring the System for Token Ring In this section, we will cover the steps necessary to configure your Macintosh computer's network connections for use with your newly installed PCI Token Ring Card, System 7.5.3, and the Token Ring software.

AppleTalk Setup

A Macintosh computer's network connection is preset for LocalTalk connected to

the printer port. To connect to a Token Ring network using AppleTalk, you need to change the settings in the AppleTalk control panel. Follow these steps:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Double-click the AppleTalk control panel to open it.

Step 3

Choose Token Ring from the popup menu.

If you have more than one card, choose the one you want to use for an AppleTalk connection. If you see a message that an error occurred, click OK and make sure that your computer is connected to the Token Ring network.

Step 4

Click Save to save the changes you made in the AppleTalk connection.

Step 5

If you see a pop-up menu that lists zones, select the zone you want, then click OK.

If your network has been set up to allow you to choose a zone but you have not yet done so, the menu lists choices, with your designated zone selected. The zone you select determines the default location for any network services provided by your computer and listed in the Chooser (such as file sharing). Before you select a zone different from the one already highlighted, consult your network administrator.

Step 6

Close the AppleTalk control panel.

Step 7

Check that the LED light on the card, above the Token Ring port, is working properly.

You are now ready to use AppleTalk services available on your Token Ring network.

TCP/IP Setup

To connect to a Token Ring network using TCP/IP, you need to change the setting in the TCP/IP control panel. Follow these steps:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Double-click the TCP/IP control panel to open it.

Step 3

Choose Token Ring from the popup menu.

If you have more than one card, choose the one you want to use with TCP/IP. If you see a message that an error occurred, click OK and make sure that your computer is connected to the Token Ring network.

Step 4

Configure the remaining options in the control panel and check with the network administrator if there are any questions.

Step 5

Click Save to save the changes you made in the TCP/IP connection.

Step 6

Close the TCP/IP control panel.

Step 7

Check that the LED light on the card, above the Token Ring port, is working properly.

You are now ready to use TCP/IP services, such as MacIP, on your Token Ring network.

Article Change History:

04 Apr 1997 - Added step to TCP/IP setup section.
14 May 1996 - Updated with hardware compat info.
17 Apr 1996 - Changed distribution status.
19 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19344



Tech Info Library

MAE, Solaris 2.3 or Later: PC, UNIX Floppy Do Not Work (5/96)

Revised: 5/14/96
Security: Everyone

MAE, Solaris 2.3 or Later: PC, UNIX Floppy Do Not Work (5/96)

Article Created: 14 February 1996
Article Reviewed/Updated: 14 May 1996

TOPIC -----

On my SPARCStation with Solaris 2.3 and Patch 101318-75, prior to installing the Macintosh Application Environment (MAE), I could insert PC or UNIX floppy disks and the File Manager appears when checking for the floppy. Macintosh floppy disks were not acknowledged by the Volume Manager.

After installing MAE, however, the File Manager no longer launches for my PC and UNIX floppy disks, but it will now, for Macintosh floppy disks. How can I have all of these floppy disks available to File Manager?

DISCUSSION -----

This issue may occur on all version of Solaris 2.3, 2.4, and 2.5, however, it is not always manifested. If this issue occurs, below is the solution.

MAE initially required JumboKernel Patch 101318-59. Sun's new release affects the Volume Manager. The volume manager uses /etc/rmmount.conf to handle removable media, and then feeds it back to vold.conf. Depending on the location of the entry for macfs, the Volume Manager will ignore PC/UNIX floppy disks.

Examples of Solaris 2.3 or later /etc/rmmount.conf:

This one will NOT work

```
-----
sparc10% cat /etc/rmmount.conf
# @(#)rmmount.conf 1.2      92/09/23 SMI
#
# Removable Media Mounter configuration file.
#
# File system identification
ident hsfs ident_hsfs.so cdrom
```

```
ident ufs ident_ufs.so cdrom floppy
ident pcfs ident_pcfs.so floppy
ident macfs ident_macfs.so floppy

# Actions
action floppy action_macfs.so    <- Notice this is the MAE entry
action cdrom action_filemgr.so
action floppy action_filemgr.so
```

This one WILL work

```
-----
sparc10% cat /etc/rmmount.conf
# @(#)rmmount.conf 1.2      92/09/23 SMI
#
# Removable Media Mounter configuration file.
#
# Modified by MH
#

# File system identification
ident hsfs ident_hsfs.so cdrom
ident ufs ident_ufs.so cdrom floppy
ident pcfs ident_pcfs.so floppy
ident macfs ident_macfs.so floppy

# Actions
action cdrom action_filemgr.so
action floppy action_filemgr.so
action floppy action_macfs.so    <- New Location
EOF
```

NOTE: With the new location of the action_macfs.so entry, both PC/UNIX floppies and Macintosh floppy disks will work properly.
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Article Change History:
14 May 1996 - Updated for Solaris 2.3, 2.4, and 2.5.

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Tech Info Library Article Number:19346



Tech Info Library

Bandai America, Inc. (2/96)

Revised: 2/15/96
Security: Everyone

Bandai America, Inc. (2/96)

=====

Article Created: 15 February 1996

Bandai America, Inc.

12851 E. 166th St.
Cerritos, CA 90703

310-926-0947 (Main Number)

Company Profile: Bandai Co., Ltd., one of Japan's leading entertainment companies, which established its prominence worldwide through the success of the Mighty Morphin' Power Rangers. Apple and Bandai unveiled plans in December 1995 to introduce a multimedia CD-ROM software player that connects to a television set, Pippin.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19347



Tech Info Library

DOS Compatibility Card: Color Printing on CLW 12/600 PS (9/96)

Revised: 9/18/96
Security: Everyone

DOS Compatibility Card: Color Printing on CLW 12/600 PS (9/96)

=====

Article Created: 15 February 1996
Article Reviewed/Updated: 17 September 1996

TOPIC -----

I have a DOS Compatibility Card in my Power Macintosh computer, and I want to print on a Color LaserWriter 12/600 PS printer. How do I configure my DOS/Windows software to print on the Color LaserWriter 12/600 PS printer?

DISCUSSION -----

In the Mac OS, you need to use the LaserWriter 8.3 or later printer software for the Color LaserWriter 12/600 PS printer. Earlier releases of LaserWriter driver (7.x or 8.2 and earlier) print, but do not provide the correct PPD, and do not use ColorSync 2.x for color calibration.

If you have a PCI-based Power Macintosh, should use the LaserWriter 8.3.4 or 8.4 software.

For detailed information on LaserWriter drivers and Mac OS, see the Tech Info Library article titled "LW Driver and System SW: Recommended Combinations".

DOS Compatability Software

You need to use PC Compatability 1.5 or later. Previous version of PC Print Spooler had trouble spooling PostScript jobs generated in the Windows environment.

MS-DOS

DOS applications must have individual support for PostScript. Due to the age of most DOS applications, color support for PostScript printing is unlikely to be available for most applicatons

Microsoft Windows 3.1

Color LaserWriter 12/600 PS customers were provided a PostScript LaserWriter driver for MS-Windows. This driver has support for color printing. The most recent version of the driver is 3.0.6. You must also turn off Send Data in Binary. If you do not turn this option off, the PostScript code generates some characters at the beginning of the file that the PC Print Spooler cannot handle properly.

Microsoft Windows 95

Color LaserWriter 12/600 PS customers were provided a PostScript LaserWriter driver for Windows 95. This driver has support for color printing. The most recent version of the driver is 4.1. Once installed, the following changes need to be made in the printer driver Properties window:

- 1) Select 'disable bi-directional support for this printer' under Details:Spool Settings
- 2) Under Details:Port Settings, make sure the checkbox labeled 'Check port state before printing' is not checked
- 3) Under Postscript:Advanced', make sure the Send CTRL+D before job' and 'Send CTRL+D after job' checkboxes are not checked.

Article Change History:

18 Sep 1996 - rewrote entire discussion.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19348



Tech Info Library

CLW 12/600 PS: Changing Configuration w/ DOS Compat Card (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Changing Configuration w/ DOS Compat Card (10/96)

Article Created: 15 February 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

I am trying to change the configuration of Color LaserWriter 12/600 PS printer from the DOS Compatibility Card to "Send Data In Binary". However, I get an error message that there is not enough memory to do perform this operation. I have a 16MB SIMM installed with 614K free of conventional memory. My Windows resources are 85% free according to the Program Manager. What is going on?

DISCUSSION -----

When setting up the Color LaserWriter 12/600 PS or the Color LaserWriter 12/660 PS printer to print from MS-DOS the printer is connected using LPT1.DOS. With this configuration the drivers for the Color LaserWriter 12/600 PS will not let you change the PostScript settings for the printer. To resolve this issue connect the printer to LPT1, make the appropriate changes in the PostScript section of the drivers setup. Then go back and change the connection settings to LPT1.DOS.

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS to discussion.
01 Apr 1996 - Minor typographical errors corrected.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19350



Tech Info Library

PowerBook 150: Printing Issue with German 7.5 Mac OS (3/96)

Revised: 3/28/96
Security: Everyone

PowerBook 150: Printing Issue with German 7.5 Mac OS (3/96)

=====

Article Created: 15 February 1996
Article Reviewed/Updated: 28 March 1996

TOPIC -----

I am having problems printing to a StyleWriter II printer from my PowerBook 150. The PowerBook 150 has a German localized version of System 7.5 installed on it. When I try printing a file I get this error message:

"Es ist ein Fehler im Drucker aufgetreten. Überprüfen Sie Bitte, ob der Drucker korrekt angeschlossen ist. Starten Sie anschließend den Druckvorgang errent."

If I put a German localized version of System 7.1.1 on the PowerBook it works properly. Is there something wrong with the German Localized version of System 7.5?

DISCUSSION -----

This issue is related to the localized version of the StyleWriter II driver v1.2 included with the German System 7.5 software.

In order to print using a PowerBook 150 and the German version of System 7.5, you need to use the StyleWriter 1200 v2.1.1 printer driver.

NOTE:

This issue would most likely occur on other Macintosh computers as well.

Since the German localized StyleWriter 1200 v2.1.1 printer driver is backward compatible and included with the German System 7.5 software, you can and should use this printer driver.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19351



Tech Info Library

Power Macintosh 7200/7500/8500/9500:Hard Drive Test Fails (2/96)

Revised: 2/15/96
Security: Everyone

Power Macintosh 7200/7500/8500/9500:Hard Drive Test Fails (2/96)

=====

Article Created: 15 February 1996

TOPIC -----

When I run hard drive diagnostics on a Power Macintosh 7200, 7500, 8500 or 9500 series computer using utilities such as SilverLining, FWB Hard Disk Toolkit, or MacTest Pro, the drives always seem to fail the tests after the computer has been on for 30 minutes or more. The hard drives seem to be working fine otherwise. What can I be doing wrong?

DISCUSSION -----

It is likely that the Energy Saver software is making the drive spin-down during the testing, which causes the diagnostics to fail the drive. To avoid this, in the Energy Saver control panel, set the Sleep Setup option to "Never". This will prevent the software from spinning down the drive and allow the utility software to properly check the hard drive.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19353



Tech Info Library

PowerBook 500 & 200 Series: PPC Upgrade Issues (1/97)

Revised: 1/10/97
Security: Everyone

PowerBook 500 & 200 Series: PPC Upgrade Issues (1/97)

Article Created: 15 February 1996
Article Reviewed/Updated: 10 January 1997

TOPIC -----

I have been experiencing some difficulties when upgrading customers' Macintosh PowerBook 500 or 200 series computers with the PowerPC (PPC) Upgrade:

- 1) Why does the internal Global Village PowerPort Mercury no longer function after the PPC daughter board or logic board upgrade is installed?
- 2) My PowerBook 500 series computer freezes up when the PCMCIA card cage is installed in the left expansion bay. Why?
- 3) I recently upgraded my PowerBook computer to PowerPC. Since the upgrade, the hard drive will not spin down, even though the icon in the Control Strip indicates that it has spun down. The only time the hard drive will spin down is when the PowerBook is shutdown or sleeping. What's wrong?

DISCUSSION -----

1) Question: Why does the internal Global Village PowerPort Mercury no longer function after the PPC daughter board or logic board upgrade is installed?

Answer: The Global Village PowerPort Mercury modem will not function without the latest software update from Global Village Communications, Inc. Global Village has now released the software. Version 2.5.5 is needed for the internal modem in the PowerBook 500 series to work. Customers will need to contact Global Village for more information.

2) Question: My PowerBook 500 series computer freezes up when the PCMCIA card cage is installed in the left expansion bay. Why?

Answer: The PowerBook 500 series PPC upgrade card requires the Revision C PCMCIA card cage. After the PPC upgrade card has been installed, the computer will not

startup if either of the prior revisions of the PCMCIA expansion card cage is inserted in the expansion bay. The Revision C cage is not yet available. It is expected it to be available from Apple by the end of May 1996

3) Question: I recently upgraded my PowerBook computer to PowerPC. Since the upgrade, the hard drive will not spin down, even though the icon in the Control Strip indicates that it has spun down. The only time the hard drive will spin down is when the PowerBook is shutdown or sleeping. What's wrong?

Answer: To alleviate this symptom, you need to update the hard drive driver with Drive Setup 1.0.3 or later. Since the default hard disk driver for all PowerBook 200 and 500 series computers comes from Apple HD SC Setup, any such PowerBook upgraded to PowerPC will have this symptom unless the hard drive has been previously updated with Drive Setup 1.0.3 or later.

Article Change History:

10 Jan 1997 - Added info about hard disk spinning resolution.

24 Jun 1996 - Correct typographical error.

10 May 1996 - Updated first two items and added third.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19357



Tech Info Library

PowerBook 190 & 5300: Password Security & Sleep Issue (9/96)

Revised: 9/5/96
Security: Everyone

PowerBook 190 & 5300: Password Security & Sleep Issue (9/96)

Article Created: 15 February 1996
Article Reviewed/Updated: 5 September 1996

TOPIC -----

I am having a problem with the password security feature on the Macintosh PowerBook 190 computer. If the password security is turned on and is set to "ask password on wake", the computer will not sleep. How can I fix this?

DISCUSSION -----

Issue

There is a known issue with the password security feature on the PowerBook 5300 and 190 series computers. If you open the Password Security control panel and set the password security is turned on and is set for ask password on wake, the unit will not sleep.

Workaround

One workaround is to turn off the "ask for password on wake" feature. If this is done, the PowerBook will be able to sleep.

Resolution

This issue is resolved by installing the System 7.5 Update 2.0 which includes the Password Security 1.0.3 control panel.

Article Change History:

05 Sep 1996 - Reworded for clarity.
18 Mar 1996 - Added information about resolution.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19358



Tech Info Library

AppleCD Drives: Troubleshooting Sound Related Issues (2/96)

Revised: 2/15/96
Security: Everyone

AppleCD Drives: Troubleshooting Sound Related Issues (2/96)

Article Created: 15 February 1996

TOPIC -----

When I play Audio Compact Discs on my Power Macintosh 7500 or Power Macintosh 8500 using system 7.5.2, I do not get any sound from my computer. The counter in the AppleCD Audio Player is counting down as though it is playing. My system sounds, startup chime, and computer compact discs work just properly. What is happening?

DISCUSSION -----

Follow the troubleshooting procedures below to get the problem resolved. After each section, test to see if sound is working for Audio Compact Discs.

Set Sound and Display Settings
=====

Make sure your Sound and Display settings are set appropriately

Step 1

Open Sound and Displays control panel

Step 2

Select Internal CD under the Sound Input section

Step 3

Select Computer Speaker under the Sound Output section - even if you have external speakers connected.

NOTE:

Step 3 is a troubleshooting step to verify sound is working appropriately.

Remove Preferences

=====

You need to Delete the following preferences from your Preference folder, which is located in your System folder.

- Finder Preferences
- Sound and Displays folder in the Preference folder
- Sound Preferences

NOTE:

You will not be able to empty the Trash until after you restart your Macintosh.

Enable Only System 7.5.2 Extensions

=====

Test with just 7.5.2 extensions enabled. Use the Extensions Manager control panel to turn off all but System 7.5.2 extensions

Reset PRAM

=====

Reset (clear) Parameter RAM (PRAM).

Step 1

Restart your Macintosh

Step 2

As your Macintosh begins the startup process, hold down the Option-Command-p-r keys until you hear at least two startup chimes.

Remove All External Devices

=====

Disconnect all externally connected devices other than the monitor and the keyboard

Remove and Reinstall Software

=====

Delete and reinstall the software involved.

The following files need to be removed:

- AppleCD Audio Player - Apple Menu Items folder
- Sound and Displays Control Panel - Control Panel folder

- AppleScript - Extensions folder
- Apple CD-ROM - Extensions folder
- Audio CD Access - Extensions folder
- Foreign File Access - Extensions folder
- High Sierra File Access - Extensions folder
- ISO 9660 File Access - Extensions folder

Reinstall Software

Choose custom install from the Apple Macintosh CD system software installer (startup from the System CD by holding down the "c" key. Immediately after restart, with the Apple Macintosh CD in the CD ROM drive)

Select the following items from the list given (you need to click on the white arrow to the left of the sections to select the specific items).

- AppleScript - Utility Software section
- CD-ROM - Multimedia Software section
- Sound and Displays - Control Panels section

Check Audio Cable

=====

If you had extra RAM or PCI cards installed in your Macintosh, check the CD-ROM drive's audio cable. The cable may not have been reattached properly.

To avoid damaging your computer, Apple Computer recommends that you have an authorized Apple service provider check and/or reattach the audio cable.

Remove additional RAM and PCI cards

=====

Remove any additional RAM or PCI cards that were installed in your Macintosh.

To avoid damaging your computer, Apple Computer recommends having RAM and PCI cards removed by an authorized Apple service provider.

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Tech Info Library Article Number:19359



Tech Info Library

Network Server 500 and 700: Technical Specifications (7/96)

Revised: 7/29/96
Security: Everyone

Network Server 500 and 700: Technical Specifications (7/96)

Article Created: 16 February 1996
Article Reviewed/Updated: 29 July 1996

TOPIC -----

This article provides the technical specifications for the Network Server 500 and Network Server 700.

DISCUSSION -----

Microprocessor

Network Server 500

- PowerPC 604 RISC microprocessor running at 132 MHz, located on upgradable, replaceable CPU card
- Integrated floating-point unit and 32K level 1 cache memory
- 512K level 2 cache memory

Network Server 700

- PowerPC 604 RISC microprocessor running at 150 MHz, located on upgradable, replaceable CPU card
- Integrated floating-point unit and 32K level 1 cache memory
- 1MB level 2 cache memory

Memory

Network Server 500

- 32MB of error-detecting parity DRAM
- Can be expanded to up to 512MB of DRAM
- 8 slots for 168-pin, 72-bit, 60ns DIMMs
- DIMM operating range is 5 volts

Network Server 700

- 48MB or 32MB of error-detecting parity DRAM
- Can be expanded to up to 512MB of DRAM
- 8 slots for 168-pin, 72-bit, 60ns DIMMs

- DIMM operating range is 5 volts

Storage

Network Server 500

- Supports seven internal SCSI devices
- One AppleCD 600i CD-ROM drive (up to 600KB/sec data-transfer rate) standard on all configurations
- One DDS-2 DAT drive (4GB uncompressed, up to 12GB compressed); some configurations
- One Apple SuperDrive 1.44MB floppy disk drive

Network Server 700

- Supports nine internal SCSI devices including two fixed-mount half-height drives
- One AppleCD 600i CD-ROM drive (up to 600KB/sec data-transfer rate) standard on all configurations
- One DDS-2 DAT drive (4GB uncompressed, up to 12GB compressed); some configurations
- One Apple SuperDrive 1.44MB floppy disk drive

Software

****IMPORTANT NOTE****

With the purchase of any Network Server 500 or Network Server 700, you must purchase the AIX for Apple Network Servers Accessory Kit (M4525Z/A) to obtain AIX for Apple Network Servers version 4.1.4. AIX is not pre-installed on Network Servers.

Network Server 500

- AIX for Apple Network Servers version 4.1.4
- Trial versions of IPT uShare and CanOPI; Helios EtherShare, EtherShare OPI and PCShare; and Legato Networker

Network Server 700

- AIX for Apple Network Servers version 4.1.4
- Trial versions of IPT uShare and CanOPI; Helios EtherShare, EtherShare OPI and PCShare; and Legato Networker

Networking

Network Server 500

- Built-in Ethernet
- Two serial ports
- Supports AppleTalk and TCP/IP networking software

Network Server 700

- Built-in Ethernet
- Two serial ports
- Supports AppleTalk and TCP/IP networking software

Displays

Network Server 500

- LCD status display for system monitoring
- Supports up to 20-inch Apple displays at 256 colors
- Supports most third-party displays as well as VGA and SVGA monitors

Network Server 700

- LCD status display for system monitoring
- Supports up to 20-inch Apple displays at 256 colors
- Supports most third-party displays as well as VGA and SVGA monitors

Display support

Network Server 500

- Built-in 1MB VRAM
- Resolutions:
 - 1024 pixels by 768 pixels
 - 800 pixels by 600 pixels
 - 640 pixels by 480 pixels

Network Server 700

- Built-in 1MB VRAM
- Resolutions:
 - 1024 pixels by 768 pixels
 - 800 pixels by 600 pixels
 - 640 pixels by 480 pixels

Interfaces

Network Server 500

- Six PCI expansion slots
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- AAUI-15 Ethernet connector (requires adapter)
- Two DMA DIN-8 serial ports (RS-232/RS-422)
- Two Fast/Wide SCSI-2 channels support 7 internal devices
- Supports 56 external devices using optional PCI RAID cards
- SCSI-1 channel supports up to 7 external devices (compatible with SCSI-1 devices)
- 16-bit stereo sound input and output ports
- Standard three-row DB-15 video port for display support (Macintosh Display Adapter included)

Network Server 700

- Six PCI expansion slots
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- AAUI-15 Ethernet connector (requires adapter)
- Two DMA DIN-8 serial ports (RS-232/RS-422)
- Two Fast/Wide SCSI-2 channels support 9 internal devices
- Supports 56 external devices using optional PCI RAID cards
- SCSI-1 channel supports up to 7 external devices (compatible with SCSI-1 devices)
- 16-bit stereo sound input and output ports

- Standard three-row DB-15 video port for display support (Macintosh Display Adapter included)

Enclosure

Network Server 500

- Front and back key-controlled access to all components, including:
 - Three-position translucent locking front door that offers three levels of access: The first level allows full access to seven front SCSI drives and media such as CD-ROMs and tape cartridges. The second level allows removable media access for replacement of floppy disks, tape cartridges and CD-ROMs, but prohibits removal of storage drives and power supplies. The third level locks the access door closed, and prohibits access to storage drives, removable media, and power supplies.
 - Keylock rear slide-out cabinet access to logic board, processor card, DIMM sockets, and PCI slots (keylock powers down system when unlocked)
 - Keylock rear cabinet door
- Seven tray-mount SCSI drive bays with hot-swap option
- Locking wheels
- Dual hot-swappable fans
- Speaker
- Security slot (requires a third-party accessory)
- Power cord lock
- Optional 19-inch rack-mount kit

Network Server 700

- Front and back key-controlled access to all components, including:
 - Three-position translucent locking front bay door that offers three levels of access: The first level allows full access to seven front SCSI drives and media such as CD-ROMs and tape cartridges, as well as the power supplies. The second level allows removable media access for replacement of floppy disks, tape cartridges and CD-ROMs, but prohibits removal of storage drives and power supplies. The third level, locks the access door closed, and prohibits access to storage drives, removable media, and power supplies.
 - Keylock rear slide-out cabinet access to logic board, processor card, DIMM sockets, and PCI slots (keylock powers down system when unlocked)
 - Keylock rear cabinet door for access to two fixed-mount drive bays
- Seven tray-mount SCSI drive bays with hot-swap option
- Optional hot swappable power supplies
- Locking wheels
- Dual hot-swappable fans
- Speaker
- Security slot (requires a third-party accessory)
- Power cord lock
- Optional 19-inch rack-mount kit

Drive bays

Network Server 500

- Front bays support seven half-height or three full-height (5.25-inch) tray-mounted SCSI devices, and electronically configure SCSI IDs

dependent on bay location

- Top four bays share one (20MB/sec) Fast/Wide SCSI-2 channel
- Bottom three bays share a second (20MB/sec) Fast/Wide SCSI-2 channel

Network Server 700

- Front bays support seven half-height or three full-height (5.25-inch) tray-mounted SCSI devices, and electronically configure SCSI IDs dependent on bay location
- Top four front bays share one (20MB/sec) Fast/Wide SCSI-2 channel
- Bottom three front bays share a second (20MB/sec) Fast/Wide SCSI-2 channel
- Two rear fixed-mount bays share the same Fast/Wide SCSI-2 channel (along with the bottom three front bays) and support two half-height or one full-height (5.25-inch) devices

System administration

Network Server 500

- Supports administration at console with AIX system administration tools
- Supports remote administration from a networked Mac OS, Windows, or UNIX-based computer

Network Server 700

- Supports administration at console with AIX system administration tools
- Supports remote administration from a networked Mac OS, Windows, or UNIX-based computer

Keyboard and mouse

Network Server 500

- Supports ADB keyboards with numeric keypads
- Includes ADB Mouse II

Network Server 700

- Supports ADB keyboards with numeric keypads
- Includes ADB Mouse II

Clock/calendar

Network Server 500

- Custom integrated circuit with long-life lithium battery

Network Server 700

- Custom integrated circuit with long-life lithium battery

Electrical requirements

Network Server 500

- Line voltage: 100 to 240 volts AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 325W maximum for power supply (not including monitor)

Network Server 700

- Line voltage: 100 to 240 volts AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 425 Watt maximum for both main and optional, load-balanced, redundant power supply (not including monitor)

PCI power requirements

Network Server 500

- Maximum current draw for all PCI cards: 50W

Network Server 700

- Maximum current draw for all PCI cards: 90W

ADB power requirements

Network Server 500

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Network Server 700

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard model used)

Environmental requirements

Network Server 500

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116.6° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 0 to 10,000 ft. (0 to 3,048 m)

Network Server 700

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116.6° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

Network Server 500

- Height: 24.5 in. (62.2 cm)
- Width: 16.5 in. (41.9 cm)
- Depth: 18 in. (45.7 cm)
- Weight: 84 to 92 lb. (38 to 41 kg) -- varies based on internal devices installed

Network Server 700

- Height: 24.5 in. (62.2 cm)
- Width: 16.5 in. (41.9 cm)
- Depth: 18 in. (45.7 cm)
- Weight: 84 to 92 lb. (38 to 41 kg) -- varies based on internal devices installed

Regulatory approval

Network Server 500

- FCC Class A
- CE
- VCCI

Network Server 700

- FCC Class A
- CE
- VCCI

Article Change History:

29 Jul 1996 - Corrected part number for AIX for Apple Network Servers
Accessory Kit.

22 Mar 1996 - Added DIMM operating range information.

04 Mar 1996 - Added Note on the AIX for Apple Network Servers Accessory Kit.

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Tech Info Library Article Number:19360



Tech Info Library

Network Server 500 & 700: DRAM Configurations (3/96)

Revised: 3/22/96
Security: Everyone

Network Server 500 & 700: DRAM Configurations (3/96)

Article Created: 15 February 1996
Article Reviewed/Updated: 22 March 1996

TOPIC -----

This article describes DRAM configurations, both parity and nonparity, for the Network Server 500 and 700 computers.

DISCUSSION -----

DRAM is provided in packages called Dual Inline Memory Modules, or DIMMs.

Your server can work with any of several DRAM configurations, depending on the density of the DRAM chips that are mounted on the DIMMs. The 168-pin parity DIMMs used in the Network Server are available from Apple in sizes of 8, 16, and 32 MB pairs, enabling you to increase Network Server memory by 16, 32, and 64 MB, respectively. Your server can have a maximum of 512 MB of memory. The DIMM operating range is 5 volts.

The Network Server 500 and 700 do not have any DRAM installed on the logic board. There exists 8 DIMM slots, where memory should be added in pairs. The maximum amount of memory that each server can hold is 512MB of RAM, obtained by placing 64MB DIMMs in all 8 DIMM slots.

IMPORTANT: The DIMMs should be 72-bit-wide 168-pin fast-paged mode, 60-nanosecond (ns) RAM access time or faster. DRAM must support byte writes. SIMMs and some DIMMs from older Macintosh computers will not work in the Network Server. The parity DIMMs should be installed in matched pairs (for example, two 16 MB DIMMs, one in slot 1A, the other in slot 1B).

Nonparity DRAM with 70-nanosecond DRAM access time or faster will work; however, if there is any nonparity DRAM installed, all server parity checking is disabled. Consult an Apple-authorized dealer or service provider for information and upgrades.

Parity DIMMs should be added in pairs, however it is not necessary. If they are

added in pairs, 144 bit wide data path is gained by interleaving the parity DIMMs.

The Network Server 700 comes in two configurations, a 32 or 48 MB configuration.

These configurations can be obtained in three ways based on the memory simm chip inventory available at the time of build. Unfortunately we can not predict or guarantee which configuration a customer will receive.

32MB: 1 32 MB parity DIMMs.
2 16 MB parity DIMMs.
4 8 MB parity DIMMs.

48MB: 1 32MB parity DIMM, and 1 16MB parity DIMM
2 16MB parity DIMMs, and 2 8MB parity DIMMS
3 16MB parity DIMMs

Article Change History:

22 Mar 1996 - Added information about configuration and DIMMs.

26 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:19361



Tech Info Library

Network Server 500 and 700: Product Description (8/96)

Revised: 8/1/96
Security: Everyone

Network Server 500 and 700: Product Description (8/96)

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Article Created: 16 February 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article describes the Network Server 500 and Network Server 700.

DISCUSSION -----

The Network Server 500 and 700 are Apple's fastest, most powerful, reliable, and expandable server solutions for demanding network file, print, and database users.

The Network Server 500 and 700 high-performance servers are based on the 132-megahertz and 150-megahertz PowerPC 604 RISC processors, respectively, and both run the robust AIX for Apple Network Servers operating system.

Designed from the lockable wheels up as highly available, reliable, and secure servers, both Network Servers offer optional hot-swappable redundant tray-mounted hard drives (requires PCI RAID Disk Array Card and RAID level 5) that slide in and out of the front storage bays in seconds. These bays provide outstanding storage flexibility because they can hold tray-mounted optical drives, tape drives, and hard drives in full- or half-height configurations.

They're easy to network, with built-in Ethernet support and optional support for up to seven Ethernet segments using PCI expansion cards.

The Network Server 700 also offers optional hot-swappable redundant power supplies that slide in and out in a similar manner to the front storage bays.

Network Servers are designed around industry standards. From AIX to PCI to SCSI, they're built to fit into your multiplatform network environment. And each features a built-in quad-speed CD-ROM drive for installing software or serving information to networked desktop computer users.

In addition, they're designed to be easy to reconfigure and service: Each major

component can be replaced in less than 60 seconds -- including the logic board.

Logic boards on both servers can be easily upgraded to 512 megabytes of DRAM main memory, and their PowerPC microprocessors are located on upgradable, replaceable processor cards.

Network Servers are easy to expand, with six PCI expansion slots, and up to 256 gigabytes of total storage capacity.

The Network Server enclosures offer controlled, key lockable access to front-mounted hard disk drives, CD-ROM drives, tape drives, and other media.

The most powerful servers Apple has ever built, the industrial strength Network Servers will meet the needs of the most demanding publishing, education, and technical customers.

Features

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Performance

- 150-MHz PowerPC 604 RISC processor with floating-point unit and 32K on-chip cache on an upgradable, replaceable processor card (700 model)
- 132-MHz PowerPC 604 RISC processor with floating-point unit and 32K on-chip cache on an upgradable, replaceable processor card (500 model)
- Two PCI buses
- Two 20-megabyte-per-second Fast/Wide SCSI channels

Reliability and high availability

- Optional redundant hot-swappable disk drives (requires PCI RAID Disk Array Card and RAID level 5)
- Optional redundant hot-swappable power supplies (700 model)
- Parity memory protection
- Third-party uninterruptable power supply (battery backup)

Expansion and storage

- 32MB or 48MB of main memory, expandable to 512MB
- Six PCI slots for expansion cards
- Up to six internal tray-mount hard disk drives of up to 4GB each, with hot-swap and redundancy option (requires PCI RAID Disk Array Card and RAID level 5), expandable to up to 256GB
- Two internal fixed-mount disk drives (700 model)
- Internal quadruple-speed CD-ROM drive
- Internal DDS-2 digital audiotape (DAT) drive (some configurations)
- SCSI-1 bus supports up to seven devices
- Eight ports support a wide range of peripherals

Networking

- Built-in AAUI Ethernet connector

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- Support for AppleTalk and TCP/IP networking protocols
- Two serial ports

Enclosure

- Three key-controlled access levels for tray-mount front drive bays
- Key-controlled access to power supplies
- Key-controlled slide-out module for access to main logic board, processor card, PCI slots and memory sockets
- Key-controlled rear access to two fixed-mount half-height drives (700 model)
- Locking wheels
- Dual hot-swappable fans
- Optional 19-inch rack-mount kit

Compatibility

- Binary compatible with the thousands of AIX applications

Bundled software

- Trial versions of IPT uShare and CanOPI; Helios EtherShare, EtherShare OPI and PCShare; and Legato Networker

Service and support

- Includes 1-year on-site hardware warranty with second-business-day response
- Includes lifetime 24-hour telephone hardware troubleshooting
- Includes 90 days of 24-hour telephone software support
- Offers optional next-business-day on-site service response plan
- Offers optional 7-day, 24-hour telephone support plan and priority queuing

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ORDERING INFORMATION

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IMPORTANT NOTE

With the purchase of any Network Server 500 or Network Server 700, you must purchase the AIX for Apple Network Servers Accessory Kit (M4525Z/A)* to obtain AIX for Apple Network Servers version 4.1.4. AIX is not pre-installed on Network Servers.

Network Server 700/150 (48MB/4.3GB/CD/DAT)

Order No. M3470LL/A

- Network Server 700 with 48MB of parity DRAM, 1MB level 2 cache, 4.3GB Fast/Wide SCSI disk drive, internal quadruple-speed CD-ROM drive, DDS-2 DAT drive, and 1.4MB Apple SuperDrive floppy disk drive
- Limited one-year hardware warranty

Optional Network Server 700 configuration

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Network Server 700/150 (32MB/CD/1GB)

Order No. M3471LL/A

- Network Server 700 with 32MB of parity DRAM, 1MB level 2 cache, 1GB SCSI disk drive, internal quadruple-speed CD-ROM drive, and 1.4MB Apple SuperDrive floppy disk drive
- Limited one-year hardware warranty

Network Server 500/132 (32MB/2.1GB/CD/DAT)

Order No. M3468LL/A

- Network Server 500 with 32MB of parity DRAM, 512K level 2 cache, 2.1GB Fast/Wide SCSI disk drive, internal quadruple-speed CD-ROM drive, DDS-2 DAT drive, and 1.4MB Apple SuperDrive floppy disk drive
- Limited one-year hardware warranty

Optional Network Server 500 configuration

Network Server 500/132 (32MB/CD)

Order No. M3469LL/A

- Network Server 500 with 32MB of parity DRAM, 512K level 2 cache, quadruple-speed CD-ROM drive, and 1.4MB Apple SuperDrive floppy disk drive
- Limited one-year hardware warranty

AIX for Apple Network Server Accessory Kit*

Order No. M4525Z/A

- Includes installation CD, Mac OS Utilities for the Network Server with AIX, Diagnostics Diskette, Setting Up the Network Server Manual, Using AIX Manual, AppleTalk Services, Mac OS Utilities, Quick Reference Card, Power Cord, Power Cord Lock, VGA Adapter, ADB Mouse, DAT Tape Cleaner, Try and Buy Third Party Software including IPT: uShare, CanOPI; Helios: EtherShare, EtherShare OPI, PCShare; Legato Systems: Legato Data Backup Utility, Networker Macintosh ClientPak, Networker Eval, APC: Powerchute.

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Peripherals and Accessories
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Accessory Kit

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AIX for Apple Network Servers Accessory Kit

Order No. M4525LL/A

The AIX for Apple Network Servers Accessory Kit includes the following items:

CD-ROM Discs

- AIX for Apple Network Servers version 4.1.4 CD
- PowerChute Plus CD, requires APC Corporation's UPS purchased separately
- Helios EtherShare, OPI, PCShare, demo license to June 1, 1996
- Information Presentation Technologies (IPT) uShare, CanOPI, free 90 day trial with a fax key authorization

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- Legato Data Backup Utility for server only, fully licensed
- Legato Networker for clients, 10 client license for 75 days

Floppy Disks

- Mac OS Utilities for the Network Server with AIX
- Network Server Diagnostic Utility

Other Items *

- Quick Reference Card
- Setting Up the Network Server manual
- Using AIX, AppleTalk Services, and Mac OS Utilities on the Apple Network Server
- flyer for Logitech 3-button mouse options
- support credit card
- mouse
- power cord
- power cord locking mechanism and screws
- cleaning cassette
- VGA Adapter

* Note: No data backup tape is included.

Memory Expansion Kits

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Network Server 16MB Parity Memory Kit (Two 8MB 60ns DIMMs)
Order No. M4017LL/A

Network Server 32MB Parity Memory Kit (Two 16MB 60ns DIMMs)
Order No. M4018LL/A

Network Server 64MB Parity Memory Kit (Two 32MB 60ns DIMMs)
Order No. M4019LL/A

Hard Drives

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Network Server 2.1GB F/W SCSI Hard Drive in Removable Tray
Order No. M4022LL/A

Network Server 4.3GB F/W SCSI Hard Drive in Removable Tray
Order No. M4023LL/A

Network Server 700 2.1GB Fixed Hard Drive with Bracket (rear-mount drive)
Order No. M4818LL/A

Network Server 700 2x4.3GB Fixed Hard Drives with Bracket (rear-mount drives)
Order No. M4819LL/A

Other Drives

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Network Server DAT-2 4 mm Tape Drive (4GB/12GB) in Removable Tray

Order No. M4025LL/A

Network Server AppleCD 600 Quad-Speed Drive in Removable Tray

Order No. M4024LL/A

Expansion

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Network Server PCI RAID Disk Array Card with internal cables (supports RAID levels 0, 1, 0+1, 5, and 7)

Order No. M4030LL/A

Network Server External SCSI Cable for RAID Card, 50 inch (68 pin to 68 pin)

Order No. M4031LL/A

Apple PCI Ethernet Card (10MB/sec Ethernet Card-AAUI, Thin Coax, Twisted Pair)

Order No. M4709LL/A

Apple PCI FastEthernet 100Base-TX Card (100MB/sec FastEthernet Card-Twisted Pair)

Order No. M3906Z/A

Ethernet adapters

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Apple Ethernet Thin Coax Transceiver (cable not included)

Order No. M0329Z/B

Apple Ethernet Twisted Pair Transceiver

Order No. M0437Z/B

Apple Ethernet AUI Adapter

Order No. M0432LL/A

Other Accessories

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Network Server 700 Redundant Power Supply

Order No. M4035LL/A

Network Server 19-inch Rack Mount Kit

Order No. M4036LL/A

Network Server SCSI Drive Adapter Kit (includes one 50-pin adapter for Fast SCSI devices and one 68-pin Fast/Wide SCSI adapter, which allow installation of

third-party drive in empty tray)
Order No. M4028LL/A

Network Server Front Drive Bezel Kit (includes CD-ROM and DAT-2 drive bezels for empty tray)
Order No. M4029LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

01 Aug 1996 - Corrected part number for Apple PCI FastEthernet 100Base-TX Card.
29 Jul 1996 - Corrected part number for AIX for Apple NW Server Accessory kit.
11 Jun 1996 - Added list of contents for the accessory kit.

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Tech Info Library Article Number:19362



Tech Info Library

Network Server 500 & 700: Using a One Button Mouse (2/96)

Revised: 2/26/96
Security: Everyone

Network Server 500 & 700: Using a One Button Mouse (2/96)

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Article Created: 16 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article describes how to obtain three button mouse functionality with a one button mouse.

DISCUSSION -----

The mouse most commonly used with AIX has three buttons. If you are using a one-button mouse, you can use the arrow keys on the keyboard for the middle and right mouse buttons, as follows:

- If you need to use the right mouse button, press the Right Arrow key.
- If you need to use the middle mouse button, press the Left Arrow key.

Article Change History:
26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19365



Tech Info Library

Network Server: Disk Management Utility & CommandShell (2/96)

Revised: 2/26/96
Security: Everyone

Network Server: Disk Management Utility & CommandShell (2/96)

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Article Created: 16 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article provides a brief description of the Disk Management Utility and CommandShell that run on a remote Macintosh computer.

DISCUSSION -----

In addition to AIX 4.1.4, the software used to run the Network Server also includes the Disk Management Utility and CommandShell, which were created by Apple for use with AIX on the Network Server. These applications run on a remotely connected Macintosh computer. They connect to AIX daemon processes to allow you to perform system administration tasks.

- The Disk Management Utility

This application allows you to manage all aspects of disk storage. It uses a graphical user interface that offers various views of the disk storage structure as well as methods of adding to, deleting from, and modifying the disk storage structure. For more information, see Chapter 8, "Managing File Storage With the Disk Management Utility" in the "Using AIX, AppleTalk Services, and MacOS Utilities on the Apple Network Server" manual.

- CommandShell

This application is a terminal emulator that runs multiple windows on your screen so that you can run different AIX applications or processes simultaneously. For more information, see Chapter 9, "Remote Access With CommandShell" in the "Using AIX, AppleTalk Services, and MacOS Utilities on the Apple Network Server" manual.

Article Change History:
26 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:19366



Tech Info Library

Network Server: Standard AIX System Management Tools (2/96)

Revised: 2/26/96
Security: Everyone

Network Server: Standard AIX System Management Tools (2/96)

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Article Created: 19 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article briefly describes the standard AIX system management tools found on the Network Server 500 and Network Server 700.

DISCUSSION -----

In addition to conventional command-line system administration, AIX includes several system management tools and installation utilities, including the Install Assistant, System Management Interface Tool (SMIT), and Visual System Manager (VSM).

Installation Assistant

The Installation Assistant application guides you through customization tasks. The interface for Install Assistant provides step-by-step instructions for completing each task. The application tells you why you would want to perform certain tasks. If you are familiar with the tasks, you can skip the instructions.

SMIT

SMIT is a menu-based tool that constructs and executes commands from the options you choose. With SMIT you can:

- install, update, and maintain software
- configure devices
- configure disk storage units in volume groups and logical volumes
- make and extend file systems and paging space
- manage users and groups
- configure networks and communication applications
- configure printers
- identify system problems

VSM

VSM provides a graphical interface that lets you manage your system by directly manipulating icons. You can use tools in VSM to perform many of the same tasks as the SMIT application. The VSM tool includes the following applications:

- Device Manager, which displays system objects and dialog boxes that represent your system's device configuration database. This allows you to manage objects such as graphic adapters, ports, buses, and memory cards.
- Print Manager, which allows you to perform basic SMIT tasks on printer and print queues.
- Storage Manager, which lets you manage physical volumes, volume groups, logical volumes, and file systems through manipulation of icons.
- Users & Groups Manager, which lets you add users with simple templates. You can also set passwords and the default interface for users.

For information on using VSM, see Chapter 6, "Using System Administration Tools" in the "Using AIX, AppleTalk Services, and Mac OS Utilities on the Apple Network Server" manual.

The software for the Network Server also provides Mac OS utilities that provide a Macintosh interface for logical volume management, the Disk Management Utility, and terminal emulation, CommandShell.

Article Change History:

26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19368



Tech Info Library

PlainTalk 1.4.x: Voice Rate Doesn't Work In SimpleText (2/96)

Revised: 2/19/96
Security: Everyone

PlainTalk 1.4.x: Voice Rate Doesn't Work In SimpleText (2/96)

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Article Created: 19 February 1996

TOPIC -----

When I adjust the voice rate in the Speech control panel v1.4.x to speak faster or slower, the change will not take effect in SimpleText. SimpleText always speaks at the same rate regardless of what is set in the Speech control panel. Why?

DISCUSSION -----

The Speech control panel that comes with PlainTalk 1.4.x has an option to adjust the rate of a particular voice. Macintosh Guide describes this function as follows:

"If you have a favorite computer voice, you can use the Voice option of the Speech control panel to specify it as the default voice. You can also indicate how fast the default voice will speak in most programs.

The default voice reads text aloud in most programs with text-to-speech capabilities, unless you specify otherwise. (Some programs have their own default voices and do not follow this setting.)"

When you set the rate in the "Voice" portion of the Speech control panel, you are setting the rate of the "Default voice." Only programs which offer a "Default voice" choice in the Voices sub-menu will be able to use this rate. SimpleText does not currently offer a Default Voice selection in the Voices sub-menu and therefore will not play voices at different rates, no matter what is selected in the Speech control panel.

This behavior may change in future versions of SimpleText or PlainTalk software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19369



Tech Info Library

System 7.5: Testing Extensions Conflicts w/ Extension Mngr 2/96

Revised: 2/19/96
Security: Everyone

System 7.5: Testing Extensions Conflicts w/ Extension Mngr 2/96

=====

Article Created: 19 February 1996

TOPIC -----

This article describes how test for extension conflicts using the Extension Manager provided in System 7.5 and greater. There are several third-party extension managers available for the Macintosh, however none of them provide the ability to use System 7.5 ONLY extensions.

DISCUSSION -----

Here are the steps you need reinstall the Apple Extension Manager (if necessary), and test for extension conflicts.

Step 1

Open the Control Panel folder located in your System folder.

Step 2

Find the Extensions Manager control panel. If you cannot find the Extensions Manager control panel, look for a folder inside your System folder called "Control Panels (disabled)".

Step 3

Launch the Extensions Manager

Step 4

Either write down all the items with a checkmark next to them, or use the Save Set option in the Sets menu to create a temporary set.

Step 5

Choose System 7.5 Only or System 7.5.2 Only from the Sets Menu.

Step 6

Close the Extensions Manager (at this point the Extensions Manager will move all non-System 7.5 Extension to the proper disabled folder.)

Step 7

Restart your Macintosh computer.

At this point your Macintosh computer is using only System 7.5 or System 7.5.2 extensions.

Step 8

Test your Macintosh. Verify that the problem does not reoccur with only System 7.5 extensions running.

Returning Your Previous Extensions

=====

Step 1

Open the Extensions Manager

Step 2

Either select the extensions and control panels previously installed, or if you saved a temporary set, choose that set from the Sets menu.

Step 3

Restart your Macintosh

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19370



Tech Info Library

AppleVision 1710 Display: Diagonal Colored Lines (5/96)

Revised: 5/2/96
Security: Everyone

AppleVision 1710 Display: Diagonal Colored Lines (5/96)

=====

Article Created: 19 February 1996
Article Reviewed/Updated: 2 May 1996

TOPIC -----

I am seeing diagonal colored lines on my AppleVision 1710 display. Is this a known problem with this monitor? Has it been reported by anyone else?

DISCUSSION -----

OVERVIEW
=====

Some customers have complained that they see 9 "sets" of horizontal lines about 1-inch apart, running from left to right at approximately a 30 degree angle on their AppleVision 1710 displays (not the AppleVision 1710AV Display).

Each set is made up of thin Blue, Green, and Red lines that are very close together. They are most apparent when looking at the black space on each side of the display and are more prominent on the left.

Suggested Steps For Examining The Display
=====

Some displays can show this symptom when the controls are set too high and can be readjusted to acceptable levels with the from panel controls. To adjust the controls, perform the following steps:

Step 1

Connect the display to another computer, if possible, to verify that the problem follows the display.

Step 2

Check the screen brightness and contrast to verify that they are not set too high. Normal settings for contrast are between the middle point of the adjustment to maximum, and brightness between the lower point of the adjustment to middle.

If adjusting the brightness and contrast controls cannot remove the lines, contact an Authorized Apple Service Provider to have the AppleVision Display tested.

Article Change History:

02 May 1996 - Replace discussion with current status of issue.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19371



Tech Info Library

Power Macintosh: Freezes & Crashes with Microsoft Office (3/96)

Revised: 3/15/96
Security: Everyone

Power Macintosh: Freezes & Crashes with Microsoft Office (3/96)

Article Created: 20 February 1996
Article Reviewed/Updated: 15 March 1996

TOPIC -----

I have a Macintosh PowerBook (Duo) 2300c running System 7.5.2 and System Update 2.0. I mostly use Microsoft Office applications with the 4.2 update patch installed.

The problem is that if Apple Menu Options (AMO) 1.1 loads at startup, Microsoft Word crashes and locks up the computer. If Apple Menu Options 1.0.2 is installed, I have no problems. Shouldn't the newer version of AMO fix problems, not cause them?

DISCUSSION -----

Issue

The patch you mentioned from Microsoft called "Office4.2x Update for PowerMac version 1.0" is NOT compatible with System Update 2.0 for System 7.5.2 (which included AMO 1.1).

Symptoms

When launching Microsoft Office applications OR when using menus in Microsoft Office applications, the computer will freeze. Also when you run the PowerPC versions of Microsoft Excel (5.0) and Microsoft Word (6.0.1) under System 7.5.3, the applications crash occasionally. The only way out of the freeze is to shutdown/restart by powering off or resetting the computer.

Solution

The problem is with version 1.0 of the Office4.2x Update for PowerMac. If you install the newer version (1.0.1), the problem will be corrected.

"Office4.2x Update for PowerMac" version 1.0.1 is needed on all Power Macintosh

computers, including all Power Macintosh PowerBook computers. It is available directly from Microsoft and from any online service where they post updates.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Microsoft, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

15 Mar 1996 - Reviewed.

22 Feb 1996 - Updated with correct Microsoft product title.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19372



Tech Info Library

Network Server 500 and 700: Installing AIX (2/96)

Revised: 2/26/96
Security: Everyone

Network Server 500 and 700: Installing AIX (2/96)

=====

Article Created: 20 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article describes installing AIX on your Network Server 500 or Network Server 700.

DISCUSSION -----

Before you install
=====

Before you begin the AIX installation process, do the following:

- Set up your hardware and connect any peripheral devices such as an additional hard disk drive.
- Locate your Installation CD.
- Obtain the Network Server key.

You must install the operating system on the local system (your Network Server). For information about setting up your hardware, see "Setting Up Your Network Server."

Installing the AIX Base Operating System
=====

Follow these steps to install the AIX Base Operating System.

Step 1

Turn on your Network Server.

Step 2

Insert the Installation CD into the drive.

Step 3

Turn the front key to the left (service) position.

Step 4

Restart your Network Server with the CD in the drive.

To restart your system, press the reset button. When your system starts, it will use the Installation CD as the startup disk. A message appears asking you to define the system console.

Step 5

Press F1 and then Enter to use the local display as your console.

If you have a standard keyboard (without function keys), the top row of the keypad serves as the function keys F1 through F4. If you have a standard keyboard, press the Clear key on the keypad instead of F1.

Step 6

When prompted, select a language for installation instructions.

For English, type 1 and press Enter.

The following message appears on your screen.

Begin_Graphic

```
-----  
| Welcome to the Base Operating System |  
|                                     |  
| Installation and Maintenance       |  
|                                     |  
| Type the number of your choice and press Enter. |  
| Choice is indicated by >>>. |  
|                                     |  
| >>> 1 Start install now with default settings |  
|      2 Change/show installation settings and install |  
|      3 Start maintenance mode for system recovery |  
|                                     |  
|      88 HELP ? |  
|      99 PREVIOUS MENU |  
|                                     |  
-----
```

End_Graphic

Step 7

To begin installation, type 1 and press Enter.

To examine or modify installation settings, you can type 2 and press Enter.

The Installation and Settings screen appears.

Begin_Graphic

```
-----
|  Installation and Settings
|
|  Either type 0 and press Enter to install with current
|  settings, or type the number of the setting you want to
|  change and press Enter.
|
|  1. System Settings
|
|      Method of installation.....Preservation
|      Disk where you want to install.....hdisk0
|
|  2. Primary Language Environment Settings (after
|  install):
|
|      Cultural Convention.....English (United States)
|      Language.....English (United States)
|      Keyboard.....English (United States)
|      Keyboard Type.....Default
|
|  3. Install Trusted Computing Base.....No
|  >>> 0 Install AIX with current settings listed above.
|      88 Help ?
|      99 Previous Menu
|
|  WARNING: Base Operating System installation will destroy
|  or impair recovery of some data on the destination disk
|  HDISK0.
|
|  -----
```

End_Graphic

Use this screen to specify the following:

- the installation method

You can choose either the New and Complete Overwrite option or the Preservation Install option. The New and Complete Overwrite option erases all the information on your hard disk before installing the BOS. The Preservation Install option keeps the user data in the root volume group when it installs the BOS.

- the destination disk
- the language environment

- the Trusted Computing Base (TCB) setting

The Trusted Computing Base tries to ensure that the programs you run are trusted programs. If you want to change the TCB setting, do so during installation. This setting cannot be changed later.

Step 8

When you have selected the appropriate settings, type 0 and press Enter to begin the installation.

The Installing Base Operating System dialog box appears, which shows you the progress of the installation and informs you when the installation is complete. The installation process for the BOS takes about 20 to 30 minutes to complete.

Step 9

Turn the front key back to the upright (unlocked) position before the installation completes.

When the BOS installation completes, the installation program restarts your computer. The key must be in the upright position during this restart to boot from the hard disk instead of the CD. The BOS is now installed, and you can customize your installation.

Installing additional software

=====

Once you have installed the BOS, you need to install additional software, such as the extensions to the AIX operating system provided by Apple Computer.

To install additional software, use the Installation Assistant. After you have installed the BOS, your computer restarts and automatically starts the Installation Assistant application. The Install Assistant application guides you through the installation process and provides step-by-step instructions for completing each task.

To install additional software using the Installation Assistant:

Step 1

Click Install Software Applications from the Installation Assistant Task List.

A menu appears with several items.

Step 2

Click Install a Bundle of Software (Easy Install).

An Easy Install dialog box appears for additional installation information.

Step 3

Specify the CD-ROM drive as the software source.

Step 4

Select the All Licensed option as the bundle of software to install.

To select this bundle, you need to scroll to the bottom of the list of bundles and click the All Licensed icon.

Step 5

Click Install/Update.

The installation process begins. This process requires about 45 to 55 minutes to complete.

Step 6

Click Exit.

When you click Exit, you exit Easy Install and return to the task list for the Installation Assistant.

Step 7

Click Tasks Completed -- Exit to AIX Login.

You must click the Tasks Completed option to quit this application to ensure proper installation of the software.

NOTE: If you install from a terminal, a text-based Installation Assistant installs additional software. To install the necessary software with the text-based Installation Assistant, choose the custom install option and select the all_licensed bundle to install.

Article Change History:

26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19373



Tech Info Library

Network Server 500 & 700: Setting Display Resolution (2/96)

Revised: 2/26/96
Security: Everyone

Network Server 500 & 700: Setting Display Resolution (2/96)

Article Created: 20 February 1996
Article REviewed/Updated: 26 February 1996

TOPIC -----

This article describes setting your display resolution on your Network Server 500 or Network Server 700.

DISCUSSION -----

After you've installed the operating system, you may want to customize your display resolution.

To set your screen preferences, you need to log in to AIX. To set your screen preference the following steps:

Step 1

Start SMIT.

To start SMIT, enter "smit" on the command line.

Step 2

Choose Devices.

The Devices menu appears.

Step 3

Choose Graphic Displays.

The Graphic Displays menu appears.

Step 4

Choose Display Resolution and Refresh Rate.

SMIT displays a list of available devices.

Step 5

Click the device name.

A dialog box appears with the attributes for the device.

Step 6

Specify your resolution and refresh rate.

Use the List button to display the available resolutions and refresh rates. For example, you can set your resolution and refresh rate to 1024x768@72Hz.

Step 7

Click OK.

Step 8

Restart your system.

Article Change History:

26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19374



Tech Info Library

PowerBook 2300 & 5300: Do Not Need JLK Font Extension 3 (2/96)

Revised: 2/20/96
Security: Everyone

PowerBook 2300 & 5300: Do Not Need JLK Font Extension 3 (2/96)

=====

Article Created: 20 February 1996

TOPIC -----

The Read Me files for the PowerBook 5300 and 2300 series computers say that if the Japanese Language Kit (JLK) version 1.2 is installed, the Font Extension 3 file needs to be installed as well. The ReadMe file directs you to the Apple Extras folder to find the Font Extension 3 file, but it is not there. Why not?

DISCUSSION -----

The reference to this file in the ReadMe for the PowerBook 5300 and 2300 series computers is in error. As of this writing, only the PowerBook 190 series computers require the Font Extension 3 file if Japanese Language Kit 1.2 is being used. On the PowerBook 190 series computers, the file can be found in the Apple Extras folder as referenced in the ReadMe.

The PowerBook 5300 and 2300 series computers do not require the Font Extension 3 file and the reference in the ReadMe should be ignored.

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Tech Info Library Article Number:19375



Tech Info Library

Network Server: Backing Up System After BOS Install (2/96)

Revised: 2/26/96
Security: Everyone

Network Server: Backing Up System After BOS Install (2/96)

Article Created: 20 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article describes backing up your system after installing the AIX basic operating system (BOS) on your Network Server 500 or 700.

DISCUSSION -----

After you have installed the BOS and performed your initial customization and configuration, it is a good idea to create a system backup. You use a backup to restore a corrupted file system and recover data.

You can use the Installation Assistant to create a backup after your initial installation. You can also use the System Management Interface Tool (SMIT) to make a backup. SMIT uses the mksysb command to create a backup image that you can store either on a tape or in a file. If you choose to back up to tape, the backup program writes to tape a boot image that you can use for installation on other systems.

For more information on using SMIT, use InfoExplorer.

Configuring before the backup

Configure your system before you create a backup image if you want the image to be identical and have the same users, passwords, network addresses, and so on. However, if you plan to use the backup image to install the BOS on other Network Servers, create the backup image before configuring the system.

If you install the backup image on other systems, you might not want passwords and network addresses copied. Using the same passwords on many systems can create a security risk, and copying network addresses creates duplicate addresses and can disrupt communications.

The BOS installation program automatically installs only the device drivers

required for the hardware configuration of the installed machine. Therefore, if you are installing a system backup on other machines, you may need to install additional device drivers on the source system before making the backup image.

To install additional device support on the source system, use the Install Additional Device Software SMIT menu item.

Creating a backup

Follow the steps below to create a system backup:

Step 1

Log in as root.

Step 2

Mount all file systems you want to back up.

Refer to the mount command for details.

Step 3

Free at least 8.8 MB of disk space in the /tmp directory or increase the size of your disk partition.

The mksysb command requires this working space. To determine the free space in the /tmp directory, use the df command. If necessary, use SMIT or the chfs command to change the size of the file system.

Step 4

Enter the following SMIT command:

```
smit mksysb
```

The Back Up the System screen appears.

Step 5

Select how you want to store the backup.

Press F4 to list available tape devices.

Step 6

If you want to create map files, select the Create Map Files field.

Map files match the physical partitions on a drive to its logical partitions.

Step 7

If you want to create a bootable backup, leave the default of yes. If you do not want a bootable backup, press Tab to change the option to no.

Step 8

Specify if you want to expand the /tmp directory if you have a bootable backup.

Step 9

Specify the number of blocks to write in a single output, or leave the field

blank to accept the system default.

Step 10

For a file backup, press Enter. For a tape backup, insert a tape and press Enter.

The Command Status screen appears.

If you are creating a tape backup, the system may prompt you to insert another tape.

Step 11

When the backup completes, exit SMIT.

The backup is complete. If you created a bootable tape, it can start your system if you are ever unable to start it from the hard disk.

Verifying a backup tape

You can use the procedures in this section to view the contents of a backup tape. The contents list verifies most of the information on the tape, but it does not verify that the tape can be used for installations. The only way to verify a boot image on a tape is to try to start the system from it.

To verify a backup tape:

Step 1

Enter the following SMIT command:

```
smit lsmksysb
```

The List Files in a System Image screen appears.

Step 2

Type the number of blocks to read for your tape device, or leave the field blank to accept the system default.

Step 3

Either type the tape device name in the second field or accept the name provided.

Step 4

Press the Enter key.

The Command Status screen appears listing the contents of the backup tape.

Article Change History:

26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19378



Tech Info Library

Power Macintosh 7200 Is Upgradeable to 7500 and 7600 (10/96)

Revised: 10/4/96
Security: Everyone

Power Macintosh 7200 Is Upgradeable to 7500 and 7600 (10/96)

=====

Article Created: 21 February 1996
Article Reviewed/Updated: 4 October 1996

TOPIC -----

I have a Power Macintosh 7200/90 computer. I know my computer does not have a processor card like the Power Macintosh 7500/100 computer, but will there still be a way I can upgrade my computer in the future?

DISCUSSION -----

7500 Upgrade (no longer available)

At the time it was released, Apple announced that there would be an upgrade option available for the Power Macintosh 7200 series computers. This upgrade would be accomplished by installing a logic board upgrade. After the upgrade the Power Macintosh 7200 series computer would be the equivalent of the Power Macintosh 7500 series computers.

7600 Upgrade

The 7200 to 7600 Logic Board Upgrade* (M3842LL/A) will allow customers with a Power Macintosh 7200 to upgrade their systems to a Power Macintosh 7600. The Power Macintosh 7600 has replaced the Power Macintosh 7500.

*IMPORTANT NOTE:

This logic board upgrade ships WITHOUT a Processor Upgrade Card. You will have to purchase one separately. This gives you the opportunity to decide how fast a processor you want to add to your system. At the time of this writing there are two Processor Upgrade Cards available from Apple. Both have PowerPC 604 processors running at 120MHz (M4731LL/A) and a 132MHz (M4875LL/A).

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change. Contact your Apple reseller for the latest information.

Article Change History:

04 Oct 1996 - Updated information to include 7600.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19379



Tech Info Library

Network Server 500 & 700: Hot Swappable Drives & RAID (9/96)

Revised: 9/13/96
Security: Everyone

Network Server 500 & 700: Hot Swappable Drives & RAID (9/96)

=====

Article Created: 21 February 1996
Article Reviewed/Updated: 12 September 1996

TOPIC -----

This article describes the need for an optional Network Server PCI RAID Card at RAID level 5 for hot swappable drives.

DISCUSSION -----

The Network Server 500 and Network Server 700 contain a flexible SCSI backplane that allows the easy removal and insertion of SCSI devices. The removal or insertion of a SCSI device while the system is running causes a reset of the SCSI bus. The ability to handle the SCSI reset is operating-system dependent. AIX does not have the ability to handle this reset, which may lead to data corruption when the reset occurs. The optional Network Server PCI RAID Card, M4030Z/A, buffers the AIX operating system from the consequences of drive insertion and removal when the drive is part of a RAID configuration setup for RAID Level 5.

In summary: hot-swapping drives on the Network Server 500 and 700 requires that the drives be part of a RAID Level 5 configuration with the Apple Network Server PCI RAID Disk Array Card.

This article was published in the Information Alley on 13 September 1996.

Article Change History:
12 Sep 1996 - Added more details.
26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19380



Tech Info Library

QuickTake Camera: Battery Life Improvement Hints (6/96)

Revised: 6/18/96
Security: Everyone

QuickTake Camera: Battery Life Improvement Hints (6/96)

=====

Article Created: 21 February 1996
Article Reviewed/Updated: 17 June 1996

TOPIC -----

How long should my batteries in my QuickTake camera last? I understand that there are factors that affect battery usage, such as the flash and image downloading, but is there some general guideline for the batteries life?

DISCUSSION -----

The QuickTake Battery life using alkaline batteries is approximately 50 images, 50% of which are flash images, including image transfer to a computer. Battery life using NiCad (Eveready CH15) batteries is approximately around 100 images, 50% of which are flash images, including image transfer to a host.

There are many factors that can affect battery life with any product and it is very important that you use this information when calculating the total number of pictures the QuickTake Camera should create.

Battery Recommendations for QuickTake Cameras

=====

Here are a few battery recommendations for the Quicktake Cameras:

- Alkaline batteries exhibit an extremely short life when used with the QuickTake Cameras and should only be used when NiCad batteries (rechargeable batteries) are not available.
- The best and preferred recommendation for lasting performance is to use lithium batteries. The second best choice is to use NiCad batteries. The reasons for these recommendations are directly related to the current/voltage demands of the camera and the individual battery characteristics.

Improving Battery Performance

=====

- When you replace batteries, replace all the batteries in the camera. Do not mix old and new batteries. If you use a mix of new and old batteries, you hinder the performance of the fresh batteries.
- If you are using rechargeable NiCad batteries, replace batteries that are running low with a complete set of fully charged batteries.
- Batteries work best when the contact surfaces are clean. If necessary, clean these surfaces by gently rubbing with a clean pencil eraser or a cloth.

Article Change History:

17 Jun 1996 - Updated for technical accuracy.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19381



Tech Info Library

Accelerated Graphics Card: WordPerfect Corruption Issue (10/96)

Revised: 10/8/96
Security: Everyone

Accelerated Graphics Card: WordPerfect Corruption Issue (10/96)

=====

Article Created: 21 February 1996
Article Reviewed/Updated: 8 October 1996

TOPIC -----

Sometimes when using WordPerfect with the Apple Accelerated Graphics Card in the Power Macintosh 9500 the WordPerfect toolbars become corrupted after they overlay each other.

DISCUSSION -----

This issue appears only when using the Apple Accelerated Graphics Card with WordPerfect, and when WordPerfect toolbars are enabled from left to right overlaying each other. All other display functions work properly. Other video cards do not have this problem.

The Apple Accelerated Graphics Card is based on the mach64 Graphics Accelerator card from ATI Technologies, Inc. A newer version (1.0.7) of the Graphics Accelerator extension has been developed by ATI to fix this problem. Apple has posted the new extension to all Apple Software Updates sites in the Unsupported section.

Since the new extension was developed by ATI and was not fully tested by Apple, it is not officially supported by Apple. It has been posted for customer convenience. The changes in this version are minimal and should not cause any stability or performance problems.

If you encounter any problems with this version of the Graphics Accelerator extension, remove it from the Extensions folder and replace it with the older version.

This article appeared in the 8 October 1996 issue of the Information Alley.

Article Change History:
08 Oct 1996 - Updated to include new extension information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19382



Tech Info Library

Newton 2.0 OS: Recommended modems list (2/96)

Revised: 2/21/96
Security: Everyone

Newton 2.0 OS: Recommended modems list (2/96)

Article Created: 21 February 1996

TOPIC -----

To assist our customers in meeting their communications needs, Apple has compiled a listing of recommended modems for use with the MessagePad 120 with the Newton 2.0 Operating System.

DISCUSSION -----

While a sample of each of these modems has been tested by Apple, modem manufacturer specifications are subject to change without notice, resulting in potential incompatibilities. Accordingly, Apple Computer, Inc. cannot guarantee the operability of any individual modem and will not be liable for damages resulting from the use of this information. Not responsible for typographical errors. Please contact the manufacturer for additional information.

Begin_Table

Manufacturer	Model	Modem Setup	Type
AirPlex	FAXMODEM	Hayes EC	PC
Apple	Newton Fax Modem (Internal)	Newton Modem	PC
	Newton Fax Modem (External)	Newton Modem	EXT
Apex Data	Mobile Plus 14.4	Hayes EC	PC
AT&T	KIT 3760-B1-261 (landline only)	Hayes EC	PC
DataRace	RediCard version 2	Hayes EC	PC

Dr. Neuhaus	Gypsy GSM	GSM Default	PC
Ericsson	AC14 Mobile Phone Modem	Hayes EC	PC
Hayes	Optima 144+FAX PC Card	Hayes EC	PC
	Optima 288 V.34 +FAX PC Card	Hayes 28.8	PC
Motorola	Power 14.4 PCMCIA	Moto Landline/ Cellular	PC
	CELLect 14.4 PCMCIA	Moto Landline/ Cellular	PC
Nokia	DTP-2 (GSM)	Nokia GSM Normal	PC
NovaLink	NovaModem 144	Hayes EC	PC
	Novamodem 288	Hayes 28.8	PC
Intel	Faxmodem 14.4	Hayes 28.8	PC
Supra	COMcard 144	Hayes EC	PC
	28.8	Hayes 28.8	EXT

End_Table

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Tech Info Library Article Number:19383



Tech Info Library

Network Server 500 & 700: Comparison Chart (2/96)

Revised: 2/26/96
Security: Everyone

Network Server 500 & 700: Comparison Chart (2/96)

Article Created: 22 February 1996
Article Reviewed/Updated: 26 February 1996

TOPIC -----

This article is a comparison chart for the Network Server 500 and 700.

DISCUSSION -----

Here is a chart comparing the Network Server 500 and 700.

Begin_Table

Network Server	500/132	700/150
-----	-----	-----
Processor Type	PPC 604	PPC 604
Processor Speed	132MHz	150MHz
CPU Cards	Yes	Yes
L2 Cache	512K	1MB
Main Memory (shipped with)	32MB	32 Or 48MB*
Main Memory (expandable to)	512MB	512MB
PCI Slots	6	6
Internal Storage Devices Supported	7	9
Total Internal Storage Capacity	24GB	32GB
Total Overall Storage Capacity	332GB	340GB
Apple SuperDrive	Yes	Yes
AppleCD 600i	Yes	Yes

* Depending on system ordered.

End_Table

Article Change History:
26 Feb 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19385



Tech Info Library

AppleVision Display Software: ReadMe File (1/97)

Revised: 1/29/97
Security: Everyone

AppleVision Display Software: ReadMe File (1/97)

=====

Article Created: 22 February 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article contains the Read Me file for the AppleVision Display Software, which is designed for the AppleVision 1710 Display and AppleVision 1710AV Display.

DISCUSSION -----

Information About Your AppleVision Display Software

This document contains important reminders and the latest product information.

Installation and Setup Tips
=====

Follow the instructions in the manual that came with your display to install the AppleVision software. Keep the following tips in mind when setting up and working with your display and display software:

- If you upgrade your system software, you must reinstall the AppleVision display software.
- With some system software and hardware configurations, your screen may not redraw correctly during the boot process. This will not affect display performance.
- Changes you make to screen geometry apply only to the display's current resolution. Geometry settings are saved with the resolution.

Sound and Video Tips
=====

If you purchased a display with speakers and built-in microphone, the following

tips may help you:

- The Sound control panel controls your computer's sound. The AppleVision Setup control panel controls the display's sound. When you make changes to sound input and output sources, be sure to use the appropriate control panel.
- If you're using system software earlier than version 7.5, your computer may have a long restart time. To improve restart time, change the name of the AppleVision system extension so it installs after QuickTime. (Pick a name that appears alphabetically after "QuickTime.")
- Whenever you change from an AppleVision display on your computer to a small-screen, fixed-resolution display (14" or less), set the resolution on the AppleVision display to 640x480 before switching off your computer and disconnecting the display. This will prevent scrambled video during the boot process on the small-screen display.
- If you use the AppleVision display with a Macintosh Quadra 630, Macintosh LC 630, Performa 630, or Power Macintosh 6200 computer, make sure you specify the correct sound input source in the Sound control panel. Choose Line In, not Microphone.

Notes About Specific Application Programs

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- Some application programs do not properly support resolution changes you make to your display. You may have to close and restart your program for the program to recognize the resolution changes.

Article Change History:

29 Jan 1997 - Added AppleVision 1710 and AppleVision 1710AV to article.

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Tech Info Library Article Number:19386



Tech Info Library

Color StyleWriter 2400: Software v2.1.2 ReadMe File (2/96)

Revised: 2/22/96
Security: Everyone

Color StyleWriter 2400: Software v2.1.2 ReadMe File (2/96)

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Article Created: 22 February 1996

TOPIC -----

This article contains the Read Me file for the Color StyleWriter 2400 v2.1.2 software.

DISCUSSION -----

Information About Your Color StyleWriter 2400 Printer

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This document contains important reminders and some information that's not in the user manual.

Installation and Setup Tips

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Follow the instructions in the user manual to install the Color StyleWriter 2400 software. Keep the following tips in mind when setting up and working with your new software:

- If you are having problems during installation, restart with Extensions off and try installing again.
- After installing the printing software, you must create a desktop printer. To do so, select the Color SW 2400 in the Chooser, then close the Chooser.
- If you have a PowerBook computer, see "Special Information for PowerBook Users" in the section "Telling Your Computer to Use the Color StyleWriter 2400" in Chapter 1 of the user manual.
- If you get the message, "Serial port in use by another application, please quit the application and try again," restart your Macintosh before trying to print again.

- If you upgrade your system software, you must reinstall the Color StyleWriter 2400 software.
- Close the Chooser after making any changes to it.
- See the Troubleshooting chapter in the Color StyleWriter 2400 user manual for more information.

About Desktop Printing

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Your new printing software comes with Desktop PrintMonitor version 1.0.3. You use Desktop PrintMonitor to create printer icons (or "desktop printers") on your Macintosh Operating System (Mac OS) desktop. You can print a document by simply dragging it to a desktop printer icon. Desktop printers also give you more control over printing, including setting printing priorities and choosing specific times for printing.

Installed Desktop Printing Files

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The following files are installed for desktop printing on computers that use version 7.1 or later of the Mac OS:

- Desktop PrintMonitor, Desktop Printer Spooler, and Desktop Printer Extension are placed in the Extensions folder.
- If your computer has version 7.1.1 or 7.1.2 of the Mac OS, Finder 7.1.3 is placed in your System Folder and Finder Help 7.1.3 is placed in the Extensions folder.
- If your system has version 7.1.1 or 7.1.2 of the Mac OS, these files are placed in the Extensions folder: Thread Manager 2.1, Network Extension 7.1.3, Macintosh Drag and Drop, and Dragging Enabler.

Creating Desktop Printers

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You create desktop printers by selecting a printer in the Chooser. A desktop printer icon appears on your desktop when you close the Chooser.

You can drag this icon to any position you want on your desktop. You cannot move it off the desktop.

If you want, you can select other printers in the Chooser and create other desktop printers for easy access. You must close the Chooser each time to create a desktop printer.

The last desktop printer created becomes the default printer. Your documents will automatically be printed on the default printer.

Printing With Desktop Printers

=====

You can print documents within your applications as you normally do. You can also print documents without leaving the Finder, using one of the two methods

described here. These methods are particularly efficient when you have a number of documents created by the same application that you want to print at once.

- Drag the icons of the documents (all created by the same application) to the desktop icon of the printer you want to use.
- Select the icons of the documents you want to print and choose the Print command from the File menu.

The computer will show you the Print dialog box so you can choose printing options. Make your choices, then click the Print button.

After a few moments, the document starts to print. If background printing is turned on, you can continue working while the document is printing.

Selecting a Default Printer =====

If you have more than one printer available, you can select which you want to use. The printer you select is called the "default printer." All your documents will be printed on the default printer until you select a new one.

To change the default printer, use one of these three methods:

- Drag the document you want to print to a desktop printer icon, and it will automatically become the default printer.
- Select the desktop printer icon and use the Printing menu to set the printer as the default.
- Select a new printer using the Chooser.

Note:

Switching between printers may change how much information you can fit on a page. It's best to choose a printer before you spend much time formatting the document.

Working With Desktop Printer Icons =====

Desktop printer icons change to indicate printing status:

You can do the following with desktop printer icons:

- Throw away the icon. Drag the icon to the Trash. You can't throw away a desktop printer icon while the printer is printing a document. (You can create another desktop printer icon for that printer whenever you like.)

Note:

You must always have at least one printer icon on your desktop. If you throw away the last icon, it will immediately be created again.

- Rename the icon. Rename the icon as you would any other Finder icon. Click the name to highlight it, then type the new name. This changes the

name of the icon, not the name of the printer.

- Move the icon. You may drag the icon anywhere you like on the desktop. However, you may not move it off the desktop.
- Create an alias for the icon. You may create an alias for the icon as you would any Finder icon, by selecting the icon and choosing the Make Alias command from the File menu. The alias may be moved anywhere on or off the desktop.

Monitoring Printing =====

If you are using background printing, you can use the desktop printer features to monitor and control the documents that are waiting to print. To learn how to turn background printing on and off, see your printer manual.

To monitor the printing of documents:

Step 1 -----

Double-click the desktop printer icon you're interested in.

A window opens listing the documents that are printing or waiting to print.

Watching the status messages can be helpful when troubleshooting printing problems. When more than one job is waiting to be printed, a list of print jobs appears in the waiting list, showing the order in which they will be printed (when sorted by print time.)

Step 2 -----

Choose what you'd like to do.

- To cancel a print request, select it by clicking its icon and click the Remove button.

You can select only the currently printing document by clicking its icon. (You can select more than one item at a time by holding down the Shift key while clicking.) You can also drag the icon for the print request to the Trash. Note that these methods delete only the print request (also referred to as a spool file), not the document itself.

- To put a print request on hold, select it and click the Hold button.

The print request will stay on hold until you select it again and click the Resume button. You can also put the document that's currently printing on hold by dragging it to the list of documents waiting to print (lower part of the window).

- To indicate that a print request is urgent, select it and choose Set Print

Time from the Printing menu. In the dialog box that opens, click Urgent.

- To indicate that a print request should not print until a future time, select it and choose Set Print Time from the Printing menu. In the dialog box that opens, click At Time, then set the time you want.
- To change the order of the items waiting to print, move their place in the list by dragging their titles up or down in the list.
- To sort the list of documents waiting to print, click the title of the column you want to sort by.

For example, to sort by the name of the document, click "Document Name." (You can also sort by choosing the commands in the View menu.) The column title you sorted by is underlined. Sorting the items does not change the order in which they will print. To see that order, sort by Print Time.

- To temporarily stop all documents from printing on this printer, choose Stop Print Queue from the Printing menu.

To resume using the printer, choose Start Print Queue from the Printing menu. If the Desktop PrintMonitor window is open, you can begin printing the document from the first page by Option-clicking the Resume button (holding down the Option key while clicking the Resume button).

Shortcut: The Printing menu for starting and stopping the print queue is available without opening the window for the printer, as long as the printer's icon is selected on the desktop.

- To move a print request from one printer to another printer of the same type (for example, from a StyleWriter 1200 to a StyleWriter 2400), drag the icon for the print request to the icon of the printer where you want to move it.

The printing software won't let you move a print request to an incompatible printer. For example, you can't move a request from a LaserWriter printer to a StyleWriter printer.

Turning the Manual Feed Notification On or Off =====

When you install the printer software, the Desktop PrintMonitor is set up to notify you about manually feeding paper the same way your PrintMonitor was set. For example, if you turned off notification for manual feeding in your PrintMonitor, the Desktop PrintMonitor will also have manual feed notification turned off.

If you want to change how the Desktop PrintMonitor notifies you about manual feeding, follow this procedure:

Step 1 -----

Hold down the Shift key and restart your computer, keeping the Shift key

depressed until the message "Extensions off" or your normal desktop appears.

Step 2

Open your System Folder and then open your Extensions folder.

Step 3

Double-click the PrintMonitor application.

Step 4

Choose Preferences from the File menu.

Step 5

Select your manual feed option and click OK.

Step 6

Close the PrintMonitor.

Step 7

Restart your computer.

Turning Off or Removing the Desktop Printing Software

=====

Removing a Desktop Printer Icon

You can remove an individual desktop printer icon by dragging it into the trash. If you have only one desktop printer, you can't get rid of the icon by dragging it to the Trash. (The icon will reappear if you do.) To get rid of the desktop printer, you must first select a different desktop printer as the default printer and then drag the desktop printer icon to the Trash. If you don't want to use desktop printer icons, see "Turning Off the Desktop PrintMonitor" or "Removing Desktop Printing Software" for information about how to remove the desktop printer software.

Turning Off the Desktop PrintMonitor

If you don't want to use desktop printers, you can turn off the Desktop PrintMonitor using the Extensions Manager (available on Macintosh System 7.5, the current version of the Mac OS).

To turn off the Desktop PrintMonitor:

Step 1

Open the Extensions Manager control panel in the Control Panels folder.

Step 2

Click to deselect (uncheck) the Desktop PrintMonitor, Desktop Printer Extension, and Desktop Printer Spooler extensions in the panel.

Step 3

Click the close box to close the control panel.

Step 4

Restart your computer.

Removing the Desktop Printing Software

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The desktop printing software uses both the Desktop PrintMonitor and the PrintMonitor software. The Desktop PrintMonitor requires 200-400K bytes more free system memory in addition to the memory required by the PrintMonitor. If you don't want to use the desktop printing software, you can remove it.

To remove desktop printing software:

Step 1

Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions off" appears or until your normal desktop appears.

Step 2

Drag the following files from the Extensions folder to the Trash:

- Desktop PrintMonitor 1.0.3
- Desktop Printer Spooler 1.0.3
- Desktop Printer Extension 1.0.3

Step 3

Restart your computer.

Using Save or Open with Desktop Printers

=====

When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Having More Than Five Desktop Printers

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If you want to have more than five or six desktop printers, you must increase the Desktop PrintMonitor memory allocation by 12K for each additional desktop printer you want. To do so, select its icon (it's in the Extensions folder inside the System Folder), choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

About Creating Duplicate Desktop Printer Icons

=====

If you use different versions of the printer software and print using the Desktop PrintMonitor, you may create duplicate desktop printer icons for the same printer. For example, say you select between two versions of the StyleWriter software. If you select your printer in the Chooser using one version, and select it later using the another version, two desktop printer icons will appear for that printer. To avoid creating confusing duplicate printer icons, primarily use one version of your printer software, or rename the icons with distinguishing names.

Using Desktop PrintMonitor on a Non-English System

=====

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an older version of the PrintMonitor. Newer versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version)
- Obtain a set of installation disks of the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5 and install the printing software again. An English-language version of the Desktop PrintMonitor is installed.

Low-Memory Troubleshooting

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If you notice any of these symptoms, your Macintosh may be running out of memory.

- The edges of some letters appear jagged.
- The Macintosh displays "out of memory" warning messages.
- Some portions of a document don't print.
- Some text prints in the Geneva font instead of the font you selected.

To make more memory available, try these suggestions:

- Have only one program open at a time.
- Increase the amount of memory you give to the program you're printing from by using the Get Info command (as explained in the documentation that came with your Macintosh).
- Use the Chooser to turn off background printing, as explained in Chapter 2 of the user manual.
- Remove any watermarks from your document.
- In the Page Setup dialog box, choose Portrait (normal) orientation instead of Landscape (sideways) orientation.
- Choose Normal in the Print dialog box and Pattern in the Print Options dialog box.
- Desktop printing requires more memory to print than the old PrintMonitor. You can remove desktop printing by using the custom install option called "PrintMonitor 7.1 (no Desktop Printing)."
- When you print in the background, if you often get a message that there is not enough memory to print on a certain desktop printer, you can give that desktop printer more memory by selecting its icon and choosing the Get Info command. Then increase the number in the Preferred Size box. (For more information on increasing a program's memory, see the documentation that came with your Macintosh.)
- As long as there are any print requests waiting to be printed, Desktop PrintMonitor (the desktop printing software) remains active in memory, even when background printing is off. If you are not printing in the background, you can remove all print requests from your desktop printer queues to reduce memory requirements by 160K.
- Use the Memory control panel to turn on virtual memory, as explained in the documentation that came with your Macintosh.
- Try a program like RamDoubler.
- See the "Troubleshooting" chapter in the Color StyleWriter 2400 user manual for more suggestions.

Color Printing Tips

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- When printing very light colors in grayscale mode, you may see thin lines fade or break up. If this happens, pick a darker color for the affected object, or try printing with the Pattern halftoning option selected. (In the Print dialog box, click the Color button, then select the Pattern option.)

- If you print a document that should have a smooth gradient from one color or shade to another and notice an unexpected color change, it may be that one of the colors in the gradient cannot be reproduced by the printer. Try using a different matching method in the Color Options dialog box, or try turning off ColorSync.
- If the blues on your printout appear purple, turn on ColorSync in the Color dialog box.
- In some programs, colors on the screen may look solid but contain tiny black dots when printed. To print solid blocks of color without these black dots, use the Business Graphics color-matching method. In the Print dialog box, click the Color button. In the Color Options dialog box that appears, make sure there is an X in the ColorSync box, and then select Business Graphics from the Matching Method pop-up menu.

If your colors still have too many black dots, create the document in a program that allows you to define each color, then make the color fully saturated. For example, to print yellow without any black dots in it, use your program to define the yellow you are using as 100% red and 100% green without any blue.

Watermark Tips

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When using a watermark, make sure the font that is in the watermark file is also in the Fonts folder inside your System Folder. If you give the watermark file to someone, they also need any fonts that it uses in order to use the watermark in their own documents.

Tips on Sharing Your Printer

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- To avoid confusion, be sure to give each shared Color StyleWriter 2400 printer a unique name. If you have more than one printer with the same name in a single AppleTalk zone, the Chooser will display only one of them.
- To clean the print head of a shared Color StyleWriter 2400, you must send the request from the Macintosh that is directly connected to the printer.

Other Printing Tips

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- If you see very thin stripes near the bottom of your printout, use your application program to make your bottom margin larger. A bottom margin of 0.8 inches or greater is best.
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.

Printing With QuickDraw GX =====

If you have QuickDraw GX on your system, the Color StyleWriter 2400 Installer will automatically install everything you need for printing with QuickDraw GX.

- If you installed QuickDraw GX after you set up your Color StyleWriter 2400, you must reinstall the Color StyleWriter 2400 software.
- After you click the Print button to print a complex document, you may notice a delay before you see printer activity.

If printing with QuickDraw GX doesn't produce satisfactory results, you can use the GX Helper utility to turn off QuickDraw GX and use the regular QuickDraw printing software. For more information, see Appendix E of your user manual.

Using the Color StyleWriter 2400 With Application Programs =====

If you have problems printing from a specific program, it may be a problem in that program. If you have problems, contact the publisher of the program. In some cases a newer, more compatible version of the software may be available.

- In some programs—such as Microsoft Word 5.1, WordPerfect 3.0, ClarisWorks 2.0, and Symantec GreatWorks 2.0—rotated text created within the program may print with jagged edges. For best results, create the rotated text in another program and paste it in.

Notes About Specific Programs -----

The following list describes some special situations that you should be aware of when working with specific programs. (There may be other problems with these programs or with other programs not mentioned in this document).

AdobeType Manager

- When you install version 3.8.1 or later of Adobe Type Manager, some system fonts are removed from your system and placed in a folder called "De-installed Fonts1." If you later turn off ATM, drag all the fonts in the "De-installed Fonts1" folder back into the Fonts folder inside the System folder to prevent characters with jagged edges.
- If you rotate Adobe Type 1 fonts in FreeHand 3.11 and then paste them into another program, your Macintosh will display a system error when you try to print.
- If you print rotated Adobe Type 1 fonts using FrameMaker 4.0, your Macintosh will display a system error.
- If you print rotated Adobe Type 1 fonts that are also bold or italic using

Intellidraw, and text will not print, you probably need to upgrade to ATM version 3.8.1.

- If you get incorrect output when you try to print rotated and flipped Adobe Type 1 fonts, try using a TrueType font instead.
- When Adobe Type 1 fonts are both outlined and underlined, characters may be misprinted (incorrect locations, multiple characters in same location, lower portions of characters shift left or right).

Adobe Dimensions

- Always print your documents in the foreground when using Adobe Dimensions. To turn background printing off, open the Chooser, click Off for Background Printing. If you accidentally print in background and your Macintosh crashes, you may have to restart with extensions off, open your desktop printer and drag all print requests from the queue.

Adobe Illustrator 5.0

- Unless you have at least 10 MB of free disk space on your startup disk, you will see a "disk is full" error message when you try to print. The more complex the document, the more space you need.
- If banding occurs in gradient fills, try printing with the Pattern halftoning option selected. (In the print dialog box, click the Color button, then select the Pattern option.)

Aldus PageMaker 5.0

- To see the Color StyleWriter 2400 Page Setup and Print dialog boxes, click the Setup button in PageMaker's Print dialog box.
- When printing rotated PICT or EPS images, be sure background printing is turned on in the Chooser. If you must print in the foreground, rotate the image in another program, then import it into PageMaker in the orientation in which you plan to print it.
- PageMaker 5.0 prints pages in reverse order on the Color StyleWriter 2400, which may be particularly confusing if you are using 2-up or 4-up printing. To print the first page first, turn on the Reverse Order option in the Print dialog box.

ClarisDraw 1.0v1

- If you have problems printing in the background, you may want to increase the Desktop PrintMonitor extension's preferred size to 300K (by using the Get Info command, as explained in the instructions that came with your Macintosh). The extension is located in the Extensions folder inside your System Folder.

ClarisImpact 1.0v1

- If you have problems printing ClarisImpact documents from a Power Macintosh,

upgrade to ClarisImpact 1.0v3.

DeltaGraph Pro 2.0.3

- When printing charts, always click the QuickDraw button in the Print dialog box.

FrameMaker 4.0

- Some FrameMaker documents, including some the Concern.Doc sample document that comes with the program, will not print with version 3.8.1 of Adobe Type Manger. If you try to print a document and your system crashes, try printing again after turning off or removing the ATM software.

- If you import text as a graphic, you can crop it on the screen but it will print uncropped.

- Rotated text in large point sizes will print as a gray box. For best results, break up the text blocks into smaller pieces or individual characters.

MacDraw II 1.1 v2

- To print in color, be sure to turn on the Print Color Patterns in the Print Options dialog box and select Color in the Image pop-up menu in the Print dialog box.

- If you experience problems when printing your MacDraw II document with layout of 2-Up or 4-Up, try using a different program, like ClarisDraw.

Microsoft Excel 4.0 and Lotus 1-2-3

- To print in color, be sure to check the Print Using Color option in the Print dialog box and select Color in the Image pop-up menu.

Microsoft Excel 5.0

- If colored cell borders drop out when printing, try using yellow or brown or you can use the line tool in the Drawing tools palatte.
- When you choose the Page Setup command, you get Excel's own version of the Page Setup dialog box. Click the Options button to see the version of the dialog box with the special Color StyleWriter 2400 options.

Microsoft Word 6.0

- When you cancel a print request from MicroSoft Word 6.0, some of the document will still print. If you are using desktop printing, try stopping the print queue on your desktop printer and then removing the print request instead of cancelling. To do this, click on you desktop printer icon and select Stop Print Queue from the Printing menu.

Ofoto 2.0

- For best results, make a custom calibration for the Color StyleWriter 2400 and click the Custom Profile button.

The Print Shop v1.3.2

- To print in color, select ImageWriter in the Preferences dialog box.

Print Shop Deluxe 1.0

- Make sure you open your document before printing.

SoftWindows 1.0

- You may not be able to print to your Color StyleWriter 2400 from SoftWindows. Contact Insignia Solutions Inc. for more information on printing from SoftWindows.

Studio/8 v 2.0 and Studio/32 v 1.2

- Always click the QuickDraw button in the Print dialog box.

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Tech Info Library Article Number:19387



Tech Info Library

StyleWriter 1200: Software v2.1.2 Readme (2/96)

Revised: 2/22/96
Security: Everyone

StyleWriter 1200: Software v2.1.2 Readme (2/96)

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Article Created: 22 February 1996

TOPIC -----

This article contains the read me file for the StyleWriter 1200 printer.

DISCUSSION -----

Information About Your StyleWriter 1200 Printer

This document contains important reminders and some information that's not in the user manual.

Installation and Setup Tips

Follow the instructions in the user manual to install the StyleWriter 1200 software. Keep the following tips in mind when setting up and working with your new software:

- After installing the printing software, you must create a desktop printer. To do so, select the StyleWriter 1200 in the Chooser, then close the Chooser.
- If you have a PowerBook computer, see "Special Information for PowerBook Users" in the section "Telling Your Computer to Use the StyleWriter 1200" in Chapter 1 of the user manual.
- If you get the message, "Serial port in use by another application, please quit the application and try again," restart your Macintosh before trying to print again.
- If you upgrade your system software, you must reinstall the StyleWriter 1200 software.
- Close the Chooser after making any changes to it.

- See the Troubleshooting chapter in the StyleWriter 1200 user manual for more information.
- If you have version 7.1 or 7.1.1 of the Macintosh Operating System (Mac OS) in any language besides English, the Installer program's Easy Install procedure will replace your version of the Finder with an English-language version. You can avoid this by using the Installer's Custom Install feature (instead of the Easy Install feature) to install PrintMonitor 7.1 and QuickDraw Printer Software. In that case, however, the desktop printer features will be unavailable to you.

About Desktop Printing

Your new printing software comes with Desktop PrintMonitor version 1.0.3. You use Desktop PrintMonitor to create printer icons (or "desktop printers") on your Mac OS desktop. You can print a document by simply dragging it to a desktop printer icon. Desktop printers also give you more control over printing, including setting printing priorities and choosing specific times for printing.

Installed Desktop Printing Files

The following files are installed for desktop printing on computers that use version 7.1 or later of the Mac OS:

- Desktop PrintMonitor, Desktop Printer Spooler, and Desktop Printer Extension are placed in the Extensions folder.
- If your computer has version 7.1.1 or 7.1.2 of the Mac OS, Finder 7.1.3 is placed in your System Folder and Finder Help 7.1.3 is placed in the Extensions folder.
- If your system has version 7.1.1 or 7.1.2 of the Mac OS, these files are placed in the Extensions folder: Thread Manager 2.1, Network Extension 7.1.3, Macintosh Drag and Drop, and Dragging Enabler.

Creating Desktop Printers

You create desktop printers by selecting a printer in the Chooser. A desktop printer icon appears on your desktop when you close the Chooser.

You can drag this icon to any position you want on your desktop. You cannot move it off the desktop.

If you want, you can select other printers in the Chooser and create other desktop printers for easy access. You must close the Chooser each time to create a desktop printer.

The last desktop printer created becomes the default printer. Your documents will automatically be printed on the default printer.

Printing With Desktop Printers

You can print documents within your applications as you normally do. You can

also print documents without leaving the Finder, using one of the two methods described here. These methods are particularly efficient when you have a number of documents created by the same application that you want to print at once.

- Drag the icons of the documents (all created by the same application) to the desktop icon of the printer you want to use.
- Select the icons of the documents you want to print and choose the Print command from the File menu.

The computer will show you the Print dialog box so you can choose printing options. Make your choices, then click the Print button.

After a few moments, the document starts to print. If background printing is turned on, you can continue working while the document is printing.

Selecting a Default Printer

If you have more than one printer available, you can select which you want to use. The printer you select is called the "default printer." All your documents will be printed on the default printer until you select a new one.

To change the default printer, use one of these three methods:

- Drag the document you want to print to a desktop printer icon, and it will automatically become the default printer.
- Select the desktop printer icon and use the Printing menu to set the printer as the default.
- Select a new printer using the Chooser.

Note: Switching between printers may change how much information you can fit on a page. It's best to choose a printer before you spend much time formatting the document.

Working With Desktop Printer Icons

Desktop printer icons change to indicate printing status:

You can do the following with desktop printer icons:

- Throw away the icon. Drag the icon to the Trash. You can't throw away a desktop printer icon while the printer is printing a document. (You can create another desktop printer icon for that printer whenever you like.)

Note:

You must always have at least one printer icon on your desktop. If you throw away the last icon, it will immediately be created again.

- Rename the icon. Rename the icon as you would any other Finder icon. Click the name to highlight it, then type the new name. This changes the name of the icon, not the name of the printer.

- Move the icon. You may drag the icon anywhere you like on the desktop. However, you may not move it off the desktop.
- Create an alias for the icon. You may create an alias for the icon as you would any Finder icon, by selecting the icon and choosing the Make Alias command from the File menu. The alias may be moved anywhere on or off the desktop.

Monitoring Printing

If you are using background printing, you can use the desktop printer features to monitor and control the documents that are waiting to print. To learn how to turn background printing on and off, see your printer manual.

To monitor the printing of documents:

- 1 Double-click the desktop printer icon you're interested in.

A window opens listing the documents that are printing or waiting to print.

Watching the status messages can be helpful when troubleshooting printing problems. When more than one job is waiting to be printed, a list of print jobs appears in the waiting list, showing the order in which they will be printed (when sorted by print time.)

- 2 Choose what you'd like to do.

- To cancel a print request, select it by clicking its icon and click the Remove button.

You can select only the currently printing document by clicking its icon. (You can select more than one item at a time by holding down the Shift key while clicking.) You can also drag the icon for the print request to the Trash. Note that these methods delete only the print request (also referred to as a spool file), not the document itself.

- To put a print request on hold, select it and click the Hold button.

The print request will stay on hold until you select it again and click the Resume button. You can also put the document that's currently printing on hold by dragging it to the list of documents waiting to print (lower part of the window).

- To indicate that a print request is urgent, select it and choose Set Print Time from the Printing menu. In the dialog box that opens, click Urgent.
- To indicate that a print request should not print until a future time, select it and choose Set Print Time from the Printing menu. In the dialog box that opens, click At Time, then set the time you want.
- To change the order of the items waiting to print, move their place in the list by dragging their titles up or down in the list.

- To sort the list of documents waiting to print, click the title of the column you want to sort by.

For example, to sort by the name of the document, click "Document Name." (You can also sort by choosing the commands in the View menu.) The column title you sorted by is underlined. Sorting the items does not change the order in which they will print. To see that order, sort by Print Time.

- To temporarily stop all documents from printing on this printer, choose Stop Print Queue from the Printing menu.

To resume using the printer, choose Start Print Queue from the Printing menu. If the Desktop PrintMonitor window is open, you can begin printing the document from the first page by Option-clicking the Resume button (holding down the Option key while clicking the Resume button).

Shortcut: The Printing menu for starting and stopping the print queue is available without opening the window for the printer, as long as the printer's icon is selected on the desktop.

- To move a print request from one printer to another printer of the same type (for example, from a StyleWriter 1200 to a StyleWriter 2400), drag the icon for the print request to the icon of the printer where you want to move it.

The printing software won't let you move a print request to an incompatible printer. For example, you can't move a request from a LaserWriter printer to a StyleWriter printer.

Turning the Manual Feed Notification On or Off

When you install the printer software, the Desktop PrintMonitor is set up to notify you about manually feeding paper the same way your PrintMonitor was set. For example, if you turned off notification for manual feeding in your PrintMonitor, the Desktop PrintMonitor will also have manual feed notification turned off.

If you want to change how the Desktop PrintMonitor notifies you about manual feeding, follow this procedure:

1. Hold down the Shift key and restart your computer, keeping the Shift key depressed until the message "Extensions off" or your normal desktop appears.
2. Open your System Folder and then open your Extensions folder.
3. Double-click the PrintMonitor application.
4. Choose Preferences from the File menu.
5. Select your manual feed option and click OK.
6. Close the PrintMonitor.

7. Restart your computer.

Turning Off or Removing the Desktop Printing Software

Removing a Desktop Printer Icon

You can remove an individual desktop printer icon by dragging it into the trash. If you have only one desktop printer, you can't get rid of the icon by dragging it to the Trash. (The icon will reappear if you do.) To get rid of the desktop printer, you must first select a different desktop printer as the default printer and then drag the desktop printer icon to the Trash. If you don't want to use desktop printer icons, see "Turning Off the Desktop PrintMonitor" or "Removing Desktop Printing Software" for information about how to remove the desktop printer software.

Turning Off the Desktop PrintMonitor

If you don't want to use desktop printers, you can turn off the Desktop PrintMonitor using the Extensions Manager (available on Macintosh System 7.5, the current version of the Mac OS).

To turn off the Desktop PrintMonitor:

1. Open the Extensions Manager control panel in the Control Panels folder.
2. Click to deselect (uncheck) the Desktop PrintMonitor, Desktop Printer Extension, and Desktop Printer Spooler extensions in the panel.
3. Click the close box to close the control panel.
4. Restart your computer.

Removing the Desktop Printing Software

The desktop printing software uses both the Desktop PrintMonitor and the PrintMonitor software. The Desktop PrintMonitor requires 200-400K bytes more free system memory in addition to the memory required by the PrintMonitor. If you don't want to use the desktop printing software, you can remove it.

To remove desktop printing software:

1. Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions off" appears or until your normal desktop appears.
2. Drag the following files from the Extensions folder to the Trash:
 - Desktop PrintMonitor 1.0.3
 - Desktop Printer Spooler 1.0.3
 - Desktop Printer Extension 1.0.3

3. Restart your computer.

Using Save or Open with Desktop Printers

When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Having More Than Five Desktop Printers

If you want to have more than five or six desktop printers, you must increase the Desktop PrintMonitor memory allocation by 12K for each additional desktop printer you want. To do so, select its icon (it's in the Extensions folder inside the System Folder), choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

About Creating Duplicate Desktop Printer Icons

If you use different versions of the printer software and print using the Desktop PrintMonitor, you may create duplicate desktop printer icons for the same printer. For example, say you select between two versions of the StyleWriter software. If you select your printer in the Chooser using one version, and select it later using the another version, two desktop printer icons will appear for that printer. To avoid creating confusing duplicate printer icons, primarily use one version of your printer software, or rename the icons with distinguishing names.

Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an older version of the PrintMonitor. Newer versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version)
- Obtain a set of installation disks of the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5 and install the printing software again. An English-language version of the Desktop PrintMonitor is installed.

Low-Memory Troubleshooting

If you notice any of these symptoms, your Macintosh may be running out of memory.

- The edges of some letters appear jagged.
- The Macintosh displays "out of memory" warning messages.
- Some portions of a document don't print.

– Some text prints in the Geneva font instead of the font you selected.

To make more memory available, try these suggestions:

- Have only one program open at a time.
- Increase the amount of memory you give to the program you're printing from by using the Get Info command (as explained in the documentation that came with your Macintosh).
- Use the Chooser to turn off background printing, as explained in Chapter 2 of the user manual.
- Remove any watermarks from your document.
- In the Page Setup dialog box, choose Portrait (normal) orientation instead of Landscape (sideways) orientation.
- Desktop printing requires more memory to print than the old PrintMonitor. You can remove desktop printing by using the custom install option called "PrintMonitor 7.1.2 (no Desktop Printing)."
- When you print in the background, if you often get a message that there is not enough memory to print on a certain desktop printer, you can give that desktop printer more memory by selecting its icon and choosing the Get Info command. Then increase the number in the Preferred Size box. (For more information on increasing a program's memory, see the documentation that came with your Macintosh.)
- As long as there are any print requests waiting to be printed, Desktop PrintMonitor (the desktop printing software) remains active in memory, even when background printing is off. If you are not printing in the background, you can remove all print requests from your desktop printer queues to reduce memory requirements by 160K.
- Use the Memory control panel to turn on virtual memory, as explained in the documentation that came with your Macintosh.
- Try a program like RamDoubler.
- See the "Troubleshooting" chapter in the StyleWriter 1200 user manual for more suggestions.

Watermark Tips

- When using a watermark, make sure the font that is in the watermark file is also in the Fonts folder inside your System Folder. If you give the watermark file to someone, they also need any fonts that it uses in order to use the watermark in their own documents.

Tips on Sharing Your Printer

- To avoid confusion, be sure to give each shared StyleWriter 1200 printer a unique name. If you have more than one printer with the same name in a single AppleTalk zone, the Chooser will display only one of them.
- To clean the print head of a shared StyleWriter 1200, you must send the request from the Macintosh that is directly connected to the printer.

Miscellaneous Printing Tips

- When printing very light colors in grayscale mode, you may see thin lines fade or break up. If this happens, pick a darker color for the affected object, or try printing with the Pattern halftoning option selected. (In the Print dialog box, click the Options button, then select the Pattern option.)
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.
- If you use the StyleWriter 1200 software to print on an older StyleWriter as well as on the StyleWriter 1200, not all the valid options (such as glossy paper) will show up when you switch back to the StyleWriter 1200 until after you print at least one page.

Printing With QuickDraw GX

If you have QuickDraw GX on your system, the StyleWriter 1200 Installer will automatically install everything you need for printing with QuickDraw GX.

- If you installed QuickDraw GX after you set up your StyleWriter 1200, you must reinstall the StyleWriter 1200 software.
- After you click the Print button to print a complex document, you may notice a delay before you see printer activity.

If printing with QuickDraw GX doesn't produce satisfactory results, you can use the GX Helper utility to turn off QuickDraw GX and use the regular QuickDraw printing software. For more information, see Appendix E of your user manual.

Using the StyleWriter 1200 With Application Programs

If you have problems printing from a specific program, it may be a problem in that program. If you have problems, contact the publisher of the program. In some cases a newer, more compatible version of the software may be available.

- In some programs—such as Microsoft Word 5.1, WordPerfect 3.0, ClarisWorks 2.0, and Symantec GreatWorks 2.0—rotated text created within the program may print with jagged edges. For best results, create the rotated text in another program and paste it in.

Notes About Specific Programs

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The following list describes some special situations that you should be aware of when working with specific programs. (There may be other problems with these programs or with other programs not mentioned in this document.)

Adobe Type Manager

- If you rotate Adobe Type 1 fonts in FreeHand 3.11 and then paste them into another program, your Macintosh will display a system error when you try to print.
- If you print rotated Adobe Type 1 fonts using FrameMaker 4.0, your Macintosh will display a system error.
- If you print rotated Adobe Type 1 fonts that are also bold or italic using Intellidraw, and text will not print, you probably need to upgrade to ATM version 3.8.1.
- If you get incorrect output when you try to print rotated and flipped Adobe Type 1 fonts, try using a TrueType font instead.
- When Adobe Type 1 fonts are both outlined and underlined, characters may be misprinted (incorrect locations, multiple characters in same location, lower portions of characters shift left or right).

Adobe Dimensions

- Always print your documents in the foreground when using Adobe Dimensions. To turn background printing off, open the Chooser, click Off for Background Printing. If you accidentally print in background and your Macintosh crashes, you may have to restart with extensions off, open your desktop printer and drag all print requests from the queue.

Adobe Illustrator 5.0

- Unless you have at least 10 MB of free disk space on your startup disk, you will see a "disk is full" error message when you try to print. The more complex the document, the more space you need.
- If banding occurs in gradient fills, try printing with the Pattern halftoning option selected. (In the print dialog box, click the Options button, then select the Pattern option.)

Aldus PageMaker 5.0

- To see the StyleWriter 1200 Page Setup and Print dialog boxes, click the Setup button in PageMaker's Print dialog box.
- When printing rotated PICT or EPS images, be sure background printing is turned on in the Chooser. If you must print in the foreground, rotate the image in another program, then import it into PageMaker in the orientation in which you plan to print it.
- PageMaker 5.0 prints pages in reverse order on the StyleWriter 1200, which may

be particularly confusing if you are using 2-up or 4-up printing. To print the first page first, turn on the Reverse Order option in the Print dialog box.

ClarisDraw 1.0v1

- If you have problems printing in the background, you may want to increase the Desktop PrintMonitor extension's preferred size to 300K (by using the Get Info command, as explained in the instructions that came with your Macintosh). The extension is located in the Extensions folder inside your System Folder.

ClarisImpact 1.0v1

- If you have problems printing ClarisImpact documents from a Power Macintosh, upgrade to ClarisImpact 1.0v3.

DeltaGraph Pro 2.0.3

- When printing charts, always click the QuickDraw button in the Print dialog box.

FrameMaker 4.0

- If you import text as a graphic, you can crop it on the screen but it will print uncropped.
- Rotated text in large point sizes will print as a gray box. For best results, break up the text blocks into smaller pieces or individual characters.

MacDraw II 1.1 v2

- To print in grayscale, follow the usual instructions and also turn on the Print Color Patterns in the Print Options dialog box and select Color in the Image pop-up menu in the Print dialog box.
- If you experience problems when printing your MacDraw II document with layout of 2-Up or 4-Up, try using a different program, like ClarisDraw.

Microsoft Excel 4.0 and Lotus 1-2-3

- To print in grayscale, check the Print Using Color option in the Print dialog box and select Color in the Image pop-up menu.

Microsoft Excel 5.0

- If colored cell borders drop out when printing, try using yellow or brown or you can use the line tool in the Drawing tools palette.

Microsoft Word 6.0

- When you cancel a print request from MicroSoft Excel 6.0, some of the document will still print. If you are using desktop printing, try stopping the print queue on your desktop printer and then removing the print request instead of cancelling. To do this, click on you desktop printer icon and select Stop Print

Queue from the Printing menu.

Print Shop Deluxe 1.0

- Make sure you open your document before printing.

SoftWindows 1.0

- You may not be able to print to your StyleWriter 1200 from SoftWindows. Contact Insignia Solutions Inc. for more information on printing from SoftWindows.

Studio/8 v 2.0 and Studio/32 v 1.2

- Always click the QuickDraw button in the Print dialog box.

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Tech Info Library Article Number:19388



Tech Info Library

Workgroup Server 6150, 7250, 8550: Comparison Chart (3/97)

Revised: 3/3/97
Security: Everyone

Workgroup Server 6150, 7250, 8550: Comparison Chart (3/97)

Article Created: 22 February 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article is a comparison chart for the Workgroup Server 6150, 7250, and 8550.

DISCUSSION -----

Here is a chart comparing the Workgroup Server 6150, 7250, and 8550.

Begin_Table

Product Features	6150/66	7250/120	8550/132
Processor	601/66 MHz	601/120 MHz	604/132 MHz
L2 Cache	256 KB	256 KB	512 KB
CPU Card	No	No	Yes
RAM (shipping with)	16 MB	16 MB	24 MB
RAM (expandable to)	128 MB	256 MB	512 MB
Number of RAM Slots	2	4	8
VRAM	DRAM video	1 MB (2)	2 MB (2)
Number of VRAM Slots	n/a	4	4
Expansion Slots	1PDS/NuBus	3 PCI	3 PCI
Drive Bays	3	4	4 (1)
Internal HD	1.2 GB	1.2 GB	2 GB
Internal CD Player	AppleCD 600i	AppleCD 600i	AppleCD 600i
Internal Floppy Drive	1.4MB SuperDrive	1.4MB SuperDrive	1.4MB SuperDrive
Internal DAT Drive	n/a	n/a	DDS-2 DAT Drive
System SW	MacOS 7.5.1	MacOS 7.5.3	MacOS 7.5.3
		OT 1.1	OT 1.1
Configurations	Two	Three	Four

End_Table

(1) The Workgroup Server 8550 has four drive bays set up by Apple. An additional "fifth" drive bay can be added to the lowest bay, but the drive cage and cable have to be provided by a third party and installed by an authorized Apple service technician.

(2) VRAM DIMMs must be 112-pin fast-paged mode, 32 bit wide, and 70 ns RAM access time or faster. Do not use 256K VRAM SIMMs.

Article Change History:

03 Mar 1997 - Added keyword.

05 Dec 1996 - Added information on number of RAM slots.

03 Jun 1996 - Added information on VRAM.

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Tech Info Library Article Number:19389



Tech Info Library

Color StyleWriter 2200: v2.1.2 Readme File (2/96)

Revised: 2/22/96
Security: Everyone

Color StyleWriter 2200: v2.1.2 Readme File (2/96)

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Article Created: 22 February 1996

TOPIC -----

This article contains the read me file for the Color StyleWriter 2200 v2.1.2 software.

DISCUSSION -----

Information About Your Color StyleWriter 2200 Printer

This document contains important reminders and some information that's not in the user manual.

Installation and Setup Tips

Follow the instructions in the user manual to install the Color StyleWriter 2200 software. Keep the following tips in mind when setting up and working with your new software:

- If you are having problems during installation, restart with Extensions off and try installing again.
- After installing the printing software, you must create a desktop printer. To do so, select the Color SW 2200 in the Chooser, then close the Chooser.
- If you have a PowerBook computer, see "Special Information for PowerBook Users" in the section "Telling Your Computer to Use the Color StyleWriter 2200" in Chapter 1 of the user manual.
- If you get the message, "Serial port in use by another application, please quit the application and try again," restart your Macintosh before trying to print again.
- If you upgrade your system software, you must reinstall the Color StyleWriter

2200 software.

- Close the Chooser after making any changes to it.
- See the Troubleshooting chapter in the Color StyleWriter 2200 user manual for more information.

About Desktop Printing

Your new printing software comes with Desktop PrintMonitor version 1.0.3. You use Desktop PrintMonitor to create printer icons (or "desktop printers") on your Macintosh Operating System (Mac OS) desktop. You can print a document by simply dragging it to a desktop printer icon. Desktop printers also give you more control over printing, including setting printing priorities and choosing specific times for printing.

Installed Desktop Printing Files

The following files are installed for desktop printing on computers that use version 7.1 or later of the Mac OS:

- Desktop PrintMonitor, Desktop Printer Spooler, and Desktop Printer Extension are placed in the Extensions folder.
- If your computer has version 7.1.1 or 7.1.2 of the Mac OS, Finder 7.1.3 is placed in your System Folder and Finder Help 7.1.3 is placed in the Extensions folder.
- If your system has version 7.1.1 or 7.1.2 of the Mac OS, these files are placed in the Extensions folder: Thread Manager 2.1, Network Extension 7.1.3, Macintosh Drag and Drop, and Dragging Enabler.

Creating Desktop Printers

You create desktop printers by selecting a printer in the Chooser. A desktop printer icon appears on your desktop when you close the Chooser.

You can drag this icon to any position you want on your desktop. You cannot move it off the desktop.

If you want, you can select other printers in the Chooser and create other desktop printers for easy access. You must close the Chooser each time to create a desktop printer.

The last desktop printer created becomes the default printer. Your documents will automatically be printed on the default printer.

Printing With Desktop Printers

You can print documents within your applications as you normally do. You can also print documents without leaving the Finder, using one of the two methods described here. These methods are particularly efficient when you have a number of documents created by the same application that you want to print at once.

- Drag the icons of the documents (all created by the same application) to the desktop icon of the printer you want to use.
- Select the icons of the documents you want to print and choose the Print command from the File menu.

The computer will show you the Print dialog box so you can choose printing options. Make your choices, then click the Print button.

After a few moments, the document starts to print. If background printing is turned on, you can continue working while the document is printing.

Selecting a Default Printer

If you have more than one printer available, you can select which you want to use. The printer you select is called the "default printer." All your documents will be printed on the default printer until you select a new one.

To change the default printer, use one of these three methods:

- Drag the document you want to print to a desktop printer icon, and it will automatically become the default printer.
- Select the desktop printer icon and use the Printing menu to set the printer as the default.
- Select a new printer using the Chooser.

Note: Switching between printers may change how much information you can fit on a page. It's best to choose a printer before you spend much time formatting the document.

Working With Desktop Printer Icons

Desktop printer icons change to indicate printing status:

You can do the following with desktop printer icons:

- Throw away the icon. Drag the icon to the Trash. You can't throw away a desktop printer icon while the printer is printing a document. (You can create another desktop printer icon for that printer whenever you like.)

Note: You must always have at least one printer icon on your desktop. If you throw away the last icon, it will immediately be created again.

- Rename the icon. Rename the icon as you would any other Finder icon. Click the name to highlight it, then type the new name. This changes the name of the icon, not the name of the printer.
- Move the icon. You may drag the icon anywhere you like on the desktop. However, you may not move it off the desktop.

- Create an alias for the icon. You may create an alias for the icon as you would any Finder icon, by selecting the icon and choosing the Make Alias command from the File menu. The alias may be moved anywhere on or off the desktop.

Monitoring Printing

If you are using background printing, you can use the desktop printer features to monitor and control the documents that are waiting to print. To learn how to turn background printing on and off, see your printer manual.

To monitor the printing of documents:

- 1) Double-click the desktop printer icon you're interested in.

A window opens listing the documents that are printing or waiting to print.

Watching the status messages can be helpful when troubleshooting printing problems. When more than one job is waiting to be printed, a list of print jobs appears in the waiting list, showing the order in which they will be printed (when sorted by print time.)

- 2) Choose what you'd like to do.

- To cancel a print request, select it by clicking its icon and click the Remove button.

You can select only the currently printing document by clicking its icon. (You can select more than one item at a time by holding down the Shift key while clicking.) You can also drag the icon for the print request to the Trash. Note that these methods delete only the print request (also referred to as a spool file), not the document itself.

- To put a print request on hold, select it and click the Hold button.

The print request will stay on hold until you select it again and click the Resume button. You can also put the document that's currently printing on hold by dragging it to the list of documents waiting to print (lower part of the window).

- To indicate that a print request is urgent, select it and choose Set Print Time from the Printing menu. In the dialog box that opens, click Urgent.

- To indicate that a print request should not print until a future time, select it and choose Set Print Time from the Printing menu. In the dialog box that opens, click At Time, then set the time you want.

- To change the order of the items waiting to print, move their place in the list by dragging their titles up or down in the list.

- To sort the list of documents waiting to print, click the title of the column you want to sort by.

For example, to sort by the name of the document, click "Document Name." (You can also sort by choosing the commands in the View menu.) The column title you sorted by is underlined. Sorting the items does not change the order in which they will print. To see that order, sort by Print Time.

- To temporarily stop all documents from printing on this printer, choose Stop Print Queue from the Printing menu.

To resume using the printer, choose Start Print Queue from the Printing menu. If the Desktop PrintMonitor window is open, you can begin printing the document from the first page by Option-clicking the Resume button (holding down the Option key while clicking the Resume button).

Shortcut: The Printing menu for starting and stopping the print queue is available without opening the window for the printer, as long as the printer's icon is selected on the desktop.

- To move a print request from one printer to another printer of the same type (for example, from a StyleWriter 1200 to a StyleWriter 2400), drag the icon for the print request to the icon of the printer where you want to move it.

The printing software won't let you move a print request to an incompatible printer. For example, you can't move a request from a LaserWriter printer to a StyleWriter printer.

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When you install the printer software, the Desktop PrintMonitor is set up to notify you about manually feeding paper the same way your PrintMonitor was set. For example, if you turned off notification for manual feeding in your PrintMonitor, the Desktop PrintMonitor will also have manual feed notification turned off.

If you want to change how the Desktop PrintMonitor notifies you about manual feeding, follow this procedure:

1. Hold down the Shift key and restart your computer, keeping the Shift key depressed until the message "Extensions off" or your normal desktop appears.
2. Open your System Folder and then open your Extensions folder.
3. Double-click the PrintMonitor application.
4. Choose Preferences from the File menu.
5. Select your manual feed option and click OK.
6. Close the PrintMonitor.
7. Restart your computer.

Turning Off or Removing the Desktop Printing Software

Removing a Desktop Printer Icon

You can remove an individual desktop printer icon by dragging it into the trash. If you have only one desktop printer, you can't get rid of the icon by dragging it to the Trash. (The icon will reappear if you do.) To get rid of the desktop printer, you must first select a different desktop printer as the default printer and then drag the desktop printer icon to the Trash. If you don't want to use desktop printer icons, see "Turning Off the Desktop PrintMonitor" or "Removing Desktop Printing Software" for information about how to remove the desktop printer software.

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If you don't want to use desktop printers, you can turn off the Desktop PrintMonitor using the Extensions Manager (available on Macintosh System 7.5, the current version of the Mac OS).

To turn off the Desktop PrintMonitor:

1. Open the Extensions Manager control panel in the Control Panels folder.
2. Click to deselect (uncheck) the Desktop PrintMonitor, Desktop Printer Extension, and Desktop Printer Spooler extensions in the panel.
3. Click the close box to close the control panel.
4. Restart your computer.

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1. Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions off" appears or until your normal desktop appears.
2. Drag the following files from the Extensions folder to the Trash:
 - Desktop PrintMonitor 1.0.3
 - Desktop Printer Spooler 1.0.3
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When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

Having More Than Five Desktop Printers

If you want to have more than five or six desktop printers, you must increase the Desktop PrintMonitor memory allocation by 12K for each additional desktop printer you want. To do so, select its icon (it's in the Extensions folder inside the System Folder), choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

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If you use different versions of the printer software and print using the Desktop PrintMonitor, you may create duplicate desktop printer icons for the same printer. For example, say you select between two versions of the StyleWriter software. If you select your printer in the Chooser using one version, and select it later using the another version, two desktop printer icons will appear for that printer. To avoid creating confusing duplicate printer icons, primarily use one version of your printer software, or rename the icons with distinguishing names.

Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an older version of the PrintMonitor. Newer versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version)
- Obtain a set of installation disks of the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5 and install the printing software again. An English-language version of the Desktop PrintMonitor is installed.

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- Some text prints in the Geneva font instead of the font you selected.

To make more memory available, try these suggestions:

- Have only one program open at a time.
- Increase the amount of memory you give to the program you're printing from by using the Get Info command (as explained in the documentation that came with your Macintosh).
- Use the Chooser to turn off background printing, as explained in Chapter 2 of the user manual.
- Remove any watermarks from your document.
- In the Page Setup dialog box, choose Portrait (normal) orientation instead of Landscape (sideways) orientation.
- Choose Normal in the Print dialog box and Pattern in the Print Options dialog box.
- Desktop printing requires more memory to print than the old PrintMonitor. You can remove desktop printing by using the custom install option called "PrintMonitor 7.1 (no Desktop Printing)".
- When you print in the background, if you often get a message that there is not enough memory to print on a certain desktop printer, you can give that desktop printer more memory by selecting its icon and choosing the Get Info command. Then increase the number in the Preferred Size box. (For more information on increasing a program's memory, see the documentation that came with your Macintosh.)
- As long as there are any print requests waiting to be printed, Desktop PrintMonitor (the desktop printing software) remains active in memory, even when background printing is off. If you are not printing in the background, you can remove all print requests from your desktop printer queues to reduce memory requirements by 160K.
- Use the Memory control panel to turn on virtual memory, as explained in the documentation that came with your Macintosh.
- Try a program like RamDoubler.
- See the "Troubleshooting" chapter in the Color StyleWriter 2200 user manual for more suggestions.

Color Printing Tips

- When printing very light colors in grayscale mode, you may see thin lines fade or break up. If this happens, pick a darker color for the affected object, or try printing with the Pattern halftoning option selected. (In the Print dialog box, click the Color button, then select the Pattern option.)
- If you print a document that should have a smooth gradient from one color or shade to another and notice an unexpected color change, it may be that one of

the colors in the gradient cannot be reproduced by the printer. Try using a different matching method in the Color Options dialog box, or try turning off ColorSync.

- If the blues on your printout appear purple, turn on ColorSync in the Color dialog box.
- In some programs, colors on the screen may look solid but contain tiny black dots when printed. To print solid blocks of color without these black dots, use the Business Graphics color-matching method. In the Print dialog box, click the Color button. In the Color Options dialog box that appears, make sure there is an X in the ColorSync box, and then select Business Graphics from the Matching Method pop-up menu.

If your colors still have too many black dots, create the document in a program that allows you to define each color, then make the color fully saturated. For example, to print yellow without any black dots in it, use your program to define the yellow you are using as 100% red and 100% green without any blue.

Watermark Tips

- When using a watermark, make sure the font that is in the watermark file is also in the Fonts folder inside your System Folder. If you give the watermark file to someone, they also need any fonts that it uses in order to use the watermark in their own documents.

Tips on Sharing Your Printer

- To avoid confusion, be sure to give each shared Color StyleWriter 2200 printer a unique name. If you have more than one printer with the same name in a single AppleTalk zone, the Chooser will display only one of them.
- To clean the print head of a shared Color StyleWriter 2200, you must send the request from the Macintosh that is directly connected to the printer.

Other Printing Tips

- If you see very thin stripes near the bottom of your printout, use your application program to make your bottom margin larger. A bottom margin of 0.8 inches or greater is best.
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.
- If you are printing from a Quadra 800 and you get a message that the battery on the Color StyleWriter 2200 is low, be sure to click Okay and dismiss the dialog BEFORE replacing the discharged battery.

Printing With QuickDraw GX

..TIL19390-Color_StyleWriter_2200-v2-1-2_Readme_File_2-96_(TA35111).pdf

If you have QuickDraw GX on your system, the Color StyleWriter 2200 Installer will automatically install everything you need for printing with QuickDraw GX.

- If you installed QuickDraw GX after you set up your Color StyleWriter 2200, you must reinstall the Color StyleWriter 2200 software.
- After you click the Print button to print a complex document, you may notice a delay before you see printer activity.

If printing with QuickDraw GX doesn't produce satisfactory results, you can use the GX Helper utility to turn off QuickDraw GX and use the regular QuickDraw printing software. For more information, see Appendix E of your user manual.

Using the Color StyleWriter 2200 With Application Programs

If you have problems printing from a specific program, it may be a problem in that program. If you have problems, contact the publisher of the program. In some cases a newer, more compatible version of the software may be available.

- In some programs—such as Microsoft Word 5.1, WordPerfect 3.0, ClarisWorks 2.0, and Symantec GreatWorks 2.0—rotated text created within the program may print with jagged edges. For best results, create the rotated text in another program and paste it in.

Notes About Specific Programs

The following list describes some special situations that you should be aware of when working with specific programs. (There may be other problems with these programs or with other programs not mentioned in this document).

AdobeType Manager

- When you install version 3.8.1 or later of Adobe Type Manager, some system fonts are removed from your system and placed in a folder called "De-installed Fonts1." If you later turn off ATM, drag all the fonts in the "De-installed Fonts1" folder back into the Fonts folder inside the System folder to prevent characters with jagged edges.
- If you rotate Adobe Type 1 fonts in FreeHand 3.11 and then paste them into another program, your Macintosh will display a system error when you try to print.
- If you print rotated Adobe Type 1 fonts using FrameMaker 4.0, your Macintosh will display a system error.
- If you print rotated Adobe Type 1 fonts that are also bold or italic using Intellidraw, and text will not print, you probably need to upgrade to ATM version 3.8.1.
- If you get incorrect output when you try to print rotated and flipped Adobe Type 1 fonts, try using a TrueType font instead.

..TIL19390-Color_StyleWriter_2200-v2-1-2_Readme_File_2-96_(TA35111).pdf

- When Adobe Type 1 fonts are both outlined and underlined, characters may be misprinted (incorrect locations, multiple characters in same location, lower portions of characters shift left or right).

Adobe Dimensions

- Always print your documents in the foreground when using Adobe Dimensions. To turn background printing off, open the Chooser, click Off for Background Printing. If you accidentally print in background and your Macintosh crashes, you may have to restart with extensions off, open your desktop printer and drag all print requests from the queue.

Adobe Illustrator 5.0

- Unless you have at least 10 MB of free disk space on your startup disk, you will see a "disk is full" error message when you try to print. The more complex the document, the more space you need.
- If banding occurs in gradient fills, try printing with the Pattern halftoning option selected. (In the print dialog box, click the Color button, then select the Pattern option.)

Aldus PageMaker 5.0

- To see the Color StyleWriter 2200 Page Setup and Print dialog boxes, click the Setup button in PageMaker's Print dialog box.
- When printing rotated PICT or EPS images, be sure background printing is turned on in the Chooser. If you must print in the foreground, rotate the image in another program, then import it into PageMaker in the orientation in which you plan to print it.
- PageMaker 5.0 prints pages in reverse order on the Color StyleWriter 2200, which may be particularly confusing if you are using 2-up or 4-up printing. To print the first page first, turn on the Reverse Order option in the Print dialog box.

ClarisDraw 1.0v1

- If you have problems printing in the background, you may want to increase the Desktop PrintMonitor extension's preferred size to 300K (by using the Get Info command, as explained in the instructions that came with your Macintosh). The extension is located in the Extensions folder inside your System Folder.

ClarisImpact 1.0v1

- If you have problems printing ClarisImpact documents from a Power Macintosh, upgrade to ClarisImpact 1.0v3.

DeltaGraph Pro 2.0.3

- When printing charts, always click the QuickDraw button in the Print dialog box.

FrameMaker 4.0

- Some FrameMaker documents, including some the Concern.Doc sample document that comes with the program, will not print with version 3.8.1 of Adobe Type Manger. If you try to print a document and your system crashes, try printing again after turning off or removing the ATM software.
- If you import text as a graphic, you can crop it on the screen but it will print uncropped.
- Rotated text in large point sizes will print as a gray box. For best results, break up the text blocks into smaller pieces or individual characters.

MacDraw II 1.1 v2

- To print in color, be sure to turn on the Print Color Patterns in the Print Options dialog box and select Color in the Image pop-up menu in the Print dialog box.
- If you experience problems when printing your MacDraw II document with layout of 2-Up or 4-Up, try using a different program, like ClarisDraw.

Microsoft Excel 4.0 and Lotus 1-2-3

- To print in color, be sure to check the Print Using Color option in the Print dialog box and select Color in the Image pop-up menu.

Microsoft Excel 5.0

- If colored cell borders drop out when printing, try using yellow or brown or you can use the line tool in the Drawing tools palatte.
- When you choose the Page Setup command, you get Excel's own version of the Page Setup dialog box. Click the Options button to see the version of the dialog box with the special Color StyleWriter 2200 options.

Microsoft Word 6.0

- When you cancel a print request from MicroSoft Word 6.0, some of the document will still print. If you are using desktop printing, try stopping the print queue on your desktop printer and then removing the print request instead of cancelling. To do this, click on you desktop printer icon and select Stop Print Queue from the Printing menu.

Ofoto 2.0

- For best results, make a custom calibration for the Color StyleWriter 2200 and click the Custom Profile button.

The Print Shop v1.3.2

- To print in color, select ImageWriter in the Preferences dialog box.

Print Shop Deluxe 1.0

- Make sure you open your document before printing.

SoftWindows 1.0

- You may not be able to print to your Color StyleWriter 2200 from SoftWindows. Contact Insignia Solutions Inc. for more information on printing from SoftWindows.

Studio/8 v 2.0 and Studio/32 v 1.2

- Always click the QuickDraw button in the Print dialog box.

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Tech Info Library Article Number:19390



Tech Info Library

What are PowerBook Demo files? (2/96)

Revised: 2/22/96
Security: Everyone

What are PowerBook "Demo" files? (2/96)

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Article Created: 22 February 1996

TOPIC -----

A customer has installed the PowerBook 5300 Software Update and he is now noticing the following files in his Extensions folder:

Demo click&drag
Demo drag/lock
Demo single.click

What are these for, and why are they called "Demo"?

DISCUSSION -----

The "demo" files that the customer sees in his System Folder are QuickTime movies. They are used by AppleGuide to illustrate the functionality of the "clickable" Trackpad used in some PowerBook computers. They are only labelled "demo" because they demonstrate the operation of certain Trackpad features.

To see what the movies demonstrate, open them using MoviePlayer, or try the following:

Step 1

Go to the Finder and choose "Macintosh Guide" from the Help/Guide menu.

Step 2

Locate the word "Trackpad" in the index.

Step 3

Click on "How do I use the Trackpad to click and drag?" Click OK.

Step 4

Follow the instructions in the Guide window.

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Tech Info Library Article Number:19394



Tech Info Library

AppleVision Display Software: v1.0.1 & v1.0.2 Changes (5/96)

Revised: 5/21/96
Security: Everyone

AppleVision Display Software: v1.0.1 & v1.0.2 Changes (5/96)

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Article Created: 23 February 1996
Article Reviewed/Updated: 20 May 1996

TOPIC -----

This article contains the changes made between Version 1.0.1 and 1.0.2 of the AppleVision Display software.

DISCUSSION -----

AppleVision Display Software version 1.0.2 contains the following improvements:

- The 1.0.2 installer maintains compatibility with the next System Software Update.
- A driver conflict that caused some computers to restart during the startup process has been eliminated.
- To provide better support for computers with multiple monitors using Accurate Color settings, changes were made to the way the Accurate Color panel updates its pop-up menus and saved settings list.
- To shorten the startup process on computers running System Software 7.1.x, the AppleVision extension was renamed "°AppleVision."
- After recalibration in thousands or millions of colors and restarting the computer, Gamma settings will be saved correctly.
- To eliminate crashes caused by pressing the monitor's bezel buttons during startup, improved error handling has been implemented. However, pressing bezel buttons during startup is still not supported and may cause the software to fail to load correctly.

Article Change History:
20 May 1996 - Corrected typo in title.

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Tech Info Library Article Number:19402



Tech Info Library

QuickTime Conferencing Web Installer: Read Me file (2/96)

Revised: 2/23/96
Security: Everyone

QuickTime Conferencing Web Installer: Read Me file (2/96)

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Article Created: 23 February 1996

TOPIC -----

This article contains the readme file included with the QuickTime Conferencing Web Installer available on the Internet and World Wide Web.

DISCUSSION -----

QuickTime Conferencing Web Installer

This installer will:

- Install free QuickTime Conferencing software for Internet and web use
- Upgrade existing QuickTime Conferencing users to a newer version of the software with enhanced Internet and QuickTime capabilities

With the QuickTime Conferencing Web Installer, you will be able to:

- Videoconference with Mac users around the world via TCP/IP on the Internet
- View live audio-video broadcasts on the worldwide internet
- Make calls or start watching broadcasts from a web page

The QuickTime Conferencing Web Installer installs:

- The QuickTime Conferencing system extensions (version 1.0.4)
- "QuickTime TV" application, for viewing Internet broadcasts
- "QuickTime Web Conference" application, for Internet videoconferencing
- "Conferencing Helper Application", which is used for:
 - launching live connections via the WWW
 - creating files which can launch live connections via the WWW
- QuickTime 2.1 and Sound Manager 3.1 with enhanced QuickTime sound codecs

This release of the QuickTime Conferencing Web Installer has some limitations: you will need bandwidth equal to or greater than (128 kbit/sec) to

videoconference or view live broadcasts, and connectivity is between Mac users only at this time.

Cross-platform support can be gained by purchasing the QuickTime Conferencing ISDN Kit, which supports videoconferencing with users on H.320 compatible Windows systems, or by purchasing the Apple Media Conference software application, which supports audioconferencing with Windows users on the Internet.

In addition, cross-platform and collaboration capabilities such as the shared whiteboard, drag and drop sharing of styled text, pictures and sounds, file transfer and more can be accomplished through purchase of third party or Apple based QuickTime Conferencing collaborative applications.

Basic System Requirements

- Power Macintosh or 68040 Macintosh computer
- System software version 7.5 or newer
- 16 Megabytes of memory
- Internet connection of 128 kbit/sec or more (for instance, T1 or basic rate ISDN)
- MacTCP and Network Software Installer version 1.5, or OpenTransport

Additional System Requirements (For QuickTime Web Conference)

- Video source (for instance, a video camera for A/V Macs or QuickCam for others)
- Sound source (for instance, a Plaintalk microphone)

Installing QuickTime Conferencing Software

Follow these steps to install the QuickTime Conferencing software.

- (1) If you are installing from the Internet web site, download the install package.
- (2) Locate the Web Conferencing Install folder and open it. Double-click the Installer icon located in the folder.
- (3) Read the message that appears, then click Continue.
- (4) If the installer tells you that you must run the Network Software Installer 1.5, download that and install it. Then repeat steps 2 & 3.
- (5) In the Easy Install dialog box, click Install. All the necessary software will be installed on your computer's hard disk.
- (6) When installation is complete, click Restart.

When you restart, you will find a new folder titled "QuickTime Conferencing" on your hard disk. This folder contains the broadcast viewing, conferencing and web browser helper application for QuickTime Conferencing Internet software. Also included is the QuickTime application MoviePlayer 2.1. Note that the QuickTime

Conferencing Web Installer will install QuickTime version 2.1 as well as a new QuickTime video compressor, H.261, which allows for conferencing at low bit rates. The H.261 compressor is a PowerPC native compressor. Any videoconference session in which all machines are PowerPCs, will use the H.261 compressor.

To Place a Videoconference Call to an Internet User

When using QuickTime Web Conference as a standalone application:

(1) Configure your MacTCP or OpenTransport TCP/IP control panel as your Internet Service Provider (ISP) recommends.

(2) Launch the "QuickTime Web Conference" application

(3) Select the menu item "Call" from the "File" menu.

(4) Type in the host name or IP address of the Internet user with whom you wish to videoconference and click on 'Connect'.

(5) The call will be placed via the Internet and an audio-video connection established

(This feature temporarily disabled for 1.0.4a4) During a connection, you can store a "QTC Calling Card" for a QuickTime Conferencing Internet user, by selecting the "Save Calling Card" menu item in the "File" menu. The next time you wish to call the user, you can select the "Speed Dial" option and select the QTC Calling Card for that user. You can also save a single QTC Calling Card, to represent a group of conferencing users. To do this, select the "Save Group Card" menu item. When you wish to re-establish a conference with the same participants, select the "Speed Dial" option, and then select the QTC Calling Card for the group of conferencing users.

Calls can be initiated from a web page. A URL to a QTC stored-address file (with a .qtc extension) can cause QuickTime Web Conference to launch, open the stored-address file, and attempt to make a connection to the address described in the file. The server and browser must both be properly configured for QTC; this process is described below.

To View an Internet Broadcast

When using QuickTime TV as a standalone application:

- Configure your MacTCP or OpenTransport TCP/IP control panel as your Internet Service Provider (ISP) recommends.

- Launch the "QuickTime TV" application

- Select the menu item "Watch Broadcast" from the "File" menu.

- Type in the domain name or ip address of the Internet live broadcast you wish to watch

- The broadcast will be viewed via the internet

(This feature temporarily disabled for 1.0.4a4) While viewing a broadcast, you can store a "QTC Calling Card" for a QuickTime Conferencing Internet user, by selecting the "Save Calling Card" menu item in the "File" menu. The next time you wish to view the broadcast you can select the "Speed Dial" option and select the QTC Calling Card for that broadcast. You can also save a single QTC Calling Card, to represent a group of broadcasts. To do this, select the "Save Group Card" menu item. When you wish to re-establish a session with the same set of broadcasts, select the "Speed Dial" option, and then select the QTC Calling Card for the group of broadcasts.

Watching a broadcast can be initiated from a web page. A URL to a QTC stored-address file (with a .qtc extension) can cause QuickTime Web Conference to launch, open the stored-address file (a "calling card"), and attempt to make a connection to the address described in the file. The server and browser must both be properly configured for QTC; this process is described below.

Configuring a Web Browser for QuickTime Conferencing Calling Cards

Netscape 2.0b4 and later comes pre-configured for QTC.

To configure other web browsers so that they may view live broadcasts and connect to other users for videoconferences on the Internet, follow the steps listed below:

In general, for any web browser,:

(1) Install the "Conferencing Helper Application" as the Helper Application for the Mime Type "video/x-qtc", with the file extension ".qtc".

Specifically for Netscape (versions 1.1 through 2.0b3), follow the directions below:

- From the Netscape Options menu, choose General Preferences. The Preferences panel opens, showing a variety of preferences to select.

- Choose the panel in preferences which says "Helpers". The window changes to show the Helper Applications settings.

- Type in the Mime type "video"

- Type in the Mime sub-type "x-qtc"

- Type in the extension ".qtc"

- Set the "Action" to launch application.

- Click on "Browse", and then a file directory pop-up is displayed. Browse through your directories, and select the "Conferencing Helper Application" in the local "QuickTime Conferencing" folder on your hard disk. When you are done with this step, the "Conferencing Helper Application" will be displayed as the helper application for the Mime type "video/x-qtc" with action "Launch" and

extension ".qtc".

- Close the preferences panel of Netscape, and close the application. When you restart Netscape, you will now be able to launch the appropriate QuickTime Conferencing application to view live broadcasts and make video conference connections to other users, after restarting Netscape.

Configuring a Web Server for QuickTime Conferencing Calling Cards

The following steps will result in the creation and usage of a file which can be used from within HTML to reference a QuickTime Conferencing broadcast or videoconference connection.

(This feature temporarily disabled for 1.0.4a4)

1) The first step is to create a QTC "calling card" which can be referenced from HTML:

- Establish a QuickTime Conferencing connection (live broadcast viewing or a videoconference session) using an existing QTC application, such as QuickTime TV, QuickTime Web Conference (version 1.0.3) or Apple Media Conference (version 1.1).

- Save a reference to the connection (conferencing user or live broadcast) by selecting "Save Calling Card" in QuickTime TV or QuickTime Web Conference. You can save a reference to a set of connections by selecting "Save Group Card" in QuickTime TV or QuickTime Web Conference.

- Launch the Conferencing Helper Application included with the Conferencing Web Installer.

- Convert the QTC calling card (typically found in System Folder/Preferences/QTC Calling Cards) using the "Convert Calling Card" menu item in the Conferencing Helper Application. The file will be converted to a data fork only file format, which can be stored on Macintoshes, PCs and UNIX-based web servers.

2) The second step is to transfer the selected QTC calling card to the web server.

3) The third and final step is to configure the web server so that it is aware of the QuickTime Conferencing MIME type.

To configure your Web browser so that web pages can reference QuickTime Conferencing connections, you will typically need to add a line to the list of supported MIME types for the web server. For web server configuration files, where the configuration is specified as:

```
<type> <suffix> <mac file type> <mac creator> <mime type>
```

add the following line, so that QuickTime Conferencing connections referenced via HTML will be supported at the web server:

```
BINARY .QTC .qtc * video/x-qtc
```

The configuration file command may be different for various HTTP web servers, but this example should serve as a useful guideline.

QuickTime Conferencing and Firewalls

At those sites with Internet firewalls, it may be necessary to configure the firewall so that QuickTime Conferencing applications can use certain features.

- To allow incoming QuickTime Conferencing calls to be received at an Internet site, it is necessary to allow incoming TCP traffic on port 458.
- To allow outgoing QuickTime Conferencing calls at an Internet site, it is necessary to permit outgoing TCP traffic on port 458.
- To allow QuickTime Conferencing broadcasts to be transmitted from an Internet site, it is necessary to allow incoming and outgoing TCP traffic on port 545.
- To allow QuickTime Conferencing media streams to flow outwards through the firewall, UDP traffic with static port 458 and with dynamic port values greater than or equal to 7000 must be allowed outgoing.
- To allow QuickTime Conferencing media streams to flow in through the firewall, UDP traffic with static port 458 and with dynamic port values greater than or equal to 7000 must be allowed incoming.

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Tech Info Library Article Number:19403



Tech Info Library

Printers: Paper Weight Conversions (2/96)

Revised: 2/23/96
Security: Everyone

Printers: Paper Weight Conversions (2/96)

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Article Created: 23 February 1996

TOPIC -----

How do I convert a paper weight of grams/meter² (g/m²) to Lbs? My ream of paper says 75 grams/meter².

DISCUSSION -----

The international weight of paper is measured in grams/meter² (g/m²), to convert this to the U.S. standard measurement of pounds (Lbs), use this formula:

$$.2667 \times \text{g/m}^2 = \text{Lbs}$$

Examples:

$$.2667 \times 75 = 20.0025 = 20 \text{ lb}$$

$$.2667 \times 90 = 24.003 = 24 \text{ lb}$$

$$.2667 \times 60 = 16.002 = 16 \text{ lb}$$

Convert from Lbs to g/m²

$$\text{Lbs} / .2667 = \text{g/m}^2$$

Example

$$28 / .2667 = 104.99 = 105 \text{ g/m}^2$$

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Tech Info Library Article Number:19404



Tech Info Library

Network Server: AIX and Application Binary Compatibility (6/96)

Revised: 6/24/96
Security: Everyone

Network Server: AIX and Application Binary Compatibility (6/96)

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Article Created: 26 February 1996
Article Reviewed/Updated: 24 June 1996

TOPIC -----

This article will provide a brief introduction to Network Server hardware running IBM's AIX 4.1.4 operating system, and will discuss hardware and software considerations relating to application binary compatibility.

DISCUSSION -----

Most of the thousands of AIX 4.1 applications running today on IBM's RS/6000 platform should run on the Network Server AIX 4.1.4 without any modification. Exceptions include those applications with specific hardware dependencies, and applications which do not yet run on AIX 4.1 due to incompatibilities between IBM's implementation of AIX 4.1 and previous releases of AIX.

IBM's AIX 4.1 represents a state of the art UNIX operating system adhering to accepted industry standards including IEEE POSIX, FIPS 151-2, and XPG4. AIX 4.1 is also designed to meet the emerging common application interface as defined by Specification 1170. AIX features supported include:

- JFS (Journaled File System) with mirroring and striping.
- UNIX networking including NFS, TCP/IP.
- Common Desktop Environment (industry standard UNIX GUI).
- System Management Interface Tool and Visual System Manager.

Network Server with AIX 4.1.4

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Apple will provide the AIX 4.1.4 operating system running on high-performance hardware custom-designed to be a greater server platform. AIX 4.1.4 provides a high-performance base operating system on which to run higher-level services such as file, print, and database. Additional Apple value-added features required by our customers will also be provided. To meet these needs, the

Network Server integrates a number of complex technologies, from several different sources.

- PowerPC RISC processor technology from IBM, Motorola, and Apple.
- IBM's AIX 4.1.4 including UNIX networking and AIX Windows (X and Motif)
- Berkeley-style sockets and TLI-compliant AppleTalk protocol stack, with router functionality and support for multiple Ethernet interfaces.
- Third-party solutions such as RAID and file/print services.

Considerations for Binary Compatibility

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Binary compatibility means that a compiled program (the executable) can be taken from one platform to another without having to either recompile it, or make source code changes.

Most applications will be binary compatible with AIX 4.1.4 running on the Network Server because in most cases, differences in hardware that may affect binary compatibility are masked by the operating system environment, and are not visible to the applications layer. In order to ensure application binary compatibility, Apple has been working with different ISVs.

Application Binary Interface (ABI)

The IBM AIX 4.1 ABI defines all the elements developers need to create applications that will install, execute, and run unmodified on AIX 4.1. This includes such key definitions as loading and linking, conventions, object formats, the execution environment, networking infrastructure, and installation and packaging information. The core of this definition will consist of the IBM AIX 4.1 interfaces. Apple will add some additional interfaces to it's value added subsystems (that is AppleTalk) and will by necessity have to delete interfaces that support IBM-specific hardware.

For UNIX users, the AIX 4.1 ABI will provide platform binary compatibility based upon leading edge hardware technology and software specifications. The AIX 4.1 ABI specification enables binary applications to run across AIX systems from different vendors, and to provide a standards-driven, open environment for tomorrows users today. Applications developed to the AIX 4.1 ABI should run unmodified on Network Server AIX 4.1.4.

Application Programing Interface (API)

The API defines the set of system calls, library functions, header files, commands and utilities that an application developer is allowed to use to develop a compliant application. ISVs are mainly concerned with programming to the API. Underlying the Network Server AIX 4.1.4 API are key industry standards including:

- X/Open XPG4
- X/Open XNFS
- X/Open XTI
- X Window System (X11R5)

- OSF AES (Open Software Foundation Application Environment Specification)
- IEEE POSIX

Available AIX Applications

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There are about 3,000 AIX 4.1 applications listed in IBM's "AIX Power Solutions" catalogue, which can be ordered from IBM, Document No. GC67-0210-04. AIX applications listings are also available on the World-Wide Web, the top level URL is:

<http://www.mfi.com/softwareguide/AIX-Solutions/>

IBM has stated that more than 10,000 applications have been developed for AIX since it was introduced in 1990. AIX was first ported to the PowerPC by IBM in 1993 in a release of AIX 3.2.5. Most AIX 3.2.5 applications will run on AIX 4.1 and will also be binary compatible with the Network Server. IBM has an AIX V4 Certification Program to help developers certify that their AIX 3.2 solutions run on AIX 4.1.

Apple is in the process of testing the AIX binary compatibility of the Network Server platform and will provide more specific information as it becomes available.

Applications that are not Binary Compatible with Network Server AIX 4.1.4

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The ability to take a compiled program (the executable) from one platform to another and run it without having to make any source code changes is affected by many things. Certain applications may need some modification if they are affected by any of the following:

The processor and the expansion bus

The Network Server platform uses the PowerPC 604 microprocessor, which does not implement all of the instructions in the original POWER chipset or the POWER2 architecture. If an application uses hard-coded assembly or compiler options which result in instructions which are not implemented on the PowerPC 604, then the binary may not run on the Network Server platform. The operating system attempts to mitigate this problem by emulating many of the unimplemented instructions.

The Network Server platform's principal hardware incompatibility as compared with the existing base of AIX applications is its exclusive use of the PCI expansion bus. Almost all of the current AIX platforms from other vendors use IBM's MicroChannel Architecture (MCA) expansion bus or provided both MCA and PCI buses. If an application depends on a specific MCA expansion card such as a multi-port serial card or Centronics printer, then a functionally equivalent PCI card (and supporting AIX driver software) may not be available. Apple believes the PCI expansion bus is becoming widely adopted and is working with third-parties to promote the availability of PCI cards and drivers for the

Network Server platform.

The system API, including device drivers interfaces and kernel extensions

For example, Apple has adopted the Open Firmware model to support PCI card self-configuration on Network Server and future desktop platforms. Device driver writers will need to develop Open Firmware-based configuration methods to correctly invoke their drivers on the Network Server platform. Apple is creating an addendum to the AIX Device Driver's Guide which describes these relevant Open Firmware issues.

The libraries, commands and other system utilities

In AIX 4.1, the Korn shell, /bin/ksh, is linked to /bin/sh, which is traditionally the Bourne shell. If an application uses a Bourne shell script which is incompatible with the Korn Shell, the procedures would not perform correctly on AIX 4.1. Most Bourne shell scripts are compatible with the Korn shell, however.

In addition, IBM reports in the "AIX Version 4.1 Porting Guide" that some applications will run on AIX 3.2.5, but not AIX 4.1; some of the problematic system services are listed below:

- XPG4 changed command output formats
- Unsupported loadable AIX kernel extensions
- Certain high-function terminal APIs
- IBM X input device programming interfaces instead of the X11R5 standard input interfaces
- Communications I/O LAN device driver programming interface
- SCSI device configuration methods (IHVs)
- nlist () interface
- DCE threads

The resulting incompatibilities for the list above are not unique to Apple's AIX implementation but are due to incompatibilities between IBM implementation of AIX 3.2.5 and 4.1.

There are other factors affecting the availability of binary compatible applications for the Network Server AIX product. These include:

- Availability of ABI test suites
- Third-party (ISV) application testing and certification
- Performance tuning considerations
- Third-party marketing efforts (sales training, technical support)
- Support for third-party applications

Macintosh Applications

Macintosh applications are not supported as the Macintosh Application Environment (MAE) is not supported on AIX.

Article Change History:

24 Jun 1996 - Corrected wording.

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Tech Info Library Article Number:19405



Tech Info Library

Performa & TelePort Gold II Modem: How It Draws Power (2/96)

Revised: 2/27/96
Security: Everyone

Performa & TelePort Gold II Modem: How It Draws Power (2/96)

Article Created: 26 February 1996
Article Reviewed/Updated: 27 February 1996

TOPIC -----

I have a Macintosh Performa 6112CD which includes a Global Village TelePort Gold II modem. I want to use the modem with another Macintosh computer. How can I do this?

DISCUSSION -----

The Global Village TelePort Gold II modem draws power from the ninth pin on the serial connector. So, you cannot use this modem with a Macintosh which does not provide this type of serial port. Additionally, there are no solutions available to convert the Global Village TelePort Gold II modems to use an external power supply or ADB port as its power source. If you are using a Macintosh computer that does not provide this type of serial port, then you need to purchase another modem.

Alternatively, if the two computers are connected to each other in a network, you may be able to use third-party software that allows a modem to be shared across a network.

Article Change History:
27 Feb 1996 - Made minor wording change.

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Tech Info Library Article Number:19407



Tech Info Library

Why Does Clip Art Print Out Jagged? (2/96)

Revised: 2/26/96
Security: Everyone

Why Does Clip Art Print Out Jagged? (2/96)

=====

Article Created: 26 February 1996

TOPIC -----

Why is it that some clip art I have prints smoothly, while some has jagged edges?

DISCUSSION -----

There are two types of graphics formats used on personal computers: bitmapped and vector (or object-oriented) graphics.

Bitmapped graphics

Bitmapped graphics are a matrix of picture elements (called pixels), each one of which has a color assigned to it. The collection of these elements define what an image looks like. Since it is a matrix, the image you look at does not have any inherent properties which define its characteristics. For example, a "line" is a collection of dots, rather than a solid line.

If the image is scaled or magnified, the dots will become more visible. Considering that your screen has a resolution of about 72 dots per inch, and even low-end printers have 300 dots per inch, it is more likely that you will see such "pixellation," especially if color information is lost as part of the printing process.

In Macintosh terminology, MacPaint, TIFF, GIF, or JPEG images are bitmapped graphics, so you can expect to see some pixellation when you print. Exceptions would be pixmaps which are imaged at extremely high resolution--resolutions which equal or exceed your printer's resolution. You will find it easy to spot these because they tend to be several megabytes in size.

Vector images

Vector images are object-oriented collections of geometrically defined elements. For example, a line really is a line--an object which consists of information

specifying its start and end coordinates, color, width, and other characteristics. Similarly, text just consists of the string information to draw and some font information. The dots that comprise the letters are not stored.

A picture comprised of vector elements can be scaled to any size, and the resulting output will be very smooth and will generally contain the characteristics of the original image.

On your Macintosh, vector formats include PICT, EPSF, and PostScript.

Conclusion

There are literally hundreds of file formats in use in the Macintosh, UNIX, and PC worlds. However, the basic limitations above apply, and many programs allow graphics to be imported from similar formats.

So, to avoid bitmapped printouts of your clip art, you need to obtain clip art which consists primarily of vector graphics. Most PICT-based packages would satisfy that requirement, but you should check with the publisher to verify this. If the PICT image is solely defined of one big bitmap, you will get pixellation.

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Tech Info Library Article Number:19408



Tech Info Library

Network Server: AIX System Dumps (2/96)

Revised: 2/26/96
Security: Everyone

Network Server: AIX System Dumps (2/96)

Article Created: 26 February 1996

TOPIC -----

This article describes AIX system dumps on the Network Server 500 and Network Server 700.

DISCUSSION -----

AIX generates a "system dump" when a severe error occurs, such as a kernel panic or hardware failure. Users with root privileges can initiate system dumps as well. A system dump creates a picture of your system's memory contents. System administrators and programmers can generate a dump and analyze its contents when debugging new applications, device drivers, and other kernel extensions. In addition, a system dump may be initiated from the keyboard when the keyswitch is in the service position, using the key sequence CTRL-Option-NumPad1. This may be useful when the system appears to be hung (of course, the system must be responsive enough to handle keyboard input).

If your system stops with an "888" number flashing in the LCD display, the system has generated a dump and saved it to a dump device. Your dump device holds the information that a system dump generates, whether generated by a system or a user. You can copy this information to tape and deliver the data to your service provider for analysis.

NOTE: The system cannot recover from a dump. You must restart the server after a dump has been taken.

Dump Device Configuration

By default, the system dump will be placed on the system paging space, /dev/hd6. You can check the dump settings by using the command "sysdumpdev". The following are the default settings:

```
# sysdumpdev -l  
primary          /dev/hd6
```

```
secondary          /dev/sysdumpnull
copy directory      /var/adm/ras
forced copy flag    TRUE
always allow dump   FALSE
```

It is not recommend, but you can change the dump device and other designations using the "sysdumpdev" command. Since a system dump may occur at any time, any other dump device must be dedicated to this purpose. The system paging space is an ideal dump device -- it will not be needed after the dump takes place, yet the space is still available for the system to use at other times. System installation should correctly configure the size of the paging space to be at lease as large as system memory (since the system dump is a snapshot of system memory this is the worst case scenario). To check the size of the system paging space, execute the following command:

```
# lsps -s
Total Paging Space      Percent Used
      128MB              27%
```

You can get an estimate of the system dump size using the -e option to sysdumpdev.

NOTE: You cannot permanently set the dump device to a logical volume not in the rootvg volume group. During boot time, when the dump device is configured, only the root volume group is accessible.

System Dump Recovery

When a system dump is taking place, status codes are displayed in the LCD display -- see Status Codes below. When the dump is complete, a 0c0 status code displays if the dump was user-initiated, a flashing 888 displays if the dump was system initiated. After the dump is complete, the system halts. You must restart the system to recover the data from the dump device. During system startup, the dump data will be copied to a filesystem specified by the copy directory, by default /var/adm/ras; the filename will be "vmcore.#", where # increases with the number of active dumps.

If there is insufficient space in the designed filesystem, the system will prompt you for removable media (such as a tape drive) on which to copy the dump data. After system startup has completed, copy the dump from the external media to a filesystem which has sufficient free space. Enter the following to copy the dump from /dev/rmt0, the default tape device.

```
# tar -x
```

After rebooting in normal mode and coping the system dump from tape if necessary, use the snap command to copy the dump data and other system configuration information to a blank tape for delivery to your service provider.

```
# snap -gfkD -o /dev/rmt0
```

If you recovered the system dump from tape, you must now append the dump data to

the tar archive created by the snap command. The snap command will have failed to find the dump data in the copy directory.

```
# tar -r dump_file
```

NOTE: The AIX documentation describes two uses of the reset button related to system dumps which do not apply to Apple hardware. On some IBM systems, if the keyswitch is in the service position, the user may initiate a system dump by pressing the reset button. After a system-initiated dump, on some IBM systems, the user may access additional status codes by repeatedly pressing the reset button.

NOTE: If the dump fails and upon reboot you see an error log entry with the label "DSI_PROC" or "ISI_PROC", and the Detailed Data area shows an "EXVAL" of "00000005", this is probably a paging space I/O error. If the paging space is the dump device or on the same hard drive as the dump device, your dump may have failed due to a problem with that hard drive. You should run diagnostics against that disk.

NOTE: AIX supports designating a tape device as the primary dump device, but that capability does not currently work on the Apple Network Server.

System Dump LCD Status Codes

The system LCD may display the following three-digit codes during a system dump.

- 0c0 The dump completed successfully. Send the dump data to your service provider
- 0c2 A system-initiated or user-requested dump is not finished. Wait one minute for the dump to complete and for the operator panel display value to change. If the operator panel display value changes, find the new value on this list. If the value does not change, then the dump did not complete due to an unexpected error. Report the problem to your service provider.
- 0c3 The dump is inhibited.
- 0c4 the dump did not complete successfully. A partial dump was written to the dump device, but there is not enough space on the dump device to contain the entire dump. To prevent this problem from occurring again, you must increase the size of your dump device.
- 0c5 A system-initiated or user-requested dump did not complete. Wait one minute for the dump to complete and for the operator panel display value to change. If the operator panel display value changes, find the new value on the list. If the value does not change, then the dump did not complete due to an unexpected error. Report the problem to your service provider.
- 0c7 A network dump is in progress, and the host is waiting for the server to respond. the value in the operator panel display should alternate

between 0c7 and 0c2 or 0c9. If the value does not change, then the dump did not complete due to an unexpected error. Report the problem to your service provider.

0c8 The dump device has been disabled. The current system configuration does not designate a device for the requested dump. Use the sysdumpdev command to configure the dump device.

0c9 A dump started by the system did not complete. Wait one minute for the dump to complete and for the operator panel display value to change. If the operator panel display value changes, find the new value on this list. If the value does not change, then the dump did not complete due to an unexpected error.

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Tech Info Library Article Number:19409



Tech Info Library

Global Village Modems: Initialization String for MacInTax (2/96)

Revised: 2/27/96
Security: Everyone

Global Village Modems: Initialization String for MacInTax (2/96)

=====

Article Created: 27 February 1996

TOPIC -----

This article provides an initialization string for users of the Global Village modems using GlobalFax 2.5.6 and wanting to use the electronic filing options in Intuit Software's 1995 version of MacInTax.

DISCUSSION -----

You must change the Global Village initialization string if you use the electronic filing option in MacInTax. If you do not change the initialization string, the modem connects but does not send any data.

Workaround

=====

Teleport Bronze II and Teleport Platinum

Initialization string: AT&C0&D2X1

Teleport Gold II

- 1) Start-up with extensions OFF
- 2) Use this Initialization string: AT&F1\N0

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library

PowerBook 5300: PowerBook Tour Has Poor Sound Quality (2/96)

Revised: 2/27/96
Security: Everyone

PowerBook 5300: PowerBook Tour Has Poor Sound Quality (2/96)

=====

Article Created: 27 February 1996

TOPIC -----

Why is the PowerBook 5300 Tour sound quality so poor? I just got my Macintosh PowerBook 5300 series computer (with 8 MB of RAM) and have not changed any settings or installed any software yet.

DISCUSSION -----

PowerBook 5300 Tour Sound

=====

The sound quality of the PowerBook 5300 Tour application may be improved by turning off Virtual Memory. Follow these steps to do this:

Step 1

Pull down the Apple menu and select Control Panels.

Step 2

Open the Memory control panel.

Step 3

Turn off Virtual Memory.

Step 4

Select Restart the from the Special menu.

Step 5

Double-click on the PowerBook 5300 Tour application icon to start the tour.

When the tour is finished or you decide to quit, you may want to turn Virtual Memory back on so that you have enough memory available to open other applications.

Why Virtual Memory Is On =====

Macintosh PowerBook 5300 series computers that come with the minimum configuration of 8 MB of RAM ship with Virtual Memory turned on for your convenience. Many popular applications (the Microsoft Office suite, for example) may require a significant amount of RAM to run. If Virtual Memory was not enabled when the PowerBook shipped, many common applications may not have enough RAM to launch.

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Tech Info Library Article Number:19413



Tech Info Library

HyperStudio: Problems Launching When on a Network (2/96)

Revised: 2/27/96
Security: Everyone

HyperStudio: Problems Launching When on a Network (2/96)

=====

Article Created: 27 February 1996

TOPIC -----

My school purchased the Elementary Reference Bundle, which includes HyperStudio v2.092. When I launch the application, sometimes my Macintosh freezes, other times an error message appears that reads "unauthorized duplicate running". Why?

DISCUSSION -----

Roger Wagner Publishing, who makes and supports HyperStudio, is aware of this issue and is providing an update to 2.097 which allows HyperStudio to run on computers connected to a network. Contact Roger Wagner for the software update.

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Tech Info Library Article Number:19414



Tech Info Library

GlobalFax: Disable 14.4 kbps Faxing in Send Fax Setup (2/96)

Revised: 2/28/96
Security: Everyone

GlobalFax: Disable 14.4 kbps Faxing in Send Fax Setup (2/96)

Article Created: 28 February 1996

TOPIC -----

I am trying to make the Disable 14.4 Faxing setting in the Global Village Send Fax Setup, the retained setting whenever I restart my computer. I have testing various computers (Performa 630, 5200, 6200, 5300CD, and 6300CD) with System 7.5.1, and either GlobalFax 2.5.5, GlobalFax 2.5.4p, GlobalFax 2.5.5p, or GlobalFax 2.5.6p.

I have tried a variety of options to find a workaround, involving the following:

- Throwing the GlobalFax Prefs and Queue Temp File in the trash
- Using Extensions Manager and starting only System 7.5 and Global Village software
- Reinstalling all Global Village software
- Zapping PRAM and rebuilding the desktop
- Running Disk First Aid
- Doing a clean installation of System and Global Village software
- Re-initializing the hard disk and restoring all software from the Performa CD-ROM disc
- Restarting with just GlobalFax, Global Village Toolbox, and Teleport in the extensions and control panel folders.

Why can I not make the Disable 14.4 Faxing setting be maintained through the restart cycle?

DISCUSSION -----

We contacted Global Village, and they have acknowledged this issue. They were unable to commit to when this will be fixed.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for

additional information.

The following computers are in the Macintosh 630CD family: LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640.

The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

The following computers are in the Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

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Tech Info Library Article Number:19416



Tech Info Library

Apexx Technology, Inc. (8/96)

Revised: 8/20/96
Security: Everyone

Apexx Technology, Inc. (8/96)

=====

Article Created: 28 February 1996
Article Reviewed/Updated: 20 August 1996

Apexx Technology, Inc.

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P.O. Box 9291
Boise, Idaho 83707 USA

208-336-9400 (Corp. Headquarters Direct, Customer Service, Technical Support)
208-336-9445 (Business Fax)

800-767-4858 (Pre-Sales Line Only)

Internet: www.apexxtech.com

Company Profile:

Hardware & Software, specializing in instant PC to Macintosh LocalTalk networking. Allows sharing of resources such as bidirectional file sharing and printer sharing. Products include the PCTalk LocalTalk Parallel Interface and EtherChain Parallel Interface. These are bundled with Miramar Systems Personal MacLAN software giving Windows users peer-to-peer networking equivalent to Mac OS file sharing.

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Tech Info Library Article Number:19417



Tech Info Library

AppleShare Client 3.6.1: Speed Copy 1.1 Compatible Issue (2/96)

Revised: 2/28/96
Security: Everyone

AppleShare Client 3.6.1: Speed Copy 1.1 Compatible Issue (2/96)

=====

Article Created: 28 February 1996

TOPIC -----

On Connectix Corporation's World Wide Web site is a patch called AppleShare 3.6.x Patch. The documentation indicates this patch is posted to correct a compatibility issue with AppleShare Workstation v3.6.1 and Speed Copy 1.1.

Is this Connectix patcher modifying Apple code, an extension which can be removed, or modifying Speed Copy? This may cause a problem when troubleshooting, if Apple code is modified, because it will be difficult to set a computer to only Apple extensions and control panels.

DISCUSSION -----

The Connectix patcher is an extension and Read Me, and we were told, is needed for Speed Copy to work specifically with AppleShare Workstation v3.6.1. This patcher corrects a issue with files being corrupted during copy operations.

The patch is an extension that fixes the AppleShare Workstation 3.6.1 software in RAM by disabling the read and write caches. This results in performance loss when coping files to or from an AppleShare 4.2.x file server.

AppleShare Workstation v3.6.1 client software will be included in the next release of System System and System 7.5 Update 2.0, so this compatibility issue will be around for a while. This patcher is not expected to be required for AppleShare Workstation v3.6.2 which is included with the Workgroup Server 7250 and 8550 computers.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19418



Tech Info Library

What Is ISDN (3/96)

Revised: 3/5/96
Security: Everyone

What Is ISDN (3/96)

=====

Article Created: 5 March 1996

TOPIC -----

This article describes Integrated Services Digital Network (ISDN).

DISCUSSION -----

ISDN (Integrated Services Digital Network) is an international network, like a telephone network, that supports rapid data transmission between many different types of personal communications devices, such as telephones, computers, and fax machines. With an ISDN line, you can send and receive both voice and other data, for example pictures, text, or video images simultaneously, at speeds up to 64 kilobits per second (kbps), per B (bearer) channel.

A typical ISDN line consists of two B channels and one D (signaling) channel which makes a BRI (Basic Rate Interface) ISDN line. The B channels are either 56 kbps, or 64 kbps, depending on the telephone company's equipment, and the D channel is 16 kbps. The total bandwidth for a BRI ISDN line is 144 kbps, however, the B channels are actually used for data and/or voice resulting in a bandwidth of 112 or 128 kbps.

The B channels can also be bonded together. Bonding refers to strapping the two B channels together using inverse multiplexing to produce what appears to be one 112 or 128 kbps channel.

Another type of ISDN line, has 23 B channels and one D channel, is the PRI (Primary Rate Interface) which is equivalent to a T1 line. Typically a PRI would be used by large corporations or an internet service provider.

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Tech Info Library Article Number:19420



Tech Info Library

QuickTime Conferencing ISDN Kit: NT-1 Needed (3/96)

Revised: 3/6/96
Security: Everyone

QuickTime Conferencing ISDN Kit: NT-1 Needed (3/96)

Article Created: 6 March 1996

TOPIC -----

This article describes why an NT-1 is needed for an BRI (Basic Rate Interface) ISDN connection, and where to get one.

DISCUSSION -----

Apple's QuickTime Conferencing ISDN Kit does NOT contain an NT-1 (Network Terminal Adaptor) which terminates the ISDN line at the users end, and powers the ISDN line from the Network Interface box to the ISDN device. An NT-1 is needed for a BRI ISDN connection which has two B channels and one D channel.

Users will need to purchase an NT-1. Their cost may run in the \$150 to \$400 range depending on features, like Caller ID and so on. A basic NT-1, without Caller ID, will do the job as well as the best model.

An NT-1 is easily obtainable. Your local telephone provider may offer to sell you one, or you can purchase one from the following companies:

Companies	Phone Number	Model Name
Quicomm	1-800-244-3688	NT-1 Network Terminator
Intellicom	1-800-884-ISDN	Various models
PicturePhone Direct	1-800-810-9966	Tone Commander NT1U-220TC

NOTE: Because an ISDN line needs power and would be unusable in the event of a power outage, a user might also consider connecting the NT-1 to a UPS (Uninterruptable Power Supply).

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Tech Info Library Article Number:19421



Tech Info Library

ISDN: How to Connect an NT-1 (7/96)

Revised: 7/1/96
Security: Everyone

ISDN: How to Connect an NT-1 (7/96)

Article Created: 6 March 1996
Article Reviewed/Updated: 1 July 1996

TOPIC -----

This article describes how to connect an NT-1 (Network Terminal Adaptor) to an ISDN line.

DISCUSSION -----

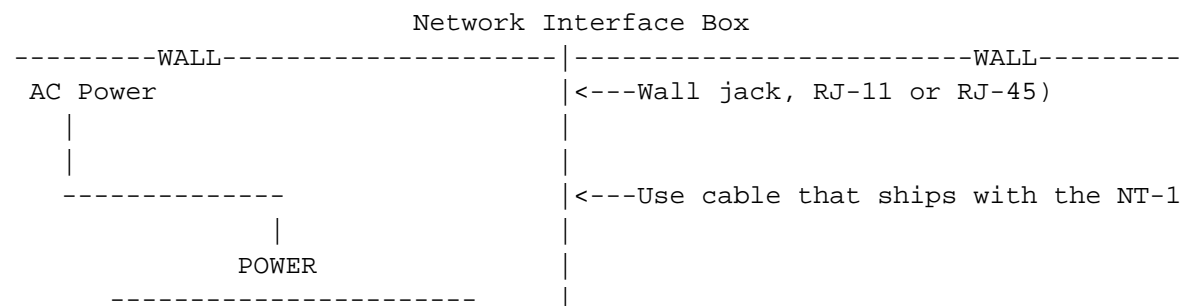
In most ISDN (Integrated Services Digital Network) installations, an NT-1 must be connected to the ISDN line to power the ISDN line from the Network Interface box to the ISDN device. Check with your telephone provider to see if one is needed.

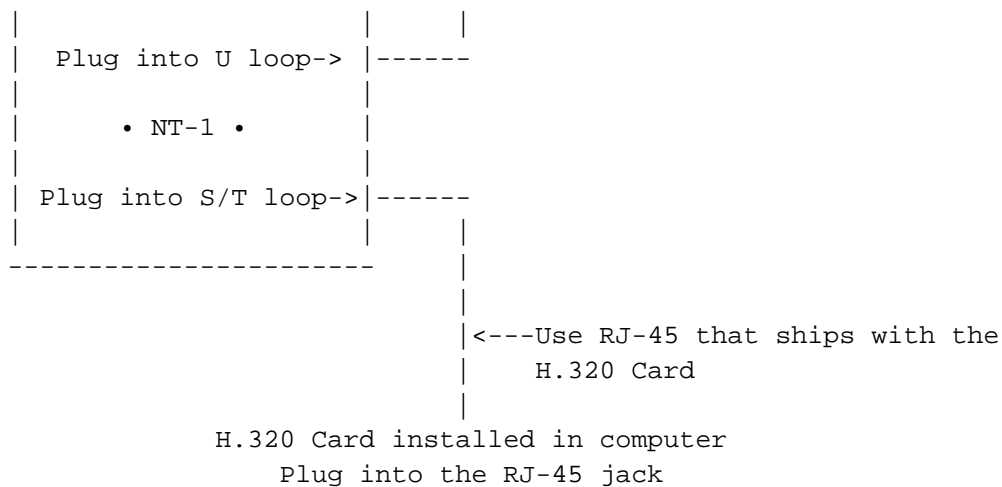
The NT-1 also has lights indicating the state of the ISDN line. Typically, an NT-1 will have Power, U Loop Back, and S/T&U lights.

Also because an ISDN line needs power and would be unusable in the event of a power outage, a user might want to consider connecting the NT-1 to an UPS (Uninterruptable Power Supply).

Below is a diagram showing how to connect an NT-1. An NT-1 may have multiple S/T ports, it does not make a difference which port you use.

Begin_Graphic





End_Graphic

Pin Assignments

=====

Begin_Table

S/T Connector Pin Assignments			
Pin	Function	Pin	Function
1	-----	2	-----
3	RX+	4	TX+
5	RX-	6	TX-
7	-40 VDC	8	GND

U-Line Connector Pin Assignments			
Pin	Function	Pin	Function
1	-----	2	-----
3	-----	4	Tip
5	Ring	6	-----
7	-----	8	-----

Power Connector Pin Assignments			
Pin	Function	Pin	Function
1	+7.5 VDC	2	-40 VDC
3	GND for +7.5	4	GND for -40

DIP Switch Settings on Alpha Telecom UT620 NT-1 Device

DIP Switch Assignments			
Switch	Function	ON	OFF
1, 2	S/T-Termination	Yes	No
3	Bus Timing Mode	Short Passive bus	Point-to-point, or extended passive bus
4	PS2 Selection	SP62020 switching power supply	AD62010 AC/DC power adapter

End_Table

Article Change History:

01 Jul 1996 - Added pin assignments for cables.

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Tech Info Library Article Number:19422



Tech Info Library

ISDN: Troubleshooting Using NT-1 Lights (3/96)

Revised: 3/6/96
Security: Everyone

ISDN: Troubleshooting Using NT-1 Lights (3/96)

=====

Article Created: 6 March 1996

TOPIC -----

This article provides a table to help troubleshoot NT-1 (Network Terminator) issues using the its lights.

DISCUSSION -----

The NT-1 on an ISDN line typically has lights for power, U Loop Back, and S/T&U. These lights can be used to troubleshoot your ISDN line. Below is a table showing varying NT-1 light states:

Begin_Table

Normal Light States

=====

Light	State	Reason	Check
-----	-----	-----	-----
Power	On	Power is on	N/A
U Loop Back	Off	Line isn't being tested	N/A
S/T&U	Off	Line is ready for use	N/A

Other Light States

=====

Light	State	Reason	Check
-----	-----	-----	-----
Power	Off	There is no AC power	Power cord, AC wall jack.
U Loop Back	On/blinking	Line is being tested	Contact local phone company to see if line is actually

being tested.

S/T&U	Fast blinking (many blinks/sec)	Line is attempting to communicate with central office	If light then goes out, the line is ready to be used. If the light stays on, then check both cables coming out of the NT-1. If the problem continues, contact your phone company.
S/T&U	On steady	Line is not hooked up properly	Check cable going from wall jack to the NT-1.
S/T&U	Slow blinking (1 blink/sec)	Line is not hooked up properly	Check cable going from NT-1 to the ISDN device.

End_Table

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Tech Info Library Article Number:19423



Tech Info Library

ISDN: Who To Contact For ISDN Service (3/96)

Revised: 3/6/96
Security: Everyone

ISDN: Who To Contact For ISDN Service (3/96)

Article Created: 6 Mar 1996

TOPIC -----

This article provides telephone company contact information for ISDN service.

DISCUSSION -----

ISDN service should be obtained from your local telephone provider. Below are telephone numbers for many of the telephone companies across the United States. Call the number corresponding to your local telephone provider.

NOTE: ISDN service is NOT available in all areas of the United States. Typically, you must be within about three miles of the central office equipment, so check with you telephone provider for more details.

Telephone Company Contact Information For ISDN Service

- Ameritech: 800-832-6328 (800-TEAM-DATA)
- Bell Atlantic: 800-570-4736 (800-570-ISDN)
- Bell South: 800-858-9413
- Cincinnati Bell: 513-566-3282 (513-566-DATA)
- GTE:
 - Menu driven information service: 800-4GTE-SW5
 - Florida, North Carolina, Virginia, and Kentucky: 800-483-5200
 - Illinois, Indiana, Ohio, and Pennsylvania: 800-483-5600
 - Oregon and Washington: 800-483-5100
 - California: 800-483-5000
 - Hawaii: 800-643-4411
 - Texas: 800-483-5400

- Nevada Bell: 702-688-7124
- NYNEX: 800-438-4736 (800-GET-ISDN)
- Pacific Bell
ISDN Service Center: 800-472-4736 (800-4PB-ISDN)
ISDN Availability Hotline: 800-995-0346
ISDN Telemarketing (order information): 800-662-0735
- Rochester Telephone: 716-777-1234
- Southern New England Telephone (SNET)
Northern Section (Hartford): 800-243-2542
Southern Section (Stamford): 800-222-2555
- Southwestern Bell: 800-792-4736 (800-SWB-ISDN)
- US West
Arizona, New Mexico, Utah: 800-288-4044
Colorado, Idaho, Montana, Wyoming: 800-289-9091
Iowa, Minnesota, North Dakota, South Dakota, Nebraska: 800-999-2021
Oregon, Washington: 800-222-2121

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Tech Info Library Article Number:19424



Tech Info Library

Apple Adoption of Open Transport 1.1 - Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Apple Adoption of Open Transport 1.1 - Q & A (3/96)

=====

Article Created: 4 March 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on Apple adoption of Open Transport 1.1.

DISCUSSION -----

Question: When will Open Transport become part of Mac OS?

Answer: Open Transport is included as a standard component of the Mac OS beginning with System 7.5.3 (System 7.5 System Update 2.0).

Open Transport v2.0 is being developed as an integral part of the Copland OS release; support is planned for all Copland platforms, including the PowerPC Platform (formerly CHRP).

Question: What Apple products will support Open Transport? Will these also be native on Power Macintosh?

Answer: Apple includes or plans to include support for Open Transport in the following products, as well many other unannounced products:

- Apple Remote Access 3.0
- MacSNMP 1.5
- Copland release of Mac OS

Article Change History:
08 Mar 1996 - Changed distribution status.

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Tech Info Library Article Number:19425



Tech Info Library

Open Transport 1.1: Applications Compatibility Q & A (2/97)

Revised: 2/6/97
Security: Everyone

Open Transport 1.1: Applications Compatibility Q & A (2/97)

=====

Article Created: 4 March 1996
Article Reviewed/Updated: 6 February 1997

TOPIC -----

This article is the Reference Q & A (questions and answers) on applications compatibility for Open Transport 1.1.

DISCUSSION -----

Question: Is Open Transport compatible with existing applications and network extensions?

Answer: Apple and third party developers have announced hundreds of Open Transport compatible applications.

Open Transport includes software libraries that provide "backward compatibility" services in four areas:

- to support existing applications that utilize the documented AppleTalk APIs;
- to support existing applications that utilize the documented MacTCP APIs;
- to support MacTCP Link Access Extensions (mdevs) on case by case basis; and,
- to support existing NuBus based network interface cards and drivers.

Note that the WinSock compatibility services are provided through third party software, available from NetManage. For more information, please refer to Open Transport and Cross-Platform Issues.

Open Transport compatibility services are available to applications accelerated for PowerPC as well as for 680x0 applications, as it provides the necessary "mixed-mode glue" as part of the Software Developer's Kit (SDK).

Question: What is implied when an application is "Open Transport Compatible"? Does that mean that it takes advantage of new Open Transport features?

Answer: Apple has defined three levels of interoperability with Open Transport. The first -- known as Open Transport Compatible -- is used to describe a network application originally developed for "classic" AppleTalk or MacTCP, that now takes advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the new Open Transport configuration utilities. However, they will not realize a significant performance increase on PowerPC Mac OS systems, nor can they take advantage of Open Transport's transport-independence capabilities.

Open Transport Ready applications are those that have been modified to adopt the new Open Transport APIs (XTI). They are PowerPC native, in addition to running on 680x0 Mac OS systems. Open Transport Ready applications not only benefit from the new configuration utilities, but have the opportunity for a significant performance boost when running on PowerPC Mac OS.

The third and final category of interoperability is referred to as Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being PowerPC native, these applications have been modified to exploit the transport-independent capabilities of Open Transport, that is, they can be dynamically configured to support AppleTalk, TCP/IP, or serial communications.

Question: How is backward compatibility for AppleTalk implemented?

Answer: AppleTalk applications backwards compatibility is accomplished by intercepting all AppleTalk networking calls at the ".ddp" driver API. Above this protocol layer, applications written to the classic AppleTalk APIs continue to rely on the classic (680x0 based) implementation of AppleTalk. Calls to the ".ddp" driver are translated to the corresponding Open Transport XTI calls and are then passed to the new native implementation of DDP for processing. The process is reversed for incoming packets.

Using this approach, backwards compatibility is very robust - the classic implementations of ADSP, ASP, ATP, NBP, ZIP, and PAP are actually present (vs. simply mimicked). This also decreases the total memory footprint of backwards compatibility as compared to an implementation based on individual adaptation layers for each of the AppleTalk protocols. The primary trade-off of this approach is that applications relying on backwards compatibility do not gain any meaningful performance increases on PowerPC Mac OS; essentially only native DDP is actually in use in these cases.

Open Transport/AppleTalk also includes broad support for existing applications software and network devices that rely on the Chooser or the Network Control Panel software for selection and configuration, known as "cdevs" and "adevs" respectively.

Question: How is backward compatibility for MacTCP implemented?

Answer: TCP/IP (MacTCP) applications backwards compatibility is accomplished by

intercepting all MacTCP networking calls at the ".ipp" driver level. Calls to the ".ipp" driver are translated to corresponding Open Transport XTI calls and then passed to the native TCP/IP stack for processing. The process is reversed for incoming packets.

This approach allows most MacTCP applications to benefit from the native implementation of the TCP/IP protocols on PowerPC Mac OS, at least to some degree. While the backwards compatibility layer itself must run as 680x0 code, most of the handling of the packet happens in the new native Open Transport/TCP implementation. The drawback of this implementation is that "warts and all" backward compatibility is somewhat less robust; applications depending on idiosyncrasies of MacTCP or referencing internal MacTCP data structures are likely to need an update.

TCP/IP backward compatibility also includes targeted support for select software products that rely on the MacTCP (or Admin TCP) Control Panel software for configuration. Support for these software modules, known as MacTCP Link Access Modules, or simply "mdevs", is more limited than that provided for AppleTalk "adevs", due to certain technical considerations.

Question: Are there other compatibility issues with PCI Mac OS systems and existing network software products?

Answer: Certain network software products -- such as MacIPX from Novell, PathWORKS (LAT and DECnet) from Digital Equipment Corp. or Thursby Software Systems, and Insignia Solutions SoftWindows -- interact directly with the Mac OS Ethernet hardware, expansion slots, and driver software. With the introduction of PCI and Open Transport to Mac OS, these elements have changed substantially; PCI has replaced NuBus, the system Registry has replaced the Slot Manager, Open Firmware has replaced the role of NuBus ROMs, and DLPI has replaced the ".enet" driver API. If not addressed, these changes would have resulted in significant compatibility problems between PCI Mac OS systems and these network software products.

NOTE: For the latest communications software mentioned above, please contact the appropriate third-party vendor for compatibility information with Open Transport 1.1

To support these types of products, Mac OS System Software 7.5.2 (and more recent) includes a compatibility library that allows these products to identify and communicate with the built-in Ethernet controller on PCI Mac OS systems as if it were a "classic" NuBus Ethernet device. This compatibility software emulates not only the necessary low-level Ethernet driver calls, but also the Slot Manager and other related APIs necessary to preserve compatibility with these applications.

This compatibility software is limited, however, in that it supports access only to the built-in Ethernet adapter of PowerPC Mac OS systems with PCI. Thus, existing versions of products such as MacIPX and SoftWindows will not be able to take advantage of PCI network interface options such as token ring, fast Ethernet, or FDDI. New versions of these applications will be required to gain full access to all PCI NIC options.

Note that this compatibility module was not available in the original distribution of System 7.5.2 for the Power Macintosh 9500 (with Open Transport v1.0). This is one of the reasons that customers with 9500s were urged to update to System Enabler 1.1 or greater.

With the availability of System 7.5.3 this compatibility library is included as a part of system software. Customers using MacIPX should note that an updated version of the compatibility library is included as a Custom Install option with the System Update 2.0 installer. For more information regarding this updated library, please refer to the System Update 2.0 release notes.

Question: How is backward compatibility for NuBus network interface cards implemented?

Answer: For 680x0 and PowerPC Mac OS systems with NuBus, Open Transport v1.1 will allow use of existing NuBus NICs and drivers. This compatibility is provided by software support mapping DLPI driver calls generated by new Open Transport protocols to corresponding calls to "classic" Mac OS LAP Manager, .enet and .token APIs.

Question: Are there other known limitations to applications backward compatibility?

Answer: Yes, there are some. Applications that rely on undocumented APIs or examine private data structures in classic AppleTalk or MacTCP will not be fully compatible with Open Transport.

Examples include the MacSNMP AppleTalk and TCP/IP Agents (however, MacSNMP and the Macintosh System Agent are compatible), the Apple Internet Router 3.x and some utilities like MacTCP Watcher and MacTCP Spy.

Updated versions of these software products will be required for full compatibility.

Question: There have been reports of problems with MacX 1.2. Is there an Open Transport compatible X Window System server available?

Answer: Apple MacX 1.5 is compatible with Open Transport and is a recommended upgrade for all customers who have any earlier versions of MacX.

Although not related to Open Transport, there is a known bug in MacX 1.2 that can cause a system crash when running on System 7.5.2.

Question: There have been reports of problems with Apple Remote Access 2.0.1 and Open Transport. What is the status?

Answer: Apple Remote Access 2.0.1 is fully compatible with Open Transport v1.1.

Apple Remote Access 2.0.1 running on a system with the earlier Open Transport 1.0.x releases always operated in the "Remote Only" mode. In that mode, only resources at the remote site would be visible in the Chooser while connected via dial-up; local resources would reappear when the dial-up link was disconnected.

Question: There have been reports of problems with the use of Open Transport 1.0.x and network protocol analysis tools such as AG Group Etherpeek and Neon Software NetMinder. What is the status of this?

Answer: AG Group's Etherpeek Version 3.x and Open Transport 1.1 are compatible. Refer to the AG Group about EtherPeek and LocalPeek questions.

Question: There have been reports of problems with the Apple LaserWriter Bridge and LocalTalk Bridge and Open Transport. What is the status?

Answer: The LaserWriter Bridge and LocalTalk Bridge software has been updated to version 2.1 which is compatible with Open Transport 1.1 or later. Updaters are available on-line from Apple Computer's FTP and WWW sites.

Question: There have been reports of problems with MacTCP Ping and Open Transport. What is the status?

Answer: MacTCP Ping is an unsupported utility developed by Apple Computer specifically for MacTCP. It is not compatible with Open Transport. Compatible Ping utilities, such as MacPing Pro from Dartmouth, are currently available.

Question: There have been reports of problems with Assistant ToolBox and Open Transport. What is the status?

Answer: Assistant Toolbox version 1.3 is compatible with Open Transport. System 7.5.5 and later will include the capabilities of this software within Mac OS and the Assistant ToolBox will no longer be needed.

Article Change History:

- 06 Feb 1997 - Updated article for technical accuracy.
- 15 Apr 1996 - Added note to other compatibility issues questions.
- 26 Mar 1996 - Updated to version 2.1 of Applications Compatibility Q & A.

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Tech Info Library

Open Transport 1.1: Availability and Distribution Q & A (4/97)

Revised: 4/3/97
Security: Everyone

Open Transport 1.1: Availability and Distribution Q & A (4/97)

Article Created: 4 March 1996
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article is the Reference Q & A (questions and answers) on availability and distribution of Open Transport 1.1.

DISCUSSION -----

Question: What is the current version of Open Transport, and what are its key features?

Answer: Open Transport v1.1.2 is the current release of Open Transport. This release is an update to Open Transport v1.1, to address the most pressing customer requests, in advance of the next feature release of Open Transport (currently planned as OT 1.5 - see Future Directions). Open Transport v1.1.1 includes the following updates and new features as compared to the earlier Open Transport 1.1 release:

- now also supports the Performa 5200, 5300, 6200, and 6300 systems;
- includes internal changes to minimize memory fragmentation resulting from dynamic loading and unloading of TCP/IP;
- includes changes to the TCP/IP DNR for inter-operability with sites using the load-balancing name daemon;
- includes changes for support of the upcoming Open Transport/PPP release;
- includes all bug fixes available to date.

Open Transport v1.1 is the version which comes with System 7.5.3. This general release is recommended for all supported Mac OS systems, and includes the following updates and new features as compared to the earlier Open Transport 1.0.x releases:

- now also supports 68030 and 68040 Mac OS systems,
- now also supports PowerPC Mac OS systems with NuBus,
- now also supports NuBus, SCSI, and CommSlot network interface adapters,

- offers tuning to optimize performance of high speed datalinks,
- offers tuning to support multiple client, multithreaded server applications,
- includes support for multinode and multihomed operation of AppleTalk protocols,
- adds support for raw packet access and promiscuous mode, to enable the development of Open Transport-ready network analyzers and other network management utilities,
- recognizes a significantly expanded selection of MacTCP dial-up network extensions (mdevs),
- allows reconnection of a dial-up TCP/IP session without reloading networking and without system restart,
- provides display of the datalink Media Access Control address for Ethernet and token ring networks,
- provides user notification in the event duplicate AppleTalk or TCP/IP addresses are established,
- automatically converts users' existing AppleTalk and MacTCP setting to Open Transport configuration files during installation,
- includes improved compatibility with Apple Remote Access 2.0.1,
- includes improved compatibility with a wider range of DHCP servers,
- provides a basis for future support for PPP-based AppleTalk and TCP/IP remote networking,
- provides a basis for future support for modem and ISDN communications devices,
- includes support for Mac OS system software System 7.5.3,
- includes support for the creation of a "universal system folder",
- includes support for the Network Software Selector utility to provide easy transition from classic to Open Transport networking on Mac OS systems supporting both,
- offers improved Balloon Help text for System 7 users,
- includes all bug fixes available to date.

Question: How is Open Transport v1.1 available?

Answer: Open Transport v1.1 is available through a broad range of distribution channels:

- as a no-charge upgrade to customers with existing MacTCP volume license software maintenance agreements;
- as a no-charge upgrade to customers with existing system software volume license software maintenance agreements;
- as a component of Mac OS system software release System 7.5.3;
- as a component of Mac OS system software update System 7.5 System Update 2.0;
- as a retail software product in single-user software package;
- through an OEM redistribution licensing program from Apple Software Licensing,
- bundled with Apple and third party applications software that are Open

Transport-ready,

- from select Apple-licensed publishers and Internet Service Providers.

Question: How will volume license software maintenance customers receive Open Transport?

Answer: A master copy of the Open Transport software and documentation will automatically be mailed to the contact of record for customers with active MacTCP or Mac OS System Software maintenance contracts.

Question: How could a customer receive a copy of System 7.5.3?

Answer: System 7.5.3 will be pre-installed on Mac OS systems beginning in first half calendar 1996. System 7.5.3 will also become available as a shrink-wrap retail product in first half calendar 1996.

Question: How could a customer receive a copy System 7.5 System Update 2.0?

Answer: System 7.5 System Update 2.0 is available through a variety of channels, including:

- On the Internet at the following sites:
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com/>>
- On America Online, use keyword: applecomputer
- On CompuServe, use GO: APLSUP
- Through Apple User Groups,
- From the Apple Order Center, in floppy or CD update kits. The update is available at no charge plus \$13 shipping and handling. Call U.S. 800-293-6617, ext. 984 to order.

Question: What is the part number and pricing for the Open Transport single-user software package?

Answer: In the U.S. order number M4252Z/A; the estimated retail price is \$39.

Question: Will Open Transport be localized for non-English speaking countries?

Answer: As a part of Mac OS System 7.5.3, Open Transport will be localized around the world. Generally speaking, within 60 days after the update is released in the U.S., a localized version will be available in most major languages in North America, Europe, and Australia. Other regions will provide the improvements that are delivered in this update at a later date. Please contact the Apple Assistance Center in your area for details.

Question: How is Open Transport available to software developers, publishers, and/or Internet Service Providers (ISPs) for redistribution and bundling?

Answer: Apple offers two different redistribution licensing agreements for Open Transport, designed to meet the needs of publishers, software developers, and ISPs.

The first agreement is designed for Internet service providers, network and communications reference work authors and publishers, and others interested in bundling Open Transport software as an added customer benefit to their product or service offering. This license is based on a sliding-scale per-unit license fee, and requires annual reporting of licenses issued. Interested parties should send electronic mail to SW.LICENSE@apple.com.

The second agreement is designed for software developers with products that adopt the new Open Transport APIs who wish to ship Open Transport as a part of an integrated product installation process. This agreement is based on an addendum to the Mac OS SDK, and allows qualified developers to ship the Open Transport run-time environment to end-users as a part of their product.

To qualify, developers must execute the Open Transport License Addendum through Apple Software Licensing, and meet the following requirements:

- have developed an Open Transport-ready or Open Transport-enhanced software product,
- be current subscribers to the Mac OS SDK,
- provide Apple advance notice of their intent to ship their Open Transport product(s),
- distribute the required Open Transport components only in conjunction with their product(s),
- annually report the total number of licenses issued.

Other terms and conditions apply, however, no additional fees (beyond the Mac OS SDK subscription) are required for this license. Interested parties can send electronic mail to SW.LICENSE@apple.com.

Question: Will localized versions of Open Transport software be available for developer and ISP licensing?

Answer: Initially the Open Transport redistribution licensing program will only have the U.S. English version of the software available. Licensing of localized versions of Open Transport will depend upon demand and availability.

Question: What of the earlier Open Transport v1.0.x releases?

Answer: Open Transport v1.0.x releases were all designed for use only on the Apple PCI Macintosh systems:

- Open Transport version 1.0, for the Power Macintosh 9500, was focused on offering compatibility with existing networking client applications and on upgrading the feature set and performance of TCP/IP. It shipped only as an integral part of system software with the 9500.
- Version 1.0.1 was a maintenance update, designed to correct a potential problem with data truncation in large file transfers. Open Transport v1.0.1 was distributed electronically, as an update to be applied to an existing installation of Open Transport v1.0.
- Version 1.0.6 added support for the Power Macintosh 7200, 7500, and 8500 systems and addressed bugs discovered since the 1.0 release. Open Transport v1.0.6 shipped as a component of System Software 7.5.2 version 2 on the Power Macintosh 7200, 7500, 8500, and 9500 models.
- Version 1.0.7 included changes to improve performance and compatibility of Open Transport/TCP with third party SLIP and PPP software and with certain Internet Service Providers (ISPs). Open Transport v1.0.7 was distributed electronically, as an update to be applied to an existing installation of Open Transport v1.0.6.
- Version 1.0.8 was also a maintenance release, and included better compatibility with Qualcomm Eudora, Claris EMailer and EMailer Lite, CE Software QuickMail, and Netscape Communications client software, as well as improvements in BootP and DHCP interoperability. Open Transport v1.0.8 was distributed via a variety of information services and a number of Internet sites - as a full installation of Open Transport software.

Question: Why was Open Transport made available on PCI Power Macintosh systems first?

Answer: Starting with the introduction of the Power Mac 9500, Apple moved to adopt industry standards for both network driver software - Open Transport DLPI - and network hardware - PCI. This strengthened the business case for new and existing third party developers who could, as a result, include Mac OS on PowerPC in their plans for cross-platform network connectivity products. The Power Macintosh 9500 was the first system to incorporate both of these standards, and has since been followed by additional systems and configurations.

In particular, Apple made the business decision to move to standards for networking on the hardware and software fronts in tandem, that is, PCI and DLPI. This created a dependency that required customers deploy Open Transport with their PCI Mac OS systems. It also minimized the work by third parties needed to create drivers for new PCI networking cards. As a result customers have found a broad selection of third party PCI networking options for Mac OS.

Article Change History:

02 Apr 1997 - Updated online references and eMail addresses

25 Nov 1996 - Update current version of Open Transport.

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Tech Info Library

Open Transport 1.1: Developer Adoption Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: Developer Adoption Q & A (3/96)

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Article Created: 4 March 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on developer adoption for Open Transport 1.1.

DISCUSSION -----

Question: Which third party developers support Open Transport?

Answer: Seeding of Open Transport among developers began more than a year in advance of release, and reached more than 5,000 developers. Several hundred developers are actively working with Apple on development efforts.

The following software developers are among those who have announced support for Open Transport to date:

- ACI
- Adobe Systems
- AG Group
- AGE Logic, Inc.
- Asanté
- Atomic Games
- Carnegie Mellon University
- CE Software
- Claris Corporation
- Dantz Development
- Delphic Software, Inc.
- Digital Ocean
- EveryWare Development Corp.
- Farallon Computing, Inc.
- Gradient Technologies
- HI Resolution Software
- Hughes Advanced Systems

- IBM
- Intercon Systems, Inc.
- Maxum
- Mentat Inc.
- Metrowerks, Inc.
- Neon Software
- NetManage, Inc.
- NorthWestern University
- Novell
- Pacer Software
- Pole Position Software GmbH
- Progressive Networks
- Quark, Inc.
- Remedy Corp.
- Seaquest Software
- SoftArc
- StarNine Technologies, Inc.
- Starlight Networks
- Systematics Softworks GmbH
- The University of Michigan
- The Wollongong Group
- Thursby Systems Software, Inc
- Vicom Technology
- Wall Data
- White Pines
- WRQ

The following developers have announced support for both Open Transport and PCI on Power Macintosh:

- Asanté
- Attachmate
- Creative Solutions
- Dayna
- Digiboard
- Digital Equipment Corporation
- Efficient NW
- Farallon Computing, Inc.
- Focus
- Fore Systems, Inc.
- 4-Sight International Limited
- Hermstedt GmbH
- Innosys
- Interphase
- Newer Technology
- Neutral
- QLogic
- Rockwell
- SAT/Sagem
- SCii Telecom
- Silicon Valley Bus
- Spectra Systems
- Workstation Technologies

Article Change History:

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Tech Info Library

Open Transport 1.1: For More Information Q & A (3/96)

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Security: Everyone

Open Transport 1.1: For More Information Q & A (3/96)

Article Created: 4 March 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) for more information on Open Transport 1.1.

DISCUSSION -----

For More Information

Question: How can interested parties get more information on Open Transport?

Answer: Documentation for Open Transport is publicly available by anonymous ftp on the Internet at a number of sites, including
<ftp://seeding.apple.com/opentransport/>.

Question: Can customers apply to receive pre-release copies of Open Transport for implementation testing?

Answer: The Open Transport Early Access program provided pre-release access to Open Transport v1.1. Since the product is now shipping, pre-release seeding of the Open Transport 1.1 has been discontinued. As plans for future versions of Open Transport develop, Apple expects to offer a similar customer testing and preview program. Announcement of details will occur at the appropriate time.

Question: Can developers apply to receive pre-release copies of Open Transport for development and testing?

Answer: The Open Transport v1.1 developer seeding program reached over 5,000 developers. Since the product is now shipping, pre-release seeding of the Open Transport 1.1 has been discontinued. A new seeding program is anticipated for future versions of Open Transport. Details will be announced at a later date.

The Open Transport software developers kit (SDK) is available as a component of the Mac OS SDK, and is available on the Internet at ftp://seeding.apple.com/ess/public/opentransport/SDK_OT_Client

Question: How can developers get support while developing Open Transport applications?

Answer: Apple Developer Support services have engineering specialists fully trained on Open Transport development and debugging. Access to these engineers is just one of the benefits of the Apple Developer Partner's program.

For more information on Apple's Developer Support services, including information on how to register as an Apple Developer Partner, contact the Macintosh Developer Services Information Line at US 408-974-4897.

For developers not a part of Apple's Developer Support services programs, Apple has assigned evangelism resources to the support of Open Transport. All interested developers are encouraged to contact Open Transport Evangelism by email to opentpt@applelink.apple.com.

Question: Are there general reference sources on XTI, STREAMs and DLPI?

Answer: Sources of information that are applicable to XTI and STREAMs include:

- OSF/1 Operating System: Network Applications Programmer's Guide; Open Software Foundation, Prentice Hall, ISBN 0-13-640145-7
- UNIX Network Programming; W. Richard Stevens, Prentice Hall, ISBN 0-13-949876-1
- UNIX System V Release 4: Programmer's Guide: STREAMs; Unix Press (A Prentice Hall title), ISBN - 0-13-020660-1
- Programming UNIX SVR4.2: Network Programming Interfaces; UNIX Press (A Prentice Hall title), ISBN 0-13-017641-9
- X/Open CAE Specification: X/Open Transport Interface (XTI); X/Open Company, Ltd. (XO/CAE/91/600) ISBN 1-872630-29-4
- Transport Provider Interface Specification, rev 1.5 (92/12/10); UNIX International, OSI Special Interest Group
- Data Link Provider Interface Specification, rev 2.0.0 (91/08/20); UNIX International, OSI Work Group

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Tech Info Library

Open Transport 1.1: Network Compatibility Q & A (9/96)

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Open Transport 1.1: Network Compatibility Q & A (9/96)

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Article Reviewed/Updated: 10 September 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on network compatibility for Open Transport 1.1.

DISCUSSION -----

Question: Is Open Transport interoperable with installed AppleTalk and TCP/IP networks?

Answer: Open Transport 1.0.x is compatible with existing AppleTalk and TCP/IP networks at the "packets on the wire" level. Organizations can introduce one, a few, or hundreds of new Mac OS systems running Open Transport into their environment without worrying about interoperability with existing networking services.

Question: There have been reports of problems with the PCI Mac OS systems when transferring large files over Ethernet networks. Is this due to running Open Transport software?

Answer: Apple has received reports describing problems transferring large files from PCI Macintosh systems to a variety of AFP servers. The reports state that file transfers stop and a -1072 error is generated. The reports also state that after the problem occurs, both AppleTalk and TCP/IP services are lost and systems must be restarted to restore them. If Ethernet traces are taken, they show that the system disappears from the network.

This problem has been identified as a bug in the Ethernet driver that can exhibit itself if there is a lot of PCI bus activity. In this case, it is possible that Ethernet DMA will start to transmit a packet, and an under run will occur because DMA cannot get enough bandwidth to transfer the entire packet to the Ethernet controller. If this condition occurs more than 10 times in

sequence, the bug in the driver causes it to not recover the buffers associated with the under run. The driver allocates 10 buffers; when they are gone the transmitter will not longer be able to send packets. This problem could occur in some normal situations with a lot of disk activity.

This problem is present only in the built-in Ethernet drivers that shipped with the Power Macintosh 7200, 7500, 8500, and 9500 systems prior to the availability of System 7.5.3. (The first Power Macintosh 9500 systems shipped with v1.0 of this driver; the Power Macintosh 7200, 7500, and 8500 systems shipped with v1.0.1.)

Apple has released an updated driver that fixes this problem, first available as version 1.0.2 of the "Ethernet (Built-in)". The most current version of this driver is included with System 7.5.3.

Question: There have been reports of problems with the Power Mac 7200/90 and its operation on Ethernet networks. Is this due to running Open Transport software?

Answer: Apple has determined that under certain network conditions, independent of the protocol being utilized, a Power Macintosh 7200/90 may fail to send large packets over its built-in Ethernet. The trouble mode is that the 7200/90 may lock-up, time-out, or have extremely slow Ethernet performance under certain conditions. These conditions generally occur only when transferring large packets of data over large and busy networks.

The problem has been isolated to the 7200/90 system logic board, and is limited to the subset of 7200/90 systems with a serial number lower than "XX544XXXXXXX". No other Power Macintosh, Power Macintosh LC, Performa or PowerBook models experience this problem, including the 7200/75. The problem is not related to Open Transport.

Apple has proactively notified customers of this issue, and has instituted troubleshooting procedures to make it easy to determine if a system is impacted. All manufacturing sites have implemented a logic board change and Power Macintosh 7200/90 systems currently available should not be affected by this issue.

If a customer has completed the troubleshooting procedures and finds that their 7200/90 experiences the trouble mode, they should contact their local Apple Authorized service provider or call Apple (1-800-SOS-APPLE in the US) to be advised on how to have the logic board replaced free of charge.

Question: Is Open Transport compatible with existing Internet Service Provider offerings?

Answer: Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software modules known as mdevs.

With the appropriate software installed, end-nodes can use either SLIP or PPP to connect to Internet Service Providers and other dial-up IP-access points. Not

all versions of all mdevs are supported by Open Transport compatibility services, thus it is important that recommended versions of software be installed for the greatest level of compatibility.

It is also very important that TCP/IP addressing and other configuration information be properly configured. As there is a new human interface provided by Open Transport/TCP, there are some differences in the process as compared to the older MacTCP software. In particular, when running TCP/IP over a SLIP or PPP link only, it is recommended that the "router address" and "subnet mask" fields be left blank in the TCP/IP control panel.

Question: Which MacTCP dial-up extensions ("mdevs") are supported by Open Transport/TCP?

Answer: Apple has worked together with third party developers to test a variety of mdevs with Open Transport 1.1. The following mdevs, when installed, will appear listed by name in the "Connect Via:" pop-up menu in the TCP/IP control panel:

- FreePPP - Apple and the developer recommend that you use version 1.0.5 or more recent.
- InterPPP II - Apple and the developer recommend that you use version 1.1 or more recent.
- InterSLIP - Apple and the developer recommend that you use version 1.0.1 or more recent.
- MacSLIP - Apple and the developer recommend that you use version 3.0.2 or more recent.
- MacPPP - Apple and the developer recommend that you use version 2.1.4 SD or more recent (version 2.2.0 is not recommended).
- SonicPPP - Apple and the developer recommend that you use version 1.0.2 or more recent.
- VersaTerm SLIP - Apple and the developer recommend that you use version 1.1.4 or most recent.

Question: Are any other mdevs recognized by Open Transport?

Answer: There are a number of third party PPP mdevs that are all derived from a common technology base, FCR PPP. The derivative implementations have not been individually tested by Apple, although Apple and FCR have worked closely together in testing the core technology.

Each of these derivatives registers with Open Transport using the same "signature". When any one is installed, it will appear as "TCP/IP PPP" in the menu, rather than as it's own brand name. These include:

- About Software FCR PPP
- 4-Sight 4-Sight PPP
- InterCon InterPPP
- Network Telesystems NTS PPP
- Pacer Software PacerPPP
- SAT/SAGEM PlanetPPP
- Tribe TribePPP
- White Pine Software WhitePine PPP

Users are always encouraged to check with the third party developer of interest for the most recent information on versions and compatibility.

Question: Is PPP connectivity distributed as a bundled component of Open Transport v1.1?

Answer: No, not at this time. AppleTalk and TCP/IP connectivity using Open Transport/PPP is planned as a feature of future products, with PPP support for Open Transport/TCP expected first to be followed by AppleTalk/PPP later.

Apple plans to merge remote access client and personal server capabilities with Open Transport capabilities, to offer an integrated support for LANs, WANs, and remote networking. These capabilities are also expected as a part of a future Mac OS update. Details will be announced at a later date.

Question: Does Apple currently offer a solution for SLIP or PPP dial-up to the Internet?

Answer: Yes. The Apple Internet Connection Kit (AICK) is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris Emailer Lite.

AICK 1.1 includes MacPPP 2.5 (Version 1.0 included MacPPP 2.1.4) along with the Apple Internet Dialer - software designed to make it simpler for Mac OS customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes AppleGuide software for on-line assistance.

Question: Does the Apple Internet Connection Kit require Open Transport?

Answer: The Apple Internet Connection Kit (AICK) can support either MacTCP 2.0.6 or Open Transport/TCP 1.x.

Note that the Apple Internet Dialer 1.0 (part of the Apple Internet Connection Kit 1.0) should not be used with System 7.5.3 unless the following procedure is first performed (note that this procedure is not required on PowerPC PCI Mac OS systems):

- Use the Network Software Selector utility to specify classic networking

- Restart the system
- Remove MacTCP from the control panels folder
- Use the Network Software Selector utility to specify Open Transport networking
- Restart the system

The Apple Internet Dialer 1.0 will now work correctly with System 7.5.3. Alternately, Customers should update their copy of AICK with the Apple Internet Dialer 1.1. This revision of the dialer is fully compatible with Open Transport 1.1 and System 7.5.3

Question: What is MacPPP 2.5 / 2.1.4? Is it available on the Internet?

Answer: MacPPP 2.5 and 2.1.4 are derivatives of the MacPPP 2.1.x SD versions of Merit's PPP. They include code contributed by Apple engineering to enhance compatibility with Open Transport/TCP.

Question: There have been reports of problems with Open Transport, PPP, and the use of Virtual Memory. Is Open Transport compatible with Virtual Memory?

Answer: Open Transport fully supports the use of virtual memory. However there were some problems with MacPPP versions 2.1.x SD and versions of FreePPP prior to 1.0.4; MacPPP 2.5 and FreePPP 1.0.5 have corrected these problems . Users are advised to update to the most recent version of the software, or temporarily turn VM off.

Question: Are there known limitations to backward compatibility mdev support?

Answer: Due to some shortcomings in the Open Transport 1.0.x backward compatibility services, there were some additional limitations with earlier versions of Open Transport:

- Some mdevs were not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This has been addressed with updated versions of mdevs.
- Once a TCP/IP application launched and used a SLIP or PPP mdev, use of a different mdev could have required restarting the Macintosh. Disconnecting from and re-dialing a service provider could also have the same effect. This has been corrected in Open Transport v1.1.

Question: Are there differences in configuring Open Transport/TCP and MacTCP for Internet Service Providers (ISPs)?

Answer: Some ISPs do not strictly follow standards, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforced this requirement in versions prior to 1.0.7. In versions since OT 1.0.7 (including 1.1), the TCP/IP Control Panel automatically generates a compatible router address to facilitate connectivity to the ISP. To take

advantage of this feature, the user simply leaves the router and subnet mask fields empty when configuring Open Transport/TCP for dial-up access.

Question: If a user needs an updated copy of an mdev, where can they find the software?

Answer: Sources for software vary, as some products are commercial, and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of Internet sites; typically at "info-mac" mirror sites in the comm/tcp directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com.hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/>
<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/>

- InterPPP and InterPPP II are commercial software products. For availability and ordering information contact InterCon Systems, US +1-800-468-7266 or 703-709-5500.
- MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information contact TriSoft, US +1-800-531-5170 or 512-472-0744.
- VersaTerm SLIP is commercial software developed by Synergy Software. For availability and ordering information contact Synergy, US +1-610-779-0522.
- MacPPP (v2.1.4) is available as a part of the Apple Internet Connection Kit, Apple Computer Inc., US +1-800-462-4396 for fax information or +1-800-538-9696 to locate an Apple reseller near you.

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Tech Info Library

Open Transport 1.1: Network Interface Options Q & A (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1: Network Interface Options Q & A (3/96)

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Article Created: 4 March 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on network interface options for Open Transport 1.1.

DISCUSSION -----

Question: What network interface options are available with Open Transport?

Answer: Open Transport v1.1 supports PCI and NuBus NICs, CommSlot and built-in (LocalTalk and Ethernet) network adapters. For models without slot-based expansion options, Open Transport v1.1 supports SCSI-attached network adapters, including PC Cards compliant with the Macintosh PC Card specifications.

NIC options available for Open Transport include Ethernet, token ring, fast Ethernet, FDDI, and ATM.

Question: What about dial-up network connectivity solutions?

Answer: For connectivity to AppleTalk networks, Open Transport v1.1 is fully compatible with Apple Remote Access v2.0.1 client and personal server.

For dial-up connectivity to TCP/IP networks including the Internet, Open Transport recognizes third party MacTCP software extensions (known as mdevs), providing SLIP or PPP connectivity.

Question: Does Open Transport influence or restrict the choice of modems for dial-up communications?

Answer: No. Open Transport provides a new, consistent programming interface for serial communications from within system software. However, there are no changes

in the external behavior of the serial ports based on the presence or absence of Open Transport on a system.

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Tech Info Library

Open Transport 1.1: Network Planning and Admin Q & A (3/96)

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Security: Everyone

Open Transport 1.1: Network Planning and Admin Q & A (3/96)

Article Created: 4 March 1996
Article Reviewed/Updated: 25 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on network planning and administration for Open Transport 1.1.

DISCUSSION -----

Question: Does Open Transport offer network managers more control over Mac OS networking?

Answer: Yes. Open Transport allows network managers to specify details of the network connection and configuration in advance, via a "preferences" file. These configurations may contain a mixture of user-provided information and network manager recommended and/or network manager required settings. Recommended data provides a default for the end-user, while required configuration data is locked with an administrator's password.

Open Transport configurations can be prepared on one machine and distributed to other systems. To support this, the Open Transport configuration utilities allow a configuration to "exported" and "imported". Exported configurations can be distributed via electronic mail, a file server, or even "sneaker net".

Question: Will Open Transport require organizations to make changes in network administration, planning, or design?

Answer: The first Open Transport protocols -- AppleTalk and TCP/IP -- offer new features that give a network manager more flexibility and control. Some of these features, when implemented in a network environment will require additional thought and planning by a network manager.

In particular, Open Transport/AppleTalk adds support for the use of static (manually assigned) AppleTalk node addresses. If implemented, a network manager

may prefer to assign addresses based on a pre-designed protocol address management plan. Open Transport/TCP adds support for the Dynamic Host Configuration Protocol (DHCP). DHCP allows network managers to allocate IP addresses and other configuration information from a DHCP server. Optimum deployment of DHCP services within an enterprise requires planning.

In order to better conform to applicable standards, Open Transport/TCP also has somewhat more rigorous requirements regarding the content and format of the local HOSTS file. This could require some updating of existing MacTCP-compatible host files. See TCP/IP Features for more information.

Question: Does the use of AppleTalk manual addressing increase the requirement for network administration?

Answer: Open Transport/AppleTalk offers network administrators a choice. Sites that prefer to have the network infrastructure automatically assign unique protocol addresses can continue to rely on AppleTalk Address Resolution Protocol (AARP). Sites that find advantage in having fixed and well-known protocol addresses for each end-node can implement manual addressing.

When manual addressing is selected there will be a requirement to allocate and assign the initial protocol addresses, which will subsequently be "locked". Some administrators may prefer to do this allocation based on a central numbering plan, creating individual configuration templates (recommended or required settings) for each user. Others may prefer to allow the network to determine the initial address configuration (that is, use dynamic addressing once), and then lock the uniquely assigned addresses after initialization.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently - either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict between a new dynamic node acquiring an address assigned to an off-line, manually-addressed node. Administrators can enforce the addressing policy for a subnet by locking the addressing mode in the "dynamic" or in the "manual" state. As an administrative precaution, however, Open Transport/AppleTalk does continue to check for the presence of duplicate protocol addresses on the LAN when static addressing is configured.

Question: Are there other benefits that arise from the new support for AppleTalk manual addressing?

Answer: Yes. Manual configuration of static AppleTalk addresses supports MacOS products that utilize WAN datalinks where non-full-mesh topologies are important. This includes datalinks such as Frame Relay, SMDS, and ATM.

Question: Does Open Transport/TCP support BootP?

Answer: Yes. Open Transport v1.1 fully supports Boot Protocol (BootP). With Open Transport v1.0.x, there was an error condition in which Open Transport would

fail to accept a BootP Reply if it were sent to the unicast (subnet broadcast) address, that is, xxx.xx.x.255; replies sent to the all-nets broadcast address (that is, 255.255.255.255) were handled properly. Both situations are correctly handled by Open Transport v1.1.

Open Transport 1.1 now also supports BootP gateways located 1 or more hops away. Earlier versions of Open Transport required that the BootP gateway be zero hops away.

Question: Which DHCP servers are supported by Open Transport/TCP?

Answer: Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport/TCP has been tested with the following DHCP server implementations:

- Competitive Automation,
- FTP Software (<http://www.ftp.com>),
- Hewlett Packard HP-UX (<http://www.hp.com>),
- Microsoft Windows NT Advanced Server,
- Silicon Graphics (<http://www.sgi.com>),
- Sun Solaris and SunOS (<http://www.sun.com>), and
- TGV (<http://www.tgv.com>).

Question: Does Open Transport/TCP support DHCP address leases?

Answer: Yes. Open Transport/TCP fully supports DHCP address leases. Open Transport/TCP will automatically attempt to renew any address lease that reaches it's renewal interval, which defaults to half of the lease's lifetime. (The Renewal Interval may be configured to a different value by making changes to the configuring DHCP server). Renewal will be attempted regardless of how many times the lease has already been renewed.

Should an interface's IP address lease expire, the interface will be closed down.

Question: Are there interoperability issues of note regarding DHCP servers?

Answer: Some DHCP servers require padding to a fixed packet size; other servers do not accept padded packets. Open Transport 1.1 automatically adapts to the type of DHCP requests that a given server accepts, while earlier versions sent non-padded packets.

Network managers should also note that Open Transport 1.1 now supports DHCP gateways located one or more hops away. Earlier versions of Open Transport required that the gateway be zero hops away.

Question: Can Open Transport/TCP act as a DHCP client to a Windows NT Advanced Server?

Answer: Yes. With Open Transport v1.1, MacOS clients are fully interoperable with the Windows NTAS DHCP server.

Macintosh clients running earlier versions of Open Transport (1.0.x) could experience some of the following interoperability problems due to differences between the Microsoft implementation and that of a typical UNIX server.

- Clients running Open Transport v1.0 or v1.0.1 were not able to acquire leased IP addresses.

This was due to unusually long reply-time-out values used in the NTAS implementation. Open Transport v1.0.6 was changed to accommodate NTAS behavior in this regard.

- Clients running Open Transport versions prior to v1.0.8 would be incompletely configured via DHCP.

NTAS sends only IP address, IP address lease information, the configuring server's IP address, and a subnet mask. Investigation revealed that other configuration options entered in the NT DHCP server's database (default gateway address, domain name server addresses, domain name, broadcast address, and so on) were not sent unless specifically requested by the client using the DHCP Parameter Request List option.

Apple believes that requiring use of this option in order for the client to be properly configured is contrary to the DHCP server specification described in RFC 1541 (Dynamic Host Configuration Protocol), and it appears to be unique to the NTAS implementation. However, in interest of interoperability, Open Transport v1.0.8 and v1.1 use the Parameter Request List option to request default gateways, DNS servers, domain name, subnet mask, and broadcast address. This permits Open Transport/TCP clients to be fully configured by these servers, at the expense of a few additional packets on the wire during the initialization phase.

Question: Can Open Transport/TCP act as a WINS client to a Windows NT Advanced Server?

Answer: No, not at this time. The Microsoft WINS server is dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support) that provide some automation for assignment and registration of IP host and domain names.

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group.

Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge. We welcome customer feedback on this topic -- should sufficient demand for a WINS client materialize, we'd be open to exploring this issue. A future MacOS WINS client would be dependent upon Microsoft releasing sufficient technical detail regarding their proprietary extensions to IP to make an interoperable implementation possible.

Question: When installing and configuring Open Transport, are there any additional issues of note for network managers?

Answer: The following observations and comments have been developed based on the recent OT 1.1 b16 Internet-based public preview program.

- Because the new domain name resolver supplied with Open Transport/TCP is both more capable and more standards compliant than the one included with MacTCP, some configuration changes may be desirable or necessary. Areas of interest and caution are noted in the section TCP/IP Features and System Requirements.

- Network managers should also note that although the TCP/IP control panel can properly receive and utilize multiple gateway and name server addresses from a DHCP server, only the first one returned will be displayed in the TCP/IP control panel. This will be resolved in a release after OT 1.1.

- Users are occasionally encountering "Error -3205" when opening a connection in a TCP application. This can result if the user has manually modified (moved, renamed, or deleted) some of the files installed by Open Transport. In particular, both the Shared Library Manager and Shared Library Manager PPC files must be installed when running on a PowerPC MacOS system. For more information on these two files, refer to the description of files installed by Open Transport elsewhere in this Q&A.

In general, users should not attempt to modify the OT installation through any means other than the Apple supplied installer scripts.

- Users are occasionally encountering an error message like "Cannot open connection to DNS Name Server" when trying to run classic MacTCP applications. This can result if the user has manually modified (moved, renamed, or deleted) some of the files installed by Open Transport. In particular, the MacTCP DNR file must remain in the System Folder at the root level for backward compatibility to function.

In general, users should not attempt to modify the OT installation through any means other than the Apple supplied installer scripts.

- Beginning with System 7.5, TCP/IP support was included with the MacOS but was not automatically installed (it required a Custom Install action). As of System 7.5.3 and Open Transport, TCP/IP services are always installed. However, if there are no MacTCP preferences on the target disk, TCP/IP is installed with a default configuration specifying configuration via MacIP in the current AppleTalk zone, but it is set to "Never Load". To enable TCP/IP, use the TCP/IP Control Panel in the Advanced or Administrator mode and select the Options dialog.

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Open Transport 1.1 and Servers Q & A (3/96)

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Security: Everyone

Open Transport 1.1 and Servers Q & A (3/96)

Article Created: 4 March 1996
Article Reviewed/Updated: 8 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on Open Transport 1.1 and Servers.

DISCUSSION -----

Question: What role does Open Transport play for servers?

Answer: The Open Transport architecture is designed to provide server applications - file, print, database, e-mail, directory, and other - with a foundation for higher performance and for more flexible configuration, while maintaining the historical differentiation of Mac OS servers - ease of configuration and administration.

Question: How will Open Transport enhance server flexibility?

Answer: Open Transport introduces the capability of activating more than one network connection at the same time, using the same networking protocol. This capability is known as multihoming, and enables servers to support more clients, to offer greater total performance, and to increase the reliability of mission critical applications.

Open Transport also enables the development of transport independent applications. This will be especially valuable for server applications which need to be deployed in AppleTalk, or TCP/IP, or NCP/IPX, or other protocol environments.

Question: How will Open Transport enhance server performance?

Answer: Servers, as network-aware applications, gain access to the higher

performance PowerPC native implementation of networking protocols that Open Transport provides. To exploit this performance opportunity, server applications must be accelerated for PowerPC and must utilize the new Open Transport XTI APIs.

Severs will also benefit through access to new high-speed PCI datalink implementations such as fast Ethernet and ATM.

Question: Will Apple's server products such as AppleShare exploit Open Transport features?

Answer: Yes. AppleShare 4.2.1 is the first version of AppleShare to be both PowerPC native and Open Transport ready. It takes advantage of other Open Transport features as well, including support for multihoming.

Question: Are PCI Mac OS systems with Open Transport recommended as application servers?

Answer: Apple recommends that server application developers adopt Open Transport v1.1 as the basis for new network applications development as soon as is possible within their product life cycles. As these updated versions of server software become available customers will find that the combination of PCI, Power Macintosh, and Open Transport makes a great platform for flexible, high-performance network applications.

It should also be noted that Apple generally recommends the Apple Workgroup Server product family, rather than re-purposed desktop hardware, for use as server platforms.

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Tech Info Library

Open Transport 1.1: Future Directions Q & A (3/96)

Revised: 3/26/96
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Open Transport 1.1: Future Directions Q & A (3/96)

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Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on future directions for Open Transport.

DISCUSSION -----

Question: What is the next planned release of Open Transport?

Answer: Open Transport v1.1.1 is anticipated as a "rapid response" release to follow up quickly to priority issues, if any, that surface after the release of Open Transport 1.1.

The next features driven release planned for Open Transport is under the working title of OT 1.5, is planned for availability sometime in Q4 1996. More information about the features, availability, and distribution of this update will be released as it becomes available.

Question: What additional network interface options are planned to be available for Open Transport?

Answer: Modem and ISDN support are to be available following the introduction of the next generation of Apple Remote Access products (incorporating Open Transport/PPP and Open Transport v1.1).

Question: Will Open Transport/TCP offer multihoming and multinode capabilities in a future release? Will users be able to configure general multihoming and multinode operation in the future?

Answer: In a future release of Open Transport, multinode and multihoming capabilities for both AppleTalk and TCP/IP are planned as configurable options

for network administrators and advanced users.

Question: What about MacSNMP? When will it be revised to work with PCI and Open Transport?

Answer: MacSNMP v1.5 is planned to be available in 1996. This release is designed to include support for MIB II statistics from the Open Transport/TCP stack, transport of SNMP data over Open Transport/TCP, and to add support in the Macintosh System MIB for both NuBus and PCI interface cards.

MacSNMP and the Mac System Agent are supported through Open Transport's backward compatibility services.

Question: What about the Apple Internet Router? Will it be revised for Open Transport?

Answer: Apple is not announcing future plans regarding this product at this time.

Question: Will Apple or Novell deliver an Open Transport-ready Mac OS client that uses IPX protocols?

Answer: Novell currently offers the NetWare Client for Mac OS v5.1, providing access to file, print, and NetWare Directory Services (NDS) using NCP/IPX protocols.

An Open Transport-ready implementation of NetWare protocols and client services is currently under investigation. The two companies are not ready to announce product details or availability at this time.

Question: Will Apple or Microsoft deliver an Open Transport-ready Mac OS client that uses NetBIOS/TCP protocols?

Answer: Windows NT AS currently includes strong Mac OS connectivity solutions based on AppleTalk protocols. Other protocol options are under investigation at Apple, Microsoft, and with third parties. No additional details are available at this time.

Question: Will Apple provide a PowerPC native standards based SLIP or PPP solution for Open Transport?

Answer: Apple is developing an implementation of PPP for Open Transport as a part of the next generation of Apple Remote Access products. Dial-up access to AppleTalk and TCP/IP networks will be based on the following RFCs:

- RFC 1661 - PPP
- RFC 1662 - PPP in HDLC-like framing
- RFC 1570 - PPP LCP extensions

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- RFC 1334 - PPP Authentication protocols
- RFC 1663 - PPP Reliable transmission
- RFC 1378 - ATCP AppleTalk Control Protocol
- RFC 1332 - IPCP Internet Protocol Control Protocol

Question: What about IP version 6 (IPv6) support in Open Transport?

Answer: IPv6 is an proposed update of the current Internet Protocol (IPv4), part of the TCP/IP suite of protocols used to allow computers to communicate with each other over the Internet. The Internet Engineering Task Force (IETF) is in the process of specifying the standards for IPv6.

IPv6 is being designed to respond to the limitations of IPv4 - including an upcoming shortage of new IP addresses - to allow for the continued expansion of the Internet and deployment on corporate networks. IPv6 also incorporates new functionality to provide security, multimedia support, and plug and play capabilities, features necessary to usher the Internet into the twenty-first century.

At the October 1995 Networld+InterOp trade show, Apple and Mentat demonstrated a prototype of Internet Protocol Version 6 running on Open Transport. The demonstration showed the flexibility of the Open Transport environment - with current IPv4 applications such as Fetch, Netscape, and Web*Star running unmodified with IPv6 support - and showed the benefits of Open Transport's underlying standards based architecture - facilitating code portability. The demonstration also included basic interoperability testing with IPv6 prototype implementations from DEC and HP, using standard IP utilities such as Ping and Telnet.

Apple and Mentat will continue to work together to ensure timely availability of IPv6 for Mac OS once the standard has been completed.

Question: Will Open Transport v2.0, for the Copland release of the Mac OS, offer any new capabilities?

Answer: Yes. Open Transport v2.0 is being designed to take full advantage of the new microkernel services available in the Copland OS. As a result, Open Transport networking on Copland is planned as a set of multithreaded, preemptively scheduled tasks running in protected memory.

To a user, this will mean that networking will be even more robust and higher performance. To a developer, this will mean that a rogue application running in another memory space will not be able to corrupt system level networking task.

In addition, Open Transport v2.0 is expected to incorporate a second generation update to the human interface introduced with Open Transport v1.0.

Current plans call for this release to include support for features such as:

- Configuration selection will be integrated with system level workspaces and the location assistance toolbox;

- Advanced end-users and network administrators will be able to configure a protocol stack for simultaneous support of multiple network connections (multihoming);
- Administrators will find additional trouble-shooting tools (such as Ping, traceroute, local ARP cache, access to local routing tables, and others) integrated with the configuration utilities;
- Support for AppleScript; and
- Desktop aliases for network configurations to allow double-click reconfiguration of services.

Open Transport 2.0 is also planned to include integrated support for NetWare/IPX, X.25, ATM, and ISDN.

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Open Transport 1.1 and Cross-Platform Issues Q & A (3/96)

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Open Transport 1.1 and Cross-Platform Issues Q & A (3/96)

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Article Reviewed/Updated: 26 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on Open Transport 1.1 and cross-platform issues.

DISCUSSION -----

Question: Will Apple port Open Transport to Windows or UNIX?

Answer: Apple does not plan to port Open Transport to other operating systems. Rather, Open Transport is based on Apple porting three existing, cross-platform industry standards to Mac OS. These standards have their roots in the UNIX community and experienced UNIX network developers will find themselves "right at home" when developing for Open Transport.

Question: What about Windows developers? What about Windows Sockets?

Answer: NetManage, the leading developer of TCP/IP protocols and applications for DOS and Windows, now offers Windows Socket tools for Mac OS, to provide access to Open Transport/TCP and MacTCP services via the Windows Sockets (Winsock 1.1) API.

NetManage's WinSock for the Mac OS is WinSock 1.1 compliant and is being certified by the WinSock Labs operated by Stardust Technologies, Inc., which performs compatibility testing. The SDK for Mac OS costs \$250 per license, with free distribution.

For more information, contact NetManage at +1-408-973-7171.

Question: With both XTI and Windows Sockets available for Open Transport, which API should a developer use?

Answer: The choice of API will depend upon a developer's background, experience, and goals. For developers with a background in UNIX, a need for POSIX compliance, or a need to deploy an application across Mac OS and UNIX systems, XTI is the logical choice. For developers with a background on Microsoft Windows, or a need to deploy an application across Mac OS and Windows, Windows 95, and/or Windows 95 systems, the planned Winsock tools from NetManage will provide an attractive cross-platform alternative.

Apple is committed to XTI and will focus development on transport independence around this API. Mac OS developers now using classic AppleTalk or MacTCP APIs are encouraged to move to Open Transport XTI API.

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Open Transport 1.1: Performance Q & A (3/96)

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Open Transport 1.1: Performance Q & A (3/96)

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TOPIC -----

This article is the Reference Q & A (questions and answers) on performance for Open Transport 1.1.

DISCUSSION -----

Question: Is Open Transport native on PowerPC Mac OS? Does this make networking faster?

Answer: Open Transport is written to take advantage of the PowerPC processor - it is native code. This provides the necessary foundation for significantly increased networking performance in Mac OS. To realize the performance gains at the application level, however, it is equally important that networking applications also be accelerated for Power Macintosh, and that applications adopt the new Open Transport XTI programming interfaces.

The compatibility services for existing AppleTalk and TCP/IP applications run as 680x0 code in emulation on Power Macintosh. This protects a customer's investment in networking applications, but also obscures - or in some cases, outweighs - the underlying performance increases from the native protocol implementations.

Question: Does Open Transport PowerPC native code include drivers for Macintosh onboard Ethernet?

Answer: PCI Power Macintosh systems ship with a PowerPC native DLPI driver for built-in Ethernet. Power Macintosh 6100, 7100, and 8100 models currently have 680x0 drivers.

Question: Will existing networking applications see performance improvements

with Open Transport on PowerPC Mac OS systems?

Answer: In general, current Mac OS networking applications are written for the 680x0 processor and use the classic networking programming interfaces. These are not likely to see performance boosts with Open Transport, as most of the performance potential comes from the move to native code for the PowerPC processor. Even for PowerPC native applications, use of the backward compatibility libraries offsets most of the performance gains in the low level protocol handling.

Users that select PowerPC native applications that are Open Transport-ready will realize the greatest performance gains. Performance of specific network applications may also be significantly influenced by the underlying processor speed of the system. Customers with demanding, network I/O intensive applications should give strong consideration to the higher performance PowerPC Mac OS systems.

However, even with existing applications using backward compatibility, TCP/IP users are likely to see some performance improvements with Open Transport. This is because of the differences in the way compatibility is provided for MacTCP vs. AppleTalk, and differences in the two protocol architectures.

Question: Will networking applications see performance improvements with Open Transport on 680x0 based applications?

Answer: Not in general, as most of the potential for increased performance with Open Transport comes from the move to PowerPC native code. However, users may find that Open Transport TCP exhibits superior performance to MacTCP, especially under adverse networking circumstances (slow links, lossy lines), due to its more robust implementation and more sophisticated error handling and recovery.

Question: When will new or updated applications that support the native Open Transport APIs become available?

Answer: Applications that are PowerPC native and Open Transport ready are available now. Users are urged to contact the specific third party vendor of interest for more details on their specific products.

Question: How is Open Transport performance being measured?

Answer: Apple has established plans for measuring the performance of Open Transport and related system components through four benchmark test suites:

- SpudPPC - this low-level benchmark tool focuses on measuring the raw throughput potential of Open Transport. It supports both AppleTalk and TCP/IP protocols, is PowerPC native code, and uses Open Transport programming interfaces. Because it measures point-to-point, memory-to-memory data transfers, it most directly measures the performance of Open Transport.

Because this test has the most direct access to Open Transport (the application

layer is "thin"), and because it is fully accelerated for PowerPC, this benchmark will generally indicate an upper bound on the performance potential of Open Transport.

- AppleShare file copy - this end-user benchmark focuses on measuring the throughput of the AppleShare client while drag-copying a file from the Mac OS desktop using the Finder. It is specific to the AppleTalk protocol suite, runs in 680x0 emulation, and depends upon backward compatibility services to access Open Transport networking. Because it measures user-perceived throughput of a complete application chain, this test only indirectly measures the performance of Open Transport.

Because this test depends upon emulated code, backward compatibility, and AppleTalk protocols, this benchmark will generally indicate a lower bound on the performance potential of Open Transport.

- Fetch 3.x - this end-user benchmark focuses on measuring the throughput of the popular ftp client, Fetch. It is specific to the TCP/IP protocol suite, runs as PowerPC native code, and uses Open Transport programming interfaces. Because it measures user-perceived throughput of a complete application chain, this test only indirectly measures the performance of Open Transport.

Because this test is PowerPC native, Open Transport ready, and is based on TCP/IP protocols, this benchmark will generally tend toward the upper bound on the performance potential of Open Transport.

- ZD Labs NetBench 4.0 - this suite of benchmarks is designed to test file server implementations. It is specific to the AppleTalk protocol suite, runs in 680x0 emulation, and depends upon the File System and backwards compatibility services to access Open Transport networking. Because it measures user-perceived throughput of a complete client-server environment, this test only indirectly measures the performance of Open Transport.

Because this test depends upon emulated code, backward compatibility, and AppleTalk protocols, this benchmark will generally indicate a lower bound on the performance potential of Open Transport. However, because it interacts with an AFP server - which may be PowerPC native and Open Transport ready - it can be useful in measuring the multi-client scalability of file server implementations built on Open Transport.

Only a combination of tests can provide good coverage, as user-perceived networking performance is heavily influenced by a combination of a number of Mac OS components including the file system, the Finder, driver code, and the applications used to move data across the network.

Question: How much faster will native Open Transport applications be?

Answer: Networking performance is influenced by many factors. As noted elsewhere in this document, customers will see the highest performance when using PowerPC native applications that fully support Open Transport APIs.

Performance potential will be greater with protocols that use larger datagram

sizes, such as TCP/IP, than with AppleTalk which has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, or ATM, both the performance of the network interface card (NIC) driver code and the number of allocated buffers are significant factors.

Open Transport has been clocked at over 9.3 Mbps using the SpudPPC tool. A pre-release version of a third party implementation of NFS was benchmarked at over 8.4 Mbps. Both figures approach theoretical maximum performance for 10 Mbps Ethernet.

Question: What about high-speed networking connections like fast Ethernet, ATM, and FDDI?

Answer: Benchmarking on fast Ethernet, FDDI, and ATM datalinks has been underway for some time. Some sample results include:

- 48 Mbps with a Rockwell fast Ethernet card and driver (1500 byte block size)
- 72 Mbps with a Rockwell FDDI card and driver (4K block size)
- 93 Mbps with an Interphase ATM-155 card and driver (8K block size)

These tests were performed using Open Transport/TCP 1.1 beta software, running on a Power Macintosh 9500/132, using the SpudPPC tool. Other tests, such as the one conducted by Fore Systems on their 155 Mbps ATM cards, have shown even higher throughput. In one test, Fore was able to transmit UDP over their LAN-E stack on ATM (using 1500 byte datagrams) at over 100 Mbps.

AppleTalk performance is lower than TCP/IP performance due to the smaller DDP packet size and the ATP retry-acknowledgment algorithm. Current testing on fast Ethernet is turning in figures around 35-45 Mbps with a PowerPC native ATP test tool. This is a significant performance improvement, and further progress should be realized as application code is revised to take full advantage of Open Transport and PowerPC.

Question: Does Open Transport support the use of large datagram sizes? Does datagram size have an impact on network throughput?

Answer: Maximum allowable datagram size is dependent on both the selected datalink and the selected protocol stack. Open Transport supports the use of large datagram sizes as appropriate to the protocol and datalink in use.

Because Open Transport/AppleTalk is based on the Phase 2 architecture, datagram size for AppleTalk is limited to a maximum of 617 bytes. Open Transport/TCP supports larger datagrams; up to 1,500 bytes on Ethernet and fast Ethernet, and up to 16K on Token Ring; even larger block sizes can be used on FDDI and ATM.

Block size does play a role in maximum throughput; the larger the block size used, the greater the potential end-to-end throughput. Users demanding the highest network throughput may find FDDI to be a more attractive alternative than fast Ethernet because it can support larger block sizes at the same bit rate.

Article Change History:

08 Mar 1996 - Changed distribution status.

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Tech Info Library Article Number:19436



Tech Info Library

Open Transport 1.1: System Requirements Q & A (3/96)

Revised: 3/25/96
Security: Everyone

Open Transport 1.1: System Requirements Q & A (3/96)

Article Created: 4 March 1996
Article Reviewed/Updated: 25 March 1996

TOPIC -----

This article is the Reference Q & A (questions and answers) on system requirements for Open Transport 1.1.

DISCUSSION -----

Question: Which MacOS systems can take advantage of Open Transport?

Answer: Open Transport is designed to work on portable and desktop Apple Macintosh or MacOS compatible computers with a Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603(e), or 604 microprocessor.

Apple recommends running MacOS System 7.5.3 with Open Transport, although the earlier System 7.1, 7.1.1 and 7.1.2 releases are also compatible. System 7.5.3 requires a minimum of 4 MB (680x0) or 8 MB (PowerPC) total memory; Open Transport requires a minimum of 5 MB (680x0) or 8 MB (PowerPC).

Systems running Open Transport may be able to benefit from larger than minimum memory configurations when using FDDI or ATM, as these datalinks can provide increased performance by taking advantage of larger datagrams and buffer sizes. Effective use of additional system RAM for buffers is application dependent.

Question: How do settings such as Virtual Memory and RAM disk affect Open Transport's minimum memory requirements.

Answer: Open Transport minimum memory requirements are based on total system memory including VM, less the size of any RAM disk and Disk Cache defined.

Question: How is the Memory Available as reported by the "About this Macintosh..." dialog related to Open Transport's actual memory requirements.

Answer: Open Transport has an entirely different memory management architecture as compared to classic networking in preparation for Copland's protected memory model. In particular, Open Transport supports the dynamic loading and unloading of networking services.

The "About this Macintosh..." dialog reports on both the total free memory and the largest block of contiguous free memory. In practice, the latter figure is a better indicator of whether an additional application can be launched. If a user frequently opens (launches) and closes (quits) multiple applications that use networking services, and if the user has set Open Transport TCP/IP preferences to load networking services only when needed, this can, over time, result in a situation where Open Transport loads into memory "between" other running applications. This "memory fragmentation", in turn, can result in a smaller value reported by "About this Macintosh..." for free contiguous memory. In extreme cases, this could unnecessarily limit the number of concurrent applications that a user could run.

If this situation arises, use the Advanced Mode of the TCP/IP Control Panel to access the Options dialog, and remove the "X" in the "Load only when needed". After restarting the system, Open Transport TCP/IP will load when called on by an application for the first time, but will then remain loaded. This will help avoid the "memory fragmentation" that can occur for these users.

Question: Does Open Transport require more system RAM than classic networking? If so, how much more, and why?

Answer: Open Transport provides many new features and capabilities to MacOS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport are dynamic; they vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors which contribute to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC code; RISC code is typically larger - but also faster - than CISC programming,
- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC MacOS systems,
- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces,
- Open Transport is very "VM-friendly", and has a lower memory footprint on systems with virtual memory enabled; classic network has about the same footprint regardless of the VM setting,

- Open Transport is based on the cross-platform standard STREAMs environment, which increases the total size of the implementation as compared to the proprietary classic networking implementation, and,
- To lay the groundwork for Copland's protected memory model, Open Transport allocates memory for TCP/IP applications in the system area; MacTCP allocated memory in each application.

Thus the difference in memory requirements will depend upon which configurations are measured. Some examples of base memory requirements include:

- On a PowerPC system with VM on, classic AppleTalk and MacTCP require about 350-450K; Open Transport will require about 200K to load; that is, Open Transport base memory requirements are about 200K smaller.
- On a 680x0 system with VM off, classic AppleTalk and MacTCP require about 350-450K total system memory; Open Transport will require about 700-800K to load; that is, Open Transport is about 350K larger.
- On a PowerPC system with VM off, classic AppleTalk and MacTCP require about 350-450K; Open Transport can require up to 1.2 MB to load, that is, Open Transport is about 800K larger.

Question: Why doesn't Open Transport 1.1 install or work on my Power Macintosh 5200/5300/6200/6300 desktop computer? Wasn't this release supposed to support all PowerPC based MacOS systems?

Answer: Very late in the final quality assurance cycle of Open Transport 1.1, the OT team was notified of a reproducible crash affecting some, but not all, customers with Power Macintosh or Performa 5200/5300/6200/6300 desktop computers. The detailed feedback we received from the OT 1.1b16 Internet-based public preview program helped us understand the extent of the customer impact of this issue.

Rather than delay the release of OT 1.1 and System Update 2.0 (System 7.5.3) further - which both bring many significant improvements to MacOS customers - the Performa, Open Transport, and System 7.5.3 teams working together decided that the best alternative was to disable OT 1.1 on these systems until the problem(s) were fully identified and an appropriate solution could be implemented and tested.

As a part of our ongoing focus on quality and customer responsiveness, Apple had already allocated resources for the possible delivery of a "rapid response" release of Open Transport (v1.1.1) should one be required before the next planned feature release of OT (currently planned as OT 1.5 for calendar Q4 1996).

The plan now in place to address the issue with 5200/5300/6200/6300 desktop computers calls for development and delivery of a modified version of Apple Shared Library Manager (ASLM 2.0.1). ASLM 2.0.1 is planned to accompany the OT 1.1.1 release, expected in approximately 60-90 days (following the release of OT

1.1)

Question: Why specify System 7.5.3 (System 7.5 Update 2.0)? What about System 7.5, 7.5.1, and 7.5.2?

Answer: Open Transport internal and external testing included work with all MacOS system software releases from System 7.1 forward, however, Apple's testing has been most concentrated on System 7.1.x and System 7.5.3.

In moving from earlier versions of System 7.5 to System 7.5.3 a user's system will benefit from a number of updates and bug fixes that while not a part of Open Transport can improve system performance and reliability on the network for a variety of tasks, including printing and file transfers. The combination of the deeper test coverage and the important system updates that are a part of the system software update leads the Open Transport team to overall recommend System 7.5.3.

System 7.1.x users are encouraged to evaluate their needs and to consider updating to System 7.5.3.

Question: Was Open Transport 1.1 released in Japan for System 7.5.2? If so, why isn't this generally recommended?

Answer: Apple did not provide Kanji localized versions of Open Transport 1.0.8; thus, Kanji customers with PCI MacOS systems have not yet been able to benefit from the updates and bug fixes released in OT 1.0.8. Because of the lead times required to localize System 7.5.3 for Kanji, Apple elected to complete the localization and testing of Open Transport 1.1 independently of plans to localize System 7.5.3-J.

This decision resulted in delivery of Open Transport 1.1-J for System 7.5.2-J customers. This is a regional exception to Apple's overall recommendation to use Open Transport 1.1 in combination with System 7.5.3. When KanjiTalk 7.5.3 becomes available, Apple will recommend that all KanjiTalk 7.5.2 customers update to 7.5.3.

Question: Does System 7.5.3 require the use of Open Transport?

Answer: System 7.5.3 supports and includes both classic and Open Transport networking.

Doing an Easy Install of System 7.5.3 on an 68030, 68040, or NuBus PowerPC MacOS system installs Open Transport v1.1 and classic networking. Easy Install on a 68000 or 68020 Macintosh will install only classic networking. Easy Install on PCI MacOS systems will install only Open Transport.

Question: Why does System 7.5.3 include both classic and Open Transport networking?

Answer: System 7.5.3 includes both classic and Open Transport networking to support a Universal System Folder, which could provide networking services for any MacOS system, from the Mac Classic to the most powerful PowerPC.

Question: Since both Open Transport and classic networking are included with System 7.5.3, which network software will actually be used?

Answer: The networking software used by System 7.5.3 depends upon four factors:

- the configuration of the system where 7.5.3 was installed;
- an initial stored preference, established at system software installation time;
- the configuration of the system currently being booted, which might be the same as or different from the system where 7.5.3 was installed; and
- the user's change to the stored preference, if any.

Together these factors determine the networking software system loaded at system startup (boot) time:

- Classic networking will load and run when booting System 7.5.3 on a 68000 or 68020 Macintosh, even if Open Transport is also installed;
- Open Transport will load and run when booting System 7.5.3 on PCI MacOS systems meeting Open Transport minimum memory requirements, even if classic networking is also installed;
- Both classic and Open Transport options are available on 68030, 68040 and NuBus PowerPC MacOS systems meeting Open Transport minimum memory requirements. The networking software used at boot time is selected based upon a stored preference.

When System 7.5.3 is installed on these machines, the initial default is to load and run classic networking. Open Transport can be enabled using the Network Software Selector utility, discussed below.

- Classic networking will load and run when booting MacOS systems with less than 5 MB (680x0) or 8 MB (PowerPC) total system memory.

If this low-memory situation occurs on a 68030, 68040, or NuBus MacOS system, classic networking will load and run, with full support for AppleTalk and MacTCP.

If this low memory situation occurs on a PCI MacOS system - perhaps due to the definition of a large RAM disk - classic networking will become available, but will be limited to support only for AppleTalk on LocalTalk; no TCP/IP services will be available.

Question: What happens if a boot device is moved to a different system after the

preference has been established?

Answer: The stored preference for network software will be honored, if possible, at boot time. Whenever the system configuration being booted meets the minimum requirements for the preferred network software, it will load and run. If the stored preference has been deleted, or is not appropriate for the system being booted, the rules noted above around minimum and recommended memory size, processor, and bus type determine which network software system loads.

Question: Why is the network software preference initially set during system installation time? Wouldn't checking system configuration at boot time be a more flexible way to support the Universal System Folder?

Answer: As described above, a number of system configuration checks are made at boot time - including processor, bus type, and system RAM - and influence the choice of network software when booting a Universal System Folder.

On MacOS systems that support both networking software systems, however, an initial preference is established based on system configuration at installation time. For the majority of users, this system (the installation system) is the same one as where the System Folder being created will be used. In these cases, the update / installation script establishes a preference based on the recommended memory configuration (vs. the minimum required memory, which is still always tested at boot time).

There are two reasons for doing this in this manner:

- Testing for minimum memory requirements at system start-up time assures a compatible hardware-software combination each time a system is booted. If a system configuration changes to fall below Open Transport's minimum memory requirements - which might happen due to reconfiguration, or by moving an external boot device to a different system - System 7.5.3 automatically drops back to classic networking to provide basic connectivity to the outside world.
- When there is no stored preference, System 7.5.3 selects between classic and Open Transport networking based on the system configurations described above. As this check is based on total memory (including VM but less RAM disk), in the absence of a preference, a seemingly unrelated user action such as turning VM on or off could change the network system used at (next) boot time. For example, enabling VM on an 8 MB system would provide at least 9 MB RAM at next startup, moving the system from classic to Open Transport "unexpectedly"; turning on a RAM Disk could cause another reversal. Thus, setting an initial preference "locks in" a predictable behavior.

Question: How can a user specify a preference for a specific network software system, overriding the system installation preference?

Answer: Apple has developed a utility called the "Network Software Selector" (NSS), which allows a user to indicate a preference for classic or Open Transport networking. Network Software Selector is distributed as a part of System 7.5 Update 2.0, and in other System 7.5.3 configurations - it is located

in the Apple Extras Folder.

NSS may not be supplied in all configurations of System 7.5.3; for example, PCI MacOS systems manufactured with System 7.5.3 pre-installed may not have the Network Software Selector utility included, because these systems require Open Transport.

To indicate a preference, the user launches NSS and clicks the radio-button control indicating either classic or Open Transport networking. After quitting NSS, the system must be re-started for the preference to have a change to take effect.

Question: Does the Network Software Selector allow a user to specify a preference for a networking system that is "not valid" for the current system configuration?

Answer: Yes, with the Network Software Selector it is possible to set a preference for classic networking while currently booted on a PCI MacOS system, or to set a preference for Open Transport while booted on a 68000 or 68020 Macintosh. This is designed to allow an administrator to prepare an external boot device with an Universal System Folder that has a configuration different than their own machine.

The Network Software Selector indicates a user preference; the actual network software loaded is determined when the system is booted. If a preference for Open Transport is set but the device is a 68000 or 68020, classic networking would load, ignoring the preference. If that boot volume is moved to a Power Macintosh 9500, Open Transport would load, as this PCI system requires Open Transport. Move the boot volume to a Quadra 800 and restart; Open Transport would load based on the stored preference.

Question: Can the stored preference be deleted? Why might this be a useful action?

Answer: The preference for network software system is stored as a part of the AppleTalk Prefs file, kept in the System Folder. Deleting this file will also delete the stored preference.

In some support environments it may be useful to create a Universal System Folder that does not include a stored preference. For example, if a network administrator's system is configured differently from the systems found with end-users, the preference set at system software installation time (based on the configuration of the administrator's system) may not be optimum for end-users' systems.

If all of the end user population is configured similarly, the network administrator could use the Network Software Selector utility to modify the stored preference before distributing system software. However, if end-users' system configurations vary widely, deleting the preference would have the effect of deferring the selection of network software to boot time for each individual user.

Should an end-user want to "lock-in" a preference for their system, they would need to simply launch and then close the NSS utility on their machine. This records the network system currently in use as the preference.

Question: When might a user want to use NSS to enable Open Transport, disabling classic networking?

Answer: The Network Software Selector provides System 7.5.3 users an easy way to update to Open Transport networking, without requiring custom system software installations.

Open Transport should be enabled when the user is ready to take advantage of any of Open Transport's features, such as multiple saved network configurations, reconfiguration without restart, support for PowerPC native code; when the user want to run Open Transport-ready or Open Transport-enhanced applications; or when a network manager requires the use of Open Transport to connect to a centrally administered network.

Of course, users that have previously dropped back to classic networking in order to maintain compatibility with an older network application will want to re-enable Open Transport once the application has been updated.

Question: When might a user override the default for Open Transport and specify a preference for classic networking?

Answer: The Network Software Selector provides an easy way to temporarily drop back to classic networking, if needed, on systems that support both networking models. There are two reasons why there might be a call to do so:

- a need to maximize RAM available for running applications, especially if VM is turned off; or,
- a need to run older networking software that is not yet Open Transport compatible.

Before dropping back to classic networking, users are encouraged to check with the application developer to find out if an Open Transport-compatible or Open Transport-ready version of the application is available.

Question: On systems that support both classic and Open Transport networking, how are configuration preferences managed? How does the Network Software Selector interact with these preferences?

Answer: When initially installed, Open Transport AppleTalk and TCP Preferences files are created based on the current settings for classic networking. The Prefs files will each contain a single configuration, entitled "Default". Classic settings are not modified by this installation process.

When booted with Open Transport active, classic networking components and

preferences are hidden, and Open Transport initializes with the default configurations. Should the system switch back to classic networking at a later time, Open Transport settings are hidden and the saved classic settings are restored.

Each time the system switches between classic and Open Transport - whether through the use of the Network Software Selector utility or by moving an external boot volume from system to system (where different memory sizes or processor types could cause a switch) - this process will be repeated.

Note that after the initial installation, there is no exchange of configuration information between classic and Open Transport networking. If changes are made in network addressing, and so on while running classic networking, those changes will not be in effect up on switching back to Open Transport. The inverse holds true as well.

For AppleTalk users this would very rarely be any sort of problem, as AppleTalk dynamic addressing and dynamic naming would typically adjust to the system environment at network initialization time.

For TCP/IP users, this could create the potential for some confusion if a user installed Open Transport but continued to run classic networking for a while -- making some configuration changes during that time. Later, when they enable Open Transport networking using the Network Software Selector utility, they'll find that the default Open Transport/TCP configuration reflects their "old" MacTCP settings, not the most recent version.

While there is some potential confusion for users in this behavior, Apple looked carefully at the alternatives, including the possibility of converting information every time the stored preference for network system changed. That approach would have resulted in more frequent and more difficult end-user problems, so was abandoned in favor of the single-conversion at installation time.

Question: On systems that support both classic and Open Transport networking, how are control panels managed? How does the Network Software Selector interact with these preferences?

Answer: During the boot process, a MacOS system running System 7.5.3 checks for the stored preference for networking software as described above. Once the selection of network software has been determined and validated, the load process also causes the appropriate control panels -- "Network" and "MacTCP" for classic networking; "AppleTalk" and "TCP/IP" for Open Transport -- to be "unhidden". Those associated with the disabled network software are hidden.

Question: Does the Network Software Selector allow running Open Transport on a 68000 or 68020 Mac? If not, why not?

Answer: While NSS can change the stored preference to Open Transport at any time, the preference will be honored at boot time only on those models that can use Open Transport - 68030, 68040, and PowerPC MacOS systems.

68000 and 68020 systems always load and run classic networking. Open Transport was not engineered to support these two older processors as the overall processor and system memory requirements associated with Open Transport's additional features are generally higher than that available in these older systems.

Question: Does the Network Software Selector allow running classic networking on a PCI Power Mac? If not, why not?

Answer: While NSS can change the stored preference to classic networking at any time, that preference will be honored at boot time only on those models that can use classic - 68030, 68040, and NuBus PowerPC MacOS systems.

However, certain MacOS systems with PCI -- designed for entry-level markets, where users' networking needs and system memory configurations may be limited -- may ship with a default preference to initially support only AppleTalk on LocalTalk using classic networking. On these systems, a user can easily enable Open Transport using NSS when they are ready to take advantage of PCI network cards, or when they want to gain direct access to TCP/IP networks such as the Internet.

Classic networking is not generally supported on PCI MacOS systems for a number of reasons:

- PCI MacOS systems are based on PowerPC, and only Open Transport provides PowerPC native code;
- Apple simultaneously adopted hardware and software standards for networking by supporting PCI networking via Open Transport's DataLink Provider Interface (DLPI) driver architecture;
- Many of the new features provided by Open Transport, such as multiple saved configurations, reconfiguration without restart, and support for current standards (DHCP, IP multicast, and so on) would have been technically difficult or impossible to retrofit to classic networking; and,
- Open Transport prepares the way for the Copland release of MacOS, by carefully defining an execution model consistent with protected memory and preemptive scheduling.

Question: Can MacTCP be installed on a system running Open Transport?

Answer: With System 7.5.2 it was possible - although not recommended or supported - to install MacTCP on PCI MacOS systems through drag-copy of specific files. Beginning with System 7.5.3, this is no longer possible.

In order to meet the requirements of the Universal System Folder, System 7.5.3 automatically hides files associated with classic networking on systems where Open Transport is in effect (and correspondingly hides Open Transport files on systems where classic networking is running). If a user installs MacTCP on a PCI

machine - where Open Transport is always active - the "just installed" MacTCP files will be automatically be hidden by the MacOS immediately upon reboot of the system. This could be confusing to users who may not be aware that this software configuration (MacTCP on PCI machines) is not supported.

If, for any reason, it becomes necessary to reinstall MacTCP on a 68030, 68040, or NuBus PowerPC MacOS system running Open Transport, the end-user must first use the Network Software Selector utility to specify a preference for classic networking and reboot the system. Only after the reboot will MacTCP and the other components of classic networking be visible. The converse would also be true for Open Transport on these machines - only the currently running network system is visible and can be modified or updated.

Question: Does System 7.1.x support both classic and Open Transport networking?

Answer: System 7.1.x continues to support classic networking, and gains the option of running Open Transport v1.1.

Customers running 7.1.x on 68000 and 68020 systems will continue to use classic networking; Open Transport v1.1 will not install on these systems. (System 7.1.x does not support PCI MacOS systems.) Customers running System 7.1.x on 68030, 68040, and NuBus PowerPC MacOS systems can use either classic or Open Transport networking. To enable Open Transport, users must run the Open Transport installer, available as a part of the stand-alone retail distribution package.

Question: Is the Network Software Selector available for System 7.1.x customers?

Answer: No, the Network Software Selector is a feature only found in System 7.5.3.

Article Change History:

25 Mar 1996 - Updated to Q&A release 2.1.

08 Mar 1996 - Changed distribution status.

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Tech Info Library Article Number:19437



Tech Info Library

Color StyleWriter 2200: White Lines at Bottom of Page (3/95)

Revised: 3/4/96
Security: Everyone

Color StyleWriter 2200: White Lines at Bottom of Page (3/95)

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Article Created: 4 March 1996

TOPIC -----

White horizontal lines appear when I print full page documents on my Color StyleWriter 2200. The lines only seem to appear during the last 0.8 inches at the bottom of the page. Is this normal?

DISCUSSION -----

White horizontal lines may appear when printing near the bottom 0.8 inches (2.03 cm) of each page because the majority of the paper has left the printer, leaving very little contact area with the paper feeding rollers. When this occurs, the paper can shift or advance slightly causing white gaps or lines.

The ReadMe file provided with each Color StyleWriter 2200 makes the following recommendations:

- If you see very thin stripes near the bottom of your printout, use your application program to make your bottom margin larger. A bottom margin of 0.8 inches or greater is best.
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.

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Tech Info Library Article Number:19438



Tech Info Library

Using MIDI software on Power Macintosh computers (3/96)

Revised: 3/4/96
Security: Everyone

Using MIDI software on Power Macintosh computers (3/96)

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Article Created: 4 March 1996

TOPIC -----

I am having problems using some MIDI software made by Opcode on my Power Macintosh 7200 computer. Previously, I used this same MIDI software on another Macintosh computer without any problems.

DISCUSSION -----

Opcode's MIDI music software works properly when you update to OMS v2.0.2. You can update your version of OMS by downloading the latest OMS software from Opcode's online FTP or WWW site.

FTP SITE: [ftp.opcode.com](ftp://ftp.opcode.com)
WWW SITE: <http://www.opcode.com>

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19440



Tech Info Library

LaserWriter 8.x: LaserWriter printers using Tray Switch (3/96)

Revised: 3/5/96
Security: Everyone

LaserWriter 8.x: LaserWriter printers using Tray Switch (3/96)

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Article Created: 5 March 1996

TOPIC -----

This article provides a list of LaserWriter printers which allow you to use the optional Tray Switch option in the print dialog.

DISCUSSION -----

LaserWriter models supporting the Tray Switch option:

LaserWriter Select 360
LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
LaserWriter Pro 16/600
Color LaserWriter 12/600 PS

LaserWriter Select 610 (sold only in Japan)

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Tech Info Library Article Number:19441



Tech Info Library

QuickTime Conferencing: Included Compression Codecs (3/96)

Revised: 3/7/96
Security: Everyone

QuickTime Conferencing: Included Compression Codecs (3/96)

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Article Created: 5 March 1996
Article Reviewed/Updated: 7 March 1996

TOPIC -----

What compression codecs are included with the H.320 ISDN QuickTime Conferencing Kit? What are their compression ratios?

DISCUSSION -----

For the H.320 QuickTime Conferencing kit, the only supported codecs when using the ISDN portion are H.320 and it's related codecs. For non-ISDN connections, we support some of the QuickTime compressors.

Audio

- G.728 - 16 Kbps digital audio samples 3.3 KHz of analog audio (low bandwidth)
- G.722 - 48, 56, or 64 Kbps PCM digital audio from 7 KHz analog audio (higher bacndwidth)

Video

- H.261
 - QCIF 176x144 pixels
 - CIF 352x288 pixels

Because there is no penalty for choosing the larger resolution, you should always select it for the best resolution on the receiving end. Also, in Apple Media Conference during an ISDN connection, you can double the CIF window <which is actually 320x240 on your screen> to achieve a 640x480 image size. Keep in mind that it uses pixel doubling, so resolution will suffer slightly.

For an ISDN connection, you can get 12-15 fps in the large window (320x240) if using both B channels. Otherwise, you can get 5-7 fps when using one B channel. Frame rate will vary depending on which audio compressor is being used and

whether or not you are sharing data in the shared window. For a single B channel connection, you can only use the G.728 audio compressor if you expect to get video, because there is no bandwidth left with G.722.

Article Change History:

07 Mar 1996 - Corrected typo.

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Tech Info Library Article Number:19444



Tech Info Library

QuickTime Conferencing: Broadcasting Over Network (3/96)

Revised: 3/5/96
Security: Everyone

QuickTime Conferencing: Broadcasting Over Network (3/96)

=====

Article Created: 5 March 1996

TOPIC -----

I would like to use the QuickTime Conferencing kit across our campus Ethernet network. Are there any special configurations we must do to our network?

DISCUSSION -----

If you are planning to broadcast across the campus network, you need to verify that all network routers, repeaters, and so on are multicast capable. (Note that this is not an issue for conferencing.) If they are not, you will need to check with the vendors of the equipment to see if an upgrade is available. Multicast allows a single packet to travel across the network and any entity can listen to that broadcast. In a non-multicast environment, each receiving entity will create a single point-to-point connection with the broadcaster. This creates more network traffic and results in fewer frames of video and audio packets getting through and far fewer people would be able to receive or view the broadcast.

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Tech Info Library Article Number:19445



Tech Info Library

QuickTime Conferencing: Using Over the Internet (3/96)

Revised: 3/5/96
Security: Everyone

QuickTime Conferencing: Using Over the Internet (3/96)

=====

Article Created: 5 March 1996

TOPIC -----

I would like to use QuickTime Conferencing to connect our university with other college campuses over the Internet. What compression rates are needed to get 7 frames per second (fps) across the Internet?

DISCUSSION -----

This will depend heavily on your network infrastructure and how much traffic currently exists on it. The default settings on the QuickTime Conferencing software are considered to be the best optimized settings for that particular network type. The default settings for IP include the JPEG compressor in the small window (120x80) and the frame rate is set to 10 fps. Keep in mind, however, that the frame rate is what QuickTime Conferencing will attempt to achieve. There is no assurance that it will be reached. If you have a fast Internet connection, this rate is more likely. You should test during peak and non-peak load periods to see what is possible on your network.

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Tech Info Library Article Number:19446



Tech Info Library

Color OneScanner 600/27: Chattering Sound due to Lock (4/96)

Revised: 4/30/96
Security: Everyone

Color OneScanner 600/27: Chattering Sound due to Lock (4/96)

Article Created: 5 March 1996
Article Reviewed/Updated: 29 April 1996

TOPIC -----

When I power on my Color OneScanner 600/27, I get a chattering sound and it will not scan. What is wrong?

DISCUSSION -----

The Apple Color OneScanner carriage is locked during shipment. The scanner will not work if the carriage is locked. The Color OneScanner software displays an error message telling you to make sure the scanner is unlocked and turned on if you try to scan when the scanner is locked.

Note:

The Color OneScanner 600/27 does not always make a chattering sound when it is locked. Sometimes no sound is heard but the scanner carriage still does not move.

Unlocking the Color OneScanner

Step 1

Grip the scanner top cover on both sides and lift it off.

Step 2

Use a coin or flat-blade screwdriver to turn the lock, located at the top of the scanner glass, to the unlocked position. You need to turn the lock 90 degrees.

IMPORTANT: A small arrow on the lock's plastic dial (NOT the slot used to turn the dial) indicates the position. The arrow needs to point to the unlocked (open) position for the scanner to operate.

Step 3

Replace the scanner top cover.

If you ever need to ship the scanner somewhere or move it to a different place, you should relock the scanning unit so the arrow points to the locked (closed) position.

Article Change History:

29 Apr 1996 - Explained scanner lock

05 Apr 1996 - Added additional information on symptoms.

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Tech Info Library Article Number:19448



Tech Info Library

Color OneScanner 600/27: Scanner Driver isn't Initializing (3/96)

Revised: 3/13/96
Security: Everyone

Color OneScanner 600/27: Scanner Driver isn't Initializing (3/96)

Article Created: 5 March 1996
Article Reviewed/Updated: 13 March 1996

TOPIC -----

I have an Apple Color OneScanner 600/27, and when I try scanning with the Dispatcher software I get an error message. The error message reads "Unable to initialize the scanner driver. Either the scanner is not turned on, connected, or already in use by another application." What is wrong?

DISCUSSION -----

The most common cause is the Apple Color OneScanner was powered ON after the Macintosh computer. Always make sure you power on the scanner before you power on your Macintosh computer, so the scanner driver loads properly.

How To Determine The Scanner is Recognized

Observe the extensions and control panels as the Macintosh starts up.

An icon which shows a side view of a scanner should appear. This is the Apple Color OneScanner 600/27 software driver loading.

If the scanner extension does not appear, reinstall the Color OneScanner software.

If the scanner extension appears with an 'X' through it, you need to check your SCSI connection. Check both the SCSI ID and SCSI cables. The Tech Info Library article titled "System 7.x: Troubleshooting Startup Problems" can help you further isolate SCSI related issues.

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Tech Info Library Article Number:19449



Tech Info Library

Color OneScanner 600/27: PhotoShop Plug-in Doesn't Work (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: PhotoShop Plug-in Doesn't Work (3/96)

Article Created: 5 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

When the Apple Color OneScanner Plug-in is moved to the Photoshop Acquire folder it does not work. Now I cannot Scan from the Dispatcher software either. Why?

DISCUSSION -----

The Apple Color OneScanner Plug-in must be left in its original folder. You can either make a copy of the Apple Color OneScanner or make an ALIAS, and put that in the PhotoShop Acquire folder.

IMPORTANT:

You cannot change the name of the original Apple Color OneScanner Plug-in. You must keep the name " Apple Color OneScanner".

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Tech Info Library Article Number:19450



Tech Info Library

Color OneScanner 600/27: Cause of Black Arcs on Pages (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: Cause of Black Arcs on Pages (3/96)

Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

What is the cause of black arcs on pages scanned with the Apple Color OneScanner 600/27?

DISCUSSION -----

Dust on the mirrors. With standard flatbed scanners when you get dust on the mirror you see straight vertical lines. The Color OneScanner 600/27 uses a two mirror design. With two mirrors you see arcs of different sizes depending on where the dust is located on the mirrors. The only solution to to have an Apple service provider inspect and clean the optical assembly.

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Tech Info Library Article Number:19451



Tech Info Library

Color OneScanner 600/27: Blank Scans With Document Feeder (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: Blank Scans With Document Feeder (3/96)

Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

Sometimes when using the Automatic Document Feeder (ADF) on my Apple Color OneScanner 600/27 it scans a blank page or a strange vertical pattern. Why?

DISCUSSION -----

Usually there is something left on the scanner glass. Check the scanner glass for any paper. Before using the Automatic Document Feeder you should always check the scanner glass and make sure it is clear of any previous documents or paper.

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Tech Info Library Article Number:19452



Tech Info Library

Color OneScanner 600/27: Scanned Image Too Large (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: Scanned Image Too Large (3/96)

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Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

When I scan images using my Apple Color OneScanner 600/27, the image is too large to see on my monitor. How can I view the entire image?

DISCUSSION -----

If you have scanned an image at 300 dpi, it will be shown initially at four times its printing size because of the pixel-for-pixel view. The images are not dynamically sized for the size of your monitor.

Here are some tips that can help you when you scan at high resolutions.

- Use PRESCAN and select only the area you need scanned before performing a scan.
- If you are using a Multiple Scan Display, change the Resolution before launching the OneScanner Dispatcher software.
- Once the image has been scanned, zoom out until you can see the entire image on your display.

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Tech Info Library Article Number:19453



Tech Info Library

Color OneScanner 600/27: Straighten feature Requirements (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: Straighten feature Requirements (3/96)

Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

The straighten feature in Apple Color OneScanner Dispatcher software does not seem to work.

DISCUSSION -----

The straighten feature relies on well-defined, high-contrast, rectangular edges on the scanned document, as well as some image content, to determine the correct rotation required to straighten the image. This function also expects the scanned document to be located away from the edges of the scan window.

You have the option of manually rotating an image, if the automatic straighten feature is not working as well as you want. To manually rotate an image, use the Rotate, Arbitrary command in the Image Editor.

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Tech Info Library Article Number:19454



Tech Info Library

Color OneScanner 600/27: SCSI Selector Has Wrong SCSI ID (3/96)

Revised: 3/12/96
Security: Everyone

Color OneScanner 600/27: SCSI Selector Has Wrong SCSI ID (3/96)

Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1996

TOPIC -----

The SCSI Select switch on my Apple Color OneScanner 600/27 does not select the correct SCSI ID according to the SCSI Probe software.

DISCUSSION -----

Sometimes the label on the Apple Color OneScanner 600/27 is not lined up correctly to the position of the SCSI selector switch. To correctly set the SCSI ID, turn the selector switch so the arrow is pointing up (the 12 o'clock position). Next turn the selector to the right (clockwise) and count the number of times the selector clicks. This allows you to set the proper SCSI ID.

For example, if you rotate the SCSI selector three notches, this is SCSI ID 3.

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Tech Info Library Article Number:19455



Tech Info Library

Power Macintosh Computers: Using FPM, EDO, SDRAM, & SGRAM

Revised: 3/19/97
Security: Everyone

Power Macintosh Computers: Using FPM, EDO, SDRAM, & SGRAM (3/97)

Article Created: 6 March 1996
Article Reviewed/Updated: 12 March 1997

TOPIC -----

I am confused about the different types of memory that are being used in current Apple products. What is meant by FPM, EDO, SDRAM, and SGRAM? Which Power Macintosh computers support these different memory types?

DISCUSSION -----

Fast-Page Mode (FPM), Extended-Data Out (EDO), Synchronous Dynamic Random Access Memory (SDRAM), and Synchronous Graphic Random Access Memory (SGRAM) are different types of memory used in various Power Macintosh computers. The table below summarizes the types of memory supported by different Power Macintosh computers. Detailed information follows the table.

Begin_Table

Power Macintosh Models	FPM	EDO	SDRAM	SGRAM
6100, 7100, 8100	YES	YES, but acts as FPM	NO	NO
4400	NO	YES VRAM: 5 V DRAM: 3.3 V	YES, but as video memory ONLY	YES, but as video memory ONLY
5200, 5300, 6200, 6300	YES	YES, but acts as FPM	NO	NO
5400, 6360, some 6400	YES	YES, but acts as FPM	NO	NO
5500 & 6500	NO	YES	NO	YES, but as video memory

				ONLY.Has 2 MB
				installed and
				is NOT
				expandable
-----+-----+-----+-----+-----				
6400 (some configurations ONLY)*	YES	YES	NO	NO
-----+-----+-----+-----+-----				
7200	YES	NO (may	NO	NO
		damage logic		
		board)		
-----+-----+-----+-----+-----				
7300, 7500, 7600, 8500, 8600, 9500, 9600	YES	YES, but	NO	NO
		acts as FPM		
		DRAM: +5V		

End_Table

*NOTE: The Macintosh Performa 6400/200 computer that includes an internal Zip drive supports EDO memory.

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+=====+
| Fast-Paged Mode Memory |
+=====+

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A specific location in a memory chip is identified by the row and the column addresses. Each time memory is accessed, the memory controller first supplies the chip with the row address and then the column address. After the information obtained from these locations is validated, the column deactivates and gets ready for the next cycle. This introduces a wait state because nothing is happening while the column is deactivating. The processor must wait for the memory to complete the cycle.

The Fast-Paged Memory (FPM) chip decreased the time required to read these addresses by allowing the memory controller to select a particular row and then access the corresponding column addresses for that row. This process works under the assumption that the next piece of data needed is in the memory location adjacent to the previous piece. Because the row address is only set up once and only the column address changes, this saves time when reading or writing information to or from memory.

Using FPM memory in Power Macintosh computers

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Most Power Macintosh computers support Fast-Paged Mode Memory. The only exceptions are the Power Macintosh 4400, 5500, and 6500 series computers.

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+=====+
| EDO Memory |
+=====+

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EDO (Extended Data Out) DRAM is a subset of FPM memory that saves the memory

controller even more time by allowing it to begin locating the row and column for the next address, while reading the data at the first address. It is able to do this because EDO memory keeps the output buffer on while preparing for the next read operation. By keeping the buffer on, EDO eliminates wait states. This speeds up data transfer rates since EDO RAM can access data continuously without waiting for addresses to be located. This reduces the time of the read cycles by approximately 10%. However, during write cycles, the system behaves exactly as an FPM chip would behave.

Although EDO devices improve timing efficiency to main memory by approximately 10%, it does not necessarily mean programs will execute 10% faster. The processor often gets instructions and data from cached memory, for example, L1 cache within the PowerPC microprocessor and or L2 cache on the logic board.

Using EDO memory in Power Macintosh computers

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Because EDO DRAM is a subset of FPM memory EDO DRAM can typically be used in place of Fast Page Mode DRAM. However, unless the memory controller is designed to use the faster EDO timing, the memory performance will be the same as Fast Page Mode.

There are three categories of Power Macintosh computers based on their level of EDO memory support. In some Power Macintosh computers, you can use EDO memory and get some potential performance boosts. In others, you can use EDO memory even though you will not derive any benefits from doing so. Finally, there are some Power Macintosh computers in which Apple does not recommend using EDO memory because doing so may damage your computer.

Power Macintosh Computers that Support EDO Memory

The following Power Macintosh computers fully support EDO memory and may experience increased performance:

- Power Macintosh 4400 series
- Power Macintosh 5500 series
- Power Macintosh 6500 series
- Macintosh Performa 6400/200 with internal Zip drive

All memory installed must be EDO to take advantage of the benefits. If you mix FPM and EDO RAM, the EDO modules will perform as if they were FPM.

IMPORTANT: There are two types of EDO memory--5 Volt and 3.3 Volt. The Power Macintosh 4400 series requires 3.3 Volt EDO memory whereas the Power Macintosh 5500, 6500, and 6400 computers require 5 Volt EDO. The two types of EDO memory are NOT interchangeable. Most 5 V and 3.3 V EDO memory are physically keyed differently to prevent you from using the wrong type, but even if the DIMM can be installed, verify that you are installing the correct type.

Additionally, EDO memory can also be used as video memory in the Power Macintosh 4400 ONLY. However, when using EDO memory as video memory, the Power Macintosh 4400 uses 5 Volt EDO memory rather than the 3.3 Volt used as DRAM.

Power Macintosh Computers that Can Use EDO memory

Although you will not derive any performance benefits by using EDO DIMMs, you can use them in the following Power Macintosh computers:

- Power Macintosh 6100 series
- Power Macintosh 7100 series
- Power Macintosh 8100 series
- Power Macintosh 5200 series
- Power Macintosh 5300 series
- Power Macintosh 5400 series
- Power Macintosh 6200 series
- Power Macintosh 6300 series
- Power Macintosh 6400 series
- Power Macintosh 7500 series
- Power Macintosh 7600 series
- Power Macintosh 8500 series
- Power Macintosh 9500 series
- Macintosh Performa 6360 series
- Some Macintosh Performa 6400 series

Power Macintosh Computers that CANNOT use EDO memory

You cannot use EDO DIMMs in the Power Macintosh 7200 computer. Using EDO memory in the Power Macintosh 7200 computer can cause damage to the logic board and to the DIMMs. Because of this, Apple does not support using EDO memory in the Power Macintosh 7200 computer. Any damage incurred from using EDO memory in the Power Macintosh 7200 computer may not be covered under Apple Computer's limited hardware warranty.

EDO RAM has not been tested, and has not been certified or is supported by Apple in the Workgroup Server 9150/xx series computers.

+====++
| SDRAM |
+====++

The processes performed by a computer are coordinated by an internal clock, but memory access has traditionally used its own fixed timers for reading and writing data. Rather than synchronizing its actions with those of the internal clock, memory access had set times for reading and writing data regardless of the actual time the processes required. This would sometimes result in periods of wait cycles where nothing was happening. Because of this, memory was considered to be "asynchronous".

However, Synchronous Dynamic Random Access Memory (SDRAM) eliminates this difference between memory speed and processor speed because SDRAM has a clock synchronized with the computer's central processing clock. Thus, SDRAM uses only the time required to read/write data which increases data transfer rates by eliminating non-productive periods of waiting. The clock coordinates with a computer's central processor's clock so that data can be delivered continuously to the microprocessor. The timing coordination between memory, the microprocessor, and other support chips permits more efficient memory access and

eliminates wait states. This results in memory access speeds of up to 20% faster than EDO.

Using SDRAM memory in Power Macintosh computers

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Only the Power Macintosh 4400/200 series support the use of SDRAM. Additionally, SDRAM is supported in these computers ONLY for video memory. You cannot use SDRAM as the primary memory devices on the logic board. The Power Macintosh 4400 series includes 2 MB of EDO memory for video memory, but it supports up to 4 MB of SDRAM or SGRAM.

+=====+

| SGRAM |

+=====+

Synchronous Graphics Random Access Memory (SGRAM) functions similarly to SDRAM except that it has added graphics support. Graphics support is provided by adding block write and masked write (or write-per-bit) functionality.

Block write enables the graphics engine to do block transfers of graphical data, such as tiling, and to interpret these larger data packets. Block write is often used in 3-D operations to clear the buffers or to prepare them for new rendering. With the block write function in the graphics memory, the graphics engine is free to do other tasks which increases performance. Masked write simplifies changing selected bits in a block of data. Masked write increases graphics performance with tasks such as color management of the display.

Using SGRAM memory in Power Macintosh computers

=====

SGRAM is supported in the Power Macintosh 4400, 5500, and 6500 series. SGRAM is supported in these computers for video memory ONLY; you cannot use SGRAM as the primary memory devices on the logic board.

The Power Macintosh 4400 series includes 2 MB of EDO memory for video memory, but it supports up to 4 MB of SDRAM or SGRAM. However, the Power Macintosh 5500 and 6500 series computers include 2 MB of SGRAM, which is NOT expandable.

This article was published in the Information Alley on 24 June 1996.

Article Change History:

12 Mar 1997 - Added information on EDO RAM and Workgroup Server 9150/xx.

05 Mar 1997 - Changed table, EDO for 7300 ... 9600 models.

27 Feb 1997 - Modified text.

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Tech Info Library Article Number:19456



Tech Info Library

System 7.5 Update 2.0: FAQ - General Info (1 of 6) (8/96)

Revised: 12/20/96
Security: Everyone

System 7.5 Update 2.0: FAQ - General Info (1 of 6) (8/96)

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Article Created: 7 March 1996
Article Reviewed/Updated: 12 August 1996

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides general information about the update.

DISCUSSION -----

General Information
=====

1) What is System 7.5 Update 2.0?

Apple's System 7.5 Update 2.0 is a comprehensive set of system software enhancements designed to provide new functionality and enhanced system performance. At the same time, it significantly improves the overall reliability of Macintosh and Mac OS-compatible systems running System 7.5, 7.5.1, or 7.5.2. Some of the changes in this update affect all Macintosh computers; others are specific to certain models. For example, all Macintosh computers should see a performance boost while the Finder is copying large numbers of small files. More specifically, this update has additional PowerPC native system software components. With this release, Apple has also created a "standardized" version of System 7.5 (officially known as System 7.5.3) that incorporates the enhancements from our last update (System 7.5 Update 1.0, released in March 1995) and will run on every properly configured Macintosh from the Macintosh Plus to the new PCI-based Power Macintosh 9500.

With System 7.5 Update 2.0, you can now create a System Folder that can be used on all currently supported Macintosh computers. You can set up a single external hard disk or removable-media drive that can boot up everything from a Macintosh Plus to a Power Macintosh 9500. We've also streamlined the System Folder, consolidating more than 20 files introduced in previous versions of System 7.5.

In response to requests from customers and developers, System 7.5 Update 2.0 contains a number of system reliability improvements, such as a reduction in the occurrence of Type 11 errors on Power Macintosh computers; corrections to the General Controls control panel to eliminate conflicts with some third-party products; and proper handling by the Installer of control panels and extensions disabled using the Extensions Manager. System 7.5 Update 2.0 also integrates a new version of Open Transport (version 1.1) that offers better performance on high-speed networks; broader support for dial-up connectivity to TCP/IP networks and the Internet; and new support for most 68030, 68040, and NuBus Power Macintosh computers. In addition, large PowerPC native applications—running on PCI-based Macintosh computers with virtual memory turned on—will launch significantly faster than before. System 7.5 Update 2.0 also integrates the "7.5.2 Printing Update" for PCI Macintosh computers (including the 7200, 7500, 8500, and 9500), as well as the recently released update for the Apple PowerBook 5300.

2) Why should I install this update?

Any customer using any version of System 7.5 (7.5, 7.5.1, or 7.5.2) will realize a benefit from the installation of this update. Improvements in overall system software performance and stability should be important to all users of Macintosh computers. System 7.5 Update 2.0 delivers significant improvements in both of these areas.

3) How does System 7.5 Update 2.0 fit into Apple's vision and strategy for the Mac OS?

System 7.5 Update 2.0 is part of Apple's strategy to address the evolving needs of our customers with regular system updates. This update is actually the fifth that Apple has made to its system software (with the first three updates for pre-System 7.5 software), which demonstrates that Apple has an established track record for providing updates. Our intent is to provide key updates every six to twelve months, so our customers do not have to wait for major revisions of the Mac OS in order for Apple to respond to their needs.

4) Is Apple planning any further development for System 7.5?

Yes, we will continue to maintain and enhance System 7.5 for as long as it makes sense for our customers, our developers, and Apple.

5) How compatible is System 7.5 Update 2.0 with existing applications and extensions?

In addition to the extensive testing done by Apple with this update, Apple has had a very aggressive developer seeding program to get the software into the hands of many developers well before it's shipped. This effort started last summer and more than 800 developers have been actively involved. Apple has also encouraged a number of our customers to test this software and provide feedback. We don't expect any significant compatibility problems with this update. If

there are problems with any particular application, extension, control panel, or driver, our developers should be prepared to assist their customers with them.

6) Will all of the improvements in System 7.5 Update 2.0 be incorporated into the existing System 7.5 retail product?

Apple plans on updating our retail product with this latest version of our system software in the U.S. in the spring of 1996. This software release is expected to be localized by most countries within months after the U.S. introduction.

7) Why is System 7.5 Update 2.0 so large?

At 14 disks, System 7.5 Update 2.0 may surprise customers because it is significantly larger than previous system software updates. There are good reasons for this. This update delivers several hundred stability improvements based upon customer and developer feedback. It also provides a number of performance improvements and includes all of the enhancements from System 7.5 Update 1.0. Finally, System 7.5 Update 2.0 includes updates to many Apple technologies, including Open Transport, PlainTalk, QuickTime, Apple Guide, and Desktop Printing.

8) What will System 7.5 Update 2.0 replace within my System Folder?

Generally speaking, any component in your System Folder will be replaced if a newer version is being delivered with this update (assuming you use the "Easy Install" option when you update your system). Since system components vary depending on the computer you're using, the components that are replaced with the update will also vary. If you're interested in the details of what this update is changing in your System Folder, you'll want to read the New In This Update documents that ship with the update. Since System 7.5 Update 2.0 is delivering so many changes, you'll find that most of the components within your System Folder will be updated.

9) Is System 7.5 Update 2.0 an Apple response to Microsoft Windows 95?

No. System 7.5 Update 2.0 is a response from Apple to requests received from customers and developers for improvements to System 7.5. It is expected to significantly improve our customers' experience using our operating system. The Mac OS has many advantages over competitive operating systems such as Windows 95 (see the document titled Top 10 Macintosh Advantages), and any enhancements we make to System 7.5 will only improve this position.

10) Can this System 7.5 Update 2.0 be installed on Mac OS compatibles?

Yes. Should any telephone support be needed after System 7.5 Update 2.0 is installed, however, the customer or user must contact the company that manufactured their Mac OS compatible computer for support-related questions.

11) Which Macintosh computers will ship with System 7.5.3?

Apple will begin shipping some computers with System 7.5.3 domestically in the spring of 1996. From that point forward, we'll increase the types of computers that ship with this system software release, and start shipping computers with it in other countries.

12) Which countries are expected to introduce System 7.5 Update 2.0, and when will this occur?

Generally speaking, within 60 days after the update is released in the U.S., a localized version will be available in most major languages in North America, Europe, and Australia. Other regions will provide the improvements that are delivered in this update at a later date. Please contact the Apple Assistance Center in your area for details.

13) After installing this update, which version number of System 7.5 will I have?

Once you've completed the installation process, go to the About This Macintosh item on the Apple menu. When the window appears, you should see System Software 7.5.3 with System 7.5 Update 2.0 directly beneath it.

14) I have a PCI-based Macintosh running System 7.5.2 and am connected to a Novell Netware network. Is there anything I should be aware of before installing System 7.5 Update 2.0?

System 7.5 Update 2.0 contains the Ethernet Compatibility extension version 1.0.3, which fixes a problem in the system shutdown code. A side effect of this fix is a two-minute delay in shutting down the computer. It may appear that the machine has hung, however after two minutes, the machine will resume the shutdown process. This delay can be avoided by logging out of the Netware tree before shutting down or restarting.

Without the Ethernet Compatibility extension, when a PCI-based machine (including the 7200, 7500, 8500, and 9500) running System 7.5.3 selects Shut Down or Restart, the machine would crash.

To use the Ethernet Compatibility extension, you must custom install the Ethernet Driver Update. This can be done by opening the System 7.5 Update 2.0 Installer, selecting Custom Install in the upper pop-up menu, and selecting the Ethernet Driver Update. This selection is at the very bottom of the list of custom install options.

Article Change History:

12 Aug 1996 - Changed distribution status.

20 Mar 1996 - Added keywords.

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Tech Info Library Article Number:19458



Tech Info Library

System 7.5 Update 2.0: FAQ-Benefits&Improvements (2 of 6) (8/96)

Revised: 8/12/96
Security: Everyone

System 7.5 Update 2.0: FAQ-Benefits&Improvements (2 of 6) (8/96)

Article Created: 7 March 1996
Article Reviewed/Updated: 12 August 1996

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides information about the key features and benefits, system software stability improvements, and performance improvements included with the update.

DISCUSSION -----

Key Features and Benefits
=====

1) Will System 7.5 Update 2.0 include any new features?

There are a number of new features that System 7.5 Update 2.0 delivers. One feature that is especially important to large business and education customers is the ability to create a universal System Folder. This will allow creation of a System Folder that can boot any system from a Macintosh Plus to currently shipping systems. These features are described in detail below.

- There is a space for you to put comments in a text window when you select "Get Info" from the File menu in the Finder. With this update, these comments are retained after rebuilding the desktop file.
- For Power Macintosh systems, when a file is dragged from within the Finder, the icon is now translucent instead of a simple outline. This will allow customers to better see what they are moving.
- A few changes have been made that affect components in the System Folder. A number of components in the System Folder have been consolidated into other pieces. In addition, Apple is providing documentation that will describe the Apple system software components in the System Folder, Control Panels folder, and Extensions folder. After System 7.5 Update 2.0 has been installed, these

will be located in the What's in Mac OS Folders? in the Apple Extras folder. For more information on new features provided with this update, please refer to the documents distributed with the update entitled New in this Update.

2) What is a "universal" System Folder and how can I create one?

With System 7.5 Update 2.0, you'll be able to create a universal System Folder that can be used to start up all currently supported Macintosh computers—from the Macintosh Plus to all Power Macintosh, PowerBook, and Performa computers shipping today. Support professionals responsible for a variety of Macintosh computers find it very useful to create a universal System Folder on an external drive. They can then use this drive to boot any of the systems they support. Directions on how to create a universal System Folder are included with System 7.5 Update 2.0 in the document titled Installing This Update. To create a universal System Folder, you'll need the original version of System 7.5 and System 7.5 Update 2.0.

3) Is there anything in this update to reduce the number of files in the System Folder?

More than 20 items have been eliminated from the System Folder (the actual number will vary depending on which Macintosh it is installed). Several stand-alone files are now merged into the System 7.5 or 7.5.2 Update enabler. In addition, several stand-alone files have been merged into, or been replaced by, various other system components. For more details, please refer to the New in This Update documents included with the update.

4) Will this update install anything new on my computer?

Yes. Two system software technologies—PlainTalk and Open Transport—are included in this update. The "Easy Install" option will install them onto your system if they are not already installed. We believe our customers want these technologies, so we've made them readily available. If you don't want these technologies active because of concerns of performance or RAM requirements, there are very simple ways to disable them. These are clearly described in the Installing This Update document that is included with the update.

5) Will this update allow other types of computers to access data on hard drives that are larger than 4GB?

Prior to the release of System 7.5 Update 2.0, only PCI-based Macintosh systems had the ability to read and write on hard drives that have more than 4 GB per volume. This is not changed with System 7.5.3.

System Software Stability Improvements =====

1) What are some of the major bugs addressed with this update?

While there are several hundred bugs addressed with this update, a few key ones are worth highlighting. For details on which bugs have been addressed, please

refer to the document titled New in This Update distributed with the update. Some causes of Type 11 errors have been eliminated for Power Macintosh computers. In addition, several months ago, Apple published a Tech Note to our developers describing in detail many of the causes of Type 11 errors. This will help them write applications that are less prone to cause this type of error.

We believe these two actions will go a long way toward significantly reducing Type 11 errors, but some of the results may take a while to be seen by our customers. Apple has also improved the memory management so that customers are less likely to get out-of-memory errors. Corrections have been made to the General Controls panel to eliminate conflicts with several third-party products.

The Update Installer has been fixed so that control panels and extensions that were disabled using the Extensions Manager get properly updated. Many of the printing problems that were associated with PCI-based Macintosh computers (including the 7200, 7500, 8500, and 9500) have been addressed (these are the same improvements delivered with the 7.5.2 Printing Update).

2) Is the 7.5.2 Printing Update included with this update?

Yes. All of these components are automatically installed if "Easy Install" is chosen when you install the update. However, we've integrated some of these components into other parts of the system software, so you may not see the same components in your System Folder after you install the update.

Performance Improvements =====

1) What type of performance improvement can I expect from System 7.5 Update 2.0?

Overall, the performance improvement you can expect to receive from System 7.5 Update 2.0 will depend on the Macintosh computer it's being installed on. Performance will range from no significant improvement to a modest improvement. Customers with Power Macintosh systems will generally see more improvement in performance.

2) Are launch times for large applications, with virtual memory turned on, improved with System 7.5 Update 2.0 for PCI-based Macintosh computers. If so, how much of an improvement?

We worked very closely with some of our key developers (most notably Microsoft) to identify the areas where we could improve the launch times for some applications with virtual memory on specific systems. Some of the testing we've seen indicates that launch times for large applications with virtual memory on for PCI-based Power Macintosh computers (including the 7200, 7500, 8500, and 9500) is several times faster. Other Macintosh computers will not experience this improvement.

3) Will Apple ship the new Dynamic Recompiling (DR) emulator, which first shipped with the PCI-based Macintosh computers with System 7.5 Update 2.0?

Yes. However, this feature is still only available for PCI-based Macintosh computers (including the 7200, 7500, 8500, and 9500). It could not be delivered with this update for other Macintosh computers in a way that would meet our performance and RAM requirements. We will, however, evaluate making this feature available for other Macintosh computers in future system software releases.

4) I recently installed the PowerBook 5300 System Software Update. Should I also install the System 7.5 Update 2.0?

For customers who've installed the PowerBook 5300 System Software Update, the improvements delivered with System 7.5 Update 2.0 are not considered by Apple to be significant enough to recommend that it be installed by all customers. The vast majority of the improvements delivered with System 7.5 Update 2.0 are already included with the PowerBook 5300 System Software Update. There may be enough new benefits in System 7.5 Update 2.0, however, for some customers to consider installing it. It's important for customers to understand that after installing the PowerBook 5300 System Software Update, the system software version will be 7.5.2. After installing System 7.5 Update 2.0, the system software version will be 7.5.3. This may be important to organizations that want all of their systems on the same system software version, or for customers who simply want the latest version.

System 7.5 Update 2.0, includes the PowerBook 2300c Update 1.0, Open Transport v1.1, the Network Software Selector (to switch between classic AppleTalk and Open Transport), a new version of Apple Menu Options, a few minor improvements to the Finder, and several other minor improvements in stability. In addition, the RAM required for System 7.5 Update 2.0 is slightly higher than for systems with the PowerBook 5300 System Software Update installed.

Some third-party PC card Ethernet drivers have not yet been optimized for use with Open Transport. Customers may encounter configurations where classic AppleTalk performs better than Open Transport AppleTalk. The Network Software Selector provides a convenient mechanism for these customers to upgrade to Open Transport when they receive an Ethernet driver update.

Article Change History:

12 Aug 1996 - Changed distribution status.
20 Mar 1996 - Added keywords.

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Tech Info Library Article Number:19459



Tech Info Library

System 7.5 Update 2.0: FAQ - Open Transport (3 of 6) (11/96)

Revised: 11/25/96
Security: Everyone

System 7.5 Update 2.0: FAQ - Open Transport (3 of 6) (11/96)

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Article Created: 7 March 1996
Article Reviewed/Updated: 25 November 1996

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides information about Open Transport.

DISCUSSION -----

Open Transport
=====

1) What is Apple Open Transport and how does it benefit users?

Apple Open Transport is the modern networking and communications subsystem for the Mac OS. Open Transport is based on industry standards and brings a new level of networking connectivity, control, and interoperability to Mac OS- based systems, while preserving and enhancing the hallmark of Macintosh computers: built-in, easy-to-use networking. Open Transport provides individual computer users with many benefits. Two of the most immediately visible and important benefits relate to making networking more accessible. First, Open Transport makes it easy to switch from one network configuration to another. A computer user "on the go" might want to hook up to the Internet in various locations, each requiring a different network configuration. With Open Transport, settings for each network location can be stored for easy access. Changed configuration settings are available immediately; no reboot of the computer is required to use them. Second, Open Transport integrates on-line help-based on Apple Guide technology-to make it easier for an individual to hook up to a network, with fewer demands on network manager and support resources. Lastly, some customers, primarily those using Power Macintosh computers, will see an improvement in networking performance by upgrading to Open Transport.

2) What Mac OS technologies, components, and products will Open Transport

replace?

When installed, Open Transport replaces the current Mac OS implementations of AppleTalk and TCP/IP (including the protocols and the Network, MacTCP, and Admin TCP control panels). Open Transport is also designed to replace the Connection Manager and the Communications Resource Manager of the current Communications Toolbox architecture. Over time, Open Transport is planned to replace the "AppleTalk Connection for Macintosh" and "TCP/IP Connection for Macintosh" shrink-wrap software products.

3) How would a user establish a preference for a specific network software system after installing System 7.5 Update 2.0?

As a part of this update, Apple supplies a utility called the "Network Software Selector." This utility allows a user to indicate a preference for classic or Open Transport networking, if different from the default choice that would otherwise be made by the system. The Network Software Selector utility is located in the Apple Extras folder.

4) Why does System 7.5 Update 2.0 include classic and Open Transport networking?

System 7.5.3 (the version delivered in System 7.5 Update 2.0) includes both classic and Open Transport networking in order to support a universal System Folder—on, for example, an external hard drive—that can be booted and provide networking services for any Macintosh from the Macintosh Classic to the most powerful Power Macintosh computer.

5) When might a user want to override the default selection of Open Transport, and specify a preference for classic networking?

The Network Software Selector provides an easy way to temporarily drop back to classic LocalTalk networking, if needed, on computers that support both networking models. Here are two reasons why there may be a need to do so:

- A need to maximize available system RAM; which may possibly be an issue in systems with less than 8 megabytes of memory—especially when virtual memory needs to be turned off for some reason.
- A need to run an older networking application that is not yet Open Transport-compatible. Before dropping back to classic LocalTalk networking, users are encouraged to check with the application developer to find out if an Open Transport-compatible or Open Transport-ready version of the application is available.

6) When this update is installed, will I get Open Transport AppleTalk or classic AppleTalk?

System 7.5.3 supports both classic and Open Transport networking. Completing an

"Easy Install" of System 7.5 Update 2.0 on a 68030, 68040, or PowerPC-based Macintosh automatically installs Open Transport v1.1. The networking software used when a system starts up depends upon the specific Macintosh computer being booted, the amount of system memory available, and the user's specified preference (if any).

- If a customer was using classic networking before installing the update, the networking software that will be active after rebooting the system will still be classic networking.

- If a customer was using Open Transport before installing the update, the networking software that will be active after rebooting the system will still be Open Transport.

- Classic networking will always load and run on 68000 and 68020 based Macintosh systems, even if Open Transport is also installed; PCI-bus Power Macintosh systems require Open Transport for full networking support.

- On most 68030, 68040, and NuBus Power Macintosh computers, both classic and Open Transport options are available; customers running classic networking can update to Open Transport by using the Network Software Selector, which is located in the Apple Extras folder. However, the base requirement for Open Transport to be active is an Apple Macintosh or PowerBook with at least 5 MB of total system RAM; or a Power Macintosh computer with at least 8MB of total system RAM. If virtual memory is turned on, the additional amount of RAM made available by the feature will be added to the total system RAM to determine if Open Transport will load. If disk cache or a RAM disk is being used, the additional amount of RAM reserved by these features will be subtracted from the total system RAM to determine if Open Transport will load.

- Open Transport v1.1 (and native ASLM) is not available on the Performa and Power Macintosh 5200, 5300, 6200, and 6300 series of desktop computers. Apple is evaluating the changes necessary to have this technology run on these systems. At this time we have no announcements to make on when this will be available.

7) Can I use the Network Software Selector to switch frequently between classic networking and Open Transport?

Apple does not recommend this. The Network Software Selector was designed to make it easy for you to transition to Open Transport, and is expected to be used infrequently by customers. Understanding the way the Installer and the Network Software Selector works will help you better understand the recommendation made by Apple.

When you initially install the System 7.5 Update 2.0, the install script will check the AppleTalk preferences, as well as the MacTCP preferences if this file is present. A matching Open Transport configuration(s) will then be created. Therefore, when Open Transport is first used, the same configuration settings that were previously in use will apply to Open Transport networking.

At any time after the installation of the update, there will be no interchange of configuration or preferences data between the two networking systems. When

switching from classic networking to Open Transport networking, the preferences for classic networking will be "stored away" and left untouched by any configuration changes made while Open Transport is in operation. If classic networking is used at a later time, the Open Transport configurations would similarly be stored away, and the last-used classic settings would be restored along with classic networking.

8) Does Open Transport require more RAM than classic networking?

The actual memory requirements of Open Transport are dynamic, based on the networking services in use at a given time. This is different from classic networking, which allocates a fixed amount of memory to networking services and keeps this memory allocated even after networking services are no longer in use. Other factors that contribute to differences in memory requirements include the following:

- Open Transport provides native PowerPC code; RISC code is typically larger—but also faster—than CISC code.
- Open Transport is very "VM-friendly," and has a much lower memory requirement on systems with virtual memory enabled; classic networking has about the same footprint regardless of the virtual memory setting.
- Open Transport is based on the cross-platform standard STREAMs environment, which increases the total size of the implementation.
- Open Transport includes the new implementation of networking plus backward compatibility libraries.
- To lay the groundwork for Copland's protected memory model, Open Transport allocates memory for TCP/IP in the system area; MacTCP allocated memory in each application.

Thus the difference will depend on which configurations are measured. Some examples include:

- On a 680x0 system with virtual memory off, classic AppleTalk and MacTCP require about 350-450K total system memory; Open Transport will require about 700-800K; that is, Open Transport is about 350K larger.
- On a PowerPC system with virtual memory off, classic AppleTalk and MacTCP require about 350-450K; Open Transport can require up to 1.2 MB; that is, Open Transport is about 800K larger. With virtual memory on, the amount of memory reserved by the system software will decrease, and part of the RAM reserved will be in virtual memory—not the faster physical RAM.

9) What is the current version of Open Transport, and what are its key features?

Open Transport v1.1.1 is the current release of Open Transport. This release is an update to Open Transport v1.1, to address the most pressing customer

requests, in advance of the next feature release of Open Transport (currently planned as OT 1.5 - see Future Directions). Open Transport v1.1.1 includes the following updates and new features as compared to the earlier Open Transport 1.1 release:

- now also supports the Performa 5200, 5300, 6200, and 6300 systems;
- includes internal changes to minimize memory fragmentation resulting from dynamic loading and unloading of TCP/IP;
- includes changes to the TCP/IP DNR for inter-operability with sites using the load-balancing name daemon;
- includes changes for support of the upcoming Open Transport/PPP release;
- includes all bug fixes available to date.

Open Transport v1.1 is the version which comes with System 7.5.3. This general release is recommended for all supported Mac OS systems, and includes the following updates and new features as compared to the earlier Open Transport 1.0.x releases:

Open Transport v1.1 is the version which comes with System 7.5 Update 2.0. This general release is recommended for all supported Mac OS systems, and includes the following updates and new features as compared to the earlier Open Transport 1.0.x releases:

- Now supports 68030 and 68040 based Macintosh systems
- Now supports Power Macintosh systems with NuBus
- Now supports NuBus, SCSI, and CommSlot network interface adapters
- Offers tuning to optimize performance of high-speed datalinks
- Offers tuning to support multi-client, multithreaded server applications
- Includes support for multi-node and multi-homed operation of AppleTalk protocols
- Adds support for raw packet access and promiscuous mode, to enable the development of Open Transport-ready network analyzers and other network management utilities
- Recognizes a significantly expanded selection of MacTCP dial-up network extensions (mdevs)
- Allows reconnection of a dial-up TCP/IP session without reloading networking and without system restart
- Provides display of the datalink Media Access Control address for Ethernet and Token Ring networks
- Provides notification in the event duplicate AppleTalk or TCP/IP addresses are established
- Automatically converts users' existing AppleTalk and MacTCP setting to Open Transport configuration files during installation
- Includes improved compatibility with Apple Remote Access 2.0.1
- Provides a basis for future support for PPP-based AppleTalk and TCP/IP remote networking
- Provides a basis for future support for modem and ISDN communications devices
- Includes support for System 7.5.3
- Includes support for the creation of a "universal System Folder," by allowing classic AppleTalk to run if an Open Transport System Folder is booted on a 68000 or 68020 based system
- Offers improved Balloon Help text for System 7 users
- Includes all bug fixes available to date

10) Where can I get more information about Open Transport in general, and specifically about version 1.1?

Please follow this AppleLink pathway for more information: AppleLink Services:
Apple Sales & Mktg: Apple Programs:

- Communications (Bulletins, Newsletters, etc.):
- Information Updates: System 7.5 Update 2.0 Info

11) Why don't Open Transport and Native ASLM run on the Performa and Power Macintosh 5200, 5300, 6200, and 6300 series of desktop computers?

The development and testing for these components could not be completed on these systems in time for the release of System 7.5 Update 2.0.

NOTE:

With the release of Open Transport 1.1.1, Performa and Power Macintosh 5200, 5300, 6200, and 6300 series computers are now supported.

Article Change History:

25 Nov 1996 - Updated for current version of Open Transport.
12 Aug 1996 - Changed distribution status.
20 Mar 1996 - Added keywords.

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Tech Info Library

System 7.5 Update 2.0: FAQ -Other Software (4 of 6) (8/96)

Revised: 8/12/96
Security: Everyone

System 7.5 Update 2.0: FAQ -Other Software (4 of 6) (8/96)

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Article Created: 7 March 1996
Article Reviewed/Updated: 12 August 1996

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides information about other system software technologies included with the update.

DISCUSSION -----

Other System Software Technologies
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1) What is new with QuickDraw GX 1.1.3 included with System 7.5 Update 2.0?
How is it installed?

QuickDraw GX 1.1.3 contains fixes required for the Color StyleWriter Pro driver (which is included with the update). It also fixes a bug where desktop printers revert to their original position on the desktop after a reboot—even if you've moved them to a different place on the desktop. There are also some performance improvements for color ink-jet printers. QuickDraw GX 1.1.3 can be installed from a separate installer that is available as a floppy fulfillment with System 7.5 Update 2.0, and is on the System 7.5 Update 2.0 CD.

2) What is new with PowerTalk 1.2.3 included with System 7.5 Update 2.0?
How is it installed?

The most visible change delivered with PowerTalk 1.2.3 is the decoupling of DigiSign Digital Signature technology from PowerTalk. This capability is accessible through a Custom Install option in the PowerTalk 1.2.3 Installer. With this release are new Starnine PowerTalk gateways for access to Internet mail, Starnine Mail, and C.E. Software's QuickMail. Additional changes include bug fixes to existing problems, bug fixes to problems uncovered during the 7.5.2 effort, and the synchro-nization of PowerTalk Finder Extensions to the current

version of the Finder. PowerTalk 1.2.3 can be installed from a separate installer that is available as a floppy fulfillment with System 7.5 Update 2.0, and is on the System 7.5 Update 2.0 CD.

3) What is new with PlainTalk 1.4.1 included with System 7.5 Update 2.0?
How is it installed?

The major improvements for PlainTalk 1.4.1 are as follows:

- English Text-to-Speech now runs on all Macintosh computers.
- English Speech Recognition has improved performance when used with the built-in microphone on Apple 14 inch AV monitors.
- "Listening" control panel defaults to the much more robust and accurate "push-to-talk" mode. Users hold down a key (defaults to the Escape key), which toggles the microphone on and off as they speak a command (without having to say "Computer" first).
- Speech control panel is compatible with HyperCard 2.3 pop-up menus on Power Macintosh computers.
- The Text-to-Speech part of PlainTalk 1.4.1 is automatically installed when "Easy Install" is selected when installing System 7.5 Update 2.0. If you are interested in installing Mexican Spanish Text-to-Speech or English Speech Recognition, they are available in the PlainTalk 1.4.1 folder in the Apple Extras folder on the CD version of System 7.5 Update 2.0. In addition, PlainTalk 1.4.1 is available electronically at many of the same locations as System 7.5 Update 2.0. Please see the section, "Availability and Distribution" for more information.

4) What is new with Apple Guide 2.0 included with System 7.5 Update 2.0?
How is it installed?

Apple Guide 2.0 features the following improvements:

- Unlimited mix-ins. The previous limit of seven mix-ins has been removed. The number of mix-ins is limited only by the amount of memory.
- The ability to option-click on a panel to copy a picture of that panel to the clipboard has been added.
- Sounds are now played asynchronously.
- System 7.0 and 7.1 are supported.
- Coach marks are displayed in modal dialogs.
- The problem of entire topic areas being eliminated when trying to add a mix-in has been fixed.

- Fixed the problem that occurred while some applications would build their menus, preventing Apple Guide from displaying that application's guide file item, even if one existed in its folder. Apple Guide 2.0 is automatically installed when "Easy Install" is selected when installing System 7.5 Update 2.0.

5) What is new with QuickTime 2.1 included with the System 7.5 Update 2.0?
How is it installed?

QuickTime 2.1 is automatically installed when a customer chooses the "Easy Install" option when installing System 7.5 Update 2.0. The main features of QuickTime 2.1 are the following:

- Provides developers with a high-performance sprite engine, with all sprite images stored as QuickTime compressed images
- A sprite track has been added, which allows sprite animations to be included as part of a QuickTime movie
- Includes a new Modifier Track feature, which allows for the creation of extremely dynamic movies
- Sound Manager 3.1, included with QuickTime 2.1 for Macintosh, for significantly enhanced recording and playback performance on all Power Macintosh computers
- Allows developers to create video that's larger and looks better on most computers, yet still plays back well on slower ones
- Adds a 256-color format to Cinepak, enabling high-quality video playback without any color remapping
- Adds a settings dialog so users can control the font, font size, style, and color of the text
- Using QuickTime 2.1 for Macintosh, Sound Manager 3.1, and any QuickTime aware application (such as Apple's MoviePlayer or Simple Text), a consumer can now transparently open and play ".WAV" and ".AU" format sound files, which are commonly found on the World Wide Web
- Provides a convenient way for developers to easily change the monitor resolution within their title so the content fills the entire screen
- Supports QuickTime Teleconferencing
- Supports the Apple MPEG Media System, providing expanded MPEG support for multimedia developers
- Includes playback support that allows digital video compression cards to provide QuickTime with memory to store compressed video data as it is read from the disk

6) What is new with Desktop Printing 1.0.3 included with System 7.5 Update 2.0?
How is it installed?

Desktop Printing Software v1.0.3 fixes memory-related problems that occur on Power Macintosh computers with Open Transport installed. If you have a Power Macintosh 7200, 7500, 8500, or 9500, you may have experienced system errors while printing to a desktop printer. This is especially likely if you have turned off virtual memory. Desktop Printing Software v1.0.3 includes support for the Extensions Manager. All three components of the Desktop Printing Software now appear in the Extensions Manager control panel. These components include the Desktop Printer Extension, Desktop PrintMonitor, and Desktop Printer Spooler. If you do not already have Desktop Printing Software in your system, you can install it by choosing the "Custom Install" feature when installing System 7.5 Update 2.0.

7) What is new with QuickDraw 3D 1.0.3 included with System 7.5 Update 2.0?
How is it installed?

QuickDraw 3D 1.0.3 is a minor maintenance release that provides better memory management. It is available as a separate installer that only comes on the CD version of System 7.5 Update 2.0. However, QuickDraw 3D 1.0.3 is also available electronically at many of the same locations as System 7.5 Update 2.0. Please see the section, "Availability and Distribution" for more information.

8) Why isn't OpenDoc included with System 7.5 Update 2.0?

The current OpenDoc release is targeted primarily to developers. When Apple is ready to deliver OpenDoc to customers, it will be included with future system software releases.

Article Change History:

12 Aug 1996 - Changed distribution status.
20 Mar 1996 - Added keywords.

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Tech Info Library

System 7.5 Update 2.0: FAQ- System Requirements (5 of 6) (1/97)

Revised: 1/17/97
Security: Everyone

System 7.5 Update 2.0: FAQ- System Requirements (5 of 6) (1/97)

Article Created: 7 March 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides information about the system requirements for and the availability of the update.

DISCUSSION -----

System Requirements
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1) What are the system requirements for System 7.5 Update 2.0? Have they changed from the original System 7.5?

Apple is very sensitive to the fact that many of our customers want to continue to evolve with our system software, but do not want to upgrade their systems in order to do so. The hardware requirements to run System 7.5 are not changing with this update. The current system requirements for System 7.5 are an Apple Macintosh or PowerBook with at least 4MB of RAM (8MB required for PowerTalk and QuickDraw GX); or a Power Macintosh computer with at least 8MB of RAM (16MB required for PowerTalk and QuickDraw GX). Open Transport requires an Apple Macintosh or PowerBook with at least 5 MB of RAM; or a Power Macintosh computer with at least 8MB of RAM. In order to install System 7.5 Update 2.0, System 7.5, 7.5.1, or 7.5.2 must already be installed on the system being updated.

2) When I install System 7.5 Update 2.0, will the system software use more RAM than previous versions of System 7.5, as indicated in the "About This Macintosh" box?

Generally speaking, yes. However, the amount of RAM will vary greatly depending on which Macintosh system you are up-dating, and what your system configuration is. The two areas that will affect the additional amount of RAM being reserved by the system software are updated system components and a new system technology

that is included with the installation of System 7.5 Update 2.0.

A number of system software components are being updated with System 7.5 Update 2.0. Many of these new components must reside completely in RAM. This accounts for the increase. The new components include important improvements in stability and/or performance, which should outweigh the RAM impact. Most of the new components being delivered with System 7.5 Update 2.0 that require more RAM affect Power Macintosh systems only, including native versions of QuickDraw, SCSI Manager, Resource Manager, and SerialDMA. Tests indicate that the RAM reserved for system software for some 680x0-based Macintosh systems will increase less than 100K as compared to System 7.5.1, while the RAM reserved for system software for some Power Macintosh systems will increase 300K-850K as compared to 7.5.1. The results you will see may vary.

The other factor that may affect the RAM reserved for system software is Open Transport, one of the new technologies included with the System 7.5 Update 2.0. For information on this, please see the question above, Does Open Transport require more RAM than classic networking? in the section on Open Transport.

Apple recognizes that customers may be concerned that the system software requires more RAM with the latest release. Reducing the RAM footprint for system software is something that Apple will consider for future system software releases.

3) Do I need System 7.5 Update 1.0 in addition to System 7.5 Update 2.0?

No. System 7.5 Update 2.0 includes all of the improvements made in System 7.5 Update 1.0. Therefore if you are plan-ning on installing System 7.5 Update 2.0, you do not need to install System 7.5 Update 1.0. Apple will discontinue the fulfillment program for System 7.5 Update 1.0 when System 7.5 Update 2.0 starts shipping.

Availability and Distribution

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1) Where can I get System 7.5 Update 2.0 in the United States? This update can be obtained in many different places, including:

- Apple's File Transfer Protocol (ftp) site on the Internet - Connect to:
<ftp://ftp.info.apple.com>
- Apple's World Wide Web sites on the Internet - Connect to:
<http://www.info.apple.com/swupdates>
- America Online: Use the keyword "applecomputer"
- CompuServe: Use the shortcut "GO APLSUP" to take you to the Apple Support Forum
- Order the update on a CD or a floppy disk set for \$13 from Apple. Call 1-800-293-6617, ext. 984

2) How can I obtain a localized version of System 7.5 Update 2.0 if I live outside the United States?

Many countries will be providing this update via on-line services and the Internet, and most are expected to provide a program where customers can obtain System 7.5 Update 2.0 on a CD-ROM or floppy. Customers will want to contact their local Apple Assistance Center for information on how to get the update. In Europe, most of the localized versions will be posted on the Apple European ftp mirror site ([ftp.info.euro.apple.com](ftp://info.euro.apple.com)).

Article Change History:

03 Dec 1996 - Corrected spelling.

12 Aug 1996 - Changed distribution status.

20 Mar 1996 - Added keywords.

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Tech Info Library

System 7.5 Update 2.0: FAQ-More Info & Other SW (6 of 6) (8/96)

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System 7.5 Update 2.0: FAQ-More Info & Other SW (6 of 6) (8/96)

Article Created: 7 March 1996
Article Reviewed/Updated: 12 August 1996

TOPIC -----

This article provides the answers to commonly asked questions about System 7.5 Update 2.0. Specifically, this article provides information about the system requirements for and the availability of the update.

DISCUSSION -----

For More Information
=====

1) Where can I get more information on the specific changes being made with System 7.5 Update 2.0?

Apple has provided a great deal of information on the changes that are delivered with this update. This information is distributed as part of the update. If you would like this information, please refer to the documents titled Installing This Update, New in This Update - 1, New in This Update - 2, and New in This Update - 3.

2) Where can I get more answers to common questions about System 7.5 Update 2.0?

It is expected that new questions and answers will come up once this document is released. Because of this, this document will be posted on AppleLink where new questions and answers will be added. Please follow this AppleLink pathway:

AppleLink Services: Apple Sales & Mktg: Apple Programs:

- Communications (Bulletins, Newsletters, etc.):
- Information Updates: System 7.5 Update 2.0 Info

Other System Software Projects
=====

1) What is Zhag and Zeus, and what are the differences between them?

Zhag and Zeus are code names for system software projects that are going on in parallel within Apple and are complementing each other. Both projects are delivering System 7.5 version 7.5.3, but the delivery mechanisms and components are different. The chart below provides a comparison.

Zhag	Zeus
=====	=====
Zhag updates a Macintosh to system software version 7.5	Zeus ships on PCI-based Power Macintosh computers as system software version 7.5.3
Has same functionality as a Macintosh system running Zeus	Has same functionality as a comparable Macintosh system running Zhag
Requires installation over an existing System Folder	Will come preinstalled on new PCI-based Power Macintosh computers beginning this spring
Distributed via online services, Internet, and a fulfillment managed by Apple (where the update on CDs or floppies)	Only bundled with certain new the the Macintosh systems. Eventually, program all Macintosh systems will ship you can order with 7.5.3, but they will not necessarily be the same as Zeus, which has specific system components for specific computers
Updates any system running 7.5, 7.5.1, or 7.5.2 because it just has the components needed for those computers	Is only qualified to run on certain new computers
Will be introduced first in the U.S. March, and in most countries over the next few months	Will first appear on new PCI-based in Power Macintosh computers in the spring
Specific details on the differences between Zeus and Zhag, including the additional bug fixes and the different components are included in an article in the Tech Info Library.	

2) What is Unity-1, and how does it differ with Zhag?

Unity-1 is code name for the reference release that Apple is working on that will be used to update the version of System 7.5 that we sell in retail stores. This product is typically purchased by customers who are running pre-System 7.5 versions of our system software, and want to upgrade to System 7.5. Unity-1 will update this retail product so that customers buying this product in the stores will be buying our latest version of System 7.5: 7.5.3. Unity-1 can be installed

on a hard drive with no existing System Folder, and will include bootable disks. OpenDoc is expected to be bundled with this product. As of 2/1/96, release of Unity is expected to be in the early spring. Claris Corporation will distribute Unity-1 as an updated version of Macintosh System 7.5.

3) When will Zhag be available in Japan and the Far East?

Japan and the Far East will not be localizing Zhag, but instead will be delivering these improvements to their customers with a localized version of the Unity-1 system software release. The schedule of this release is being worked out and more details will be available in the coming months.

4) Can I install Zhag over Zeus?

Yes.

Article Change History:

12 Aug 1996 - Changed distribution status.

20 Mar 1996 - Added keywords.

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Tech Info Library Article Number:19463



Tech Info Library

System 7.5 Update 2.0: PCI-Based Computers&Netware ReadMe(3/96)

Revised: 3/25/96
Security: Everyone

System 7.5 Update 2.0: PCI-Based Computers&Netware ReadMe(3/96)

=====

Article Created: 7 March 1996
Article Reviewed/Updated: 25 March 1996

TOPIC -----

This article contains one of several Read Me files included with System 7.5 Update 2.0. Specifically, this information is taken from the "Novell Netware Users Read Me" file. This information is applicable only if you have a PCI-based Mac OS computer connected to a Novell Netware network.

DISCUSSION -----

System 7.5 Update 2.0 contains the Ethernet Compatibility extension version 1.0.3, which fixes a problem in the system shutdown code. A side effect of this fix is a two-minute delay in shutting down the computer. It may appear that the machine has hung, however after two minutes, the machine will resume the shut down process. This delay can be avoided by logging out of the Netware tree before shutting down or restarting.

Without the Ethernet Compatibility extension, when a PCI-based machine running System 7.5.3 selects Shut Down or Restart, the machine would crash.

To use the Ethernet Compatibility extension, you must custom install the Ethernet Driver Update. This can be done by opening the System 7.5 Update 2.0 Installer, selecting Custom Install in the upper pop-up menu, and selecting the Ethernet Driver Update. This selection is at the very bottom of the list of custom install options.

Article Change History:

25 Mar 1996 - Added comment about name of ReadMe file.
20 Mar 1996 - Added keyword.
08 Mar 1996 - Updated with latest information.

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Tech Info Library Article Number:19464



Tech Info Library

Performa: Receiving Faxes with Internal GVC Modem (11/96)

Revised: 11/18/96
Security: Everyone

Performa: Receiving Faxes with Internal GVC Modem (11/96)

=====

Article Created: 7 March 1996
Article Reviewed/Updated: 18 November 1996

TOPIC -----

I have a Macintosh Performa computer with an internal Global Village modem. I am having difficulty receiving faxes while Megaphone is set to receive messages. What should I do?

DISCUSSION -----

To reliably receive calls, follow these steps:

Step 1

Choose the Global Village Fax Center from the Apple menu.

Step 2

From the Fax menu, choose Setup, then choose Receiving.

Step 3

Click on the Receive Fax check-box to turn it on, and set the number of rings that the fax software should use.

Step 4

Click on the OK button.

Step 5

Open the Telephone Setup control panel.

Note: For optimum performance, Megaphone should be left open if the Telephone

Setup control panel is turned on.

Step 6

Turn off the Call Saver mode.

Step 7

Set the number of rings to answer at one more than the number noted in step 3.

Note: The settings in Telephone Setup and in the GVC Fax Center should theoretically work at the same number of rings, but the setup described here has proven to be successful.

Step 8

Close the Telephone Setup control panel.

Article Change History:

18 Nov 1996 - Added notes for clarity.

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Tech Info Library Article Number:19465



Tech Info Library

Apple TV/Video System: Closed Captioning Not Appearing (3/96)

Revised: 3/7/96
Security: Everyone

Apple TV/Video System: Closed Captioning Not Appearing (3/96)

=====

Article Created: 7 March 1996

TOPIC -----

I have a videotape that includes closed captioning information that I wish to view with Apple Video Player. I've turned on closed captioning using the appropriate Apple Video Player "Controls" window. Also, the video window is not set to the smallest size, which I know keeps the closed captioning text from appearing, but I'm still not seeing the closed captioning.

DISCUSSION -----

In order to decode closed captioning information, the incoming video must be passed through the TV Tuner module. If the video cable is attached to the RCA jack of the Apple Video-In Card, closed captioning information will be ignored. Instead, use a standard F-type coaxial cable to attach the VCR to the TV Tuner module.

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Tech Info Library Article Number:19466



Tech Info Library

Apple Video Player: Always Records an Audio Track (3/96)

Revised: 3/7/96
Security: Everyone

Apple Video Player: Always Records an Audio Track (3/96)

=====

Article Created: 7 March 1996

TOPIC -----

Even though no audio cables are attached to the left or right RCA audio-in jacks of the Apple Video card in my computer, the Apple Video Player application still records an audio track. It is a silent track, but it increases the file size of the recorded video significantly, and can potentially impede video capture rates as well. Is there any way to disable this functionality?

DISCUSSION -----

No, the inability to turn off this feature is a trade-off for the simplicity and ease-of-use that Apple Video Player provides. However, the audio track can be removed with Apple's Movie Player application (which is included with QuickTime 2.1) and with most major video applications, such as Avid VideoShop, QuickFLIX, or Adobe Premiere.

Follow these steps to delete the audio track with Movie Player:

Step 1

Open the movie file and choose Delete Tracks from Movie Player's Edit menu.

Step 2

A window will appear that lists Video Track and Sound Track. Choose Sound Track from the list and click Delete.

The movie can now be saved without the audio portion, reducing the size of the saved file.

To prevent the audio track from being recorded in the first place, use a more full featured video application, like the ones listed above.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:19467



Tech Info Library

Macintosh Computers & System 7.5: Freeze Troubleshooting (7/96)

Revised: 10/10/96
Security: Everyone

Macintosh Computers & System 7.5: Freeze Troubleshooting (7/96)

=====

Article Created: 8 March 1996
Article Reviewed/Updated: 10 October 1996

TOPIC -----

This article provides guidelines to help troubleshoot various system freeze symptoms associate with Macintosh computers.

DISCUSSION -----

The following system freeze symptoms are covered in this article:

My computer freezes:

- At the happy Macintosh during startup
- While loading system extensions during startup
- After startup as the Finder is loading
- While the computer is sitting idle
- When launching, using, or quitting application "X"
- When printing from application "X"

In general, it is a good idea to understand when the freezes began to occur. For instance, if the freezes began occuring after adding memory, after adding a SCSI device, or after adding some new software, this might help identify where to begin troubleshooting the symptoms.

- At the happy Macintosh during startup

=====

Step 1

Turn computer off from the back of the computer.

Step 2

Temporarily disconnect external SCSI and serial devices.

Step 3

Wait 7 - 10 seconds for the drive to spin down.

Step 4

Turn computer back on.

Step 5

If computer continues to freeze at the happy Macintosh, try starting up from the system software CD-ROM disc or a Disk Tools floppy disk. The procedure for starting with the CD-ROM disc is documented in the User's Guide. Once you have started up from the CD-ROM disc or Disk Tools disk, run Disk First Aid to make sure hard disk is OK. You may also test the drive with Apple HD SC Setup or Drive Setup.

Step 6

If computer continues to freeze at the happy Macintosh while starting up from the CD or Disk Tools floppy disk, the computer should be serviced by an Apple-authorized service provider.

- While loading system extensions during startup

=====

Troubleshoot this problem as an extension conflict.

Step 1

Turn computer off from the back of the computer.

Step 2

Temporarily disconnect external SCSI and serial devices

Step 3

Start up the computer and hold down the space bar during startup to open the Extensions Manager control panel.

Select the extension set called "System 7.5.x Only".

Step 4

If the computer still freezes during startup, perform a clean installation (or restore new system software) to alleviate possible corrupted system software.

Step 5

If the computer still freezes during startup after a clean installation of system software, the computer should be serviced by an Apple-authorized service provider.

- After startup as the Finder is loading

=====

Troubleshoot this problem as an extension conflict.

Step 1

Restart from the Special menu or the keyboard by pressing and releasing the Command-Control-Power keys.

Step 2

Start up the computer and hold down the space bar during startup to open the Extensions Manager control panel.

Select the extension set called "System 7.5.x Only".

Step 3

If computer still freezes as the Finder is loading, try starting up by holding down the Option key until the desktop is loaded. This prevents open windows from opening which can sometimes cause freezing or lock-ups when loading the Finder.

Step 4

If computer still freezes, perform a clean installation of the system software or restore new system software to alleviate possible corrupted system software.

- While the computer is sitting idle

=====

Troubleshoot this problem as an extension conflict.

Step 1

Restart from the Special menu or the keyboard by pressing and releasing the Command-Control-Power keys.

Step 2

Start up the computer and hold down the space bar during startup to open the

Extensions Manager control panel.

Select the extension set called "System 7.5.x Only".

Step 3

Check to see if any screen savers have been added to the System Folder.
Temporarily disable or remove any screen savers as they may cause this symptom if they are incompatible.

Step 4

If system still freezes while sitting idle with extensions off, perform a clean installation of the system software or restore new system software to alleviate possible corrupted system software.

- When launching, using, or quitting application"X"

=====

Troubleshoot this problem as a possible low memory situation or as a possible application conflict with the system software and/or an extension conflict.

Step 1

Restart from the Special menu or the keyboard by pressing and releasing the Command-Control-Power keys.

Step 2

Once computer has started back up, choose About This Macintosh from the Apple menu in the Finder.

Check the Largest Unused Block of memory in the About This Macintosh window.

Step 3

Check the Memory Requirements of the application to be sure that there is enough free memory for the application to launch. It's important for the application to have at least the Minimum size of memory available to run. (For more information refer to Macintosh Guide's Application Programs topic, "How do I change the memory a program uses?")

Note: It may be necessary to enable Virtual Memory in the Memory control panel to give the application enough memory to run.

Step 4

If the computer still freezes, restart the computer and hold down the space bar during startup to open the Extensions Manager control panel.

Select the extension set called "System 7.5.x Only".

Step 5

Try to launch application again.

Step 6

If the computer still freezes when launching the application, try starting the application with Modern Memory Manager (for Power Macintosh computers) or 32-bit addressing (for earlier Macintosh computers) turned off. Some older applications may not be compatible with these options. Contact the developer for a more up-to-date version of the application.

Step 5

If the computer still freezes, the application may not be compatible with your computer.

Check the application's documentation or contact the developer of the application to determine if the application is compatible with your computer.

- When printing from application "X"

=====

First, troubleshoot this problem as a possible low memory situation. Second, troubleshoot this problem as a possible print driver and application or system software conflict.

Step 1

Restart from the Special menu or the keyboard by pressing and releasing the Command-Control-Power keys.

Step 2

Once computer has started back up, choose About This Macintosh from the Apple menu in the Finder.

Check the Largest Unused Block of memory in the About This Macintosh window.

Step 3

Check the Memory Requirements of the application to be sure that there is enough free memory for the application to launch. It's important for the application to have at least the Minimum size of memory available to run. (For more information refer to Macintosh Guide's Application Programs topic, "How do I change the memory a program uses?")

Note: It may be necessary to enable Virtual Memory in the Memory control panel to give the application enough memory to run.

Step 4

If the computer still freezes when printing and you are using Background Printing, try increasing the Memory Requirements for the PrintMonitor application if problem only occurs during Background Printing. The PrintMonitor is located in the Extensions folder within the System Folder.

Step 5

If the computer still freezes when printing, try disabling the Background Printing option in the Chooser or turn on Virtual Memory to increase the memory available for Background Printing.

Many print drivers including Apple's LaserWriter and StyleWriter drivers allow the user to enable to Background Printing. If there is not enough free memory for Background Printing to run, the computer may freeze during printing.

Step 6

If the computer still freezes when printing, the print driver may not be compatible with the application or system software. Check the printer's documentation or contact the manufacturer of the printer to determine if the print driver is compatible with your computer.

This article was published in the Information Alley on 26 March 1996.

Article Change History:

10 Oct 1996 - Removed fax information.

10 Jul 1996 - Removed keyword.

02 Jul 1996 - Added Fax Doc word.

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Tech Info Library Article Number:19468



Tech Info Library

Open Transport 1.1 Read Me (3/96)

Revised: 3/8/96
Security: Everyone

Open Transport 1.1 Read Me (3/96)

Article Created: 8 March 1996

TOPIC -----

This article is the Open Transport 1.1 ReadMe file.

DISCUSSION -----

Open Transport 1.1 Read Me

Introduction

This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), use Macintosh Guide, available from the Guide (question mark) menu. For technical information about Open Transport, see "Open Transport Technical Info."

Network Interface Options

Open Transport 1.1 supports PCI bus, NuBus, communications slot, and PC-card network interface cards as well as built-in LocalTalk and Ethernet network adapters. For Macintosh models without expansion options, Open Transport supports SCSI-attached network adapters.

Third party network interface options available for Open Transport include fast Ethernet, ATM, and FDDI.

Compatibility

Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple Computer, Inc.
- existing applications that use MacTCP as specified by Apple Computer, Inc.
- existing devices (such as printers) that you select in the Chooser
- existing NuBus network interface cards

Open Transport is compatible with existing AppleTalk, TCP/IP LocalTalk and Ethernet networks. Macintosh computers running Open Transport can be added to an existing network without upgrading other computers on the network.

Dial-up Network Connectivity

For connectivity to AppleTalk networks, Open Transport supports Apple Remote Access version 2.0.1 or later.

For dial-up connectivity to TCP/IP networks, including the Internet, Open Transport supports third party MacTCP software extensions known as Link Access Modules, or "mdevs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided through mdevs.

With the appropriate mdev installed, you use either SLIP (Serial Line Interface Protocol) or PPP (Point to Point Protocol) to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport 1.1. For best results, be sure to use the versions of software recommended below.

Open Transport 1.1 recognizes the following MacTCP mdevs. When installed on your system, they are available in the "Connect Via:" pop-up menu in the TCP/IP control panel:

- FreePPP - version 1.0.4 or later
- MacPPP - version 2.1.4 SD or later (version 2.2.0 is not recommended).
- InterPPP - version 1.2.9 or later
- InterPPP II - version 1.1 or later
- InterSLIP - version 1.0.1 or later
- MacSLIP - version 3.0.2 or later
- VersaTerm SLIP - version 1.1.4 or later
- Sonic PPP - version 1.0.2 or later
- AOL Link - the most current version is recommended

In addition, there are a number of third party PPP mdevs (including Pacer PPP, FCR PPP and Tribe PPP) which have a common technology base and as a result are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect Via:" pop-up menu in the TCP/IP control panel as "TCP/IP PPP."

NFS/Share 1.3.x and 1.4 are not compatible with Open Transport. To use NFS/Share with Open Transport, you must contact Intercon to obtain a version of NFS/Share that is compatible with Open Transport.

For more information on Open Transport compatibility, contact the developer of the software you want to use.

Obtaining Connectivity Software

FreePPP is shareware and can be found on a variety of Internet sites; typically at "info-mac" mirror sites in the comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com/hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>

MacPPP version 2.1.4 is available as a part of the Apple Internet Connection Kit. For fax information in the US, contact Apple Computer Inc., at 800-462-4396. To locate an Apple reseller near you in the US, call 800-538-9696.

InterPPP, InterPPP II, and NFS/Share are commercial software products. For availability and ordering information in the US, contact InterCon Systems at 800-468-7266 or 703-709-5500.

MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the US, contact TriSoft at 800-531-5170 or 512-472-0744.

VersaTerm SLIP is commercial software developed by Synergy Software. For availability and ordering information in the US, contact Synergy at 610-779-0522.

SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering information in the US, contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax).

MacPPP and FreePPP

If you experience problems using MacPPP or FreePPP when Virtual Memory is turned on, try turning off Virtual Memory. To find out how to turn off Virtual Memory, see the topic "How do I use hard disk space as memory" in Macintosh Guide, available from the Guide (question mark) menu.

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Tech Info Library Article Number:19469



Tech Info Library

System 7.5.x: Software Components Versions (11/96)

Revised: 11/4/96
Security: Everyone

System 7.5.x: Software Components Versions (11/96)

Article Created: 8 March 1996
Article Reviewed/Updated: 4 November 1996

TOPIC -----

This article lists the version numbers of Apple software components included with System 7.5.1, System 7.5.2, and System 7.5.3. System 7.5.3 is a new version of System 7.5 that comes installed on computers built after March 1996. You can update from System 7.5, System 7.5.1, or System 7.5.2 to System 7.5.3 by installing the System 7.5 Update 2.0 available online.

This list only includes the basic System 7.5.3 components or System 7.5 Update 2.0 components. Additional installations for PlainTalk, PowerTalk or QuickDraw GX may be available on the startup CD.

"n/a" - not applicable

"-" - no version number

DISCUSSION -----

Begin_Table

Ships with:	7.5.1	7.5.2	7.5.3
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System Folder
=====

Finder	7.1.4	7.5.3	7.5.5
Scrapbook File	7.5	7.5	7.5
System	7.5	7.5.2	7.5.3

System Folder:Apple Menu Items

AppleCD Audio Player	2.0	2.1	2.1
Apple Video Player (<i>f</i> alias)	n/a	1.3	1.4

Automated Tasks (<i>f</i> alias)	7.5	7.5	7.5
Calculator	7.5	7.5	7.5
Chooser	7.5	7.5.3	7.5.4
Control Panels (<i>f</i> alias)	7.5	7.5	-
Find File	1.0	1.1.1	1.1.2
Graphing Calculator	1.0	1.0	1.0
Jigsaw Puzzle	1.0	1.0.1	1.0.1
Key Caps	7.5	7.5	7.5
Note Pad	7.5	7.5	7.5
Scrapbook	7.5	7.5	7.5
Stickies	1.0	1.0.1	1.0.1
• Shut Down	1.0P	1.1	1.1

System Folder:Control Panels

Apple Menu Options	1.0	1.0.2	1.1.1
AppleTalk	n/a	1.0.6	1.1
AutoRemounter			7.5.3
Color	7.1	7.1	7.1
ColorSync System Profile	1.0.5	2.0	2.0
Control Strip	-	1.3	1.3.1
Date & Time	7.5	7.5	7.5.1
Desktop Patterns	7.5	7.5	7.5
Energy Saver		2.0	2.0.1
Extensions Manager	3.0	3.0.2	3.0.3
File Sharing Monitor	7.1	7.1	7.1
General Controls	7.5	7.5.5	7.5.7
Keyboard	7.1	7.5.1	7.5.1
Labels	7.1	7.1	7.1
Launcher	2.4	2.7	2.8
Macintosh Easy Open	1.1	1.1.1	1.1.2
MacTCP	n/a	2.0.4	2.0.6
Map	7.5	7.5	7.5
Memory	7.5	7.5.4	7.5.5
Monitors	7.5	7.5.3	7.5.4
Monitors & Sound	n/a	n/a	1.1
Mouse	7.3	7.3.1	7.5.3
Network Software Selector	n/a	n/a	1.0
(OT/Classic Atalk switch)			
Numbers	7.1	7.1	7.1
Password Security (PowerBook Only)	n/a	n/a	1.0.3
PC Exchange	2.0.2	2.0.5	2.0.5
PowerBook (PowerBook Only)	n/a	n/a	7.5.3
PowerBook Display (PowerBook Only)	n/a	n/a	7.5.2
PowerBook Setup (PowerBook Only)	n/a	n/a	7.3.1
Sharing Setup	7.1	7.1	7.1
Sound	8.0.3	8.0.3	8.0.5
Sound & Displays	n/a	1.0	1.0
Speech	n/a	n/a	1.4.1
Startup Disk	7.3.2	7.3.2	7.5.2
TCP/IP	n/a	1.0.6	1.1
Token Ring	n/a	n/a	1.0.1
Text	7.1	7.1	7.1

TrackPad (PowerBook Only)	n/a	n/a	7.5.5
Users & Groups	7.1	7.1	7.1
Views	7.1	7.1	7.1
WindowShade	1.3	1.3.1	1.3.1

System Folder:Control Strip Modules Folder

AppleTalk Switch	n/a	1.3	1.3.1
Battery Monitor (PowerBook Only)	n/a	n/a	1.3.1
File Sharing	n/a	1.3	1.3.1
HD Spin Down (PowerBook Only)	n/a	n/a	1.3.1
Power Settings (PowerBook Only)	n/a	n/a	1.3.1
Sleep Now (PowerBook Only)	n/a	n/a	1.3.1
Sound Volume	n/a	1.3	1.3.1
Monitor Bit Depth	n/a	1.0	1.0
Monitor Resolution	n/a	1.0	1.0
Video Mirroring	n/a	1.3	1.3.1

System Folder:Extensions

7200 Graphics Accelerator	n/a	1.0	1.0.1
7200 & 9500 Guide Additions	n/a	1.0	n/a
7500 & 8500 Guide Additions	n/a	1.0	1.0
About Apple Guide	1.2	1.2	1.3
Apple CD-ROM	5.0.2	5.1.1	5.1.2
Apple Color SW Pro CMM		1.0	1.0.1
Apple Guide	1.2	1.2.7	2.0
Apple Modem Tool (PowerBook Only)	n/a	n/a	1.5
Apple Photo Access	2.0	2.1	2.1
AppleScript	1.1	1.1	1.1
AppleScriptLib	1.1	1.1	1.1
AppleShare	3.5	3.5	3.6.1
AppleVision	n/a	n/a	1.0.4
AppleVision Guide Additions	n/a	n/a	1.1
Audio CD Access	5.0.2	5.1	5.1
Assistant Toolbox (PowerBook Only)	n/a	n/a	1.3.1
AV Monitors Guide Additions	n/a	1.0	1.1
AV Setup	n/a	1.0	n/a
Clipping Extension	7.1.4	7.1.4	7.1.4
Color Picker	2.0.1	2.0.1	2.0.1
Color SW 2000 Series CMM	n/a	1.0	1.0
Color SW 2200	n/a	n/a	2.1.1
Color SW 2400	n/a	2.1	2.1.1
Color SW Pro	n/a	1.5.2	1.5.2
ColorSync	1.0.5	2.0	2.0.1
Desktop Print Monitor	n/a	n/a	1.0.3
Desktop Printer Extension	n/a	n/a	1.0.3
Desktop Printer Spooler	n/a	n/a	1.0.3
Display Guide Additions	n/a	1.0.1	1.0.1
EM Extension	7.5	3.0.2	3.0.3
Energy Saver Extension	n/a	2.0	2.0.1
Energy Saver Guide Additions	n/a	1.0	1.1
Ethernet (Built-In)	n/a	1.0.1	n/a

File Sharing Extension	7.1.1	7.6.2	7.6.2
Find File Extension	1.0	1.1.1	1.1.1
Finder Help	7.1.4	7.5.3	7.5.5
Finder Scripting Extension	1.2	7.5.3	7.5.5
Finder Update	n/a	7.5.3	n/a
Foreign File Access	5.0.2	5.1	5.1
Generic PC Card Modem (PowerBook Only)	n/a	n/a	2.0.1
High Sierra File Access	5.0.2	5.1	5.1
ImageWriter	7.0.1	7.0.1	7.0.1
IR Talk	n/a	n/a	-
IR File Exchange Guide	n/a	n/a	1.1
ISO 9660 File Access	5.0.2	5.1	5.1
LaserWriter	7.2	7.2	7.2
LaserWriter 8	8.1.1	8.2.2	8.3.3
LaserWriter 300 (Renamed 300/LS in 7.5.3)	1.2	1.2	1.2
Macintalk 3	n/a	n/a	1.4
MacTCP Token Ring Extension (PowerBook Only)	n/a	n/a	-
Macintosh Guide	1.2	1.2	1.3
Monitor and Sound Guide Additions	n/a	n/a	1.0
Network	n/a	7.1.3	n/a
Network Extension	7.1.3	7.1.3	7.5.5
ObjectSupportLib	1.0.2	1.0.2	1.0.2
Open Tpt AppleTalk Library	n/a	1.0.6	1.1
Open Tpt Internet Library	n/a	1.0.6	1.1
Open Transport Guide Additions	n/a	1.0.6	1.3
Open Transport Library	n/a	1.0.6	1.1
Open TransportLib	n/a	1.0.6	1.1
OpenTptAppleTalkLib	n/a	1.0.6	1.1
OpenTptInternetLib	n/a	1.0.6	1.1
PB 500 Upgrade Guide Additions	n/a	n/a	1.3
PB 2300 Guide Additions	n/a	n/a	1.3
PB 5300 Guide Additions	n/a	n/a	1.3
PC Card Extension (PowerBook Only)	n/a	n/a	2.0
PC Card Modem Extension (PowerBook Only)	n/a	n/a	2.0.3
Printer Share	1.1.1	1.1.2	1.1.3
PrintMonitor	7.1.2	7.1.2	7.1.2
QuickTime	2.0	2.0.9	2.1
QuickTime PowerPlug	2.0	2.0.9	2.1
Serial (Built-In)	n/a	1.0.2	1.1
Shared Library Manager	n/a	2.0	2.0
Shared Library Manager PPC	n/a	2.0	2.0
Shortcuts	1.2	1.2	1.3
SimpleText Guide	n/a	1.0.1	1.0.1
Sound & Display Guide Additions	n/a	1.0.1	n/a
Speech Guide Additions	n/a	n/a	1.4.3
Speech Manager	1.3	1.3	1.4
StyleWriter 1200	n/a	2.1	2.1.1
System AV	n/a	n/a	1.1
Text Tool (PowerBook Only)	n/a	n/a	1.0.1
ThreadLib	2.1	2.1.2	2.1.2
TokenTalk Phase 2 (PowerBook Only)	n/a	n/a	2.5.7
TokenTalk Prep (PowerBook Only)	n/a	n/a	2.5.2
TTY Tool (PowerBook Only)	n/a	n/a	1.0.1

Video Startup	n/a	n/a	1.4
VT 102 Tool (PowerBook Only)	n/a	n/a	1.0.2
WorldScript Power Adapter	7.5.1	7.5.2	7.5.3
XMODEM Tool (PowerBook Only)	n/a	n/a	1.1

System Folder:Extensions:Printer Descriptions

LaserWriter	3.2	3.3	3.3
LaserWriter Color 12/600 PS	n/a	n/a	1.1.1
LaserWriter 4/600 PS	n/a	n/a	1.1
LaserWriter 16/600 PS	n/a	1.0	1.1
LaserWriter 16/600 PS Fax	n/a	1.0	1.1
LaserWriter II NT	3.7	3.7	3.7
LaserWriter II NTX	3.5	3.5	3.5
LaserWriter II NTX v50.5	1.2	1.2	1.2
LaserWriter II NTX v51.8	2.5	2.5	2.5
LaserWriter II NTX-J v50.5	1.5	1.5	1.5
LaserWriter II f v2010.113	3.0	3.0	3.0
LaserWriter II f v2010.130	3.1	3.1	3.1
LaserWriter II g v2010.113	3.0	3.0	3.0
LaserWriter II g v2010.130	3.1	3.1	3.1
LaserWriter Personal 320	1.10	1.11	1.1
LaserWriter Personal NT	2.8	2.8	2.8
LaserWriter Personal NTR	1.9	1.9	1.9
LaserWriter Plus v38.0	3.7	3.7	3.7
LaserWriter Plus v42.2	3.5	3.5	3.5
LaserWriter Pro 400 v2011.110	n/a	1.1	1.1
LaserWriter Pro 405 v2011.110	n/a	1.0	1.0
LaserWriter Pro 600 v2010.130	1.15	1.15	1.2
LaserWriter Pro 630 v2010.130	1.14	1.14	1.1
LaserWriter Pro 810	1.3	1.3	1.1
LaserWriter Pro 810f	1.3	1.3	1.3
LaserWriter Select 360	1.10	1.10	1.1
LaserWriter Select 360f	1.10	1.10	1.1
LaserWriter Select 610	n/a	1.30	1.3

System Folder:Extensions:Scripting Additions

AGStart	1.0	1.0	1.0
Beep	1.1	1.1	1.1
Choose Application	1.1	1.1	1.1
Choose File	1.1	1.1	1.1
Current Date	1.1	1.1	1.1
Display Dialog	1.1.1	1.1.1	1.1.1
File Commands	1.1	1.1	1.1
Load Script	1.1	1.1	1.1
MonitorDepth	1.0	1.0	1.0
New File	1.1.1	1.1.1	1.1.1
Numerics	1.1	1.1	1.1
Read/Write Commands	1.1.1	1.1.1	1.1.1
Run Script	1.1.1	1.1.1	1.1.1
Scripting Components	n/a	n/a	1.1.1

Set Volume	1.0	1.0	1.0
Store Script	1.1	1.1	1.1
String Commands	1.1	1.1	1.1
Time to GMT	1.1.1	1.1.1	1.1.1

System Folder:Extensions:Scripting Additions:Dialects

English Dialect	1.1	1.1	1.1
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System Folder:Extensions:Voices Folder

Albert	n/a	1.4	1.4
Bad News	n/a	1.4	1.4
Bahh	n/a	1.4	1.4
Bells	n/a	1.4	1.4
Boing	n/a	1.4	1.4
Bubbles	n/a	1.4	1.4
Cellos	n/a	1.4	1.4
Deranged	n/a	1.4	1.4
Fred	n/a	1.4	1.4
Good News	n/a	1.4	1.4
Hysterical	n/a	1.4	1.4
Junior	n/a	1.4	1.4
Kathy	n/a	1.4	1.4
Pipe Organ	n/a	1.4	1.4
Princess	n/a	1.4	1.4
Ralph	n/a	1.4	1.4
Trinoids	n/a	1.4	1.4
Whisper	n/a	1.4	1.4
Zarvox	n/a	1.4	1.4

System Folder:Fonts

Chicago	-	-	-
Courier	-	-	-
Geneva	-	-	-
Helvetica	-	-	-
Monaco	-	-	-
New York	-	-	-
Palatino	-	-	-
Symbol	-	-	-
Times	-	-	-

System Folder:Launcher Items

Script Editor (alias)	1.1.1	1.1.1	1.1.1
SimpleText (alias)	1.1.1	1.2	1.2

System Folder:Preferences

System Folder:Preferences:ColorSync Profiles

Apple 12" RGB Standard	1.0.3	2.0	2.0
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Apple 13" RGB Standard	1.0.3	2.0	2.0
Apple 16" RGB Page-White	1.0.3	2.0	2.0
Apple 16" RGB Standard	1.0.3	2.0	2.0
Apple 21" RGB Page-White	1.0.3	2.0	2.0
Apple 21" RGB Standard	1.0.3	2.0	2.0
Apple Multiple Scan 17 - 9300	1.0.3	2.0	2.0
Apple Multiple Scan 17 - D50	1.0.3	2.0	2.0
Apple Multiple Scan 17 - D65	1.0.3	2.0	2.0
Apple Multiple Scan 20 - 9300	1.0.3	2.0	2.0
Apple Multiple Scan 20 - D50	1.0.3	2.0	2.0
Apple Multiple Scan 20 - D65	1.0.3	2.0	2.0
Apple Performa Display	1.0.3	2.0	2.0
Apple Performa Plus Display	1.0.3	2.0	2.0
Apple Color SW Pro SN	n/a	1.0.3	1.0.3
Apple Color SW Pro	n/a	1.0.3	1.0.3
Color SW 2000 Series Pattern	n/a	1.0.3	1.0.5
Color SW 2000 Series Scatter	n/a	1.0.3	1.0.5
Mac Color Display Standard	n/a	2.0	2.0

MacintoshHD:

SimpleText	1.1.1	1.2	1.2
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MacintoshHD:Apple Extras

MacintoshHD:Apple Extras:Plaintalk

Plaintalk	n/a	1.4	1.4
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MacintoshHD:Apple Extras:Telecom Software

Apple Telecom	n/a	2.1	n/a
Apple Telecom 2.1 Install	n/a	2.1	n/a
GeoPort Telecom Adapter ReadMe	n/a	2.1	n/a
Apple Telecom Disk 1	n/a	-	-
Fax Software	n/a	-	-
MegaPhone	n/a	1.0.2	n/a
Megaphone	n/a	1.0.2	n/a
Megaphone ReadMe			

MacintoshHD:Apple Extras:AppleScript

Script Editor	n/a	n/a	1.1.1
Using AppleScript Part 1	n/a	n/a	7.5
Using AppleScript Part 2	n/a	n/a	7.5

MacintoshHD:Apple Extras:AppleVideo Player

AppleVideo Player	n/a	n/a	1.3.2
AppleVideo Player Guide	n/a	n/a	1.3

MacintoshHD:Apple Extras:Extra Alert Sounds

Basil	n/a	1.0	n/a
Bend Me	n/a	1.0	n/a
Blue Dust	n/a	1.0	n/a
Bye!	n/a	1.0	n/a
Dewdrop	n/a	1.0	n/a
Jacaranda	n/a	1.0	n/a
Natal	n/a	1.0	n/a
Ryan's Hope	n/a	1.0	n/a
Sheet	n/a	1.0	n/a
Solly	n/a	1.0	n/a
Transvaal	n/a	1.0	n/a
Extra Alert Sounds ReadMe	n/a	1.0	n/a

MacintoshHD:Apple Extras:Pointer Mode Control Panel

Pointer Mode		1.0	1.3.2
Pointer Mode Read Me			

MacintoshHD:Apple Extras: SimpleText

SimpleText	n/a	1.0	1.3
SimpleText Guide	n/a	n/a	1.0.1

MacintoshHD:Apple Extras:Sound Input Amplification

Sound Input Amplification	n/a	1.0	1.0
Using A Microphone ReadMe			

End_Table

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

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Article Change History:

04 Nov 1996 - Deleted duplicate entry.

19 Sep 1996 - Removed keyword.

10 Jul 1996 - Added keyword.

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Tech Info Library Article Number:19470



Tech Info Library

Workgroup Server 8550/132: Time to Ready Workaround (3/96)

Revised: 3/8/96
Security: Everyone

Workgroup Server 8550/132: Time to Ready Workaround (3/96)

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Article Created: 8 March 1996

TOPIC -----

This article describes an issue where large and fast hard disk drives do not mount on a Workgroup Server 8550/132 after a cold startup.

DISCUSSION -----

On a Workgroup Server 8550/132 when large drives (2 GB and 4 GB), and fast drives (7200 RPM) are used on both the internal and external SCSI channel, as in a dual-drive configuration, all of the drives may not mount on the desktop from a cold startup. This only occurs with large, and fast drives from a cold restart. This is because the time to ready status is initiated from the drive after the system looks for it.

If this symptom occurs in other situations, its root cause is different.

Workaround

First, use the Startup Disk control panel and deselect all volumes. This delays the system enough for a drive to mount.

Second, select the Restart command from the Special menu. Since the drive will already be spinning, it will respond appropriately to the restarting of the server and mount.

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Tech Info Library Article Number:19471



Tech Info Library

List of ISDN Acronyms (3/96)

Revised: 3/8/96
Security: Everyone

List of ISDN Acronyms (3/96)

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Article Created: 8 March 1996

TOPIC -----

This article provides a list of ISDN acronyms.

DISCUSSION -----

ACD	Automatic Call Distribution
AMA	Automatic Message Accounting
ANI	Automatic Number Identification
ANSI	American National Standards Institute
B (Channel)	A 64 kbps digital information channel
bps	Bits per second
BRI	Basic Rate Interface
CA	Call Appearance
CCITT	Consultative Committee for International Telegraphy and Telephony
CFDA	Call Forwarding Don't Answer
CIC	Carrier Identification Code
CLAMN	Call Forwarding Address Modified Notification
CLID	Calling Line Identification
CMD	Circuit-mode-data
CND	Calling Number Delivery
CPE	Customer-premises-equipment
CR	Call Reference
CSU/DSU	Channel Service Unit/Data Service Unit
DLCI	Data Link Connection Identifier
DMA	Direct Memory Access
DMS	Digital Multiplex Switching
DN	Directory Number
DNIC	Data Network Identification Code
DNS	Data Network System
DSM	Demand Side Management
DSP	Display Station Protocol
EID	Endpoint Identifier
EKTS	Electronic Key Telephone Service

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ESS	Electronic Switching System
FEP	Front End Processor
FTP	File Transfer Protocol
FX	Foreign Exchange
HLC	High Layer Compatibility
ID	Identification
IEC	InterExchange Carrier
IMUX	Inverse Multiplexer
INIC	ISDN Network Identification Code
IOF	Inter Office Facility
ISDN	Integrated Services Digital Network
ISO	International Standardization Organization
ITU-TSS	International Telecommunications Union - Telecommunications Standardization Section (formerly, CCITT)
kbps	Kilobits per second
kHz	Kilohertz
LAN	Local Area Network
LATA	Local Access and Transport Area
LC	Logical Channel
LEC	Local Exchange Carrier
LLC	Logical Link Control (LAN)
LLC	Low Layer Compatibility (ISDN)
MAC	Medium Access Control
Mbps	Megabits per second
MF	Multi-Frequency Signaling
MLHG	Multiline Hunt Group
MPEG	Moving Pictures Experts Group
MR CMD	Multi-rate Circuit Mode Data
NI-1	National ISDN-1
NI-2	National ISDN-2
NIIG	NIUF ISDN Interface Group
NIPG	NIUF ISDN Parameter Group
NIST	National Institute of Standards and Technology
NIUF	North American ISDN Users' Forum
NT	Network Termination
NTSC	National Television System Committee
NUI	Network User Identification
OSI	Open Systems Interconnection
PBX	Private Branch Exchange
PHF	Packet Handling Function
PMD	Packet-Mode Data
POTS	Plain Old Telephone Service
PPSN	Public Packet Switched Network
PRI	Primary Rate Interface
PSTN	Public Switched Telephone Network
PVC	Permanent Virtual Circuit
SFG	Stimulated Facility Group
SPCS	Stored Program Controlled Switching System
SPID	Service Profile Identifier
SS7	Signaling System 7
SWF-DS1	Switched DS1/Switched Fractional DS1 Service Capability
T3 POS	Transaction Processing Protocol for Point-of-Sale
TA	Terminal Adapter

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TCP/IP	Transport Control Protocol/Internet Protocol
TE	Terminal Equipment
TEI	Terminal Endpoint Identifier
TSP	Terminal Service Profile
UDI	Unrestricted Digital Information
UUI	User-to-User Information
VMS	Voice Messaging System

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Tech Info Library Article Number:19472



Tech Info Library

Cyberdog Beta 1.0 Bugs List (4/97)

Revised: 4/28/97
Security: Everyone

Cyberdog Beta 1.0 Bugs List (4/97)

Article Created: 8 March 1996
Article Reviewed/Updated: 9 April 1997

TOPIC -----

This article is the Cyberdog Beta 1.0 Bugs List as of 12 Feb 1996.

DISCUSSION -----

Welcome to the Cyberdog List of Frequent Bugs. This document is the second stop to the Cyberdog Bug Reporting System. Below you will find a listing of the most frequently found bugs from both our testing efforts and general users. Please check over this list before submitting a bug in the event that it has already been found.

Last Updated - 02/12/96

B1 Bugs

- connecting to an FTP server with a username with a period will fail.
- dragging files with names greater than 31 characters out of FTP will give an error. (workaround: use the Get Item from Server menuitem)
- extremely long gopher listings will sometimes hang on systems running 7.5.3
- Account Info in the Trays menu is activated when a message is selected
- email enclosures to some online services (e.g. AOL) are not received correctly.
- can not drag from the background of a mail window
- mail and news handlers dialog does not let you tab between fields

- can not sort by Status in the Out Tray

A3 Bugs

- Still using A3 and having trouble launching Cyberdog? Get a weird "GetURLPlugIns" error? - [Click Here](#) for the solution.
- Closing windows before they finish drawing will crash (seen most often in mail) - Fixed in B1
- Sometimes Cyberdog mail will get into a state where if you try to download or send mail, you will get an error dialog "...an unknown error occurred for an uncertain reason..." If this happens to you, closing all of the Cyberdog windows and starting again should fix it. - Fixed in B1

Article Change History:

09 Apr 1997 - Removed out dated on line references.
03 Mar 1997 - Changed title to reflect Beta 1.0 software.

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Tech Info Library

Cyberdog Beta1.0: General FAQ (3/97)

Revised: 3/3/97
Security: Everyone

Cyberdog Beta1.0: General FAQ (3/97)

Article Created: 8 March 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article provides frequently asked questions about Cyberdog Beta 1.0 software.

DISCUSSION -----

Question: What is Cyberdog?

Answer: Cyberdog is the code name for a set of OpenDoc components that provides one-click access to Internet services. It provides a consistent interface, and brings Macintosh ease-of-use to the Internet. In Cyberdog, Internet address is an object that can be dropped into mail, your notebook, OpenDoc documents, or into the Finder. If you double-click on an Internet address, it opens the object, whether it's a web page, a picture (Cyberdog will do any necessary translation or decompression), or a file. And Cyberdog provides you with powerful mail that's integrated with the other Internet components.

Question: Will Cyberdog be the product name?

Answer: Cyberdog is the code name for the technology. We'll announce the product name when it is released.

Question: How can I get the most current information about Cyberdog?

Answer: Visit the Cyberdog home page at <http://cyberdog.apple.com>.

Question: Why use OpenDoc?

Answer: Together, Cyberdog and OpenDoc bring component software to the Internet.

Because it is based on OpenDoc, Cyberdog is built of many small components. This makes it easy for the user to replace or update components as new functionality becomes available. You can choose a component from your favorite vendor, or one that provides the functionality you need, and simply drop it into your system folder to install it. This gives users and developers flexibility to keep up with the rapid addition of new services and data types on the Internet.

Cyberdog brings live Internet connections to OpenDoc documents. You can create links to Internet data, and you can actually embed Cyberdog viewers in a document so when you open the document, the viewer and its data are brought live, right into your document. With this capability, you can customize your access to all of the Internet, and bring the Internet live to documents you create.

Question: Why should I use Cyberdog instead of an all-purpose web browser?

Answer: Cyberdog gives you integrated access to all services on the Internet (including FTP, Gopher, Telnet, World Wide Web, Netnews and E-mail) with the ability to display the full richness of each service. If you try use a browser optimized for the world-wide web, you're forcing other services and data types to be displayed in way that's not optimal for them. Cyberdog avoids this compromise. In addition, with customized Internet documents, Cyberdog allows you to fully integrate the Internet more fully into your daily activities and to share your Internet explorations with friends and colleagues.

Question: What about email?

Answer: Cyberdog provides extremely robust and powerful e-mail capabilities. It supports the full MIME 1.0 standard, so you can use styled text, plus you can drop pictures, Internet links (as links, not just as text addresses), and enclosures right into your message. Cyberdog has mail handlers that filter and sort your incoming or outgoing mail messages. You can create multiple mailboxes for storing your received mail, and search stored messages for any word in any field of the message (full text search).

Question: How does message searching work?

Answer: Cyberdog incorporates Apple's new VTWIN technology developed for the next version of the Macintosh OS, code-named Copland. It indexes full text of all messages 'on the fly', and gives extremely fast relevancy-ranked listing of matches. You can literally search over thousands of messages in seconds.

Question: What about newsgroups?

Answer: Cyberdog makes managing newsgroups easy. With the ability to connect to multiple news servers, search, read messages, and save them in Cyberdog's mail system for archiving (manually or using the News handlers), Cyberdog makes it easy to find the information you want. You can read and post full MIME 1.0-encoded documents, with graphics, styled text, and enclosures (including

live links).

Question: What do you mean by live links?

Answer: A live link is any URL (which stands for "uniform resource locator"). It gives an internet address and can point to an ftp or gopher site, a telnet host, World Wide Web page, an e-mail address, a newsgroup or news server, etc. In Cyberdog, every URL is represented as a labeled icon which indicates what kind of site it is pointing to. These icons, much like Aliases on the desktop, can be dragged to the desktop or other Cyberdog or OpenDoc documents. If you double-click the icon, Cyberdog opens that item, whether it is a file, picture, web page, etc. If they're dragged out of OpenDoc (for example, into your Scrapbook), they become the URL text string. Cyberdog provides icons that represent most of the major Internet data types, so you can tell if the object is a picture, text, file, web, gopher, newsgroup, mail message, or ftp site.

Question: How can I keep track of my favorite places?

Answer: Cyberdog provides a Notebook & a Log to keep track of where you've been.

The Notebook is your place to store Internet references. You can drag into it any web "link" from a web page, any item from the log, or any file saved as a URL from the desktop. Even coolerÉyou can drag any text that has the form of a URL (e.g., <http://cyberdog.apple.com>) into the notebook and it will be accepted as a legal internet address and represented with the appropriate icon. You can have multiple notebooks, so you can easily organize a large volume of links and mail addresses for quick access.

The Log can be displayed alphabetically, chronologically, or hierarchically. Objects can be dragged from the Log into the Notebook, mail, or any OpenDoc document, or to the Finder. Log files can be saved, and the log can be erased.

Question: What about consistency?

Answer: Cyberdog provides a standard browser window for different Internet services (FTP, Gopher, and World Wide Web), with forward and back arrows, display of the URL as both an object (an alias and icon) and a text string (the locator URL), a pop-up History, and a stop button. Inside the browsing window, each data type is displayed by a different Cyberdog component that gives the best display of that kind of data, so FTP and Gopher are displayed as hierarchical lists, with triangles you can use to click open a category and view the items inside it. This window has grow, zoom, and close boxes. Pictures are opened in their own separate windows, sized to the picture. Text is opened into a window with slider bars, and grow and zoom boxes. Movies and sounds are opened into the Cyberdog "player" window.

Question: Can I get directly to an Internet site or address?

Answer: Yes! You can use Cyberdog's "Connect To" menu item to directly access any URL, newsgroup, or mail account.

Question: What Internet services/standards does Cyberdog support?

Answer: Cyberdog supports the popular Internet standards: Telnet (vt100), FTP, Gopher, World Wide Web (http protocol and HTML hypertext language), Newsgroups (NNTP), mail (POP/SMTP), and MIME 1.0. Cyberdog provides viewers for text, GIF, JPEG, PICT, QuickTime, .au sound, .WAV sound, and .AIFF sound. We are working with 3rd parties to encourage them to develop OpenDoc components for chat, sound, and video.

Question: What about secure transactions?

Answer: The final release of Cyberdog will include Netscape's SSL protocol encryptions, and a key icon will appear at the top of the Cyberdog browser window whenever a secure connection is made.

Question: What HTML standards does the world-wide web browser support?

Answer: The Cyberdog web browser supports all of HTML 2.0 and includes tables and background pictures from HTML 3.0.

Question: Can Cyberdog use plug-ins and applets?

Answer: Plug-ins and applets are a way of moving toward the benefits of component architecture. Cyberdog is already built on the OpenDoc component architecture, and therefore it's easy for developers to create new components and viewers for new technologies as they become available. The advantage of using Cyberdog is that any component for displaying a data type (Java, QuickTime VR, or web) can be incorporated into it. Extending this to other OpenDoc containers, you could even have Java applets that work in your OpenDoc-based spreadsheet or word processing document. We're working with 3rd parties to develop ways to either use applets and plug-ins with Cyberdog, or to develop the same technology as an OpenDoc component.

Question: How does Java fit with Cyberdog?

Answer: The beauty of Cyberdog is its ability to integrate data from multiple sources (including the Internet) into desktop applications. Although Cyberdog doesn't currently support Java, Apple and 3rd parties are investigating development of Java components that would integrate with Cyberdog and OpenDoc. In addition to Java support in the HTML browser, the Cyberdog/OpenDoc approach means that Java applets can move out of the browser and be integrated into any OpenDoc container.

Question: Can Cyberdog share preferences with my existing Internet

applications?

Answer: Yes. On the Macintosh, Cyberdog uses the de facto standard for storing Internet application preferences, an application called "Internet Config". This allows it to easily co-exist with commonly used Macintosh internet applications, and makes it easy to transition from applications to component software.

Question: How can I connect to the Internet with Cyberdog?

Answer: For network connections, Cyberdog uses standard TCP/IP protocols and so will work on any type of network that supports TCP/IP. This includes Ethernet, LocalTalk, Token-Ring, FDDI, ATM, Frame Relay local and wide area networks, as well as dialup networks based on SLIP, PPP or Apple Remote Access (if an IP Gateway is present). You can use MacPPP or any other Macintosh-based PPP to connect to Internet services through a phone line and modem. (These applications are not supplied with Cyberdog.) If you already have an Internet provider, or an Internet mail account, you can continue to use them with Cyberdog.

Question: Is Cyberdog compatible with my Internet Service Provider?

Answer: As long as access to your Internet provider is offered through standard Internet protocols (SLIP/PPP) Cyberdog will be completely compatible with your provider. Cyberdog will work with any provider that offers servers compatible with today's leading Internet applications like those included in the Apple Internet Connection Kit. Cyberdog will not work to access proprietary protocols, such as those used by the so-called "online" services (like American Online, CompuServe, etc.).

Question: How will Cyberdog be distributed?

Answer: The beta and final versions will be distributed free over the Internet from Apple's web and FTP sites. The final version will be bundled with Apple Macintosh computers and Mac OS releases. There will be a retail version for current Power Macintosh and Mac OS clone owners. We're also investigating 3rd party distribution.

Question: Will Cyberdog replace the Apple Internet Connection Kit?

Answer: Since Cyberdog requires Power Macintosh and OpenDoc, we'll continue to provide the Apple Internet Connection Kit for those Macintosh owners who don't have the required hardware and system configuration.

Question: What's the upgrade path for customers?

Answer: You can download Cyberdog from the Internet, if you have a hardware configuration that supports Cyberdog.

Question: What are Cyberdog's system requirements?

Answer: Cyberdog requires system 7.5.1 or later, OpenDoc 1.0, a Power Macintosh with 8 MB memory with Virtual Memory turned on, or 16 MB of memory with VM off. (This is the requirement for the system, OpenDoc and Cyberdog.)

Question: Will there be a Windows version of Cyberdog?

Answer: Apple's current focus is Cyberdog for Mac OS, since today OpenDoc only runs on the Mac OS. OpenDoc for Windows is expected before the end of 1996. We are in discussion with several vendors who could bring Cyberdog to OpenDoc for Windows.

Question: What does Cyberdog offer developers?

Answer: Cyberdog provides technology that extends OpenDoc that any developer can use to create live links to the Internet in any OpenDoc component. It gives developers a consistent user interface for accessing the Internet, and a public set of APIs to replace, extend, or build new components. Developers can not only create replacement components that provide more functionality than the original Cyberdog components, they can add new services (such as RealAudio), or provide ways to incorporate the Internet into other components such as word processing, charting, or presentations. Visit our Developer Information web page.

Article Change History:

03 Mar 1997 - Change title to reflect Beta 1.0 software.

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Tech Info Library Article Number:19475



Tech Info Library

Cyberdog Beta 1.0 Release Notes (3/97)

Revised: 3/3/97
Security: Everyone

Cyberdog Beta 1.0 Release Notes (3/97)

Article Created: 8 March 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article are the Cyberdog Beta 1 release notes.

DISCUSSION -----

Software License

Please read the software license agreement carefully before installing the software. By installing the software, you are agreeing to be bound by the terms of this license. If you do not agree to the terms of this license, do not install the software.

System Requirements

The beta 1 release of Cyberdog requires a Power Macintosh with at least 12 megabytes of memory, although 16 megabytes is recommended. Both OpenDoc version 1.0 and MacTCP or Open Transport with TCP/IP must be installed for the system to operate. Install OpenDoc before installing Cyberdog.

WARNING: This is beta quality software. It is highly recommended that the software be installed over a clean version of System 7.5.1 or later, preferably on a test or non-production machine. Some instability and crashes may be experienced.

Using the Mail System

To use the Cyberdog mail system you will need an SMTP/POP3 account on a UNIX machine or other system or a Macintosh server running software such as MailShare or the Apple Internet Mail Server. See your system administrator to acquire an account. Once Cyberdog has been installed, to set up a connection to your server select the *Connect ToÉ* item from the Cyberdog menu, then click on the *Mail* icon. Mail and other preferences are stored in the "Internet Preferences" file

in the Preferences folder, created by the Internet Config extension. If you have currently been using Internet Config and have set up another POP3 mail server your Cyberdog mail connection will already be set up.

Known Problems in b1

Cyberdog has not been thoroughly evaluated in combination with many third party system extensions so compatibility with those is not know. Also, because of some memory leaks some long duration Cyberdog sessions may terminate in a crash. You might wish to save the Notebook frequently (using the "Save" command from the Document menu) since you may lose recent additions to the Notebook in the event of a crash. Finally, Cyberdog has not been fully tested for compatibility with all OpenDoc parts.

Upgrading from version a3

If you have been using a3 or another previous version of Cyberdog you will have to throw out and rebuild your current Notebooks. You can drag most and you should also throw out your old Log file in the Cyberdog Preference folder in the Preferences folder in the System Folder. To be safe you may also wish to back up previous mail storage files (which are stored in the "Cybermail" folder in the Preferences folder) before you open mail trays in the new version. To be extremely safe, after you have installed version b1 you may wish to create new mail trays and move mail from the old ones into them.

Reporting Problems

Please use our bug reporting web page to report any bugs or problems you may encounter in using version b1 of Cyberdog.

Article Change History:

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Tech Info Library Article Number:19476



Tech Info Library

Cyberdog Technical FAQ (1/97)

Revised: 1/3/97
Security: Everyone

Cyberdog Technical FAQ (1/97)

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Article Created: 8 March 1996
Article Reviewed/Updated: 3 January 1997

TOPIC -----

This article is the Cyberdog technical FAQ (Frequently Asked Questions).

DISCUSSION -----

We encourage you to read this FAQ. Often times someone else has already asked your question and if so, this is where the answer will be! You can also access our WEB site at:

<http://cyberdog.apple.com/br/techfaq.html>

General Cyberdog
=====

Question: How can I rename items?

Answer: There is a "Rename <<Item>>" command in the Edit menu. You can now use Command-E as a shortcut for Rename.

Question: What version of Internet Config do I need to run Cyberdog?

Answer: In order to run Cyberdog you need Internet Config extension 1.2 in the Extensions folder. Cyberdog provides an interface to most of the preferences found in Internet Config, but not all of them. If you want to be able to set the few settings we don't yet have an interface for, such as mapping extensions to helper applications, you will need the Internet Config 1.2 application. The latest Internet Config.

Question: Does Cyberdog have support for firewalls and proxies?

Answer: We support SOCKS firewall for all protocols and CERN proxies for gopher, FTP and HTTP. We do not support either of these on a protocol-by-protocol basis.

Question: Does Cyberdog work on a 680x0 Macintosh?

Answer: Yes, Cyberdog works on all Power Macintosh computers as well as 68030, 68040 and 68040LC processor-based Macintosh computers.

Question: In the Cyberdog Preferences, Firewalls Item, under the "Exceptions" button, is there any way to specify a whole group of machines such as all machines ending in ".mitre.org" for example?

Answer: No.

Question: How do I cancel or stop processes in Cyberdog?

Answer: Anywhere you see our running dog icon, click it to cancel or stop the process that is running. Command-. (Command-Period) is a shortcut for Cancel.

Question: How can I embed the various CyberParts into an OpenDoc document?

Answer: You can embed Cyberdog parts into OpenDoc documents several ways:

1) Drag a Cyberdog icon (for example, from the Notebook, Log, or browser window) directly to the OpenDoc document and drop it in.

2) Drag in the stationery of the Cyberdog part you wish to embed in the OpenDoc document and drop it in. You can find various stationery (for example, cyberbutton stationery) in the Tools folder.

3) Drag a Cyberdog part file into the OpenDoc document. (Note: the file needs to be closed; you cannot drag an open part window into a container and drop it.)

Question: Is there a way I can get Cyberdog to display different icons for things based on their extension?

Answer: Yes, Cyberdog supports Internet Config 1.2 or later, which in turn supports extension mapping. Use the Internet Config application and set your preferred mappings there.

Question: Will Java and VRML be supported?

Answer: Initial Java support will be made available with Cyberdog 1.1 and refined with later releases. VRML is not yet supported.

Question: Will there be a Windows version of Cyberdog?

Answer: Currently, Cyberdog runs only on Power Macintosh and Macintosh computers.

Question: Can you specify another post-processor instead of the Stuffit Expander?

Answer: Yes. If you have the Internet Config 1.2 Application, you can change the default settings for post-processing of files.

Question: What does the menu item "Browse In Place" in the Navigator menu mean?

Answer: The "Browse In Place" setting lets you choose between creating a new navigator window when you follow a link or replacing the content in the current navigator. If the "Browse In Place" menu item is checked then when you follow a link, the content in that current window will be replaced by the content you were navigating to. If the "Browse in Place" menu item is NOT checked then when you follow a link, Cyberdog will create a new navigator window and put the new content in there.

Question: Sometimes I just want just one new window. Do I have to use the "Browse In Place" menu item?

Answer: No, all you have to do is hold down the option key and click (or double-click if you are in gopher or ftp). The link and the preference will be reversed just for that link. If "Browse In Place" is NOT checked, then the option key again reverses the preference and you WILL replace the content in that particular window.

Question: Is it "CyberDog" or "Cyberdog"?

Answer: It is "Cyberdog".

Question: How can I open my Netscape Bookmarks file in Cyberdog so I can copy over the links easily?

Answer: Simple, open up the notebook you want them imported to. In the Notebook menu, there is an Import submenu. Use the Import Netscape Bookmarks menu item. This will open a dialog box and allow you to pick the bookmark file you want to import. Select it and hit OK. Cyberdog will import all of the links from the Bookmarks file into the notebook and place them in a category called Bookmarks.

Question: Does Cyberdog 1.1 support QuickDraw GX printing?

Answer: No, Cyberdog 1.1 does not. It is something we hope to support in a

future version.

Question: How do I setup Internet Config to use helper applications such as Real Audio?

Answer: Cyberdog caches the Internet Config file mapping table when it launches, so you need to make any changes to your Internet Preferences before launching Cyberdog, otherwise you will have quit Cyberdog and re-launch it.

Here is a web page that describes how to setup Real Audio as well:

http://www.novagate.com/%7Eacgolf/charles/html32/ra_help.htm

To set up Real Audio, launch Internet Config and click on the File Mappings button. Then click the Add button. Now, setup the Mapping Entry dialog as follows:

```
"Name:" field = Real Audio
"Extensions:" field = .ram
"MIME Type:" field = audio/x-pn-realaudio
Select the Binary Data radio button
"File Type:" field = PNRM
"File Creator:" = PNst
```

Once that is done, click the Add button again, and configure dialog just as you see below.

```
"Name:" field = Real Audio
"Extensions:" field = .ra
"MIME Type:" field = audio/x-pn-realaudio
Select the Binary Data radio button
"File Type:" field = PNRM
"File Creator:" = PNst
```

Question: I have been reading about people making their own "Internet Starting Points", but I can not seem to get it to work. Help!

Answer: OK, here are some quick tips on creating your own "Internet Starting Points":

- Double-click the DocBuilder Stationery inside the Tools folder of the Cyberdog b1 folder. This will create a new DocBuilder document. Give it a name and save it.
- Also in the Tools folder, you will see Cyberbutton Stationery. Take that and drag it into your blank DocBuilder document. After a few seconds, an unwired button will appear on the document. You can move this button around to your desired location.
- Since this is OpenDoc, there are several things you can do with this button and several ways to interact with it. I will not go into all of them here, but if you hold the option key down and click on the button, you will notice it

behaves differently then if you hold the command key down. These two options help you move the button and help you activate the Cyberdog menus so that you can wire this button up to the Internet.

- You can wire this button simply by dragging and dropping a Cyberdog icon atop of the button and letting go. Or, you could use one of the many Cyberbutton menu items to help you.

- You can embed as many Cyberbuttons in your document as you like, as long as you have the memory for it.

- You can also embed other things as well. Like the notebook for example. If you drag and drop the Notebook Stationery, also in the Tools folder, into your DocBuilder document, it will embed a notebook there.

- Make sure you save frequently. This is about all I can go into right now. We will have better documentation as time goes on.

Question: I have saved an icon to a web site in my notebook, but the URL is wrong. How do I edit it?

Answer: There is no clear cut way to "Edit" a URL at present. Follow this workaround:

- Select icon of URL to edit.
- Select Get Info menu item from Edit menu.
- Copy the URL that is displayed in the window and close.
- Click back in the notebook to activate the Notebook menu.
- Use the Add Item to Notebook menu item in the Notebook menu.
- Select the URL panel and paste the URL into the text block.
- Edit the URL as necessary.
- Click OK and then choose a place to save the icon.
- Go to the new item, use the Rename menu item in the Edit menu to give it a new name.
- Delete the old, incorrect item.

Question: I really like the idea of using two notebooks, but I do not seem to have the memory to run two OpenDoc processes at the same time, am I out of luck?

Answer: No, you are not. In Cyberdog 1.1 with OpenDoc 1.1, all Cyberdog documents will be opened in one process, just like there was an application! This means, you can open as many Notebooks as you have memory for and not have to worry about duplicate processes. Also, you can increase Cyberdog's memory by Getting Info on the Cyberdog application and changing the memory in the field given in that window.

Web/HTML/HTTP Related
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Question: Does Cyberdog support the Blink tag?

Answer: Yes, Cyberdog displays <BLINK> text in the OUTLINE style.

Question: What level of the HTML standard does the Cyberdog web browser support?
1.0, 2.0, 3.0?

Answer: Cyberdog supports HTML 2.0 plus the following from the HTML 3.0 draft:

- Image width and height
- Backgrounds
- Tables

Question: Does it support any Netscape extensions? Does it support any other HTML extensions such as ones made specifically for it?

Answer: The Cyberdog web browser has no special extensions. We support the following Netscape additions:

- Horizontal Rule size, width, align, and no shade
- List bullet shapes, numbering styles, and start value.
- Font size (base font too)
- Centering
- Background, text, and link colors.
- ®, ©, ™, , <, >

Question: Does the web tool support JPEG images?

Answer: Yes.

Question: Does Cyberdog support the <EMBED> tag?

Answer: Yes, Cyberdog 1.1 supports the <EMBED> tag. With it, Cyberdog can view plug-in, Java and other Cyberdog browsers inside the web viewer.

Question: Can I connect to a secure server when my proxy serve is enabled?

Answer: No, first go to your preference panel and turn off your proxy and then re-connect to the secure server.

Question: I saw in the release notes that you can drag multiple links from web pages into my notebook or the Finder.

Answer: Absolutely! Try this. While in Cyberdog, use the URL connection panel and connect to a website that you know has alot of links on it, Yahoo! for example. Then, simply select ALL of the links you want to move into your Notebook. Then, drag that block of selected text to your Notebook and watch what happens. Voila! If you want all of those items, but just not in you current notebook. Drag that block of text to the Finder. Cyberdog will make a new notebook for you with all of those items in it!

File Transfer/FTP Related
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Question: How do I upload something to an FTP Server?

Answer: Simply drag the file into the appropriate folder or window once you have connected to the server, or use the "Put File on Server" menu item.

Question: Can I rename things on an FTP server? How about delete? And can I move things as well?

Answer: You can do all of these things as long as you have the correct permissions on that server. To rename a file simply select the item and use the "Rename" menu item. To delete a file, select the item and use the delete key or the "Delete" menu item. To move a file, drag it to the appropriate place and drop it.

Question: Does Cyberdog support Passive FTP?

Answer: Yes it does. Check in the FTP Preferences Panel.

Question: Every time I try to upload something to an FTP server, it binhexes it even when I don't want it to, say for text files with HTML or pictures?

Answer: Cyberdog binhexes any file that is not "flat", meaning any file that has a resource fork. To work around this, make sure the files you are trying to upload do not contain a resource fork.

A work around I use when uploading pictures that have resource forks is to use the file:/// URL in the Cyberdog Connect-To to open the picture into the Cyberdog picture viewer and then I Save a Copy as Generic File and Cyberdog will save it as the file type indicated in Internet Config for that extension without a resource.

Question: When I FTP why is my password displayed in the URL, and why does FTP show up in the web browser window?

Answer: These are the side effects of using a Cern Proxy server in your firewall preferences. Proxy serves information in HTML format, thus we display it in the web browser. The reason your password is displayed in the URL field is because that's the real URL. We could put up a "fake" URL but we haven't yet decided whether or not that's the right thing to do.

A workaround for Q1 would be to enter the site (and path) and user name in the Connect dialog, but NOT your password. You will be prompted for your password upon connection and it wont be displayed in the URL.

A workaround for Q2 would be to use one of the other firewall options - SOCKS or Passive, if you can. I'd recommend turning on passive support under FTP preferences as it's the fastest and most transparent option.

Mail, News and Message Editor Related
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Question: Is there an easy way I can read my messages after I download them without having to close and open them over and over again?

Answer: Yes! Open up the first message, then to page down the message if it is a long one, just hit the space bar. Presto, you are scrolled down one page that you can view. If you are at the end of the message, it will close that one and open the next one! If you are in a real hurry, you can hit the enter key to always go to the next message instead of scrolling down in a long one.

Question: What if I also wanted to DELETE them as well?

Answer: Hold down the Option key when you use either the space bar or enter key to go to the next message. This will delete your current message and open the next one for you.

Question: Is there some visual way to distinguish between an unwanted article and a read article?

Answer: No, not at present. There is a visual way to distinguish between read and unread (the check marks), but unwanted messages simply do not get displayed as default, and you can toggle between that view with the menu item, "Display Unwanted Items".

Question: How many news articles can I download?

Answer: In the Mail & News Setup dialog, the News preference has a field where you can set the limit of the number of articles you want to download.

Question: The Mail and News Handler window confuses me a bit, is there a trick to it?

Answer: Here are a few tips that might help make using Handlers a little easier:

- The three When fields use logical AND when trying to match a condition. That is, a match will be found only when all three conditions are matched.
- The Apply To fields tell Cyberdog what source of messages (mail trays, newsgroups) you want these handlers to work on. For mail, the handlers may apply to all of the Outgoing messages and/or Incoming messages (either All In Trays or to a Single In Tray). For newsgroups, the handlers may apply to a single

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newsgroup or to all the newsgroups. This list is generated from newsgroups saved in your Default Notebook.

- Mail messages can only be handled once per application of the handlers (because once a message is moved to a different tray, it is no longer available for handling). Therefore, order of your handlers is important.
- To change the order of handlers, simply click on a handler name in the list and drag it up or down to the position you want it to have in the list. Handlers are applied according to their order in the list, top handler first.

Question: I am confused about where I set up mail and once I set it up, how do I check it?

Answer: There are a few ways that you can set up mail in Cyberdog:

1) If you have already set up your preferences in Internet Config for your mail, then go right into Cyberdog and select "Show Mail Trays" under the Mail/News menu. Cyberdog will see your settings in Internet Config and set things up for you.

2) You can set things up yourself by using the Mail & News Setup dialog. In the first panel, Mail, put in your default email address. This is the email address that will be your default from. You can also enter an option choice for your SMTP host if it is different from your POP server. Contact your server administrator for more information on you SMTP host. In the Trays panel, click the Add button for the In Trays. Enter your account name, your account name, POP server and your password (if you want it to be saved). Set your other preferences for how often to check your account, whether or not to leave mail on server and then click OK. Your mail tray is now setup. Lastly, in the Messages panel, fill in your name. This is the second half of your default email address. Then, click OK to close the Mail & News Setup dialog. Now, Show Mail Trays from the Mail/News menu and you will see your In Tray has been created for you. If you have more than one mail account you would like to use with Cyberdog, repeat the above steps as often as necessary.

Question: I want to have a separate SMTP mail host from my POP mail host, how do I do this?

Answer: In the Mail & News Setup dialog, in the Mail panel, there is a field for your SMTP host. Put your SMTP host information in that field.

Question: Why is it that when I open a message I can do "next message" with the space bar, but when I open a new message and then try to go back to my first message, I can no longer do "next message" with the space bar?

Answer: This happens because Cyberdog mail has two possible views for each mail tray, and the connection between arrow keys and positions in a list can be lost when switching between different trays and different views.

Question: No matter what I set my e-mail address to in Internet Config, when I open a new message to send something, I see that address for a second and then an older one replaces it. What's up?

Answer: When you created the letterhead that you are now using, you must have added the old address set in your Preferences either due to the Cyberdog preference bug or because it was not set up yet. Cyberdog letterheads save the header information (From, To, Subject, CC, BCC) as well as anything in the body of the message (pictures, text, cyber icons and enclosures). (When making a letterhead, make sure you set the insertion point to where you want it when it opens before you save it!).

The way to fix the problem of incorrect e-mail address appearing in your "From" field is to do the following:

- Open a New Message and choose the letterhead you want to fix.
- Edit the "From" field to have the correct e-mail address.
- Use the Letterhead menu item in the Message menu and add the current document (if you choose the same name, Cyberdog will simply replace the old one with the new one).

Question: Can I paste into the Address Dialog or into the Find dialog?

Answer: Yes, we fixed this bug for 1.1!

Question: I saved some e-mail addresses into my notebook and gave them nicknames. When I went to send a letter, I just typed in the nickname and sent it, but it didn't work. How come?

Answer: Unlike Eudora, the header fields (To, CC and BCC) are not linked to the address book. So, if you save e-mail addresses into the Notebook and then type out those nicknames in the To, CC or BCC fields of a message, Cyberdog will not know who you are trying to send it to! However, you can easily drag those icons of the e-mail address you want to send to into the appropriate address box, or use the Address button to bring up a dialog with all of the e-mail and news addresses that your Default Notebook knows about.

Question: I have noticed that some of the e-mail and news messages I read have dates and times that just don't seem right, they are either way to late, or way to earlier. Do I have something configured incorrectly?

Answer: Since e-mail comes from all over the world, your Macintosh has to know where it (and you!) are in order to give you the accurate date and time of when it was set. You can do this by going to your Date and & Time control panel and setting the time zone/place where you currently are.

Question: I just created a very lengthy e-mail message and clicked the Send Later button. Of course, right after I did that, I realized I spelled my name

wrong. Is there anyway I can go back into that message and edit it so the whole world does not know I don't know my own name?

Answer: Sure can! Messages in the out tray are now editable. You can save messages to the Out Tray without sending them and re-edit them later. You can Queue messages to be sent later and still edit them before you send them. Already sent letters can also be edited and sent again!

Question: Every time I open a letter, I always get this opened envelope crowding my whole screen. Is there a way I can set it up so that when messages are opened, they open with the envelope collapsed?

Answer: There sure is. Just go to the Mail & News Setup in the Mail/News menu. Click on the icon for "Message" and the Message's Preference panel will display. There are several check boxes that allow you to configure how the envelope is set when new and old messages are opened. Choose the ones appropriate to the desired behavior and then click OK.

Question: I read my articles from a newsgroup, but when I return to that newsgroup, the articles I just read are not marked as read! Why?

Answer: This behavior has been changed! Now, in Cyberdog 1.1, we save the article read-state for the groups you read globally. This means, that no matter where you open the newsgroup item from, a web page, your notebook, or even the Finder, the articles that you have previously read will remain read!

Question: I noticed that imported Eudora Out Trays are dated Jan. 1, 1904; are we just stuck with this, or is there a workaround?

Answer: Yes, we are stuck with it for now. Eudora Out Tray's do not have a traditional date setting so we make it up. In a future version we would like to put something more sensible.

Question: When I save a message from a news server to a personal mail tray, I see a "Writing to Out Tray" message appear. What is up with that?

Answer: When moving a news article to a tray you may see a "writing to Out Tray" message even though you didn't select the Out Tray to move to. This message is incorrect and your message will actually be moved to the tray you selected. You may have to double click the tray to see the message since dinking it does not refresh properly.

Question: Is there a way to import Claris EMailer Mailboxes?

Answer: Yes, there is! You will need to use the MailConverter 2.2 utility to convert your EMailer mailboxes into Eudora mailboxes and then Cyberdog 1.1 can import those mailboxes itself.

AppleTalk Browser Related

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Question: When you receive an AppleShare volume CyberItem sent by somebody else, the user name field of the login dialog may be locked, preventing you from mounting the volume using a different user name. How do I change it?

Answer: When you receive an AppleShare volume CyberItem sent by somebody else, the user name field of the login dialog may be locked, preventing you from mounting the volume using a different user name.

To use a different user name follow these steps:

- 1) select the CyberItem in Cyberdog,
- 2) Select "Get Info" in the Cyberdog's edit menu (cmd-L)
- 3) select and copy the URL from the Info window
- 4) paste the URL in the Connect To dialog URL panel (cmd-T)
- 5) change the user name
- 6) hit the enter key to resolve the edited URL

To keep the corrected CyberItem, open the log window and copy the CyberItem to your notebook.

Question: What happens when I get a "Server not found alert" messages?

Answer: If you type a URL and a "Server not found" error is reported, check the spelling of the server name and zone name in the current CyberItem or URL. Also make sure that the server name and zone name are separated by a colon (:) and that slashes and colons are used correctly elsewhere in the URL (for example, slashes between zone and volume name; colons between volume and file paths).

Question: What happens when I get a "Volume not found alert" message?

Answer: A common error is to use the slash character (/) to separate the folder names from the volume and file names instead of using the correct character, a colon (:). A slash should only be used to separate the zone and volume names.

Question: What are the differences between connecting to servers as register user named "Guest" as opposed to, guest access?

Answer: Using "guest@>server<" in an AppleShare URL means connect to the server using guest access. If your server has a registered user named "Guest" and you want to login using this register user name do not use the "guest@>server<" syntax: simply use >server< and enter "Guest" in the login dialog user name field, followed by the appropriate password. Currently, registered user accounts named "guest" must have valid passwords to work correctly.

Question: What do I do about identical volume names?

Answer: When using an AFP URL to point to a file on a server volume that has the same name of a volume already on your desktop, the URL resolution may fail because the volume name is ambiguous.

Question: Why do I get an empty zone browser window when I enter a correct URL?

Answer: When a correct syntax zone URL is used, an AppleTalk zone browser window will open. If no servers appear in a zone and no error message occurs, it may be that the zone doesn't contain any server or that the zone name you typed is incorrect. You may want to check for correct spelling of the zone name in the location field. If you notice that it is incorrect, you can edit the name there and then hit the enter key to correct the error.

What To Do When Cyberdog Crashes

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Question: If I try to open a Telnet Connection when my network is not connected, I crash!

Answer: Yes, don't open a Telnet item without being connected to the network!

Question: Sometimes I get into this state where I seem to crash whenever I try to visit a web site or any internet site. It usually occurs right away and it seems to be always happening. Anything I can do to help fix this?

Answer: This sounds like a problem of your log file being corrupted. While Cyberdog is not running, go to the Cyberdog Preferences folder inside the Preferences folder in your System Folder. There will be a file called, appropriately enough, "Log". Throw this file away and restart Cyberdog and things should be better. Note: This file is where your Log Information is stored and removing it will reset your Log in Cyberdog to contain nothing. If this file is important to you, please back it up often. In Cyberdog 1.1, we have made this much more stable. Now, if Cyberdog detects what could be a bad log, it deletes this file and warns the user that it has reset the log to being empty.

Question: After a bad crash, I've noticed that my settings in the Internet Config preferences file are no longer being used. When I go to reset them in Cyberdog and save them, they are ignored! What's happened?

Answer: Sometimes, Cyberdog will corrupt the Internet Preferences file in the Preferences Folder inside the System Folder. To alleviate this problem, remove the Internet Preferences file and restart Cyberdog. New preferences will be created, or you could launch Internet Config 1.3 and it will recreate the preferences as well. Please keep a backup of your Internet Preference file if this happens to you so that you do not lose your preference information.

Article Change History:

03 Jan 1997 - Updated article with the latest information.

28 May 1996 - Added troubleshooting steps.

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Tech Info Library Article Number:19477



Tech Info Library

System 7.5 w/Update 2.0: Universal System Folder Contents (7/96)

Revised: 7/10/96
Security: Everyone

System 7.5 w/Update 2.0: Universal System Folder Contents (7/96)

=====

Article Created: 12 March 1996
Article Reviewed/Updated: 10 July 1996

TOPIC -----

This article describes the contents of the universal System Folder that you can create with System 7.5 with the System Update 2.0 installed (7.5.3).

DISCUSSION -----

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=====

- Apple Video Player
- AppleCD Audio Player
- Automated Tasks 7.5
- Calculator 7.5
- Chooser 7.5.4
- Control Panels 7.5
- Find File 1.1.2
- Jigsaw Puzzle 1.0.1
- Key Caps 7.5
- Note Pad 7.5
- Scrapbook 7.5
- Stickies 1.0.1
- • Shut Down 1.1

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- PowerBook Display 7.5.2
- 601 Processor Upgrade 1.0
- Apple Menu Options 1.1.2
- AppleTalk 1.1
- Auto Power On/Off 1.0
- AutoRemounter 1.2

- Brightness	7.0.1
- CloseView	7.2.1
- Color	7.1
- ColorSync™ System Profile	2.0
- Control Strip	1.3.1
- Date & Time	7.5
- Desktop Patterns	7.5
- Energy Saver	2.0.1
- Extensions Manager	3.0.3
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- Speech	1.4.1
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- TCP/IP	1.1
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- About Apple Guide	1.3
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- Apple CD-ROM	5.1.2
- Apple Ethernet CS	1.0.3
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- Apple Modem Tool	1.5.5
- Apple Photo Access	2.1
- Apple Token Ring NB	1.0.2
- AppleScriptLib	1.1
- AppleScript™	1.1
- AppleShare	3.6.1RevB
- Assistant Toolbox	1.3
- Audio CD Access	5.1
- Caps Lock	7.1.3
- Catalogs Extension	1.2.3
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- Find File Extension	1.1.1
- Finder Help	7.5.5
- Finder Scripting Extension	7.5.5
- Foreign File Access	5.1
- Generic PC Card modem	2.0.1
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- High Sierra File Access	5.1
- IIci/IIsi Monitors Extension	7.5
- InputBackSupport	7.5.3
- IRTalk	1.3.1
- ISO 9660 File Access	5.1
- LaserWriter 8	8.3.3
- LaserWriter 8f	8.2.3
- LC Monitors Extension	7.5
- MacinTalk 2	1.4
- Macintosh Guide	1.3
- Mailbox Extension	1.2.3
- Monitor & Sound Guide Additions	1.0
- Motorola CELlect (Cellular)	
- Motorola CELlect (Land)	

- Network Extension	7.5.5
- Networking Guide Additions	1.3
- ObjectSupportLib	1.0.2
- Open Tpt AppleTalk Library	1.1
- Open Tpt ATalk 68K Library	1.1
- Open Tpt Inet 68K Library	1.1
- Open Tpt Internet Library	1.1
- Open Transport 68K Library	1.1
- Open Transport Guide Additions	1.3.1
- Open Transport Library	1.1
- OpenTptAppleTalkLib	1.1
- OpenTptInternetLib	1.1
- OpenTransportLib	1.1
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- LaserWriter 16/600 PS Fax	1.1
- LaserWriter 16/600 PS-J	1.1
- LaserWriter 4/600 PS	1.0
- LaserWriter Color 12/600 PS	1.1.1
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- LaserWriter II NTX v51.8	2.5
- LaserWriter II NTX-J v50.5	1.5
- LaserWriter IIif v2010.113	3.0
- LaserWriter IIif v2010.130	3.1
- LaserWriter IIg v2010.113	3.0
- LaserWriter IIg v2010.130	3.1
- LaserWriter Personal 320	1.11
- LaserWriter Personal NT	2.8
- LaserWriter Personal NTR	1.9
- LaserWriter Plus v38.0	3.7
- LaserWriter Plus v42.2	3.5
- LaserWriter Pro 400 v2011.110	1.1
- LaserWriter Pro 405 v2011.110	1.0
- LaserWriter Pro 600 v2010.130	1.15
- LaserWriter Pro 630 v2010.130	1.14
- LaserWriter Pro 810	1.3
- LaserWriter Pro 810f	1.3
- LaserWriter Select 360	1.10
- LaserWriter Select 360f	1.10
- LaserWriter Select 610	1.30
- Printer Share	1.1.3

- Quadra AV Monitors Extension	7.5
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- QuickTime™ PowerPlug	2.1
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- Choose File	1.1
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- Display Dialog	1.1.1
- File Commands	1.1
- Load Script	1.1
- MonitorDepth	1.0
- New File	1.1.1
- Numerics	1.1
- Read/Write Commands	1.1.1
- Run Script	1.1.1
- Scripting Components	1.1.1
- Set Volume	1.0
- Store Script	1.1
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- Time to GMT	1.1.1
- Serial (Built-in)	1.1
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- Shared Library Manager	2.0
- Shared Library Manager PPC	2.0
- Shortcuts	1.3
- SimpleText Guide	1.0.1
- Sound/Monitors Guide Additions	1.3
- Speech Guide Additions	1.4.3
- Speech Manager	1.4
- StyleWriter 1200	2.1.1
- SystemAV	1.1
- Text Tool	1.0.1
- TokenTalk Phase 2	2.5.7
- TokenTalk Prep	2.5.2
- TTY Tool	1.0.1
- Video Guide Additions	1.0
- Video Startup	1.4
- Voices	
- Boris	1.4
- Brenda	1.4
- Mariel	1.4
- Marvin	1.4
- Mr. Hughes	1.4
- Otis	1.4
- RoboVox	1.4
- Xero	1.4
- VT102 Tool	1.0.2
- WorldScript™ I	7.5.2
- WorldScript™ II	7.5.1

- WorldScript™ Power Adapter 7.5.3
- XMODEM Tool 1.1

Finder 7.5.5

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Fonts

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- Chicago
- Courier
- Geneva
- Helvetica
- Monaco
- New York
- Palatino
- Symbol
- Times

Launcher Items

=====

- Script Editor 7.5
- SimpleText 7.5

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=====

- ColorSync™ Profiles
 - Apple 12" RGB Standard 2.0
 - Apple 13" RGB Standard 2.0
 - Apple 16" RGB Page-White 2.0
 - Apple 16" RGB Standard 2.0
 - Apple 21" RGB Page-White 2.0
 - Apple 21" RGB Standard 2.0
 - Apple Color SW Pro 1.0.3
 - Apple Color SW Pro SN 1.0.3
 - Apple Multiple Scan 14 2.0.1
 - Apple Multiple Scan 15 2.0.1
 - Apple Multiple Scan 17 - 9300 2.0
 - Apple Multiple Scan 17 - D50 2.0
 - Apple Multiple Scan 17 - D65 2.0
 - Apple Multiple Scan 1705 2.0
 - Apple Multiple Scan 20 - 9300 2.0
 - Apple Multiple Scan 20 - D50 2.0
 - Apple Multiple Scan 20 - D65 2.0
 - Apple Performa Display 2.0
 - Apple Performa Plus Display 2.0
 - AppleVision 1710 - 9300 2.0.1
 - Color LW 12/600 PS Profile 2.0
 - Color SW 2000 Series Pattern 2.0.1
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 - Mac Color Classic Standard 2.0
 - Mac Color Display Standard 2.0
 - Macintosh LC520 Standard 2.0
 - PowerBook 165C Standard 2.0

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- Printing Prefs	
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- Contract (Color)	1.0.2
- Do Not Copy	1.0.2
- Do Not Copy (Color)	1.0.2
- Draft	1.0.2
- Draft (Color)	1.0.2
- Final	1.0.2
- Final (Color)	1.0.2
- For Your Information	1.0.2
- For Your Information (Color)	1.0.2
- Personal	1.0.2
- Personal (Color)	1.0.2
- Proposal	1.0.2
- Proposal (Color)	1.0.2
- TCP/IP Preferences	

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=====	

System	7.5
=====	

System 7.5 Update	7.5.3
=====	

System 7.5.2 Update	7.5.3
=====	

End_Table

Article Change History:

10 Jul 1996 - Removed keyword.
03 Jul 1996 - Reworded for clarity.
10 Jun 1996 - Added keyword.

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Tech Info Library Article Number:19478



Tech Info Library

Newton OS 2.x: Supported Printers (5/97)

Revised: 5/5/97
Security: Everyone

Newton OS 2.x: Supported Printers (5/97)

Article Created: 12 March 1996
Article Reviewed/Updated: 5 May 1997

TOPIC -----

What printers are supported on Apple MessagePad and eMate 300 devices using Newton OS 2.x?

DISCUSSION -----

Begin_Table

Driver	Connection	Printer Models
Stylewriter (I&II)	Serial	Stylewriter (original) Stylewriter II
Pers. LW 300	Serial	Personal Laserwriter LS Personal Laserwriter 300
Stylewriter 1200	Serial	Stylewriter 1200
Stylewriter 2200	Serial	Stylarwiter 2200
Stylewriter 2400	Serial	Stylewriter 2400
Network Printer	LocalTalk	Any postscript based Appletalk LaserWriter printer. LaserWriter (original) LaserWriter Plus Personal LaserWriter NT Personal LaserWriter NTR Personal LaserWriter 320 LaserWriter IINT

		LaserWriter IINTX	
		LaserWriter IIIf	
		LaserWriter IIg	
		LaserWriter 4/600 PS	
		LaserWriter Select 360	
		LaserWriter Pro 600	
		LaserWriter Pro 630	
		LaserWriter Pro 810	
		LaserWriter 16/600 PS	
		Color LaserWriter 12/600 PS	
+-----+-----+-----+-----+			

End_Table

Unsupported or Untested

=====

The following printers are not supported.

Begin_Table

+=====+	
Printer Model	Comments
+=====+	
Non-PostScript network	
printers including:	
+=====+	
Imagewriter II W/ AppleTalk Mod	No ImageWriter AppleTalk or
Imagewriter LQ W/ AppleTalk Mod	Printshare/Grayshare/ColorShare
Apple Color Printer	printer driver.
StyleWriters W/ LocalTalk Mod	
Personal Laserwriter LS	
Personal Laserwriter 300	
Laserwriter Select 300	
+-----+-----+	
LaserWriter Select 300	This printer was not supported under
	Newton OS 1.0. Support for the
	printer was not added under
	Newton OS 2.x.
+-----+-----+	
StyleWriter (original) and	StyleWriter 1200 in Mac OS supports
StyleWriter II using	the StyleWriter and StyleWriter II.
StyleWriter 1200 driver	Should work, but it is untested.
+-----+-----+	
StyleWriter 2200 using	StyleWriter 2200 and 2400 drivers

StyleWriter 2400 driver (or vice versa) 	in the Mac OS are the same. Should work, but it is untested.
+-----+	
ImageWriter I ImageWriter II ImageWriter LQ LaserWriter Select 310 Color StyleWriter Pro Portable StyleWriter Scribe 	No driver.
+-----+	
LaserWriter IISC Personal LaserWriter SC Apple Color Printer 	No SCSI port.
+-----+	
LaserWriter Pro 810 Fax Card LaserWriter 16/600 PS Fax Card LaserWriter Select 360 Fax Card 	The Newton OS drivers do not support fax card options on these printers.
+-----+	
Non-Apple, networkable laser printers 	May work with the Apple MessagePad, however these have not been tested by Apple Computer.
+-----+	

End_Table

Additional Notes

=====

Macintosh-compatible non-Apple printers that require a serial connection, or are not laser printers (such as the Hewlett-Packard DeskWriter) are not supported.

With the purchase of the Newton Print Pack, hundreds of other printers are available. A list of printers that the Newton Print Pack supports is available in the article "Newton Print Pack: Compatible Printers".

Article Change History:

05 May 1997 - Added eMate, Newton OS 2.x; minor edit.
22 Mar 1996 - Added additional notes and printers.
14 Mar 1996 - Added StyleWriter 2200 to list.

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Tech Info Library Article Number:19483



Tech Info Library

Open Transport 1.1: Memory Fragmentation (8/96)

Revised: 8/29/96
Security: Everyone

Open Transport 1.1: Memory Fragmentation (8/96)

Article Created: 13 March 1996
Article Reviewed/Updated: 29 August 1996

TOPIC -----

It appears that memory does not get released properly after using some TCP/IP applications with Open Transport 1.1. Sometimes the Largest Unused Block in About This Macintosh decreases after quitting TCP/IP applications, but other times it does not appear to decrease.

I have selected 'Load only when needed' in the TCP/IP control panel.

What could be causing this behavior?

DISCUSSION -----

There have been some reports of memory not being released when using TCP/IP applications with Open Transport. Although the issue is under investigation by Apple Engineering, it appears this could be a normal condition for the Mac OS based on the design of the 'Load only when needed' option, especially if non-TCP applications are launched after a TCP/IP application.

When launching TCP/IP applications, if TCP is not loaded, Open Transport loads the TCP/IP stack into the application heap (memory reserved for applications under the Mac OS) after the TCP/IP application. After the last TCP/IP application is quit, the TCP/IP stack unloads from memory. However, if other non-TCP/IP applications have been loaded before quitting the TCP/IP application, memory can be fragmented.

For instance, if you load TCP/IP application A and another non-TCP/IP application B, memory will be arranged as follows (from top of memory to bottom):

Free Memory
APP B
TCP/IP STACK

APP A

Then, later you quit Application A, memory will look like:

Free Memory Block 2

APP B

Free Memory Block 1

At this point, the memory is fragmented because the free memory block is split into two parts by application B. If you looked at About this Macintosh, the Largest Unused Block would be smaller than it was before launching applications A and B. The Largest Unused Block is the largest block of contiguous memory, and with application A in the middle of two free memory blocks, blocks 1 and 2 cannot be joined together to form a larger contiguous block.

The workaround is to deselect the 'Load Only As Needed' option in the TCP/IP control panel (but leave TCP/IP active). This will force the Mac OS to load TCP/IP into memory before applications use any of the application heap and prevent memory fragmentation. The drawback is that memory will always be allocated to the TCP/IP stack defeating the benefits of the 'Load only as needed' option.

The TCP/IP stack will unload from memory about 2 minutes after there is NO TCP/IP activity. With some PPP connections, the stack will not unload. For PPP users, it is recommended they use the 'load always' option.

Article Change History:

29 Aug 1996 - Added keyword.

22 May 1996 - Change security to Everyone, added TCP/IP stack info.

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Tech Info Library Article Number:19484



Tech Info Library

Open Transport 1.1: Custom Remove Disables Apple Telecom (3/96)

Revised: 3/13/96
Security: Everyone

Open Transport 1.1: Custom Remove Disables Apple Telecom (3/96)

=====

Article Created: 13 March 1996

TOPIC -----

I used the Custom Remove option in the System 7.5 Update 2.0 installer to remove Open Transport. However, now my Apple Telecom software is no longer active. The Express Modem control panel will not open, and there is an X through the extension icon when starting up the computer. What should I do?

DISCUSSION -----

It appears that the Custom Remove option for Open Transport removes the Apple Shared Library Manager, which is needed by the Apple Telecom Software.

To resolve this, reinstall the Apple Telecom Software to restore the Apple Shared Library Manager. Then, you will be able to use the Express Modem and other telecommunication components again.

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Tech Info Library Article Number:19485



Tech Info Library

Network Software Selector: Disabled Control Panels (4/96)

Revised: 4/12/96
Security: Everyone

Network Software Selector: Disabled Control Panels (4/96)

=====

Article Created: 13 March 1996
Article Reviewed/Updated: 12 April 1996

TOPIC -----

This article contains questions about the Network Software Selector application included with System 7.5 Update 2.0.

Questions Answered in this Article:
=====

- 1) When I use the Network Software Selector application to switch between classic networking and Open Transport networking, what happens to the control panels associated with the disabled networking software?
- 2) I have selected Open Transport in the Network Software Selector application. However, the MacTCP control panel is still in the Control Panels folder. I thought it would be automatically removed. What happened?
- 3) I noticed that when I switch to Open Transport using the Network Software Selector the related MacTCP control panels are made invisible. However, the MacTCP Token Ring Extension remains visible. Will this cause any issues with using Open Transport?

DISCUSSION -----

1) Question: When I use the Network Software Selector application to switch between classic networking and Open Transport networking, what happens to the control panels associated with the disabled networking software?

Answer: The control panels are left in the Control Panels folder but are made invisible. If you wish to verify that they are still there, follow these steps

Step 1

Select Find File from the Apple menu

Step 2

Type the name of the control panel in question

Step 3

Click on the More Choices button.

Step 4

Press and hold the Option key on the keyboard and select the Size pop-up menu.

Step 4

Select Visibility from the options that appear under the Name pop-up menu.

Step 5

Click the Find button.

2) Question: I have selected Classic AppleTalk in the Network Software Selector application. However, I noticed that the MacTCP control panel appears to be invisible. What happened?

Answer: The Network Software Selector checks for specific names of control panels when switching between Open Transport and Classic AppleTalk networking. If you have renamed any of these related control panels, then they will remain active in your System Folder even when you switch to the other network. The solution is to make sure that the MacTCP control panel is named "MacTCP" and the Network control panel is named "Network".

3) Question I noticed that when I switch to Open Transport using the Network Software Selector the related MacTCP control panels are made invisible. However, the MacTCP Token Ring Extension remains visible. Will this cause any issues with using Open Transport?

Answer: Although the MacTCP Token Ring extension is not made invisible when switching to Open Transport, it is not needed or used when using Open Transport.

This article was published in the Information Alley on 10 April 1996.

Article Change History:

12 Apr 1996 - Minor technical change.

10 Apr 1996 - Clarified information.

29 Mar 1996 - Added additional information.

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Tech Info Library Article Number:19486



Tech Info Library

AShare Client/Win: Port Address Not Shown In Installer (3/96)

Revised: 3/27/96
Security: Everyone

AShare Client/Win: Port Address Not Shown In Installer (3/96)

Article Created: 13 March 1996
Article Reviewed/Updated: 27 March 1996

TOPIC -----

During the installation for the AppleShare Client for Windows (ASCW), the installer asks me for the port address and interrupt request (IRQ) for my network interface card (NIC). None of the settings in the list match the port address for my NIC. How do I tell the ASCW the proper port address?

DISCUSSION -----

The installer does not provide every possible port address setting for every network interface card. If your port address does not appear in the list, you will have to manually change this setting after installation is complete. This setting is stored in NET.CFG, a text file located in the directory in which you installed the ASCW.

Step 1

Proceed with the installation for the ASCW and select any port address from the list when asked to choose one.

Step 2

After installation is complete, go to your ASCW directory (the default directory is C:\apple\a_share).

Step 3

Use a text editor to open NET.CFG.

Step 4

Find the line labelled PORT #1.

Step 5

Replace the value you selected during installation with the proper port address for your NIC.

Step 6

Save the change you made.

Step 7

Restart your computer.

This article was published in the Information Alley on 27 March 1996.

Article Change History:

27 Mar 1996 - Added Info Alley publication date.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19487



Tech Info Library

Apple Network Servers: How to Get Replacement Keys (9/96)

Revised: 9/17/96
Security: Everyone

Apple Network Servers: How to Get Replacement Keys (9/96)

=====

Article Created: 13 March 1996
Article Reviewed/Updated: 17 September 1996

TOPIC -----

How can I get additional or replacement keys for our Apple Network Servers? I lost mine. Also, can I obtain a single master key for all my servers since I have more than one?

DISCUSSION -----

If you lose your keys, an Authorized Apple service provider can order a set of new keys with new locks, but you cannot get additional or replacement keys without new locks. However, it is your option to have a locksmith make additional or replacement keys for you as long as the Apple hardware is not damaged in the process which would void your warranty.

An authorized Apple service provider can order the following replacement service part for you:

0922-2084 Lock, Front & Rear with Keys*

At the present time there is no plan to offer a master key. However, depending on demand from customers, this may be implemented in the future.

* Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

This article was published in the Information Alley on 28 March 1996.

Article Change History:

17 Sep 1996 - Added the words lost and lose to the article for searchability.
06 May 1996 - Added Info Alley publication information and keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19488



Tech Info Library

Macintosh PowerBook Qualified Accessories & Peripherals (3/96)

Revised: 3/18/96
Security: Everyone

Macintosh PowerBook Qualified Accessories & Peripherals (3/96)

Article Created: 18 March 1996

TOPIC -----

The following is a list of vendors whose products have been tested and certified for use with Macintosh PowerBook 190 and 5300 series computers and the PCMCIA Expansion Module (rev. A) for the Macintosh PowerBook 500 Series computers.

DISCUSSION -----

** IMPORTANT NOTE **

This list does not claim to be all inclusive or complete. It is provided by Apple for your convenience. The addresses, phone numbers, product numbers, and product names were correct as of this writing. You need to contact the manufacturer if you have any further questions about their products.

PowerBook PC Card Solutions for the PowerBook 190 and 5300 Series

The following is a list of vendors whose products have been tested and certified for use with Macintosh PowerBook 190 and 5300 series computers.

NOTE: Using an incompatible card may result in damage to the card and/or your computer.

PC Card Data Fax Modems (U.S. and Canada)

Dayna Communications

Sorenson Research Park
849 West Levoy Drive
Salt Lake City, Utah 84123
800-531-0600 or 801-269-7200

Sales@Dayna.com
www.dayna.com/

- CommuniCard Data/Fax Modem 14.4 14.4 bps Data/ 14.4 bps Fax Modem
- CommuniCard Data/Fax Modem 28.8 28.8 bps Data/ 14.4 bps Fax Modem

Global Village Communication

800-736-4821 or 408-523-1000
1144 East Arques Avenue
Sunnyvale, CA 94086
www.globalcenter.net/

- PowerPort Platinum Pro PC Card 28.8 bps Data/ 14.4 bps Fax modem/ 10 base-T Ethernet
- PowerPort Platinum PC Card 28.8 bps Data/ 14.4 bps Fax modem
- PowerPort Gold PC Card 14.4 bps Data/ 14.4 bps Fax modem

Megahertz Corporation

North 5600 West
P.O. Box 16020
Salt Lake City, Utah 84116
800-LAPTOPS or 801-320-7000 605
www.xmission.com/~mhz/

- CruiseCard 14.4 PC Card Fax Modem 14.4 bps Data/ 14.4 bps Fax Modem Model KJA3144
- CruiseCard 28.8 PC Card Fax Modem 28.8 bps Data/ 14.4 bps Fax Modem Model XJA3288

TDK

136 New Mohawk Road
Nevada City, CA 95959
800-999-4TDK (U.S. & Canada) or 916-478-8421
www.tdk.com/

- DF2814APB Global Class PC Card 28.8 bps Data/ 14.4 bps Fax Modem
- DF2814APB V.34 PC Card 28.8 bps Data/ 14.4 bps Fax Modem

Networking PC Cards

=====

Dayna Communications

Sorenson Research Park
849 West Levoy Drive
Salt Lake City, Utah 84123
800-531-0600 or 801-269-7200
Sales@Dayna.com
www.dayna.com/

- CommuniCard Ethernet Adapter 10Base-T and Thin Ethernet LAN Adapter

Farallon Computing, Inc.

2470 Mariner Square Loop
Alameda, CA 94501
510-814-5000
www.Farallon.com/

- EtherMac PowerBook PC Card 10Base-T,
Thin and EtherWave LAN Adapter

Global Village Communication

1144 East Arques Avenue
Sunnyvale, CA 94086
800-736-4821 or 408-523-1000
www.globalcenter.net/

- PowerPort Platinum Pro PC Card 28.8 bps Data/ 14.4 bps Fax modem/ 10 base-T
Ethernet

PowerBook Accessories

=====

Company Phone Address World Wide Web location City, State, Zip Code e-mail
address Product Model Product Description

Farallon Computing, Inc.
Mariner Square Loop
Alameda, CA 94501
510-814-5000 2470
www.Farallon.com/

- AirDock Adapter 230 kbps Infrared to LocalTalk Adapter

Teleadapt, Inc.

51 E. Campbell Ave.
Campbell, CA 95008 72623
408-370-5105
www.teleadapt.com/
706@compuserv.com

- TeleDapter Foreign Telephone Adapters RJ-45 to foreign country telephone
converter

Xtend Microproducts, Inc./Panasonic

2 Faraday
Irvine, CA 92718

800-232-9836
xtend@xmpi.com
www.xmpi.com/

- Apple 5300/ 190 NiMH Notebook Computer Battery

=====
PowerBook PCMCIA Expansion Module Solutions for the PowerBook 500 Series
=====

The manufacturers of the following PC Cards (PCMCIA cards) have confirmed that their cards are compatible with the PCMCIA Expansion Module (rev. A) for the Macintosh PowerBook 500 Series computers.

This list does not include all cards that may be compatible with the Expansion Module for the Macintosh PowerBook 500 Series. The cards listed below have not been certified to work with the PowerBook 500 Series PCMCIA Expansion Module through Apple's Macintosh PowerBook Qualified Program. PC Card models and product availability may vary by country. For detailed information concerning a specific PC Cards, contact the manufacturer.

NOTE: Using an incompatible card may result in damage to the Expansion Module, the card and/or your Macintosh PowerBook computer.

Wireless Messaging Cards (U.S.)
=====

Apple Computer, Inc.
408-996-1010
(Fax-Back Service 800-510-4955)

- Apple Mobile Message System Wireless Messaging/Page Card for PowerBook, Newton and Windows PC's

Data Fax Modems (U.S. and Canada)
=====

Angia Communications, Inc.

800-877-9159 (U.S.) or 801-373-9800

- SafeJack SJ192 19.2 kbps Data/14.4 kbps Fax Modem

Apple Computer, Inc.

408-996-1010

- Newton Fax Modem Card H0086 2400 bps Data/9600 bps Fax Modem

AT&T Paradyne

800-482-3333 or 813/530-8623

- KeepIn Touch Card, Model 3762-B1 Cellular -ready/Wireline 14.4 Data/14.4 Fax Modem

DTRONIX

408-982-9667

- PC 144 Wireline 14.4 Data/14.4 Fax Modem PC 144D Wireline/Cellular-ready 14.4 Data/14.4 Fax Modem

Epson America, Inc.

800-922-8911 or 310-782-0770

- EFM-144 14.4 Data/14.4 Fax Modem

Megahertz Corporation

800-LAPTOPS or 801-320-7000

- XJ1144 (10052) 14.4 Data/14.4 Fax Modem
- XJ2144 (34051) 14.4 Data/14.4 Fax Modem

Motorola

800-451-2369 or 205-430-8000

- CELlect 14.4 PCMCIA Cellular-ready/Wireline 14.4 Data/14.4 Fax Modem
- Power 14.4 PCMCIA Cellular-ready/Wireline 14.4 Data/14.4 Fax Modem
- Lifestyle 14.4 PCMCIA Wireline 14.4 Data/14.4 Fax Modem

Practical Peripherals

800-442-4774 or 805-497-4774

- MacClass MC144T2 Wireline 14.4 Data/14.4 Fax Modem
- MacClass MC144T2-EZ Wireline 14.4 Data/14.4 Fax Modem w/ EZ-Port

PreMax Electronics, Inc.

408-739-7000

- FM-144 14.4 Data/14.4 Fax Modem

SMART Modular Technologies

510-623-1231

- ST 1414L 14.4 Data/14.4 Fax Modem

Supra

800-727-8772 (U.S. & Canada) or 503/967-2400

- COMcard 144 14.4 Data/14.4 Fax Modem

TDK

800-999-4TDK (U.S. & Canada) or 916-478-8421

- DF2814APB 28.8 Data/14.4 Fax Modem DF1414 14.4 Data/14.4 Fax Modem

Storage Cards

=====

Calluna Technology, Inc.

408-453-4753 (North America)

011 44 592 630 810 (Outside North America)

- Callunacard CT-105MC 105MB ATA Hard Disk Drive, Type III
- Callunacard CT-130MC 130MB ATA Hard Disk Drive, Type III
- Callunacard CT-170MC 170MB ATA Hard Disk Drive, Type III

Epson America, Inc.

800-922-8911 or 310-782-0770

- EHDD170 170MB ATA Hard Disk Drive, Type III
- ATA202EN11 2.5MB PCMCIA Type II ATA Flash Card
- ATA502EN11 5MB PCMCIA Type II ATA Flash Card
- ATA112EN11 10MB PCMCIA Type II ATA Flash Card
- ATA212EN11 20MB PCMCIA Type II ATA Flash Card

Intégral Peripherals

303-449-8009

800-995-1999 (Bell Micro Products)

- PocketFile 170 8170PA 170MB ATA Hard Disk Drive, Type III

Intel

800-628-8686 or 916-356-3104

- iFD005P2SA 5MB PCMCIA Type II ATA Flash Card
- iFD010P2SA 10MB PCMCIA Type II ATA Flash Card

Ministor

800-943-0165 or 408-943-0165

- MP130P3/MP260P3 131MB ATA Hard Disk Drive, Type III

- MP170P3/MP340P3 171MB ATA Hard Disk Drive, Type III

Simple Technology

800-367-7330 or 714-476-1180

- STI-105HD 105MB ATA Hard Disk Drive, Type III
- STI-130HD 130MB ATA Hard Disk Drive, Type III
- STI-170HD 170MB ATA Hard Disk Drive, Type III

SunDisk Corporation

408-562-0595

- SDP5-1 1MB PCMCIA Type II ATA Flash Card
- SDP5-1.8 1.8MB PCMCIA Type II ATA Flash Card
- SDP5-2.5 2.5MB PCMCIA Type II ATA Flash Card
- SDP5-5 5MB PCMCIA Type II ATA Flash Card
- SDP5-10 10MB PCMCIA Type II ATA Flash Card
- SDP5-20 20MB PCMCIA Type II ATA Flash Card
- SDP5A-40 40MB PCMCIA Type II ATA Flash Card

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Tech Info Library Article Number:19489



Tech Info Library

PowerBook: Error Waking From Sleep w/ System 7.5 Updt 2.0 (1/97)

Revised: 1/20/97
Security: Everyone

PowerBook: Error Waking From Sleep w/ System 7.5 Updt 2.0 (1/97)

Article Created: 19 March 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

I just installed System 7.5 Update 2.0, and now every time my PowerBook comes out of sleep I get a Type 8 error. What's going on?

DISCUSSION -----

Symptom

A Type 8 error dialog is displayed immediately after waking from sleep on certain models of PowerBook computers.

Issue

Connectix RAM Doubler version 1.6.1 or earlier is incompatible with System 7.5.3 (System 7.5 plus the System 7.5 Update 2.0) on 680x0-based PowerBook computers. This does not include the PowerPC-based PowerBook computers.*

Workarounds

- 1) Remove RAM Doubler. You can use Apple's Virtual Memory if necessary.
- 2) Remove the System 7.5 Update file. This is not recommended because this will eradicate some features that the update provides
- 3) Reinstall the previous version of the system software.

Resolution

This issue has been fix with System 7.5.3 Revision 2. You can find this software on Apple Computer's online software update sites.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.

- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

* The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

This article was published in the Information Alley on 25 March 1996.

Article Change History:

20 Jan 1997 - Added info about PPC PowerBook computers.
15 Jun 1996 - Added System 7.5.3 Revision 2 information.
26 Mar 1996 - Added Info Alley information.

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Tech Info Library Article Number:19490



Tech Info Library

PowerBook: Duo Dock Top Cover Upgrade No Longer Available (3/96)

Revised: 3/19/96
Security: Everyone

PowerBook: Duo Dock Top Cover Upgrade No Longer Available (3/96)

=====

Article Created: 19 March 1996

TOPIC -----

I just called my authorized Apple service provider. They told me I can no longer order the Duo Dock Top Cover Upgrade. How am I going to be able to fit my new color PowerBook Duo computer into an original Duo Dock without this top cover? Is there a different my Apple service provider could order?

DISCUSSION -----

The Duo Dock Top Cover Upgrade (M1814Z/A) which is necessary to put a color duo into an original Duo Dock is no longer available.

However, the service part (922-0519, Top Cover, Duo Dock II w/door) is still available. So, if you need the taller top for your original Duo Dock, you will need to ask your authorized Apple Service provider to order this service part instead of the finished goods part.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19491



Tech Info Library

System 7.5.3: Apple Telecom & No Sound on Pwr Mac 9500 (3/96)

Revised: 3/20/96
Security: Everyone

System 7.5.3: Apple Telecom & No Sound on Pwr Mac 9500 (3/96)

=====

Article Created: 20 March 1996

TOPIC -----

After installing Apple Telecom 2.x on my Power Macintosh 9500, which I recently upgraded to System 7.5.3 (using System Update 2.0), I can no longer hear any sound. Is there a compatibility problem between Apple Telecom and System 7.5.3?

DISCUSSION -----

On Power Macintosh 9500 computers, the Apple Telecom installer places the Audio Tune-up extension in the Extensions folder. This extension fixes a sound problem under System 7.5.2 when using the Geoport Telecom Adapter.

The Audio Tune-up extension is built into System 7.5.3. However, if you still have it installed under 7.5.3, you will experience a problem with sounds. To resolve these problems, simply remove the Audio Tune-up extension.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19494



Tech Info Library

Network Server LCD Values: Manual Correction (6/96)

Revised: 6/6/96
Security: Everyone

Network Server LCD Values: Manual Correction (6/96)

Article Created: 20 March 1996
Article Reviewed/Updated: 6 June 1996

TOPIC -----

This article describes a "Using AIX, AppleTalk Services, and Mac OS Utilities on the Apple Network Server" manual correction.

DISCUSSION -----

Below is a corrected version of the table on page 161, Chapter 10 Troubleshooting, of the "Using AIX, AppleTalk Services, and Mac OS Utilities on the Apple Network Server" manual. These are the values displayed during a normal system startup.

Begin_Table

LCD	System Action
510	The system has started the configuration manager.
511	The configuration manager has completed.
517	The system is attempting to mount the / (root) and /usr file systems.
538	The configuration manager is passing control to a configuration method.
539	The configuration method has completed.
551	The system is attempting to vary on the root volume group.
553	The system has completed phase one of the boot process.
591	The system is configuring the Logical Volume Manager (LVM).
593	The system is configuring the low-function graphics terminal.
594	The system is configuring the rendering context manager.
704	The system is configuring a SCSI disk drive.
723	The system is configuring a CD-ROM or other SCSI device.
727	The system is configuring an asynchronous device.
731	The system is configuring a pseudo TTY.
811	The system is configuring the system planar (mainboard).

812 The system is configuring the standard I/O adapter.
814 The system is configuring the NVRAM.
821 The system is configuring the standard keyboard adapter.
823 The system is configuring the standard mouse adapter.
826 The system is configuring on-serial port 1.
828 The system is configuring the standard floppy disk adapter.
831 The system is configuring serial port 2.
868 The system is configuring the integrated SCSI adapter.
874 The system is configuring the graphics subsystem adapter.
921 The system is configuring a keyboard.
925 The system is configuring a mouse.
935 The system is configuring a 3.5-inch diskette drive.
9002 The system is configuring a SCSI-2 adapter.
c301 Apple Desktop Bus (ADB) time out.

End_Table

Article Change History:

06 Jun 1996 - Added another LCD code.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19497



Tech Info Library

Power Macintosh: Write Cache Hard Drive Corruption Issue (5/96)

Revised: 5/16/96
Security: Everyone

Power Macintosh: Write Cache Hard Drive Corruption Issue (5/96)

=====

Article Created: 20 March 1996
Article Reviewed/Updated: 16 May 1996

TOPIC -----

Customers who have installed some third-party hard disk driver software on Power Macintosh computers have experienced some loss of data and corruption.

DISCUSSION -----

The third-party software may improperly handle write-caching which runs the risk of data loss or even corruption of the disks' file structure on shutdown. Apple software properly supports write caching (and always has) on any hard disk shipped.

Many high performance disk drives available for Macintosh computers utilize on-board hardware write-cache mechanisms. Although these devices can enhance disk performance, they also require special software consideration to avoid the loss of data on shutdown.

Write cache functions are part of the ANSI SCSI-2 Specification. These cache functions have been there for a while. A Technote was written by Apple which was directed primarily to IDE and SCSI disk interface module software developers. This tech note addresses ways to flush the disk's write cache during the shutdown process.

Recent postings on the Internet by some third-party hard disk driver software vendors may lead customers to believe this problem is caused by Apple hardware or software. This issue is not an Apple hardware or software issue, it is a third-party issue. Apple has no direct control over what third-party software vendors do with their software. If customers replace the Apple hard disk driver by formatting with a third-party disk driver, or if they purchase a drive from another vendor, Apple has no direct connection with either the third-party software or hardware.

Suggestions

1. Make that you have the latest driver from the vendor from whom you purchased the hard drive.

- Apple Developers have been made aware of the driver requirements and should be updating their drivers if they encounter problems.

- You should update both third-party and Apple drivers to the latest versions for all the drives on your Macintosh computer.

2. After updating the driver, run Apple's Disk First Aid application or run a drive utility program (such as Norton Utilities) to repair any corruption or directory damage that may have occurred previously.

This article was published in the Information Alley on 27 March 1996.

Article Change History:

16 May 1996 - Corrected spelling of SCSI-2

06 May 1996 - Added keyword.

28 Mar 1996 - Added Info Alley publication information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19498



Tech Info Library

AWS 95 or A/UX 3.x: Manually Executing fsck (3/96)

Revised: 3/21/96
Security: Everyone

AWS 95 or A/UX 3.x: Manually Executing fsck (3/96)

=====

Article Created: 21 March 1996

TOPIC -----

This article describes Manually Executing the fsck command on an Apple Workgroup Server (AWS) 95 or A/UX 3.x after a system crash.

DISCUSSION -----

Running fsck From the A/UX Startup Shell

When restarting an AWS 95 or A/UX 3.x after a system crash, you should perform a manual file system check (fsck) from the A/UX Startup shell. Any file system inconsistency is made worse if you continue to use that file system (consequently modifying it further) without running fsck.

You enter the A/UX Startup shell by turning on your server and clicking the Cancel button or pressing Command-. (Command and period keys) in the dialog box containing "Welcome to the Apple Workgroup Server 95". This cancels the A/UX startup process and presents the A/UX Startup shell. After the A/UX Startup shell displays, the following command-line prompt appears:

```
startup#
```

At the prompt, enter this UNIX command (use lower case):

```
fsck -y /dev/default
```

Press Return to execute this fsck command. The fsck program lets you know which phase and what file system it is checking at any given time. It may take several minutes to complete the check. For a complete description of all the phases of fsck, refer to the "Server Administration with A/UX" manual which came with your Workgroup Server 95.

When fsck completes running, if you see this message, "FILE SYSTEM WAS MODIFIED", it is recommended you execute the above fsck command again. You want

fsck to make a complete check without any modifications or changes.

NOTE: This sequence performs a filesystem check of the root partition. To check other partitions you can modify the fsck command as follows:

```
fsck /dev/dsk/cx0Yd0sZ
```

Where X = SCSI BUS (1, 2, 3 or 4)

Y = SCSI ID of the drive (0, 1, 2, 3, 4, 5 or 6)

Z = Slice where the file system will be created (0 for root volume)

A listing of partitions on the system and their associated mount points can be located in the filesystem table (fstab). This file can be read by entering the following command:

```
cat /etc/fstab
```

Running fsck From the Command Shell

Before running the fsck command, be certain there are no applications running which use mounted filesystems, like AppleShare, and then unmount the filesystems using the following command:

```
umount -a
```

This unmounts all partitions listed in the file /etc/fstab except "/". To run fsck on these partitions all at once, enter:

```
fsck
```

Once the file system check is complete, the partitions can be remounted by entering:

```
mount -a
```

The system is now ready to resume normal activity.

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Tech Info Library Article Number:19499



Tech Info Library

AppleShare Workstation 3.6.1RevB & 3.6.1: Differences (3/96)

Revised: 3/21/96
Security: Everyone

AppleShare Workstation 3.6.1RevB & 3.6.1: Differences (3/96)

=====

Article Created: 21 March 1996

TOPIC -----

I have installed AppleShare Workstation 3.6.1, now after installing System 7.5 Update 2.0 the AppleShare Workstation version is now 3.6.1RevB. What is the difference between 3.6.1 and 3.6.1RevB and which one should I use.

DISCUSSION -----

The only difference between AppleShare Workstation 3.6.1 and 3.6.1RevB is the bundle bit is set on the 3.6.1RevB and is not set on the 3.6.1.

You should use AppleShare Workstation 3.6.1RevB.

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Tech Info Library Article Number:19500



Tech Info Library

Power Macintosh: Audio CDs & 7.5.3 on PCI-based Systems (3/96)

Revised: 3/26/96
Security: Everyone

Power Macintosh: Audio CDs & 7.5.3 on PCI-based Systems (3/96)

=====

Article Created: 21 March 1996
Article Reviewed/Updated: 26 March 1996

TOPIC -----

What changes were made in System 7.5.3 in the way Audio CD ROM discs are used on PCI-based Power Macintosh computers?

DISCUSSION -----

With the advent of System 7.5 Update 2.0 and System 7.5.3, the "Internal CD" and "Playthrough" options no longer need to be selected in the Sound or Monitors & Sound control panel in order to playthrough an Audio CD to internal or external speakers.

An Audio CD will playthrough no matter which selections are made in the control panels, except for mute and volume changes. The change was made for PCI-based Power Macintosh computers only. However, future versions of the Mac OS may implement the change for other Macintosh computers as well.

This article was published in the Information Alley on 25 March 1996.

Article Change History:
26 Mar 1996 - Added Info Alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19501



Tech Info Library

System 7.5 Update 2.0: Changes to Find File (5/96)

Revised: 5/6/96
Security: Everyone

System 7.5 Update 2.0: Changes to Find File (5/96)

=====

Article Created: 22 March 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

Since I installed the System 7.5 Update 2.0, Find File seems to work differently. What changed?

DISCUSSION -----

If you install the System 7.5 Update 2.0 to update your system software to version 7.5.3, the Find File does not work as before. Previously, the file, folder, or application being sought would appear in both the upper and lower window.

Prior to System 7.5 Update 2.0

- If you double-clicked on the item within the upper window, the file or application would launch.
- If you double-clicked on the item within the lower window, the application, file, or folders would be opened and the application, file, or folder would be highlighted within its respective folder window.

After Installing System 7.5 Update 2.0

- Double-clicking the application or file in either the upper or lower window will launch it.

NOTE: This applies to Macintosh computers using the System 7.5 Update 2.0.

This article was published in the Information Alley on 27 March 1996.

Article Change History:
06 May 1996 - Added keyword.

28 Mar 1996 - Added Info Alley publication date information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19503



Tech Info Library

Internet Server Solution for WWW: Product Matrix (3/96)

Revised: 3/22/96
Security: Everyone

Internet Server Solution for WWW: Product Matrix (3/96)

Article Created: 22 March 1996

TOPIC -----

This article provides a product matrix for versions 1.0 and 1.1 of the Apple Internet Server Solution (AISS) for the World Wide Web.

DISCUSSION -----

Begin_Table

Product	Delta	AISS		For more information
		v1.0	v1.1	
StarNine WebSTAR	Update	1.0	1.2.5	www.starnine.com/webstar/
Adobe Acrobat	Update	2.0	2.1	www.adobe.com/Acrobat/Acrobat0.html
Adobe PageMill	New		1.0	www.adobe.com/Apps/PageMill/
AppleSearch	No Ch	1.5	1.5	product.info.apple.com/ productinfo/datasheets/
AppleSearch Patch	New		1.5.1	
AppleSearch acgi	Update	1.5	1.5.1	kamaaina.apple.com/
MacDNS	Update	1.0	1.0.1	
Kitchen Sink SW ServerStat	New		1.0.5	www.kitchen-sink.com/ss.html
Maxum Development NetCloak	New		2.0	www.maxum.com/NetCloak/
Netscape Navigator	Update	1.1	2.0	home.netscape.com/comprod/

Progressive Network RealAudio Server	New		1.x	www.prognet.com/
ACME Script Widgets	No Ch	2.0	2.0	
AppleScript	No Ch	1.1	1.1	dev.info.apple.com/solguide/
HyperCard	Update	2.2.1	2.3.4	product.info.apple.com/ productinfo/datasheets/
HyperCard acgi	Update	2.2.1	2.3.4	
Bare Bones Software BEdit	Update	3.1.1	3.5.1	www.tiac.net/biz/bbsw/ bbedit.html
WebMap	No Ch	1.0.1	1.0.1	www.city.net/cnx/software/ webmap.html
MapServe CGI	Update	1.0	1.5	www.bart.spub.ksu.edu/other/ machttp_tools/
MacTCP Ping	Omitted	2.0.2		
MacPing	New		3.0.5	www.dartmouth.edu/pages/ softdev/
email CGI	Update	1.0.2	3.0.4	
DecodeURL OSAX	No Ch	1.0	1.0	
TCP/IP OSAX	No Ch	1.2	1.2	
FileMaker Runtime & FileMaker CGI				www.claris2.com./filemaker/
Butler SQL Runtime & Tango				www.everyware.com/

End_Table

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Tech Info Library Article Number:19504



Tech Info Library

AppleScript: Cannot Create New Folder In Finder (3/96)

Revised: 3/22/96
Security: Everyone

AppleScript: Cannot Create New Folder In Finder (3/96)

=====

Article Created: 22 March 1996

TOPIC -----

Using the Script Editor, I recorded a script that creates a new folder within another folder:

```
tell application "Finder"
    activate
    make new folder at folder "my folder" of startup disk
end tell
```

This script records fine, but when I try to run or change it, it fails.

Why?

DISCUSSION -----

This problem occurs If you installed the PhotoFlash Scripting Additions that came with QuickTake camera. The "Photoflash Utilities" addition defines it's own version of "Make Folder" which is different from the one the Scriptable Finder defines. This extension was defined and written before the Scriptable Finder was widely available.

In order to properly create a folder, remove the "Photoflash Utilities" from the Scripting Additions folder located in the Extensions folder.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19505



Tech Info Library

Color StyleWriter 2400: Communication Rate (3/96)

Revised: 3/22/96
Security: Everyone

Color StyleWriter 2400: Communication Rate (3/96)

=====

Article Created: 22 March 1996

TOPIC -----

What baud rate (data rate) does the Color StyleWriter 2400 communicate at? Does the speed vary depending on which Macintosh computer is printing to the printer?

DISCUSSION -----

The Color StyleWriter 2400 communicates almost constantly at 884.7 kbaud with any Macintosh computer using System 7.x. When the printer is first powered ON, the serial port is set for 57.6 kbaud. The Color StyleWriter 2400 printer driver then queries the printer at 57.6 to determine the type of printer. Once the driver determines it is a Color StyleWriter 2400, as opposed to another printer such as the StyleWriter II, the driver knows the printer supports an external clock so it then sets the printer's serial port speed to 884.7 kbaud. The driver continues using this baud rate until the connection is closed. Once the connection is closed, the port is set to 57.6 kbaud.

The printer supports a 230.4 kbaud rate, but that rate is not used.

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Tech Info Library Article Number:19506



Tech Info Library

Multiple Scan 1705 Display: Viewable Image Size Changes (3/96)

Revised: 3/22/96
Security: Everyone

Multiple Scan 1705 Display: Viewable Image Size Changes (3/96)

=====

Article Created: 22 March 1996

TOPIC -----

I have a Multiple Scan 1705 Display. When I open or close a window that contains a mostly white background, such as a SimpleText document, the viewable image grows. For example, when I open a new document in SimpleText, the size of the image grows by a few millimeters. When the document window is closed, the image shrinks.

DISCUSSION -----

There is nothing wrong with your display. What you describe is normal for the Multiple Scan 1705 Display and typical of all entry level 17-in. displays.

When you display more white areas on your monitor, this draws more current causes the screen raster to move slightly. The same size display at a higher price point contains higher cost circuitry that compensates for the raster movement.

When using MacTest Pro test patterns (all white screen), the various Apple Displays all have different levels of raster movement, or high voltage regulation. This is normal on all displays, regardless of manufacturer.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19509



Tech Info Library

PCI-Based Power Macintosh: Identifying Processor Cards (4/96)

Revised: 4/9/96
Security: Everyone

PCI-Based Power Macintosh: Identifying Processor Cards (4/96)

=====

Article Created: 25 March 1996
Article Reviewed/Updated: 9 April 1996

TOPIC -----

Is there a way to identify the type and speed of the PowerPC microprocessor being used on the processor cards for the Power Macintosh 7500, 8500, and 9500 series computers?

The processor card is not currently installed in a Power Macintosh so I can't run a benchmark program to check the information.

DISCUSSION -----

On the processor card, there is an FCC ID label, which contains information about the processor type and speed. The FCC ID label is located on the back side of the processor card (the side without the heat sink). The number on the FCC ID label contains 9 alpha-numeric characters, and the last 6 numerals identify the processor and the speed.

FCC ID: xxx601100 = 601 Processor @ 100MHz
FCC ID: xxx604120 = 604 Processor @ 120MHz
FCC ID: xxx604132 = 604 Processor @ 132MHz

This article was published in the Information Alley on 9 April 1996.

Article Change History:
09 Apr 1996 - Added keyword.

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Tech Info Library Article Number:19510



Tech Info Library

Drive Setup: Initialization Fails on 800 MB IDE Drives (4/96)

Revised: 4/9/96
Security: Everyone

Drive Setup: Initialization Fails on 800 MB IDE Drives (4/96)

Article Created: 25 March 1996
Article Reviewed/Updated: 9 April 1996

TOPIC -----

I have a Macintosh computer with an 800 MB IDE hard drive. I am attempting to use Drive Setup 1.0.4 to format the hard drive using the "Low Level Format" option. It appears to start working, but then an error message appears stating, "Initialization Failed." What is going on?

DISCUSSION -----

The symptoms you are experiencing can occur when using version 1.0.4 or earlier of Drive Setup on Quantum 800 MB IDE hard drives. To resolve this issue, you should select the "Zero All Data" option to reformat your hard drive. Note that there is no negative impact to the drive or system.

A newer version of the Drive Setup utility will be released to address this incompatibility.

This article was published in the Information Alley on 4 April 1996.

Article Change History:
09 Apr 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19511



Tech Info Library

System 7.5 Update 2.0: Disk Tools Disk Not Supported (4/96)

Revised: 11/12/96
Security: Everyone

System 7.5 Update 2.0: Disk Tools Disk Not Supported (4/96)

Article Created: 25 March 1996
Article Reviewed/Updated: 9 April 1996

TOPIC -----

I recently installed System 7.5 Update 2.0, and I noticed that there are newer versions of Disk First Aid, Drive Setup, and Apple HD SC Setup in the Apple Extras folder. Do I need to update my old Disk Tools disk with the newer versions of these utilities? If so, do I need both Drive Setup and Apple HD SC Setup?

DISCUSSION -----

Apple does not officially support updating a Disk Tools disk with the utilities installed with System 7.5 Update 2.0. There are a couple of reasons for this:

- On some older Disk Tools disks (any that shipped before the release of Drive Setup, such as the original System 7.5 Disk Tools disk), there is not enough room for the System Folder, Drive Setup 1.0.4, and Disk First Aid 7.2.2.
- The System Folders included with Disk Tools disks are significantly modified to fit on a 1.4 MB floppy disk. Because every existing modified System Folder isn't tested with every existing CPU and the newer versions of the utilities, you shouldn't assume that the newer utilities will run reliably from an existing Disk Tools disk.

Macintosh computers that ship with System 7.5.3 installed from the factory will include a Disk Tools disk or CD-ROM disc containing the latest versions of the utilities.

If you need to repair a volume with Disk First Aid or format or initialize a volume with Drive Setup or Apple HD SC Setup, you should start up from another volume (such as a second hard drive, CD, or removeable cartridge drive) running System 7.5.x (not necessarily System 7.5.3) and then run the desired utility. The utility does not have to be on the startup volume, but it cannot be on the volume that needs to be repaired, formatted, or initialized.

If you have a Power Macintosh system (including the PowerBook 500 with PPC upgrade, but excluding the Power Macintosh processor card) or any Macintosh that originally shipped with an IDE hard drive (such as the Macintosh Performa and LC 630CD and 580 series, the PowerBook 150, and the PowerBook 190), you should use Drive Setup. Otherwise, use Apple HD SC Setup.

Note: The following computers are in the Macintosh 630CD family: LC 630, Quadra 630, Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640.

This article was published in the Information Alley on 4 April 1996.

Article Change History:

09 Apr 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19512



Tech Info Library

Open Transport 1.1 and Fragmenting TCP/IP Packets (3/96)

Revised: 3/28/96
Security: Everyone

Open Transport 1.1 and Fragmenting TCP/IP Packets (3/96)

Article Created: 25 March 1996
Article Reviewed/Updated: 28 March 1996

TOPIC -----

I have a network administrator commenting that Open Transport 1.1, which comes with the System 7.5 Update 2.0, will not allow the fragmenting of TCP/IP packets.

MacTCP 2.0.6 does not set the Don't Fragment (DF) bit and allows packet fragmentation, however, Open Transport 1.1 does set the DF bit. This may be an issue because some TCP/IP devices reject this. Can you confirm or deny this as an issue without traces?

DISCUSSION -----

Open Transport supports a new IP feature called MTU Path Discovery. The MTU Path Discovery algorithm does set the DF bit on all packets as long as the minimum datagram size (576) is not the current MTU. The DF bit is set on all packets so that in the event that the route changes, which could cause the MTU to change, the sender will receive an ICMP "packet too large" datagram from a router and adjust the MTU. The only time the DF bit is not set is when the minimum (576) size datagram is being used.

We are not aware of any problems using MTU Path Discovery or setting the DF bit with any IP implementations.

Here is a summary of how this all fits together from rfc 1191:

1. Introduction

When one IP host has a large amount of data to send to another host, the data is transmitted as a series of IP datagrams. It is usually preferable that these datagrams be of the largest size that does not require fragmentation anywhere along the path from the source to the destination. (For the case against fragmentation, see [5].) This datagram size is referred to as the Path MTU

(PMTU), and it is equal to the minimum of the MTUs of each hop in the path. A shortcoming of the current Internet protocol suite is the lack of a standard mechanism for a host to discover the PMTU of an arbitrary path.

NOTE: The Path MTU is what in [1] is called the "Effective MTU for sending" (EMTU_S). A PMTU is associated with a path, which is a particular combination of IP source and destination address and perhaps a Type-of-service (TOS).

The current practice [1] is to use the lesser of 576 and the first-hop MTU as the PMTU for any destination that is not connected to the same network or subnet as the source. In many cases, this results in the use of smaller datagrams than necessary, because many paths have a PMTU greater than 576. A host sending datagrams much smaller than the Path MTU allows is wasting Internet resources and probably getting sub-optimal throughput. Furthermore, current practice does not prevent fragmentation in all cases, since there are some paths whose PMTU is less than 576.

2. Protocol overview

In this memo, we describe a technique for using the Don't Fragment (DF) bit in the IP header to dynamically discover the PMTU of a path. The basic idea is that a source host initially assumes that the PMTU of a path is the (known) MTU of its first hop, and sends all datagrams on that path with the DF bit set. If any of the datagrams are too large to be forwarded without fragmentation by some router along the path, that router will discard them and return ICMP Destination Unreachable messages with a code meaning "fragmentation needed and DF set" [7]. Upon receipt of such a message (henceforth called a "Datagram Too Big" message), the source host reduces its assumed PMTU for the path.

The PMTU discovery process ends when the host's estimate of the PMTU is low enough that its datagrams can be delivered without fragmentation. Or, the host may elect to end the discovery process by ceasing to set the DF bit in the datagram headers; it may do so, for example, because it is willing to have datagrams fragmented in some circumstances. Normally, the host continues to set DF in all datagrams, so that if the route changes and the new PMTU is lower, it will be discovered.

Unfortunately, the Datagram Too Big message, as currently specified, does not report the MTU of the hop for which the rejected datagram was too big, so the source host cannot tell exactly how much to reduce its assumed PMTU. To remedy this, we propose that a currently unused header field in the Datagram Too Big message be used to report the MTU of the constricting hop. This is the only change specified for routers in support of PMTU Discovery.

This article was published in the Information Alley on 27 March 1996.

Article Change History:

28 Mar 1996 - Added Information Alley notation.

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Tech Info Library

Disk First Aid: What Does It Do? (3/96)

Revised: 3/27/96
Security: Everyone

Disk First Aid: What Does It Do? (3/96)

=====

Article Created: 27 March 1996

TOPIC -----

What are the meanings of all the messages that appear while Disk First Aid is checking my hard drive? For what type of errors does Disk First Aid check?

DISCUSSION -----

The information in this article is taken from the book "Inside Macintosh."

Disk First Aid ensures the integrity of individual files on a volume cataloged by Hierarchical File Structure (HFS - the method for placing data on a hard drive used by the Mac OS).

A disk can contain several partitions, which are treated as separate virtual disks by the system. Each partition contains information similar to that shown below:

Begin_Graphic

```

.....
Partition Information .
.....
Disk Driver Partition
.....
Boot Blocks .
.....
Master Directory Block(MDB). Macintosh Partition
.....
Volume Bitmap .
.....
Catalog File .
.....
Extents Overflow File .
```

```
..... |
Files/Free Space . |
..... |
Alternate MDB . |
..... -----
..... Other Partitions
..... -----
```

End_Graphic

Partition Map

The first physical block (512K) contains the disk's "Partition Map". This specifies the first and last physical blocks of each partition as well as its type (Macintosh, A/UX, MS-DOS, etc.). It also contains the value for the size of "Logical Blocks." Physical blocks are always 512K. The logical block size will vary depending upon the capacity of the drive. Whenever a file is written to the disk, it is allocated a certain number of logical blocks or "clumps." This slows down the process of fragmentation, but can result in open space being left at the end of the file allocation.

Device Driver

After the partition map is the device driver used for SCSI communications with that device. (Note that if the device driver is updated after the drive is initialized, HFS may move the driver to the end, depending on space constraints).

Boot Blocks

The HFS volume begins with two boot blocks. This is where booting instructions are stored along with directions for locating the system and Finder files.

Master Directory Block

Contains volume information such as the date and time of volume's creation and number of files the volume contains. When the MDB is read, the volume is mounted and an area is created in memory called the Volume Control Block (VCB).

Volume Bitmap

A record of which logical blocks in the volume are allocated to files. It contains one bit for each allocation block on the volume. If the block is taken then the bit is set. Otherwise, the bit is clear if the block is available.

Catalog File/Tree

Contains hierarchical information about the relationship and structure of files and folders and their location on a volume.

Specifically, it contains the parent directory for each file. In order to determine the full path, a directory's parent is found, and so on, until the

root level is reached. The Catalog File and Extents File are each in the form of a "B-Tree" (and are the source for all B-Tree type errors). See below for a discussion of B-Trees.

Extents File/Tree

An "Extent" is a contiguous range of logical blocks that are allocated to a file. The Extents File (also called "Extents Overflow File") keeps track of the location of records that can't be placed contiguously. This information is used to locate pieces of a file when it's loaded. Some Extent information is contained within the MDB and VCB. The first three file extents are always retained in memory with the VCB.

Given the above information it is understandable why optimizing, or "defragmenting" a disk is so effective. Not only does making files contiguous reduce seek time, but continual accesses to the Extents File are eliminated – all of the needed information is already in memory.

All of the items listed before the Catalog and Extents Files are contiguous. The Catalog and Extents Files can be anywhere on the volume and are not contiguous.

The Catalog File also stores Finder information for each file. This information consists of:

File Type - Identifier of one of several categories.

File Creator - Name of the application that created it.

Finder Flags - These are information items (bits) that can be set to on or off.

The Finder takes these into account when it reads them. The specific types of Finder flags are:

- isInvisible: File won't appear in dialog listings or windows.
- hasBundle: File is associated with a custom icon.
- nameLocked: File can't be renamed or have another icon assigned to it by a user.
- isStationery: File is a stationery pad.
- isShared: File is being shared over a network.
- hasCustomIcon: File has it's own customized icon.

Files Location in Window - Relative position in the window when it's opened.

Directory that Contains File - The directory path of the file.

The rest of the volume contains application/data files, the Catalog File, Extents Overflow File, and open space.

A Discussion of B-Trees

=====

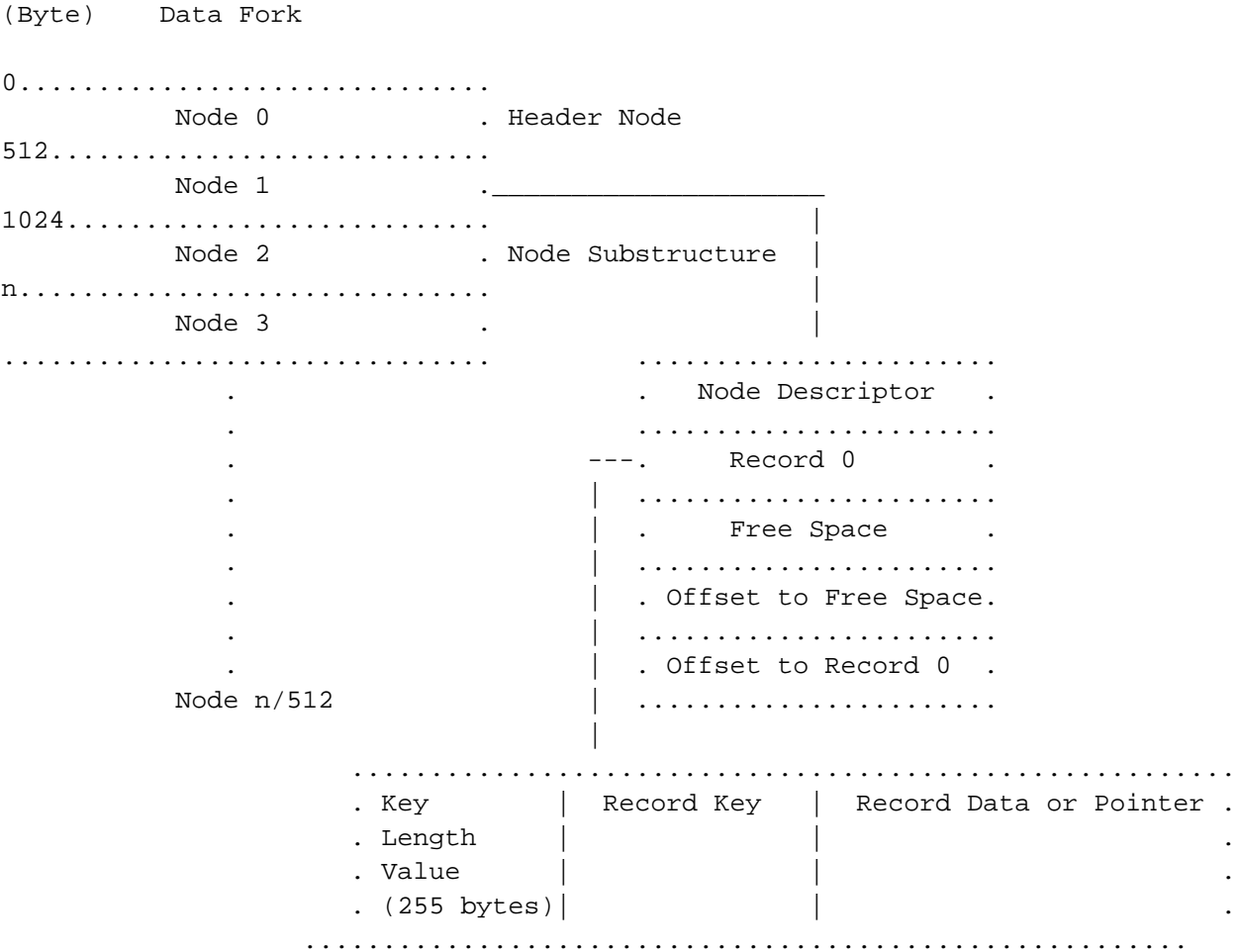
Catalog and Extents files are organized into B-Trees, a structure which allows for optimum read speeds.

Both of these files contain only data forks – there are no resource forks. The

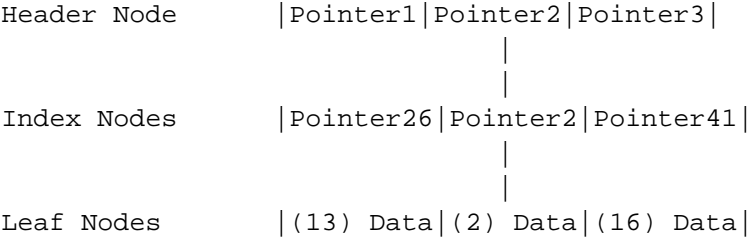
location of the start of the Catalog and Extents B-Tree is contained at the beginning of the MDB and is stored in memory.

Below is a rough diagram of what the disk structure of the Catalog and Extents Files look like:

Begin_Graphic



An example of a B-Tree structure is shown below:



End_Graphic

This goes a long way to explain how and why errors occur. B-Tree structures are

complex. If one becomes damaged, erroneous information is read into File Manager and the referenced files can also become damaged. This is why it's vital to run Disk First Aid or similar utilities on a regular basis.

Typical Errors Detected by Disk First Aid
=====

Below are some typical errors generated by Disk First Aid with explanations:

Keys Out of Order

B-Tree records or referenced records have become damaged.

Bad Leaf Node/Index Node

A node has been changed so it doesn't correctly refer to other nodes or records.

B-Trees Damaged

This is obvious - the B-Trees are damaged.

Volume Bitmap Incorrect

The volume bitmap does not accurately reflect the use of allocation blocks on the drive. Disk First Aid repairs this and the extents file by comparing the two with each other, then comparing against the actual allocation blocks on the drive.

Bundle Bits Need to be Reset

The Bundle Bit flag needed to reset for some of the files. (Other flags may also need to be reset).

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Tech Info Library Article Number:19516



Tech Info Library

AppleShare Workstation 3.6.1 to 3.6.2 Changes (3/96)

Revised: 3/27/96
Security: Everyone

AppleShare Workstation 3.6.1 to 3.6.2 Changes (3/96)

=====

Article Created: 27 March 1996

TOPIC -----

This article describes the changes in AppleShare Workstation software from version 3.6.1 to 3.6.2.

DISCUSSION -----

The AppleShare Workstation 3.6.2, changes from 3.6.1 are:

- Changes the behavior of the Alias Manager, included with System 7.5.3 and System 7.5 Update 2.0, to use the workstation user interface for Alias resolution. Set Password Button now available.
- Fixes several hangs due to VBL (vertical blanking interrupt) problems.
- Fixes a crash on launch of certain applications from the server.
- When you get a Bad Password error, the workstation now asks you to check the Caps Lock key if it was active when you entered the password.

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Tech Info Library Article Number:19517



Tech Info Library

GeoPort and OCR: Language Dictionary Supplier (3/96)

Revised: 3/27/96
Security: Everyone

GeoPort and OCR: Language Dictionary Supplier (3/96)

=====

Article Created: 27 March 1996

TOPIC -----

Are there different language dictionaries for the Optical Character Recognition (OCR) software, supplied with GeoPort for European countries, specifically France, Germany, and Italy?

DISCUSSION -----

Additional language dictionaries can be obtained by contacting Mimetics at the following address:

Mimetics
5, Central Park
Avenue Sully Prud'homme
92298 Châtenay-Malabry
France

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19518



Tech Info Library

Microsoft Bookshelf: Please Insert The CD Message (4/96)

Revised: 4/2/96
Security: Everyone

Microsoft Bookshelf: Please Insert The CD Message (4/96)

=====

Article Created: 28 March 1996
Article Reviewed/Updated: 2 April 1996

TOPIC -----

I got the Microsoft Bookshelf application with the Library Research Software Bundle from Apple. Why do I get an error message asking me to insert the Microsoft Bookshelf CD-ROM disc when it is in the drive already?

DISCUSSION -----

The Microsoft Bookshelf CD is included with the following software bundles from Apple:

- Library Research Bundle
- Multimedia Learning Tools Bundle

Some early versions of the CD were improperly mastered which is the reason for the error message.

Please call 800-SOS-APPL to get the newer version of this CD.

Article Change History:
02 Apr 1996 - Reviewed for technical accuracy.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19521



Tech Info Library

LaserWriter IISC: No Printer Driver in Sys7.5 Update 2.0 (3/96)

Revised: 3/28/96
Security: Everyone

LaserWriter IISC: No Printer Driver in Sys7.5 Update 2.0 (3/96)

=====

Article Created: 28 March 1996

TOPIC -----

I just installed the System 7.5 Update 2.0, and I could not find a printer driver for the LaserWriter IISC printer. What happened to that driver?

DISCUSSION -----

The LaserWriter IISC driver is not compatible with System 7.5.3 (System 7.5 with Update 2.0).

When printing to a LaserWriter IISC or Personal LaserWriter SC from a Macintosh running System 7.5.2 or 7.5.3, the print output may not be WYSIWYG depending upon the font selected. The output is not WYSIWYG due to improper character and word spacing. The improper spacing may also cause lines to get clipped. Clipping is where characters that lie outside the printable area are not printed.

The situation gets more confusing since the printer drivers are referenced in the System 7.5.3 "About the Extensions folder" ReadMe:

- LaserWriter IISC: Enables your computer to print documents on a LaserWriter IISC connected to a SCSI port. Replaced by Personal LaserWriter SC.
- Personal LaserWriter SC: Enables your computer to print documents on a Personal LaserWriter SC or a LaserWriter IISC.

Workarounds

At this time there is only two workarounds; if you use System 7.5.3, you should use QuickDraw GX and the appropriate QuickDraw GX printer driver. The only other option if you do not want to install QuickDraw GX is to use another version of the Mac OS prior to System 7.5.2 or System 7.5.3.

If you want to continue using System 7.5.3, and you do not want to use QuickDraw GX you can experiment with different fonts in various applications. You should

be able to find a font that provides acceptable results.

This article was published in the Information Alley on 28 March 1996.

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Tech Info Library Article Number:19522



Tech Info Library

Macintosh IIVx: Replacing Logic Board, Buzzing Sound (3/96)

Revised: 3/28/96
Security: Everyone

Macintosh IIVx: Replacing Logic Board, Buzzing Sound (3/96)

=====

Article Created: 28 March 1996

TOPIC -----

After installing a new logic board in a Macintosh IIVx, the computer no longer makes the usual startup chime, it buzzes for three seconds. Then with power staying on, no video is displayed. What is wrong?

DISCUSSION -----

You need to install VRAM on the logic board. Once this is done the computer should startup in a normal fashion.

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Tech Info Library Article Number:19523



Tech Info Library

DOS Compatible Card: Open Transport or Classic Network (6/96)

Revised: 6/21/96
Security: Everyone

DOS Compatible Card: Open Transport or Classic Network (6/96)

=====

Article Created: 28 March 1996
Article Reviewed/Updated: 21 June 1996

TOPIC -----

After installing the System 7.5 Update 2.0, I am unable to do networking from the DOS side of my Power Macintosh 6100 DOS Compatible. I have also tried this on an LC 630 DOS Compatible and a Performa 640 DOS Compatible. None of these are able to do networking with Open Transport, but they work properly with Classic networking.

DISCUSSION -----

Apple has released version 1.5 of the DOS Compatibility software and strongly recommends that all owners of previous version of DOS Compatibility cards (except the Macintosh Centris/Quadra 610 DOS Compatibility Card), upgrade to this version of software. This software requires an upgrade to Mac OS 7.5.3 with System 7.5 Update 2.0. With the Power Macintosh 6100, Macintosh LC 630, and Macintosh Performa 640 DOS Compatibility cards, Classic networking must be chosen instead of Open Transport.

- If you have a PCI-based computer, you need DOS Compatibility software 1.5, System 7.5.3, and use Open Transport 1.1. Version 1.5 of the DOS Compatibility Software ships with the PC Compatibility Cards.
- If you have a Non-PCI-based computer (for example, a Power Macintosh 6100 DOS Compatible, LC 630 DOS Compatible, or Performa 640 DOS Compatible), you need DOS Compatibility software 1.5, System 7.5.3, and use Classic networking by selecting this option in the Network Software Selector found in the Apple Extras folder.

Article Change History:

21 Jun 1996 - Complete rewrite of article.
12 Jun 1996 - Added supported computers.

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Tech Info Library Article Number:19524



Tech Info Library

Color StyleWriter 2500: Margins in Manual Incorrect (3/96)

Revised: 3/28/96
Security: Everyone

Color StyleWriter 2500: Margins in Manual Incorrect (3/96)

=====

Article Created: 28 March 1996

TOPIC -----

I noticed that I am getting a smaller top margin using the Color StyleWriter 2500, than what the manual lists.

DISCUSSION -----

The margins listed in the Color StyleWriter 2500 User's Manual are not correct.

Here are the values listed in the manual and the correct values.

Begin_Table

+=====+						
	Margin		Manual		Correct	
+=====+						
	Left		3 mm (0.12-in.)		5 mm (0.2-in.)	
+-----+						
	Right		3 mm (0.12-in.)		5 mm (0.2-in.)	
+-----+						
	Top		3 mm (0.12-in.)		3 mm (0.12-in.)	
+-----+						
	Bottom		8 mm (0.3-in.)		7 mm (0.28-in.)	
+-----+						

End_Table

The specifications listed in article titled "Apple Color StyleWriter 2500: Technical Specifications" in the Technical Information Library are correct, only the User's Manual is incorrect.

The manual will be corrected in future versions.

This article was published in the Information Alley on 28 March 1996.

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Tech Info Library Article Number:19525



Tech Info Library

Newton OS: Versions & Updates (3/97)

Revised: 4/21/97
Security: Everyone

Newton OS: Versions & Updates (3/97)

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Article Created: 25 October 1995
Article Reviewed/Updated: 11 March 1997

TOPIC -----

There are a couple of different versions of the Newton Operating Systems and Updates which can be used based on the MessagePad that one has. I have an original MessagePad. What version should I use?

DISCUSSION -----

Use the following chart to determine which operation system and update you need.

US Newton Operating Systems and Updates
=====

Begin_Table

System Version	Intro Date	At Intro	Without update	Other updates	Other updates	Other updates
Original MessagePad*	8/2/93	1.02	1.00	1.03	1.04	1.05
Original MessagePad*	10/30/93	1.11	1.10	None	None	None
MessagePad 100	3/4/94	1.3 (414059)	1.3 (414059)	1.3 (414313)	1.3** (415333)	None
MessagePad 110	3/4/94	1.3 (344052)	1.20	1.3 (345025)	1.3** (345333)	None
MessagePad	1/30/95	1.3	1.3	1.3**	None	None

120 w/1.3		(444217)	(444217)	(445333)		
-----		-----	-----	-----	-----	-----
MessagePad	11/13/95	2.0	2.0	2.0	2.0**	None
120 w/2.0		(515299)	(515264)	(516205)	(516263)	
-----		-----	-----	-----	-----	-----
MessagePad	04/01/96	2.0	2.0	2.0**	None	None
130 w/2.0		(526060)	(525314)	(526205)		
-----		-----	-----	-----	-----	-----
eMate 300	03/10/97	2.1				
w/2.1		(737041)				
-----		-----	-----	-----	-----	-----
MessagePad	03/20/97	2.1				
2000 w/2.1		(717041)				
-----		-----	-----	-----	-----	-----
*	The original MessagePad was distributed with two distinct					
	ROM versions - 1.0 and 1.1					
**	These are the latest in system updates (December 1996)					
-----		-----	-----	-----	-----	-----

End_Table

For information on using and obtaining the Newton System Updates, see the Tech Info Library article titled "Apple MessagePad: System Update 1.3 Versions and Changes."

This article appeared in the 9 December 1996 issue of the Information Alley.

Article Change History:

11 Mar 1997 - Updated to include the MP2000 and eMate 300.
09 Dec 1996 - Added lastest update information.
17 Apr 1996 - Reclassified article.

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Tech Info Library Article Number:19526



Tech Info Library

Power Macintosh 7200/120: Description (7/96)

Revised: 7/12/96
Security: Everyone

Power Macintosh 7200/120: Description (7/96)

Article Created: 28 March 1996
Article Reviewed/Updated: 12 July 1996

TOPIC -----

This article contains a description of the Power Macintosh 7200/120 series of computers.

DISCUSSION -----

Apple's Power Macintosh 7200/120 combines affordability with high performance to provide an ideal system for small and medium-size businesses, for home offices, and for running productivity applications in any size of organization. Based on high-performance RISC technology, the Power Macintosh 7200/120 computer features a 120-megahertz PowerPC 601 processor. And if your performance needs later increase, this system can be upgraded to a Power Macintosh 7600/120 system, which features video-input capabilities and processor upgradability.

The three industry-standard Peripheral Component Interconnect (PCI) expansion slots on the Power Macintosh 7200/120 let you customize the Power Macintosh 7200/120 computer easily to more precisely meet your needs. You can find many PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 7200/120 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install an Apple PC Compatibility Card in one of the system's PCI slots--and switch instantly between the two computing environments.

Connecting your Power Macintosh 7200/120 computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors. With an optional PC Compatibility Card, you can connect both the card and Power Macintosh to a network simultaneously.

Today, more and more computer users are discovering the wealth of information, and communications resources, and opportunities offered by the Internet. The Power Macintosh 7200/120 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet

access.

So whether you need power and expandability for everyday number crunching, office productivity, or an innovative multimedia project--or want a fast, easy way to get started with the Internet--the Apple Power Macintosh 7200/120 offers the features you need at an affordable price.

Features

=====

High performance

- * 120-MHz PowerPC 601 processor
- * Built-in floating-point processor and 32K cache
- * 256K level 2 cache (standard on some configurations)
- * Built-in graphics acceleration

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * Quadruple-speed or 8x-speed CD-ROM drive, depending on configuration
- * 16-bit stereo audio input and output

Expandability

- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional storage device
- * Up to 256 MB of RAM
- * Up to 4 MB of VRAM

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs most 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

Ordering Information

=====

Power Macintosh 7200/120

..TIL19527-Power_Macintosh_7200-120-Description_7-96_(TA35241).pdf

All configurations also include mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

* Power Macintosh 7200/120 computer with 8 MB, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal quadruple-speed CD-ROM drive.

_ Order No. M4897LL/A

* Power Macintosh 7200/120 computer with 16 MB, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, 256K L2 Cache, and an internal quadruple-speed CD-ROM drive.

- Order No. M4628LL/A

* Power Macintosh 7200/120 computer with 16 MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, 256K L2 Cache, and an 8x-speed CD-ROM drive.

- Order No. M4628LL/B

NOTE: This configuration is available ONLY in the Higher Education channel.

PC Compatibility Card Solutions

* PC Compatibility Card with Pentium 100-MHz processor

- Order No. M4092LL/A

* PC Compatibility Card with 586 100-MHz processor

- Order No. M4091LL/A

Power Macintosh 7600 Logic Board Upgrade Kit*

* Order No. M3842LL/A

* Power Macintosh 7600 logic board with video-input capabilities

* Accessory kit with documentation and a CD-ROM containing system software version 7.5.3

* Requires processor purchase (see Processor Upgrade Card information)

Power Macintosh Processor Upgrade Card

* Order No. M4731LL/A (120 MHz)

* Order No. M4875LL/A (132 MHz)

Power Macintosh GeoPort Telecom Adapter

* Order No. M3127LL/C

Apple QuickDraw 3D Accelerator Card

* Order No. M4333LL/A

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

12 Jul 1996 - Added additional configuration.

19 Apr 1996 - Updated information.

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Tech Info Library Article Number:19527



Tech Info Library

Power Macintosh 7200/120: Technical Specifications (8/96)

Revised: 8/1/96
Security: Everyone

Power Macintosh 7200/120: Technical Specifications (8/96)

=====

Article Created: 28 March 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7200/120 computer.

DISCUSSION -----

Microprocessor

=====

- * 120-MHz PowerPC 601 microprocessor
- * Integrated floating-point unit and 32K cache

Memory

=====

- * 8 MB or 16 MB of RAM, expandable to 256 MB via 4 DIMM sockets
- * 4 MB of ROM
- * Optional 256K level 2 cache

Disk drives

=====

- * Internal 1.2 GB SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal quadruple-speed or 8x-speed CD-ROM drive, depending on configuration
- * Expansion bay for additional 3.5-inch hard disk or other SCSI device

Interfaces

=====

- * Three PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables

- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal/external SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
 - 16-bit audio
 - Up to 44.1-kHz sampling rate
- * DB-15 connector for monitor

Graphics support

=====

- * VRAM-based accelerated graphics
- * 1MB of VRAM, expandable to 4MB
- * 64-bit data path to VRAM (with 2MB of VRAM)
- * Support for display resolutions of up to 1,280x1,024 pixels
- * 24-bit color up to 1,024x768 resolution
- * Refresh rate of up to 75 Hz

Audio System

=====

- * Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- * 16-bit stereo input and output
- * Sample rates of 44.1 and 22.05 kilohertz (kHz)
- * Input line level: 2 volts peak-to-peak nominal, into 6.5-Kilohm (k) impedance
- * Output line level: 2.2 volts peak-to-peak nominal, into 1 k impedance
- * Input through output SNR**: >74 decibels (dB) typical
- * Bandwidth: 10 Hz-19 kHz (+/- 2 dB) at 44.100 kHz sample rate
- * THD+N*: Less than 0.06%; measured 30 Hz-16 kHz with a 2-Vpp sine wave input
- **SNR is signal-to-noise ratio; THD+N is total harmonic distortion plus noise.

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Supports ADB keyboards with numeric keypads
- * Comes with an ADB Mouse II

Electrical requirements and compliance

=====

- * Line voltage: 100 to 240 V AC, RMS single phase
- * Frequency: 50 to 60 Hz, single phase
- * Power: 150 W maximum, not including display
- * EPA Energy Star compliant

ADB power requirements

=====

- * Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- * Height: 6.15 in. (15.6 cm)
- * Width: 14.37 in. (36.5 cm)
- * Depth: 16.93 in. (43.0 cm)
- * Weight: 22 lb. (9.97 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 01 Aug 1996 - Added sound information.
- 12 Jul 1996 - Added additional information.
- 19 Apr 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19528



Tech Info Library

Apple Internet Router 3.0.1 and System 7.5.3 Issue (4/96)

Revised: 4/15/96
Security: Everyone

Apple Internet Router 3.0.1 and System 7.5.3 Issue (4/96)

=====

Article Created: 29 March 1996
Article Reviewed/Updated: 15 April 1996

TOPIC -----

This article describes an issue which appeared after installing the System 7.5 Update 2.0 on a Macintosh computer running the Apple Internet Router (AIR) v3.0.1 software.

DISCUSSION -----

We found the SNMP (Simple Network Management Protocol) component, contained in the Network Management package of the AIR v3.0.1 installer, was causing the issue.

Here is a workaround you can use. As long as you follow the instructions below when installing AIR v3.0.1, it should make no difference if AIR v3.0.1 is installed before or after System 7.5 Update 2.0.

- When installing AIR 3.0.1 always choose Custom install, and only select Basic Connectivity and Half Routing if you need Half Routing.
- During the AIR v3.0.1 installation, you will be asked if you want to replace the Network control panel with the older version in the installer. Choose to keep the newer version of the Network control panel.

NOTE: If you performed an Easy Installation of AIR v3.0.1 after installing System 7.5 Update 2.0, you will need to preform a clean installation of system software to 7.5.3 (clean install System 7.5, then install System 7.5 Update 2.0). This is due to system software being modified during an Easy Install of AIR v3.0.1. Once a clean installation of system software is complete, follow the workaround instructions above.

Article Change History:

15 Apr 1996 - Added note section.

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Tech Info Library Article Number:19530



Tech Info Library

System 7.5 Update 2.0: Installer May Not Use All Disks (4/96)

Revised: 4/9/96
Security: Everyone

System 7.5 Update 2.0: Installer May Not Use All Disks (4/96)

=====

Article Created: 29 March 1996
Article Reviewed/Updated: 9 April 1996

TOPIC -----

While going through the installation procedure for System 7.5 Update 2.0, I noticed that not every disk was required. However, it seems to have installed everything. Why didn't I need all of the disks?

DISCUSSION -----

The System 7.5 Update 2.0 installer may not use all of the disks during installation. This is a normal behavior of the installer, and which disks are used depends on the type of computer and software you have pre-installed and whether you do an Easy or Custom Install.

This article was published in the Information Alley on 9 April 1996.

Article Change History:
09 Apr 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19531



Tech Info Library

Macintosh Computers: Excessive Disk Activity at Startup (5/96)

Revised: 5/2/97
Security: Everyone

Macintosh Computers: Excessive Disk Activity at Startup (5/96)

Article Created: 29 March 1996
Article Reviewed/Updated: 2 May 1997

TOPIC -----

Following a system freeze, why does my Macintosh computer take so long to reach the "Welcome to Macintosh" screen in the startup process?

DISCUSSION -----

In general, the startup process will likely take longer on Macintosh computers with a lot of RAM and hard drive storage space. At startup, both the memory and the integrity of the hard drives are checked. The memory check validates and determines how much memory is present. So, a computer with 256 MB of memory will take somewhat longer to startup than a 16 MB computer. Additionally, the status of the "file system dirty" flag is checked to determine the integrity of the hard drives.

The "file system dirty" flag is set in the file system disk structures when a disk or partition is opened and mounted. This flag indicates that some active disk structures are RAM resident, that files open for output are present, and that data needs to be flushed to the drive when the volume is closed and dismounted. In the normal shutdown process, the Finder flushes all RAM-resident disk structures to the disk, closes and dismounts the volume, and resets the "file system dirty" flag.

The major difference between a normal and abnormal restart (after a system freeze) is the validation of the integrity of the disk file system. If this flag has not been reset, then it is assumed that a proper close and dismount by the Finder did not occur. The state of the file system data structures are in doubt because there may have been open files for output when the crash occurred. At this point, the drive is checked to ensure the integrity of the disk file structures. This process takes longer if you have a larger hard drive and/or have a lot of files on the hard drive. The normal startup process is faster because the volume integrity is assured and no recovery checking is necessary.

All SCSI drives attached to the computer are checked in this manner. For the startup volume, this process happens before "Welcome to Macintosh". For the other volumes, this process happens as the Finder launches. Thus, you are likely to see a further delay, accompanied by intensive disk activity, as the Finder launches.

So, to avoid losing or corrupting files, Apple recommends that you shutdown the computer by selecting Shutdown from the Special or Apple menus.

This article was published in the Information Alley on 5 April 1996.

Article Change History:

09 Apr 1996 - Added keyword.

02 May 1997 - Corrected typographical error.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19533



Tech Info Library

CLW 12/600 PS: Supported Paper Sizes & Margins (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Supported Paper Sizes & Margins (10/96)

Article Created: 29 March 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article provides the supported paper sizes and imageable areas of the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS printers.

DISCUSSION -----

The Color LaserWriter supports printing on US Letter, Legal, A4, and B5 paper sizes. The US version of the Color LaserWriter ships with a 250-sheet US Letter cassette. Legal, A4, and B5 paper sizes can be fed using the included 100 sheet capacity multi-purpose tray. An optional 250-sheet universal cassette tray (M3874G/A) that supports US Letter, Legal, A4, and B5 can be purchased separately. The optional 250-sheet stackable feeder (M3762G/A) includes the universal cassette tray. Full bleed and tabloid printing are not supported by the Color LaserWriter 12/600 PS printer.

The following tables lists the supported paper sizes and their imageable areas when using the LaserWriter 8.3.x drivers. Other paper sizes are not supported due to the design characteristics of the print engine. All of the values are listed in inches.

Begin_Table

+=====+							
Paper Size	Standard Imageable Area			Standard Margins			
	Width	Height	Top	Bottom	Left	Right	
+=====+							
Letter	7.67	10.49	.43	.43	.43	.40	
+-----+							
Legal	6.72	12.50	.75	.75	.89	.89	
+-----+							
A4	7.47	10.84	.42	.43	.40	.39	

B5	6.79	9.62	.32	.19	.19	.19	

Paper	Maximum Imageable Area		Maximum Margins				
Size							
	Width	Height	Top	Bottom	Left	Right	
Letter	8.32	10.14	.32	.19	.19	.19	
Legal	8.32	13.49	.32	.19	.19	.19	
A4	7.89	11.18	.32	.19	.19	.18	
B5	NA	NA	NA	NA	NA	NA	

End_Table

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS to article.

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Tech Info Library Article Number:19534



Tech Info Library

AMTPE: Installation Corrections (3/96)

Revised: 3/29/96
Security: Everyone

AMTPE: Installation Corrections (3/96)

Article Created: 29 March 1996

TOPIC -----

I purchased the Apple Media Tool Programming Environment (AMTPE), and cannot install the product on my hard disk properly. I am following the installation instructions included with the product, but they are somewhat confusing.

DISCUSSION -----

There are a couple of things you need to do that the installation instructions do not cover.

Step 1

Drag the Folder called MPW from the CD-ROM to your hard disk.

On page 2-2 of Getting Started the manual tells you to drag the folder called MPW for AMTPE from the CD-ROM to your Macintosh. However, the folder is named MPW on the CD-ROM, not MPW for AMTPE.

Step 2

Drag the Contents of AMTPE Mac from the CD-ROM to your hard disk.

The folders Key, and Standard and Minimal Engines are in the AMTPE Mac folder. These folders are required later in the installation process.

Step 3 - Power Macintosh Users Only

If you are using a Power Macintosh computer, you need to drag the StdCLibInit from the System Folder Additions folder to your Macintosh System Folder, then restart your computer.

This step is missing from the original documentation.

Manual Error

On page 2-4 under Initializing Your AMTPE Tools, step 3 should say click the Directory button, not click the Select Current Directory button.

Once you get everything right in the MPW folder then it works properly.

This article was published in the Information Alley on 29 March 1996.

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Tech Info Library Article Number:19535



Tech Info Library

System 7.5 Update 2.0: Universal System Folder (9/96)

Revised: 9/11/96
Security: Everyone

System 7.5 Update 2.0: Universal System Folder (9/96)

=====

Article Created: 29 March 1996
Article Reviewed/Updated: 11 September 1996

TOPIC -----

This article contains questions about creating and using the Universal System Folder in System 7.5.3.

Questions Answered in this Article:
=====

- 1) Why would I want to create a universal System Folder?
- 2) How can I create a universal System Folder using the installer included with System 7.5 Update 2.0?
- 3) How much space does the universal System Folder require on a volume? I attempted to install it on a 44 MB removable cartridge, but I didn't have enough room.
- 4) I created a universal System Folder and tried to startup my computer. However, it is locking up as the extensions load at startup. What's going on?
- 5) Why can't I create a universal System Folder using System 7.5.1 or System 7.5.2?
- 6) I noticed that the Power Macintosh 5400/120 computer includes System 7.5.3 Revision 2. Can I install and use the Universal System Folder on this computer?

DISCUSSION -----

- 1) Question: Why would I want to create a universal System Folder?

Answer: Only some users need a universal System Folder. You might want to create a universal System Folder if you

- start up different Macintosh models using removable media
- want to simplify support of multiple users by giving all users the same System Folder
- prefer to start up computers using an external startup disk

If you are responsible for only one computer, you shouldn't need to create a universal System Folder.

2) Question: How can I create a universal System Folder using the installer included with System 7.5 Update 2.0?

Answer: To create a universal System Folder, you must start with System 7.5. The procedure will not work if you start with System 7.5.1 or 7.5.2. (You cannot install System 7.5 on a computer that requires 7.5.2 or greater.)

These steps assume you're not installing the software on your startup drive. A universal System Folder can be created on your startup drive, but you'll be forced to restart after each installation. By installing onto another drive, you can avoid several restarts.

Step 1

Open the System 7.5 Installer (the Installer for version 7.5.0 of the system software).

Step 2

When you see the Installer's welcome screen, click Continue.

Step 3

Choose Custom Install from the pop-up menu in the upper-left corner of the dialog box.

Step 4

Click Switch Disk until the name of the desired destination disk appears.

Step 5

Click the triangle on the left side of the first item in the list.

Step 6

Click the box next to "System for any Macintosh" to put an "X" in it.

Step 7

In the list, click the triangle to the left of Utility Software, then click the box next to AppleScript to put an "X" in it.

If you are creating the universal System Folder on a disk that did not already

have a System Folder on it, skip step 8.

Step 8

If you are creating the universal System Folder on a disk with a System Folder on it, hold down the Command and Shift keys while pressing the K key. Click to select the button labeled Install New System Folder and then click OK.

Step 9

Click Clean Install (or Install, if you skipped step 8) and wait for the installation to finish (inserting disks as needed).

If the destination disk had a System Folder on it, the contents of your old System Folder have been moved to a new folder titled Previous System Folder.

Step 10

Insert the System 7.5 Update 2.0 CD or the first update floppy, disk and open the System 7.5 Update Installer.

Step 11

When you see the Installer's welcome screen, click Continue.

Step 12

Choose Custom Install from the pop-up menu in the upper-left corner of the dialog box.

Step 13

Click Switch Disk until the name of the desired destination disk appears.

Step 14

Click the Universal Update box to put an "X" in it.

If you don't see this option, make sure that you've done the previous steps correctly.

Step 15

Click the Install button and wait for the installation to finish (inserting disks as needed).

3) Question: How much space does the universal System Folder require on a volume? I attempted to install it on a 44 MB removable cartridge, but I didn't have enough room.

Answer: On a 44 MB volume, the universal System Folder will take approximately 36.3 MB. So, you should be able to install it successfully. It is possible that

you selected "System for any Macintosh" and then selected all the other options in the Custom Install window. This may seem logical, but it is not necessary. Be sure to carefully follow the directions for creating the universal System Folder.

4) Question: I created a universal System Folder and tried to start up my computer. However, it is locking up as the extensions load at startup. What's going on?

Answer: The universal System Folder may include items which are not needed for a particular Macintosh computer. These additional items should be inert and have no effect. However, it is possible that you may need to start up with the Space Bar down (to open the Extensions Manager control panel) and disable unused extensions and control panels.

5) Question: Why can't I create a universal System Folder using System 7.5.1 or System 7.5.2?

Answer: To create a universal System Folder, the System 7.5 Update 2.0 installer simply updates an already existing universal System Folder. However, the only previous installer capable of creating a universal System Folder was the System 7.5 installer. Because System 7.5.1 and System 7.5.2 installers are incapable of making a universal System Folder, you must start with a System 7.5 universal System Folder.

6) Question: I know that the Power Macintosh 5400/120 came out after System 7.5 Update 2.0, but I was wondering if I could install and use the Universal System Folder on this computer?

Answer: No, you cannot use the Universal System Folder with the Power Macintosh 5400/120 computer. The Power Macintosh 5400 computer uses a version of the system software that is newer than System 7.5.3 created with System Update 2.0. Additionally, this computer cannot use System 7.5, which is required to make the Universal System Folder (as explained in Question 6).

This article is one of many available through the Apple Fax center. For a complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

11 Sep 1996 - Made minor correction to Step 14.
02 Jul 1996 - Added Fax Doc word
06 Jun 1996 - Added additional question.

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Tech Info Library Article Number:19537



Tech Info Library

System 7.5 Update 2.0: AppleVision Software Version (3/96)

Revised: 3/29/96
Security: Everyone

System 7.5 Update 2.0: AppleVision Software Version (3/96)

=====

Article Created: 29 March 1996

TOPIC -----

I have an AppleVision display, I am confused over which version of the AppleVision software I should be using since I installed the System 7.5 Update 2.0 software.

DISCUSSION -----

If you use AppleVision software, use version 1.0.2 or later. Earlier versions of AppleVision are not compatible with System 7.5 Update 2.0.

If you have a 1710AV monitor and a PCI-based computer, use AppleVision 1.0.4 and the Monitors & Sound control panel.

If you have a 1710AV monitor and a non-PCI-based computer, use AppleVision 1.0.2, the Sound control panel, and the Monitors control panel.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 29 March 1996.

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Tech Info Library Article Number:19538



Tech Info Library

PowerShare and Open Transport 1.1 Incompatible (3/96)

Revised: 3/30/96
Security: Everyone

PowerShare and Open Transport 1.1 Incompatible (3/96)

=====

Article Created: 30 March 1996

TOPIC -----

This article describes an incompatibility issue between Open Transport 1.1 and PowerShare.

DISCUSSION -----

There is an incompatibility between PowerShare and Open Transport 1.1. It has to do with making synchronous versus asynchronous calls, and it is an issue with PowerShare. It is a periodic bug -- things might work for a while but inevitably, the system will hang. Also, there is not an easy fix. The code that makes the Open Transport incompatible calls is spread throughout PowerShare.

In short, PowerShare and Open Transport are not compatible. Apple has identified the problem, however, there is no known date when a fix will be available.

This article was published in the Information Alley on 1 Apr 1996.

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Tech Info Library Article Number:19539



Tech Info Library

PowerShare and System 7.5.3 Incompatible (3/96)

Revised: 3/30/96
Security: Everyone

PowerShare and System 7.5.3 Incompatible (3/96)

=====

Article Created: 30 March 1996

TOPIC -----

Is PowerShare compatible with System 7.5.3?

DISCUSSION -----

PowerShare has not been tested and is not supported with System 7.5.3. In addition, there are known incompatibilities between PowerShare and Open Transport 1.1. Also, there are no benefits to be gained by running a PowerShare server with System 7.5.3.

Therefore Apple strongly recommends that you do not update a PowerShare server to System 7.5.3 with the System 7.5 Update 2.0.

This article was published in the Information Alley on 1 Apr 1996.

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Tech Info Library Article Number:19540



Tech Info Library

AppleShare Print Server and GeoPort Software Issue (3/96)

Revised: 3/30/96
Security: Everyone

AppleShare Print Server and GeoPort Software Issue (3/96)

=====

Article Created: 30 March 1996

TOPIC -----

AppleShare 4.0.2 Print Server appears to have a software conflict with the GeoPort Express Modem software. When I try to capture a LaserWriter printer from my Workgroup Server 8150 with the Express Modem control panel active I get the message, "Having difficulties connecting to the printer."

Is this a known issue? Is there a known workaround?

DISCUSSION -----

This is a known issue, and it has been reported to Apple Engineering. The issue was found to be with the AppleShare Print Server software. A fix for this issue may be in future versions of Print Server software, however, there is no known date when this fix may appear.

You have to choose between having the server run Apple Telecom software or AppleShare Print Server software.

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Tech Info Library Article Number:19541



Tech Info Library

Power Macintosh 7200 PC Compatible: Specifications (10/96)

Revised: 10/28/96
Security: Everyone

Power Macintosh 7200 PC Compatible: Specifications (10/96)

Article Created: 1 April 1996
Article Reviewed/Updated: 28 October 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7200/120 PC Compatible computer.

DISCUSSION -----

Microprocessors & RAM
=====

Power Macintosh

- 120-MHz PowerPC 601 with integrated floating-point unit and 256K level 2 cache
- 8 MB or 16 MB of RAM (depending on configuration), expandable to 256 MB via three DIMM expansion slots (total of 4 DIMM slots)

PC Compatibility Cards

- Pentium 100-MHz with integrated floating-point unit and 256K level 2 cache
- 8 MB of RAM, expandable to 72 MB on Pentium (8 MB on board, one free DIMM slot)

- or -

- 586 Processor 100-MHz with integrated floating-point unit and 128K level 2 cache
- 64 MB on 586 PC Compatibility Card (has one DIMM slot which comes with one 8 MB DIMM installed)

Disk drives
=====

- Built-in 1.4MB Apple SuperDrive floppy disk drive
 - Accepts high-density floppy disks
 - Reads, writes, and formats Mac OS, Windows, and MS-DOS floppy disks
 - Supports Distributed Media Format (DMF) for floppy disks
- Internal 1.2 GB hard disk
- Internal AppleCD 600i quadruple-speed CD-ROM drive or 8x-speed (depending on configuration)
- Expansion bay for additional 3.5-inch hard disk or other peripheral

Video support

=====

- Features built-in support for one or two displays
- Works with all current Apple displays as well as most third-party VGA and SVGA displays (third-party displays may require separate cable adapter)
- 1 MB VRAM, expandable to 4 MB (for Mac OS)
- 1 MB DRAM (for MS-DOS and Windows)
- Display Resolution with 1 MB Video DRAM:

640x480	16.7 million colors
800x600	65,536 colors
1024x768	256 colors

Interfaces

=====

- Three PCI expansion slots (one dedicated to PC Compatibility Card) compatible with PCI 2.0-compliant cards for Mac OS (Note: These slots are not NuBus compatible.)
- Internal/external SCSI bus for connecting up to six external devices
- Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- 10Base-T and AAUI-15 Ethernet connectors
- Two PC-compatible serial ports routed under software control to text file or to Macintosh RS-422 serial ports
- Serial port for AppleTalk networking (for Mac OS)
- PC game port (DOS and Windows environments)

Networking

=====

- Support for Novell NetWare SPX/IPX, TCP/IP, and NETBEUI protocols in MS-DOS and Windows environments using the built-in Ethernet connector and ODI and NDIS 2.0 drivers (network client software not included)

Sound

=====

- Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- 16-bit stereo input and output
- Sample rates of 44.1 and 22.05 kilohertz (kHz)
- Input line level: 2 volts peak-to-peak nominal, into 6.5-Kilohm (k) impedance
- Output line level: 2.2 volts peak-to-peak nominal, into 1 k impedance
- Input through output SNR*: >74 decibels (dB) typical

- Bandwidth: 10 Hz-19 kHz (+/- 2 dB) at 44.100 kHz sample rate
- THD+N*: Less than 0.06%; measured 30 Hz-16 kHz with a 2-Vpp sine wave input
- Mini jacks for stereo audio input and output with 16-bit audio
- Sound Blaster-16-compatible support (for DOS and Windows environment)
- Built-in speaker

*SNR is signal-to-noise ratio; THD+N is total harmonic distortion plus noise.

Keyboard and mouse

=====

- Supports ADB keyboards with numeric keypads
- Includes ADB Mouse II

Clock/calendar

=====

- Custom integrated circuit with long-life battery

Disability access

=====

• CloseView, Easy Access, and ability to substitute visual cue for beep included with Mac OS. These built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Electrical requirements

=====

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 210 W maximum, not including monitor power

ADB power requirements

=====

- Maximum current draw for all ADB devices: 500 mA
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- Height: 6.2 in. (15.6 cm)
- Width: 14.4 in. (36.5 cm)
- Depth: 16.9 in. (43.0 cm)
- Weight: 22 lb. (9.97 kg) (varies based on internal devices installed)

Environmental requirements

=====

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

28 Oct 1996 - Corrected info.

22 Oct 1996 - Added additional configuration options.

01 Aug 1996 - Added sound info.

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Tech Info Library Article Number:19542



Tech Info Library

Power Macintosh 7200 PC Compatible: Description (3/97)

Revised: 3/5/97
Security: Everyone

Power Macintosh 7200 PC Compatible: Description (3/97)

Article Created: 1 April 1996
Article Reviewed/Updated: 5 March 1997

TOPIC -----

This article contains a description of the Power Macintosh 7200/120 PC Compatible computer.

DISCUSSION -----

Apple's most versatile personal computers, the Power Macintosh 7200/120 PC Compatible, allows you to run more software than any other mainstream personal computer on the market.

Whether you're in business or education, these Power Macintosh computers not only is the easiest to learn and use, but also gives you the ability to run your favorite Macintosh, MS-DOS, and Windows software. They also lets you switch instantly between these operating environments with just a keystroke.

Offering a breakthrough in power and compatibility, the Power Macintosh 7200/120 PC Compatible features dual microprocessors. The PowerPC provides industry-leading performance for Mac OS applications, while the Pentium (or 586) processor delivers strong performance for MS-DOS and Windows applications.

To help you get even more work done, the Power Macintosh 7200/120 PC Compatible supports two displays without the addition of a video card, so you can see your work in both environments. When using one display, the computer allows you to switch instantly from the Mac OS to MS-DOS and Windows and vice versa, so you can use your favorite Mac OS application while running an MS-DOS or Windows application in the background.

Designed to fit into your environment, the Power Macintosh 7200/120 PC Compatible support the peripherals and network resources you already have. So you can use your Macintosh-compatible printers, modems, and displays with your MS-DOS and Windows applications. And you can connect to any mainstream network from either the Mac OS or MS-DOS and Windows.

The Power Macintosh 7200/120 PC Compatibles also support Sound Blaster-16 compatible multimedia applications, and the internal quadruple-speed or 8x-speed CD-ROM drive runs thousands of Mac OS, MS-DOS, and Windows CD-ROM titles.

The Power Macintosh 7200/120 PC Compatible is easy to expand. It comes with three Peripheral Component Interconnect (PCI) slots (one dedicated to the Pentium or 586 PC Compatibility Card) and nine built-in ports, including an external PC game port—so you can tailor this system to fit your needs.

If you're torn between choosing Macintosh or a Windows-based PC, Apple has made your choice easy: the Power Macintosh 7200/120.

=====

Features

=====

High Performance: Microprocessors & RAM

=====

Power Macintosh

- 120-MHz PowerPC 601 with integrated floating-point unit and 256K level 2 cache
- 8 or 16 MB of RAM (depending on configuration) expandable to 256 MB via three DIMM expansion slots (total of 4 DIMM slots) for Macintosh operating system (Mac OS)

PC Compatibility Cards

- Pentium 100-MHz with integrated floating-point unit and 256K level 2 cache
- 8 MB of RAM, expandable to 72 MB on Pentium (8 MB on board, one free DIMM slot) for MS-DOS and Windows

- or -

- 586 Processor 100-MHz with integrated floating-point unit and 128K level 2 cache
- 64 MB on 586 PC Compatibility Card (has one DIMM slot which comes with one 8 MB DIMM installed) for MS-DOS and Windows

Compatibility

- Runs MS-DOS and Windows applications
- Includes pre-installed Microsoft MS-DOS 6.22
- Compatible with Windows 3.1, Windows for Workgroups 3.11 (not compatible with Windows NT or OS/2)
- Supports single-keystroke switching between Mac OS, MS-DOS, and Windows environments without rebooting
- Opens MS-DOS or Windows files in Mac OS using Macintosh PC Exchange
- Supports copy and paste between Mac OS and Windows
- Includes network support for Netware SPX/IPX, TCP/IP, and NETBEUI protocols
- Prints from MS-DOS and Windows with a Macintosh compatible printer (PostScript

printer recommended for best performance)

- Includes PC game port
- Supports Sound Blaster-16

Flexible display options

- Features built-in support for one or two displays
- Works with all current Apple displays as well as with most third-party VGA and SVGA displays
- 1 MB VRAM, expandable to 4 MB (for Mac OS)
- 1 MB DRAM (for MS-DOS and Windows)
- Supports ATI Mach 64 video in Windows environment

Expandability

- Includes three PCI expansion slots (one dedicated to PC Compatibility Card)
- Includes SCSI connector for up to seven external SCSI peripherals
- Comes with nine built-in ports to support a wide range of peripherals
- Provides expansion bay for additional 3.5-inch storage device

Ordering Information

=====

Power Macintosh 7200/120 PC Compatible

- Order No. M4729LL/A
- PowerPC 601 processor with 8 MB of RAM, 256K level 2 cache to run the Mac OS
- PC Compatibility Card (with Pentium 100-MHz processor, 8MB of RAM, and 256K level 2 cache) to run MS-DOS and Windows
- 1.2 GB hard disk drive
- Internal quad-speed AppleCD 600i CD-ROM drive
- 1.4MB Apple SuperDrive floppy disk drive, and support for Distributed Media Format (DMF) for floppy disks
- System software version 7.5.3
- MS-DOS version 6.22
- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Power Macintosh 7200/120 PC Compatible

- Order No. M4898LL/A
- PowerPC 601 processor, 8MB of RAM, 256K level 2 cache
- PC Compatibility Card (with 586 100-MHz processor, 8 MB of RAM, and 128K level 2 cache)
- 1.2 GB hard disk drive
- Internal quad-speed AppleCD 600i CD-ROM drive
- 1.4 MB Apple SuperDrive floppy disk drive, and support for DMF for floppy disks
- System software version 7.5.3
- MS-DOS version 6.22
- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Power Macintosh 7200/120 PC Compatible

- Order No. M5443LL/A
- PowerPC 601 processor, 16 MB of RAM, 256K level 2 cache
- PC Compatibility Card (with Pentium 100-MHz processor, 8 MB of RAM, and 128K level 2 cache)
- 1.2 GB hard disk drive
- Internal 8x-speed CD-ROM drive
- 1.4 MB Apple SuperDrive floppy disk drive, and support for DMF for floppy disks
- System software version 7.5.3
- MS-DOS version 6.22
- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Power Macintosh 7600 Logic Board Upgrade Kit*

- Order No. M3842LL/A
- Power Macintosh 7600 logic board with video-input capabilities
- Accessory kit with documentation and a CD-ROM containing system software version 7.5.3

* Requires processor purchase (see Processor Upgrade Card information)

Power Macintosh Processor Upgrade Card

- Order No. M4731LL/A (120 MHz)
- Order No. M4875LL/A (132 MHz)

Article Change History:

05 Mar 1997 - Corrected CPU on M5443LL/A.
28 Oct 1996 - Corrected information.
22 Oct 1996 - Added additional configurations.

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Tech Info Library Article Number:19543



Tech Info Library

Power Macintosh 7600 Series: Description (2/97)

Revised: 2/6/97
Security: Everyone

Power Macintosh 7600 Series: Description (2/97)

Article Created: 1 April 1996
Article Reviewed/Updated: 6 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 7600 series computers.

DISCUSSION -----

If you need a computer that offers increased performance and expandability for your business, regardless of its size, the Power Macintosh 7600/120 and 7600/132 deliver. With a 120- or 132-megahertz PowerPC 604 RISC processor that you can easily upgrade to an even faster processor, the Power Macintosh 7600/120 and 7600/132 give you all the advantages of PowerPC technology now--with plenty of room to grow later. Built-in video-input capability, high-resolution graphics, and CD-quality stereo sound add vitality to everyday business projects. And because the Power Macintosh 7600/120 and 7600/132 optimize the transfer of video data, they are ideal systems for videoconferencing.

The three industry-standard Peripheral Component Interconnect (PCI) expansion slots on the Power Macintosh 7600/120 and 7600/132 let you customize the computer easily to more precisely meet your needs. You can find many PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 7600/120 or 7600/132 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install an Apple PC Compatibility Card in one of the system's PCI slots--and switch instantly between the two computing environments.

Connecting your Power Macintosh 7600/120 or 7600/132 computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors. With an optional PC Compatibility Card, you can connect both the card and Power Macintosh to a network simultaneously.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The

Power Macintosh 7600/120 and 7600/132 make it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access.

Whether you are selecting computers for a large corporation or a single-person home office, the Power Macintosh 7600/120 and 7600/132 systems offer PowerPC performance and PCI expandability giving you the versatility you need for professional computing.

Features

=====

High performance

- * 120-MHz PowerPC 604 processor, user-upgradable to faster processor when available (up to 250 MHz)
- * Built-in floating-point processor and 32K cache
- * 256K level 2 cache
- * Built in graphic acceleration

Communications and multimedia

- * 64-bit VRAM graphics subsystem
- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * Quadruple-speed or 8x-speed CD-ROM drive, depending on configuration
- * 16-bit stereo audio input and output
- * 24-bit composite and S-video input
- * Support for speech-recognition and text-to-speech capabilities
- * Optimized for QuickTime Conferencing software

Expandability

- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional hard disk drive

Compatibility

- * Includes 10BASE-T and AUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs most 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

Ordering

=====

Power Macintosh 7600/120

* Power Macintosh 7600/120 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

- Order No. M4631LL/A

Power Macintosh 7600/132

* Power Macintosh 7600/132 computer with 16MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 1.2GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

- Order No. M5346LL/A

NOTE: This configuration is available ONLY in the Higher Education channel.

PC Compatibility Card Solutions

* Order No. M4092LL/A

- PC Compatibility Card with Pentium 100-MHz processor

* Order No. M4091LL/A

- PC Compatibility Card with 586 100-MHz processor

Power Macintosh Processor Upgrade Card

* Order No. M4875LL/A (132 MHz)

Power Macintosh GeoPort Telecom Adapter

* Order No. M3127LL/C

Apple QuickDraw 3D Accelerator Card

* Order No. M4333LL/A

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

06 Feb 1997 - Corrected reference to different 7600 model.

19 Sep 1996 - Updated processor support information.

12 Jul 1996 - Added additional configuration.

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Tech Info Library Article Number:19544



Tech Info Library

Power Macintosh 7600 Series: Technical Specifications (10/96)

Revised: 2/17/97
Security: Everyone

Power Macintosh 7600 Series: Technical Specifications (10/96)

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Article Created: 1 April 1996
Article Reviewed/Updated: 15 October 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7600 series computers.

DISCUSSION -----

Upgradable microprocessor
=====

- * PowerPC 604 microprocessor running at 120 or 132 MHz, upgradeable to a higher-speed processor when available (up to 250 MHz)
- * Integrated floating-point unit and 32K cache
- * High-speed system bus (up to 50 MHz)

Memory
=====

- * 16 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- * 4 MB of ROM
- * 256K level 2 cache

Disk drives
=====

- * Internal 1.2GB SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal quadruple-speed or 8x-speed CD-ROM drive, depending on configuration
- * Expansion bay for additional 3.5-inch hard disk

Interfaces
=====

- * Three PCI expansion slots compatible with PCI 2.0-compliant cards

- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10 MB/s)
- * External SCSI bus (up to 5 MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * RCA phono jacks for line-level stereo audio input and output
- * Mini jacks for stereo audio input and output
- * All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- * DB-15 connector for monitor
- * Composite connectors (RCA phono jacks) for composite video input
- * S-video input connector
- * Internal digital audio/video (DAV) connector for video compression/decompression cards

Video Input

=====

- * 24-bit video input
- * Real-time video playthrough of up to 640 by 480 pixels with NTSC; 768x576 pixels with PAL and SECAM
- * Up to 320x240-pixel capture up to 15 frames per second with NTSC
- * Maximum capture size of 640x480 pixels with NTSC

Audio System

- * Custom sound circuitry, including stereo generator (digital-to-analog converter, or DAC)—capable of driving stereo miniplug headphones or audio equipment—and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound
- * 16-bit stereo input and output
- * Sample rates of 44.1 and 22.05 kilohertz (kHz)
- * Input line level: 2 volts peak-to-peak nominal, into 6.5-Kilohm (k) impedance
- * Output line level: 2.2 volts peak-to-peak nominal, into 1 k impedance
- * Input through output SNR**: >74 decibels (dB) typical
- * Bandwidth: 10 Hz-19 kHz (+/- 2 dB) at 44.100 kHz sample rate
- * THD+N**: Less than 0.06%; measured 30 Hz-16 kHz with a 2-Vpp sine wave input

**SNR is signal-to-noise ratio; THD+N is total harmonic distortion plus noise.

Graphics support

=====

- * 2 MB of VRAM, expandable to 4 MB
- * Fast 64-bit data path to VRAM
- * Support for display resolutions of up to 1,280x1,024 pixels
- * 24-bit color up to 1,152x870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony (Requires GeoPort Telecom Adapter)

=====

- * 14.4-Kbit/s modem support
- * V.17 fax support

- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Supports ADB keyboards with numeric keypads
- * Comes with an ADB Mouse II

Electrical requirements and compliance

=====

- * Line voltage: 100 to 240 V AC, RMS single phase
- * Frequency: 50 to 60 Hz, single phase
- * Power: 150 W maximum, not including display

ADB power requirements

=====

- * Maximum current draw for all devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- * Height: 6.15 in. (15.6 cm)
- * Width: 14.37 in. (36.5 cm)
- * Depth: 16.93 in. (43.0 cm)
- * Weight: 22 lb. (9.97 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 15 Oct 1996 - Added additional processor speed.
- 19 Sep 1996 - Updated processor card support speed.
- 17 Sep 1996 - Updated information.

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Tech Info Library Article Number:19545



Tech Info Library

Power Macintosh 8500/132 & 8500/150: Description (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh 8500/132 & 8500/150: Description (9/96)

=====

Article Created: 1 April 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains a description of the Power Macintosh 8500/132 and 8500/150 series computers.

IMPORTANT: Another article in the Tech Info Library title, "Power Macintosh 8500/150 & 8500/180: Description" contains information about the latest 8500/150 configuration.

DISCUSSION -----

If your profession demands a high-performance, expandable computer that can handle any media as easily as text, opt for a Power Macintosh 8500 series system. Depending on your current budget and need for power, you can choose the Power Macintosh 8500/132 or the 8500/150, which feature a 132- or a 150-megahertz PowerPC 604 RISC processor, respectively. Both high-performance systems make an ideal choice for in-house publishing, media authoring, and technical applications--and because they're processor upgradable, they protect your investment for the future.

Built-in near-broadcast-quality video-input/output capabilities, high-resolution graphics, and CD-quality stereo sound add vitality to professional projects and--with Apple's QuickTime software--make media authoring easy.

You can also customize these computers easily to more precisely meet your needs, through their three industry-standard Peripheral Component Interconnect (PCI) expansion slots. You can find many PCI cards for a variety of uses, including video compression, video production, and high-speed networking. And if you want to use your Power Macintosh 8500 series computer to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install an Apple PC Compatibility Card in one of the system's PCI slots--and switch instantly between the two computing environments.

Connecting your Power Macintosh 8500/132 or 8500/150 computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors. With an optional PC Compatibility Card, you can connect both the card and Power Macintosh to a network simultaneously.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. Power Macintosh 8500 systems make it easy to get involved in this rapidly expanding community, because they come with all of the software you need for easy Internet access.

The Power Macintosh 8500/132 and 8500/150: exceptional performance for handling any media as easily as text to enhance your creativity.

Features

=====

High performance

- * 132- or 150-MHz PowerPC 604 processor, user-upgradable to a faster processor when available (up to 250 MHz)
- * Built-in floating-point processor and 32K cache
- * 256K level 2 cache
- * Built-in graphics acceleration

Communications and multimedia

- * 64-bit VRAM graphics subsystem
- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * Quadruple-speed CD-ROM drive.
- * 16-bit stereo audio input and output
- * 24-bit composite and S-video input and output
- * Support for speech-recognition and text-to-speech capabilities
- * Optimized for QuickTime Conferencing software

Expandability

- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional hard disk drive

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

Ordering Information

=====

All configurations include mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 8500/132

Power Macintosh 8500/132 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone

- * Order No. M4889LL/A

Power Macintosh 8500/150

Power Macintosh 8500/150 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone

- * Order No. M4890LL/A

PC Compatibility Card Solutions

- * Order No. M4092LL/A
 - PC Compatibility Card with Pentium 100-MHz processor
- * Order No. M4091LL/A
 - PC Compatibility Card with 586 100-MHz processor

Power Macintosh GeoPort Telecom Adapter

- * Order No. M3127LL/C

Apple QuickDraw 3D Accelerator Card

- * Order No. M4333LL/A

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

- 19 Sep 1996 - Added info about other 8500/150 article.
- 12 Jul 1996 - Updated information.
- 19 Apr 1996 - Updated information.

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Tech Info Library

Power Macintosh 8500/132 & 8500/150: Specifications (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh 8500/132 & 8500/150: Specifications (9/96)

Article Created: 1 April 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains the technical specifications of the Power Macintosh 8500/132 and 8500/150 series computers.

IMPORTANT: Another article in the Tech Info Library title, "Power Macintosh 8500/150 & 8500/180: Specifications" contains information about the latest 8500/150 configuration.

DISCUSSION -----

Upgradable microprocessor

=====

- PowerPC 604 microprocessor running at 132 MHz or 150 MHz, upgradable to a higher-speed processor when available (up to 250 MHz)
- Integrated floating-point unit, 32K cache, and three integer units
- High-speed system bus (up to 50 MHz)

Memory

=====

- 16 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- 4 MB of ROM
- 256K level 2 cache

Disk drives

=====

- Internal 1.2 GB or 2 GB high-performance SCSI hard disk
- Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4 MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal quadruple-speed
- Expansion bay for additional 3.5-inch hard disk

Interfaces

=====

- Three PCI expansion slots compatible with PCI 2.0-compliant cards
- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- Internal Fast SCSI bus (up to 10 MB/s)
- External SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- RCA phono jacks for line-level stereo audio input and output
- Mini jacks for stereo audio input and output
- All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- DB-15 connector for monitor
- Composite connectors (RCA phono jacks) for composite video input and output
- S-video input and output connectors
- Internal digital audio/video (DAV) connector for video compression/decompression cards

Video input/output subsystem

=====

- 24-bit video input
 - Real-time video playthrough of up to 640x480 pixels with NTSC; 768x576 pixels with PAL and SECAM
 - Up to 320x240-pixel capture up to 25 frames per second with NTSC (with 2 GB drive)
 - Maximum capture size of 640x480 pixels with NTSC
- 24-bit video output
 - Support for NTSC and PAL
 - Convolution for flicker reduction at all bit depths

Graphics support

=====

- 2 MB of VRAM, expandable to 4 MB
- Fast 64-bit data path to VRAM
- Support for display resolutions of up to 1,280x1,024 pixels
- 24-bit color up to 1,152x870-pixel resolution
- Refresh rate of up to 75 Hz

GeoPort telephony (Requires GeoPort Telecom Adapter)

=====

- 14.4-Kbit/s modem support
- V.17 fax support
- GeoPort Fax and GeoPort Telephony software included
- Speakerphone and answering-machine capability

Clock/calendar

=====

- Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

Electrical requirements and compliance

=====

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

ADB power requirements

=====

- Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- Height: 14 in. (35.6 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)
- Weight: 25 lb. (11.3 kg)

Environmental requirements

=====

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 19 Sep 1996 - Updated processor card support.
- 12 Jul 1996 - Added additional informatin.
- 19 Apr 1996 - Updated information

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19547



Tech Info Library

Power Macintosh 9500/150: Description (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh 9500/150: Description (9/96)

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Article Created: 1 April 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains a description of the Power Macintosh 9500/150 computer.

DISCUSSION -----

The Power Macintosh 9500/150 computer is the top of the line in speed, performance, expandability, and upgradability, which is tremendous news for publishers, engineers, and multi-media professionals. With a 150-megahertz PowerPC 604 processor, this system provides the power you need today--and because it's processor upgradable, it protects your investment while offering room to grow.

With six industry-standard Peripheral Component Interconnect (PCI) expansion slots, this is also the most customizable, expandable Macintosh computer ever. You can find many PCI cards for a variety of uses, such as videoconferencing, video production, and high-speed networking. And if you want to use your Power Macintosh 9500/150 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install an Apple PC Compatibility Card in one of the system's PCI slots--and switch instantly between the two computing environments.

With the accelerated graphics card installed--and most configurations include one--the Power Macintosh 9500/150 supports all Apple and most third-party displays, including monochrome, color, VGA, and SVGA displays. For example, you can use your system to view up to 16.7 million colors on Apple color displays of up to 17 inches, without any additional VRAM.*

Connecting your Power Macintosh 9500/150 computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors. With an optional PC Compatibility Card, you can connect both the card and Power Macintosh to a network simultaneously.

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Today, more and more computer users are discovering the wealth of information, communications resources, and opportunities offered by the Internet. The Power Macintosh 9500/150 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access.

So whether you're involved in publishing, engineering, or multi-media--or simply want the most powerful, expandable Macintosh computer ever--the Power Macintosh 9500/150 is designed to meet your needs.

Features

=====

High performance

- 150-MHz PowerPC 604 processor, user-upgradable to faster processor when available (up to 250 MHz)
- Built-in floating-point processor and 32K cache
- 512K level 2 cache

Communications and multimedia

- Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- Quadruple-speed CD-ROM drive
- 16-bit stereo audio input and output
- Support for speech-recognition and text-to-speech capabilities

Expandability

- 16 MB or 32 MB of RAM expandable to 768 MB
- 2 MB of VRAM expandable to 4 MB
- Six industry-standard PCI expansion slots
- Dual-channel SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- Two open internal expansion bays for additional hard disk drives or other SCSI devices

Compatibility

- Includes 10BASE-T and AUI Ethernet connectors
- Supports Open Transport networking software (TCP/IP and AppleTalk)
- Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- Comes with all of the software required for Internet access

System 7.5 software

- Makes working with different applications consistent, so they're easier to learn and use
- Allows easy customization of your Macintosh to reflect the way you work
- Provides active assistance in learning new features with Apple Guide

Ordering Information

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Power Macintosh 9500/150

- Power Macintosh 9500/150 computer with 16 MB or 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal quadruple-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

PC Compatibility Card Solutions

- Order No. M4092LL/A
 - PC Compatibility Card with Pentium 100-MHz processor
- Order No. M4091LL/A
 - PC Compatibility Card with 586 100-MHz processor

Power Macintosh GeoPort Telecom Adapter

- Order No. M3127LL/C

Apple QuickDraw 3D Accelerator Card

- Order No. M4333LL/A

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

19 Sep 1996 - Updated speed of processor card support.
19 Apr 1996 - Updated information.

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Tech Info Library Article Number:19548



Tech Info Library

Power Macintosh 9500/150: Technical Specifications (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh 9500/150: Technical Specifications (9/96)

Article Created: 1 April 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 9500/150 computer.

DISCUSSION -----

Upgradable microprocessor

- PowerPC 604 microprocessor running at 150 MHz, upgradable to a higher-speed processor when available (up to 250 MHz)
- Integrated floating-point unit and 32K cache
- High-speed system bus (up to 50 MHz)

Memory

- 16 MB or 32 MB of RAM, expandable to 768 MB via 12 DIMM sockets
- 4 MB of ROM
- 512K level 2 cache

Disk drives

- Internal 2 GB high-performance SCSI hard disk
- Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal AppleCD 600i quadruple-speed (4X) CD-ROM drive
- One open expansion bay for additional 3.5-inch hard disks

Interfaces

- Six PCI expansion slots compatible with PCI 2.0-compliant cards

- Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- Internal Fast SCSI bus (up to 10 MB/s)
- External SCSI bus (up to 5 MB/s)
- Apple Desktop Bus (ADB) expansion port
- 16-bit stereo sound input and output ports
- DB-15 connector for monitor (on accelerated graphics card, if included)

Graphics support

=====

- 2 MB of VRAM, expandable to 4 MB
- Support for display resolutions of up to 1,280x1,024 pixels
- 24-bit color up to 1,152x870-pixel resolution
- Refresh rate of up to 75 Hz
- Third-party displays, including VGA and SVGA monitors

Clock/calendar

=====

- Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- Supports ADB keyboards with numeric keypads
- Comes with an ADB Mouse II

Electrical requirements and compliance

=====

- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

ADB power requirements

=====

- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA
- Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- Height: 16.9 in. (43.0 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)
- Weight: 28 lb. (12.7 kg)

Environmental requirements

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 19 Sep 1996 - Updated processor card support.
- 18 Jul 1996 - Changed number of open bays to one.
- 19 Apr 1996 - Updated information.

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Tech Info Library Article Number:19549



Tech Info Library

Apple Color OneScanner 600/27: Terminator isn't required (4/96)

Revised: 4/17/96
Security: Everyone

Apple Color OneScanner 600/27: Terminator isn't required (4/96)

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Article Created: 1 April 1996
Article Reviewed/Updated: 17 April 1996

TOPIC -----

This article provides Questions and Answers about SCSI termination on the Apple Color OneScanner 600/27.

DISCUSSION -----

Question:
Is a SCSI terminator required on the Apple Color OneScanner 600/27?

Answer:
No. The Apple Color OneScanner 600/27 includes built-in SCSI termination, so external SCSI termination is not required. However, there is an option to turn SCSI termination off.

Question:
How do I set the SCSI ID and termination on the Color OneScanner 600/27?

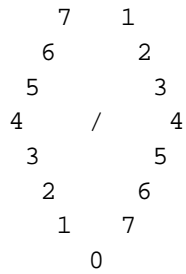
Answer:
SCSI termination is determined by the SCSI ID Settings used. The default setting on the SCSI ID selector is 2-termination on.

Below is a rough diagram of the SCSI ID selector switch. This is located in between the two SCSI ports on the back of the Color OneScanner 600/27. The black numbers on the 0 side indicate that the termination is "OFF". The red numbers on the "1" side indicate that the termination is on.

Begin_Graphic

0 1

0



End_Graphic

There is a dial in the middle that you use to select the number and termination setting. Please make sure that the Scanner and computer are turned off when you change the setting.

Question:

If the termination is built in, how do I add another SCSI device to the SCSI chain?

Answer:

If the OneScanner is the only SCSI device, or the last device on the SCSI chain, set the termination to on. If the OneScanner is going to be used in the middle of the chain, the termination should be set to off, and a SCSI terminator should be used at the end of the SCSI chain.

IMPORTANT:

Do not assign numbers 0 or 7 to the OneScanner. The default SCSI address of the internal hard disk is 0, and the default SCSI address of the Macintosh computer is 7. If you have other SCSI devices, make sure you use a number that is not assigned to any other SCSI device. Each SCSI address must be unique. SCSI ID number 3 is reserved for internal CD drives.

Article Change History:

17 Apr 1996 - Added 0 and 1 to the diagram.

08 Apr 1996 - Added More detailed information on SCSI connector.

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Tech Info Library Article Number:19550



Tech Info Library

LaserWriters: Driver Availability for Windows NT 3.5.1 (3/97)

Revised: 4/21/97
Security: Everyone

LaserWriters: Driver Availability for Windows NT 3.5.1 (3/97)

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Article Created: 1 April 1996
Article Reviewed/Updated: 25 March 1997

TOPIC -----

Are there any Apple LaserWriter printer drivers available for Windows NT 3.51?

DISCUSSION -----

The drivers in the following list are included in Windows NT 3.51 and are supported by Microsoft.

LaserWriter
LaserWriter Plus
LaserWriter 16/600
LaserWriter Pro 600
LaserWriter Pro 630
LaserWriter Pro 810
LaserWriter Select 360
LaserWriter IINT
LaserWriter IINTX
LaserWriter IIIf
LaserWriter IIg
Personal LaserWriter NTR

Apple provides Windows NT printer drivers for the following LaserWriter printers:

Color LaserWriter 12/600 PS
Color LaserWriter 12/660 PS
LaserWriter 16/600 PS
LaserWriter 12/640 PS

For more information about driver availability with Windows NT 4.0, please refer to the Tech Info Library article titled, "LaserWriters: Driver Availability for

Windows NT 4.0."

Microsoft wrote the AppleTalk stack for Windows NT, and they support network printing to these printers (not Apple). If you are using Windows NT for network printing, you should be aware there are problems with the Windows NT AppleTalk stack prior to version 3.5. Apple does support parallel printing on Windows NT.

Article Change History:

25 Mar 1997 - Edited for technical accuracy.

24 Feb 1997 - Added Windows NT 4.0 information.

24 Jan 1997 - Added Color LW 12/660.

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Tech Info Library Article Number:19551



Tech Info Library

Windows LaserWriter v3.0.4 Driver: Wrong ReadMe file (4/96)

Revised: 4/1/96
Security: Everyone

Windows LaserWriter v3.0.4 Driver: Wrong ReadMe file (4/96)

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Article Created: 1 April 1996

TOPIC -----

I installed the LaserWriter Driver for Windows 3.1 v.3.0.4, and the Read Me file in the Apple LaserWriter Software program group is for Windows 95.

DISCUSSION -----

The installer incorrectly installs the Laserwriter for Windows 95 readme.txt onto your system. The correct ReadMe is found on the disk and within the archive, but the installer uses a hidden ReadMe file that could not be removed.

Please refer to the ReadMe file posted on the Apple Software Updates sections or the README.TXT file contained within the posted software.

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Tech Info Library Article Number:19552



Tech Info Library

PowerTalk 1.2.3 & Sys 7.5 Update 2.0: Install Questions (3/96)

Revised: 4/1/96
Security: Everyone

PowerTalk 1.2.3 & Sys 7.5 Update 2.0: Install Questions (3/96)

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Article Created: 1 April 1996

TOPIC -----

I have a few questions regarding PowerTalk 1.2.3 and System 7.5 Update 2.0.

1) Question: Are there any reasons for users not to use their old PowerTalk Setup Preferences with the old keychain information? Assuming these preference are not corrupted, is this an OK to do?

2) Question: Are there any issues with the MailLink PowerTalk gateways with System 7.5 Update 2.0 and PowerTalk 1.2.3?

3) Question: Will Direct Dialup be recognizable as a Custom Install option using the System 7.5 Update 2.0 CD-ROM disc PowerTalk Installer, or will it be part of the Easy Install? Also will it update Direct Dialup if present, and how will users add Direct Dialup if they haven't used it before?

DISCUSSION -----

1) Answer: If you are a current PowerTalk user, you should run System 7.5 Update 2.0 and then install PowerTalk 1.2.3. Although PowerTalk may be functional after the update but before installing PowerTalk 1.2.3, the tested and recommended configuration is to update to PowerTalk 1.2.3. This presents one small problem. The PowerTalk 1.2.3 software is posted online and is included on the System 7.5 Update 2.0 CD-ROM disc but it is not included as part of the floppy disk set. So if you download System 7.5 Update 2.0 you should also download PowerTalk 1.2.3.

This procedure will preserve all existing PowerTalk settings, aliases, passwords, and so on. You should not have to touch any of the preferences files.

2) Answer: The gateways were tested for compatibility with System 7.5 Update 2.0. They were tested extensively for the System 7.5.3 release.

3) Answer: Direct Dialup and the other gateways are all manually installed,

therefore the updates must also be manually installed. Each of the Direct Dialup or gateway installers can be used to install the software for the first time or update the existing one.

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Tech Info Library Article Number:19554



Tech Info Library

AppleDesign Powered Speakers: Adding a Subwoofer (4/96)

Revised: 4/1/96
Security: Everyone

AppleDesign Powered Speakers: Adding a Subwoofer (4/96)

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Article Created: 1 April 1996

TOPIC -----

Certain versions of the AppleDesign Powered Speakers have a jack on them for connecting a subwoofer. What are the requirements for connecting a subwoofer?

DISCUSSION -----

The subwoofer output on the AppleDesign Powered Speakers can reach levels of up to 2 Volts peak-to-peak. The subwoofer must handle an input signal that can reach this 2 Volt peak-to-peak level, or the subwoofer needs to have a input volume control.

Apple Computer does not recommend connecting a subwoofer that cannot handle the output levels from the subwoofer jack on the AppleDesign Powered Speakers. Check the manual that comes with the third-party subwoofer, or contact the manufacturer to see if the subwoofer can accept these levels.

If the Subwoofer has an input volume control you may be able to turn down the input signal that the subwoofer is receiving from the AppleDesign Powered Speakers. If this is attempted, start with the volume on the AppleDesign Powered Speakers turned all the way down and the input volume control on the subwoofer also turned all the way down. Slowly adjust the volume controls to a usable level. You may need to keep the subwoofer input volume control turned down while increasing the volume on the AppleDesign Powered Speakers.

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Tech Info Library Article Number:19555



Tech Info Library

Apple Telecom 2.3.3: Read Me File (11/96)

Revised: 12/20/96
Security: Everyone

Apple Telecom 2.3.3: Read Me File (11/96)

Article Created: 1 April 1996
Article Reviewed/Updated: 27 November 1996

TOPIC -----

This article is the Apple Telecom 2.3.3 ReadMe file found with the online software updates.

DISCUSSION -----

Name: Apple Telecom
Version: 2.3.3
Released: March 28, 1996
Description: This software replaces Apple Telecom 2.3.2. It is recommended for use with System 7.5.3. For complete information, please see below.

The software posted here consists of two self-extracting archives of Disk Copy 1440K disk images. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disks. Disk Copy can be found in the Utilities folder posted here.

Apple Telecom 2.3.3 consists of 2 disks:

Name as Posted	Actual Disk Name
Telecom 2.3.3-1of2.sea	Apple Telecom Disk 1
Telecom 2.3.3-2of2.sea	Fax Software

GeoPort Telecom Adapter ReadMe
=====

Software included in the GeoPort Telecom Adapter Kit

Apple Telecom Software

This includes all software necessary to use the GeoPort Telecom Adapter with the following Macintosh systems:

- Centris 660AV, Quadra 660AV and Quadra 840AV.
- Power Macintosh 6100 series, 7100 series, 7200 series, 7500/100, 8100 series, 8500/120, and 9500 series.

The Apple Telecom User's Guide contains complete information about installing and using this software. An electronic Apple Telecom Upgrade Manual is included in the Telecom Documents folder so that you can learn about the new features if you upgraded electronically and don't have the Apple Telecom User's Guide. Disks 1 and 2 can also be used to install Apple Telecom 2.x software on Macintosh systems equipped with an Express Modem card.

Note: For Power Macintosh 7200 series, 7500/100, 8500/120, and 9500 series, version 2.1 or higher of Apple Telecom Software is required. If you are using a GeoPort Telecom Adapter on these Power Macintosh models, you must disable LocalTalk. To do this, disconnect any LocalTalk devices attached to the printer port (serial devices can remain attached).

Important If you select "Sleep" from the Special Menu available on some Power Macintosh models while there is an active GeoPort connection, the GeoPort Telecom Adapter will automatically disconnect the call without warning. When a Power Macintosh 7200 series model is in the low-power mode, the GeoPort Telecom Adapter will wake up the machine if the telephone rings and the machine is awaiting an incoming call. The monitor will remain in the low-power mode. While a connection is open via a GeoPort Telecom Adapter, your Power Macintosh will not enter the low-power mode, but the monitor will dim the screen.

MegaPhone (for United States, Canada, and Japan only)

This is a screen-based telephone application that delivers full support of the telephony capabilities of the Apple Telecom 2.x software, including support for dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information, and voice-mail functions.

The GeoPort Telecom Adapter Kit also includes a free 30-day trial of call logging, MegaDial dialing manager, intelligent synchronization with directory information (saving telephone numbers to a PowerTalk catalog, for example), and other extended capabilities.

See also: the MegaPhone electronic manual included on Disk 3 (Telecom Applications).

Note: MegaPhone is not installed by the Apple Telecom Installer program. You must install it separately.

SITcomm SE/GTA (for United States and Canada only)

..TIL19556-Apple_Telecom_2-3-3-Read_Me_File_11-96_(TA35268).pdf

This is a terminal emulator application. With SITcomm SE/GTA (Special Edition for GeoPort Telecom Adapter), your Macintosh can communicate with a variety of other computers, linked by serial cables or by telephone lines.

With SITcomm you can exchange information with

- A colleague who is using another computer with similar communications software.
- Text-based information and electronic mail services, such as CompuServe or MCI Mail.
- Your company or school's remote minicomputer or mainframe.

See also: the SITcomm SE electronic manual included on Disk 4 (Telecom Applications).

Note: SITcomm is not installed by the Apple Telecom Installer program. You must install it separately.

Note: SITcomm (Disk 4) is not included with free upgrades. You can order the full upgrade, including SITcomm SE and the Apple Telecom User's Guide manual, by calling the Apple Order Center. Ask for the Apple Telecom software version 2.x upgrade for use with your GeoPort Telecom Adapter.

The Tech Info Library article titled "Locating Vendor Information" can help you search for Apple Order Center's phone number.

Upgrading from Previous Releases of GeoPort Telecom Adapter Software

If you are installing this version of the software over an older version, you should use the Easy Install option rather than the Custom Install option. This ensures that all files are updated as necessary.

Note: If you have installed any customized fax cover pages and renamed the fax folder (called Express Fax in previous versions), the Installer moves them to the new Fax Folder. You can still use them, but if you want to keep them in a different folder, you'll need to drag them there manually.

When you have installed over an older version, the folders "Modem Documents" and "Express Fax" and the file "GeoPort ReadMe" may still be left on your hard disk from the earlier version. These are not necessary for using the newer version; you may delete them.

Connection (CCL) Scripts for Apple Remote Access

Use the following connection scripts with Apple Remote Access:

ARA 1.0: GeoPort Telecom ARA 1.x (in Extensions folder in System Folder)
ARA 2.0: GeoPort Telecom ARA 2.x (in Extensions folder in System Folder)

These files are placed directly in the Extensions folder by the Installer program. You do not need to move or copy them there as stated in Appendix C of

the Apple Telecom User's Guide. Apple Remote Access 1.0 does not support Power Macintosh computers. You can order an upgrade for Apple Remote Access by calling the Apple Order Center (in United States and Canada only).

Two additional, optional connection (CCL) files, named GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG, are installed as well. When you use them, the GeoPort Telecom Adapter transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select one of these connection files in the Apple Remote Access Setup control panel.

Note: The GeoPort Telecom ARA 1.x/CNG and GeoPort Telecom ARA 2.x/CNG files are installed in the Telecom Documents folder. Should you decide to use these optional files, you'll need to drag or copy them to the Extensions folder.

Using Remote Access Dial Back

If your Remote Access server uses a "Dial Back" feature, the server's return call back to your machine may be inadvertently directed to an open telephone application. To avoid this situation, either close these applications or open the Express Modem control panel and choose "Data" as the default call type when you expect an incoming call from another computer.

Using Fax Sender GX with QuickDraw GX 1.1

The Fax Sender GX extension described in Chapter 8 of the Apple Telecom User's Guide can only be used with QuickDraw GX 1.1 or later. Depending on your location, QuickDraw GX 1.1 may not be available in your area at the time this software is released.

If you need to send complex grayscale images, you should use Fax Sender GX instead of Fax Sender. The image quality is superior.

Note: The Control-shift shortcut used to select Fax Sender without going through the Chooser is not available when using Fax Sender GX. However, you can create a desktop printer icon for Fax Sender GX and use drag-and-drop to accomplish the same thing.

Fax Sender GX initially defaults to Standard quality. If you plan to use a desktop printer and want to change the default to Fine quality, print a document from any GX-aware application (SimpleText, for example) and select Fine quality from the Fax Sender GX print dialog.

Please refer to the About Fax Sender GX electronic manual installed in the Telecom Documents folder or Chapter 8 of the Apple Telecom User's Guide for more information about this software.

Sharing Fax Sender GX on an AppleTalk Network

Using Fax Sender GX, you can set up one machine on an AppleTalk network to be a central server for sending faxes. Other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

Using the Apple Fax Gateway with PowerTalk 1.1

The Apple Fax Gateway extension should be used with PowerTalk 1.1 or later. PowerTalk 1.1 is included in the System 7.5 system software release.

Note: Apple Fax Gateway only sends AppleMail-compatible letters, text-only files, and PICT files. If you enclose a formatted document (for example, a word processor document), it will be skipped and not be included in the fax.

See also: The About Apple Fax Gateway electronic manual installed in the Telecom Documents folder.

FastPrint

The Fax Viewer program included with this package implements a new FastPrint feature. The speed of printing can be significantly improved but is only available if the preferred memory size setting of the Fax Viewer application is set to at least 1500K (the default is 290K). To enable FastPrint, select the FastPrint checkbox in the Fax Viewer print dialog box. Note that this feature only works with PostScript printers.

Troubleshooting

Connecting to online services that do not support data compression or error correction

First check to see if your software uses a "modem initialization string". If so, locate and remove "S48=0", if it appears in the string. If this does not work or it is not present, add "%C0S46=136" to the end of your modem initialization string (this disables compression). If this still does not work, try adding "&Q0" instead (this disables compression and error correction).

Another potential connection problem is your application getting confused by the CARRIER message. Some applications misinterpret this as a CONNECT message and begin sending data. This will cause the GeoPort Telecom Adapter to drop the

connection. Since it is still negotiating the connection, it will abort the call if it receives any data prior to the CONNECT message. If this is the case, you may want to add a W0 command in the application's initialization string (this suppresses the CARRIER message).

Communication Settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Identifying Incoming Calls

When answering your phone line, the GeoPort Telecom Adapter will attempt to determine the type of incoming call (fax, voice, or data) before transferring the call to a telephony application. Incoming fax calls are easily detected since the sending fax machine usually transmits a fax calling tone. Incoming data and voice calls are more difficult to detect since in many countries modems typically do not transmit a tone. In the Express Modem control panel, you can set the default call type for situations where no calling tone is detected. If you are using a voice telephony application (such as MegaPhone), we recommend that you select Voice as the default call type. If you are using a data telephony application (such as Apple Remote Access server), we recommend that you select Data as the default call type. If you expect to receive both voice and data calls, ask your callers to send a data calling tone when calling your machine. Use of these features is explained in detail in the Apple Telecom Upgrade Manual electronic document installed in the Telecom Documents folder.

If you have problems receiving calls from data modems (when using the Apple Remote Access dial back feature, for example), try decreasing the number of rings to Auto-answer in the Express Modem control panel (if permitted in your country). Some calling modems may time out and disconnect before your modem answers if the number of rings is too high.

Removing Fax Storage Folders

To protect your fax documents, the fax storage folders ("Fax Waiting To Be Sent", "Received Fax Documents", "Sent Fax Documents") are protected from accidental deletion. To bypass this mechanism, drag these folders to the trash, restart your computer, and then empty the trash. New, empty folders are created for you.

Using a Centris 660AV or Quadra 660AV/840AV

If you are using a Centris 660AV or Quadra 660AV/840AV and experience errors when attempting to establish a connection, you may need to change the audio settings on your computer. The default setting of 24.000 kHz is compatible with

the GeoPort Telecom Adapter. To change this setting, open the sound control panel, choose "Sound Out" and select the "24.000 kHz" sampling rate.

Resetting a Blacklisting Error Message

Regulations in France, Japan, and a few other countries require that the Express Modem software blacklist recently dialed numbers when the connection fails. If you receive a "BLACKLISTED" error message when dialing, you can reset the BLACKLISTED condition by turning the Express Modem control panel off and then on. This software reset, equivalent to turning off and on a hardware modem, is compliant with PTT regulations.

Clicking Sound from GeoPort Telecom Adapter

If your machine freezes, the GeoPort Telecom Adapter can lose its connection with your machine and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your machine.

Port Selection

The interface for selecting the correct communications port has been simplified since GeoPort Telecom Adapter software versions 1.0.2 (Power Macintosh) and 1.2.2 (660AV/840AV). The "Use internal modem instead of modem port" checkbox has been removed from the Express Modem Control Panel. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. If so, all serial communications are first processed by the Express Modem software and transmitted through the GeoPort Telecom Adapter. If not, serial communication passes through the modem port directly.

GeoPort has been removed from the list of ports. The Express Modem control panel now automatically detects whether a GeoPort Telecom Adapter is actually attached to the Modem port. Select Modem Port whenever you wish to communicate through the GeoPort Telecom Adapter.

What Goes Where

When you install the software using the Easy Install option of the Installer program, the following files and resources are installed on your hard disk.

Hard Disk:

- GeoPort Telecom Adapter ReadMe
- SimpleText 1.2

Hard Disk: Telecom Applications: Fax Folder:

- Fax Terminal
- Fax Viewer
- Fax Cover
- Sample (cover document)

- Standard (cover document)
- My First Fax (PICT sample)

Hard Disk: Telecom Documents:

- About OCR (OCR manual for users who upgrade electronically)
- About Apple Fax Gateway (Gateway manual for users who upgrade electronically)
- About Fax Sender GX (Fax Sender GX manual for users who upgrade electronically)
- Apple Telecom Upgrade Manual
- Express Modem CCL (AppleLink CCL)
- GeoPort Telecom ARA 1.x/CNG (optional, transmits data calling tone, 660/840AV only)
- GeoPort Telecom ARA 2.x/CNG (optional, transmits data calling tone)
- Modem AT Command Set

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- Apple Fax Gateway
- Apple Telecom Modem
- AudioTuneUp (9500 series only)
- Express Modem Tool
- Fax Extension
- Fax Sender
- Fax Sender GX
- GeoPort for Power Macintosh (Power Macintosh only)
- GeoPort Extension (660/840AV only)
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort Telecom ARA 1.x (Apple Remote Access 1.0 CCL, 660/840AV only)
- GeoPort Telecom ARA 2.x (Apple Remote Access 2.0 CCL)
- Serial Extension (660/840AV and 6100/7100/8100 series only)
- Shared Library Manager
- Telephone Manager Extension

Hard Disk: System Folder: Mimetics:

- EasyReader Fax
- Neuroneye
- US Dictionary
- UK Dictionary

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center phone number.

This article is one of many available through the Apple Fax center. For a

complete list of available fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature).

The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

27 Nov 1996 - Reviewed and updated.

04 Oct 1996 - Removed keyword.

19 Sep 1996 - Added keyword.

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Tech Info Library Article Number:19556



Tech Info Library

Apple Media Tool 2.0: Use 256 Colors for Windows Compile (4/96)

Revised: 4/1/96
Security: Everyone

Apple Media Tool 2.0: Use 256 Colors for Windows Compile (4/96)

=====

Article Created: 1 April 1996

TOPIC -----

I am trying to run a compiled Apple Media Tool (AMT) 2.0 program on the Power Macintosh 6100/DOS Compatible computer. The project runs fine under the Mac OS, however the Windows version of the compile, which plays fine on a Windows computer, quits with the following error:

"The display device does not support 640x480 pixels and 65536 colorsor 0 colorsor 256 colors!

Please re-set the device and restart Windows."

The project is set to default to 256 colors if thousands of colors cannot be accomplished. This is done through the runtime setup menu.

DISCUSSION -----

When you set your preference options for AMT, you must set the color depth to 256 colors as the first option. You must also make sure the the driver is set to 256 colors on the 6100/DOS compatible. It cannot be set for 16 colors and it will not do any thing above 256 colors, so 256 is your only option.

This article was published in the Information Alley on 1 April 1996.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19557



Tech Info Library

System 7.5.3: Load QuickTime Before GXGraphics (2/97)

Revised: 2/24/97
Security: Everyone

System 7.5.3: Load QuickTime Before GXGraphics (2/97)

=====

Article Created: 2 April 1996
Article Reviewed/Updated: 24 February 1997

TOPIC -----

I installed the System 7.5 Update 2.0 and QuickDraw GX 1.1.3 with the GXGraphics (Debug) * extension. During the Startup process, GXGraphics (Debug) extension loads, then QuickTime freezes. Macsbug reports an unimplemented ATrap called by QuickTime. What is going on?

* Note:
The QuickDraw GXGraphics (Debug) extension is part of the developer software development kit (SDK), not part of the standard QuickDraw GX software.

DISCUSSION -----

Apple is aware of this issue with QuickDraw GX v1.1.3 software. It will be fixed in future versions of the software. In the meantime there is a workaround you can use.

Workaround
=====

- Change the init loading order. Make QuickTime load prior to the GXGraphics extension.

Article Change History:
24 Feb 1997 - Corrected minor typographical error.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19558



Tech Info Library

AppleShare File Server & Sys 7.5 Update 2.0 Compatible (1/97)

Revised: 1/29/97
Security: Everyone

AppleShare File Server & Sys 7.5 Update 2.0 Compatible (1/97)

Article Created: 2 April 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article provides compatibility, installation, and post installation troubleshooting for AppleShare File Server and System 7.5 Update 2.0.

DISCUSSION -----

Workgroup Servers and 7.5.3 Compatibility

NuBus-based Workgroup Server 60, 80, 6150, 8150, and 9150 customers can upgrade to System 7.5.3 by installing the System 7.5 Update 2.0. The Workgroup Server 95 is based on A/UX, and the System 7.5 Update 2.0 is not to be use with this operating system.

IMPORTANT: Please read and follow the instructions that are provided in the Software 7.5.3 Installing This Update read me file. In particular, start up the Macintosh or Workgroup Server with the System 7.5.x only chosen in the sets pop-up menu of the Extensions Manager control panel, before installing the System 7.5 Update 2.0

As a precaution, Apple recommends performing a backup of the server before undergoing a System Software upgrade.

In addition, Apple recommends customers upgrade to the latest version of AppleShare File Server software appropriate for their server:

- Workgroup Servers 60 and 80 or 680x0-based Macintosh computer with AppleShare 4.0.x -- AppleShare 4.0 users MUST upgrade to AppleShare 4.0.1 (this is not just a recommendation, it is requirement). The AppleShare Tune-Up 4.0.1 is available on Apple's online services. AppleShare 4.0.1 is functionally equivalent to the 680x0 version of AppleShare 4.0.2.

- Workgroup Servers 6150, 8150, 9150, or PowerPC-based Macintosh computer with AppleShare 4.x -- AppleShare 4.2.1 is the current version.

IMPORTANT: Please refer to Tech Info Library article "AppleShare 4.2.1: Questions and Answers", article ID: TECHINFO-0018744, for more information on compatibility of AppleShare and Open Transport.

Install System 7.5 Update 2.0 on computers with AppleShare File Server

=====

- Boot or start up the Macintosh or Workgroup Server from a bootable Disk Tools Disk or CD-ROM disc. (To start up from a CD-ROM on most Macintosh computers, you will need to press and hold the C key while the CD-ROM disc is in the CD-ROM drive.) You can ensure that a floppy or CD-ROM disc is the start up volume by looking for its icon in the upper-right most position on the desktop.
- Use Disk First Aid to verify and, if necessary, repair all of the volumes. Disk First Aid should be run from the Disk Tools Disk, or from the CD-ROM disc (usually located in the Utilities folder).
- Restart the Macintosh or Workgroup Server, and eject any CD-ROM disc, so the server will start up from the hard disk. Press and hold the space bar as soon as the Mac OS screen appears. Continue to hold the space bar until the Extensions Manager window displays. If you miss this opportunity, restart the computer and try the procedure again.
- Choose System 7.5.x only from the Sets pop-up menu in the Extensions Manager control panel window.

If you have third-party peripherals that are required for installation and require an extension, turn those extensions back on by placing a check mark to the left of the extension. For example, include video drivers, alternative input devices, network card drivers, and removable media. Do not select any other extensions, including the extensions required by AppleShare File Server.

- Click the Extensions Manager window's close box to continue with the startup process.
- Insert the System 7.5 Update 2.0 CD-ROM or the first floppy disk. If you are performing a network install, mount any necessary server.
- Double-click the Installer icon to launch the System 7.5 Update 2.0 installer.
- When you see the Installer's welcome screen, click Continue.
- The Easy Install dialog box appears. Easy Install automatically installs the files that your particular model of computer needs. Make sure the destination disk indicated on the screen is the one you want to install the update on. If it is not, click Switch Disk until the right destination disk appears.
- Click Install. Follow the instructions on the screen.

- When the installation is complete, click Restart to restart your computer.

Press and hold the space bar as soon as the Mac OS screen appears, and continue to hold the space bar until the Extensions Manager window appears. If you miss this opportunity, restart the computer and try the procedure again.

Use the Extensions Manager to turn on the File Server Extension, and, if present, the Desktop Manager Fix and Installer Cleanup extensions.

- When you have verified that the server is operational with the System 7.5 Update 2.0 installed, you may use the Extensions Manager control panel to select any third-party extensions and control panels, you may have been previously using, to run after restarting the computer. Contact the third-party software vendors if these extensions appear to cause additional issues.

Problems After The Install

=====

It is important that the instructions provided in the System 7.5 Update 2.0 Installing This Update file are followed without exception. If you did not follow these instructions, or followed them but encountered problems afterwards, you may have to perform a clean System Software installation, re-apply the System 7.5 Update 2.0, and reinstall AppleShare File Server.

The instructions below will help you reinstall software. Please read all the instructions through before proceeding.

Check Volumes with Disk First Aid

- Start up the Macintosh or Workgroup Server from a bootable Disk Tools Disk or CD-ROM disc. (To start up from a CD-ROM on most Macintosh computers, you will need to press and hold the C key while the CD-ROM disc is in the CD-ROM drive.) You can ensure that a floppy or CD-ROM disc is the start up volume by looking for its icon in the upper-right most position on the desktop.
- Use Disk First Aid to verify and, if necessary, repair all of the volumes. Disk First Aid should be run from the Disk Tools Disk, or from the CD-ROM disc (usually located in the Utilities folder).

Clean Install of System 7.5.x Software

- If you are using the Disk Tools floppy disk for Disk First Aid, restart the computer and insert the first System Software Install floppy disk, and you will start up directly to the Installer. If you are using a CD-ROM disc for Disk First Aid, you will need to locate and launch the System Software Installer application.
- Click Continue at the Welcome screen.
- Press the Command, Shift, and K keys simultaneously until a dialog box appears with these options, Update Existing System Folder or Install New System Folder.

- Select Install New System Folder and click the OK.
- Click Clean Install on the Installer window.
- When the installation finishes, quit the Installer, restart the server and immediately eject the CD-ROM disc, if present.

Install System 7.5 Update 2.0

NOTE: If using AppleShare 4.0 with the 4.0.1 patch, Apple recommends you install System 7.5 Update 2.0 first, then install AppleShare 4.0 and the 4.0.1 patch (see instructions below).

- Insert the System 7.5 Update 2.0 CD-ROM disc or the first floppy disk. If you are performing a network install, mount any necessary server.
- Double-click the Installer icon to launch the System 7.5 Update 2.0 installer.
- When you see the Installer's welcome screen, click Continue.
- The Easy Install dialog box appears. Easy Install automatically installs the files that your particular computer needs. Make sure that the destination disk indicated on the screen is the one you want to install the update on. If it is not, click Switch Disk until the right destination disk appears.
- Click Install. Follow the instructions on the screen.
- When the installation is complete, click Restart to restart your computer.

Reinstall AppleShare

-
- Insert the AppleShare CD-ROM disc or Install floppy disk, run the AppleShare Installer, and select Easy Install.

IMPORTANT: If you installing AppleShare 4.0, perform a Custom Install and omit the Shared Library Manager. To do this, dismiss a dialog box that appears when you first launch the installer which explains that the version to be installed is not compatible with currently-running version of the Shared Library Manager.

- When the AppleShare installation finishes, let the Macintosh computer start up normally.
- If using AppleShare 4.0, install the 4.0.1 patch at this point.
- Restart.

Retaining Users & Groups and Privileges

These next steps are important in order to retain the users and groups information and privileges on the server. These steps MUST BE FOLLOWED before launching the AppleShare Admin, or the AppleShare File Server software.

- Open the Preferences folder in the System Folder. Drag the existing Users & Groups Data File to the trash.
- Drag the original Users & Groups data file from the Preferences folder in the Previous System Folder to the Preferences folder in the System Folder.
- Restart the server. Do not skip this step.
- Open the Sharing Setup control panel and enter a name for the server in the Macintosh Name field. (This name will appear in the Chooser on client computers. To avoid confusion, you can choose the name the server had before reinstalling software, however, it is not critical that you do so.)
- To confirm that the file server is functioning properly, launch the AppleShare Admin program and verify the users & groups information. Then launch the AppleShare File Server, and logon to the server from a client to verify that access privileges are properly set.

If you use third-party extensions on the server, you may use the Extensions Manager control panel to select any third-party extensions and control panels to run at start up, but do so with caution. Contact third-party vendors if these extensions appear to cause issues on the server.

Article Change History:

29 Jan 1997 - Updated article for technical accuracy.
23 Sep 1996 - Changed wording for clarity.
20 Sep 1996 - Corrected AppleShare 4.0 installation.

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Tech Info Library Article Number:19559



Tech Info Library

Power Macintosh 5400/120: Technical Specifications (7/96)

Revised: 7/12/96
Security: Everyone

Power Macintosh 5400/120: Technical Specifications (7/96)

Article Created: 2 April 1996
Article Reviewed/Updated: 12 July 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 5400 series computers.

DISCUSSION -----

Microprocessor

=====

- PowerPC 603e processor
- 120 MHz processor clock
- 32K internal cache
- Built-in floating point unit (FPU)
- 40 MHz system bus
- 64-bit memory bus
- 32-bit PCI bus
- Optional High Performance Module (256K level 2 cache)

Memory

=====

- 8 MB of dynamic random-access memory (DRAM) soldered to the main logic board, expandable to 136 MB using 168-pin JEDEC-standard DIMM devices.
- Two DIMM slots are provided for DRAM expansion.
- 1 MB of built-in video RAM
- 4 MB of read-only memory (ROM)
- 8K of nonvolatile parameter memory
- One socket for an optional 256K Level 2 cache DIMM card

Internal disk drives

=====

- Apple SuperDrive 1.4 MB high-density floppy disk drive
- Apple (Integrated Device Electronics) IDE hard disk drive
- Internal quadruple- or 8x-speed CD-ROM drive, depending on configuration.

Display

=====

- 15-in RGB color display (12.8-in diagonal viewable image size)
- 0.28-mm dot pitch
- Noninterlaced, flat, square cathode-ray tube (CRT)
- User-adjustable resolutions from 640 by 480 pixels to 832 by 624 pixels
- Resolution can be changed without restarting the computer
- Refresh rate up to 75 Hz
- Meets SWEDAC MPR2 international guidelines for magnetic-field emissions

Video

=====

Begin_Table

Graphics modes supported

Resolution	Colors	Scan frequencies
=====	=====	=====
640 x 480	16-bit	60 Hz and 67 Hz
800 x 600	16-bit	60 Hz
800 x 600	8-bit	72 Hz
832 x 624	8-bit	75 Hz

End_Graphic

Video output

With the optional external video connector kit, your Power Macintosh 5400 Series can be connected to a video presentation system or support video mirroring (connecting a second monitor for display purposes) at 640 x 480 resolution on the following monitors:

- Macintosh 12" Color Display
- Macintosh 13" Color Display
- Apple Color Plus 14" Display
- Macintosh Color Display
- Apple Multiple Scan 14 Display
- Apple Multiple Scan 15 Display
- Apple Multiple Scan 17 Display
- Apple Multiple Scan 20 Display
- VGA monitors (a plug adapter may be required)

You can use the following monitors for video mirroring at 800 x 600 and 832 x 624 resolutions:

- Apple SVGA displays
- Apple Multiple Scan 14 Display
- Apple Multiple Scan 15 Display
- Apple Multiple Scan 17 Display
- Apple Multiple Scan 20 Display

Video input

With the optional video input card, your Power Macintosh 5400 Series can connect to a video camera, VCR, or other video equipment.

- Format: composite or S-video
- Transmission Format: industry standard NTSC/PAL/SECAM
- Polarity: sync negative
- Level: .8 Vpp minimum to 2.0 peak-to-peak (p-p) maximum ("S" chroma level 1.4 Vpp maximum)
- Impedance: 75 ohms () internally terminated
- DC offset: +/- 1.0 volts (V) maximum
- 32-bit video data bus

Sound

=====

- 16-bit stereo input and output featuring SRS surround sound
- Sample rates of 11.025, 22.05 and 44.1 kilohertz (kHz)
- Sound input connector line level: 2 volts peak-to-peak (Vpp) nominal, into 10-kilohms (k) impedance (minimum)
- Sound output connector line level: 2 Vpp nominal, into 32- impedance
- Sound input signal-to-noise ratio (SNR): >70 decibels (dB)
- Sound output SNR: >70 dB (SRS disabled)

Clock/calendar

=====

- CMOS custom circuitry with long-life battery

Keyboard

=====

- Supports all Apple Desktop Bus (ADB) keyboards

Mouse

=====

- Supports all models of the ADB mouse

Interfaces

=====

- One Apple Desktop Bus (ADB) port supporting up to three ADB input devices (such as a trackball, keyboard, or mouse) daisy-chained through a synchronous serial bus.
- Optional monitor port supporting the connection of color and grayscale monitors of various sizes and resolutions for video mirroring.
- One internal expansion slot supporting 6.88-inch 15 watt Peripheral Component Interconnect (PCI) expansion cards.
- One internal expansion slot supporting communications cards (i.e. modem, fax, high speed networking).
- One internal expansion slot supporting video input cards using NTSC.
- Two RS-232/RS-422 serial GeoPort-compatible ports,
- One 3.5 mm sound output port for headphones or line-level devices.
- One 3.5 mm sound input port for stereo sound input. The sound input port supports the Apple PlainTalk Microphone that comes with some Macintosh computers.
- One external standard SCSI interface that supports up to 6 external SCSI devices.

Additional features

=====

- Built-in microphone
- Built-in stereo speakers
- Support for optional infrared remote control
- Front panel push-button controls for volume and picture
- Power on and off from keyboard and optional remote control (included with the optional TV tuner card)

Size and weight

=====

Weight: 47 lbs. (21.15 kg) Varies depending on installed options.

Height: 17.5 in. (445 mm)

Width: 15.1 in. (383 mm)

Depth: 16 in. (406 mm)

Environment

=====

- Operating temperature: 10° C to 40° C (50° F to 104° F)
- Storage temperature: -40° C to 47° C (-40° F to 116.6° F)
- Relative humidity: 5% to 95% (noncondensing)
- Altitude: Works below 3048 m (10,000 ft.)

Power

=====

AC line input

- Line voltage: 90-264 V alternating current (AC), RMS single phase, automatically configured.
- Frequency: 47-63 Hz
- Power: 220 watts maximum continuous

DC power

- Continuous output: 73 watts

Apple Desktop Bus (ADB)

- Mouse draws up to 10 milliamperes (mA)
- Keyboard draws 25-80 mA (varies with keyboard model used)
- Maximum current available for all ADB devices and all serial devices: 500 mA
- The ADB port can support up to three daisy-chained ADB devices.

Power Allowances for External Devices

=====

The following table shows power allowances for external devices connected to input ports:

Device	Voltage	Current	Power
-----	-----	-----	-----
Microphone	+5 V	1 mA	5 mW
GeoPort telecom adapter & ADB devices	+5 V	500 mA	2.5 W
S-video input connector	+12 V	250 mA	3 W

Power Allowances for Expansion Cards

=====

The following table shows power allowances for installed expansion cards.

Device	Voltage	Current	Power
-----	-----	-----	-----
PCI expansion card (15 watts)*	+3.3 V	2 A	6.6 W
	+5 V	3 A	15 W
	-12 V	500 mA	6 W
Communications expansion card**	+5 V	500 mA	2.5 W
	+12 V	100 mA	1.2 W
Video expansion card***	+5 V	200 mA	1 W
	+12 V	300 mA	3.6 W

Notes:

*The PCI expansion card should not consume more than 15 watts of power total.

**The communications card should not consume more than 2.5 watts of power total.

***The video input card should not consume more than 4.6 watts of power total.

Article Change History:

12 Jul 1996 - Updated CD information.

14 May 1996 - Updated sound information.

26 Apr 1996 - Updated information.

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Tech Info Library Article Number:19560



Tech Info Library

Apple Telecom Won't install After Clean System Install (4/96)

Revised: 4/3/96
Security: Everyone

Apple Telecom Won't install After Clean System Install (4/96)

=====

Article Created: 3 April 1996

TOPIC -----

When I try to install the Apple Telecom software (from either the Apple Extras folder, or the disks that came with my GeoPort) after performing a clean system software installation on my Power Macintosh 8500/120 computer, I get an error message indicating the installation could not be completed. I have reset PRAM which did not help. I have also tried starting up from either the hard disk, or the CD-ROM -- this made no difference. What do I need to do to install Apple Telecom software.

DISCUSSION -----

These are the known cases where Apple Telecom software will not install.

- All Extensions off
- A minimal or reduced System Software
- When started from a CD-ROM disc

The Apple Telecom software should install properly after you install System Software with the Easy Install option to get the full system software on your hard disk. Also, you need to start the computer with all Apple extensions turned on.

Testing we have done while started from a CD-ROM disc or by dragging the minimal System Software from a CD-ROM disc to your hard disk does not work.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19563



Tech Info Library

CLW 12/600 PS: Photoconductor LEDs Coming on Prematurely (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Photoconductor LEDs Coming on Prematurely (10/96)

Article Created: 3 April 1996

TOPIC -----

My Color LaserWriter 12/600 PS will not print and there are several LEDs (lights) lit up on the status panel. The photoconductor has approximately 4,000 pages printed on it and the photoconductor LED is on. Is the printer supposed to shut down when the photoconductor LED turns on?

DISCUSSION -----

The photoconductor alert LED is an indicator that it is time to consider ordering a replacement photoconductor. The actual life of the photoconductor varies greatly depending on the type of printing being done. A worn out photoconductor begins to impact print quality, however it should not shut down the printer.

If the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS printer is shutting down, check for other error LEDs and consult the user's guide for recommendations. In some cases the waste toner LED may blink which indicating that the waste toner bottle is full. Every new photoconductor comes with two waste toner bottles because at least one of them is expected to fill up and require replacing during the life of the photoconductor.

Remove the waste toner bottle to see if it is full. Also inspect the clear plastic cap on the waste toner bottle to make sure that it is not contaminated with toner that might be blocking the photosensor light beam. Toner contamination can trigger a waste toner alert, when the waste toner bottle is not full.

Article Change History:

23 Oct 1996 - Added Color LaserWriter 12/660 PS to the discussion.

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Tech Info Library Article Number:19567



Tech Info Library

Power Macintosh 5200, 5300, 5260, 5400: Comparison (9/96)

Revised: 9/24/96
Security: Everyone

Power Macintosh 5200, 5300, 5260, 5400: Comparison (9/96)

Article Created: 4 April 1996
Article Reviewed/Updated: 24 September 1996

TOPIC -----

What are the hardware differences among the Power Macintosh 5200, 5300, 5260, and 5400 series computers?

DISCUSSION -----

The following table compares the Power Macintosh 5200, 5300, 5260, and 5400 series computers:

Begin_Table

Features =====	Power Macintosh 5200/5300 =====	Power Macintosh 5260 =====	Power Macintosh 5400 =====
Processor Type	PowerPC 603e	PowerPC 603e	PowerPC 603e
Processor Speed	75 MHz (5200) 100 MHz (5300)	100 MHz	120 MHz
Cache	256K L2 Cache Soldered on	256K L2 cache Optional SIMM	256K L2 cache Optional DIMM
RAM	8 MB-64 MB	8 MB-64 MB	8 MB-136 MB
On-board RAM	0 MB	0 MB	8 MB
RAM Expansion	2 72-pin SIMMs	2 72-pin SIMMs	2 168-pin DIMMs
Memory Bus	32 bits, 37.5 MHz	32 bits, 37.5 MHz	64 bits, 40 MHz
Video RAM	1 MB DRAM	1 MB DRAM	1 MB DRAM

Video Input	Optional card for video input capture	Optional card for video input capture	Optional card for video input capture
Video Output	Optional mirror connector supports external monitor operating in mirror mode	Optional mirror connector supports external monitor operating in mirror mode	Optional mirror connector supports external monitor operating in mirror mode
Sound	(5200) 8 or 16 bits/channel; mono in,out stereo out (5300) 16 bits/channel; mono in, out stereo out	16 bits/channel mono in, stereo in, stereo out	8 and 16 bits/channel; stereo SRS surround sound mode
Remote Control	Built-in infrared (IR) receiver	Built-in infrared (IR) receiver	Built-in infrared (IR) receiver
Floppy Drive	1 internal	1 internal	1 internal
ADB Ports	1	1	1
Hard Drive	1 (IDE)	1 (IDE)	1 (IDE)
CD-ROM Drive	Optional	Optional	Optional
External SCSI ports	1	1	1
Communications Slot	1, for optional modem or Ethernet interface 68040 bus configuration	1, for optional modem or Ethernet interface 68040 bus configuration	1, for optional modem or Ethernet interface PCI bus configuration
Expansion slot	1 I/O slot Accepts PDS card for Macintosh LC series	1 I/O slot Accepts PDS card for Macintosh LC series	1 PCI I/O slot for 7-inch card
DMA I/O	None	None	10 DMA channels
Serial Ports	2, modem and printer LocalTalk supported	2, modem and printer LocalTalk supported	2, LocalTalk and GeoPort supported

End_Table

Note:

The following computers are in the corresponding Macintosh families:

- Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- Macintosh 5300CD family: Macintosh 5300/100 LC, Performa 5300.

Article Change History:

24 Sep 1996 - Added SIMM type info.

15 Apr 1996 - Updated information.

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Tech Info Library Article Number:19571



Tech Info Library

LaserWriter: TCP/IP Printing For VMS Solutions (4/96)

Revised: 4/4/96
Security: Everyone

LaserWriter: TCP/IP Printing For VMS Solutions (4/96)

=====

Article Created: 4 April 1996

TOPIC -----

This article provides information on a VMS software packages which supports UNIX style LPR printing. Apple customers with VMS systems and Apple LaserWriters may use this software as a solution for TCP/IP printing.

DISCUSSION -----

TGV Software's MultiNet for OpenVMS version 3.5 contains "LPD/LPR printing services" as part of its standard feature set.

There may be other third-party products which provide this functionality. This product is not tested by Apple, and therefore, not supported by Apple Computer.

For more information on configuring non-UNIX software for TCP/IP printing, see the Tech Information Library article, "LaserWriters: TCP/IP Printing from Non-UNIX Workstation."

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19572



Tech Info Library

TGV Software, Inc. (4/96)

Revised: 4/4/96
Security: Everyone

TGV Software, Inc. (4/96)

=====

Article Created: 4 April 1996

TGV Software, Inc.

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Company Profile:

TGV Software, Inc. provides network applications and services to build corporate intranets and access the world-wide Internet. TGV serves customers worldwide from corporate offices in Santa Cruz, California, and Basingstoke, England. TGV markets its principal product line under the name MultiNet.

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Tech Info Library Article Number:19573



Tech Info Library

PB 190,5300,2300: Sad Mac Error After Installing At Ease (1/97)

Revised: 1/17/97
Security: Everyone

PB 190,5300,2300: Sad Mac Error After Installing At Ease (1/97)

=====

Article Created: 4 April 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

We encountered a problem with a PowerBook 190 and At Ease for Workgroups v3.0.1. Our new PowerBook 190 came with System 7.5.2, so I installed the System 7.5 Update 2.0 (7.5.3). No problem. Then after installing At Ease software, and restarting, we were greeted with the Sad Mac icon, and the error code: 0000000F 00000001. We were unable to startup from a Disk Tools floppy disk.

DISCUSSION -----

Issue
=====

The issue you describe may appear if you are using At Ease for Workgroups 3.0 or 3.0.1 and the following conditions are true:

- * the At Ease administrator has set the "Lock startup volume" option,
- * the Macintosh running At Ease is equipped with an IDE internal hard drive and a recent version of the driver software. (This includes the PowerBook 190, PowerBook 2300, and PowerBook 5300 series computers.) It should be noted that this issue has nothing to do with installing the System 7.5 Update 2.0.

In these circumstances, turning on the computer and attempting to startup from the internal hard disk will cause a "Sad Mac" window to appear. You will not be able to get to the At Ease logon screen or to the Finder.

The Solution
=====

The At Ease-IDE Utility 1.0 fixes this issue. Follow these steps to correct it:

1. Insert a bootable floppy disk that contains the At Ease-IDE Utility and do a restart while holding down simultaneously the Command-Shift-Option-Delete keys. It will take some time before the Finder appears. (See instructions at the end of this document for obtaining such a disk if you don't have one. It is also possible to connect a bootable external hard drive containing the At Ease-IDE Utility and, in the same manner, start up from that drive.)
2. If you see a dialog asking if you want to rebuild the desktop, click on cancel.
3. Once you have booted and are in the Finder, run the At Ease-IDE Utility. (Note that your internal hard disk will not be visible on the desktop.)
4. Choose "Restart" from the Special Menu in the Finder and allow the floppy disk to be ejected so that you are booting from the internal hard disk.
5. If At Ease is on, you will go to the At Ease logon screen as usual. (Note that if your computer's startup disk has been locked by At Ease for Workgroups, it will still be locked after running the At Ease-IDE Utility.)
6. If At Ease is off, you will go to the Finder.
7. Immediately upgrade to At Ease for Workgroups version 3.0.2 or later. (See below for information on obtaining version 3.0.2).

The data on your internal hard disk will not be affected by this problem or by running the At Ease-IDE utility.

On At Ease for Workgroups 2.x versions, IDE (ATA) drive locking was not supported, so the problem will not appear. You should still consider upgrading to At Ease 3.0.2 or subsequent versions.

Obtaining A Bootable Floppy Disk With The At Ease-IDE Utility =====

1. If you have a Disk Tools disk for the computer with the problem, you can move the At Ease-IDE Utility to that disk -- there should be room -- and then startup from that disk.
2. If you have access to any of the following on-line services, you can download a bootable disk image called "At Ease-IDE Utility Disk" on the following online services and Internet sites:
 - * America Online - keyword: applecomputer
 - * CompuServe - GO APLSUP
 - * Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>
3. If you do not have on-line access, you can obtain the At Ease-IDE Utility by

calling 800-SOS-APPL, or 800-767-2775. (Available in the US only.)

Obtaining At Ease For Workgroups 3.0.2 Update

=====

You can obtain the At Ease for Workgroups 3.0.2 update from any of the above on-line services using the same path.

Article Change History:

17 Jan 1997 - Updated Online references.

18 Jun 1996 - Added information about solution.

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Tech Info Library Article Number:19574



Tech Info Library

LaserWriter Select 310: PCI-Based Power Macintosh Issues (4/97)

Revised: 4/28/97
Security: Everyone

LaserWriter Select 310: PCI-Based Power Macintosh Issues (4/97)

=====

Article Created: 5 April 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains solutions for customers using the LaserWriter Select 310 printer on PCI-Based Power Macintosh computers.

DISCUSSION -----

There are several issues which customers using Power Macintosh 7200/75, 7200/90, 7500/100, 8500/110, 9500/120, and 9500/132 computers with a LaserWriter Select 310 printer may experience.

These issues can range from longer print times to complete inability to print.

Known Issues

- Long delays (15 seconds to 15-30 minutes) before printing begins, pauses in printing, longer than expected print times
- Intermittent connection failures, that go away with with "try again" button in Print Monitor or "LaserWriter is unable print or the printer may have been disconnected, please check to make sure the printer is properly connected and turned on" if you background printing is off.
- No connection established, even after standard troubleshooting (includes clean install, v 7.0.1 of driver, and AppleTalk off).
- Problems printing when connected to service provider or online vendor (AOL) using modem port.

Customers should check the version of LaserWriter Select 310 driver. If you do not have version 7.0.1, you should upgrade. The driver is available in several software releases, including:

- System 7.5
- LaserWriter Select 310 (1.0.1) These disks would have come with your printer, and has version 1.0.1 on the back of the label.
- Apple Software Updates.

Customers also need to load the SerialDMA 2.0.2 driver. This file addresses problems with the serial architecture. Serial DMA is found in:

- SerialDMA 2.0.2
- Printing Fix 1.1
- System 7.5 Update 2.0
- System 7.5.3

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 5 April 1996.

Article Change History:

28 Apr 1997 - Removed reference to on line service.
03 Dec 1996 - Corrected spelling.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19576



Tech Info Library

Open Transport 1.0.8: AppleTalk Activated By Applications (4/96)

Revised: 4/8/96
Security: Everyone

Open Transport 1.0.8: AppleTalk Activated By Applications (4/96)

=====

Article Created: 8 April 1996

TOPIC -----

I have Open Transport version 1.0.8 installed on my Power Macintosh 7200 and when I try to print to my LaserWriter Select 310 printer I get a -97 error (port in use). I restarted, then reset the Parameter RAM (PRAM), and now I get -43 error (file not found). I went into the chooser and AppleTalk was active. I made AppleTalk inactive and restarted. I could print from SimpleText, but not from Quark Xpress. When I tried to print from Quark Xpress I received the -97 error again.

DISCUSSION -----

Open Transport v1.0.8 activates AppleTalk, which causes the -97 error. This issue is addressed in Open Transport v1.1. The System 7.5 Update 2.0 should solve this problem. There are several applications which O.T. 1.0.8 activates AppleTalk including MegaPhone, PageMaker, and Quark Xpress. However, there may be other applications this also occurs with.

Solution

=====

Use the System 7.5 Update 2.0 software to update your version of Open Transport to v1.1.

This article was published in the 8 April 1996 Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19580



Tech Info Library

System 7.5.3: Compatibility Issue With Radius SoftPivot (4/96)

Revised: 4/8/96
Security: Everyone

System 7.5.3: Compatibility Issue With Radius SoftPivot (4/96)

=====

Article Created: 8 April 1996

TOPIC -----

I am using a Radius SoftPivot display on a Power Macintosh 7100. After I installed System 7.5 Update 2.0, the display software did not work correctly. The screen redraws only around the mouse pointer. The same behavior happened on my Macintosh IIsi with a SoftPivot display after installing System 7.5 Update 2.0.

DISCUSSION -----

There is an incompatibility problem with the SoftPivot 3.2.1 control panel and System 7.5 Update 2.0. Radius Technical Support is aware of the problem and are looking into the incompatibility issues. The only workaround is to disable the SoftPivot 3.2.1 control panel when using System 7.5 Update 2.0 (System 7.5.3).

This article appeared in the 8 April 1996 issue of Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19581



Tech Info Library

System 7.5.3: incompatible with some SuperMac NuBus cards (4/96)

Revised: 4/8/96
Security: Everyone

System 7.5.3: incompatible with some SuperMac NuBus cards (4/96)

=====

Article Created: 8 April 1996

TOPIC -----

I have a Quadra 950 with a SuperMac NuBus video card, and ever since I updated to System 7.5 Update 2.0 (System 7.5.3), I can no longer startup in 32-bit mode. Why?

DISCUSSION -----

There seems to be some incompatibilities in some of the older SuperMac NuBus cards and System 7.5.3. Contact Radius, which owns SuperMac, for information on workarounds and solutions.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19582



Tech Info Library

PlainTalk 1.4 and Voice Options (4/96)

Revised: 4/8/96
Security: Everyone

PlainTalk 1.4 and Voice Options (4/96)

=====

Article Created: 8 April 1996

TOPIC -----

With PlainTalk 1.4, the Text-to-Speech and Speech Recognition portions are separate installations and can lead to the following scenarios:

1) When I'm in a speech-capable application like SimpleText and choose Speak All from the Sound menu, I get the following message: "An error occurred when SimpleText tried to speak." Additionally, in the Speech control panel, I have the Voice option, but once selected I'm not able to choose a voice in the pop-up menu.

2) I have just installed PlainTalk 1.4. When I go into the Speech control panel, the only option I have is Voice, which lets me select a different voice. I am unable to turn Speakable Items on.

3) I just installed PlainTalk 1.4. When I go into the Speech control panel, the Voice option is grayed out and I am unable to select a different voice.

DISCUSSION -----

1) The Voices Folder has been moved or deleted from the Extensions Folder of the System Folder. The Voices Folder is required for the Text-to-Speech software to operate. Reinstalling the Text-to-Speech software will get the voice files back.

2) You have the Text-to-Speech portion of PlainTalk 1.4 installed. In order to have the Speakable Items (as well as Listening and Feedback) options, you need to install the Speech Recognition software.

3) You have the Speech recognition portion of PlainTalk 1.4 installed. To get the voice option within the Speech control panel you need to install the English or Mexican Spanish Text-to-Speech software.

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Tech Info Library

Network Server: Modify AIX Shell Environment Variables (4/96)

Revised: 4/8/96
Security: Everyone

Network Server: Modify AIX Shell Environment Variables (4/96)

=====

Article Created: 8 April 1996

TOPIC -----

I just modified my .profile file in my home directory to set some of my environment variables like VISUAL (to choose a command line editor) and PS1 (to modify the command line prompt). However, I've logged in and out and none of these environment variables have been set as in my .profile file. I switched to the csh and used the .login file to set environment variables and found the same problem.

DISCUSSION -----

In your home directory there is a file called .dtprofile which is used to set environment variables so they are available to all applications on the Common Desktop Environment (CDE). By default, the desktop does not read your standard \$HOME/.profile or \$HOME/.login files. This can be changed by uncommenting the DTSOURCEPROFILE variable assignment at the end of this file. The desktop reads .profile if your \$SHELL is "sh" or "ksh", or .login if your \$SHELL is "csh".

To learn more about which variables to set where, read the comments at the top of the .dtprofile file in your home directory which is copied below.

```
#####  
### Your $HOME/.dtprofile is read each time you login to the Common  
### Desktop Environment (CDE) and is the place to set or override  
### desktop environment variables for your session. Environment  
### variables set in $HOME/.dtprofile are made available to all  
### applications on the desktop. The desktop will accept either sh or  
### ksh syntax for the commands in $HOME/.dtprofile.  
###  
### By default, the desktop does not read your standard $HOME/.profile  
### or $HOME/.login files. This can be changed by uncommenting the  
### DTSOURCEPROFILE variable assignment at the end of this file. The  
### desktop reads .profile if your $SHELL is "sh" or "ksh", or .login  
### if your $SHELL is "csh".
```

```
###
### The desktop reads the .dtprofile and .profile/.login without an
### associated terminal emulator such as xterm or dtterm. This means
### there is no available command line for interaction with the user.
### This being the case, these scripts must avoid using commands that
### depend on having an associated terminal emulator or that interact
### with the user. Any messages printed in these scripts will not be
### seen when you log in and any prompts such as by the 'read' command
### will return an empty string to the script. Commands that set a
### terminal state, such as "tset" or "stty" should be avoided.
###
### With minor editing, it is possible to adapt your .profile or .login
### for use both with and without the desktop. Group the statements not
### appropriate for your desktop session into one section and enclose
### them with an "if" statement that checks for the setting of the "DT"
### environment variable. When the desktop reads your .profile or .login
### file, it will set "DT" to a non-empty value for which your .profile
### or .login can test.
###
### example for sh/ksh
###
###     if [ ! "$DT" ]; then
###         #
###         # commands and environment variables not appropriate for desktop
###         #
###         stty ...
###         tset ...
###         DISPLAY=mydisplay:0
###         ...
###     fi
###
###     #
###     # environment variables common to both desktop and non-desktop
###     #
###     PATH=$HOME/bin:$PATH
###     MYVAR=value
###     export MYVAR
###     ...
###
### example for csh
###
###     if ( ! ${?DT} ) then
###         #
###         # commands and environment variables not appropriate for desktop
###         #
###         stty ...
###         tset ...
###         setenv DISPLAY mydisplay:0
###         ...
###     endif
###
###     #
###     # environment variables common to both desktop and non-desktop
```

```
###      #
###      setenv PATH $HOME/bin:$PATH
###      setenv MYVAR value
###      ...
###
###      Errors in .dtprofile or .profile (.login) may prevent a successful
###      login. If after you login, your session startup terminates and you
###      are presented with the login screen, this might be the cause. If
###      this happens, select the Options->Sessions->Failsafe Session item on
###      the login screen, login and correct the error. The
###      $HOME/.dt/startlog and $HOME/.dt/errorlog files may be helpful in
###      identifying errors.
###
#####

#
#  If $HOME/.profile (.login) has been edited as described above,
#  uncomment the following line.
#
#DTSOURCEPROFILE=true
```

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Tech Info Library Article Number:19585



Tech Info Library

Color OneScanner 600/27: SCSI Port Depends on Configuration 4/96

Revised: 4/12/96
Security: Everyone

Color OneScanner 600/27: SCSI Port Depends on Configuration 4/96

Article Created: 9 April 1996
Article Reviewed/Updated: 12 April 1996

TOPIC -----

There are two connectors on the Apple Color OneScanner 600/27, which of these should I use?

DISCUSSION -----

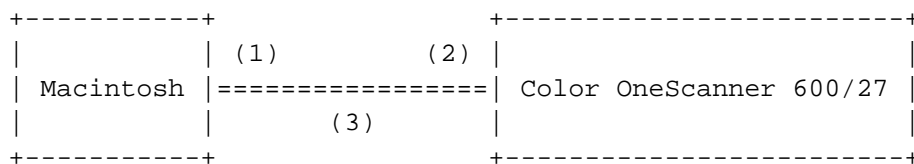
The Apple Color OneScanner 600/27 has two SCSI connectors. The connector you use depends on where the scanner is placed in the SCSI chain. Appendix C of the Color OneScanner 600/27 User's Guide contains information on the various locations in the SCSI chain, and what the SCSI termination should be set to.

Below is a chart providing the basic information provided in Appendix C of the Color OneScanner 600/27 User's Guide.

Scanner is the ONLY device in the SCSI Chain
=====

Use the Macintosh SCSI System Cable. The Macintosh SCSI System Cable has a 50-pin connector on one end, and a 25-pin connector on the other. The 25-pin connector goes to your Macintosh computer, the 50-pin connectors goes to the Color OneScanner 600/27.

Begin_Graphic



(1) 25-pin Connector

- (2) 50-pin Connector
- (3) SCSI system cable

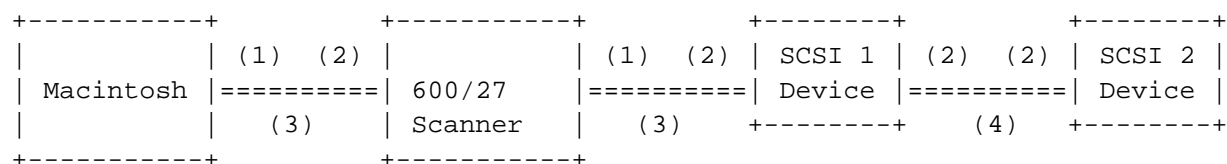
End_Graphic

Scanner is at the Beginning of the SCSI Chain

=====

When you have multiple SCSI devices an the Color OneScanner 600/27 is placed at the beginning of the SCSI chain, you need two (2) Macintosh SCSI System Cables, and a SCSI peripheral cable for each additional SCSI device.

Begin_Graphic



- (1) 25-pin connector
- (2) 50-pin connector
- (3) SCSI system cable
- (4) SCSI peripheral cable

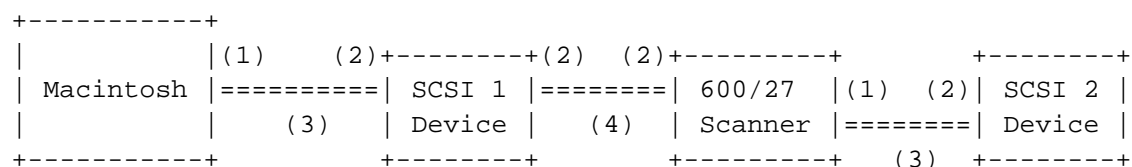
End_Graphic

Scanner is in the Middle of the SCSI Chain

=====

If you have the Apple Color OneScanner 600/27 in the middle of a SCSI chain, you need two SCSI Systems cables and a SCSI peripheral cable.

Begin_Graphic



- (1) 25-pin connector
- (2) 50-pin connector
- (3) SCSI system cable
- (4) SCSI peripheral cable

End_Graphic

SCSI termination information is explained in the Tech Info Library article titled "Apple Color OneScanner 600/27: Terminator isn't required".

Article Change History:

12 Apr 1996 - Corrected SCSI cable diagram.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19586



Tech Info Library

Color StyleWriter 1500: No Printer Tray Available (4/96)

Revised: 4/9/96
Security: Everyone

Color StyleWriter 1500: No Printer Tray Available (4/96)

=====

Article Created: 9 April 1996

TOPIC -----

The Apple Color StyleWriter 1500 User's Guide indicates there is some type of paper receiving tray, but I do not see one.

DISCUSSION -----

The manual is incorrect. Although an output tray is mentioned in a couple of different places, there is no output paper tray on the Color StyleWriter 1500 printer. The front panel of the printer extends past down the base plate and precludes installing an output paper tray.

This article was published in the 9 April 1996 Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19587



Tech Info Library

Enhanced PCI-Based Power Macintosh Models: New Features (4/96)

Revised: 4/26/96
Security: Everyone

Enhanced PCI-Based Power Macintosh Models: New Features (4/96)

Article Created: 9 April 1996
Article Reviewed/Updated: 26 April 1996

TOPIC -----

What are the differences between the previous PCI-based Power Macintosh computers and the enhanced (speedbump) PCI-based Power Macintosh computers.

DISCUSSION -----

The new features in the enhanced PCI-based Power Macintosh computers include:

- Faster processor speeds: up to 150 MHz
- A second-level (L2) cache for higher performance in most models
- Larger sizes of internal hard disks: up to 2 GB
- The latest release of the Mac OS: System 7.5.3
- Multihoming support

Processor Types and Speeds

The clock speeds for the microprocessors in the enhanced Power Macintosh 7200, 7500, 8500, and 9500 computers are increased over their earlier counterparts. In addition, the microprocessor in the Power Macintosh 7600 is a PowerPC 604 instead of the PowerPC 601 used in the original Power Macintosh 7500. The updates are as follow:

Begin_Table

Model	Processor Type	Processor Clock Speed	Processor Bus Speed
Power Macintosh 7200	PowerPC 601	120 MHz	40 MHz
Power Macintosh 7600	PowerPC 604	120 MHz	40 MHz

Power Macintosh 8500	PowerPC 604	132 MHz	44 MHz
Power Macintosh 8500	PowerPC 604	150 MHz	50 MHz
Power Macintosh 9500	PowerPC 604	150 MHz	50 MHz

End_Table

Second-Level Cache
=====

All of the enhanced PCI-based Power Macintosh models, except the lowest-priced Power Macintosh 7200 models, include a second-level (L2) cache. The L2 cache provides up to 40% better performance.

The L2 cache in the Power Macintosh 9500/150 consists of 512 KB of fast static RAM. The size of the cache in the other models is 256 KB. The table in the configurations section of this article depicts this information.

Hard disk drive
=====

The internal hard drives of the enhanced PCI-based Power Macintosh computers consist of either 800 MB, 1.2 GB, or 2 GB. The table in the configurations section of this article depicts this information.

Macintosh System 7.5.3 1
=====

The enhanced PCI-based Power Macintosh computers include the latest version of the Mac OS, System 7.5.3. For a description of the new features of System 7.5.3,

Configurations
=====

Begin_Table

Model	DRAM	Hard Drive	L2 Cache
=====	====	=====	=====
Power Macintosh 7200/100	8 MB	800 MB	-
Power Macintosh 7200/120	8 MB	1.2 GB	-
Power Macintosh 7200/120	8 or 16 MB	1.2 GB	256K
Power Macintosh 7600/120	16 MB	1.2 GB	256K
Power Macintosh 8500/132	16 MB	1.2 GB	256K
Power Macintosh 8500/150	16 MB	2 GB	256K

Power Macintosh 9500/150

16 MB

2 GB

512K

End_Table

Multihoming

=====

The enhanced models of the PCI-based Power Macintosh computers have a new version of the Curio IC, CurioPrime, that supports multihoming. Multihoming, also called multiporting, makes it possible for AppleTalk to be active on more than one network port on the computer at the same time.

Multihoming is most important for Macintosh computers with PC Compatible cards installed so users can have simultaneous TCP/IP and Netware sessions.

This article was published in the Information Alley on 25 April 1996.

Article Change History:

26 Apr 1996 - Added alley keyword.

19 Apr 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19588



Tech Info Library

Macintosh 5400 & 6400: PCI Expansion Slot (11/96)

Revised: 11/15/96
Security: Everyone

Macintosh 5400 & 6400: PCI Expansion Slot (11/96)

Article Created: 9 April 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

What type of expansion slots do the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers have? Are the slots an LC-PDS compatible slot similar to those found in the Power Macintosh 5200 and 5300 series computers?

DISCUSSION -----

The I/O expansion slots in the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers are PCI (peripheral component interconnect) expansion slots and are not compatible with LC-PDS expansion cards, such as those compatible with the Macintosh LC family of computers, the Macintosh 630 series, or with cards that operate in the I/O expansion slot in Power Macintosh 5200, 5300, 6200, and 6300 series computers.

The Power Macintosh 5400 series and the Macintosh Performa 6360/160 computer have one PCI expansion slot whereas the Macintosh Performa and Power Macintosh 6400 series have two PCI expansion slots. These computers accept standard 7-inch (6.88-inch) PCI cards as defined by the PCI Local Bus Specification, Revision 2.0. The PCI bus is a 32-bit multiplexed address and data bus, and does not support the optional 64-bit bus extension signals or cache support signal. The PCI expansion slot has a 33.33 MHz system clock.

A total of 15 watts of power is provided for the PCI expansion slot. Both 5 volts and 3.3 volts are supplied; the total power consumed by both voltages must not exceed the 15-watts maximum.

To install a PCI card into Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers, you need to install a right angle PCI adapter into the PCI expansion slot on the logic board. This adapter is included with these computers and replacement adapters are available from Apple-authorized Service Providers.

The following computers are in the corresponding Macintosh families:

- Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- Macintosh 5300CD family: Macintosh 5300/100 LC, Performa 5300.
- Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.
- Macintosh 6300CD family: Performa 6300, Performa 6290

Article Change History:

15 Nov 1996 - Added 6360.

02 Aug 1996 - Added 6400.

15 Apr 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19589



Tech Info Library

Macintosh 5260,5400,6400 & 6360: L2 Cache Differences (11/96)

Revised: 11/15/96
Security: Everyone

Macintosh 5260,5400,6400 & 6360: L2 Cache Differences (11/96)

Article Created: 9 April 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

I realize that the Power Macintosh 5260/100, Power Macintosh 5400 and 6400, Macintosh Performa 6400 series, and Macintosh Performa 6360/160 computers accept an optional 256K L2 Cache Card. However, I'd like to know if they use the same card, and if not, if the two cards are compatible with each other.

DISCUSSION -----

Although the Power Macintosh 5260/100, Power Macintosh 5400 and 6400, Macintosh Performa 6400 series, and Macintosh Performa 6360/160 computers accept an optional High-Performance Module (256K L2 cache card), the modules are not interchangeable. The Power Macintosh 5260/100 accepts a 160-pin L2 cache SIMM card whereas the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers accept a 160-pin L2 cache DIMM card.

For the Power Macintosh 5260/100, you need to use the High-Performance Module for Power Macintosh 5260, part number M4849LL/A.

The Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers require the High-Performance Module for Power Macintosh 5400 and Performa 6400, part number M4505LL/A.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

15 Nov 1996 - Added 6360 info.
02 Aug 1996 - Added 6400 info.
20 Jun 1996 - Corrected part number

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19590



Tech Info Library

Power Macintosh 5400 & Performa 6400:Communications Slot (11/96)

Revised: 11/15/96
Security: Everyone

Power Macintosh 5400 & Performa 6400:Communications Slot (11/96)

Article Created: 9 April 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

Is the communications slot in the Power Macintosh 5400 and 6400 series; Macintosh Performa 6400 series; and the Macintosh Performa 6360/160 computers compatible with the communications slot in the Power Macintosh 5200 and 5300 series computers?

DISCUSSION -----

Overview

The logic board in the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers has a communications slot that allows the computer to support a communications module without occupying the PCI expansion slot. The PCI-bus based communications slot connector is a 112-pin half-height microchannel connector. Cards that use the communications slot are memory mapped into the I/O space of these computers through the parallel bus.

Compatibility

The communications slots in the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers are PCI bus compatible slots and are, in general, not compatible with communication cards that are used with the Macintosh LC family of computers, the Macintosh 630 series, or Power Macintosh 5200, 5300, 6200, and 6300 series computers. The Tech Info Library article titled, "Communications Slot: Specifications" has more information about the communications slot used with Power Macintosh 5200, 5300, 6200, and 6300 series computers.

Such cards will not physically fit into the communications slot of the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers because the communications slot is keyed at the opposite end (notches). If you line up the notches to install a comm slot I card* into these

computers, the connector will face inwards, which will prevent you from being able to use the card. In addition, the two communications slots are not fully signal compatible.

The exception is that cards which do not use the bus, such as serial modem cards, can be designed to work in either type of communications slot. The power, ground, serial, and audio signals of the communications slots in the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers are located on the connector in such a way that a dual-keyed (cutout) modem card will fit and operate in the Macintosh LC family of computers, the Macintosh 630 series, or Power Macintosh 5200, 5300, 6200, 6300 series computers, and Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers communications slot.

Serial modems designed for universal operation must not attempt to access the parallel bus of either the 68030-bus or the PCI-bus communications slots to be compatible in both configurations.

*Note: To distinguish between those cards that are compatible with the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers from those compatible with earlier models, the communication slots themselves are named distinctly. The communications slot in previous models is referred to as "comm slot I" whereas the slots in the Power Macintosh 5400 and Macintosh Performa 6400 are called "comm slot II".

Installation

A communications card can be installed by either the user or an Apple-authorized Service Provider. The communications card is mounted vertically in the connector and its I/O connector is accessed through the communications port access hold on the right hand side of the back panel.

Available Cards

Apple announced several Ethernet CS II (Communication Slot II), including:

- 10BaseT (twisted pair) Ethernet Card (M4772ZM/A)
- 10Base2 (thin coax) Ethernet Card (M4773ZM/A)
- AAUI (Apple standard) Ethernet Card (M4774ZM/A)

The Power Macintosh 5400/120 and the Power Macintosh 6400/200 include the 10BaseT Ethernet CS II Card, but it and the other cards will also be available as standalone cards as well. The Macintosh Performa 6400 series and the Macintosh Performa 6360/160 computers do not include an Ethernet Card, but they do have an internal 28.8 kbps Global Village or Apple Geoport modem installed in the communications slot.

Note:

The following computers are in the corresponding Macintosh families:

- Macintosh 630CD family: LC 630, Quadra 630, Performa 630, Performa 635,

Performa 636, Performa 637, Performa 638, and Performa 640.

- Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

- Macintosh 5300CD family: Macintosh 5300/100 LC, Performa 5300.

- Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.

- Macintosh 6300CD family: Performa 6300, Performa 6290

Article Change History:

15 Nov 1996 - Added 6360 information.

02 Aug 1996 - Added 6400 information.

30 May 1996 - Added reference to "Communications Slot: Specifications."

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Tech Info Library Article Number:19591



Tech Info Library

Macintosh Performa 6320CD: Description (9/96)

Revised: 9/25/96
Security: Everyone

Macintosh Performa 6320CD: Description (9/96)

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Article Created: 10 April 1996
Article Reviewed/Updated: 25 September 1996

TOPIC -----

This article contains a description of the Macintosh Performa 6320CD.

DISCUSSION -----

Overview

=====

The Macintosh Performa 6320CD is a powerful and versatile system that brings you increased system speed and built-in video-in and TV tuner capability.

The Apple Macintosh Performa 6320CD computer uses a state-of-the-art PowerPC 603e processor running at 120 megahertz to deliver the highest performance available to date in the Performa product line.

The Performa 6320CD will meet your needs well into the future, not only with its robust performance, but also with a 1.2-gigabyte hard drive--large enough to store applications and information for years to come.

This affordable system includes multimedia features that can be expensive add-ons with other computers. A quadruple-speed CD-ROM drive accesses CD-based data quickly and plays audio and video segments smoothly. Stereo 16-bit sound provides high-quality audio playback, while an audio-input port lets you record your own sounds. The Performa 6320CD also includes the Apple TV/Video System, which allows users to connect to external video sources and capture images as well as view television programming with the aid of a TV antenna.

The machine also comes with special features for telephony. The high-speed internal fax modem works with the Apple PlainTalk microphone (included with the computer) and special software to let you use the computer as a speakerphone and a digital answering machine.

A trial version of America Online is included with every Performa 6320CD

..TIL19594-Macintosh_Performa_6320CD-Description_9-96_(TA35299).pdf

computer. Subscribers can access World Wide Web sites, Internet electronic mail—and, of course, the news and information provided by America Online.

The 6320CD is a complete, ready-to-use multimedia system. Packed in one box are the computer (with Apple System 7.5 software already loaded), a color display, a keyboard, a mouse, an internal modem, and a microphone. Also included are more than a dozen home, education, and home-business programs, plus a collection of multimedia reference CDs.

Features

=====

Complete, ready-to-use system

- Computer, color display, keyboard, mouse, and all necessary cables in one box
- Apple System 7.5 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, and Macintosh PC Exchange software
- Internal fax modem supports speeds up to 28.8-kbps data and 14.4-kbps electronic fax send/receive as well as speakerphone and digital answering machine capabilities
- Built-in quadruple-speed, tray-loading CD-ROM player
- Front-panel volume control and headphone/speaker jack
- CD-quality digital sound
- Apple TV/Video System

Included software

=====

- Macintosh System 7.5.3
- At Ease 2.0.3
- Adobe Acrobat 2.0.1
- Apple Video Player
- Global Fax
- Connectix Desktop Utilities 1.0.4z
- HyperCard Player 2.3
- ClarisWorks 4.0v4
- Quicken 96 SE (Special Edition)
- America Online 2.6
- MegaPhone for Performa
- WealthBuilder
- Espresso
- MacLink Plus/Easy Open Translators
- At Ease
- Virex
- The Writing Center
- The American Heritage Dictionary
- Mangia Special Edition
- ClickArt Performa Collection
- MacGALLERY Clip Art Treasure Pak
- Power Pete
- Lode Runner

CD-ROM titles

=====

- The Grolier Multimedia Encyclopedia
- TIME Almanac Reference Edition
- 3D Atlas
- The Family Doctor
- Smithsonian's America
- Avid VideoShop
- Club KidSoft CD
- Sesame Street Numbers
- My First Incredible, Amazing Dictionary
- Making Music by Voyager
- Descent
- Hollywood
- Buried in Time
- Allied General
- F/A-18

Ordering Information

=====

Macintosh Performa 6320CD 16/1.2GB/4xCD/28.8

- Macintosh Performa 6320CD computer with 16 MB of RAM, 1 MB of video memory, built-in AppleCD 600i internal quadruple speed CD-ROM player, 1.4 MB Apple SuperDrive floppy disk drive, internal 1.2 GB hard disk drive
- Global Village 28.8 internal modem
- Apple Multiple Scan 15" Display
- AppleDesign Keyboard
- Apple PlainTalk microphone
- Order number M4957LL/A

Optional Enhancements

- Apple MPEG Media System

Order No. M4243LL/A

- Apple Video System

Order No. M2894LL/C

- Apple TV/Video System

Order No. M2896LL/C

- Apple Presentation System

Order No. M2895LL/A

- Apple Ethernet LC Thin Coax Connection

Order No. M33462Z/A

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

25 Sep 1996 - Removed keyword.

10 Jun 1996 - Modified modem information.

29 May 1996 - Changed distribution status.

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Tech Info Library Article Number:19594



Tech Info Library

Macintosh Performa 6320CD: Technical Specifications (9/96)

Revised: 9/25/96
Security: Everyone

Macintosh Performa 6320CD: Technical Specifications (9/96)

=====

Article Created: 10 April 1996
Article Reviewed/Updated: 25 September 1996

TOPIC -----

This article contains the technical specification for the Macintosh Performa 6320CD.

DISCUSSION -----

Microprocessor

=====

- PowerPC 603e processor running at 120 MHz
- Integrated floating-point unit
- 40 MHz, 64-bit bus
- 256K level 2 cache
- 32K internal cache

Memory

=====

- Comes with 16 MB of RAM (uses one SIMM socket)
- Expandable to 64 MB of RAM using two 32 MB SIMMs
- Uses 72-pin, noncomposite, 80-nanosecond or faster DRAM SIMMs

Disk drives

=====

- Internal 1.2GB hard disk drive
- Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal, quadruple-speed AppleCD 600i CD-ROM drive

Modem

=====

- Internal, up to 28.8-kbps data and 14.4-kbps electronic fax send/receive

- Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- Stereo 16-bit sound
- Built-in speaker
- Sound-output port
- Sound-input port (can be used to connect the Apple PlainTalk microphone included with the computer)
- Front headphone jack and volume control

Interfaces

=====

- Apple Desktop Bus port for mouse, keyboard, and other devices
- Monitor port (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- Serial port (RS-232/RS-422) for an AppleTalk network connection, other networking or communications equipment, or a printer
- SCSI interface port for connecting as many as five external SCSI devices, such as disk drives or CD-ROM drives
- LC processor-direct expansion slot
 - Compatible with most Macintosh Performa 400 and 500 series; Performa 630; Macintosh Quadra 605; and Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630 processor-direct cards
 - Can be used for an Apple MPEG Media System card or other specialized card
- Communications slot for a modem (used by Global Village modem)
- Composite and S-video inputs for video viewing and capture
- Integrated TV tuner to attach to TV antenna
- Infrared remote control

Display support

=====

- Apple displays up to 15 inches through a 1 MB DRAM video buffer (independent of system RAM)
- Wide range of VGA and SVGA displays from other vendors

Color support

=====

- Offers 16-bit color for display of up to 32,768 colors on monitors using 640x480-pixel resolution
- Provides 8-bit color for display of 256 colors on monitors using 800xpixel or 832x624-pixel resolution

Electrical requirements

=====

- Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- Frequency: 50 to 60 Hz
- Power: 55 W maximum

Size and weight

=====

- Height: 4.3 in. (10.95 cm)

- Width: 12.6 in. (32.0 cm)
- Depth: 16.5 in. (41.9 cm)
- Weight: 19 lb. (8.6 kg)

Operating environment

=====

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 5% to 95%, noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- CloseView software magnifies image up to 16 times
- Easy Access software for sequential combination keys, and cursor control from the numeric keypad
- "Visual beep" replaces audible system alerts

Apple Multiple Scan 15 Display

=====

- 15-inch diagonal RGB color display (13.3-inch diagonal viewable image size)
- Up to 832x624-pixel resolution at a scan frequency of 75 Hz
- 0.28-mm dot pitch
- Meets the strictest international magnetic-field emissions requirements (SWEDAC MPR2)
- Height: 16.7 in. (42.4 cm)
- Width: 15.9 in. (40.5 cm)
- Depth: 17.8 in. (45.2 cm)
- Weight: 31.0 lb. (14 kg)

AppleDesign Keyboard

=====

- Provides adjustable keyboard slope
- Includes function keys, numeric keypad, cursor arrow keys, and special screen-editing keys

Apple Desktop Bus Mouse II

=====

- Round shape fits contour of the palm of the hand
- Large button allows easy clicking and dragging

Article Change History:

25 Sep 1996 - Removed keyword.
29 May 1996 - Changed distribution status.
19 Apr 1996 - Updated information.

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Tech Info Library Article Number:19595



Tech Info Library

MacTCP on PCI-Based Macintosh Computers Not Supported (5/96)

Revised: 5/8/96
Security: Everyone

MacTCP on PCI-Based Macintosh Computers Not Supported (5/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 8 May 1996

TOPIC -----

Can I run the MacTCP control panel on my PCI-based Power Macintosh computer (7200, 7500, 8500, or 9500)?

DISCUSSION -----

No, you should not have MacTCP running on PCI-based Power Macintosh computers. Prolonged use of MacTCP can damage system software to the extent that Open Transport networking will not work properly. If Open Transport no longer functions properly, you need to perform a clean installation of the system software as described in the Power Macintosh User's Guide that came with the computer. The information below is from the PCI-based Power Macintosh Read Me files, and it recommends removing MacTCP.

Important Information About Open Transport Networking

MacTCP

After you install new networking software on your hard disk, if you have problems with TCP/IP applications, look in the Control Panels folder for a MacTCP file. If one is there, remove it from the Control Panels folder and restart your computer. Each time you install new networking software, you may want to verify whether or not the software's installer also installed MacTCP, and follow this procedure.

Article Change History:
08 May 1996 - Included additional information on clean system install.

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Tech Info Library Article Number:19596



Tech Info Library

At Ease and Open Transport: 680x0 Computers Issue (4/96)

Revised: 4/10/96
Security: Everyone

At Ease and Open Transport: 680x0 Computers Issue (4/96)

=====

Article Created: 10 April 1996

TOPIC -----

I'm using At Ease on a 680x0-based Macintosh computer. After installing System 7.5 Update 2.0 and enabling Open Transport with the Network Software Selector, my computer hangs during startup, while the extensions are loading.

DISCUSSION -----

As of March 1996, At Ease is not compatible with Open Transport. This includes all versions, At Ease 3.0.1 and earlier.

The work around is to use Classic AppleTalk instead of Open Transport. A future update for At Ease will correct this issue.

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Tech Info Library Article Number:19597



Tech Info Library

Power Macintosh 5400 & Performa 6400: Adding Memory (11/96)

Revised: 11/26/96
Security: Everyone

Power Macintosh 5400 & Performa 6400: Adding Memory (11/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 26 November 1996

TOPIC -----

I need to add memory to my Power Macintosh 5400/120 computer, but I'm not sure what type of memory I need to purchase. Does this computer use SIMMs or DIMMs?

DISCUSSION -----

Compatibility
=====

The Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers use JEDEC-standard 168-pin DIMMs (dual inline memory module) DRAM cards rather than the 72-pin SIMM DRAM cards used in the Power Macintosh 5200 and 6200 computers. The DIMMs should be 64-bit-wide, 168-pin fast-paged mode, 70ns RAM access time or faster, and 2K refresh rate. Although you can use EDO memory in the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers, you will not experience any benefit from doing so. SIMMs from older Macintosh computers are not compatible with your computer and should not be used.

Additionally, you cannot necessarily use the same DIMMs as you can in other PCI-based Power Macintosh computers such as the 7200, 7500, 7600, 8500, and 9500 series computers. These other Power Macintosh computers can support DIMMs with either a 2K or 4K refresh rate. However, the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers can only support DIMMs with a maximum of a 2K refresh rate*. DIMMs incorporating 4K refresh parts will function in these computers but at half the memory density. For example, the computers will only recognize 16 MB of a 32 MB DIMM, and so on.

To prevent compatibility problems, Apple has contacted major RAM developers in several ways. In the Developer Notes for the Power Macintosh 5400/120 and for the Macintosh Performa 6400 series, the following note was added:

"DRAM DIMM developers should note that the PSX memory controller on the main logic board of the Power Macintosh 5400 computer does not provide support for 4 M by 4 bits (12 by 10 addressing) or 1 M by 16 bits (12 by 8 addressing) DRAM devices."

Additionally, Apple sent a message to specific vendors which stated:

"The PSX memory controller does not support 4Mx4 DRAM devices with 12 by 10 addressing nor 1Mx16 devices with 12 by 8 addressing. Other 16 MBit devices are compatible, for a full list refer to the Developer Note."

The following RAM developers received this note:

- Vikking
- Techworks
- SQP
- Southland
- PNY
- Newer Technology
- Lifetime, Kingston
- Delta Lu, Comtech
- Apple Japan

DIMMs available from Apple Computer are 2K refresh rate only so you can safely use them in your Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers.

*Notes:

- Refresh rates lower than 2K, such as 256K or 1K are also supported.
- The only memory devices with a 4K refresh rate which is supported on the Power Macintosh 5400/120 and Macintosh Performa 6400 series are 2M x 8 devices with 12 x 9 addressing.

Expansion

=====

The Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers have two RAM expansion slots on the logic board. You can use any DRAM configuration with DIMMs of these sizes: 8, 16, 32, or 64 MB. The exact configuration depends on the density of the DRAM chips that are mounted on the DIMMs.

You can increase your computer's DRAM to up to a maximum of 136 MB (the 8 MB that comes on your computer's logic board, plus an additional 128 MB for a total 136 MB).

DIMMs can be installed one or more at a time. The Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers support only linear memory organization. Therefore, no performance gains are seen when two DIMMs of the same size are installed. Any size DIMM can be installed in either DIMM slot, and the combined memory of all of the DIMMs installed will be configured as a contiguous memory space.

Article Change History:

26 Nov 1996 - Clarified refresh rate support.

15 Nov 1996 - Added 6360.

17 Sep 1996 - Corrected expansion information.

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Tech Info Library Article Number:19598



Tech Info Library

CyberDog: Q&A about Java & Netscape (7/96)

Revised: 7/2/96
Security: Everyone

CyberDog: Q&A about Java & Netscape (7/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 2 July 1996

TOPIC -----

This article contains information on how OpenDoc, Cyberdog, and Java work together. This information is contained in the Apple product slick titled "Harnessing component software & the Internet. OpenDoc & Cyberdog."

DISCUSSION -----

"With the advent of OpenDoc and Java, there is now a unique opportunity for two very powerful technologies to work together. OpenDoc's component approach and Java's portability make for a powerful combination." —Joshua D. Wachs, president, Natural Intelligence, Inc.

"Cyberdog allows our users to create personalized living documents that contain live Internet data." —Roger Bell, president, Digital Harbor, L.C.

There are two powerful forces driving today's worldwide software industry. One force is component software. The other is the Internet. OpenDoc and Cyberdog harness those two forces, providing opportunities and benefits for developers and users alike.

Here is a look at OpenDoc and Cyberdog: how they relate to each other, and to technologies such as Java (from Sun Microsystems) and Netscape Navigator (from Netscape Communications Corporation).

Question: How do OpenDoc and Cyberdog relate to each other?

Answer: OpenDoc is an open, multiplatform architecture for component software: self-contained, reusable software modules. It is supported by CI Labs, a nonprofit association of more than 300 industry leaders that includes Apple Computer.

Apple used OpenDoc to create Cyberdog, a new technology that integrates network services into the Mac OS, bringing live links and views of the Internet to any document. And making the Internet as easy to use as a Macintosh computer.

Question: How are OpenDoc and Java similar?

Answer: OpenDoc and Java are each based on the premise that, in the future, software will be composed of small modules that can be bound together at run time. The creators of both technologies believe that this will lead to greater innovation in the marketplace, and more customized solutions for users.

Question: How are OpenDoc and Java different?

Answer: OpenDoc is a component architecture. Java is an object-oriented programming language. The OpenDoc architecture contains everything necessary for a complete component architecture, including persistent storage. OpenDoc components can be written in any language including Java.

Question: Do OpenDoc and Java compete with each other?

Answer: OpenDoc and Java are, in fact, complementary technologies. Apple intends to ensure that OpenDoc and Java work together. For example, an OpenDoc component can be written to understand how to execute Java applets. In this way, Java applets can be embedded within any OpenDoc container application, not just in an Internet browser. OpenDoc can become the bridge between today's desktop applications and tomorrow's network-based applets.

Question: What will drive a developer's choice of language when writing OpenDoc components?

Answer: Developers will choose whether to use C, C++, or Java on a case-by-case basis. If cross-platform development is the primary goal—and performance less of an issue—Apple expects many developers to choose Java. If high performance and tight integration with the operating system are paramount, developers are likely to use C or C++.

Question: What are the benefits Cyberdog offers to users?

Answer: The conventional Internet model is to "put everything into the browser." The new Cyberdog model is "put the browser everywhere." Cyberdog allows users to integrate live Internet data in their desktop applications, by embedding Cyberdog components (such as the web browser) into any OpenDoc-compatible application. For example, ClarisWorks. This brings live links and views of the Internet to any document, whether it's a monthly report, lesson plan, or executive information system.

Question: How does Cyberdog relate to other Internet technologies?

Answer: Cyberdog fits in between browsers, such as Netscape Navigator, and HTML authoring tools, like Adobe PageMill. Cyberdog, with its ability to embed live Internet data into OpenDoc documents, allows users to create—and store on the desktop—custom views of the Internet.

Question: Will users choose Cyberdog over Netscape Navigator?

Answer: Most users are likely to have both Netscape Navigator and Cyberdog on their systems. Apple believes that users who want to just quickly browse a web site will continue to use Netscape Navigator. Users who want to integrate the Internet into their desktop applications—or create custom Internet solutions—will use Cyberdog.

Question: Does the Netscape plug-in architecture compete with OpenDoc?

Answer: OpenDoc is a general-purpose component architecture. It does not compete with the Netscape plug-in architecture, which is a highly specialized mechanism for adding viewers to Netscape Navigator. An OpenDoc component that allows any Netscape plug-in to work with any OpenDoc container application, would demonstrate the complementary nature of the two architectures.

Cyberdog Development Opportunities

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Created entirely with OpenDoc, Cyberdog integrates network services into the Mac OS, bringing live links and views of the Internet to any document. It makes the Internet as easy to use as a Macintosh. Apple designed Cyberdog to create a ready market for developers. Developers can ship it with their products. And every Cyberdog component can be replaced or enhanced. Developers can create replacement web or Gopher browsers, Notebooks, Logs, or other Cyberdog components. Or they can choose to offer Cyberdog users totally new functionality. Perhaps a videoconferencing component, or real-time "chat" capabilities. Other opportunities include developing tools to analyze and manipulate raw data from the Internet. All application developers can realize benefits from Cyberdog. For instance, by simply adding OpenDoc support to your existing applications, you also get Cyberdog. Which gives you Internet connectivity, without recoding your software. Find out more about OpenDoc and Cyberdog.

Visit our Internet home page: <http://opendoc.apple.com>

Article Change History:

02 Jul 1996 - Replaced entire discussion with current information.

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Tech Info Library Article Number:19599



Tech Info Library

System 7.5 Update 2.0: Removes MacTCP Token Ring Ext. (4/96)

Revised: 4/18/96
Security: Everyone

System 7.5 Update 2.0: Removes MacTCP Token Ring Ext. (4/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 18 April 1996

TOPIC -----

I have a Macintosh computer running TCP/IP on a Token Ring network. I recently installed System 7.5 Update 2.0, but now I am unable to select Token Ring in the MacTCP control panel. What's going on?

DISCUSSION -----

During the installation of System 7.5 Update 2.0, the MacTCP Token Ring extension is removed. However, the extension is necessary to run TCP/IP protocol over a Token Ring network from a Nubus-based Macintosh computer. To resolve this, you'll need to reinstall the MacTCP Token Ring extension. If you do not have the disks from which you originally got the MacTCP Token Ring extension, you can download it from the online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
18 Apr 1996 - Updated technical information.

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Tech Info Library Article Number:19600



Tech Info Library

Power Macintosh 5260/100: Description (4/96)

Revised: 4/15/96
Security: Everyone

Power Macintosh 5260/100: Description (4/96)

Article Created: 10 March 1996
Article Reviewed/Updated: 15 April 1996

TOPIC -----

This article contains a description of the Power Macintosh 5260/100 computer.

Note: This computer is only available through educational channels.

DISCUSSION -----

The Power Macintosh 5260/100 computer brings 100-MHz PowerPC processor performance to a new low cost. And this is a system that can grow as your needs change, with such options as 256K of Level 2 cache memory to further boost processor performance, and a wide variety of multimedia, networking, and communications expansion cards.

The Power Macintosh 5260 is an all-in-one system, so it's economical, easy to set up, and easy to start using. And it's optimized for multimedia, with built-in features and expansion slots that let you enjoy stunning graphics, video, and audio now, and add advanced features later.

Already included in the main unit are a 14-inch color display (diagonal viewable image size 12.3 inches), an 800-megabyte hard disk, a 1.4 MB floppy disk drive, a quadruple-speed CD-ROM drive, a microphone, and stereo speakers. The whole system is on a tilt-and-swivel base that lets you position it precisely for the most comfortable viewing. A keyboard and mouse are also provided.

The 16-bit sound provides high-quality audio playback through the built-in stereo speakers or external speakers (not included). You can record voice, music, and other audio of your own choosing through the front microphone or the rear audio-input port.

Multimedia expansion is easy on the Power Macintosh 5260 computer. Your computer comes with special slots for video-input, TV-tuner, and communications or networking cards. A general-purpose slot supports a variety of expansion

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options, such as an MPEG card for viewing CD-ROM-based movies and interactive "edutainment" programs. You can also add video-output capability to display your Macintosh screen on a TV or a projection system, or to record your work on a VCR.

Features

=====

Complete, ready-to-use system

- Computer, 14-inch color display (12.3-inch diagonal viewable image size), CD-ROM drive, floppy disk drive, hard disk, micro-phone, and speakers built into one unit
- Matching keyboard, mouse, and all necessary cables
- Apple System 7.5 software, including Apple Guide software for step-by-step help with basic system operation, and QuickTime multimedia software
- Built-in quadruple-speed, tray-loading CD-ROM player
- Front-panel volume control and headphone/speaker jack
- CD-quality digital sound

Ordering Information

=====

Power Macintosh 5260/100

- Computer with built-in 14-inch display (12.3-inch diagonal viewable image size), 800MB hard disk, quadruple-speed CD-ROM drive, and Apple SuperDrive floppy disk drive. Mouse, keyboard, and cables also included.
- Order No: M4982LL/A

Optional Enhancements

- High Performance Module
(256K Level 2 Cache)
Order No. M4849LL/A

- Apple MPEG Media System
Order No. M4243LL/A

- Apple Video System
Order No. M2894LL/C

- Apple TV/Video System
Order No. M2896LL/C

- Apple External Video Connector
Order No. M4099LL/A

- Apple Presentation System
Order No. M2895LL/A

- Apple Ethernet CS Twisted-Pair Card
Order No. M3065Z/A

- Apple Ethernet CS AAUI Card

Order No. M3066Z/A

- Apple Ethernet CS Thin Coax Card

Order No. M2708Z/A

Article Change History:

15 Apr 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19601



Tech Info Library

Power Macintosh 5260/100: Technical Specifications (8/96)

Revised: 8/28/96
Security: Everyone

Power Macintosh 5260/100: Technical Specifications (8/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 27 August 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 5260/100 computer.

Note: This computer is only available through educational channels.

DISCUSSION -----

Microprocessor

- 100-MHz PowerPC 603e
- 16K internal cache
- 40-MHz, 64-bit bus
- Optional 256K Level 2 Cache

Memory

- 16 MB of RAM, expandable to 64 MB
- Two 72-pin, 70ns DRAM SIMM slots, no RAM soldered on-board.

Disk Drives

- Built-in Apple SuperDrive 1.4 MB floppy disk drive, which uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- Internal 800 MB IDE hard disk drive
- Internal quadruple-speed AppleCD 600i CD-ROM drive

Expansion Slots

- One 114-pin LC 030 PDS slot
- One 112-pin Communications slot for modem or Ethernet card supporting these

Apple Ethernet cards:

- Apple Ethernet CS Twisted Pair Card
- Apple Ethernet CS Thin Coax Card
- Apple Ethernet CS AAUI Card
- One 60-pin video input slot for realtime video display
- One L2 Cache SIMM slot

Ports

- One Mono sound input port
- One Stereo sound output port (16-bit)
- One Apple Desktop Bus (ADB) port
- Two serial (RS-422) ports (do not support GeoPort)
- One SCSI port for connecting as many as six external devices (including CD-ROM)

Display

- 14-in (12.3-inch diagonal viewable image size) shadow-mask color display
- Video Modes: 640x480 @ 16-bit
- .28 mm dot pitch
- 66.67 Hz refresh rate
- Tilts from

Sound

- 16-bit on-board stereo sound output and mono sound in (16-bit CD and video)
- Built-in stereo speakers
- Sound-output ports
- Sound-input port
- Front headphone jack and volume control
- Built-in monophonic microphone

Expansion interfaces

- LC processor-direct slot for networking, communications, and multimedia expansion, such as a modem, Ethernet card, or MPEG video card
 - Compatible with most Macintosh Performa 400 and 500 series; Macintosh Quadra 605; Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630; Performa 630; and Performa and Power Macintosh 5200, 5300, 6200, and 6300 series

processor-direct cards

- Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- Two RS-232/RS-422 serial ports for an AppleTalk network connection, other networking connections, communications equipment, or a printer (some models include built-in modem that uses one serial port)
- SCSI interface port for as many as five external SCSI devices, such as disk drives or CD-ROM drives
- Communications slot for Ethernet card or fax/data modem card
- Video slot for video-input card (such as the Apple Video System)
- TV tuner connector and infrared control sensor for TV tuner card (such as the

Apple TV/Video System)

Electrical requirements

- Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- Frequency: 50 to 60 Hz
- Power: 240 W maximum
- U.S. EPA Energy Star compliant

Size and weight

- Height: 17.5 in. (44.5 cm)
- Width: 15.1 in. (38.3 cm)
- Depth: 16 in. (40.6 cm)
- Weight: 45 lb. (20.5 kg)

Operating environment

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° F (-40° to 47° C)
- Relative humidity: 20% to 95%, noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Disability access

- CloseView software magnifies screen image up to 16 times
- Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- "Visual beep" replaces audible system alerts

Article Change History:

27 Aug 1996 - Correct the internal hard disk size.
06 Jun 1996 - Removed word to avoid confusion.
15 Apr 1996 - Updated information.

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Tech Info Library Article Number:19602



Tech Info Library

System 7.5 Update 2.0: Drive Setup, HD SC Setup Install (4/96)

Revised: 4/10/96
Security: Everyone

System 7.5 Update 2.0: Drive Setup, HD SC Setup Install (4/96)

=====

Article Created: 10 April 1996

TOPIC -----

Where can I find and install Drive Setup 1.0.4 which is mentioned in the following Read Me files?

System 7.5 Update 2.0: What's New in This Update (3 of 3)
System 7.5 Update 2.0: Overview and Installation Read Me

DISCUSSION -----

The following applications can be installed with the Custom Install option of the System 7.5 Update 2.0 installer:

- Apple HD SC Setup 7.3.5
- Battery Recondition 1.3 (certain PowerBook computers only)
- Drive Setup 1.0.4
- Disk First Aid 7.2.2
- SimpleText 1.3.1

You can install these applications by following the steps below:

- 1) Double-click the Installer icon.
- 2) Read the Welcome to System 7.5 Update Installer, then click Continue.
- 3) In the Destination Disk section of the Install System 7.5 Update window, in the lower left corner, click Switch Disk until the hard disk you want to install the software on appears.
- 4) Select Custom Install in the Easy Install pop-up menu, upper right corner.
- 5) Click on the triangle to the left of Application.
- 6) Select the applications you want to installed by clicking its checkbox.
- 7) Click Install.
- 8) Click Restart when the installation is completed.

Look in the Apple Extras folder for the applications you just installed.

This article was published in the Information Alley on 10 April 1996.

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Tech Info Library Article Number:19603



Tech Info Library

System 7.5.3: How to Install Desktop Printers (4/96)

Revised: 4/11/96
Security: Everyone

System 7.5.3: How to Install Desktop Printers (4/96)

Article Created: 11 April 1996

TOPIC -----

I reinstalled the System 7.5.2 software on my PowerBook 5300cs, then I installed the System 7.5 Update 2.0. After doing this, I checked the LaserWriter printer driver. The LaserWriter driver is version 8.3.3, however I do not have the desktop printer icons.

How can I get this functionality? Why is it not included with the System 7.5 Update 2.0?

I did find Desktop Printing Software SW 1.0.3. The ReadMe file stated that I should not use this software unless desktop printing had already been installed. I installed it anyway, and it did not work.

DISCUSSION -----

Desktop Printing Software is included with System 7.5 Update 2.0, it is in TOME 7, however you must use the Custom Install feature to install it. Within the "Custom Install" area of the Installer, expand the "Printing SW Updates" item and click the "Desktop Printer 1.0.3" box. This installs all of the necessary resources for Desktop Printing. You will also need to enable Background Printing in the Chooser.

There are a couple of other ways to obtain the latest version of Desktop Printing software using specific printer installers such as Color LaserWriter 12/600 8.3.2 installer, Color StyleWriter 2500 installer, or Color StyleWriter 1500 installer.

The standalone Desktop Printing SW 1.0.3 installer ReadMe states a need for an earlier version of desktop printing software because of these other component requirements; Finder v7.1.4, Clipping Extension, Networking Extension, Thread Manager, Drag & Drop extension, and the Dragging Enabler.

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Tech Info Library

Apple Media Tool 2.0: Mouse Up Events Issue (4/96)

Revised: 4/11/96
Security: Everyone

Apple Media Tool 2.0: Mouse Up Events Issue (4/96)

=====

Article Created: 11 April 1996

TOPIC -----

In Apple Media 2.0, when trying to use a "Mouse Up" event for an object, the event is sent regardless of whether the pointer is within the hot spot of the picture when the mouse is released.

DISCUSSION -----

This behavior is being investigated by Engineering. In the meantime, there is a workaround.

Workaround
=====

For any object where this "Mouse Up" behavior is a problem, include a "Mouse Leave" event with a "Go to itself" link. This should prevent the Mouse Up event from processing when the mouse is released outside of the hot spot. However, this workaround may affect the playback of sounds and movies any time the pointer leaves that hot spot.

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Tech Info Library Article Number:19605



Tech Info Library

MacPPP 2.5 and AICK 1.0 (4/96)

Revised: 4/11/96
Security: Everyone

MacPPP 2.5 and AICK 1.0 (4/96)

=====

Article Created: 11 April 1996

TOPIC -----

This article tells you how to obtain MacPPP v2.5 for use with the Apple Internet Connection Kit (AICK) 1.0.

DISCUSSION -----

MacPPP v2.5 is an upgrade to the current version of MacPPP. Apple recommends that all AICK 1.0 users upgrade to MacPPP v2.5. You can find MacPPP v2.5 at Apple Computer's online software update areas.

These articles can help you locate the software update mentioned:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:19606



Tech Info Library

MacPPP v2.5 Read Me (4/96)

Revised: 4/11/96
Security: Everyone

MacPPP v2.5 Read Me (4/96)

Article Created: 11 April 1996

TOPIC -----

This article is the MacPPP version 2.5 ReadMe file.

DISCUSSION -----

Important Information about MacPPP v2.5 is in this Read Me. Before you install MacPPP v2.5, read the following information.

System Requirements

- Power Macintosh or Macintosh computer with a 68030 microprocessor or greater
- Macintosh system software version 7.5 or later
- MacTCP or Open Transport; if you are using Open Transport, you must use version 1.0.8 or later (version 1.1 is strongly recommended)

Open Transport Users

Open Transport v1.1 is strongly recommended for use with the Apple Internet Connection Kit and MacPPP. You must use Open Transport v1.0.8 or later.

Apple's System 7.5 Update 2.0 will install Open Transport v1.1 for you. Look for information about this update and others on Apple forums and Apple Web sites on the Internet.

Installing MacPPP v2.5

Make sure you've quit all open applications before you attempt to install MacPPP.

To install MacPPP on your hard drive, drag the MacPPP file onto your System Folder icon. If you are installing over an older version of MacPPP it will tell that an older version is installed, and ask for permission to install the newer

version. Click on the OK button. MacPPP will be automatically installed into your Extensions folder. Restart your Macintosh.

MacPPP is now installed.

Problems While Connecting

If you encounter problems while connecting and you use the Apple Internet Connection Kit, try the following:

Throw away the PPP Preferences file (located in the Preferences folder in your System Folder). Run the Apple Internet Dialer, and then Quit. The Apple Internet Dialer will create new MacPPP Prefs for you. Restart your Macintosh.

Changes From MacPPP v2.1.4

MacPPP v2.5 offers a number of bug fixes and changes from v2.1.4, which was included in the Apple Internet Connection Kit v1.0.

In addition to improved error handling, MacPPP v2.5 is now compatible with the following:

- Virtual Memory
- Apple Macintosh PowerBook computers
- Faceless background applications
- Berkeley Systems' After Dark screen saver
- most major third party Internet utilities

All Apple Internet Connection Kit v1.0 users should upgrade to MacPPP v2.5.

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Tech Info Library Article Number:19607



Tech Info Library

Apple Internet Connection Kit: FAQ (10/96)

Revised: 10/28/96
Security: Everyone

Apple Internet Connection Kit: FAQ (10/96)

Article Created: 12 April 1996
Article Reviewed/Updated: 28 October 1996

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) on the Apple Internet Connection Kit (AICK).

IMPORTANT: First make certain the computer meets AICK requirements:

- Type of Macintosh - 68030 microprocessor or newer computer.
- System Software - System 7.5 or later (for Apple Guide and MacTCP), Open Transport users should use version 1.1.1 or later.
- Amount of RAM - minimum 8 MB RAM, preferred 16 MB or more depending on how many Internet applications are running.
- Modem - minimum 9600 or 14,400 bps modem (28,800 bps recommended).

Questions in this FAQ

-
- 1) I keep getting "Not enough memory to launch Netscape" errors, what should I do?
 - 2) I keep getting "PPP timeout" errors when clicking Dial in the Apple Internet Dialer. What should I do?
 - 3) I get "DNS errors" in Netscape, what can I do?
 - 4) I cannot get AICK to install, and I get this error message, "Can't install to hard drive. A problem was found." What can I do?
 - 5) I keep getting a "Resource File" is damaged error when I try to open the Apple Internet Dialer. What can I do?
 - 6) I keep getting a PPP not active error when I try to open the Apple Internet Dialer. How do I fix this?

7) My settings in Config PPP and MacTCP are not being saved. How do I save them?

8) I cannot receive or send e-mail with E-Mailer Lite, however, I appear to connect to the Internet fine. What can I do?

DISCUSSION -----

1) Question: I keep getting "Not enough memory to launch Netscape" errors, what should I do?

Answer: Some Internet programs have an issue running with Virtual Memory (VM) turned on. When you are performing setup troubleshooting on those programs, it would be better to start with VM off, and turn VM on later, once the Internet software is setup and working properly.

It may be difficult to run Internet software with less than 8 MB RAM. Software that runs without color like e-mail, Gopher, Telnet, and others may be possible depending on how much RAM is used by System Software. However, Worldwide Web (WWW) browsers by themselves may use 4 MB to 8 MB RAM, or more, depending on which pluggins or add-ons are installed and in use.

Internet software can consume large amounts of RAM, especially if these applications remain open over time. It is fairly easy, on a Macintosh, to continue opening new windows, images, data files, and so on -- all of which use RAM. This is similar to a word processing application which will eventually run out of RAM, if we keep opening different files.

There are basically two ways you might run short of RAM on your Macintosh. An individual application like a WWW browser or e-mail program, could run out of RAM -- this is an Application RAM problem. The other is that system software may not have enough room to grow dynamically in the Macintosh computer's overall (or total) RAM space -- this is typically referred to a system heap problem (or system RAM problem).

2) Question: I keep getting "PPP timeout" errors when clicking Dial in the Apple Internet Dialer. What should I do?

Answer: PPP timeout errors usually occur when the PPP software is unable to set up its connection. There are several things to check:

First, make sure your modem is properly connected (a) to your Macintosh, (b) to the telephone line, and (c) that the modem is turned on. This accounts for most PPP timeout error messages.

Second, did you hear a dial tone prior your modem's attempting to connect? If not, check the phone line for proper dial tone; most modems let you connect a telephone to check for dial tone. If your modem does not allow a connection, you can take the modem's phone line and connect it to your telephone. If the modem's line does not have a proper dial tone, it will not work and PPP timeout errors will occur.

Third, check the modem selection and initialization (init) string. The Dialer includes the ability to select, add, or modify modem init strings. In the modem selection pop-up menu, an Add/Modify Modem command is available at the very top of the menu. This information is stored in the Modem Information preference file.

An init string is a group of commands and settings sent to the modem to start it, so it can function properly. Please see the TIL article entitled, "Modem Initialization Strings for MacPPP Access" for the correct string for your modem, or check with the modem manufacturer. Further information on init strings is also available by searching in the Tech Info Library using the search string "modem and initialization and string". Many modem manufacturer's web sites now exist for product information, software updates, and technical information such as modem init strings.

Additionally, your modem manufacturer or Internet service provider (ISP) may have additional suggestions for avoiding conflicts with PPP software. Generally, it may be helpful to turn off fax software, or other third-party additions to System Software, with the Extensions Manager control panel. Be careful to leave any needed telecom software -- like MacTCP or TCP/IP, Global Village Toolbox, Express Modem, and so on -- turned on.

Also, it may be helpful to zap the PRAM (clear the parameter RAM) on your Macintosh. This is especially helpful if you see an error message indicating that the serial port is in use. For further information on this, please see Tech Info Library article "How To Reset Parameter RAM". If you do zap PRAM, you may need to check that VM is off.

3) Question: I get "DNS errors" in Netscape, what can I do?

Answer: DNS (Domain Name Service), to use a simple explanation, is like a giant phone book for the Internet. It lets you type "http://www.apple.com" in a web browser and a DNS server on the net will return the proper IP address for this destination. Your web browser will then make it's query again, using the numerical IP address. It's easier for us to remember www.apple.com than 17.254.3.21 (the IP address for the www.apple.com host). Note that you can also type "http://17.254.3.21" and it works just like "http://www.apple.com". There are several reasons why you may get DNS errors, and several things you can do to fix them.

First, remove the file called MacTCP DNR (domain name resolver) from the root (or top level) of your system folder. This file will be recreated automatically when you restart your Macintosh, whether you are running classic networking (MacTCP) or Open Transport (TCP/IP). The DNR file may become corrupted, and removing it, should resolve some connection problems. Removing the MacTCP DNR file is the first and most important troubleshooting tip for AICK, and should be used prior to other actions. To replace the MacTCP DNR file, drag it to the Trash, restart your computer by choosing Startup from the Special menu, then empty the Trash.

Second, WWW Browsers sometimes can experience a corrupted cache file which could cause problems when logging on. Locate your browser's cache folder and drag it

to the Desktop Restart your computer and try the browser again. If it works now, it probably was a corrupted cache item.

Third, check to make sure you have the proper settings from your ISP. AICK stores these settings in the Apple Internet Dialer. If you have a backup of your Dialer settings, the Dialer can handle the backup and restoring of these settings. You can also check these settings in the MacTCP or TCP/IP control panels. This information must be correct for DNS to work.

Finally, the MacTCP prep file or TCP/IP Preferences file may be corrupted. These files are located in the System Folder's Preferences folder. There is less reason to throw these files away, unless your network administrator or ISP suggests that you do so.

WARNING: Throwing either the MacTCP prep file, or TCP/IP Preferences file in the Trash will result in a loss of your TCP/IP settings. Be sure you have this information written down and saved.

4) Question: I cannot get AICK to install, and I get this error message, "Can't install to hard drive. A problem was found." What can I do?

Answer: Try the following to resolve the issue:

- Unlock the System Folder by using the General Controls control panel and turn off System Folder Protection.
- Check to see if the Launcher is locked, if it is locked, unlock it.
- If you are still unable to reinstall AICK, Custom Remove the AICK software, do a clean install of your System Software to put a fresh System Folder on your hard drive and then reinstall AICK.

5) Question: I keep getting a "Resource File" is damaged error when I try to open the Apple Internet Dialer. What can I do?

Answer: The Dialer includes the ability to backup your providers settings, and restore from that backup. You can do this from the Dialer's File menu, choose "Backup Provider Information..." or "Restore Provider Information...". All users should perform a backup and save it. If a "Resource File is damaged" error occurs, you can restore good copies of the needed files from a previously saved backup.

This Backup function copies the files from Preferences/Internet Dialer Folder, so the restore function will not generate fresh preference files. Therefore, it is possible to backup files that may already be corrupted, and thus possibly restoring corrupted files. It is recommended that users backup their Internet Dialer Folder soon after the software is successfully set up.

If a backup with good settings is not available the Internet Dialer Prefs, Modem Information, reg server and <username> files in the Internet Dialer Folder of the Preferences Folder, can be moved to the Trash and reconfigured from the Dialer after restarting the computer.

If the Resource File is damaged error still occurs, check the following files:

- MacTCP DNR
- MacTCP Prep or TCP/IP preferences
- PPP preferences

Try moving these files to the Desk Top and restarting. Be aware some ISP information may need to be entered again. Having backup copies of MacTCP Prep or TCP/IP Preferences file, and PPP Preferences file is also advisable, but remember to compress them or keep them on a volume separate from the startup disk.

6) Question: I keep getting a PPP not active error when I try to open the Apple Internet Dialer. How do I fix this?

Answer: Typically, this error is caused by a corrupted PPP Preferences file which is located in the Preferences folder. Try replacing the PPP Preferences file by moving the PPP Preferences file to another hard disk, floppy, or compress this file. Be sure you have the PPP configuration information available because you may have to enter this information again after restarting the computer.

NOTE: Having more than one copy of PPP Preferences or MacTCP Prep on your startup disk may cause problems.

NOTE on SLIP software: SLIP software is not supported with the Internet Dialer. The Dialer is specifically set to work with PPP. The Dialer may not work properly if there is active SLIP software in the Control Panels or Extensions folders.

7) Question: My settings in Config PPP and MacTCP are not being saved. How do I save them?

Answer: It appears you are trying to configure the settings directly in Config PPP and MacTCP or TCP/IP control panels. All of these settings should be configured in the Apple Internet Dialer. Open the Apple Internet Dialer and choose Define Provider Information from the Provider menu to enter the information given by your Internet Service Provider.

If you do not want to use this preferred method as stated above, you can use the control panels TCP/IP, MacTCP, Config PPP, and so on. However, be aware that these control panels may support multiple configurations. If a second configuration is selected that does not match the information for a corresponding control panel, for example Config PPP with TCP/IP, then the Dialer may not work properly. For this reason, setting up your configuration information using the Apple Internet Dialer is recommended.

8) Question: I cannot receive or send email with EMailer Lite, however, I appear to connect to the Internet fine. What can I do?

Answer: Please check the following:

- Verify you have a good Internet connection by connecting to a web site.
- Make sure you are connected to the Internet before opening Emailer Lite.
- Make sure you are using the "Connect Now" command in Emailer Lite.
- Choose Internet Setup command in the Setup menu.
- The Internet Service Entry window must be filled in correctly for Emailer Lite to work properly. Verify the fields are filled out as shown below. If it's not, disable "Use Internet Configuration System" option and enter the information in the fields again. Or, locate the Internet Config application to correct the information in the Internet Config extension. Remember to Save this new information also.

The information should be in this format:

```
Account Name  = User's login           - this must be filled in
User Name     = User's actual name      - this must be filled in
Email address = User's Email address    - Internet Config *
Mail Account  = Example, Loginname@popserver.ISP.com - Internet Config *
Password      = User's Login Password   - Internet Config *
SMTP host     = The SMTP server host name. - Internet Config *
               For example from the Mail
               Account example above,
               the entry would be "popserver.ISP.com". **
```

Select Save and go to Connect Now. Make sure both Get and Send are enabled.

* Internet Config gets these values from the Internet Dialer. If you deselect the Internet Config checkbox, these fields will become blank and you will need to fill them in. Normally, the Internet Config values (the ones you inputted with the Dialer), should be fine.

** Some Internet mail administrators will set up a different server for sending mail. You will be told by your ISP or in house provider if this is the case. In this case, your SMTP host might be "smtp.ISP.com". This is because sending mail (simple mail transfer protocol or smtp) is a different protocol from receiving mail from a POP3 (Post Office protocol version 3) server. Therefore, on busy sites, administrators may wish to split up these functions over different machines.

Article Change History:

28 Oct 1996 - Complete article rewrite.
25 Sep 1996 - Made adjustment to answer to question 6.
19 Sep 1996 - Added keyword.

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Tech Info Library Article Number:19608



Tech Info Library

AICK 1.0, Apple Internet Dialer, & Open Transport 1.1 (5/96)

Revised: 5/7/96
Security: Everyone

AICK 1.0, Apple Internet Dialer, & Open Transport 1.1 (5/96)

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Article Created: 12 April 1996
Article Reviewed/Updated: 7 May 1996

TOPIC -----

After installing System 7.5 Update 2.0 on both my PowerBook 280c and PCI-based Power Macintosh computers, I started receiving this error message, "MacTCP does not work with Open Transport. You must use Open Transport TCP. Remove the MacTCP control panel.", when using the Apple Internet Dialer v1.0. Here is what happened with both computers.

PowerBook 280c

I used the Network Software Selector to switch to Open Transport 1.1 networking software. After restarting, I checked the TCP/IP control panel settings which looked fine. I then launched the Apple Internet Dialer 1.0 and the error message appeared.

I looked for MacTCP in the control panel, but it was not there. I opened the Extensions Manager control panel for MacTCP, but it was not listed. I switched back to classic networking and the Apple Internet Dialer worked properly without an error message.

PCI-based Power Macintosh

After launching the Apple Internet Dialer I got the error message. I again looked for MacTCP in the control panel, but it was not there. I opened the Extensions Manager control panel for MacTCP, but it was not listed. I tried to find MacTCP with Find File, but it was not found.

Questions

- 1) How can I get rid of this error message, and use the Internet Dialer with Open Transport 1.1?
- 2) Is there a compatibility issue between the Apple Internet Connection

Kit's (AICK) Internet Dialer and Open Transport 1.1?

DISCUSSION -----

There is no compatibility issue between the Apple Internet Dialer and Open Transport 1.1. The issue is the way the Internet Dialer looks for the MacTCP control panel. The dialer looks for a file, with MacTCP's type, creator, and name "MacTCP" to be present in the Control Panels folder.

Below is a description of what happens:

- On 680x0 processor based computers (like your PowerBook) and PowerPC processor based with NuBus computers (like Power Macintosh 6100, 7100, 8100), the Network Software Selector makes the MacTCP control panel invisible in the Control Panels folder, resulting in the Internet Dialer finding MacTCP and reports the error.
- On PowerPC processor based with PCI computers (like Power Macintosh 7200, 7500, 8500, 9500), the System 7.5 Update 2.0 installer places an invisible copy of the MacTCP control panel in the Control Panels folder. The Internet Dialer finds MacTCP and reports the error.

NOTE: You cannot use the Network Software Selector to switch to Classic AppleTalk on PCI-based Power Macintosh computers.

Workaround

=====

680x0-based, and PowerPC and NuBus-based Computers

Follow the steps below:

- 1) With classic networking enabled, open the Control Panels folder.
- 2) Create a folder. You may, for example, name it Classic MacTCP. (It does not matter where the new folder is located on your hard disk.)
- 3) Move MacTCP out of the Control Panels Folder and into the folder you just created above.
- 4) Use Network Software Selector to switch to Open Transport 1.1.
- 5) Restart. The Dialer should now work as expected.

PowerPC and PCI-based Computers

The invisible MacTCP file can be removed from the Control Panels folder by either making MacTCP visible with ResEdit or other third-party utility and throwing MacTCP into the trash, or by using the steps below.

- 1) Click and drag the Control Panels folder to the desktop.

- 2) Restart. (A new Control Panels folder will be created in the System Folder.)
- 3) Move the contents of the Control Panels folder located on the desktop, to the new Control Panels folder located in the System Folder. The invisible files will remain in the Control Panels folder on the desktop.
- 4) Put the Control Panels folder located on the desktop in the trash, and empty the trash.
- 5) Restart. The Dialer should now work as expected.

NOTE: You may have to create a new Control Panels alias in the Apple Menu Items folder if it does not function properly.

This article was published in the Information Alley on 07 May 1996.

Article Change History:

07 May 1996 - Added PCI-based Power Macintosh information.

15 Apr 1996 - Added Information Alley information.

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Tech Info Library Article Number:19609



Tech Info Library

QuickTime 2.5: Product Description (5/97)

Revised: 5/5/97
Security: Everyone

QuickTime 2.5: Product Description (5/97)

Article Created: 12 Apr 1996
Article Reviewed/Updated: 5 May 1997

TOPIC -----

This article is a description of Apple QuickTime 2.5.

DISCUSSION -----

QuickTime is the industry-standard multimedia architecture used by software tool vendors and content creators to integrate, edit, synchronize, store, and playback video, sound, graphics, text, and music.

QuickTime is open, published, and extensible allowing developers and creative professionals to create stunning content and titles for delivery on CD-ROM, Internet, and professional video.

Available for Macintosh, Windows 3.1, Windows 95, Windows NT, OS/2, and other platforms, QuickTime makes "author once, playback anywhere" a reality.

QuickTime supports any compression/decompression standard including MJPEG, Cinepak, Indeo, and others, minimizing the size and maximizing the playback quality of your multimedia content.

For digital video professionals, QuickTime supports multiprocessing systems, enables professional-quality video editing, and supports SMPTE time code.

The powerful QuickTime Music Architecture provides music professionals and multimedia developers the opportunity to include custom sound synthesizers and instruments in music tracks, giving their content a distinctive aural presence.

Used by more Internet, content, and tool developers, QuickTime has become the most pervasive technology for creating and integrating multimedia content on CD-ROM and the Internet.

Features

- Pervasive playback standard for CD-ROM and Internet content. With more than 1,500 leading title developers already licensing QuickTime, and over 100 new QuickTime enhanced titles introduced each month, QuickTime continues as the standard format for CD-ROM and Internet content delivery.
- Support for multiple data types. QuickTime enables developers to provide customers such unique features as multiple-language text tracks. Data types supported include video, sound, graphics, animation, text, music/MIDI, MPEG, sprite 3D, and copyright.
- Multiplatform playback. Develop once and deliver on many platforms. Avoid time-consuming platform conversion tasks and reach millions of Macintosh and Windows users. Shared Mac OS and Windows data files allow production of hybrid disks.
- Built-in synchronization. QuickTime makes it easy to synchronize sound, video, music, and other data tracks to a common time base.

Article Change History:

05 May 1997 - Changed distribution status.

16 Apr 1996 - Changed distribution status.

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Tech Info Library Article Number:19610



Tech Info Library

Color StyleWriter LocalTalk Modules: Question & Answers (6/96)

Revised: 6/25/96
Security: Everyone

Color StyleWriter LocalTalk Modules: Question & Answers (6/96)

Article Created: 12 April 1996
Article Reviewed/Updated: 25 June 1996

TOPIC -----

This article contains information on the Color StyleWriter LocalTalk options available for the Color StyleWriter 2400 and Color StyleWriter 2500 printers.

DISCUSSION -----

There are two LocalTalk modules available:

+=====+		
Printer	Apple Part #	Description
+=====+		
	M4615ZM/A	LocalTalk Module for both CSTW
Color StyleWriter 2400		2400 & 2500.
	+-----+	
	M3458G/A	LocalTalk Module ONLY for CSTW
		2400.
+-----+		
Color StyleWriter 2500	M4615ZM/A	LocalTalk Module for both CSTW
		2400 & 2500.
+-----+		

Questions & Answers
=====

Question: What do the LocalTalk Modules look like? Are they cards? Are they identical?

Answer: The Color StyleWriter LocalTalk Options are external modules. They connect to the back of the printer and plug into the serial port. The LocalTalk Options are not cards. They look identical except for the writing on the module itself. The Color StyleWriter 2400 LocalTalk Module (M3458G/A) does not have any writing on it, the Color StyleWriter 2400/2500 LocalTalk Module (M4615ZM/A) says

LocalTalk module for the Color StyleWriter 2400 and 2500.

Question: Which printers do the Color StyleWriter LocalTalk modules work with?

Answer: The Color StyleWriter LocalTalk Module M3458G/A only works with the Color StyleWriter 2400. The Color StyleWriter LocalTalk Module M4615ZM/A works with both the Color StyleWriter 2400 and Color StyleWriter 2500.

Question: What printer drivers do I need? Is there a Color StyleWriter 2400 AppleTalk/Color StyleWriter 2500 AppleTalk driver?

Answer: You use the printer driver that ships with the printer. The driver supports both serial and LocalTalk connections. There is not an AppleTalk StyleWriter driver for either printer. However, the Color StyleWriter 2500 driver is backward compatible and can be used with either printer.

This article was published in the 12 April 1996 Information Alley.

Article Change History:

25 Jun 1996 - Corrected the LocalTalk Option part number.

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Tech Info Library Article Number:19612



Tech Info Library

System 7.5 Update 2.0: Any System 7.5 Users Can Install (4/96)

Revised: 4/15/96
Security: Everyone

System 7.5 Update 2.0: Any System 7.5 Users Can Install (4/96)

=====

Article Created: 15 April 1996

TOPIC -----

I have a Power Macintosh 9500 with System Enabler 1.0 on it. Do I need to update my computer using the Power Macintosh 9500 CD version 2.0 before installing System 7.5 Update 2.0?

DISCUSSION -----

No, you can simply update your system using System 7.5 Update 2.0. System 7.5 Update 2.0 is a set of system software enhancements that improves the reliability and performance of all computers running system software version 7.5, 7.5.1, or 7.5.2.

This article was published in the Information Alley on 15 April 1996.

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Tech Info Library Article Number:19615



Tech Info Library

Pwr Mac Processor Crds & Logic Brd Upgrades: Descriptions (2/97)

Revised: 2/21/97
Security: Everyone

Pwr Mac Processor Crds & Logic Brd Upgrades: Descriptions (2/97)

=====

Article Created: 15 April 1996
Article Reviewed/Updated: 21 February 1997

TOPIC -----

This article contains descriptions of the Power Macintosh Logic Board Upgrades and the Power Macintosh Processor Upgrade Card.

DISCUSSION -----

Overview
=====

If you're a Macintosh owner who wants to gain the advanced capabilities of more powerful Power Macintosh models without sacrificing your previous investments, Apple has good news for you.

Logic board upgrades

Logic board upgrades are now available that give any Power Macintosh 7200 series system the advanced capabilities of the Power Macintosh 7600 series, and that turn Macintosh Quadra 800 or 840AV, or Power Macintosh 8100 computers into Power Macintosh 8500 series systems.

These upgrades feature processor upgradability, so you can select the Power Macintosh Processor Upgrade Card that best meets your requirements -- secure in the knowledge that if your needs change, you can easily upgrade to a faster processor in the future.

If you own a Power Macintosh 7200 series computer, the Power Macintosh 7600 Logic Board Upgrade can transform your system into a Power Macintosh 7600 series system, with video-input capabilities.

The Power Macintosh 8500 Logic Board Upgrade works in much the same way, transforming your Macintosh Quadra 800, Macintosh Quadra 840AV, or Power Macintosh 8100 into the advanced Power Macintosh 8500 series.

High-performance features include a complete, near-broadcast-quality video-input/output subsystem that's optimized for video editing. And, as with the 7600 upgrade, you can opt for the processor of your choice, with no worry about obsolescence.

Power Macintosh Processor Upgrade Cards

The Power Macintosh Processor Upgrade Card is currently available in two processor speeds: one with a 120-megahertz PowerPC 604 RISC processor, and the other with the even more powerful 132-megahertz PowerPC 604. They work not only with the two Power Macintosh Logic Board Upgrades, but also with many of the existing Power Macintosh systems with Peripheral Component Interconnect (PCI) expansion slots.

Whatever Power Macintosh upgrade is right for you, you can rest assured that your investment in current equipment is protected, because your Power Macintosh was designed to provide the performance you need -- now and in the future.

Features of Power Macintosh Logic Board Upgrades

Available models

-
- Power Macintosh 7600
 - The 7200 to 7600 Logic Board Upgrade (M3842LL/A) will allow customers with a Power Macintosh 7200 to upgrade their systems to a Power Macintosh 7600.

NOTE:

This logic board upgrade ships WITHOUT a Processor Upgrade Card. Customers will have to purchase one separately which gives them the opportunity to decide how fast a processor they want to add to their system.

- Power Macintosh 8500
 - The Power Macintosh 8500 Logic Board Upgrade (M3807LL/C*) will allow customers with the following systems to upgrade to the Power Macintosh 8500:
 - Macintosh Quadra 800 computer
 - Macintosh Quadra 840AV computer
 - Power Macintosh 8100 series computers

* The /C revision of this logic board upgrade includes a software revision to accommodate 8xCD-ROM drives.

NOTE:

As with the 7200 to 7600 Logic Board Upgrade, a Processor Upgrade Card is NOT be included with the 8500 Logic Board Upgrade. Customers will have to purchase one separately which gives them the opportunity to decide how fast a processor they want to add to their system.

Power and speed

- Processor upgradability with choice of available PowerPC processor options.

Memory and storage

- Power Macintosh 7600 upgrade can use the existing RAM from your Power Macintosh 7200
- Power Macintosh 8500 upgrade comes with 8 MB of RAM
- Both upgrades retain existing hard disks
- 256K level 2 cache

Expansion slots

- Both logic board upgrades feature PCI expansion slots*

Additional capabilities

- Power Macintosh 7600 upgrade provides video-input capabilities
- Power Macintosh 8500 upgrade includes video-input/output subsystem

Installation

Logic board upgrades must be performed by an authorized Apple reseller or service provider.

Features of Power Macintosh Processor Upgrade Card

=====

Power and speed

- Includes PowerPC 604 processor with floating-point processor and 32K on-chip cache.

Ordering Information

=====

Power Macintosh 7600 Logic Board Upgrade*

- Order No. M3842LL/A
- Power Macintosh 7600 logic board with video-input capabilities
- Accessory kit with documentation and a CD-ROM containing system software version 7.5.3

* Requires processor purchase (see Processor Upgrade Card information); logic board upgrades must be performed by an authorized Apple reseller or service provider

Power Macintosh 8500 Logic Board Upgrade*

- Order No. M3807LL/C
- Power Macintosh 8500 logic board with video-input/output subsystem
- Accessory kit with documentation and a CD-ROM containing system software version 7.5.3

* Requires processor purchase (see Processor Upgrade Card information); logic board upgrades must be performed by an authorized Apple reseller or service provider

Power Macintosh 120MHz Processor Upgrade Card

- Order No. M4731LL/A (120 MHz)
- Card with 120 MHz PowerPC 604 with floating-point processor and 32K on-chip cache

Power Macintosh 132MHz Processor Upgrade Card

- Order No. M4875LL/A (132 MHz)
- Card with 132 MHz PowerPC 604 with floating-point processor and 32K on-chip cache

Power Macintosh 180MHz Processor Upgrade Card

- Order No. M5458LL/A (180 MHz)
- Card with 180 MHz PowerPC 604 with floating-point processor and 32K on-chip cache

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

This article was published in the Information Alley on 25 April 1996.

Article Change History:

21 Feb 1997 - Updated with new part number.
24 Sep 1996 - Updated
10 Jul 1996 - Removed keyword.

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Tech Info Library Article Number:19616



Tech Info Library

Power Macintosh Logic Board Upgrades: Specifications (4/96)

Revised: 4/19/96
Security: Everyone

Power Macintosh Logic Board Upgrades: Specifications (4/96)

Article Created: 15 April 1996
Article Reviewed/Updated: 19 April 1996

TOPIC -----

This article lists the technical specifications for the Power Macintosh Logic Board Upgrades including the Logic Board Upgrades Compatibility table.

DISCUSSION -----

Power Macintosh Logic Board Upgrades
=====

Power and speed

- Processor upgrade card must be purchased separately; see chart for available options

Memory and storage

- Power Macintosh 7600 upgrade can use existing RAM from upgraded system; includes 256K L2 cache with 7600 logic board upgrade
 - Power Macintosh 8500 logic board upgrade includes 8MB of RAM and 256K level 2 cache
 - Both upgrades retain existing hard disks from upgraded system
- Video support, expansion, setup, system software, compatibility, and communications
- Identical to corresponding Power Macintosh models
(For detailed specifications on the Power Macintosh 7600 and 8500 series computers, see the appropriate product data sheets.)
 - Includes accessory kit with CD-ROM disc containing system software version 7.5.3

Installation

- Must be installed by an authorized Apple reseller or service provider

Begin _Table

Logic Board Upgrades Compatibility

=====

Macintosh Model*	7600 Series	8500 Series
Power Macintosh 8100 series	No	Yes
Power Macintosh 7200 series	Yes	No
Macintosh Quadra 840AV	No	Yes
Macintosh Quadra 800	No	Yes

* - Macintosh models other than those listed in this table do not have a logic board upgrade path

End_Table

Article Change History:

19 Apr 1996 - Changed distribution status.

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Tech Info Library Article Number:19617



Tech Info Library

Power Macintosh Processor Upgrade Card: Specifications (4/96)

Revised: 4/19/96
Security: Everyone

Power Macintosh Processor Upgrade Card: Specifications (4/96)

Article Created: 15 April 1996
Article Reviewed/Updated: 19 April 1996

TOPIC -----

This article lists the technical specifications for the Power Macintosh Processor Upgrade Card including the Power Macintosh Processor Upgrade Card Speed Comparison table.

DISCUSSION -----

Power Macintosh Processor Upgrade Card
=====

Power and speed

- 120-MHz or 132-MHz PowerPC 604 processor with floating-point processor and 32K on-chip cache

Installation

- User-installable (includes step-by-step instructions); however, Apple recommends that this upgrade be performed by an authorized Apple reseller or service provider

Begin _Table

Power Macintosh Processor Upgrade Card Speed Comparison
=====

Macintosh Model	RISC-based PowerPC 604 Processor Upgrade	
	120-MHz	132-MHz
Power Macintosh 9500/120	X	Yes

Power Macintosh 8500/120		X		Yes	
Power Macintosh 7600/120		X		Yes	
Power Macintosh 7500/100		Yes		Yes	
Power Macintosh 7200 series		Yes*		Yes*	

* - 7200 to 7600 logic board upgrade required, and requires
processor upgrade card purchase

X - Is compatible, but won't increase system performance

End_Table

Article Change History:
19 Apr 1996 - Changed distribution status

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Tech Info Library Article Number:19618



Tech Info Library

PC Compatibility Cards for Power Macintosh:Specifications (5/96)

Revised: 5/29/96
Security: Everyone

PC Compatibility Cards for Power Macintosh:Specifications (5/96)

Article Created: 15 April 1996
Article Reviewed/Updated: 29 May 1996

TOPIC -----

This article contains the technical specifications for the PC Compatibility Cards for Power Macintosh Computers.

DISCUSSION -----

Microprocessor

- Pentium 100-MHz processor or 586 100-MHz processor

Memory

PC Compatibility Card with Pentium processor

- 8 MB of RAM (soldered on card), expandable to 72 MB of local RAM (one 168-pin DIMM slot) for MS-DOS and Windows environments
- 256K level 2 cache

PC Compatibility Card with 586 processor

- One 8 MB (DIMM) of RAM installed in one 168-pin DIMM slot, expandable to 64 MB of local RAM for MS-DOS and Windows environments
- 128K level 2 cache

Sound

- Includes Sound Blaster 16-compatible support (DOS and Windows environments)
- 16-bit stereo output

Video Support

- Works with all Apple displays as well as with most third-party VGA and SuperVGA displays (for MS-DOS and Windows)
- 1 MB DRAM of display support (third-party displays may require a separate cable adapter)

Networking

- Supports Novell NetWare SPX/IPX, TCP/IP, and NETBEUI protocols in MS-DOS and Windows environment using the built-in Ethernet connector and ODI and NDIS 2.0 drivers (client software not included)

Compliance

- Compliant with PCI 2.0 requirements

Environmental Requirements

- Operating temperature: 50° to 104° F (10° to 40° C)
- Storage temperature: -40° to 116° (-40° to 47° C)
- Relative humidity: 5% to 95% noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Size And Weight

- PC Compatibility Card (with Pentium processor)
 - 12-inch card (30.5 cm)
 - 0.7 lb. (0.32 kg)
- PC Compatibility Card (with 586 processor)
 - 7-inch card (17.7 cm)
 - 0.46 lb. (0.21 kg)

Macintosh Compatibility

Both PC Compatibility Cards work with all Power Macintosh 9500, 8500, 7600, 7500, and 7200 series computers

Article Change History:

29 May 1996 - Added more detailed information about RAM on cards.
19 Apr 1996 - Changed distribution status.

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Tech Info Library Article Number:19619



Tech Info Library

PC Compatibility Cards for Power Macintosh: Description (4/97)

Revised: 4/16/97
Security: Everyone

PC Compatibility Cards for Power Macintosh: Description (4/97)

=====

Article Created: 15 April 1996
Article Reviewed/Updated: 16 April 1997

TOPIC -----

This article contains the descriptions for the PC Compatibility Cards for Power Macintosh Computers.

DISCUSSION -----

Overview

For people who want power, ease-of-use, and compatibility, Apple PC Compatibility Cards can turn your Power Macintosh computer into the most flexible, versatile system available.

Offering either a Pentium 100-megahertz processor on a 12-inch card or a 586 100-megahertz processor on a 7-inch card, these PC Compatibility Cards let you run MS-DOS and Windows applications directly on your Power Macintosh computer. You can switch instantly between Mac OS, Windows, and MS-DOS environments with a single keystroke.

With the PC Compatibility Cards, your Power Macintosh computer becomes a powerful dual micro-processor system. The Pentium pro-cessor delivers fast performance for MS-DOS and Windows applications. The 586 processor offers a more affordable option, yet still runs all the same applications.

Because the Power Macintosh PowerPC processor and the Pentium (or 586) processors work independently, you can run Macintosh and MS-DOS or Windows applications concurrently. In fact, you can even cut and paste information between them, as well as share folders and disks.

In addition, the PC Compatibility Cards help your Power Macintosh computer fit into your work environment better than ever. Once you install either card, your system will support MS-DOS and Windows net-work applications and services using

..TIL19620-PC_Compatibility_Cards_for_Power_Macintosh-Description_4-97.pdf

Novell NetWare SPX/IPX, TCP/IP, and NETBEUI protocols over the built-in Ethernet network connection—in addition to its standard Macintosh networking capabilities.

You can even run MS-DOS and Windows multimedia applications using your computer's built-in CD-ROM drive, with the built-in Sound Blaster-16 support.

In short, with a PC Compatibility Card for MS-DOS and Windows environments, you don't have to choose between operating systems—you can run more software than any other mainstream personal computer on the market.

Features

=====

PC Compatibility Card (with Pentium processor)

- Pentium 100-MHz processor with integrated floating-point unit (FPU)
- 256K level 2 cache
- 8 MB of RAM, expandable to 72 MB

PC Compatibility Card (with 586 processor)

- 586 100-MHz processor with FPU
- 128K level 2 cache
- 8 MB of RAM, expandable to 64 MB

General Compatibility Information (both cards)

- Allows a Power Macintosh computer with a Peripheral Component Interface (PCI) slot to run MS-DOS and Windows programs directly without software emulation
- Includes Microsoft MS-DOS 6.22
- Compatible with Windows 3.1, Windows for Workgroups 3.11, and Windows 95 (not compatible with Window NT or OS/2)
- Includes Sound Blaster-16 support for MS-DOS and Windows PC multimedia compatibility
- Supports single-keystroke switching between Mac OS, MS-DOS, and Windows environments
- Works with all current Apple displays as well as with most third-party VGA and SVGA displays
- Lets you copy and paste between Mac OS and Windows environments
- Prints from MS-DOS and Windows with a Mac OS-compatible printer (PostScript printer recommended for best performance)
- Supports Novell NetWare SPX/IPX, TCP/IP, and NETBEUI protocols in MS-DOS and Windows environment
- Includes PC game port

Macintosh Compatibility

Both the 7-inch 586 and 12-inch Pentium PC Compatibility Cards are compatible with all Power Macintosh computers that include Peripheral Component Interface (PCI) slots, including:

- Power Macintosh 7200-series computers
- Power Macintosh 7500-series computers
- Power Macintosh 7600-series computers
- Power Macintosh 8500-series computers
- Power Macintosh 9500-series computers
- Power Macintosh 5400/120-series computers*

*The Power Macintosh 5400/120 (M4781LL/A) supports the 7-inch (M4091LL/B), but NOT the 12-inch PC Compatibility Card M4092LL/A). The 7-in. PC Compatibility Card M4091LL/A will function in a 5400/120, though there are some cabling differences to accommodate the differences in case design.

Display Compatibility

Both cards work with all current Apple displays and with most third-party VGA and SVGA monitors.

DOS/Windows Compatibility

Both cards support MS DOS 6.22 (which ships with the cards) and Windows 3.1, Windows for Workgroups 3.11, and Windows '95 (any or all of which would have to be purchased separately). The cards are NOT compatible with Windows NT or OS/2.

The cards come with an ODI driver that supports Novell NetWare SPX/IPX, TCP/IP, and NETBEUI protocols in the MS-DOS and Windows environments.

They allow customers to print to Macintosh OS-compatible printers from either DOS or Windows.

Usage Requirements

The two PC Compatibility Cards require a PCI-based Power Macintosh computer. Only the 7-inch PC Compatibility Card (M4091LL/B; note revision B) is fully compatible with the Power Macintosh 5400/120 (M4781LL/A), which is sold only in the Education Market.

Bundled Software

The PC Compatibility Cards ship with MS-DOS 6.22 and with Macintosh System Software 7.5.3.

User Installation

-
- Dealer installation not required

Ordering Information

PC Compatibility Card (with Pentium Processor)

-
- Order No. M4092LL/A
 - Pentium 100-MHz processor with FPU and 256K level 2 cache on 12-inch PCI

card that runs MS-DOS 6.22, Windows 3.1, Windows for Workgroups 3.11, and Windows 95

- 8 MB of RAM, expandable to 72 MB
- System software version 7.5.3
- MS-DOS version 6.22
- Complete installation, learning, and reference documentation
- Limited one-year hardware warranty

PC Compatibility Card (with 586 Processor)

-
- Order No. M4091LL/B
 - 586 100-MHz processor with FPU and 128K level 2 cache on 7-inch PCI card that runs MS-DOS 6.22, Windows 3.1, Windows for Workgroups 3.11, and Windows 95
 - 8 MB of RAM, expandable to 64 MB
 - System software version 7.5.3
 - MS-DOS version 6.22
 - Complete installation, learning, and reference documentation
 - Limited one-year hardware warranty

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

This article was published in the Information Alley on 25 April 1996.

Article Change History:

16 Apr 1997 - Edited rev /B information for clarity.
10 Oct 1996 - Added /B revision information.
26 Apr 1996 - Added alley information.

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Tech Info Library Article Number:19620



Tech Info Library

Newton Print Pack: HP LaserJet print solutions (4/96)

Revised: 4/15/96
Security: Everyone

Newton Print Pack: HP LaserJet print solutions (4/96)

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Article Created: 15 April 1996

TOPIC -----

I have an Apple MessagePad and an HP LaserJet printer. How can I print from the Apple MessagePad to the HP LaserJet?

DISCUSSION -----

You have two possible options:

- 1- Use the "Choose Network Printer" option in Newton OS 1.0 and 2.0.
- 2- Use the Newton Print Pack

Use the "Choose Network Printer" option in Newton OS 1.0 and 2.0

=====

All Apple MessagePads have a built-in PostScript/AppleTalk driver, very similar to the Mac OS printer driver "LaserWriter8". This means any AppleTalk-based networked laser printer is compatible with the Apple MessagePad. Some HP LaserJet printers have PostScript and AppleTalk built-in, and almost all models can be upgraded to support these features. HP Technical Support recommended checking the startup page for individual printers.

The Apple MessagePad functions as a LocalTalk device and supports several physical connections, so a serial cable can be used for a direct connection. LocalTalk connectors allow the Apple MessagePad to print to any supported printer on the AppleTalk network.

Use the Newton Print Pack

=====

LaserJet printers with a parallel port can print from an Apple MessagePad using the Newton Print Pack. The Newton Print Pack is sold separately, and only has

some specific LaserJet models lists. However, any Hewlett-Packard PCL-based printer should work with the Newton Print Pack.

The Newton Print Pack provides both a physical connection (serial to parrallel conversion) and a PCL driver for the NewtonOS.

Troubleshooting note:

If you are trying to print to an HP LaserJet that you believe has PostScript/AppleTalk support, and you cannot see it in the "select a Printer" window, try printing directly to the printer with a serial cable. Sometimes an AppleTalk networking problem prevents the Apple MessagePad from seeing the printer properly.

This article appeared in the 15 April 1996 Information Alley.

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Tech Info Library Article Number:19622



Tech Info Library

Apple MessagePad: Socketed ROM Won't Allow Upgrade (4/96)

Revised: 4/15/96
Security: Everyone

Apple MessagePad: Socketed ROM Won't Allow Upgrade (4/96)

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Article Created: 15 April 1996

TOPIC -----

Will the socketed ROM on the Apple MessagePad 120 and Apple MessagePad 130 allow customers to upgrade to a faster ARM processor?

DISCUSSION -----

The socketed ROM has nothing to do with the processor. The ROM is the read only memory where all the operating system information is stored.

Since the MessagePad 120 was introduced, the ROM has been socketed so that future Newton Operating System Updates can be easily performed.

To date the processor in the Apple MessagePads has not been socketed for easy removal or replacement. The same 20MHz ARM 610 RISC processor used in the original MessagePad is still being used in the current Apple MessagePad 130 devices.

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Tech Info Library Article Number:19623



Tech Info Library

AppleShare 4.2.x: File Server Memory & Cache Usage (4/96)

Revised: 4/17/96
Security: Everyone

AppleShare 4.2.x: File Server Memory & Cache Usage (4/96)

Article Created: 17 April 1996

TOPIC -----

This article describes how AppleShare 4.2 and 4.2.1 deal with memory and cache.

DISCUSSION -----

About the File Server cache

AppleShare 4.2 introduced a new method of caching that differed from previous versions of AppleShare. Briefly, AppleShare 4.2 (and 4.2.1) provides a single block cache that dynamically tunes itself for optimal performance. Once the server is up and running, AppleShare gradually expands until it allocates all available RAM to its cache. You can set aside a portion of RAM that can be used for other applications (as described in "How Much Memory Should Be Reserved for Other Applications?" later in this addendum); this portion is then unavailable for AppleShare's cache expansion.

By caching items (files, folder contents, icons) in RAM, the File Server provides faster access to those items than if they were retrieved from permanent memory on the server's hard drive.

See "Setting Cache Preferences" in Chapter 3 of the AppleShare Administrator's Guide for a general description of the cache and for the steps you need to take to configure the cache. The purpose of this addendum section is to provide additional useful information about the cache and about setting your cache preferences.

Size of the File Server Extension partition and cache

The File Server program (strictly speaking, the File Server Extension) requires 5.5 megabytes (MB) of memory when the program is first started. Of this amount, approximately 1 MB is reserved for file, folder, and icon caching. The memory that the File Server Extension uses is one component of the overall memory required by system software. Thus, the minimum of 5.5 MB of RAM that the File

Server Extension requires is part of the total memory displayed for "System Software" when you view your server's memory allocation. To view your server's memory allocation, choose "About This Macintosh" from the Apple menu while in the Finder.

If free RAM (that is, RAM not being used by system software or any applications) is available on your server, AppleShare uses it for its cache as needed. As the AppleShare cache expands, the amount of memory allocated to "System Software" in "About This Macintosh" grows accordingly.

How much memory should be reserved for other applications?

As explained in "Setting the Preferences" in Chapter 3 of the AppleShare Administrator's Guide, you can adjust the amount of memory reserved for other (non-File Server) applications in the File Server Cache Preferences window. When the AppleShare cache expands (because it requires more memory to cache items), it will not attempt to claim the amount of memory you've set aside for other applications.

Here are a few things to keep in mind when considering the amount of memory you plan to reserve for other applications:

- Apple recommends a minimum cache setting of 1 MB (the default setting); under most circumstances, this should be an adequate amount of memory to reserve for other applications.
- The Finder can perform poorly (or crash) if there is not any free memory for it to use; the value for "Memory to be reserved for other applications" should always be greater than zero.
- The AppleShare cache does not attempt to claim memory used by applications that have been opened prior to starting the AppleShare program, or for those applications that are running prior to AppleShare's cache expanding. So, if there are applications that you plan on using often on the server, consider starting them before you start the File Server program. For example, if you open a database application that has a 4 MB memory partition before you open the server (or before AppleShare tries to expand its cache), that 4 MB does not count toward the amount of memory reserved for other applications. Other applications that provide a network service, such as the Apple Remote Access MultiPort Server, should be started before you start the File Server.
- If you think that the 1 MB of cache contained within the 5.5 File Server Extension memory partition is sufficient for your file service needs, you can reserve all available RAM for other applications. For instance, for a server with 32 MB of RAM, you can set the value in the File Server Cache Preferences window to 32 MB. AppleShare will not attempt to allocate additional cache blocks.

Does AppleShare release RAM cache automatically?

Once AppleShare has claimed available memory for its cache, it does not automatically release the memory so that it can be used by other applications. However, you can flush the cache and free up RAM by choosing Reset Cache from

the Server menu and clicking OK.

NOTE: It may take up to two minutes for the cache to reset.

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Tech Info Library Article Number:19624



Tech Info Library

AMT 2.0: Play QTVR Movies on Monitor w/ Menu Bar (4/96)

Revised: 4/17/96
Security: Everyone

AMT 2.0: Play QTVR Movies on Monitor w/ Menu Bar (4/96)

=====

Article Created: 17 April 1996

TOPIC -----

I have a Power Macintosh 7500 computer, with two monitors attached. An NEC 17-in. monitor is connected to the video port of the Macintosh, and the other monitor is a NEC xv15 connected to the computer through an ATI Exclaim video card. I am working on an Apple Media Tool 2.0 project with QuickTime VR movies.

When I run a QuickTime VR movie and the playback screen is on the xv15 display, the picture may show on the screen, but never actually plays. If the run window is moved back to the 17-in. display, the QuickTime VR movie runs properly.

The movies play fine when viewed using QTVR Player.

DISCUSSION -----

Apple Media Tool may not display QuickTime VR movies correctly on monitors other than those that display the menu bar. If this happens, move the Run window so that it appears on the monitor that displays the menu bar.

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Tech Info Library Article Number:19625



Tech Info Library

Apple MessagePad: Can't Use Infra-red for Printing (4/96)

Revised: 4/18/96
Security: Everyone

Apple MessagePad: Can't Use Infra-red for Printing (4/96)

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Article Created: 17 April 1996

TOPIC -----

Can the Apple MessagePad print using the infra-red port to Hewlett-Packard printers with infra-red ports?

DISCUSSION -----

The Apple MessagePad and Hewlett-Packard printers cannot connect because they do not use the same infra-red protocol.

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Tech Info Library Article Number:19626



Tech Info Library

PCI Network Installer: Read Me (7/96)

Revised: 7/1/96
Security: Everyone

PCI Network Installer: Read Me (7/96)

Article Created: 17 April 1996
Article Reviewed/Updated: 1 July 1996

TOPIC -----

This article contains the ReadMe file for the PCI Network Installer Version 1.0 which is used with the Apple PCI Token Ring card.

DISCUSSION -----

Contents

=====

- What the PCI Network Installer disk includes
- System requirements
- Installing software using the PCI Network Installer
- Important information about your Apple PCI Token Ring Card and software
 - Setting the ring speed
 - Using the Apple PCI Token Ring Card with MacIPX
 - Using the Apple PCI Token Ring Card with Novell Netware for Macintosh 3.011, 3.12 or 4.02
 - Using the Apple PCI Token Ring Card with SoftWindows
 - Using the Apple PCI Token Ring Card on Power Macintosh 7200/75 and 7200/90 systems
 - Using the Apple PCI Token Ring Card with the Apple Internet Router
 - Using the Apple PCI Token Ring Card with Apple LocalTalk/LaserWriter Bridge software
 - Using the Apple PCI Token Ring Card with SNA•ps
 - Locally Administered Addresses
 - Using the Apple PCI Token Ring Card with long station cables

What the PCI Network Installer disk includes

=====

Version 1.0 of the PCI Network Installer disk includes:

- Apple PCI Token Ring 1.0

The Apple PCI Token Ring card is the first, and at the time of this release, the only, PCI-based networking card for MacOS supported by Apple, and therefore the only card supported by this PCI Network Installer disk. Future releases of the PCI Network Installer may include support for additional PCI-based networking cards, as well as possible enhancements to the Apple PCI Token Ring driver.

System requirements

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The PCI Network Installer 1.0 disk requires:

- Power Macintosh 7200/120 computer
 - Power Macintosh 5400 Performa computers
 - Power Macintosh 7500, 7600, 8500, and 9500 series computers
 - Workgroup Server 7250, and 8550 computers
- NOTE: At this time, the PCI Token Ring card is not compatible with the PCI DOS Compatibility card. Apple Engineering is investigating this issue.
- Mac OS version 7.5.3 or higher
 - Open Transport 1.1 or higher (included in MacOS version 7.5.3)
 - An Apple PCI Token Ring card

Important information about your PCI Token Ring Card and software

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These notes pertain to the Apple PCI Token Ring driver, version 1.0, contained on this disk, and to the Apple PCI Token Ring card.

Setting the ring speed

The Apple PCI Token Ring card automatically detects the speed of the ring (4 Mbps or 16 Mbps) and adapts to it, eliminating the need for any manual speed-setting mechanism.

Except for the initial insertion (using a factory-preset speed of 16 Mbps), the card will "remember" the speed it used most recently and will make subsequent insertions using that speed. Should an insertion failure occur, however, the card will report this error to the user, and toggle the speed of the card for the next insertion attempt. In essence, after an insertion error occurs, the card will alternate between 4 Mbps and 16 Mbps with each insertion attempt until it finally succeeds.

The only caveat to this is the initial insertion using a factory-preset speed of 16 Mbps. The card's design requires that the first insertion cannot be onto an empty ring (one with no stations on it already), or the insertion will fail.

Using the PCI Token Ring Card with MacIPX

This release of the Apple Token Ring PCI card and software does not support MacIPX. This results from incompatibility issues between the MacIPX software and PCI-based networking cards in general, which Apple and Novell are working to resolve.

Using the Apple PCI Token Ring Card with Novell Netware for Macintosh 3.011, 3.12 or 4.02

Versions of the APPLETLK.NLM prior to version 4.50c have known problems with source routing, which may affect the proper operation of this card with your server. To avoid these problems, upgrade your APPLETLK.NLM to version 4.50c (or later), following the installation instructions provided by Novell.

This upgrade is available on Novell's NetWire Web site (<http://www.novell.com/>) as a self-extracting archive titled ATK45C.EXE.

Using the Apple PCI Token Ring Card with SoftWindows

The Apple PCI Token Ring software supplied on this disk does not support Insignia Solutions' SoftWindows product.

Using the Apple PCI Token Ring Card on Power Macintosh 7200/75 and 7200/90 systems

The Apple PCI Token Ring Card is not supported on Power Macintosh 7200/75 and 7200/90 systems at this time. If you try to use this card in a Power Macintosh 7200/75 or 7200/90, the system may freeze.

Using the Apple PCI Token Ring Card with the Apple Internet Router

The Apple Internet Router is not compatible with Open Transport, and is therefore not compatible with the Apple PCI Token Ring card or driver.

Using the Apple PCI Token Ring Card with Apple LocalTalk/LaserWriter Bridge software

The Apple LocalTalk Bridge 2.0.1 and Apple LaserWriter Bridge 2.0.1 products are not Open Transport compatible, and are therefore not compatible with the Apple PCI Token Ring Card or driver. Enhancements or updates to these products may be made at a later date, along with other MacOS system enhancements.

Using the Apple PCI Token Ring Card with SNA•ps

The Apple PCI Token Ring Card is compatible with SNA•ps client software, although the current version of Open Transport does not support the use of SNA•ps gateway software using the Apple PCI Token Ring Card and driver.

Locally Administered Addresses

There is presently no Apple-provided mechanism for setting a Locally Administered Address of the Apple PCI Token Ring Card. The hardware address of the card can be displayed by selecting it in the AppleTalk Control Panel, and setting the User Mode to Advanced.

Using the Apple PCI Token Ring Card with long station cables

The Apple PCI Token Ring Card's ability to automatically sense the speed of the ring may be defeated on station cables that exceed the maximum lobe length allowed for your network. The maximum lobe length allowed for your token ring network depends on your network topology, but never exceeds 330 feet for 16Mbps networks, or 500 feet for 4Mbps networks.

If your station cable (lobe cable) is excessively long, and the card's "last known" speed (factory default of 16Mbps for new cards) does not match the speed of your token ring backbone, then the card may fail to detect the speed mismatch, resulting in a partially-inserted condition. The symptom of this situation includes no network activity to or from this station, and a solid green light on the back of the card.

The work-around to this problem is to use a short station cable to temporarily connect the Apple PCI Token Ring Card to a token ring network running at the desired ring speed. This will allow the card to set its default speed to the desired ring speed, causing subsequent insertion attempts to be made at the proper speed.

Once the default speed of the card has been changed to the proper speed, insertion attempts using longer station cables are more likely to succeed, though we cannot guarantee proper operation of the card on networks that violate token ring topology specifications.

Article Change History:

01 Jul 1996 - Updated article for clarity.

14 May 1996 - Added information about hardware compat.

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Tech Info Library Article Number:19629



Tech Info Library

Drive Setup: Issues Using Custom Icons On Partitions (5/96)

Revised: 5/6/96
Security: Everyone

Drive Setup: Issues Using Custom Icons On Partitions (5/96)

Article Created: 17 April 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

I have a Power Macintosh 9500/132 computer on which I have partitioned my hard drive into 8 partitions with Apple's Drive Setup version 1.0.4. When I apply custom icons to each partition and restart my computer, a number of the icons revert to generic and other icons are linked together (that is, the icon on partition 1 now appears on partition 2 as well).

I reinitialized the hard drive, reset parameter RAM (PRAM), and "clean" installed the system software. I then restarted and set up custom icons. After setting the icons and restarting again, the computer displays the same symptoms. All other SCSI devices/peripherals are disconnected.

DISCUSSION -----

Symptom

When using Drive Setup, including the latest version (1.0.4), with multiple partitions and custom icons, the icons for one partition may either duplicate across partitions, disappear, or turn generic. This is a known issue with Drive Setup that has been escalated previously.

Issue

This issue is caused by the way the driver interacts with partitions that have the same creation date. Drive Setup is so fast and efficient, that it often will create partitions with exactly the same date and time.

Workarounds

1 - One workaround is to modify the creation date of the partitions so they are not the same using a third party drive utility to do the partitioning.

2 - The other workaround is to avoid using custom icons for partitions.

This issue has been reported to engineering and is known. There are plans for this issue to be resolved in a future version of the Drive Setup utility.

This article was published in the Information Alley on 17 April 1996.

Article Change History:

06 May 1996 - Added Info Alley keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19630



Tech Info Library

Apple Media Tool 2.0: Use Wave File for Ambient Sounds (4/96)

Revised: 4/17/96
Security: Everyone

Apple Media Tool 2.0: Use Wave File for Ambient Sounds (4/96)

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Article Created: 17 April 1996

TOPIC -----

In Apple Media Tool 2.0, ambient sounds don't seem to work with SND files; I get a "end of file -39" error. The sound itself is fine, and plays in other screens, and in the preview. If I substitute a WAVE sound, then it works fine.

DISCUSSION -----

Using SND files as ambient sounds in AMT 2.0 does not work correctly. Apple is testing and investigating this behavior. Until a fix is available, WAVE files should be used as ambient sounds.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19631



Tech Info Library

Power Macintosh 8500: Video Output Distortion (4/96)

Revised: 4/26/96
Security: Everyone

Power Macintosh 8500: Video Output Distortion (4/96)

Article Created: 17 April 1996
Article Reviewed/Updated: 26 April 1996

TOPIC -----

I am using a Power Macintosh 8500 series computer to output video to a video display. Regardless whether I use NTSC or S-video, when an image with a very large area of black is displayed on the video monitor, the image is significantly distorted. The problem is most evident when displaying an all-black window with white borders. The display appears pincushioned, especially on the right hand side and is most severe where there is the most black displayed.

DISCUSSION -----

The distortion is most likely caused by the performance level of the display being used. If the black portion is moved, the distorted area will probably move with it. This is common for many consumer and middle-performance displays. High-performance displays would have little or no distortion of this type.

It's likely that the video signal from the computer is fine. To verify this, you can record the signal that causes the distortion on video tape. Then, play the video tape and record the signal using the video record feature in the computer. You could then view the captured video on the computer display to confirm that the distortion is not in the tape recorded signal.

If you can't capture the taped video signal using the computer, you should check the signal using a high performance display.

To reduce or eliminate this distortion, you can use shades of gray instead of large black and white areas. Or, use colors instead of black like fully saturated blue, red, or green in large areas.

You should also note that although this distortion would likely appear on home televisions as well, most people will likely not notice it because consumer television have overscan, which prevents you from seeing the edges of the video

signal.

This article was published in the Information Alley on 18 April 1996.

Article Change History:

26 Apr 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19632



Tech Info Library

System 7.5 Update 2.0: Pwr Mac 9500 & Sound & Monitors (4/96)

Revised: 4/17/96
Security: Everyone

System 7.5 Update 2.0: Pwr Mac 9500 & Sound & Monitors (4/96)

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Article Created: 17 April 1996

TOPIC -----

I recently installed System Update 2.0 on my Power Macintosh 9500. Now, in addition to the Monitors & Sound control panel, I also have the Sound and Monitors control panel. Why do I have all of these, and which ones should I use?

DISCUSSION -----

During installation of System 7.5 Update 2.0 on a Power Macintosh 9500 series computers, the old Sound and Monitors control panels are mistakenly not removed.

The presence of the older control panels won't disrupt the operating system, but you can remove them to avoid confusion.

However, you may want to consider that the Monitors & Sound control panel does not provide a way of recording system alert sounds. The SimpleSound application does this, but it is not included with System 7.5 Update 2.0. So, to record system alert sounds, you need to use the Sound control panel. With this in mind, you might want to leave the Sound control panel installed.

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Tech Info Library Article Number:19633



Tech Info Library

Open Transport 1.1, ISP Assigned Static IP Address, PPP (6/96)

Revised: 6/4/96
Security: Everyone

Open Transport 1.1, ISP Assigned Static IP Address, PPP (6/96)

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Article Created: 17 April 1996
Article Reviewed/Updated: 4 June 1996

TOPIC -----

If you have installed Open Transport on your Macintosh, and your ISP (Internet Service Provider) uses assigned static IP addressing, and you connect using PPP; you may have experienced the following:

- You are able to dial in. Your account and password go through, Free PPP seems to be functioning properly, but when you try using Telnet, Newswatcher, or another Internet application; you get an error something like "Unable to Open MacTCP's resolver. Domain names will not work."
- You tried to set everything up the way your ISP told you, but the Open Transport TCP/IP control panel will not let you set the Subnet mask or Router address fields when connecting with MacPPP and configuring Manually.

DISCUSSION -----

The steps below should work with FreePPP and MacPPP 2.14 or later when using static addressing with Open Transport. If you have another way to access the web, you will find instructions and pictures to help in your configurations at this URL:

<http://www.halcyon.com/podenski/static-IP.html>

How to set up a static IP with Open Transport and Free PPP

The key point in setting up a static IP address configuration with Open Transport is to place some of the IP information in the Config PPP settings.

These instructions assume you already know how to use the Config PPP control panel to some degree, and that you only need this tip for static IP addressing.

- 1) Open the Config PPP control panel and click the Config... button.

- 2) Choose Manual ISP (some versions may have Config instead) in the PPP Server Name pop-up menu.
- 3) Click IPCP Options...
- 4) Enter your assigned IP address number in the Local IP Address field.
- 5) Enter your Gateway IP address number in the Remote IP Address field. Click OK and exit the Config PPP control panel.
- 6) Open the TCP/IP control panel. Be sure you have chosen MacPPP in the Connect via pop-up window, and you have chosen Manually in the Configure pop-up window.
- 7) Enter your assigned IP address number in the IP Address field.
- 8) Enter your DNS (domain name server) IP address in the Name server address field.
- 9) In the "Implicit Search Path: Starting domain name:" field enter your domain, for example, your.domain.com and close the TCP/IP control panel.

Article Change History:

04 Jun 1996 - Updated article for technical accuracy.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19634



Tech Info Library

PB 500 Series with PowerPC Upgrd: Corrupts DOS Floppies (6/96)

Revised: 6/18/96
Security: Everyone

PB 500 Series with PowerPC Upgrd: Corrupts DOS Floppies (6/96)

Article Created: 10 April 1996
Article Reviewed/Updated: 18 June 1996

TOPIC -----

I formatted a floppy disk as DOS format on my PowerBook 500 series computer with the Power PC (PPC) Upgrade. Other Macintosh computers can read the disk fine, but my Pentium-based computer cannot read the disk. Why not?

DISCUSSION -----

Resolution

This issue has been fixed with System 7.5.3 Revision 2. This software can be found on Apple Computer's online software update sites. If you do have not access to an online service please refer to Tech Information Library article, "Macintosh System 7.5.3 Revision 2: FAQ." If you do not have System 7.5.3 Revision 2, follow the workaround provided below.

Original Issue

If a floppy disk is formatted as DOS format on a PowerBook 500 series computer with the PPC Upgrade, DOS/Windows computers will not be able to recognize the disk. Other Macintosh computers, however, recognize the disk as a DOS disk.

If a floppy disk is formatted on a DOS/Windows computer and then inserted into a PowerBook 500 series computer with the PPC Upgrade, the PowerBook will recognize it as a DOS floppy. However, if the disk is then removed from the PowerBook and taken back to a DOS/Windows system, that disk will not be recognized by the DOS/Windows computer.

Explanation

There was an inadvertent change made to the floppy driver of the PowerPC-upgraded PowerBook 500 series computers. This change makes a DOS disk unreadable by DOS/Windows computers if the PowerPC-upgraded PowerBook 500 series

computer formats the disk or is the first Macintosh computer to read the disk after it has been formatted on a DOS/Windows computer.

Workaround

If you cannot immediately install, the System 7.5.3 Revision 2 there is a workaround. You need to either format the disk as DOS on a Mac other than the PowerBook 500 series computer with the PPC Upgrade or make sure a Mac other than the PowerBook 500 series computer with the PPC Upgrade is the first to read the disk after it has been formatted on a DOS/Windows system. After another Macintosh has read the disk and written the resource fork (which is necessary in order for the Macintosh file system to recognize the disk), all other Macintosh computers (including the PowerBook 500 series computer with the PPC Upgrade) and DOS/Windows systems should be able to read the disk.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

18 Jun 1996 - Reworded for clarity.

15 Jun 1996 - Added System 7.5.3 Revision 2 fix.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19635



Tech Info Library

DOS Compatibility Card: Don't Remove Joystick Card (4/96)

Revised: 4/18/96
Security: Everyone

DOS Compatibility Card: Don't Remove Joystick Card (4/96)

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Article Created: 18 April 1996

TOPIC -----

Can the Joystick port on the DOS Compatibility Card be removed from the computer since it is on a separate board?

DISCUSSION -----

The DOS Compatibility Card joystick port should not be removed. While the joystick card is a separate from the DOS Compatibility Card daughter board, the joystick card is how the DOS Compatibility Card accesses the PDS slot. The DOS Compatibility Card daughter board has a 26-pin ribbon cable connecting to the joystick card. If you remove the joystick card, the DOS Compatibility Card no longer functions, and a message appears on the screen with the message "The DOS Compatibility Card is not installed. Changes made will take effect when the card is installed."

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19636



Tech Info Library

PowerTalk: Alias of the Mailbox (4/96)

Revised: 4/18/96
Security: Everyone

PowerTalk: Alias of the Mailbox (4/96)

=====

Article Created: 18 April 1996

TOPIC -----

Why can't I make an alias of the PowerTalk Mailbox. The Finder simply deselects the mailbox when an attempting to make the alias.

DISCUSSION -----

This issue was addressed with System 7.5.3 and the System 7.5 Update 2.0. You can now select the PowerTalk mailbox and choose the Make Alias command from the File menu. The alias will be created on the desktop and will open the PowerTalk mailbox.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19637



Tech Info Library

Open Transport: Network Printers Missing From Chooser (4/96)

Revised: 4/18/96
Security: Everyone

Open Transport: Network Printers Missing From Chooser (4/96)

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Article Created: 18 April 1996

TOPIC -----

I cannot get any printers to appear in the Chooser when I select the LaserWriter 8.3.2 driver.

I'm trying to see a TI Microlaser and I've also tried seeing a NEC SilentWriter. I have tried both of these printers on a LocalTalk connection to a Macintosh Quadra, with the LaserWriter 8.3.2 printer driver, and both printers worked fine. I'm using this same LocalTalk connection to a Power Macintosh 8500 running Open Transport.

DISCUSSION -----

This issue was addressed in Open Transport 1.0.8 and later. The issue was first addressed in AppleTalk version 60.0.8 (a component of Open Transport 1.0.8).

What happened was some AppleTalk packets from the client were being addressed to 'network id 0'. These packets were ignored by some laser printers on LocalTalk.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19639



Tech Info Library

AppleShare: Some Information Not Found Error Message (11/96)

Revised: 11/19/96
Security: Everyone

AppleShare: Some Information Not Found Error Message (11/96)

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Article Created: 18 April 1996
Article Reviewed/Updated: 18 November 1996

TOPIC -----

When using AppleShare Admin or AppleShare file server, I get the message, "Some server information could not be found. Please quit and restart the file server or some information may be lost." This happens when opening groups or adding users to groups.

DISCUSSION -----

Follow the steps below

- 1) Quit AppleShare File Server, AppleShare Admin, and AppleShare Print Server.
- 2) Move the Users and Groups file from the Preferences folder to the root level of the system folder.
- 3) Restart the computer.
- 4) Run Disk First Aid.
- 5) Run AppleShare Admin
- 6) Enter all information (such as the AppleShare serial number and the server's name).

NOTE: The server name must be exactly the same or access privileges may be lost. Also, the name field is case sensitive.

The usable data from the Users and Groups Data file moved in Step 2 should be imported into a new Users and Groups file.

Article Change History:
18 Nov 1996 - Added Step 5 to sequence.

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Tech Info Library Article Number:19640



Tech Info Library

AppleShare 4.2.1: Read Me (4/96)

Revised: 2/17/97
Security: Everyone

AppleShare 4.2.1: Read Me (4/96)

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Article Created: 19 April 1996
Article Reviewed/Updated: 30 April 1996

TOPIC -----

This article is the AppleShare 4.2.1 ReadMe file. A correction to the original ReadMe file was made to this Tech Info Library document.

DISCUSSION -----

AppleShare Read Me

This document provides important information about AppleShare version 4.2.1. Some of this information is not included in the AppleShare Administrator's Guide or in the Addendum to AppleShare Administrator's Guide. You may want to print this document and keep it with your guide.

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- Serial numbers are not updated immediately
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- Avoid giving users access to the root of a volume
- Initializing floppy disks on an AppleShare file server
- Don't select Folder Protection
- General Controls control panel updated
- Don't install SAM Intercept on the server machine

AppleShare Client for Windows

AppleShare 4.2.1 includes a site license for AppleShare Client for Windows version 1.0.2. This product includes disc images of installation software and LaserWriter drivers on the AppleShare CD-ROM disc; the product also includes the printed guide Getting Started With AppleShare Client for Windows. You can create AppleShare Client for Windows floppy disks using the Disk Copy utility. The disk images, Disk Copy, and instructions on how to use this utility can be found in the AppleShare Windows Client 1.0.2 folder. For late-breaking information about AppleShare Client for Windows, see the README.TXT file on AppleShare Client for Windows Disk 1.

Share the Workstation Software 3.6.2 folder

If you use the Easy Install method when you install your AppleShare server software or if you use the Custom method and select the AppleShare Workstation Network Install option, the Installer places a folder named Workstation Software 3.6.2 at the root of your startup volume. This folder contains all the components needed to upgrade any Macintosh computer to the latest version of the AppleShare Workstation program. Share this folder and its contents to make the workstation program available on the file server for installation over the network.

See the AppleShare Administrator's Guide for instructions on how to share a folder. The Workstation Software 3.6.2 folder should have See Files and See Folders privileges enabled for Everyone (do not allow Make Changes privileges). Do not allow the folder to be moved, renamed, or deleted. Change all the enclosed folders as well. Enable guest access to your server so that users can log on as guests and so that they can mount the Workstation Software 3.6.2 folder as a volume on their desktops.

You may also want to rearrange the folder so that only the Workstation User's Guide and the Installer application are visible when the volume is mounted. This will eliminate any confusion about how to use the contents of the folder.

Upgrade to AppleShare Workstation 3.6.2

Macintosh system software includes AppleShare Workstation software, which users can use to log on to any AppleShare server, including an AppleShare 4.2.1 server. However, the AppleShare Workstation software supplied with system software does not provide the increased performance of AppleShare Workstation 3.6.2 and may not accept the full range of server greeting messages that can be sent from an AppleShare 4.2.1 server; users may experience other problems with earlier versions of the Workstation Software. For these reasons, it is important to encourage all users to upgrade to AppleShare Workstation 3.6.2, following the complete instructions provided in the online Workstation User's Guide. The guide is in the Workstation Software 3.6.2 folder, which is located on the startup volume of your server or on the AppleShare CD-ROM disc.

Upgrade workstations to System 7.5 Update 2.0

The Macintosh System 7.5 Update 2.0 Installer is on the AppleShare CD-ROM disc. You can use this Installer (or make it available over the network) to upgrade the systems of the workstations on your network. System 7.5 Update 2.0 is a set of system software enhancements that improves the reliability and performance of all computers running system software version 7.5, 7.5.1, or 7.5.2. You can install the update even if you (or users on your network) did not install Macintosh System 7.5 Update 1.0.

Note: Although Apple recommends that you install the update for the many enhancements it provides, be aware that once you install the update your users may notice a decrease in AppleShare performance. This decrease in AppleShare performance will be corrected in future releases of system software.

Sharing a volume over 2 gigabytes

AppleShare 4.2 allows you to share a volume as large as 4 gigabytes (GB). However, when a user mounts a volume that's over 2 GB, the information that is displayed at the top of the volume window on the user's computer will be inaccurate. The line beneath the volume window title displays the number of items in the window ("n items"), the amount of memory used by items on the volume ("n MB in disk"), and the amount of additional memory that can be used ("n MB available"). The "n MB in disk" and "n MB available" figures will not reflect the total volume size.

Negative file sizes

In some views, the Finder displays the size of a file next to the file's name. If users report that the Finder is displaying negative file sizes for files stored on AppleShare servers, instruct them to upgrade to System 7.5.1 or higher.

IMPORTANT:

In the original ReadMe document this section instructed users to upgrade to AppleShare Workstation 3.6.2. However, they should upgrade their system software, not their AppleShare Workstation software.

The Print Server program uses LaserWriter 7 drivers

The AppleShare Print Server program can accommodate any model of Apple LaserWriter that is compatible with LaserWriter 7 drivers, ImageWriter printers, and any other printers compatible with the print drivers for these two classes of printers. The Print Server program is dependent on LaserWriter 7 drivers and does not utilize LaserWriter 8 drivers. Client computers can have LaserWriter 8 drivers installed and use the print server; however, users will not get the functionality of LaserWriter 8 drivers (such as Automatic Setup) and server problems may occur. For instance, if client computers on your network have LaserWriter 8 drivers installed, print queue windows displayed on the server will display double entries for each print job.

Longer print time when printing through a print spooler

The total elapsed time is longer when users print documents through a print spooler rather than printing directly to a printer.

Don't use QuickDraw GX with the Print Server program

QuickDraw GX and AppleShare Print Server program are not compatible. Do not run them on the same machine.

Using the LaserWriter Bridge software

The LaserWriter Bridge software that is included on the AppleShare CD-ROM disc is intended for classic AppleTalk-based machines only; the LaserWriter Bridge software is not compatible with Open Transport-based machines.

Use QuickTime 2.0 or later on workstations

Workstations running both NOW utilities and QuickTime version 1.6 may hang when users log on to an AppleShare file server. To avoid this problem, instruct users to install QuickTime version 2.0 or later on their computers. Alternatively, removing QuickTime 1.6 or NOW utilities will fix the problem. Users may also experience problems with the HAM (Hierarchical Menu) utility. Solving this problem requires removing the utility.

QuickTime 2.1 is in the Extras folder, which is in the AppleShare Workstation 3.6.2 folder on the AppleShare CD-ROM disc. If AppleShare 4.2.1 has been preinstalled on your server, the Workstation Software 3.6.2 folder will be located at the root of the startup volume on your server. You can also find it on the AppleShare CD-ROM disc.

Opening applications over the network

If users with 68040-based Macintosh computers running system software prior to version 7.5 are experiencing problems opening applications over the network, they need to install Network Launch Fix into the Extensions folder of the System Folder on their computer startup disk. (Computers running system software 7.5 or later have Network Launch Fix built into the system.)

Network Launch Fix is in the Extras folder, which is in the AppleShare

Workstation 3.6.2 folder at the root of the startup volume on your server. You can also find it on the AppleShare CD-ROM disc.

Delayed response to the Cancel button

When users click the Cancel button to stop a file transfer that is in progress, the Finder may not respond immediately. The delay may be significant depending on the length of the round trip between the workstation and the server. Connections over multiple routers or over phone lines using Apple Remote Access may cause significant round-trip delays.

Tell users that if the Finder does not respond immediately, they should not assume that their computer has crashed or is frozen; they should wait several minutes before restarting.

Mounting the same volume twice in different zones

If you have enabled multihoming on your network, tell users to be cautious when connecting to volumes and servers with the same name in different zones; the volumes may actually represent the same volume on your server that can be accessed in several zones. If you log on to the same server in two zones and you attempt to copy the same files or folders from one icon representing a volume on the server to another icon representing the same volume, data loss will occur.

Using System 7 disk cache with AppleShare

In addition to the caching provided in AppleShare 4.2.1, your system software also provides disk caching. Depending on how you use AppleShare, you may notice an improvement in performance by adjusting the server computer's disk cache size. In general, increasing the size of the cache for your AppleShare file server will provide a more substantial performance improvement than increasing the size of the system software's disk cache.

Your server's system software ships with disk cache turned on and set to 96K. You may wish to experiment with different settings. (You adjust the cache size in the Memory control panel.)

If you change the size of the disk cache, be sure to restart the server computer for the new size to take effect.

Do not use virtual memory with AppleShare

AppleShare 4.2.1 cannot run with virtual memory turned on. Do not turn on virtual memory with your server computer.

Do not turn on file sharing from the Automated Tasks submenu

Do not use the Start File Sharing and Stop File Sharing commands from the Automated Tasks submenu under the Apple menu.

Choose screen savers carefully

There are many screen savers on the market that can be used to prevent screen

burn-in on AppleShare servers. Some screen savers are quite elaborate and perform many complex calculations to draw a single picture on the screen. Since they require significant amounts of CPU time, the more complex screen savers will reduce the performance of your AppleShare server. Please choose the screen saver that interferes the least with your AppleShare server.

Some screen savers are not compatible with AppleShare 4.2.1 and can cause your server to crash or hang. Before purchasing or using a screen saver, check with the screen saver's manufacturer to determine if the screen saver will work properly with your server.

Choose disk compression utilities carefully

Most disk compression utilities are incompatible with AppleShare 4.2.1 and can cause your server to crash or hang. Before purchasing or using a disk compression utility, check with the utility's manufacturer to determine if the utility will work properly with your server.

Using Retrospect Remote with AppleShare

If you are backing up a large number of files, you may need to give Retrospect Remote more application memory. See the Retrospect Remote User's Guide for information on when to increase the size of your Retrospect Remote program.

Using WebSTAR and AppleShare on the same server

You may experience problems if you try to run WebSTAR and AppleShare on the same server and you are also using Open Transport. If you attempt to open WebSTAR when AppleShare is already running, your system may freeze. To avoid this problem, follow these steps:

- 1) Open the TCP/IP control panel.
- 2) Choose User Mode from the control panel's File menu and click the Advanced or the Administration button. Then click OK.
- 3) In the control panel, click the Options button.
- 4) In the TCP/IP Options dialog box, deselect (click to remove the "X") the "Load only when needed" option.
- 5) Click OK.
- 6) Restart your server computer.

Logging on to an AppleShare file server from a PhoneNet PC client

Using the AppleShare Admin program, you can force new AppleShare users to change their password the first time they log on to your server. If new users are experiencing problems logging on to an AppleShare file server with PhoneNet PC, try letting them keep their original passwords.

Using Farallon Ethernet cards and multihoming

If you are using a Farallon Ethernet card on your server and you enable multihoming, you must terminate the card. If the card is not properly terminated, your server may freeze or crash.

Incompatibility with Atto NuBus card

AppleShare 4.2.1 is not compatible with Atto Technology's Silicon Express IV NuBus FAST/WIDE SCSI-2 SCSI Card. This is because AppleShare requires a system based on SCSI Manager 4.3. The Atto card uses its own SCSI manager.

Using special characters in server names

The AppleShare Admin program will not allow the administrator to enter a server name that contains a "/" character. If you must have a "/" character in the name of your server, use the following workaround:

- 1) Shut down file service.
- 2) Quit AppleShare Admin.
- 3) Drag the Users & Groups Data File from the Preferences folder to the System Folder.
- 4) Using the Sharing Setup control panel, enter a new name in the Macintosh Name box.
- 5) Start AppleShare Admin.
- 6) Enter the appropriate information in the administrator information and serial number dialog box.
- 7) When the file server information dialog box appears, do not change the server name. Just enter the Admin Key and click OK.
- 8) Quit AppleShare Admin.
- 9) Drag the Users & Groups Data File from the System Folder to the Trash (it is no longer needed).

A new Users & Groups Data File has been created in the Preferences folder.

Use separate aliases for shared items

Aliases to shared folders can be created using the Finder on the AppleShare server computer. Those aliases can be shared with workstations by placing them in a shared folder. If a shared alias is accessed by a workstation, the alias may be modified in such a way that it is no longer usable by the Finder on the AppleShare server. This can only happen with shared-item aliases created on an AppleShare server.

To avoid this problem, use separate aliases for shared items. Create two aliases to the same shared item, using the Finder on the AppleShare server. Place one alias in a shared folder for use by workstations. Keep the other alias in a folder that is not shared with workstations.

Serial numbers are not updated immediately

Using the AppleShare Admin program, you can change serial numbers while file service is running. However, the old serial number will remain in effect until you shut down and restart file service.

Once you change to a new serial number, the old serial number will no longer be displayed in the Administrator Information and Serial Number dialog box (displayed by starting the AppleShare Admin program and choosing File Server Serial Number Preferences from the Server menu). To avoid confusion about which serial number is in use, restart file service immediately after changing the

serial number.

Working with a large Users & Groups Data File

The AppleShare Admin program is configured to work with a Users & Groups Data File that has a maximum of 2000 users. If you have a large user community, you may need to increase the capacity of AppleShare Admin by increasing the preferred memory size in the Admin Info window. (In the Finder, select the AppleShare Admin icon, then choose Get Info from the File menu.) AppleShare Admin needs a minimum memory of 400K. Increase Admin's preferred memory size by 100K for each additional 1000 users in your user community. For example, AppleShare Admin needs 500K of memory to handle 2900 users, but it needs 600K of memory to handle 3900 users.

Use AppleShare Admin to modify Users and Groups information

If you install AppleShare on a server that also supports Apple Remote Access, you can't use the Users and Groups file from Apple Remote Access. Instead, use the AppleShare Admin program to work with Users and Groups.

Avoid giving users access to the root of a volume

Using the AppleShare Admin program, you can give workstation users access to either the root of a volume or to specific shared items within that volume. To ensure the security of your file server, give workstation users access to shared items only.

Initializing floppy disks on an AppleShare file server

If you are experiencing problems initializing floppy disks on an AppleShare 4.2.1 server that has connected users, try removing the PC Exchange control panel from the Control Panels folder in the System Folder and then restarting.

Don't select Folder Protection

The General Controls control panel contains two checkboxes in the Folder Protection box: "Protect System Folder" and "Protect Applications folder." Because there is an incompatibility between this feature and AppleShare, make sure that no X's appear in these two checkboxes.

General Controls control panel updated

When you install AppleShare 4.2.1 software on servers running System 7.5.1, the General Controls control panel is replaced by General Controls version 7.5.6. This update fixes bugs that affect AppleShare operations.

Don't install SAM Intercept on the server machine

AppleShare 4.2.1 does not run with Symantec Antivirus for Macintosh (SAM) Intercept installed in your server's Extensions folder.

Article Change History:

..TIL19641-AppleShare_4-2-1-Read_Me_4-96_(TA35341).pdf

30 Apr 1996 - Revised what software to upgrade if negative file sizes appear.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19641



Tech Info Library

Open Transport: Network Time 2.0.1 Issue (4/96)

Revised: 4/19/96
Security: Everyone

Open Transport: Network Time 2.0.1 Issue (4/96)

=====

Article Created: 19 April 1996

TOPIC -----

I'm having a problem with system hangs when using Network Time 2.0.1 and Open Transport or System Update 2.0. Is there a compatibility issue with Network Time and Open Transport?

DISCUSSION -----

Network Time and Open Transport are compatible. The compatibility problem is with the Auto Power On/Off control panel which was last shipped as part of System 7.5.

The solution is to disable the Auto Power On/Off control panel.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19643



Tech Info Library

PowerBook 150: Can't Use Drive Setup (6/96)

Revised: 6/26/96
Security: Everyone

PowerBook 150: Can't Use Drive Setup (6/96)

Article Created: 19 April 1996
Article Reviewed/Updated: 26 June 1996

TOPIC -----

I just upgraded the 120 MB IDE hard drive in my PowerBook 150 to a 500 MB IDE hard drive. However, the PowerBook will not start up from the drive even after installing the correct system software. I tried reformatting the hard drive with Drive Setup and Internal HD Format but they do not work. What should I do?

DISCUSSION -----

The PowerBook 150 has a driver scheme that is different than most Macintosh computers. The hard disk driver is always taken from ROM and if there is a driver present on the hard disk, the computer usually will not start up from it.

The PowerBook 150 comes with a special utility, Internal HD Format, that will format hard drives for use with the PowerBook 150. However, Internal HD Format will not format a drive that already has a driver partition. If Internal HD Format is run on a drive that has a driver partition, it will generate the message "Internal HD Format will not run on this system. Please use HD SC Setup." This message is in error since neither Apple HD SC Setup or Drive Setup are compatible with the PowerBook 150.

So if possible, you should purchase the new hard drive as unformatted. Then you can use Internal HD Format to format the drive correctly. After the drive is formatted, you should be able to install system software and start up from the drive as normal.

If the new hard drive is pre-formatted (whether by Apple or a third-party utility), follow this procedure:

Step 1

With the new hard drive installed, startup from another startup device with a

System Folder such as a Disk Tools disk.

Step 2

While starting up, if you receive a message saying "This disk is unreadable by this Macintosh, do you wish to initialize it..", select Initialize.* The hard drive icon should appear on the desktop when the initialization process is done. This is sufficient to prepare the hard disk for use since the driver is in ROM. You do not need to use the Internal HD Format utility.

If the message "This disk is unreadable by this Macintosh, do you wish to initialize it.." does not appear and the hard drive icon shows up on the desktop, click on the icon to select it and then select Erase Disk... from the Special menu and initialize the disk. This is sufficient to prepare the hard disk for use since the driver is in ROM. You do not need to use the Internal HD Format utility.

Step 3

Now that the hard drive is initialized, you can install the system software by booting from the install disk or CD.

* Note: The PowerBook 150 comes with a special program called PowerBook 150 Backup to make the system software disk set. Make sure the system software disk set is created before installing a new hard drive. Instructions for using the PowerBook 150 Backup program are in the User's Guide.

This article was published in the Information Alley on 26 April 1996.

Article Change History:

26 Jun 1996 - Re-written for clarity.

26 Apr 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19644



Tech Info Library

MacTCP DNR: What is it? (5/96)

Revised: 5/14/96
Security: Everyone

MacTCP DNR: What is it? (5/96)

Article Created: 20 April 1996
Article Reviewed/Updated: 14 May 1996

TOPIC -----

After installing System 7.5 Update 2.0 on my Power Macintosh 8500, I noticed the file "MacTCP DNR" in the System Folder. I'm not sure whether it was there before. As I recall, MacTCP DNR was a preference file before installing System 7.5 Update 2.0. Now the icon is different, and the file type is listed as control panel. Double clicking on it says that it is used by MacTCP.

Do I need the MacTCP DNR file, and what does it do?

DISCUSSION -----

MacTCP DNR is a special file that contains resources for TCP applications written for System 6.0.x. It's placed at the root level of the System Folder because older applications expect it to be available there, like older System 6.0.x control panels.

The file type/creator may have changed to control panel to reflect it was a control panel under System 6.0.x. You should leave the file installed in the event you come across an older TCP application that requires it. If you do remove it, the MacTCP DNR file will be recreated automatically after you restart your computer.

Article Change History:
14 May 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19645



Tech Info Library

TCP/IP Control Panel: Syntax of Hosts File (12/96)

Revised: 12/16/96
Security: Everyone

TCP/IP Control Panel: Syntax of Hosts File (12/96)

Article Created: 20 April 1996
Article Reviewed/Updated: 16 December 1996

TOPIC -----

Does Open Transport 1.1/TCP support a local HOSTS file?

DISCUSSION -----

Open Transport/TCP supports one or more HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the domain name resolver's initial cache of information. The selected file is opened and parsed when Open Transport/TCP is initialized. As with MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified Domain Name, and where

```
<rr> = [<ttd>] [<class>] <type> <rdata> OR [<class>] [<ttd>] <type> <rdata>
```

The only <class> currently supported is IN (Internet Domain); <ttd>, time to live, indicates the record's configured lifetime in seconds; and <type> can be A (host address), CNAME (canonical name of an alias), or NS (name server). If <ttd> is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a value of minus-one (-1). \$INCLUDE and \$ORIGIN are not supported.

Open Transport/TCP is more stringent regarding the content and format of the HOSTS file than was MacTCP, which permitted violation of the FQDN requirement

for <domain-name>. For instance, this format:

```
charlie                A            128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie                CNAME       myhost.mydomain.edu
myhost.mydomain.edu    A            128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

If a HOSTS file is used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, the Advanced or Administrator mode must be used to select the desired file. The text file must already exist; it could have been created with any text editor or word processor. The HOSTS file is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when connecting via Ethernet to the campus LAN and when dialing-in from a remote location.

Article Change History:

16 Dec 1996 - Made correction for technical accuracy.
09 Dec 1996 - Made correction for technical accuracy.
04 Sep 1996 - Changed title.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19646



Tech Info Library

AppleShare Client for Win 1.0: NE2000 and NDIS Issue (4/96)

Revised: 4/20/96
Security: Everyone

AppleShare Client for Win 1.0: NE2000 and NDIS Issue (4/96)

=====

Article Created: 20 April 1996

TOPIC -----

This article describes an issue between the AppleShare Client for Windows 1.0 and some NE2000-compatible Ethernet cards.

DISCUSSION -----

After installing the AppleShare Client for Windows 1.0, the computer may lock up entering Windows under the following circumstances:

- The computer is running Windows for Workgroups
- The computer is using an NE2000-compatible Ethernet card
- The Ethernet network has an AppleTalk router
- Windows for Workgroups networking is using an NDIS3 (enhanced mode) drivers

Resolution

The AppleShare Client for Windows 1.0.2 or later resolves this issue.

To use the AppleShare Client for Windows 1.0, remove the enhanced mode NDIS driver in Windows for Workgroups by following these steps:

- 1) Open to the Network group in Program Manager
- 2) Open Network Setup
- 3) Click on the button labelled 'Drivers...'
- 4) Click on the button labelled 'Setup...'
- 5) For Driver Type, select 'Real Mode NDIS Driver'
- 6) Click 'OK'
- 7) Click 'Close'
- 8) Click 'OK'
- 9) Follow the rest of the prompts on the screen.

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Tech Info Library

Macintosh Users Unable to See Volumes on Novell Server (4/96)

Revised: 4/20/96
Security: Everyone

Macintosh Users Unable to See Volumes on Novell Server (4/96)

Article Created: 20 April 1996

TOPIC -----

We have several Power Macintosh 7500/100 computers, and we're having a problem with the Macintosh computers seeing a newly attached 8 GB disk array on a Novell server. The Macintosh users could see the old disk configuration, however, now the new disk array is the only logical volume on the server.

The Macintosh users can see the Novell server in the Chooser, logon to the server, and print to spooled printers using AppleTalk. However, the newly attached disk array does not appear in the Chooser's volume selection dialog box -- nothing is presented in the selection dialog, not even a grayed volume name. PC users are able to mount this volume.

I'm considered the Macintosh administrator for this server, and I'm wondering if my problem could be with a Macintosh not being able to access volumes larger than 2 GB.

DISCUSSION -----

The AppleTalk portions of your Novell server are working because your Macintosh users can see the server in the Chooser, connect by logging on, and print to the server's attached printers using AppleTalk.

There is no way to correlate the disk array's volume size to your problem, because the Macintosh computers have not yet mounted the volume. This is because the Novell server is not informing the Macintosh computers that there are any volumes attached. The volume selection dialog lists volumes in response to an AFP request, from the Macintosh to the server, for a list of attached volumes, not caring about the characteristics of the volumes.

Therefore at this stage, this appears to be a configuration problem on the Novell server. Any volume size issues will only emerge once the Macintosh users select the disk array, and attempt to mount it. Furthermore, any difficulties that may arise, when mounting the disk array, are not related in any way to the

Macintosh computers inability to see volumes offered by the server.

You need to review the steps necessary to make the server's volumes available to Macintosh users. The multi-protocol Novell server needs each aspect of its services separately set up for each protocol supported -- a volume needs to be explicitly shared for IPX clients, AppleTalk clients, and IP clients.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19648



Tech Info Library

AppleVision 1710: Front Controls used for DOS/Windows (4/96)

Revised: 4/22/96
Security: Everyone

AppleVision 1710: Front Controls used for DOS/Windows (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

I have an AppleVision 1710 Display and the five front left controls only open the AppleVision Setup window.

DISCUSSION -----

The front controls on the AppleVision 1710 Display are for changing or selecting options and values for your monitor. However, the control buttons on the far left of the display are for use only with DOS/Windows computers. The two left buttons are for selecting on-screen menus; the middle button is for selecting a topic on a menu; and the two right buttons are for adjusting values up or down.

If you do not install the AppleVision software, you can use these buttons to manually adjust the monitor.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19649



Tech Info Library

Multiple Scan 20: Radius Calibration Software Settings (4/96)

Revised: 4/22/96
Security: Everyone

Multiple Scan 20: Radius Calibration Software Settings (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

When I use Radius software for calibrating my Multiple Scan 20 Display, should I use light or dark phosphor?

DISCUSSION -----

Use dark phosphor for both Rev. A and Rev. B Multiple Scan 20 Displays.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19650



Tech Info Library

Connecting to DEC LAT network

Revised: 4/22/96
Security: Everyone

Connecting to DEC LAT network

=====

Article Created: 22 April 1996

TOPIC -----

Is there a solution for running LAT on a Power Book 5300 with System 7.5.3 and Open Transport 1.1 to a VAX running AppleTalk for VMS? I found a copy of the LAT tool on the VAX, but it froze the Power Book immediately under System 7.5.2 with classic networking.

DISCUSSION -----

The LAT Tool version 1.3.2 is the most current. There were some problems with version 1.3.1 hanging systems. We have found version 1.3.2 to be quite stable. You can contact Digital's CSC for the latest LAT tool.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19651



Tech Info Library

Connecting PC-Compatibles to AppleTalk Networks (4/96)

Revised: 4/25/96
Security: Everyone

Connecting PC-Compatibles to AppleTalk Networks (4/96)

=====

Article Created: 22 April 1996
Article Reviewed/Updated: 25 April 1996

TOPIC -----

I would like to connect my PC-compatible computers to my AppleTalk network. What products are available for Windows 3.1x and Windows 95?

DISCUSSION -----

- 1) AppleShare Client for Windows by Apple Computer, Inc. which runs on Windows 3.1x. Lets PC-compatible computers connect to LocalTalk, Ethernet, or Token Ring networks. Provides client for accessing AppleTalk file and printer services.
- 2) Personal MacLAN Connect by Miramar Systems. Runs on Windows 3.1x and Windows 95. Lets PC-compatible computers connect to LocalTalk, Ethernet, or Token Ring networks. Provides full peer to peer file and printer sharing between Macintosh and Windows PCs.
- 3) COPSTalk for Windows by COPS, Inc. Runs on Windows 3.x and Windows 95. Lets PC-compatible computers connect to LocalTalk or Ethernet networks. Provides client for accessing AppleTalk file and printer services.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
25 Apr 1996 - Correct product spelling.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19652

Tech Info Library

[Apple Spec DB](#) - [Hard Drives Matrix](#) - [Memory Guide](#) - [Parts DB](#) - [Service Manuals](#) - [Software Troubleshooting](#)

[Service Programs Manual Index](#) - [U.S.](#) - [Canada](#)

[CompTIA Codes](#) - [Ordering Parts FAQ](#) - [Product Service Matrix](#) - [REAs](#) - [Service Excellence](#)

TITLE

Apple Monitors: Using on PC-Compatible

Article ID: 19653
Created: 4/22/96
Modified: 1/12/00

TOPIC

Which Apple monitors can I connect to a PC-compatible computer?

DISCUSSION

The Apple Multiple Scan series of monitors may be connected to either a Macintosh computer or a PC-compatible computer. However, not all Multiple Scan monitors include the required PC adapter. The following tables show which monitors include a PC adapter and which ones do not.

Monitors that come with a PC adapter:

- Multiple Scan 720 (922-1458, Adapter, Macintosh to VGA)
- Multiple Scan 17 (922-0736, Cable, Mac/PC Adapter)
- Multiple Scan 1705 (922-1458, Adapter, Macintosh to VGA)
- Multiple Scan 1710 (922-1458, Adapter, Macintosh to VGA)
- Multiple Scan 20 (922-0736, Cable, Mac/PC Adapter)

Monitors that do not come with a PC adapter:

- Multiple Scan 14 (needs 922-0736, Cable, Mac/PC Adapter)
- Multiple Scan 15 (needs 922-0736, Cable, Mac/PC Adapter)
- Multiple Scan 15AV (needs 922-1458, Adapter, Macintosh to VGA)

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Monitors-Displays
Category: Multiple Scan Displays
Sub Category: AppleVision 1710; AppleVision 1710AV; Multiple Scan 14 Display; Multiple Scan 15 Display; Multiple Scan 17 Display; Multiple Scan 1705 Display; Multiple Scan 20 Display; Multiple Scan 720 Display



Tech Info Library

Apple Monitors: Using on PC-Compatibles (4/96)

Revised: 4/23/96
Security: Everyone

Apple Monitors: Using on PC-Compatibles (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

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Monitors that come with a PC adapter:

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Multiple Scan 1705	(922-1458, Adapter, Macintosh to VGA)
Multiple Scan 1710	(922-1458, Adapter, Macintosh to VGA)
Multiple Scan 20	(922-0736, Cable, Mac/PC Adapter)

Monitors that do not come with a PC adapter:

Multiple Scan 14	(needs 922-0736, Cable, Mac/PC Adapter)
Multiple Scan 15	(needs 922-0736, Cable, Mac/PC Adapter)

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19653



Tech Info Library

AppleVision 1710 Display: Convergence Discussion (4/96)

Revised: 4/23/96
Security: Everyone

AppleVision 1710 Display: Convergence Discussion (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

My AppleVision 1710 Display manual mentions that I can change convergence in the AppleVision Setup software. What is convergence and how does it affect the picture being displayed on the screen?

DISCUSSION -----

Red, green, and blue signals in your display intersect, or converge, to create the colors you see on the screen. If convergence is not adjusted properly, the images or text on your screen may be blurred, or you may get a rainbow effect with several colors visible at the edges of the images on the screen. Over time, your display may be exposed to external magnetic fields, which may cause the color signals to converge less precisely, producing a less distinct image. You may adjust convergence to correct for a blurred image or to suit your personal preferences.

Before making adjustments to the convergence, first make sure the settings for height/width, position, pincushion, and rotation are correct.

You can click the convergence icon shown in the Geometry window to open the Convergence Control panel. When you do this, the screen background changes to a grid composed of red, green, and blue lines. First adjust the horizontal lines with the up and down arrows, and then adjust the vertical lines with the left and right arrows. When convergence is set properly, the lines are aligned vertically and horizontally. Click OK to save the setting.

IMPORTANT: Because of the slight curvature of the front glass and the central location of the RGB gun within the CRT assembly, convergence settings may appear correct at the center of the display but slightly off at the outer edges. Therefore, when you adjust convergence, adjust for the best overall color clarity.

NOTE: When Overscan is on, you cannot make changes to any of the Geometry

selections, and the menu buttons and titles are dimmed. Turn Overscan off to make changes.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19654



Tech Info Library

Remote Access Control Panel Requires Password (10/96)

Revised: 10/16/96
Security: Everyone

Remote Access Control Panel Requires Password (10/96)

=====

Article Created: 16 October 1996

TOPIC -----

I have an Apple Remote Access (ARA) Personal Server on my network. In the Remote Access Setup control panel, when selecting the Answer calls checkbox, I get a dialog with the message "A password is required to set answering on this network", and a field for the password. I entered my personal password, but it was not accepted. What is wrong?

DISCUSSION -----

AppleTalk networks have the ability to lock out remote access including ARA. The network administrator enables or disables this feature with the Security Zone feature. You have to obtain a password from your Network administrator.

The Security Zone feature prevents the unauthorized remote access of an AppleTalk network.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19655



Tech Info Library

AppleShare: Move File to Different Folder, Creates Copy (4/96)

Revised: 4/25/96
Security: Everyone

AppleShare: Move File to Different Folder, Creates Copy (4/96)

=====

Article Created: 22 April 1996
Article Reviewed/Updated: 25 April 1996

TOPIC -----

With AppleShare 4.1 on a Workgroup Server 8150/110, when I logon as a user, a file is copied when moved between two folders on the same volume. When I logon as the administrator, or in front of the server computer, the file is moved, not copied.

DISCUSSION -----

This happens because as a user, you do not have access privileges necessary to move the file. You can do one of the following:

- Place the folders inside a single shared folder the user has See Folders, See Files, and Make Changes privileges. You should now be able to move the file rather than copy it.
- Give the user Make Changes privileges to the volume, or to additional folders.

Article Change History:
25 Apr 1996 - Changed title.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19656



Tech Info Library

After System 7.5 Update 2.0 Install, Can't Open Chooser (4/96)

Revised: 4/25/96
Security: Everyone

After System 7.5 Update 2.0 Install, Can't Open Chooser (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

After installing System 7.5 Update 2.0, when I try to open the Chooser or the AppleTalk control panel I get an error message that says AppleTalk Cannot Be Opened. What is causing this?

DISCUSSION -----

The resource for AppleTalk services are contained within the Shared Library Manager files, located in the Extensions folder of the System Folder. For AppleTalk services to function properly, both the Shared Library Manager and Shared Library Manager PPC files must be present.

To install the Shared Library Manager files for your Power Macintosh computer, double click the System 7.5 Update 2.0 Installer and choose the custom install in the pop-up menu. In the custom install menu list, click on the arrow to the left of the following:

Networking Software
Open Transport 1.1
Open Transport For PowerPC Only

Select Apple Shared Library Manager for PowerPC Macintosh by clicking the checkbox to the left, then click Install.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19657



Tech Info Library

Microsoft Office & Global Village 2.5.x Incompatibility (4/96)

Revised: 4/25/96
Security: Everyone

Microsoft Office & Global Village 2.5.x Incompatibility (4/96)

=====

Article Created: 22 April 1996

TOPIC -----

There is a known incompatibility with the Global Village fax software and Microsoft Office. When trying to launch Microsoft Office while the Global Village software is installed, in certain situations the computer will either freeze, or the application will open and then immediately close.

DISCUSSION -----

If a user is running Global Village software from v2.5 to v2.5.5, you need to acquire the Global Village v2.5.6 update, and Microsoft Office patch.

The Global Village software is available from the following internet sites:

- <http://www.globalvillage.com/support/tupdate.html>
- [ftp.globalvillage.com/pub/software/mac/](ftp://globalvillage.com/pub/software/mac/)
- Through most major online services

For the Microsoft Office update, you must contact Microsoft.

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Tech Info Library Article Number:19658



Tech Info Library

SerialDMA Extension: Use it instead of ASFU Fixer (12/96)

Revised: 12/3/96
Security: Everyone

SerialDMA Extension: Use it instead of ASFU Fixer (12/96)

=====

Article Created: 25 April 1996
Article Reviewed/Updated: 3 December 1996

TOPIC -----

The ASFU Fixer extension from GDT Softworks should be replaced with Apple's SerialDMA extension.

DISCUSSION -----

The ASFU Fixer was installed on early Power Macintosh computer, such as the Power Macintosh 7100 and 8100, to allow certain serial communication connections. However, if this extension is installed, it breaks serial communications between the Macintosh and several Apple MessagePad applications and tools such as the Newton Connection Kit, Newton Toolkit, Newton Press, and Newton Package Installer. It may also affect Newton Backup.

If you have ASFU Fixer installed, you should remove it and use Apple's SerialDMA extension instead.

Article Change History:
03 Dec 1996 - Corrected spelling.

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Tech Info Library Article Number:19659



Tech Info Library

Hebrew Language Kit: Where to Purchase ClarisWorks Hebrew (6/96)

Revised: 6/10/96
Security: Everyone

Hebrew Language Kit: Where to Purchase ClarisWorks Hebrew (6/96)

=====

Article Created: 25 April 1996
Article Reviewed/Updated: 10 June 1996

TOPIC -----

The Hebrew Language Kit Read Me First states that I need to contact a distributor to obtain the Hebrew version of ClarisWorks 3.0 for use with the Hebrew Language Kit. How can I obtain this version of ClarisWorks?

DISCUSSION -----

The information in the Read Me is incorrect. Claris currently does not offer ClarisWorks Hebrew in the United States. For further information, please contact Claris.

Article Change History:
10 Jun 1996 - Updated information.

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Tech Info Library Article Number:19661



Tech Info Library

Arabic Language Kit: Albayan Font & Diacrtical Mark (4/96)

Revised: 4/25/96
Security: Everyone

Arabic Language Kit: Albayan Font & Diacrtical Mark (4/96)

=====

Article Created: 25 April 1996

TOPIC -----

In the Arabic Language Kit, if I type Shift-N in the Albayan font, why do I see an extra diacritical mark?

DISCUSSION -----

Apple is currently investigating this issue. The current workaround is to select a different font.

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Tech Info Library Article Number:19662



Tech Info Library

Hebrew and Arabic Language Kits: System 7.5 Update 2.0 (4/96)

Revised: 4/25/96
Security: Everyone

Hebrew and Arabic Language Kits: System 7.5 Update 2.0 (4/96)

=====

Article Created: 25 April 1996

TOPIC -----

The Read Me file for the Hebrew and Arabic Language Kits does not mention System 7.5 Update 2.0. Is it supported with these Language Kits?

Also, I noticed that the ReadMe states that LaserWriter 8.3 and StyleWriter 1200 drivers will be installed if they are not already present. If I have System 7.5 Update 2.0 installed, and then install the Language Kits, will I have older versions of the LaserWriter 8 and StyleWriter 1200 printer drivers?

DISCUSSION -----

System 7.5 Update 2.0 is supported with the Language Kits. If System 7.5 Update 2.0 is installed, and then the Hebrew or Arabic Language Kit is installed, you will still have LaserWriter 8 version 8.3.3 and StyleWriter 1200 version 2.1.1, which are installed by System 7.5 Update 2.0.

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Tech Info Library Article Number:19663



Tech Info Library

Arabic and Hebrew Language Kits: What's in Version 1.0.1? (8/96)

Revised: 8/9/96
Security: Everyone

Arabic and Hebrew Language Kits: What's in Version 1.0.1? (8/96)

=====

Article Created: 25 April 1996
Article Reviewed/Updated: 9 August 1996

TOPIC -----

What is the difference between version 1.0 and version 1.0.1 of the Arabic Language Kit and Hebrew Language Kit?

DISCUSSION -----

The only change to version 1.0.1 of Arabic Language Kit and Hebrew Language Kit is to include the latest version of WorldScript, version 1.1.

The version of WorldScript included with version 1.0 of these kits may cause a crash when used with Macintosh Performa 475, 476, 575, 577, 578 and Macintosh LC 475 and 575 computers. Additionally, when using the Hebrew Language Kit on other 68LC040-based computers, such as the PowerBook 280 and 280c, the computer may lock up when you switch to the U.S. Keyboard Layout after typing in Hebrew in SimpleText Hebrew or at the Finder.

If you are using version 1.0 of the Arabic or Hebrew Language Kits, you should install the WorldScript Updater v1.1, which is available on the online services.

These articles can help you locate the software update mentioned here:

* "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

* "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

09 Apr 1996 - Added information about downloading updater.

25 Jul 1996 - Added additional information.

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Tech Info Library Article Number:19664



Tech Info Library

Apple Media Tool 2.0: How to Create Flipbooks (4/96)

Revised: 4/26/96
Security: Everyone

Apple Media Tool 2.0: How to Create Flipbooks (4/96)

=====

Article Created: 26 April 1996

TOPIC -----

This article contains directions for creating flipbooks in Apple Media Tool 2.0.

DISCUSSION -----

Here is a list of essential steps for quickly creating Flipbooks. A list of example files on the Apple Media Tool 2.0 CD that demonstrate how Flipbooks should work.

BEFORE YOU START
=====

You need a Flipbook media item. Flipbook media items are pictures whose contents have been divided into equal-sized areas, known as frames. The frames can be arranged in one or more rows, but all rows must be the same height. Each row can be divided into multiple columns, all of which must be the same width.

HOW TO SET IT UP
=====

Step 1

Open your project and add your Flipbook media item to the media list.

Step 2

Click and hold on the Flipbook media item until a pop-up menu appears.

Step 3

Choose "Flipbook" from the pop-up menu.

Step 4

Double-click on the Flipbook media item in the media list to display its parameters.

Step 5

Set the number of frames, columns, and rows by adjusting the values in the appropriate fields.

Step 6

Set the column width and row height by adjusting the values in the appropriate fields. Click "OK" when finished.

Note:

You will need these values again later.

Step 7

Add your Flipbook media item to a screen.

Step 8

Double-click the Flipbook object in the object list to display its parameters.

Step 9

Set the column width and row height by adjusting the values in the appropriate fields. Use the same values specified earlier.

Step 10

Specify the rhythm of the Flipbook.

It's important to note that changing the rhythm of a Flipbook changes the way that Apple Media Tool counts the frame numbers for that Flipbook.

If a rhythm of two is specified, each frame is displayed twice. As a result, the first two frames displayed are the same image. The next two frames displayed are the next image, and so on. If a rhythm of ten is specified, the frames 0 to 9 display the first image from the Flipbook media object, frames 10 to 19 display the second image from the Flipbook media object, and so on.

If you want to tell Apple Media Tool to go to a specific frame, you need to adjust the frame number you specify by multiplying it by the rhythm. If you use a Flipbook media object with 3 frames, you would have the following results:

Begin_Table

+=====+			
Image in	Frame Numbers if	Frame Numbers if	Frame Numbers if
Flipbook	Rhythm = 1	Rhythm = 2	Rhythm = 10
+=====+			
1	0	0-1	0-9
2	1	2-3	10-19
3	2	4-5	20-29
+-----+			

End_Table

FINSIHING UP

=====

Add actions which control the Flipbook. Flipbook objects can perform the following commands:

- | | |
|------------------|-------------------|
| - Enable | - Start-Stop |
| - Enable-Disable | - Stop |
| - Disable | - Stop All |
| - Move By | - Go to Beginning |
| - Move To | - Go to End |
| - Start | - Go to Time |

EXAMPLES

=====

The Apple Media Tool 2.0 CD contains several files that demonstrate Flipbooks. Check these paths on the AMT 2.0 CD:

- An AMT project with Flipbooks:

```
Apple Media Tool
  New Features Demo Project
    New Features Demo
```

- Flipbook media objects:

```
Apple Media Tool
  New Features Demo Project
    MEDIA
      50$Bill.flipbk
      ALPHABET.PIC 40x40
      ambsnd.txt.fb
      AMT ColorTitle.flipbk 200x400
      AMTTitle.flipbk
      AppleScriptBtn.flipbk
      AudioBtn.PICT
      DUCKFLIP.PIC
      exit
      EYELID.PIC 62x73
```

FlipbooksBtn.flipbk
qt fb
QTVRBtn.flipbk
QuickTimeBtn.flipbk
Sportflip.flipbk
stop.fb

This article was published in the 26 April 1996 issue of Information Alley.

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Tech Info Library Article Number:19665



Tech Info Library

LaserWriter 16/600 PS Fax: PS Code for Ignoring Dialtone (4/96)

Revised: 4/26/96
Security: Everyone

LaserWriter 16/600 PS Fax: PS Code for Ignoring Dialtone (4/96)

=====

Article Created: 26 April 1996

TOPIC -----

We use a Blinddial patch for the LaserWriter 16/600 PS fax, so that it can be used with a PBX without a standard dialtone. The patch implements a X3 command to the Modem. This patch stopped working with PCI-based Power Macintosh computers. Is there a new patch or another way to implement the X3 modem command?

DISCUSSION -----

We confirmed that the Ignore Dialtone patcher causes a System error on a Power Macintosh 9500 using System 7.5.3, but does work successfully on Power Macintosh 7200 and PowerBook 5300 using System 7.5.2 or 7.5.3.

When using the Ignore Dialtone patcher on a 9500 running 7.5.3, two error dialogs are displayed:

1. System Error -4099
2. Sorry, a system error occurred. "Ignore Dialtone error type 10"

then the 9500 froze.

System Error -4099 is a Print Manager error, and translated means "Write request too big." A type 10 error is a trap error.

We'll request the patcher be rewritten to work on PCI based Macintosh computers. Meanwhile, you can use another Macintosh to run the Ignore Dialtone patcher on, or alternatively download the following PostScript code with the Apple Printer Utility:

%=====

```
% Begin PostScript code
%
```

```
%!PS-Adobe-3.0
%%Title: (Correct WaitforDialTone problem in 16/600 Europe)
%%Creator: (Adobe Systems, Incorporated)
%%CreationDate: (Thursday, February 2, 1995)
%%Pages: 0
%%DocumentFonts:
%%DocumentNeededFonts:
%%DocumentSuppliedFonts:
%%DocumentData: Clean7Bit

product (LaserWriter 16/600 PS Fax) ne {
    (Ignore Dialtone works on Laserwriter 16/600 PS Fax only) = flush
    currentfile closefile
} if
1183615869 internaldict dup /faxmodemoption known
{
    begin
    faxmodemoption
    exch (WorldModem) eq and
    {
        /FaxAdminOps /ProcSet findresource begin (\b\bX3DT9) 0 tryphone
        (Heard dial tone.) eq
        {
            (Dial Tone Detection disabled.) print
        }if
    } if
}if
%%EOF
%
% End PostScript code
%=====
```

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Tech Info Library Article Number:19668



Tech Info Library

Apple Media Tool 2.0: How to Create an Idle Command (4/96)

Revised: 4/26/96
Security: Everyone

Apple Media Tool 2.0: How to Create an Idle Command (4/96)

=====

Article Created: 26 April 1996

TOPIC -----

In Apple Media Tool 1.x there was an Idle command that would cause the title to link back to a specific screen after a specified time of inactivity. This was useful for projects that played in kiosks. This article describes how to do this same thing with Apple Media Tool 2.0?

DISCUSSION -----

Here is one example of how you can achieve this same functionality in Apple Media Tool 2.0.

In this example, you are setting a duration for a background and for a text field (timeout.txt). These objects are the timers. The timeout.txt object is a text object that asks the user "Do you need more time? Click here to continue".

Note:

This article assumes you already know how to import media, create a screen, change actions, create commands, change commands, and other basic media tool procedures. If you do not know how to do this, please refer to the Apple Media Tool User's Manual.

Step 1 - Set Background Duration Time

Set a duration, in ticks*, for the background.

* 60 ticks = 1 second

The duration should be fairly long. When the duration elapses, the assumption is your audience has lost interest or walked away from the kiosk.

Step 2 - Assign Commands for the Background

Here is a chart of the event/action for the background.

Begin_Table

Background Object	Events	Actions
	After Display	Start Itself
		Go To Beginning Itself
	Finished	Show Timeout.txt
		Start Timeout.txt

End_Table

Step 3 - Set Timeout.txt Duration Time

Set a duration, in ticks*, for the background.

* 60 ticks = 1 second

Step 4 - Assign Commands for Timeout.txt

Here is a chart of the event/action for Timeout.txt

Begin_Table

Timeout.txt Object	Events	Actions
	Before Display	Hide Itself
		Hide Itself
		Stop Itself
	Mouse Up	Go To Beginning Itself
		Start Background
	Finished	Go To XXX (screen preferred)

End_Table

If timeout.txt finishes, meaning nobody clicked to continue, then it links back

to the main screen, or wherever you want.

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Tech Info Library Article Number:19669



Tech Info Library

AppleVision 1710 Display: Color Window Terms (4/96)

Revised: 4/27/96
Security: Everyone

AppleVision 1710 Display: Color Window Terms (4/96)

=====

Article Created: 26 April 1996

TOPIC -----

Please define the terms used in the Color window of AppleVision Setup for the AppleVision 1710 and 1710 AV Displays.

DISCUSSION -----

Following are definitions of terms found in the Color window of AppleVision Setup:

White Point

All light, including display light, has a white point, which is the measure of the color content of the light. The white point is also referred to as the color temperature measured in degrees Kelvin - a temperature scale used in scientific applications. Standard white points are available by selecting a corresponding button from the default list available in the White Point panel within the Accurate Color settings. D50 or 5000 degrees Kelvin, is a common lighting setting used in graphic arts. 6500 + 8 MPCD (mean perceptible color difference) or D65 is the white point of Midday sun. The default white point is 9300 + 8 MPCD which is the standard setting for Macintosh displays and high-definition television. This is a high-intensity white point, located at the blue end of the color spectrum. The lower the intensity, the closer it moves to the red end of the spectrum. If you are working in a darkroom environment, you should choose the lowest standard setting, which is D50. Other common settings not available by selecting a button are: D40 or 4100 degrees Kelvin for halogen light and D33 or 3300 degrees Kelvin for flourescent light. Please note that the AppleVision 1710 Display does not support color temperatures below 4100 degrees Kelvin.

If you wish to create a custom white point, click the Create Custom White Point button. When you do this, the Custom White Point dialog box appears on the screen. You create a custom white point in one of three ways. If you select Kelvin, the numeric feedback panel with slider and detente white points appears to the right of the button. You can then create a white point based on a Kelvin

temperature between 4100 and 9300 degrees by moving the slider. Lower temperatures create reddish whites and higher temperatures create bluish whites. If you select the button xy (1931 CIE), or u'v' (1976 CIE), the respective windows contain a color space graphic, a cross hair cursor that you can drag, and two fields of coordinates that you can edit. By the dragging the cross hair, you can set the desired white point value.

Gamma Curve

The gamma curve is the relationship between color intensity (chromaticity) and light (luminance) and determines the degree of gamma correction for the display. With a low gamma curve, colors are washed out. With a high gamma curve, colors have more contrast. The human eye can determine subtle changes in color, but does not register these changes in a linear way. Color systems are linear and continuous. A linear gamma curve ensures that the display produces the correct luminance levels on each primary color channel, and matches the user's nonlinear color expectations to the display's linear color devices. Gamma correction is a technique that adjusts the gamma curve to compensate for the loss of detail in dark objects. The default gamma value for the AppleVision 1710 Display is 1.8.

You can adjust the gamma curve on your AppleVision 1710 Display to ensure that the light and dark detail on images that you import or export is consistent. Most scanners have a gamma value of 1.0, while video editing equipment use a gamma value of 2.2. You can select a gamma value from the Gamma Curve panel in the Color window. When you do this, the gamma curve image in the panel changes to reflect the new value.

Ambient Light

Ambient light is the light surrounding the display. It can change the way colors appear on the screen. For example, fluorescent lights make colors look bluer, daylight or sunlight can make them look redder. To get a true color rendering, first set the white point for the display, and then correct for ambient light. Before you can correct for ambient light, you must also set the display color depth to millions. (To create a custom ambient light, use the ambient light tool supplied with the display and follow the instructions in chapter 4 of the user's guide.) The default ambient light setting is "None".

ColorSync System Profile

Macintosh computers use an additive system that combines red, green, and blue (RGB) phosphors to create display colors. They use a subtractive process of cyan, magenta, yellow, and black (CMYK) inks to create printer colors. Because these two processes are different, and because no two color devices produce exactly the same colors, AppleVision 1710 Displays, printers, scanners, and other color devices, must be characterized to provide the best color match. The software that does this is called ColorSync, and the AppleVision 1710 Display comes with a general profile called a ColorSync profile that characterizes the display. (For instructions on importing and exporting ColorSync profiles, follow the instructions in chapter 4 of the user's guide.)

When you reset the white point, gamma curve or ambient light, you will not see the change reflected on the screen or be able to export ColorSync system

profiles until you click the Recalibrate button located in the Color window.

Virtual Photometry Technology

The AppleVision display has the ability to correct for manufacturing variances through a process called Virtual Photometry Technology (VPT). Using VPT, the AppleVision display can be set to a wide variety of white points and can correct for CRT aging, and for ambient light conditions. VPT is a proprietary Apple technique used to calculate a theoretical white point. It does this by measuring the currents for the R, G, and B electron guns, while displaying a white screen. The current values are correlated to factory calibration data that is programmed into the display during production. An extremely accurate white point can be determined by compensating for the aging affects of the display. The current sensing circuitry also allows the host CPU to calculate the observed color of any pixel on the screen.

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Tech Info Library Article Number:19673



Tech Info Library

StyleWriter II: Special Communication Specifications (4/96)

Revised: 4/29/96
Security: Everyone

StyleWriter II: Special Communication Specifications (4/96)

=====

Article Created: 26 April 1996

TOPIC -----

I am trying to use a special device with the StyleWriter II printer. However, I need some information I couldn't find in the StyleWriter II printer manual. I need the data bits, stop bit, baud rate, and parity.

DISCUSSION -----

The information you need is listed in the table below. However, the StyleWriter II is a QuickDraw printer. Unlike many MS-DOS/Windows printers, QuickDraw printers require special drivers, and do not have a built-in character set or support emulation modes such as Epson, or Hewlett-Packard (HP).

In addition to the information in the table, you will need to write a custom QuickDraw driver if the StyleWriter II is used on any computer other than a Macintosh. Writing a custom driver is NOT an easy task, and requires knowledge of both programming and printer command sequences.

StyleWriter II Communication Specifications

=====

+=====+		
Data Type		Data Rate
+=====+		
Start Bits		1
+-----+		
Data Bits		8
+-----+		
Stop Bits		1
+-----+		
Baud Rate		57.6 Kilobit per seond (Default)
		230.4 Kbps (software selectable)
+-----+		

Parity	None	
+-----+	+-----+	+-----+

DIN-8 Connector (RS-422)
=====

+=====+	+=====+	+=====+
Pin #	Signal	Description
+=====+	+=====+	+=====+
1	NC	No connection
+-----+	+-----+	+-----+
2	NC	No connection
+-----+	+-----+	+-----+
3	TxD-	Transmit Data, negative
+-----+	+-----+	+-----+
4	SG	Signal Ground
+-----+	+-----+	+-----+
5	RxD-	Receive Data, negative
+-----+	+-----+	+-----+
6	TxD+	Transmit Data, positive
+-----+	+-----+	+-----+
7	PWR	Optional interface power
+-----+	+-----+	+-----+
8	RxD+	Receive Data, positive
+=====+	+=====+	+=====+

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Tech Info Library Article Number:19674



Tech Info Library

Hebrew & Arabic Language Kit: System Direction Issues (4/96)

Revised: 4/30/96
Security: Everyone

Hebrew & Arabic Language Kit: System Direction Issues (4/96)

=====

Article Created: 30 April 1996

TOPIC -----

This article contains the answers to questions about the System Direction in the Hebrew and Arabic Language Kits.

Questions in this Article:
=====

- 1) What does the System Direction setting in the Text control panel do?
- 2) I have the Hebrew (or Arabic) Language Kit installed and want to change the System Direction from left-to-right to right-to-left. How do I do this?
- 3) Is the System Direction information stored within individual documents?
- 4) Why do some localized version of SimpleText provide left or right text justification and others only provide right text justification?
- 5) After changing the System Direction to Right-to-left, SimpleText (or SimpleText Arabic, SimpleText Persian, or SimpleText Hebrew) still displays the text I enter from Left-to-right. Why?
- 6) Can I use both Left-to-right and Right-to-left text in the same document within SimpleText?
- 7) I installed the Hebrew (or Arabic) Language Kit, and wrote some letters with the System Direction set to Right-to-left. I then removed the Hebrew (Arabic) Language Kit and installed the Cyrillic Language Kit. When I try to type in SimpleText Russian, the text is from Right-to-left. Why is this happening? Does the Cyrillic Language Kit also support Right-to-left text?
- 8) I'm using ClarisWorks 4.0v2 and 4.0v4 and have the System Direction set to Right-to-left. All of the menus are displayed from Right-to-left as they should be, but I can't type in ClarisWorks from Right-to-left--all the text I enter is

always Left-to-right. Does ClarisWorks support WorldScript I? Is there any information about WorldScript in ClarisWorks Help?

9) I'm using ClarisWorks 4.0v4, and the names of some of the options in the File, Format & other menus begin and/or end with an unusual character. What is this?

DISCUSSION -----

1) Question: What does the System Direction setting in the Text control panel do?

Answer: The System Direction setting in the Text control panel determines the writing direction of text in menus and dialogs (elements created by the System).

In many instances, changing the System Direction also affects the justification of text within a SimpleText document. SimpleText is considered a "world-ready" application, and it takes its queue for text justification from the System Direction setting. The implementation of using the System Direction to control text justification in SimpleText is an undocumented feature.

Therefore, if the System Direction is left-to-right, then text within a SimpleText document is left-justified. If the System Direction is right-to-left, then text within a SimpleText document is right-justified.

2) Question: I have the Hebrew (or Arabic) Language Kit installed and want to change the System Direction from left-to-right to right-to-left. How do I do this?

Answer: Use the Text control panel to change the System Direction.

3) Question: Is the System Direction information stored within individual documents?

Answer: The System Direction is stored in the System file, not within individual documents.

4) Question: Why do some localized versions of SimpleText provide left- or right-justification and others only provide right text justification?

Answer:

Certain localized versions of SimpleText, such as SimpleText Persian, SimpleText Arabic, and SimpleText Hebrew, override the System Direction feature, and always display text as right-justified because it is more appropriate for those languages.

5) Question: After changing the System Direction to right-to-left, SimpleText (or SimpleText Arabic, SimpleText Persian, or SimpleText Hebrew) still displays

the text I enter from left-to-right. Why?

Answer: Any applications running when the System Direction is changed are not affected. You'll need to quit and re-open these applications to see the System Direction change.

6) Question: Can I use both left-to-right and right-to-left text in the same document within SimpleText?

Answer: No, you cannot use both System Directions in the same SimpleText document. For example: if you set the System Direction to right-to-left, open SimpleText, and type several lines, the text appears right-justified. If you then save your document, quit SimpleText and change the System Direction to left-to-right, when you re-open your original document all the text will now be left-justified.

7) Question: I installed the Hebrew (or Arabic) Language Kit, and created a document with the System Direction set to right-to-left. I then removed the Hebrew (Arabic) Language Kit and installed the Cyrillic Language Kit. When I try to type in SimpleText Russian, the text is displayed from right-to-left. Why is this happening? Does the Cyrillic Language Kit also support right-to-left text?

Answer: This shouldn't happen because the Cyrillic Language Kit does not support right-to-left text; Apple is looking into this issue.

To avoid the issue, change the System Direction back to left-to-right before removing either the Hebrew or Arabic Language Kits.

To resolve the issue after it occurs, you'll need to re-install the Hebrew or Arabic Language Kit, change the System Direction to left-to-right, and then remove the Hebrew or Arabic Language Kit.

NOTE: Resetting the PRAM does not restore the System Direction. Also, you cannot Custom Install the Text control panel from the Arabic or Hebrew Language Kits.

8) Question: I'm using ClarisWorks 4.0v2 and 4.0v4 and have the System Direction set to right-to-left. All of the menus are displayed from right-to-left as they should be, but I can't type in ClarisWorks from right-to-left--all the text I enter is always left-to-right. Does ClarisWorks support WorldScript I?

Answer: Yes, both versions of ClarisWorks that you mention are WorldScript I savvy, but ClarisWorks does not support right-to-left text. This information is found in the ClarisWorks Help file available in the Guide Menu.

9) Question: I'm using ClarisWorks 4.0v4, and the names of some of the options in the File, Format and other menus begin and/or end with an unusual character. What is this character?

Answer: You've registered ClarisWorks with the Arabic (or Hebrew or Cyrillic)

Language Register, which tells ClarisWorks to use the default font for that language. For example, the default font for Arabic is called "Geeza". So, if you register ClarisWorks with the Arabic Language Register, when ClarisWorks is launched, it will use the "Geeza" font in the menus. However, "Geeza" doesn't have an equivalent to the ellipsis, so in the File menu the 'New...' option looks like "New•", with the • representing some Arabic character. (If the System Direction is set right-to-left, the File menu '...New' option looks like "•New".)

To restore ClarisWorks to using the Roman script for menus, open any Language Register application (they're located in the Apple Extras folder on the hard drive), change the Language in the pop-up menu to "English", click on the "Register" button, and select ClarisWorks in the lower portion of the window.

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Tech Info Library Article Number:19676



Tech Info Library

Apple MPEG Card: Common Issues (5/96)

Revised: 5/6/96
Security: Everyone

Apple MPEG Card: Common Issues (5/96)

Article Created: 30 April 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

This article contains the resolutions to some of the commonly experienced issues with the Apple MPEG card.

DISCUSSION -----

1) Issue: There is no option for MPEG video in the "Controls" window of Apple Video Player.

Resolution:

Step 1

The AMMS MPEG Decoder extension may be missing or damaged. You can reinstall the AMMS MPEG Decoder extension using the Apple MPEG Media System CD which came with the Apple MPEG Card.

Step 2

Remove the Apple Video Player Prefs file from the Preferences folder (you will lose all custom settings and channel passwords) and restart the Apple Video Player.

Note: If this does not resolve the issue, you can move the preferences file back into the Preferences folder, replacing the new one that was created, so you do not lose your custom settings.

Step 3

Ensure that the MPEG card is fully seated in the expansion slot of the logic board.

2) Issue: The video window in Apple Video Player is blank during playback of an MPEG video.

Resolution:

Step 1

If you are using QuickTime 2.0, ensure that the QuickTime 2.0 AMMS Update extension is present in the Extensions folder.

Note: You do not need this extension if you are using QuickTime 2.1 or later.

Step 2

Ensure that no other video applications have open MPEG video windows. Only one MPEG video can be played at a time.

Step 3

Remove the Apple Video Player Prefs file from the Preferences folder (you will lose all custom settings and channel passwords) and restart the Apple Video Player.

Note: If this does not resolve the issue, you can move the preferences file back into the Preferences folder, replacing the new one that was created, so you do not lose your custom settings.

Step 4

Ensure that the DVA (Digital Video Access) ribbon cable that came with the MPEG card is securely fastened to both the MPEG card and the Video-In card.

3) Issue: Certain picture adjustment controls, like sharpness, have no effect on MPEG video.

Resolution: MPEG video playback is independent of these settings. Set the video window to "Normal" size (320 x 240) in order to avoid pixel-doubling and achieve maximum image clarity.

4) Issue: During MPEG video playback, the audio intermittently skips and speeds up as if it were interrupted and is trying to catch up with the video track.

Resolution: Though MPEG video playback demands only approximately 20% of the processor's cycles, some aspects of MPEG video playback can be preempted by other processes. Ensure that no other applications or processes (file sharing, printing, and so on) are working in the background. The effect can be reproduced occasionally by simply pulling down a menu.

5) Issue: Certain MPEG movie files that can be played with applications that

support software decompression cannot be played with applications that support the MPEG card, such as Apple Video Player and MoviePlayer.

Resolution: MPEG movies designed for software decompression by applications such as Sparkle may not be compatible with the hardware decompression methods employed by the MPEG card and the applications that support it.

This article was published in the Information Alley on 30 April 1996.

Article Change History:

06 May 1996 - Added alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19677



Tech Info Library

MoviePlayer 2.1: Purpose of Plug-ins (5/96)

Revised: 5/6/96
Security: Everyone

MoviePlayer 2.1: Purpose of Plug-ins (5/96)

Article Created: 30 April 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

MoviePlayer 2.1 includes two plug-ins: Authoring Tools and Goodies. What are these plug-ins used for and what features do they offer?

DISCUSSION -----

These plug-ins allow you to add or modify custom color palettes, add or modify copyright information, add previews, use IMA audio compression, and use other authoring features when creating QuickTime movies. They do not affect the way movies play back.

If you are interested in developing or learning more about QuickTime software, the QuickTime Developers Kit is available from the Apple Programmer Developers Association at (800) 282-2732.

This article was published in the Information Alley on 30 April 1996.

Article Change History:
06 May 1996 - Added alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19678



Tech Info Library

PowerBook Upgraded to PowerPC: Hard Drive Won't Spin Down (5/96)

Revised: 9/23/96
Security: Everyone

PowerBook Upgraded to PowerPC: Hard Drive Won't Spin Down (5/96)

Article Created: 30 April 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

I recently upgraded my PowerBook 500 series computer to PowerPC. Since the upgrade, the hard drive will not spin down, even though the icon in the Control Strip indicates that it has spun down. The only time the hard drive will spin down is when the PowerBook is shutdown or sleeping. What's wrong?

DISCUSSION -----

Issue

This issue applies to any 200 or 500 series PowerBook computer which has been upgraded to PowerPC. The PowerPC processor for these PowerBook computers is not fully compatible with the hard drive driver written to the hard drive by Apple HD SC Setup.

Resolution

To alleviate this symptom, you need to update the hard drive driver with Drive Setup 1.0.3 or later.

Which PowerBook Computers are Affected?

Since the default hard disk driver for all PowerBook 200 and 500 series computers comes from Apple HD SC Setup, any such PowerBook upgraded to PowerPC will have this symptom unless the hard drive has been previously updated with Drive Setup 1.0.3 or later.

Where to Get Drive Setup

• Drive Setup 1.0.3 can be found on the Disk Tools disk image included with the CD that comes with the PowerBook PowerPC upgrade kit.

- If you have updated to System 7.5.3 from 7.5.2 by installing the System 7.5 Update 2.0, Drive Setup 1.0.4 can be found in the Apple Extras folder, inside the Utilities folder.
- Drive Setup 1.0.4 can be custom installed with the System 7.5 Update 2.0 Installer.
- Drive Setup 1.0.4 is currently posted to Apple Software Updates on AppleLink and the Internet.

This article was published in the Information Alley on 30 April 1996.

Article Change History:

06 May 1996 - Added Info Alley keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19680



Tech Info Library

System 7.5 Update 2.0: Global Village Startup Error (4/96)

Revised: 4/30/96
Security: Everyone

System 7.5 Update 2.0: Global Village Startup Error (4/96)

=====

Article Created: 30 April 1996

TOPIC -----

I recently installed System 7.5 Update 2.0 with Open Transport 1.1. Now the Global Village Toolbox extension will not load at startup because of a memory error. How can I resolve this?

DISCUSSION -----

To prevent this memory error from occurring, you can rename the extension by putting a space in the beginning of the name. This will force the extension to load first in the startup sequence and prevent any memory heap issues from occurring.

Note that you can do this with other extensions as well if they give you similar errors.

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Tech Info Library Article Number:19682



Tech Info Library

Apple RAID 1.1: Read Me File (5/96)

Revised: 5/1/96
Security: Everyone

Apple RAID 1.1: Read Me File (5/96)

=====

Article Created: 1 May 1996

TOPIC -----

This article contains the readme file for the Apple RAID 1.1 software.

DISCUSSION -----

Apple RAID Software 1.1 Read Me

IMPORTANT Be sure to review this entire document. It contains important information that supplements the Apple RAID Software Administrator's Guide. You may want to print this document for reference.

Locating the Apple RAID Software on Your Startup Disk

The Apple RAID Software program is installed in the Apple Menu Items folder in the System Folder on the startup disk. The Apple RAID monitor program is installed in the Extensions folder in the System Folder on the startup disk. The Apple RAID Software Read Me (this document) and the SimpleText text-processing program are installed in an Apple RAID folder in the top-most directory of your startup disk.

Using the Microsoft Mail Backup Utility With Apple RAID

Because of the way in which the Microsoft Mail Backup Utility shuts down the system, the automatic backup feature of Microsoft Mail causes mirrored volumes to become out of sync. The best way to back up your Microsoft Mail Server is to follow the instructions for a manual backup in the Microsoft Mail documentation.

Rebuilding Mirrored Volumes While Running AppleShare

When rebuilding a failed or out-of-sync mirror volume while AppleShare is running, set the AppleShare Remote User Activity slide bar to less than 50%. If AppleShare is under particularly heavy use, set the slide bar to an even smaller percentage of the processor's time. These settings ensure that Apple RAID will receive the necessary processing time to perform the rebuild. (See your AppleShare documentation for details about setting the Remote User Activity slide bar.)

Using Drive Setup to Reinitialize an Apple RAID-prepared disk

If you have a disk that contains Apple RAID volumes, and you no longer want to use it for Apple RAID, first use Apple RAID to delete the volumes and then restart the server. Then use Drive Setup to reinitialize the disk. (The volumes must be deleted and the server restarted to avoid a conflict between the Apple RAID driver and Drive Setup.)

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19684



Tech Info Library

Apple RAID 1.1: New Features and Changes (5/96)

Revised: 5/9/96
Security: Everyone

Apple RAID 1.1: New Features and Changes (5/96)

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Article Created: 1 May 1996
Article Reviewed/Updated: 9 May 1996

TOPIC -----

This article provides the changes in Apple RAID version 1.1.

DISCUSSION -----

These are the changes in Apple Raid 1.1:

RAID Driver

Reinitializing the drives is no longer necessary when implementing RAID. The Administrator must install the Apple RAID disk driver on each hard disk that will contain mirrored or striped volumes. The easiest way to install the Apple RAID disk driver is to use the Install Driver command. The Install Driver command is also recommended for older versions of Apple RAID drives.

Apple RAID will now be "installable" over the Apple hard disk driver. Previously, a user needed to "reformat" a disk drive to use Apple RAID.

The Get Info command displays the amount of free space within a volume, and the Apple RAID Setup program displays the amount of disk space not allocated to a volume.

Weighted Striping

Apple RAID allows up to eight partitions per disk; stripe and mirror partitions can reside on the same disk. Apple RAID volumes are limited to 2 GB with no more than 10 Apple RAID volumes per server system. If the server has more than one SCSI bus, the partitions should reside across both buses. A striped volume is limited to a maximum of 4 GB or a minimum of 10 MB.

The main advantage of weighted striping is the ability to balance the data

throughput of RAID volumes on two separate SCSI buses of unequal speed. For instance, the 8550/132 has both a 5 MB/s and 10 MB/s bus. Two drives are installed, one connects to the 5 MB/s channel, the other to the 10 MB/s channel. With normal striping, the maximum theoretical throughput on each SCSI channel is the speed of the slower bus. With "weighted striping" the RAID software optimizes throughput on both buses, taking into consideration that one bus is faster and "weighting" these transfers. The result should be better data throughput on the 8550/132 SCSI subsystem. The cabling, bracket and software, will be included as standard elements with all 8550 systems. The user will just need to add the second drive.

Server Manager Support

Server Manager will receive error messages from Apple RAID, enabling system administrators to receive remote notification of a failed Apple RAID volume through e-mail, paging, or other Server Manager features.

Upgrades/Compatibility

Apple RAID 1.1 is only supported on PCI-based workgroup servers. Since Apple RAID 1.1 is not supported on NuBus workgroup servers, no upgrades to version 1.1 are available.

Clarification

The PCI RAID Card is not part of Apple RAID 1.1. The PCI RAID Card is an option for the Network Server 500 or 700, and requires the AIX operating system. The PCI RAID Card is not Mac OS compatible.

Article Change History:

09 May 1996 - Added clarification section.

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Tech Info Library Article Number:19685



Tech Info Library

Power Macintosh: Mono Recording level Lower than Stereo (5/96)

Revised: 5/1/96
Security: Everyone

Power Macintosh: Mono Recording level Lower than Stereo (5/96)

=====

Article Created: 1 May 1996

TOPIC -----

When I input a stereo signal into my Power Macintosh computer, then use my recording application software to record in mono, I notice a drop in the signal level if I turn down the right or left source signal. Why?

DISCUSSION -----

When the Macintosh is set to record in Mono mode, it adds together the signals of both the left and the right inputs and averages them together into a mono signal. This averaged mono signal is a lower level signal. By summing and averaging the right and left inputs into a mono signal rather than picking one input no information is lost from either input.

If there are concerns that the input level of mono recordings are lower than those of stereo recordings there are a couple of workarounds.

Increase Source Signal Level

Have them increase the level of the signal that they are supplying to the Macintosh. This compensates for the reduction due to the averaging to a mono signal.

Use Hardware Splitter

If you are supplying a mono signal to the macintosh, you can use a splitter that would take the mono signal and split it into two signals. The splitter would be a Y-cable that would have a connector on one end for the signal input (3.5mm, 1/4-in or RCA jack) and the other end would have two RCA jacks to connect to the sound input jacks, or a stereo 3.5mm jack which could be connected to the Microphone input.

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Tech Info Library Article Number:19687



Tech Info Library

Macintosh PowerBook PCMCIA Expansion Module ReadMe (5/96)

Revised: 5/2/96
Security: Everyone

Macintosh PowerBook PCMCIA Expansion Module ReadMe (5/96)

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Article Created: 2 May 1996

TOPIC -----

This article contains the text of the Read Me file for the Macintosh PowerBook PCMCIA Expansion Module.

DISCUSSION -----

Overview

Congratulations on purchasing your PowerBook PCMCIA Expansion Module. This document adds to and updates the information in the manuals that came with your module. It is a good idea to read this document now, and keep a copy handy for future reference.

If your PowerBook computer* is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

* NOTE: Apple does not recommend that any PCMCIA module be used with PowerBook 550c computer. The PowerBook 550c is available only in Japan.

Contents

=====

Tips

- Using PC Cards
- Using a DOS-formatted PC Card

Troubleshooting

- Selecting a PC Card as a startup disk
- Starting machine with PC Card(s) inserted

Tips

====

Using PC Cards

- For best results, purchase only cards that have been qualified for use on a Macintosh computer. If you are in the United States, you can receive a faxed list of currently available PC Cards by calling 1-800-462-4396 and requesting document 10307. You can call this number anytime. In Canada, call 1-800-263-3394 and request document 10307. Outside the United States and Canada, please consult your Apple-authorized dealer.

- Don't use an SRAM storage card as a startup disk on your PowerBook. Use SRAM cards for extra storage only.

- Never eject a PC Card manually (with a paper clip) while the PowerBook is in sleep. You may damage the card or lose data.

Using a DOS-formatted PC Card

- If your PowerBook has the Macintosh PC Exchange control panel installed and PC Exchange is turned on, you can use a PC Card that has been preformatted in a DOS format in your PowerBook. However, you cannot start up your computer using the DOS-formatted PC Card; you can only start up your computer using a Mac OS-formatted PC Card. If you want to reformat your DOS-formatted PC Card as a Mac OS-formatted PC Card, you need to turn PC Exchange off, and then format the card as you would any non-Mac OS-formatted disk. Follow these steps:

Step 1

Choose Control Panels from the Apple menu.

Step 2

Open the PC Exchange control panel.

Step 3

Click the Off button and close the PC Exchange control panel.

Step 4

Insert your PC Card. A window appears asking if you want to initialize (format) the disk.

Step 5

Click Initialize to format the PC Card.

- Once the PC Card is reformatted, you can turn Macintosh PC Exchange back on in

the PC Exchange control panel.

- You cannot reformat a Mac OS-formatted PC Card as a DOS-formatted PC Card with PC Exchange. To do so, you need to use a DOS/Windows computer with PC Card capabilities.

Troubleshooting

=====

Selecting a PC Card as a startup disk

- The user may experience some difficulty in selecting a PC Card as a startup disk. If a system alert "beep" is heard when attempting to select a PC Card as a startup disk, simply restart the machine, then reselect the startup disk.

Starting the computer with PC Card(s) inserted

- Under some configurations, the user may experience problems when starting up with a PC Card inserted. If this occurs, remove the PC Card before starting the computer.

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Tech Info Library Article Number:19688



Tech Info Library

PC Compatibility Card (12-inch): Adding Memory (2/97)

Revised: 2/11/97
Security: Everyone

PC Compatibility Card (12-inch): Adding Memory (2/97)

Article Created: 2 May 1996
Article Reviewed/Updated: 11 February 1997

TOPIC -----

I need to add memory to my 12-inch PC Compatibility card, but I'm not sure what type of memory I need to purchase. What type of memory can I use?

DISCUSSION -----

Compatibility
=====

The 12-inch PC Compatibility cards use JEDEC-standard 168-pin DIMMs (dual inline memory module) DRAM cards. The DIMMs should be 64-bit-wide, 168-pin fast-paged mode (FPM) with a 70ns access time or faster. DIMMs built with either Extended Data-out (EDO) or asymmetrical DRAMs are not supported on the 12-inch PC Compatibility card.

NOTE:

If you are adding a 32 MB or 64 MB DIMMs to the PC Compatibility Card, then you may need to install the PC Setup DIMM Patch from one of the Apple Online Software Updates areas. See the Technical Information Library article "12 Inch PC Compat Card: Freezes With 32 MB & 64 MB DIMMs" for more information.

Expansion
=====

The 12-inch PC Compatibility card comes standard with 8 MB of on-board DRAM. In addition, the 12-inch PC Compatibility card has one RAM expansion slot. You can use DRAM configurations with DIMMs of these sizes: 8, 16, 32 or 64 MB. The exact configuration depends on the density of the DRAM chips that are mounted on the DIMMs. You can increase the 12-inch PC Compatibility card total DRAM to up to a maximum of 72 MB.

This article appeared in the 1 November 1996 issue of the Information Alley.

Article Change History:

11 Feb 1997 - Reworded for clarity.

10 Sep 1996 - Added information about software patch.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19689



Tech Info Library

PC Compatibility Card (7-inch): Adding Memory (2/97)

Revised: 2/11/97
Security: Everyone

PC Compatibility Card (7-inch): Adding Memory (2/97)

Article Created: 2 May 1996
Article Reviewed/Updated: 11 February 1997

TOPIC -----

I need to add memory to my 7-inch PC Compatibility card, but I'm not sure what type of memory I need to purchase. What type of memory can I use?

DISCUSSION -----

Compatibility
=====

The 7-inch PC Compatibility cards uses JEDEC-standard 168-pin DIMMs (dual inline memory module) DRAM cards. The DIMMs should be 64-bit-wide, 168-pin fast-paged mode (FPM), 2K refresh rate with a 70ns RAM access time or faster. DIMMs built with either Extended Data-out (EDO) or asymmetrical DRAMs are not supported on the 7-inch PC Compatibility card.

All DIMMs currently available from Apple Computer are 2K refresh rate so you can safely use them in your 7-inch PC Compatibility card.

Expansion
=====

The 7-inch PC Compatibility card has one RAM expansion slot on board. You can use DRAM configuration with DIMMs of these sizes: 8, 16, 32 or 64 MB. The exact configuration depends on the density of the DRAM chips that are mounted on the DIMMs. You can increase the 7-inch PC Compatibility cards total DRAM to up to a maximum of 64 MB.

Article Change History:
11 Feb 1997 - Reworded for clarity.
23 Aug 1996 - Added information about asymmetrical DRAM.

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Tech Info Library Article Number:19690



Tech Info Library

Apple System Profiler: Read Me (5/96)

Revised: 5/2/96
Security: Everyone

Apple System Profiler: Read Me (5/96)

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Article Created: 02 May 1996

TOPIC -----

This article contains the ReadMe file for Apple System Profiler v1.0 and v1.0.1, which are available to Apple Macintosh users.

DISCUSSION -----

Apple System Profiler (ASP) lets you gather information about the configuration of your computer. The information that ASP reports may be useful if you place a call to the Apple User Assistance Center.

If you have one of the computers listed below, we recommend that you install Apple System Profiler now. Note that you MUST be running Mac OS version 7.5.2 or 7.5.3 to successfully install Apple System Profiler.

- Power Macintosh 9500, 8500, 8100, 7600, 7500, 7200, 7100, 6100, 5400, 5300 and 5200 series.
- PowerBook 5300, 2300 and 190 series.
- Macintosh Performa 6300, 6200, 6100, 5300 and 5200 series.

Apple System Profiler will only install on the computers listed above. Do NOT attempt to install it on any other computers.

Installation instructions:

1. Locate the Apple System Profiler Installer. It is in the same folder as this document.
2. Double-click on the Apple System Profiler Installer application.

You'll see a confirmation message when installation is complete. The Apple System Profiler will be placed in the Apple menu. To use ASP, open the Apple menu and choose Apple System Profiler.

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Tech Info Library

Apple System Profiler: Processor Speed Misidentified (5/96)

Revised: 5/2/96
Security: Everyone

Apple System Profiler: Processor Speed Misidentified (5/96)

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Article Created: 2 May 1996

TOPIC -----

I recently bought what I thought was a Power Macintosh 8500/132. However, I just ran the Apple System Profiler application, and it reported that I have a Power Macintosh 8500/120. What's going on? Was I given the wrong computer?

DISCUSSION -----

No, it is likely that you have the correct computer, but you are using a version of the Apple System Profiler that does not support the new Enhanced PCI-based Power Macintosh computers*.

You should be using version 1.0.1, which is available on the online services. This new version of the Apple System Profiler corrects this misidentification of processor speed. In version 1.0.1, the processor speed for these computers is omitted from the description line.

*The enhanced PCI-based Power Macintosh computers include the following series:

- Power Macintosh 7200/120
- Power Macintosh 7600/120
- Power Macintosh 8500/132
- Power Macintosh 8500/150
- Power Macintosh 9500/150

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:19694



Tech Info Library

LaserWriter/Localtalk Bridge Conflicts w/ Open Transport (5/96)

Revised: 5/6/96
Security: Everyone

LaserWriter/Localtalk Bridge Conflicts w/ Open Transport (5/96)

Article Created: 2 May 1996
Article Reviewed/Updated: 6 May 1996

TOPIC -----

I have recently added a Power Macintosh 7200 to my network which consists mostly of Macintosh Quadra 800 computers. When I open the Chooser on the Power Macintosh computer I get a message that says, "The LaserWriter Bridge cannot continue because of a network number conflict." What's wrong?

DISCUSSION -----

Symptoms

There are times when neither a LaserWriter Bridge, or a LocalTalk Bridge, running on any Nubus-based Macintosh computer system, can coexist on a network which includes a Macintosh computer running Open Transport (such as a Power Macintosh 7200).

There are no problems until the person running Open Transport on their computer opens the Chooser. At this time, either type of bridge may quit with one of the following two messages:

1) "The LaserWriter Bridge cannot continue because of a network number conflict."

or

2) "The LocalTalk Bridge cannot continue because of a network number conflict."

Issue

The problem is caused when the person running Open Transport on their computer sets a user-defined network range in the AppleTalk control panel.

Resolution

To fix this, do either of the following two things:

1) Open the AppleTalk Control Panel and change the network ID.

or

2) Un-check the "User Defined" AppleTalk address box. Turn off Appletalk. Then reactivate it again.

Of these two solutions, the second is a better choice. A user should not have to hard wire a network or node ID on a system to correct this situation.

This article was published in the Information Alley on 3 May 1996.

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Tech Info Library Article Number:19695



Tech Info Library

Apple Video Player: Corrupted Pref file Causes Wrong Tint (5/96)

Revised: 5/8/96
Security: Everyone

Apple Video Player: Corrupted Pref file Causes Wrong Tint (5/96)

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Article Created: 3 May 1996
Article Reviewed/Updated: 8 May 1996

TOPIC -----

I am using the Apple Video Player and it worked properly for a while. However, now the input window shows everything with a pink tint. How can I get rid of the tint?

DISCUSSION -----

If the preference file gets corrupted, you get the unexpected tint. To correct this, open your Preference folder, inside your System folder, and throw away the Apple Video Player Pref file.

The next time you open the Apple Video Player a new preference file is created and Apple Video Player displays the proper tint.

Article Change History:
08 May 1996 - minor formatting change.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19696



Tech Info Library

Power Macintosh 7500 and 7600 Series: 150 MHz Processor? (5/96)

Revised: 9/23/96
Security: Everyone

Power Macintosh 7500 and 7600 Series: 150 MHz Processor? (5/96)

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Article Created: 03 May 1996

TOPIC -----

Will the 150 MHz processor card that is used in the new configurations of the Power Macintosh 8500/150 and 9500/150 computers work in the Power Macintosh 7500 and 7600 series of computers?

DISCUSSION -----

Apple does not currently offer the 150 MHz processor card for use in the Power Macintosh 7500 and 7600 models. The Power Macintosh 8500/150 and 9500/150 computers are currently the only Apple products that are available with the 150 MHz processor card. In the future, Apple may announce an upgrade path to the 150 MHz processor card.

This article was published in the Information Alley on 03 May 1996.

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Tech Info Library Article Number:19697



Tech Info Library

PCI-Based Power Macintosh: Speed of Processor Upgrades (4/97)

Revised: 4/29/97
Security: Everyone

PCI-Based Power Macintosh: Speed of Processor Upgrades (4/97)

Article Created: 3 May 1996
Article Reviewed/Updated: 29 April 1997

TOPIC -----

Which PCI-based Power Macintosh computers will be able to support future processor card upgrades? What is the fastest processor card these computer could support?

DISCUSSION -----

Currently, all PCI-based Power Macintosh computers that are capable of accepting processor upgrade cards will be able to support cards of up to 250 MHz. These computers include the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500 and 9600 series computers.

This article was published in the Information Alley on 11 September 1996.

Article Change History:
29 Apr 1997 - Updated with additional Power Macintosh models.
17 Oct 1996 - Added alley information.
06 Sep 1996 - Updated processor information.

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Tech Info Library Article Number:19698



Tech Info Library

Network Server 500: Why It May Not Power On (5/96)

Revised: 5/3/96
Security: Everyone

Network Server 500: Why It May Not Power On (5/96)

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Article Created: 3 May 1996

TOPIC -----

After I added several third-party SCSI devices, my Network Server 500 does not power on. Why?

DISCUSSION -----

Overview

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This document explains the reasons why a Network Server 500 may not power on after the addition of several third-party SCSI devices.

* NOTE: This discussion does not apply to the Network Server 700.

Symptom

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Third-party drive testing at Apple has revealed that some SCSI devices may cause the Network Server 500 power supply to fail to power on. The unit fails to exhibit ANY response (no LED or LCD flash) to a front panel or keyboard power-on request. This problem is only seen if several third-party SCSI devices are installed. Hard drive, tape and CD-ROM Option Kits shipped by Apple do not provoke this problem, nor do many third party drives, tapes, and CD-ROM drives.

Cause

=====

When several third party devices are installed in combination, they exhibit transient (power-on) loads on the +12 volts that exceed the short-circuit detect trip point of the Network Server 500 power supply.

If you have NOT added third party SCSI devices, it is likely that there is some other cause. The most common of these other causes are:

- 1) Rear Keyswitch is not fully locked.
- 2) Main Logic Module (Rear Drawer) is not fully seated with all four thumbscrews tightened.
- 3) Processor Card is not fully seated.

Workaround

=====

If the "no power on" symptom is experienced, following this procedure allows the power supply to properly power up in the system:

Step 1

Unseat the SCSI devices, but leave the root hard drive plugged in (otherwise you will have to startup from Open Firmware).

Step 2

Unplug the unit from the AC wall outlet for at least 45 seconds.

Step 3

Replug the unit into the AC.

Step 4

Power-on from the keyboard or front panel.

Step 5

Reseat the SCSI devices before AIX starts booting.

NOTE:

The power supply is not damaged by the failure to power-on. Unseating the offending SCSI devices will allow the unit to successfully power on.

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Tech Info Library Article Number:19711



Tech Info Library

Color OneScanner 600/27: Dispatcher Software Description (5/96)

Revised: 5/5/96
Security: Everyone

Color OneScanner 600/27: Dispatcher Software Description (5/96)

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Article Created: 5 May 1996

TOPIC -----

This article contains a description of the Apple Color OneScanner 600/27 Dispatcher software.

DISCUSSION -----

The OneScanner Dispatcher software that enables the user to scan, edit and archive images or documents. It provides scanner integration with other office products and software applications. Provides an effortless, central guide to many functions including: scanning, image editing, OCR, printing, faxing, copying, document archival/retrieval and drag and drop access to other applications. Also provides scanning directly into PhotoShop with an included plug-in module.

The OneScanner Dispatcher Image Editor allows the user to perform all basic functions to edit any image. It contains a Tool Pallet with all of the conventional graphic and text edit options, including those to select images, add text or color, erase portions of the image. Specifically it contains a selection rectangle, grabber, paint bucket, eraser, spray can, clone, lasso, zoom, text, pencil, paintbrush, smudge, and displays the current background and foreground color. These Tool Pallet options are recognizable and are the industry standard. But you cannot compare these graphic and text options with such image creation and manipulation tools available in such programs as Adobe PhotoShop.

The image editor can edit file formats, JPEG, TIFF, PICT PHOTOSHOP 2.5, and EPS. Blurring and sharpening filters can be applied or any PhotoShop compatible plug-in filters such as Kai's PowerTools can be used to enhance the image.

Three automated functions are: Suggest a Crop, which estimates the best possible crop automatically based on the pre-scan; Adjust Tone, which automatically measures and adjusts the brightness and contrast ratios within the image based on the pre-scan and Straighten which automatically straightens a document or

image based on the pre-scan.

The user can select an area to be cropped by simply moving the cursor over the prescanned image and selecting the area by holding down and dragging. The magnifying glass on the far left of the scanning interface zooms in or out on the pre-scanned image or functions as a manual cropping tool in the pre-scan by clicking on the magnifying glass.

The Tone button allows the user to manually choose from a selection of 9 contrast/brightness adjusted images or manually move sliding toggles to adjust brightness and contrast of the image. This information is then applied to the final scan when selected. The fine tune shows the result of a selected image and allows the user to further tweak the brightness or contrast if needed.

In the Image menu are such options as zoom in and out, invert, brightness and contrast control, color balance, sharpen, resize, crop, flip, rotate, image depth, effects (if you've installed compatible plug-ins), ColorSync Preferences, and how you wish your archived imaged displayed (by name, date, type, or size).

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Tech Info Library Article Number:19712



Tech Info Library

AppleVision Software Fix for System 7.5 Update 2.0 Read Me(1/97)

Revised: 1/29/97
Security: Everyone

AppleVision Software Fix for System 7.5 Update 2.0 Read Me(1/97)

=====

Article Created: 6 May 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article contains the ReadMe file for AppleVision Software Fix. This software should be installed by users who have an AppleVision 1710 Display or AppelVision 1710AV Display and have installed System 7.5 Update 2.0.

DISCUSSION -----

This document contains important information for AppleVision customers.

Who needs to install the AppleVision Software Fix?
=====

If you have an AppleVision Display and you have problems after installing the System 7.5 Update 2.0, you should install the AppleVision Software Fix. This software fixes such problems as:

- When you press the buttons on the front of the display, you see a message that says "No AppleVision Display is connected."
- You have a Power Macintosh 7200 and can't find the Monitors & Sound control panel in the Control Panels folder.
- The Monitors & Sound control panel does not have Geometry, Color, and Monitor Sound buttons. (Note: The Monitor Sound button appears only if you have an AV monitor.)
- You can't change the resolution of the AppleVision Display or you can't open the AppleVision Setup control panel.
- Macintosh Guide does not contain information on the AppleVision Software or Display.

How to install the AppleVision Software Fix =====

After you install System 7.5 Update 2.0 and AppleVision Software 1.0.x, you can install the AppleVision Software Fix. Follow these steps:

Step 1

If you don't already have an AppleVision Software Fix floppy disk, then copy the AppleVision Software Fix online disk image to a floppy disk.

Step 2

Insert the floppy disk in your computer and double-click the Installer icon.

What is installed?

=====

68040 or non-PCI

On a 68040 or non-PCI Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Display Enabler version 2.0.2 is added to the Extensions folder.
- (2) AppleVision Guide Additions version 1.1 is added to the Extensions folder.

PCI-based Power Macintosh

On a PCI-based Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Monitors & Sound version 1.1 is added to the Control Panels folder.
- (2) SystemAV version 1.1 is added to the Extensions folder.
- (3) °AppleVision version 1.0.4 is added to the Extensions folder.
- (4) Monitors & Sound Guide Additions version 1.0 is added to the Extensions folder.
- (5) AV Monitors Guide Additions version 1.0 is added to the Extensions folder.
- (6) SimpleSound version 1.0 is added to the Apple Menu Items folder.

If you have a 68040 or non-PCI Power Macintosh

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When you installed System 7.5 Update 2.0, if you used the Custom Install option

to put the Monitors & Sound control panel on a 68040 or non-PCI Power Macintosh, the AppleVision software will not work.

To use the AppleVision Software, follow these steps:

Step 1

Remove the Monitors & Sound control panel from the Control Panels folder.

Step 2

Remove °AppleVision extension from the Extensions folder.

Step 3

Restart the computer.

Step 4

Install AppleVision Software version 1.0.x.

Step 5

Install the AppleVision Software Fix.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 6 May 1996.

Article Change History:

29 Jan 1997 - Added AppleVision 1710 and AppleVision 1710AV to article.

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Tech Info Library Article Number:19713



Tech Info Library

AppleVision Software Fix for System 7.5 Update 2.0 Read Me(1/97)

Revised: 3/19/97
Security: Everyone

AppleVision Software Fix for System 7.5 Update 2.0 Read Me(1/97)

=====

Article Created: 6 May 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article contains the ReadMe file for AppleVision Software Fix. This software should be installed by users who have an AppleVision 1710 Display or AppelVision 1710AV Display and have installed System 7.5 Update 2.0.

DISCUSSION -----

This document contains important information for AppleVision customers.

Who needs to install the AppleVision Software Fix?
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If you have an AppleVision Display and you have problems after installing the System 7.5 Update 2.0, you should install the AppleVision Software Fix. This software fixes such problems as:

- When you press the buttons on the front of the display, you see a message that says "No AppleVision Display is connected."
- You have a Power Macintosh 7200 and can't find the Monitors & Sound control panel in the Control Panels folder.
- The Monitors & Sound control panel does not have Geometry, Color, and Monitor Sound buttons. (Note: The Monitor Sound button appears only if you have an AV monitor.)
- You can't change the resolution of the AppleVision Display or you can't open the AppleVision Setup control panel.
- Macintosh Guide does not contain information on the AppleVision Software or Display.

How to install the AppleVision Software Fix =====

After you install System 7.5 Update 2.0 and AppleVision Software 1.0.x, you can install the AppleVision Software Fix. Follow these steps:

Step 1

If you don't already have an AppleVision Software Fix floppy disk, then copy the AppleVision Software Fix online disk image to a floppy disk.

Step 2

Insert the floppy disk in your computer and double-click the Installer icon.

What is installed?

=====

68040 or non-PCI

On a 68040 or non-PCI Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Display Enabler version 2.0.2 is added to the Extensions folder.
- (2) AppleVision Guide Additions version 1.1 is added to the Extensions folder.

PCI-based Power Macintosh

On a PCI-based Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Monitors & Sound version 1.1 is added to the Control Panels folder.
- (2) SystemAV version 1.1 is added to the Extensions folder.
- (3) °AppleVision version 1.0.4 is added to the Extensions folder.
- (4) Monitors & Sound Guide Additions version 1.0 is added to the Extensions folder.
- (5) AV Monitors Guide Additions version 1.0 is added to the Extensions folder.
- (6) SimpleSound version 1.0 is added to the Apple Menu Items folder.

If you have a 68040 or non-PCI Power Macintosh

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When you installed System 7.5 Update 2.0, if you used the Custom Install option

to put the Monitors & Sound control panel on a 68040 or non-PCI Power Macintosh, the AppleVision software will not work.

To use the AppleVision Software, follow these steps:

Step 1

Remove the Monitors & Sound control panel from the Control Panels folder.

Step 2

Remove °AppleVision extension from the Extensions folder.

Step 3

Restart the computer.

Step 4

Install AppleVision Software version 1.0.x.

Step 5

Install the AppleVision Software Fix.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 6 May 1996.

Article Change History:

29 Jan 1997 - Added AppleVision 1710 and AppleVision 1710AV to article.

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Tech Info Library Article Number:19713



Tech Info Library

Macintosh Performa 6200: Can't Record from 1710AV Display 12/96

Revised: 12/19/96
Security: Everyone

Macintosh Performa 6200: Can't Record from 1710AV Display 12/96

Article Created: 6 May 1996
Article Reviewed/Updated: 19 December 1996

TOPIC -----

I am having difficulty using the built-in microphone of the AppleVision 1710AV Display with my Macintosh Performa 6200CD. Whenever I attempt to record sounds with this setup, the recording appears muffled and contains a lot of static. However, if I connect the PlainTalk microphone directly into the computer, I get clear sound recordings. What could be causing this to happen?

DISCUSSION -----

Apple is aware of this issue and is investigating it. It does not appear to be an issue with the AppleVision 1710AV Display. Rather, it appears that this issue can occur on all computers with a this form factor, including the Macintosh 630, 6200, and 6300 series computers.

This audio issue also occurs with the Macintosh Performa 6400 computer.

Currently, the only workaround is to use the PlainTalk microphone connected directly to the computer's microphone port.

Note:

The following computers are in the corresponding Macintosh families:

- Macintosh 630CD family: LC 630, Quadra 630, Performa 630, Performa 631, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640.
- Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216, Performa 6218, Performa 6220, and Performa 6230.
- Macintosh 6300CD family: Performa 6300, Performa 6290

This article was published in the Information Alley on 4 December 1996.

Article Change History:

19 Dec 1996 - Added Macintosh Performa 6400 to the article.

04 Dec 1996 - Added keyword.

02 Dec 1996 - Changed distribution status.

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Tech Info Library Article Number:19714



Tech Info Library

System 7.5 Update 2.0: Energy Saver Update Not Installed (5/96)

Revised: 9/23/96
Security: Everyone

System 7.5 Update 2.0: Energy Saver Update Not Installed (5/96)

Article Created: 6 May 1996

TOPIC -----

I have a Power Macintosh 7200/90 computer. I recently installed System 7.5 Update 2.0, but now I cannot open the Energy Saver Guide in the Energy Saver control panel. What's going on?

DISCUSSION -----

System 7.5 Update 2.0 does not install the latest version of the Energy Saver Guide, control panel, or extension when performing an "Easy Install." However, these files are correctly updated on Power Macintosh 7500, 8500, and 9500 series computers.

Use the System 7.5 Update 2.0 installer to Custom Install the update to Energy Saver 2.0.1 by following these steps:

Step 1

Launch the System 7.5 Update 2.0 installer.

Step 2

Choose "Custom Install" from the pop-up menu in the top left corner.

Step 3

Under the Custom Install window, click once on the arrow to the left of "Control Panels", so the arrow points down.

Step 4

Click once in the check box next to "Energy Saver".

Step 5

Click the Install button to finish the installation.

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Tech Info Library Article Number:19715



Tech Info Library

QuickDraw GX 1.1.2: Printing Issues on PCI Macintosh (5/96)

Revised: 10/28/96
Security: Everyone

QuickDraw GX 1.1.2: Printing Issues on PCI Macintosh (5/96)

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Article Created: 6 May 1996

TOPIC -----

My Power Macintosh 7500 freezes when I attempt to print to a LaserWriter using QuickDraw GX. I had the same problem using the LaserWriter 8.2.2 printer driver, but when I used the LaserWriter 8.3.2 software, I could print correctly. Why am I having problems using the LaserWriter GX printer driver?

DISCUSSION -----

The problem is related to some known printing issues with PCI-based Macintosh computers. The problems are resolved with some new AppleTalk PAP/ATP fixes included in the LaserWriter 8.3.2 printer driver, and the 7.5.2 Printing Fix extension. If System 7.5.2 Update 2.0 is installed, the Printing Fix extension is no longer needed.

In the QuickDraw GX environment, the LaserWriter GX driver has not been revised to include the AppleTalk PAP/ATP fixes. This is the reason that the LaserWriter GX driver (J-1.1.2) does not work. The QuickDraw GX engineering team have scheduled the fixes to be rolled into QuickDraw GX v1.2. Currently, there is no release timeline, but It will definitely be a part of the Copland OS.

One possible workaround to this issue if the customer wants to use QuickDraw GX is to use QuickDraw GX Helper. This allows you to use the LaserWriter J1-8.3.2 driver within QuickDraw GX. The Tech Info Library article titled "QuickDraw GX: Workaround For Fax Capable Apple Printers" explains how to use QuickDraw GX Helper -- the article actually refers to using QuickDraw GX helper for PostScript Fax, however, the same steps would apply to utilizing the LaserWriter J1-8.3.2 driver.

The Tech Info Library article "System 7.5 Update 2.0: What's New in This Update (3 of 3)" outlines the PCI-based Macintosh printing issues, and resolutions.

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Tech Info Library Article Number:19716



Tech Info Library

QuickTime Conferencing: Questions & Answers (6/96)

Revised: 6/11/96
Security: Everyone

QuickTime Conferencing: Questions & Answers (6/96)

Article Created: 6 May 1996
Article Reviewed/Updated: 11 June 1996

TOPIC -----

This article contains QuickTime Conferencing questions and answers.

DISCUSSION -----

Question: PictureTel system is strapping an ISDN (Integrated Services Digital Network) board to ATM (Asynchronous Transfer Mode) board to trick it into thinking its on ISDN when it's really on ATM. Therefore, how will Apple be supporting ATM and when? Or, fast Ethernet? (Is this ISO-Ethernet?)

Answer: Apple has made no announcements about supporting ATM or fast Ethernet at this point, primarily because of the component architecture of QuickTime Conferencing (QTC). QTC has a separate transport layer that can be written for specific protocols you want QTC to use (ATM, Fast Ethernet, or ISO-Ethernet). Customers could write their own transport component for their needs. National Semiconductor announced plans to build a ISO-Ethernet card at the QuickTime Conferencing intro in February 1995, but you need to check with National Semiconductor concerning availability of this card.

Question: How can I interface Ethernet/T1 to ISDN for remote sites that do not have T1 access? In other words, if one user is on T1 can they connect to an ISDN user?

Answer: ISDN implements the ISDN-1 standard for a BRI (Basic Rate Interface) giving the user 2 B (56 or 64 kbps) and 1 D channels. T1 implements the ISDN-2 standard where the user has 23 B (56 or 64 kbps) and 1 D channel. If both the BRI and PRI use H.320, then they can use it. Otherwise they will likely use IP to communicate with each other.

Question: Does the H.320 take advantage of its hard compression over an existing

Ethernet LAN or Fast Ethernet or ATM?

Answer: No, the H.320 hardware component is only used in an ISDN WAN connection.

Once you switch the network type to AppleTalk or TCP/IP instead of ISDN, then you no longer interface with the H.320 board and cannot take advantage of the hardware H.320 compression. QTC does include a software H.261 compressor for the LAN video. H.261 is a subset of the H.320 standard, so in actuality some H.320 can occur, but the preferred compressor for a LAN connections is JPEG for IP and Apple Video Compressor for AppleTalk.

Question: For normal Internet access is additional software required? Is anything different required of the ISP (Internet Service Provider), or the Internet connection such as router, CSU/DSU?

Answer: The currently shipping QTC/ISDN Kit does not include software for an internet connection with an ISP. You can connect to an ISP with no additional hardware, you just need software.

Question: Is it possible to use either a point-to-point connection, or Apple Remote Access connection over an ISDN line with QuickTime Conferencing?

Answer: The current version of QuickTime Conferencing requires Ethernet or an installed H.320 ISDN card.

Article Change History:

11 Jun 1996 - Added last Q & A pair.

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Tech Info Library Article Number:19717



Tech Info Library

Apple IP Gateway 1.0.1: Setting Up Multiple Gateways (5/96)

Revised: 5/6/96
Security: Everyone

Apple IP Gateway 1.0.1: Setting Up Multiple Gateways (5/96)

Article Created: 6 May 1996

TOPIC -----

This article describes how to setup Apple IP Gateway 1.0.1 so you have multiple gateways in the same zone.

DISCUSSION -----

You can set up multiple Apple IP Gateways in the same AppleTalk zone. Doing so allows you to balance the gateway service load between multiple machines, as well as to provide service to an additional 253 users per gateway.

To set up multiple gateways, you must configure the gateway to provide automatic addresses only; you cannot use manual addresses with multiple gateways. Also, Power Macintosh clients will not be able to locate a gateway if there are multiple gateways in a zone. Only MacTCP clients on non-Power Macintosh machines will be able to locate a gateway if multiple gateways are in use.

Follow these steps to set up multiple gateways in the same zone:

Step 1

Purchase another copy of the Apple IP Gateway and install it on another machine.

Step 2

Set up the second gateway machine in the same zone as the original gateway.

Step 3

Divide the automatic address range of the original gateway into two ranges. Configure the original gateway with one of these ranges and the second gateway with the remaining range.

Step 4

Start both gateways.

Clients connect to the first gateway that responds. When a gateway has no more addresses to give out, it ceases responding, thus allowing another gateway to respond to the client.

IMPORTANT:

If you have Power Macintosh clients that need to access a gateway, do not set up multiple gateways in the same zone.

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Tech Info Library Article Number:19719



Tech Info Library

General Computers: A+ Certification Program (5/96)

Revised: 5/7/96
Security: Everyone

General Computers: A+ Certification Program (5/96)

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Article Created: 7 May 1996

TOPIC -----

This article contains information on the A+ Certification testing program.

DISCUSSION -----

The A+ Certification is a testing program sponsored by the Computing Technology Industry Association (CompTIA) that certifies the competency of service technicians in the computer industry. Anyone who wants a nationally recognized credential as a competent computer service professional can take the A+ exams. The program is backed by major computer hardware and software vendors, distributors, resellers and publications as well as a leading industry service organization, the Association of Field Service Management, Inc.

To become certified you must pass two test modules - the Core and one of two other specialties, either the Microsoft Windows/DOS module or the Macintosh module.

Candidates for certification may register by phone by calling: (800) 77-MICRO and schedule their testing session at a Drake Authorized Testing Center.

Sylvan Prometric
Phone: (800) 77-MICRO
FAX: (612) 820-5050

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Tech Info Library Article Number:19720



Tech Info Library

Mail*Link for PowerTalk/MS 1.6: ReadMe (5/96)

Revised: 5/7/96
Security: Everyone

Mail*Link for PowerTalk/MS 1.6: ReadMe (5/96)

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Article Created: 7 May 1996

TOPIC -----

This article is the Mail*Link for PowerTalk/MS 1.6 Read Me File.

DISCUSSION -----

Mail*Link for PowerTalk/MS 1.6

Mail*Link PT/MS for PowerTalk is a personal e-mail gateway for PowerTalk users. This gateway will allow PowerTalk users to send and receive mail into the StarNine Mail system or, as formerly known, Microsoft Mail for AppleTalk system. Mail can be sent and read with any PowerTalk mail-enabled application.

This release of Mail*Link® for PowerTalk™/MS is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.0.0. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

Note: If you are upgrading from version 1.0.0 it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.0.0 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

To use the PT/MS gateway you must have the Microsoft Mail Extension installed in the Extensions folder of your System folder. The Microsoft Mail Extension is part of Microsoft Mail for AppleTalk. Please refer to the PT/MS User Guide for more information.

ITEMS OF NOTE

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- Power PC: If you are using a Power PC, turn off the modern memory manager before installing PT/MS. After you have completed the gateway configuration described in Chapter 2 and are sure that the gateway is working properly, turn the modern memory manager back on. See "Power PC issues" on page 52 of the manual for related information.
- Gateway Operation: When you activate the PT/MS gateway, it uses the MS Mail extension to log in to the MS Mail Server specified in the Key Chain configuration window. It then sends pending mail from your Out Tray to the Server and transfers mail from your account on the Server to your PowerTalk In Tray at regular specified intervals until you deactivate the gateway or turn off your Macintosh. This process all takes place in background. While the MS Mail extension is actively communicating with the MS Mail Server, your Macintosh is temporarily unavailable for other tasks. This translates into slight freezes from time to time as you are going about your normal tasks as PT/MS logs into the server, with more significant hangups lasting a couple of seconds during large file transfers between the local disk and MS Mail Server. If the MS Mail Server is on a physically remote network or a large, busy network, the process of logging in to the Server will take longer. Increasing the interval at which you contact the MS Mail Server will mitigate hangups (An interval less than three or four minutes will hang your machine up in continual PowerTalk processing leaving no time for your machine to do anything else. We recommend a connection interval of at least five minutes).

INSTALLATION INSTRUCTIONS

=====

For new installations only:

We recommend that you install this software via the installer script.

1. Double click on either the "Installer" icon.
2. Select the drive on which you wish to install this software and click Install.
3. Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link PT/MS for PowerTalk, you should follow these instructions:

1. Install the software as instructed in the section "GETTING STARTED - Installing Mail*Link PT/MS".
2. After the system has rebooted, open the "PowerTalk Key Chain".
3. Open the PT/MS personal gateway in the key chain. The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/MS file. Opening and closing the PT/MS Service

configuration window will cause the new file-id to be written into the PowerTalk configuration file.

4. Close the key chain. You will be told that you must reboot the system before PowerTalk will activate the gateway.
5. Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

- Creating your PT/MS personal gateway

Once you have installed the software and rebooted the system (as described above), follow these instructions to create your PT/MS personal gateway.

1. Open the "Key Chain" located on your desktop.
2. Press the "Add" button.
3. You will be presented with a list of services that are available. Select "Microsoft Mail Service".
4. A new item with the server name of "Not Configured" and a service type of "Microsoft Mail Service" will appear in your "Key Chain".
5. Proceed to the "Configuring" section below.

- Configuring your PT/MS personal gateway

Before configuring, make sure that you have selected your MS Mail server in the Chooser. If you do not select this the PT/MS gateway will not be able to connect.

To configure the PT/MS personal gateway, ensure that the "Key Chain" has been opened.

1. Double click (Open) the item with a service type of "Microsoft Mail Service". The PT/MS personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.
2. A configuration window will be displayed. You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).
3. Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.
4. Once the PT/MS configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

1. Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):
Mail*Link PT/QM
Mail*Link PT/MS
Mail*Link PT/INET
2. Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.
StarNine (folder)
PowerTalk Setup Preferences
PowerTalk Startup Preferences
3. Find the "Mail*Link Extras" folder, on the top level of your hard drive. Drag this folder to the trash.
4. Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.
5. Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.
6. Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS

=====

The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

1. Place the distribution diskette in the floppy drive.
2. Open the folder named "Drop Contents on System Folder".
3. Select all of the items in this folder and drag them onto the "System Folder" icon.
4. You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".
5. Close the "Drop Contents on System Folder" folder.
6. Open the folder named "Place Contents in Preferences Folder".
7. Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").
8. If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).
9. Reboot the system. This is necessary because some of the software installed is only activated at boot time.

Note: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

=====

- PT/MS and MailSwitch: Running the MS Mail MailSwitch utility simultaneous with gateway operation has been reported producing odd behavior, particularly, PT/MS reports a -1981 error in its log on a mail message send. A restart should cure the confusion.

- PT/MS and RAM-Doubler: There have been some reports of inconsistencies running PowerTalk and PMSAMs with RAM-Doubler.

- When a mail message is forwarded, the name and address of the original sender are not preserved.

- CE Software's QM for AOCE may be used to send mail, although you must select the AppleMail format when sending the message. This application may NOT be used as the default mail reader. If it is selected, AppleMail will be used instead.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway please call Apple Support at: 1 (800) SOS - APPL.

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Tech Info Library Article Number:19721



Tech Info Library

StyleWriter Printers: How to Reset the Paper Tray (5/96)

Revised: 5/7/96
Security: Everyone

StyleWriter Printers: How to Reset the Paper Tray (5/96)

=====

Article Created: 7 May 1996

TOPIC -----

This article describes how to reset the paper tray on various StyleWriter model printers.

DISCUSSION -----

From time to time you might encounter a problem where a StyleWriter printer does not feed the paper properly. This might include paper feeding only on one side, pulling multiple sheets through at a time, or not pulling any paper, or envelopes through the paper feed. You can reset the paper tray by following the steps listed below. With the exception of the original StyleWriter and the Portable StyleWriter, this procedure works on all StyleWriter printers including the StyleWriter 2200.

Resetting the Paper Tray
=====

Step 1

Turn the printer off.

Step 2

Remove all paper from the paper tray.

Step 3

Reposition the paper selection lever

Note:

On the StyleWriter II, 1200, 1500, 2400, and 2500 (but not on the 2200) there is also a paper selection lever to the right of where the paper enters the printer. It is marked with an envelope icon (pull the lever forward for envelope) and a

paper icon (push the lever back for paper). This lever might also need to be adjusted. Simply pull the lever forward toward the front of the printer, then push it back into the paper position to ensure it is locked into place.

Step 4

Press and hold the power button until the orange light goes out.

Note:

The StyleWriter 1500 does not have an orange error light, so keep the power button held down for at least 30 seconds.

Step 5

The printer will make some noise during a self-test. In approximately 30 seconds, you will hear the paper tray snap two times and the orange light will come on.

Step 6

Turn the printer off

The paper tray should be reset at this point.

Testing the Printer

=====

To ensure that the paper tray is reset, re-insert paper and try printing a test page.

Step 1

Make sure the printer is off.

Step 2

Make sure there is paper in the printer.

Step 3

Press and hold on the power button until the orange light goes out.

Step 4

The printer will make some noise during a self-test. The StyleWriter printer should pull a piece of paper through the paper feed and print a test page.

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Tech Info Library Article Number:19722



Tech Info Library

PC Setup 1.0.7: Untested with System 7.5.3 (6/96)

Revised: 6/11/96
Security: Everyone

PC Setup 1.0.7: Untested with System 7.5.3 (6/96)

Article Created: 7 May 1996
Article Reviewed/Updated: 11 June 1996

TOPIC -----

The CD version of System 7.5 Update 2.0 contains a separate installer for DOS Compatibility Card software version 1.0.7. Will this work with System 7.5.3?

DISCUSSION -----

Although the installer for the DOS Compatibility Card software v1.0.7 is included on the CD, this software is not supported for use with System 7.5.3.

DOS Compatibility Software Update 1.5 is now available from the online services and the Apple Order Center. Apple recommends using this version with Apple DOS Compatibility cards, except for those used in Macintosh Quadra and Centris 610 computers.

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
11 Jun 1996 - Updated information.

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Tech Info Library Article Number:19723



Tech Info Library

PC Exchange: Mounting Hybrid DOS/Macintosh CD (5/96)

Revised: 5/7/96
Security: Everyone

PC Exchange: Mounting Hybrid DOS/Macintosh CD (5/96)

Article Created: 7 May 1996

TOPIC -----

I have a CD-ROM disc, which has both a Macintosh and Windows format on the disc. I want to see the Windows files, but the only icon I can see on the desktop is for the Macintosh partition. Is there a way to force PC Exchange into mounting the MS-DOS/Windows partition?

DISCUSSION -----

This is problem with the older versions of the Apple CD-ROM driver. However, if you install CD-ROM Setup 5.1.5, you will be able to mount both partitions. Of course, this runs into the problem of needing a CD-ROM disc in the drive at startup in order for the PC to use the drive (assuming you have the DOS Compatibility Card installed). If you are not familiar with this problem, it is documented in the Tech Library article titled "DOS Compatible: CD-ROM Needs to be in Drive at Startup".

Version 1.5 of the DOS Compatibility software installs CD-ROM Setup 5.1.6 and also corrects the problem mentioned above.

The steps required to see the DOS/Windows partition are:

Step 1

Insert the hybrid CD-ROM into the drive (just so the CD-ROM is in at restart).

Step 2

Install CD-ROM Setup 5.1.5 and restart.

You should now be able to see the PC partition on the PC and the Macintosh partition on the Macintosh.

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Tech Info Library Article Number:19724



Tech Info Library

Newton Backup Utility: Only Available Ports Can Be Used (5/96)

Revised: 5/7/96
Security: Everyone

Newton Backup Utility: Only Available Ports Can Be Used (5/96)

=====

Article Created: 7 May 1996

TOPIC -----

I installed Newton Backup Utility on Windows 95 and it only allows me to configure the software to connect to the COM2 port. Why doesn't it allow me to connect to the COM1 serial port?

DISCUSSION -----

When the Newton Backup Utility starts up, it searches for available ports. If a port is in use it does not give the option to select that port. Using a Windows computer configured with a COM1 serial mouse, Newton Backup Utility only gave us the option to connect to COM2 and not COM1. We then installed on another Windows computer that was not using COM1 for the mouse, and Newton Backup Utility allowed us to select either the COM1 or COM2 port.

Newton only lets you select "available" ports. You will see the same results using Windows 95, Windows 3.11, or Windows for Workgroups

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Tech Info Library Article Number:19725



Tech Info Library

Fonts: Renamed Font Always Downloads to the Printer (5/96)

Revised: 5/7/96
Security: Everyone

Fonts: Renamed Font Always Downloads to the Printer (5/96)

=====

Article Created: 7 May 1996

TOPIC -----

I have an updated version of a Type 1 PostScript font from Adobe. However, when I print I always get the version in the LaserWriter ROM, not the version on my Macintosh computer. Is there a way to modify the font to have it always download to the LaserWriter printer?

DISCUSSION -----

Modifying TrueType or Adobe Type 1 fonts with ResEdit or similar development tools such as Resourcer is not a trivial task and is not for the faint of heart.

We recommend you either obtain a tool such as Fontographer, or request a font name change be made by Adobe, or perhaps work with a consultant or a knowledgeable programmer to make the appropriate name changes to the font, so that the "new" font gets downloaded. The reason for the name change is it would make the Font appear to the printer to be unique, so it would be downloaded and used. If the Font in question isn't a "ROM" Font, then either the old Font is stored in the printer's hard drive or in the printer's RAM, at which point it is merely a matter to delete the Font from those locations, and download this other Font.

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Tech Info Library Article Number:19726



Tech Info Library

ImageWriter LQ: System 7.5.3 Causes Some Fonts to Shift (5/96)

Revised: 5/7/96
Security: Everyone

ImageWriter LQ: System 7.5.3 Causes Some Fonts to Shift (5/96)

=====

Article Created: 7 May 1996

TOPIC -----

I have an ImageWriter LQ. I recently installed the System 7.5 Update 2.0 on my Power Macintosh 6100 computer, and after the installation certain fonts shift during the second pass of the print head, the top half of the characters are displaced from the bottom half. When I reverted back to System 7.5 everything worked properly. What changed?

DISCUSSION -----

We were able to reproduce the problem on the Power Macintosh 6100, but not a Power Macintosh 7200, so it only seems to occur on some Power Macintosh models. It also only seems to occur when printing in Best mode.

After installing System 7.5 Update 2.0, we checked the Geneva, Palatino, and Helvetica TrueType fonts and they did not change. The issue was most likely introduced in other system software changes such as a possible Font Manager or QuickDraw code change.

Workarounds
=====

- Use QuickDraw GX v1.1.3.
If you use the latest version of QuickDraw GX, the fonts do not shift. There are additional benefits to using QuickDraw GX such as background printing and being able to perform multiple page up (N-up) printing.
- Use landscape orientation.
If you print in the landscape mode, the issue does appear.

This article appeared in the 7 May 1996 Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19727



Tech Info Library

Mail*Link for PowerTalk/QM 1.6: ReadMe File (5/96)

Revised: 5/7/96
Security: Everyone

Mail*Link for PowerTalk/QM 1.6: ReadMe File (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

This article is the Mail*Link for PowerTalk/QM 1.6 Read Me File.

DISCUSSION -----

Mail*Link for PowerTalk/QM 1.6

This is a personal gateway for PowerTalk users. This gateway will allow PowerTalk users to send and receive mail from their QuickMail accounts without having to login to QuickMail and use the QuickMail DA. Mail can be sent and read with your favorite PowerTalk mail enabled application.

This release of Mail*Link® for PowerTalk™/QM is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.0.5. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

NOTE: If you are upgrading from version 1.0.5 or earlier it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.0.5 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

INSTALLATION INSTRUCTIONS
=====

For new installations only:

We recommend that you install this software via the installer script.

1. Double click on either the "Installer" icons.
2. Select the drive on which you wish to install this software.
3. Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link PT/QM, you should follow these instructions:

1. Install the software as instructed in the section "INSTALLATION INSTRUCTIONS".
2. After the system has rebooted, open the "PowerTalk Key Chain".
3. Open the QuickMail personal gateway in the key chain. The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/QM file. Opening and closing the QuickMail Service configuration window will cause the new file-id to be written into the PowerTalk configuration file.
4. Close the key chain. You will be told that you must reboot the system before PowerTalk will activate the gateway.
5. Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

- Creating your QuickMail personal gateway

Once you have installed the software and rebooted the system (as described above), follow these instructions to create your QuickMail personal gateway.

1. Open the "Key Chain" located on your desktop.
2. Press the "Add" button.
3. You will be presented with a list of services that are available. Select "QuickMail".
4. A new item with the server name of "Not Configured" and a service type of "QuickMail" will appear in your "Key Chain".
5. Proceed to the "Configuring" section below.

- Configuring your QuickMail personal gateway

To configure the QuickMail personal gateway, ensure that the "Key Chain" has been opened.

1. You first need to select your QuickMail directory service. To do this: open the Chooser, choose QuickMessenger, select the directory service and close the Chooser.

2. Double click (Open) the item with a service type of "QuickMail". The QuickMail personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.
3. A configuration window will be displayed. You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).
4. Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.
5. Once the QuickMail configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

1. Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):
Mail*Link PT/QM
Mail*Link PT/MS
Mail*Link PT/INET
2. Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.
StarNine (folder)
PowerTalk Setup Preferences
PowerTalk Startup Preferences
3. Find the "Mail*Link Extras" folder, on the top level of your hard

drive. Drag this folder to the trash.

4. Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.
5. Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.
6. Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS

=====

The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

1. Place the distribution diskette in the floppy drive.
2. Open the folder named "Drop Contents on System Folder".
3. Select all of the items in this folder and drag them onto the "System Folder" icon.
4. You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".
5. Close the "Drop Contents on System Folder" folder.
6. Open the folder named "Place Contents in Preferences Folder".
7. Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").
8. If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).
9. Reboot the system. This is necessary because some of the software installed is only activated at boot time.

NOTE: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

=====

- When forwarding a mail message, the name and address of the original sender of the message is not preserved.
- When forwarding a message, the form content of the forwarded message is lost

unless you type at least 1 character into the forwarded message.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway
please call Apple Support at: 1 (800) SOS - APPL.

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Tech Info Library Article Number:19728



Tech Info Library

PowerBook: PCMCIA Expnsn Module Replacement Which Sftwr? (5/96)

Revised: 5/7/96
Security: Everyone

PowerBook: PCMCIA Expnsn Module Replacement Which Sftwr? (5/96)

Article Created: 7 May 1996

TOPIC -----

I just got a new Rev. C PCMCIA Expansion module for my PowerBook 500 series computer. Why didn't I get a manual or any documentation? Which version of the PC Card Software do I need to install?

DISCUSSION -----

Some customers will receive the Rev. C PCMCIA Expansion Module through Apple's free upgrade program. Through this program, customers can have an older Rev. A or Rev. B PCMCIA Expansion Module exchanged with a Rev. C module at no cost by calling 800-SOS-APPL or going to an Apple service center.

Rev. C Replacement Modules Are Service Parts

Customers should be made aware that because they are receiving a service part not a Finished Goods part, the Rev. C module will not come with any documentation or software.

Use PC Card Software 2.0 Update ONLY!

*** WARNING ***

Do not attempt to "flash" or update the EPROMs of the Rev. C PCMCIA Expansion Module with PCMCIA Update 1.0 or 1.0.1 software. Doing so downgrades the module and could render it inoperable, requiring a replacement.

The Rev. C PCMCIA Expansion Module requires PC Card Software 2.0. This software can be custom installed from System 7.5.2 (with enabler v1.2 or later) or System 7.5.3. It can also be downloaded from Apple Software Updates sites on the Internet, America Online, CumpuServe and AppleLink.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple

software updates.

- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Downgraded By Mistake?

If you have already downgraded the module's EPROMs by running the older PC Card Software, you will need to have the module replaced by calling 800-SOS-APPL or taking the module to an Apple service center.

Which PC Cards Will Work?

With the new software (2.0) and the Rev. C PCMCIA Expansion Module, you should be able to use PC Cards that worked with previous modules plus certain cards that may not have worked with older modules.

Ejecting a PC Card

The PCMCIA Eject control panel and Control Strip module are not needed with the new software and will not work. To eject a PC Card, make sure that it is not in use. Then drag it to the Trash as you would do with a floppy disk.

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Tech Info Library Article Number:19729



Tech Info Library

MailLink for PowerTalk INET 1.6: ReadMe File (5/96)

Revised: 5/7/96
Security: Everyone

MailLink for PowerTalk INET 1.6: ReadMe File (5/96)

=====

Article Created: 7 May 1996

TOPIC -----

This article is the MailLink for PowerTalk INET Read Me File.

DISCUSSION -----

Mail*Link for PowerTalk/INET 1.6

Mail*Link Internet for PowerTalk is a personal gateway for PowerTalk users. This gateway will allow PowerTalk users to send mail via SMTP and receive mail from a POP3 account. Mail can be sent and read with any PowerTalk mail-enabled application.

This release of Mail*Link® for PowerTalk™/INET is the first release of this gateway by Apple Computer Inc. This gateway is functionally equivalent to version 1.5.1. Future versions of this software will be modified and enhanced.

This software is licensed to you under the Macintosh System 7.5 license agreement. All terms and conditions of this license must be followed.

Upgrade Note: If you are upgrading from version 1.5.1 or earlier it is VERY IMPORTANT that you follow the instructions in the Upgrading Section below.

The installation and upgrade procedure for this software will still install the StarNine demonstration key files (which were part of the 1.5.1 release). However the 1.6 release of the gateway has been modified to ignore the key files and thus will never expire.

It is required that you install and configure MacTCP before using this gateway. See the PT/INET User Guide for more information.

ITEMS OF NOTE
=====

OpenTransport users: This gateway does not function correctly when used with Apple's OpenTransport. The gateway will connect one time but will not reconnect without a reboot. Apple is currently investigating problem.

INSTALLATION INSTRUCTIONS

=====

For new installations only:

We recommend that you install this software via the installer script.

1. Double click on either the "Installer" icon.
2. Select the drive on which you wish to install this software and click Install.
3. Reboot the system after the software has been properly installed.

UPGRADE INSTRUCTIONS

=====

If you are upgrading from a previous release of Mail*Link Internet for PowerTalk, you should follow these instructions:

1. Install the software as instructed in the section "INSTALLATION INSTRUCTIONS".
2. After the system has rebooted, open the "PowerTalk Key Chain".
3. Open the PT/Internet personal gateway in the key chain. The installation procedures change the file-id that PowerTalk uses to locate the Mail*Link PT/INET file. Opening and closing the PT/Internet Service configuration window will cause the new file-id to be written into the PowerTalk configuration file.
4. Close the key chain. You will be told that you must reboot the system before PowerTalk will activate the gateway.
5. Reboot the system.

If you have trouble with the gateway after upgrading please re-install by following the instructions in the Clean Upgrade Install section below.

CONFIGURATION

=====

- Creating your PT/Internet personal gateway

Once you have installed the software and rebooted the system (as described above), follow these instructions to create your PT/Internet personal gateway.

1. Open the "Key Chain" located on your desktop.
2. Press the "Add" button.
3. You will be presented with a list of services that are available. Select "PT/Internet".

4. A new item with the server name of "Not Configured" and a service type of "PT/Internet" will appear in your "Key Chain".
 5. Proceed to the "Configuring" section below.
- Configuring your PT/Internet personal gateway

To configure the PT/Internet personal gateway, ensure that the "Key Chain" has been opened.

1. Double click (Open) the item with a service type of "PT/Internet". The PT/Internet personal gateway only allows one instantiation, so there should only be one item with this type in the Key Chain window.
2. You should configure each item in this window before closing the window. Window closing is equivalent to pressing the "OK" button in a dialog. The "Key Chain" configuration windows have no "Cancel" operation, so please ensure each item is properly filled in before closing the window (you can always come back and change the selections at a later date, but it is better if each item is properly filled in).
3. To finalize configuration YOU MUST select the preferences button on open the PT/INET Preference dialog. Change any preferences you need to (it is not necessary to change any) and close the window.
4. Once you have entered the information in the configuration window, close the window with a mouse click in the close box or by typing "<command>W". It may take a few seconds for the window to close. This is because PowerTalk is activating all of the personal gateway subsystems and informing them of their new configuration. Be patient.
5. Once the PT/Internet configuration window is closed, close the Key Chain window.

CLEAN UPGRADE INSTALLATION

=====

Use this procedure if you are experiencing problems with the gateway software. You should not need to use this procedure for normal installs. To perform a "Clean Install" of the gateway software, use the following procedure.

NOTE: Some gateways may remove mail from your In Tray and Out Tray when they are reinstalled. Be sure to back up any items in your InTray and OutTray by dragging them to another folder on your hard drive.

NOTE: This will remove all services from your keychain, so be sure you have the passwords for these services handy. If you have personal gateways already installed, you will need to set them up again, so be sure you write down the setup information that is contained in each key, if necessary.

This procedure removes all "Mail*Link" gateways. If you have multiple "Mail*Link" gateways installed, you will need to re-install each of the gateways you want to use.

1. Open the Extensions folder, located inside the System Folder. Find the following item(s) and drag to the trash (note only the gateways you have installed will be in the Extensions folder):

Mail*Link PT/QM
Mail*Link PT/MS
Mail*Link PT/INET

2. Open the Preferences folder, located inside your System Folder. Find the following items and drag them to the trash.
StarNine (folder)
PowerTalk Setup Preferences
PowerTalk Startup Preferences
3. Find the "Mail*Link Extras" folder, on the top level of your hard drive. Drag this folder to the trash.
4. Restart your machine. After you have restarted, choose "Empty Trash" from the Special menu.
5. Double-click the installer for the desired software, and click Install at the Easy Install screen. After the installation is complete, your machine will restart. If you are installing more than one gateway, repeat this step for each gateway.
6. Open the keychain and click "Add". Select the gateway from the list of choices. A new item will be added to the Key Chain. Open this key, and configure the gateway as you normally would. The gateway should now be functioning.

MANUAL INSTALLATION INSTRUCTIONS =====

The manual installation instructions are for advanced users who wish to build their own installation process or who wish to install only portions of this gateway. Installation using this process should be conducted only after you fully understand how to use your Macintosh, and how to configure and use PowerTalk gateways.

If you must install this version manually, please follow these instructions:

1. Place the distribution diskette in the floppy drive.
2. Open the folder named "Drop Contents on System Folder".
3. Select all of the items in this folder and drag them onto the "System Folder" icon.
4. You will be presented with a dialog box that indicates these files belong in special locations. Click "OK".
5. Close the "Drop Contents on System Folder" folder.
6. Open the folder named "Place Contents in Preferences Folder".
7. Select all of the items in this folder and drag them into the "Preferences" folder (which is located within your "System Folder").
8. If you are presented with a dialog indicating that you will be replacing existing files, click cancel. You should perform the "Automatic Installation" procedure (above).
9. Reboot the system. This is necessary because some of the software installed is only activated at boot time.

NOTE: With version 1.6 it is no longer required to install the key files.

KNOWN INCOMPATIBILITIES

=====

- When a mail message is forwarded, the name and address of the original sender are not preserved.
- CE Software's QM for AOCE may be used to send mail, although you must select the AppleMail format when sending the message. This application may NOT be used as the default mail reader. If it is selected, AppleMail will be used instead.

SUPPORT

=====

If you need any additional help installing, configuring or using this gateway please call Apple Support at: 1 (800) SOS - APPL.

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Tech Info Library Article Number:19730



Tech Info Library

Global Village: AT Command Set (5/96)

Revised: 5/8/96
Security: Everyone

Global Village: AT Command Set (5/96)

Article Created: 8 May 1996

TOPIC -----

This article describes AT commands and the general Global Village command list. This information is from the Global Village Platinum V Users Guide.

DISCUSSION -----

Usually your telecommunications application controls and configures your telecommunications card (the modem). However, you can also control and configure most modems - including your telecommunications card - using a "language" called the AT command set.

You control and configure your telecommunications card from within a telecommunications application. You can enter an AT command to "tell" your telecommunications card to perform a variety of tasks, such as dialing or answering the telephone. For example, to get the telecommunications card's attention and ask it to dial a phone number such as "123-4567," enter the following command line:

```
ATDT 123-4567
```

Today, many Macintosh telecommunications applications contain options for dialing, terminal emulation, and file transfer using menu commands that are in plain English. However, in many telecommunications applications, the AT command line appears on your screen after you choose the menu command.

Uses for AT Commands

AT commands have a number of uses. You can use AT commands to connect to a certain type of modem. You can also use AT commands in scripts. A script is a set of AT commands you use to perform a certain function. You often use scripts to automate common activities, such as logging to an on line service.

Command state and On-line State

When the telecommunications card is on, it is always in one of 2 states: the command state or the On-line State. The telecommunications card assumes the command state when power is turned on. In the command state, AT commands are sent to the telecommunications card to control all aspects of its operation. After your telecommunications card connects with a remote modem, both the telecommunications card and the modem are in the on-line state. All information you send to you telecommunications card is sent to the remote modem as well.

Command Buffer

The command buffer is the area in which you enter At commands. The command buffer capacity for the telecommunications card (platinum V) is 39 characters. If the command line exceeds the command buffer capacity, the telecommunications card will not execute the command line and will send an ERROR message after the carriage return. If you exceed the character limit, re-enter the command with fewer than the allowed number of characters so that the command line can be executed.

You can enter telephone numbers with or without punctuation: for example: (123) 456-7890 or 1234567890

Punctuation in the telephone number takes up space in the command buffer. Note that the AT command characters, the space character, the carriage return control character, and the line feed (LF) control character are not stored in the command buffer.

AT Command Components

The following sections discuss the key components of an AT command.

- Attention Code

You must begin command lines with the characters "AT" and enter them as all uppercase (AT) or all lowercase (at) characters. The attention code (AT) gets the telecommunications card's attention and indicates that the text following the AT command is a command that the telecommunications card should act on. The following is a sample command in which you instruct the telecommunications card to hand up: ATH0

- Command Parameters

Most AT commands have parameters - single-digit or double-digit options - that follow the command letter. Each command has a default parameter. The default parameter is used if no parameter is specified. For example, the "Hn" command has 2 parameters: 0 and 1. The command defaults to 0 if no parameter is specified. Therefore, typing ATH is equivalent to typing ATH0.

- Return Key

You must end the command line with a carriage return. Press the Return Key to enter a carriage return. The telecommunications card begins executing a command when it receives a carriage return.

- Delete Key

Before executing a command by pressing the Return key, you can edit the command

using the Delete key. The Delete key cannot erase the AT at the beginning of the command line.

General Global Village Command list

Begin_Table

Command	Meaning
ATDT phone nu	ATDT and a telephone number dials a telephone number using a touch tone dialing.
ATE1	Ensures that commands you send to the telecommunications card appear on your screen when you type them.
ATH0	Hangs up the line.
ATM0	Turns off the modem speaker.
ATLM1	Turns on the modem speaker while dialing until connection is established.
ATX1	Ignores the dial tone when dialing a number.
ATV1	Displays verbal results codes, such as RING, CONNECT, OK, and NO CARRIER.
ATZ	Resets the telecommunications card to its power-on configuration.
AT&F1	Resets the telecommunication card for optimal high-speed connections.
ATDP	ATDP and telephone number dials the phone number using pulse Dialing.

- Teleport Gold II, Gold IIv and Platinum V

ATL1 Sets the speaker volume to low.

End_Table

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Tech Info Library Article Number:19731



Tech Info Library

Network Server: SMIT, AppleTalk Admin Tool Function Keys (5/96)

Revised: 5/8/96
Security: Everyone

Network Server: SMIT, AppleTalk Admin Tool Function Keys (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

How can I run SMIT with the CommandShell AppleTalk Administrative Tool on the Network Server 500 or Network Server 700?

The default VT-102 tool only gives me F1 through F4 function keys does not let me manipulate SMIT. I tried the VT-320 tool with MacTerminal which I did have working with ClarisWorks and a serial connection to the server, but I could not get the same settings for VT-220 emulation to work in CommandShell.

How do I get other function key functions?

DISCUSSION -----

There is a built-in alternative to the function keys.

You can use the sequence "Escape Key - Number Key".

This will let you navigate the different menus in SMIT while in a terminal emulation session from the CommandShell windows, Text based Console Window, Telnet session, and so on.

For example, from the CommandShell window, if you need to enter F4 (Function Key 4) to generate a list of options for a field, you can enter the sequence Esc 4 (Escape key - Number 4 key) and obtain the same result.

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Tech Info Library Article Number:19733



Tech Info Library

Apple OneScanner 600/27: Creating Electronic Forms (5/96)

Revised: 5/8/96
Security: Everyone

Apple OneScanner 600/27: Creating Electronic Forms (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

I want to scan in a form using the Apple OneScanner 600/27, then type over the top of the electronic version of the form. Does the Apple OneScanner 600/27 software convert the text of the form, but leave the lines and other artwork alone?

DISCUSSION -----

You can scan with the OneScanner Dispatcher software an image or document, then add text or edit graphics before archiving the document for later retrieval. Added text to the image may be later converted to text using the bundled TextBridge OCR software.

You can also use TextBridge to scan and convert hard copy directly, or with TextBridge, open and convert existing on-line (electronic) images into formatted text files. TextBridge OCR Software output options include Text, Page Image, or Both:

- If you want to capture and convert only the Text, select Text.
- Choose Page Image to only output page images.
- Click Both to create a text and a page image file. Use your text editor or page layout program to manipulate the text file, or a graphics package to manipulate or extract any illustrations from the image file. In the case of a form (a type of image), you will be able to modify the image with a graphics application. The Both output, however, does not create a single document containing editable graphic and text elements: you'll need text and graphic applications to recombine the graphic and text elements while allowing discrete graphic and text edit control.

An Auto Zone feature recognizes pages that have more than one column and/or unusual layouts and outputs the recognized text in the proper order. You can

preview and manually override any automatic zones.

The Tech Info Library article titled "Color OneScanner 600/27: Dispatcher Software Description" contains a complete description and functions of the software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19734



Tech Info Library

PCI-based PC Compatibility Cards Video Capabilities (4/97)

Revised: 4/8/97
Security: Everyone

PCI-based PC Compatibility Cards Video Capabilities (4/97)

=====

Article Created: 8 May 1996
Article Reviewed/Updated: 8 April 1997

TOPIC -----

What are the video capabilities of the PCI-based PC Compatibility Cards?

DISCUSSION -----

Both the 7-inch and the 12-inch cards have 1 MB built-in video memory (VRAM) for the following capabilities:

Begin_Table

Resolution	Max Colors
-----	-----
640x480	16.7 million
800x600	65,536
1024x768	256
1152x864	256

End_Table

The 12-inch card also has two sockets to increase video DRAM to 2 MB. These sockets accommodate 5V, 256K x 16, 60 ns, standard fast-page mode SOJ package DRAM devices (40 pin), such as Micron #MT4C16257DJ-6, NEC #UPD424260LE60R, Samsung #KM416C256BJ-6, or Hyundai #HY514260BJ-60.

These are the maximums with 2 MB video memory (VRAM) for the 12-inch card:

Begin_Table

Resolution	Max Colors
-----	-----
640x480	16.7 million
800x600	16.7 million

1024x768	65,536
1152x864	65,536
1280x1024	256

End_Table

A multiple-scan monitor is required to reach some resolution/color depth combinations. For particular resolutions/color depths, the monitor must support the resolution at refresh rates that are indicated in Appendix C of your PC Compatibility Card User's Manual.

Article Change History:

08 Apr 1997 - Edited for technical accuracy.

16 Sep 1996 - Added VRAM to text for searchability.

29 Jul 1996 - Reviewed and updated for technical accuracy.

Copyright 1996-1997, Apple Computer, Inc.

Tech Info Library Article Number:19735



Tech Info Library

Newton Keyboard: Uppercase Keys Don't Work (5/96)

Revised: 5/8/96
Security: Everyone

Newton Keyboard: Uppercase Keys Don't Work (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

I have a Apple MessagePad with the Newton Keyboard. All the lowercase keys work properly, but not all the uppercase worked. I tried to use the caps lock and the shift key, but they resulted in lowercase characters.

DISCUSSION -----

When this happens you should reset your Apple MessagePad. Do not perform a hard reset. If you perform a hard reset any information in the internal memory are lost.

Resetting Your Apple MessagePad

=====

Step 1

Remove the battery cover

Step 2

With a pencil or pen, press the button next to the word RESET.

DO NOT use the pen that came with your Apple MessagePad.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19736



Tech Info Library

Apple MessagePad: Default System Dates (5/96)

Revised: 5/8/96
Security: Everyone

Apple MessagePad: Default System Dates (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

I am trying to create a new not on an Apple MessagePad 120. When I draw a line underneath an existing note, the line disappars and a new note does not show on the screen.

DISCUSSION -----

Either scroll up, or look at the notes overview for the new notes. If you performed a hard reset and did not set the date, new notes appear before any existing notes.

Below is a table which shows the default system date and time settings.

Begin_Table

MessagePad Model	Default System Date and Time	Default Note Date
Original MP	1 Jan 1993 12:00 PM	1/1/93 11:00 AM
100 w/1.3 OS	3 Jan 1994 12:00 PM	1/3/94 11:00 AM
110 w/1.3 OS	3 Jan 1994 12:00 PM	1/3/94 11:00 AM
120 w/1.3 OS	3 Jan 1994 12:00 PM	1/3/94 11:00 AM
120 w/2.0 OS	4 Nov 1995 03:00 AM	11/4/95 03:01 AM
130 w/2.0 OS	1 Nov 1995 02:08 PM	11/1/95 02:08 PM

End_Table

When setting the clock, you should first check the Time Zones for the correct setting. The default setting is the Pacific Time zone.

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Tech Info Library Article Number:19738



Tech Info Library

Apple Video Player: Remote Control Doesn't Work (10/96)

Revised: 10/17/96
Security: Everyone

Apple Video Player: Remote Control Doesn't Work (10/96)

=====

Article Created: 8 May 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

I have a Macintosh Performa 638CD, and I just installed System 7.5 Update 2.0. However, since doing so I can no longer use the remote control which was included with my computer. It worked fine before I installed the update. What is causing this?

DISCUSSION -----

Apple has duplicated this issue, but it appears to occur only when using the Apple Video Player; the remote control works fine when using other applications, such as adjusting the volume for the CD-ROM drive. Apple has resolved this issue with System 7.5.5 Update, which is available on the online services.

If you have not yet installed System 7.5.5 Update, this issue can be temporarily resolved by deleting the Apple Video Player Prefs file, which is in the Preferences folder within the System Folder. However, once you use the remote control with the Apple Video Player again, the issue will return. So, the best solution is to not use the remote control in Apple Video Player until you update to System 7.5.5 Update.

The following computers have a built-in infrared sensor which allow them to be controlled remotely and may be affected by this issue:

- The Macintosh 630CD family: Macintosh LC 630, Quadra 630, Performa 630, Performa 631, Performa 635, Performa 636, Performa 637, Performa 638, and Performa 640.
- The Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.
- The Macintosh 6200CD family: Performa 6200, Performa 6214, Performa 6216,

Performa 6218, Performa 6220, and Performa 6230.

- The Macintosh Performa 5300CD, Power Macintosh 5260/100 and Power Macintosh 5300/100 LC
- The Macintosh Performa 6300CD series: Performa 6300 and 6290

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 23 September 1996.

Article Change History:

17 Oct 1996 - Added kalley keyword.
19 Sep 1996 - Added 7.5.5 information.
09 May 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19739



Tech Info Library

Apple LaserWriter Printers: Models Supporting Apple II (5/96)

Revised: 5/8/96
Security: Everyone

Apple LaserWriter Printers: Models Supporting Apple II (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

This article contains a list of LaserWriter models supporting the Apple II computer series.

DISCUSSION -----

In order for an Apple LaserWriter to work with an Apple II system, the LaserWriter hardware needs to support Diablo (straight text) mode. Diablo mode allows the printer to understand text data from the Apple II and convert that data into a printed page. The Apple LaserWriters supporting hardware Diablo mode are the:

LaserWriter (original model)
LaserWriter Plus
LaserWriter IINT
LaserWriter IINTX
Personal Laserwriter NT

To put the LaserWriter hardware in Diablo (straight text) mode, do the following:

Begin_Table

+=====+	
Model	What to do for Diabo mode
+=====+	
LaserWriter	Change dial on back of LaserWriter
	to SPECIAL
+-----+	
LaserWriter Plus	Change dial on back of LaserWriter
	to SPECIAL
+-----+	
LaserWriter IINT	Dipswitch 1 = UP

	Dipswitch 2 = Down	
+-----+		
LaserWriter IINTX	Dipswitch 2 = UP	
	Dipswitch 3 = UP	
	ALL Others = DOWN	
+-----+		
Personal LaserWriter NT	Change pinwheel dial to Setting 3	
+-----+		

End_Table

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Tech Info Library Article Number:19741



Tech Info Library

Apple MessagePad 130: Memory Allocation Amounts (5/96)

Revised: 5/8/96
Security: Everyone

Apple MessagePad 130: Memory Allocation Amounts (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

This article provides a breakdown on the memory allocation on the Apple MessagePad 130 device.

DISCUSSION -----

Built-in applications: Calculator, Calls, Card, Clock, Connection, Formulas, Help, In Box, Out Box, Owner Info, Prefs, Setup, Styles, Time Zones, and Writing Practice,

Also loaded into internal memory are:

Hide-E	2K
HW Instructor	101K
Newton Tour	110K
Pocket Quicken	238K
Serial 9600	1K

Total	452
Soups	7
Patches (approx.)	33

Total	492K

1K allotments are initially set aside for the Calls, Dates, In/Out Items, Names, Notes, Pocket Quicken and To do Task soups adding up to another 7K. Everytime you add a note, or name, these amounts increase and take up more user memory.

Memory Info shows 492K used and 869K free, this gives you 1361K user available memory. Since the 869K free initially may be startling, you can gain some of that space back by removing those packages that are preloaded into the internal memory: HW Instructor, Newton Tour, Pocket Quicken, or Serial 9600.

Just as with any computer, when the operating system loads, it takes away from the operational memory. In the case of the Apple MessagePad, the operating system, the system updates (patches) load in at about 639K. As for the extra 512K, you should never even be aware of its existence unless you looks at the Memory Info stats. This is a result of how smoothly the heap space operations are now handled.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19742



Tech Info Library

PowerBook 5300: GlobalFax Error Message (5/96)

Revised: 5/8/96
Security: Everyone

PowerBook 5300: GlobalFax Error Message (5/96)

=====

Article Created: 8 May 1996

TOPIC -----

When I start my PowerBook 5300 series computer I get an error message that says the GlobalFax software has encountered an error.

DISCUSSION -----

Step 1

Open Extensions Manager Control Panel and select the set All Off from the pop-up menu. Then select the extension Macintosh Easy Open (MEO).

Step 2

Restart the computer from the Special menu rebuild the desktop by holding down the Option and Command keys until you get the message which asks do you want to rebuild the desktop. Click OK.

Step 3

Open Extensions Manager Control Panel and select the set All On. Restart using the Special menu.

Step 4

If you still get the GlobalFax error, remove the existing Global Village software (Use the Custom Remove feature of the Global Village Installer) and then reinstall the software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19743



Tech Info Library

WorkGroup Server Solution Companion CD 2.0: What's On it (5/96)

Revised: 5/9/96
Security: Everyone

WorkGroup Server Solution Companion CD 2.0: What's On it (5/96)

=====

Article Created: 9 May 1996

TOPIC -----

This article contains a list and description of the applications on the WorkGroup Server Solution Companion 2.0 CD-ROM disc.

DISCUSSION -----

The WorkGroup Server Solution Companion 2.0 CD-ROM disc consists of:

- Acrobat Reader: Adobe Systems Document Reader
- FileWave: Automated file / data distribution
- Viper: File look-up utility
- Contact & Up-to-Date: Contact management, calendar
- 4-Sight fax server: Send/receive, e-mail integration
- netOctopus: Asset management (Mac & PC)
- Skyline / Satellite: Network bandwidth monitor
- Virex: Antivirus utility

• Datawatch (508/988-9700), which sells Virex antivirus software, recently obtained U.S. marketing rights to netOctopus, a network- and system-administration package developed by Germany-based Pole Position Software. Like Saber LAN Workstation, netOctopus can be used to distribute software electronically. Datawatch is supporting existing netOctopus customers, and the company promises a major revision of netOctopus later this year. An interim release, due in July, will allow remote users to run database updates, virus scans, software inventories, and similar functions automatically when they log on. netOctopus costs between \$30 and \$47 per workstation.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19744



Tech Info Library

CLW 12/600 PS: Cyan Yellow Magenta Startup Page (10/96)

Revised: 10/23/96
Security: Everyone

CLW 12/600 PS: Cyan Yellow Magenta Startup Page (10/96)

=====

Article Created: 8 May 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

My Color LaserWriter 12/600 PS printer produces a 1/2 magenta, 1/4 yellow and 1/4 cyan page whenever I power on the printer. I have turned off both of the startup pages with the Apple Printer Utility, but this three color page still comes out. I am connecting using a peripheral 8 serial cable for my connection.

DISCUSSION -----

Examine the serial cable. If any of the pins are bent, this can cause the printer to think that a special loopback test plug is installed. The loopback plug places the printer into an extended diagnostic mode which produces the three color page you have described. This also happens on the Color LaserWriter 12/660 PS printer.

Power down the printer, then remove the serial cable. Then power the printer back on. You should not see the three color diagnostic page. If removing the cable solves this issue, you need to replace the cable, or carefully bend the pins back into position. However, if after removing the cable you are still getting the three color diagnostic page, you should get your Color LaserWriter 12/600 PS printer serviced.

Article Change History:
23 Oct 1996 - Added Color LaserWriter 12/660 PS to article.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19745



Tech Info Library

Macintosh: Where to Find Public Domain/Shareware Software (5/96)

Revised: 5/9/96
Security: Everyone

Macintosh: Where to Find Public Domain/Shareware Software (5/96)

=====

Article Created: 9 May 1996

TOPIC -----

Where can I locate public domain (freeware) or shareware software for the Macintosh?

DISCUSSION -----

There are a variety of sources including commercial online services such as CompuServe, America Online, and Prodigy, Macintosh user groups, and the internet.

For a list of sites on the internet which have large postings of public domain software, commonly referred to as "info-mac" sites, use the following URL:

<http://www.mcp.com/hayden/iskm/info-mac-mirrors.html>

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Tech Info Library Article Number:19746



Tech Info Library

Performa 640 DOS Compat: DOS Software Isn't Reinstalled (5/96)

Revised: 5/9/96
Security: Everyone

Performa 640 DOS Compat: DOS Software Isn't Reinstalled (5/96)

=====

Article Created: 9 May 1996

TOPIC -----

I have a Performa 640 DOS Compatible computer, and I had to reinstall my system software recently. Now that I have reinstalled the system software, I cannot find the PC Setup control panel.

DISCUSSION -----

The DOS Compatibility Installer for the Mac Environment disk is not shipped with the Performa 640 series DOS Compatible. When you reinstall the system software from the CD-ROM disc, the software required to operate the DOS Compatibility Card is not installed. To use your DOS Compatibility Card again, you need to manually drag the files from the CD-ROM disc to your System folder on your hard disk.

The path to locate these DOS resources on the CD are:

Performa CD -> Hard Disk Files -> System Folder Files -> Extensions to get the following:

PC Clipboard (V 1.0.5)
PC Clipboard Translators (V 1.0.5)
PC Network Extension (V 1.0.5)
PC Print Spooler (V 1.1.1)
PC Setup Guide Additions (V 1.1)

Performa CD -> Hard Disk Files -> System Folder Files -> Control Panels to get the following:

PC Setup (V 1.0.5)

The Preferences folder contains both PC Setup Preferences and Spooler folder, but these can be left out since they are automatically recreated.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19747



Tech Info Library

Color STW 2400: Freezes in Landscape mode w/VM ON (5/96)

Revised: 5/9/96
Security: Everyone

Color STW 2400: Freezes in Landscape mode w/VM ON (5/96)

=====

Article Created: 9 May 1996

TOPIC -----

We have a Power Macintosh 6100/66 running System 7.5.3 and a Color StyleWriter 2400. When printing color output to our Color StyleWriter 2400 in landscape mode, our computer freezes after Desktop PrintMonitor shows that 28% is complete. The problem does not occur if we:

- Select Black & White.
- Print in portrait mode.
- Disable background printing.
- Disable Virtual Memory.

We are using the Color StyleWriter 2400 v2.1.1 driver.

DISCUSSION -----

There are some known issues when printing to the Color StyleWriter 2400 with Virtual Memory enabled. The problem as outlined above is resolved with the Color StyleWriter 2500 software (v2.2) which is backward compatible with the Color StyleWriter 2400. We would suggest that all customers experiencing any software-related problems with their Color StyleWriter 2400, upgrade to the new software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19748



Tech Info Library

PCI-Based Power Macintosh Computers: UL Listing? (5/96)

Revised: 5/9/96
Security: Everyone

PCI-Based Power Macintosh Computers: UL Listing? (5/96)

=====

Article Created: 6 May 1996

TOPIC -----

Are the PCI-based Power Macintosh computers UL (Underwriter Laboratories)
Listed?

DISCUSSION -----

Apple Computer Inc. uses the testing services of the Canadian Standards Association (CSA). The CSA is recognized by the Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL).

OSHA created a set of standards for approving companies or agencies that do electrical and safety testing. These procedures for certifying a company as an NRTL mean that there can now be more than one source for testing. This allows vendors other than UL to be qualified as OSHA-recognized testing labs.

The insignia for CSA is on the PCI-based Power Macintosh computers, which shows that they are recognized by an NRTL. The /c means that they are also certified for Canada.

Additional information on OSHA's procedures is available on OSHA's web site at <http://www.osha-slc.gov/>.

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Tech Info Library Article Number:19751



Tech Info Library

Network Server AIX: CDE and Slow Startup (5/96)

Revised: 5/9/96
Security: Everyone

Network Server AIX: CDE and Slow Startup (5/96)

=====

Article Created: 9 May 1996

TOPIC -----

When I log into the CDE environment of AIX on my Network Server, CDE appears to take a long time to get past the blue screen. The desktop will finally appear, but this can take 15 minutes. My system is properly registered with the DNS Server. As a side note, I am unable to ping loopback.

DISCUSSION -----

If you are configuring your system to use DNS for host resolution, AIX defaults to using DNS resolution before using /etc/hosts. CDE depends on the host name & IP address assigned to properly function, but during the login sequence, your system is querying the DNS server. To speed up the login sequence, and to let you resolve names in the host file prior to requesting them from DNS, create a file called /etc/netsvc.conf, and add this line:

```
hosts=local, bind.
```

This will allow AIX to resolve your hostname for CDE and improve login time

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19753



Tech Info Library

Network Server AIX: CDE and Slow Startup (5/97)

Revised: 5/2/97
Security: Everyone

Network Server AIX: CDE and Slow Startup (5/97)

Article Created: 9 May 1996
Article Reviewed/Updated: 2 May 1997

TOPIC -----

When I log into the CDE environment of AIX on my Network Server, CDE appears to take a long time to get past the blue screen. The desktop will finally appear, but this can take 15 minutes. My system is properly registered with the DNS Server. As a side note, I am unable to ping loopback.

DISCUSSION -----

If you are configuring your system to use DNS for host resolution, AIX defaults to using DNS resolution before using /etc/hosts. CDE depends on the host name & IP address assigned to properly function, but during the login sequence, your system is querying the DNS server. To speed up the login sequence, and to let you resolve names in the host file prior to requesting them from DNS, create a file called /etc/netsvc.conf, and add this line:

```
hosts=local, bind
```

This will allow AIX to resolve your hostname for CDE and improve login time.

Article Change History:
02 May 1997 - Corrected typographical error.

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Tech Info Library Article Number:19753



Tech Info Library

System 7.5.3: No Translucent Icons Available on Monitor (5/96)

Revised: 5/23/96
Security: Everyone

System 7.5.3: No Translucent Icons Available on Monitor (5/96)

=====

Article Created: 9 May 1996
Article Reviewed/Updated: 23 May 1996

TOPIC -----

I have a PowerBook 5300 with an built-in grayscale monitor and I just upgraded to System 7.5.3. The System 7.5 Update 2.0 Read Me files say there is a new "translucent dragging" feature for PowerPC-based computers, but I do not seem to have this feature. Why not?

DISCUSSION -----

Because translucent dragging mixes the color of the first icon being dragged with any grays or colors in the background that it is being dragged over, a palette of at least 256 grays or colors is required to make the feature work. If you set the Monitors control panel to a bit-depth below 256 grays or colors, the icons will not be translucent when dragged, they will simply be outlined.

Because the grayscale version of the PowerBook 5300/100 computer* is only capable of displaying 4-bit (16 shades) of gray on the internal monitor, it cannot display the translucent dragging feature. If an external monitor with greater than 256 grays or colors is connected, the feature will work on that external monitor.

NOTE:

*All other models of the PowerBook 5300 series computers are capable of translucent dragging.

Article Change History:

23 May 1996 - Added information about which models are affected by this.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19754



Tech Info Library

PowerBook 180c: Won't Power Up Properly (12/96)

Revised: 12/9/96
Security: Everyone

PowerBook 180c: Won't Power Up Properly (12/96)

=====

Article Created: 9 May 1996
Article Reviewed/Updated: 9 December 1996

TOPIC -----

My PowerBook 180c will not always fully power on. It gets a startup chime and I see the screen for a few seconds and then it just shuts down. I have reset the power manager, but that did not correct it. I have a good AC adapter that I checked with my PowerBook 165c. If I charge the battery, it will eventually start the unit, but it will not start with just the AC Adapter.

DISCUSSION -----

You need to make sure you are using the proper AC adapter. If your PowerBook 180c has a modem and a large RAM card, it may require more power than most AC adapters provide. The PowerBook 180c requires a 24W AC adapter. The proper Apple AC adapter can be identified by the Model number M5652, and reads 24W on the AC Adapter tip. If you are using any other AC Adapter and your battery is low, then your PowerBook will not always startup properly without a fully charged battery.

Article Change History:
09 Dec 1996 - Reworded for clarity.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19755



Tech Info Library

Macintosh 5200/5300/6200/6300: Repair Extension Program (1/97)

Revised: 1/17/97
Security: Everyone

Macintosh 5200/5300/6200/6300: Repair Extension Program (1/97)

Article Created: 9 May 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

The pointer on the screen of my Power Macintosh 5200/75 computer seems to freeze when I am working in different applications. The color hue also seems to change over time. What can I do?

DISCUSSION -----

Apple has identified the causes for the issues you describe and has created a Repair Extension Program to address them. This is NOT a product recall. Rather, it is a program designed to resolve the sporadic freezing and color hue changes on your computer.

Quality is a top priority at Apple, and this repair program addresses certain quality issues that have surfaced with these products. Apple is putting these repair programs in place as part of the company's goal to provide a high level of customer satisfaction.

ISSUES ADDRESSED

=====

The Repair Extension Program for Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers addresses two key quality issues:

- 1) System freezes caused by specific, known component issues that have been identified by Apple.
- 2) Sudden or intermittent changes in the monitor's color hue on Power Macintosh and Performa 5200 and 5300 series computers due to a particular cable.

MODELS INCLUDED

=====

- Power Macintosh 5200/75 LC, 5300/100 LC
- Macintosh Performa 5200, 5215, 5300
- Macintosh Performa 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290, 6300

*Note:

The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.

REPAIRS INCLUDED IN PROGRAM

=====

The Repair Extension Program will include some or all of the following, as appropriate, for a particular computer:

- Check the logic board and replace as appropriate.
- Check revision of the unit and replace a cable to correct the sudden or intermittent changes in color hue.

IMPORTANT NOTES

=====

- System freezes or video issues can occur for reasons unrelated to the component problems described above. Any such issues would not be covered by this Repair Extension Program.

- If your computer is affected by either of the two specific issues identified above, call 1-800-SOS-APPL (in the United States) or contact an Apple-authorized service provider (outside the United States) to schedule your system for repair.

- This program will remain in effect for 7 years.

This article was published in the Information Alley on 9 May 1996.

Article Change History:

17 Jan 1997 - Added info about models not included.

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Tech Info Library Article Number:19756



Tech Info Library

Network Server 500 & 700: Licensed AIX Logins

Revised: 5/10/96
Security: Everyone

Network Server 500 & 700: Licensed AIX Logins

=====

Article Created: 10 May 1996

TOPIC -----

AIX Licensed Logins, counted and non-counted logins.

DISCUSSION -----

There are several ways to access the AIX Version 4.1 BOS, some of which are controlled by the AIX user license. An AIX Version 4.1 user license is required for a user to access the system with the following methods:

- Logins provided via a getty (from an active, local terminal)
- Logins provided using the rlogin or rsh -l command
- Logins provided using the telnet or tn command
- Logins provided through the Common Desktop Environment (CDE)
- Logins provided using Apple's CommandShell remote AppleTalk client

Any other way of accessing the AIX Version 4.1 BOS does not require AIX user licenses (for example: ftp, rexec, rsh without the -l flag, nfs).

Third-party applications may implement their own user or other license restrictions.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19757



Tech Info Library

QuickTime 2.5: Features & Enhancements (9/96)

Revised: 4/21/97
Security: Everyone

QuickTime 2.5: Features & Enhancements (9/96)

Article Created: 10 May 1996
Article Reviewed/Updated: 30 September 1996

TOPIC -----

This article describes new features and enhancements for Apple Quicktime 2.5.

DISCUSSION -----

On Monday April 15, the QuickTime team announced enhancements to QuickTime for video professionals at the National Association of Broadcasters (NAB) conference in Las Vegas. Although announced on 15 April 1996, these updates are still under development and will not be available for distribution until mid May 1996 (WWDC timeframe). QuickTime 2.5 replaces QuickTime 2.1 for Macintosh and provides several performance enhancements as well as bug fixes that primarily impact developers and content authors, including:

QUICKTIME 2.5

QuickTime v2.5 is a reference release for Macintosh and is fully compatible with today's QuickTime content. It provides several new features and enhancements:

- Improved performance, better quality movie playback
- Improved MIDI/music support
- Multi-processing and PCI card support
- Closed-Caption text capture support
- Improvements to overall reliability through numerous bug fixes in the core QuickTime extensions
- Better performance movie playback

QuickTime's primary data handler has been updated to allow for higher

performance playback. The data handler has been modified to maximize throughput resulting in noticeable performance improvements.

- Native Component Manager dispatching mechanism

A new Component Manager provides a more efficient, fully Power PC native path for QuickTime video, sound, music and as well as other Component Manager clients such as ColorSync, QuickDraw GX, Sound Manager, AppleScript, Macintosh Easy Open and the Display Manager. These enhancements provide better movie playback performance as well as overall better system performance.

- Asynchronous JPEG and Raw codecs on Power Mac

The JPEG and Raw codecs are now asynchronous allowing QuickTime to continue processing data while the codecs simultaneously compress or decompress video.

- Public API and format for software synthesizers and musical instruments (MIDI)

QuickTime 2.5 has music capabilities that make it possible for developers to bring a unique music experience to multimedia titles while taking advantage of the MIDI standard. QuickTime 2.5 provides developers the ability to create their own distinctive, custom software synthesizers and libraries of musical instruments and sounds. QuickTime 2.5 introduces a public API and format for adding these synthesizers and instruments using the QuickTime Music Architecture (QTMA). These sounds may be embedded in a QuickTime movie, passed via a call to QuickTime, or dropped into the System Folder.

Third parties such as InVision, Roland, Yamaha, and others can now sell and/or license instruments and instrument libraries to developers and musicians. With the introduction of this enhancement to the QTMA, these instruments and instrument libraries are to developers and musicians, what fonts are to desktop publishers and graphic artists.

- Support for QuickDraw 3D / Tweening media handler

QuickTime 2.5 includes support for Apple's QuickDraw 3D technology. With this addition, 3DMF objects can be put into a 3D track and synchronized with other media types, such as video and music. Going forward QuickTime will support controls so users will be able to interact with these 3D objects by simply "grabbing" the object.

- PCI acceleration support / Multi-processor support

QuickTime 2.5 includes new API hooks that enhance the ability of hardware vendors to improve QuickTime performance through hardware acceleration. Examples include new PCI video accelerator cards from ATI and Diamond Multimedia for improved playback performance - regardless of the size the movie was originally captured and digitized at. Cards such as the Daystar Genesis multi-processor card will greatly increase creation and authoring performance.

- Support for Closed-Caption in the capture APIs

A new sequence grabber channel is now available. Along with video, sound, and music channels, closed-captioned text can be captured and embedded into a QuickTime movie's text track. This allows for fast searching and cataloging of stored media. Just as the video grabber digitizer components have been written for specific hardware, the text grabber calls components that supply text. QuickTime 2.5 uses a component that works with an Apple TV Tuner card. It converts the closed-captioned data into text data for a text track.

- Enhanced text import/export descriptors

Editing text in movies is now easier. The import/export text components now work with text descriptors and timeStamps. Text descriptors are just that, descriptions of the text that follows. TimeStamps make it simple to do repeated export-edit-import tasks. The timeStamp keeps track of the starting time and duration of the sample, thus keeping the samples in sync with other media in the movie.

- Better support for low data rate audio capture

The sequence grabber sound channel has been enhanced to allow sound to be captured at any sample rate. This feature is important to network video conferencing solutions such as Apple's QuickTime Conferencing technology. The user interface in the sequence grabber sound sample panel has been updated for this feature. If 8k is not present in the sound input driver's native rates, 8k is added to the rate pop-up.

- Sprite enhancements

Both the Sprite Toolbox and the Sprite Track in QuickTime 2.5 now support graphics modes. This allows for sprites to blend with the background in various ways. Of particular interest is the ability to use 32 bit animation compressed sprites with an alpha channel graphics modes.

- Clock component

A new Clock component now guarantees enhanced synchronization of video and sound, and simplifies the problem of synchronizing these data types across the diverse array of sound and video hardware configurations supported by QuickTime.

- CD AutoStart for audio CDs

The AutoStart feature enables multimedia developers to create CD-ROMs that automatically start up when the disc is inserted. QuickTime 2.5 now extends this feature to standard audio Compact Discs which will begin playing when mounted.

Article Change History:

30 Sep 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19758



Tech Info Library

COMPUTER:applications, Inc. (5/96)

Revised: 5/13/96
Security: Everyone

COMPUTER:applications, Inc. (5/96)

=====

Article Created: 10 May 1996

COMPUTER:applications, Inc.

12813 Lindley Drive
Raleigh, NC 27614

919-846-1411

919-846-1412 FAX

Internet: <http://www.caidesign.com>

Company Profile:

Software engineering firm dedicated to new product design and development for the microcomputer industry.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19759



Tech Info Library

System 7.x: RAM Disk & Startup With Extensions Off (5/96)

Revised: 5/10/96
Security: Everyone

System 7.x: RAM Disk & Startup With Extensions Off (5/96)

Article Created: 10 May 1996

TOPIC -----

When I'm using a RAM disk and I startup with the extensions turned off, sometimes I get a message asking me if I want to initialize the RAM disk. If I hit Cancel, the message keeps coming back. What should I do? I do not want to lose any data that might be on the RAM disk.

DISCUSSION -----

What you describe can occur using any version of the Mac OS that supports a RAM disk, System 7.0 or later. The Memory control panel has certain resources which are needed to build a RAM disk, and when starting with extensions off, some of those resources are disabled.

This issue is purely cosmetic. No data loss will occur. This message is presented when the RAM disk needs to be built, or when the extensions are turned off at startup. Below are the occasions a RAM disk needs to be built:

- The first time after RAM disk is turned on in the Memory control panel and the computer is restarted.

NOTE: The RAM disk is not available until after restarting the computer.

- When the computer is turned on or started from an off or shut down position.

NOTE: A RAM disk does not get built when choosing Restarting from the Special menu because it is already present in RAM.

Data loss cannot occur during a RAM disk's initial build because you have not had a chance to access the RAM disk yet.

Data loss cannot occur when starting the computer after a shut down, because the shut down process erases the contents of the RAM disk. The system will warn you

if you choose Shut Down while data is present on the RAM disk.

The Assistant Toolbox extension, which comes standard with PowerBook computers, can be used with desktop Macintosh computers. The Assistant Toolbox provides a persistent RAM disk, which saves the RAM disk contents to the hard drive before shutting down, and then reloads the saved data to the RAM disk when starting up. However, if you start the computer with extensions off, you disable the Assistant Toolbox extension and the data will not get copied. You can find Assistant Toolbox on Apple Computer's software update locations.

If the initialize RAM disk message is annoying, use Restart instead of Shut Down when you want to restart your computer with extensions off and a RAM disk is present. After the initial build of the RAM disk (restarting after the first time it's turned on in the Memory control panel), choosing Restart with extensions off will not present this message.

If you are presented with the initialize message, you should click Initialize. A RAM disk initializes very fast.

These articles can help you locate the Assistant Toolbox mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19761



Tech Info Library

QuickTime Conferencing: Can't Use ISDN Crd w/Quadra 840AV (5/96)

Revised: 5/10/96
Security: Everyone

QuickTime Conferencing: Can't Use ISDN Crd w/Quadra 840AV (5/96)

=====

Article Created: 10 May 1996

TOPIC -----

I have a Macintosh Quadra 840AV computer, and I'd like to use the QuickTime Conferencing H.320 ISDN NuBus Card in my computer. I noticed that the QuickTime Conferencing ISDN Kit Installation Guide states that I need a special DAV ribbon cable to use the card in my computer. However, I'm not sure which cable I specifically need in order to use the card.

DISCUSSION -----

The QuickTime Conferencing ISDN Kit Installation Guide manual is incorrect. As stated in the QuickTime Conferencing H.320 ISDN NuBus Card ReadMe file, you must have a Power Macintosh 7100AV or 8100AV computer in order to use this card.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19762



Tech Info Library

Apple Internet Connection Kit 1.1 System Requirements (5/96)

Revised: 5/10/96
Security: Everyone

Apple Internet Connection Kit 1.1 System Requirements (5/96)

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Apple Internet Connection Kit 1.1 System Requirements (5/96)
Article Created: 10 May 1996

TOPIC -----

What are the Apple Internet Connection Kit (AICK) 1.1 system requirements?

DISCUSSION -----

AICK 1.1 requires an Apple Macintosh with 68030 or better processor, Power Macintosh, or Mac OS-compatible system with:

- System 7.5.3 or later (System 7.5 Update 2.0 is included on AICK 1.1 CD)
- 8 MB RAM minimum (12 MB recommended)
- Minimum 9600 bps modem (14,400 bps or greater recommended), or connection to LAN already connected to the Internet.
- 10 MB available hard disk space (15 MB recommended)
- A CD-ROM drive

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Tech Info Library Article Number:19764



Tech Info Library

Software Version Differences Between AICK 1.0 and 1.1 (4/97)

Revised: 5/1/97
Security: Everyone

Software Version Differences Between AICK 1.0 and 1.1 (4/97)

Article Created: 10 May 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article describes the software version differences between Apple Internet Connection Kit (AICK) v1.0 and v1.1.

DISCUSSION -----

Begin_Table

Company	Product Name	AICK 1.0 Version	AICK 1.1 Version
-----	-----	-----	-----
Netscape	Navigator	1.1.2	2.0
Claris	eMailer Lite	1.0v2	1.0v3
NCSA	Telnet	2.6	2.6
John Norstad	NewsWatcher	2.0b24	2.1.2
Dartmouth	Fetch	2.1.2	3.0
Dartmouth	MacPING	3.0.3	3.0.3
Adobe	Acrobat Reader	2.1	2.1
Apple	TCP/IP	1.0.7	not included
Apple	OT 1.0.6-->1.0.7	Patch	not included
Apple	MacTCP	2.0.6	2.0.6
Apple	Internet Status	1.0	1.1
Apple	Internet Dialer	1.0	1.1
Aladdin	Stuffit Expander	3.5.2	3.5.2
Aladdin	DropStuff	3.5.2	3.5.2
Lewis/Quinn	Internet Config	1.1	1.2
Apple	QTVR Player	1.0	1.0
Progressive-			
Networks	RealAudio Player	1.0.1	1.0.1
Maynard Handley	Sparkle	2.3.5	2.4.5
Apple	ConfigPPP	2.1.4	2.1.4
Apple	PPP	2.1.4	2.5
Apple	QuickTime	2.1	2.1

Apple	QT PowerPlug	not included	2.1
Apple	Sound Manager	3.1	3.1
Apple	Apple Telecom	not included	2.3.3
Apple	Sys. 7.5 Upd. 2.0	not included	included w/CD only

End_Table

Article Change History:

28 Apr 1997 - Removed out dated on line references.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:19766



Tech Info Library

AICK 1.1: CD Version Disk Exchange (6/96)

Revised: 6/3/96
Security: Everyone

AICK 1.1: "CD Version Disk Exchange" (6/96)

Article Created: 10 May 1996
Article Reviewed/Updated: 3 June 1996

TOPIC -----

What is included in the Apple Internet Connection Kit (AICK) 1.1 "CD version Disk Exchange" for AICK 1.1 floppy disks?

DISCUSSION -----

Claris will offer a floppy disk fulfillment program for users who do not have a CD-ROM drive and require floppies. The floppy version is part number 505002U and is available directly through Claris only. Users will receive 10 high-density floppy disks for AICK 1.1.

NOTE: Users will not receive floppy disks for System 7.5 Update 2.0 through this fulfillment program. Apple strongly recommends that you install System 7.5 Update 2.0. System 7.5 Update 2.0 includes Open Transport version 1.1, which must be used to ensure that the Internet Connection Kit functions properly.

To obtain information about where you can get a copy of System 7.5 Update 2.0, see the following page on Apple's Web site:

<http://support.info.apple.com/update/update.html>

or contact the Apple Order Center.

Details

Users will need to provide proof of purchase for the CD version of AICK 1.1.

- The AICK 1.1 box will feature a sticker that says "CD version Disk Exchange Available - Details Inside."
- The disk fulfillment card inside will state the following:

"Do you need high density disks instead of a CD? No problem! Just call Apple Order Center and Apple will send you high density disks at no charge by 2 day Airborne delivery.*

Please have your product registratratriation number ready so that your request can be processed quickly.

*Orders received at the Apple Order Center will ship the next business day. If you require next day delivery, your order must be received at the Apple Order Center by noon Pacific Time on a business day; you will be charged \$4.00 for this expedited delivery."

The Tech Info Library article titled "Locating Vendor Information" can help you search for the Apple Order Center's phone number.

Article Change History:
03 Jun 1996 - Updated for technical accuracy.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19767



Tech Info Library

MacDNS and International Date Issue, Workaround (5/96)

Revised: 5/11/96
Security: Everyone

MacDNS and International Date Issue, Workaround (5/96)

=====

Article Created: 11 May 1996

TOPIC -----

This article provides a workaround for users experiencing an issue with MacDNS and certain international date settings.

DISCUSSION -----

It turns out that some code assumed that the first separator in the abbreviated date string was a comma. Some date formats do not use a comma separator after the day of the week.

For example:

```
Thu, Jan 2, 1992 <-- OK
Gio, 2 gen 1992 <-- OK
tor 2 jan 1992 <-- no comma after day of week, the issue appears
```

If you are experiencing this issue, the workaround is to open the Date & Time control panel, click the Date Formats... button, and enter a comma after the day of week.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19768



Tech Info Library

System 7.5.3: Retrospect 3.0 Needed (2/97)

Revised: 2/11/97
Security: Everyone

System 7.5.3: Retrospect 3.0 Needed (2/97)

=====

Article Created: 11 May 1996
Article Reviewed/Updated: 11 February 1997

TOPIC -----

Since updating to System 7.5.3, Retrospect 2.x will not recognize the tape in my DAT drive it just says "busy." What should I do?

DISCUSSION -----

Retrospect 2.x is not compatible with System 7.5.3 and later. You should contact Dantz Development Corp. for information on how to upgrade to Retrospect 3.0 or later.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
11 Feb 1997 - Changed article completely, new information.
18 Oct 1996 - Updated the URL.

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Tech Info Library Article Number:19769



Tech Info Library

MAE 2.0: ccMail Compatibility (5/96)

Revised: 5/11/96
Security: Everyone

MAE 2.0: ccMail Compatibility (5/96)

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Article Created: 11 May 1996

TOPIC -----

This article describes the compatibility between MAE 2.0 and ccMail version 2 and 3..

DISCUSSION -----

MAE and ccMail versions 2 and 3 are compatible. However, there are 2 items that will prevent ccMail to run in MAE.

- Users is unable to use Direct Server Access under ccMail 2.2 & 3.0. Users must mount the mail volume first, then read mail.
- Users cannot save their password while logging onto ccMail 3.0, because if they do, MAE will quit with a core dump. Users will need to type their password each time to successfully log onto the Mail server.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19770



Tech Info Library

MAE 2.0: Failed to get ROM memory Error on Solaris (5/96)

Revised: 5/11/96
Security: Everyone

MAE 2.0: "Failed to get ROM memory" Error on Solaris (5/96)

=====

Article Created: 11 May 1996

TOPIC -----

After installing MAE 2.0 on an UltraSparc with Solaris 2.5, and restarting, I attempt to start MAE. The splash screen will appear for a moment, then disappear. The error "Failed to get ROM memory" will appear in the shell that MAE was started from.

DISCUSSION -----

MAE 2 requires Patch 2 to run under Solaris 2.5 and the UltraSparc. Upgrade MAE with this patch, and restart your workstation. Upon this restart, MAE will launch successfully.

The Patch can be found on <ftp.support.apple.com>, or www.mae.apple.com.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19771



Tech Info Library

PowerBook 2300: Memory Test Error Message at Startup (5/96)

Revised: 5/13/96
Security: Everyone

PowerBook 2300: Memory Test Error Message at Startup (5/96)

=====

Article Created: 9 April 1996
Article Reviewed/Updated: 9 May 1996

TOPIC -----

I am getting a strange error message on my PowerBook 2300 computer at startup. It says, "The built-in memory test has detected a problem. Please contact a service technician for assistance." What does this mean?

DISCUSSION -----

Issue

This problem is the result of an out-of-spec RAM card. The failure was first noticed with some third party 12 MB RAM cards at Apple's manufacturing facility in Cork, Ireland. A resistor change to that third party card corrected the problem.

Resolution

You should have the RAM card replaced by the manufacturer.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19772



Tech Info Library

System 7.5 Update 2.0: Important Software Updates ReadMe (5/96)

Revised: 5/17/96
Security: Everyone

System 7.5 Update 2.0: Important Software Updates ReadMe (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

This article describes the Read Me file "Important Software Updates" installed by System 7.5 Update 2.0. This Read Me will only be installed in the folder "Important Software Updates" on PCI-based Power Macintosh computers. The following computers are in the PCI-based Power Macintosh family: Power Macintosh 7200, 7500, 8500, 9500.

DISCUSSION -----

This folder contains three software updates that enhance your computer's stability. These updates have been requested by customers using system software version 7.5.3, the version of system software installed on your computer.

This document explains each update. The details below will help you decide if you need to install the updates. Installation instructions are also provided below.

Important:

Since these updates are very new, the system software CD or floppy disks that came with your computer do not contain backup copies of these updates. Please follow the instructions at the end of this document to create a backup copy.

Apple Guide update

This folder contains Apple Guide version 2.0.2, which replaces Apple Guide 2.0 on your computer. Apple Guide 2.0.2 includes the following improvements:

- corrects a problem that causes Apple Guide indexes to be improperly alphabetized in some languages
- corrects a problem in the way that Apple Guide uses memory (this problem can cause a decline in system performance and, in some cases, cause the computer to crash)

To install Apple Guide version 2.0.2, follow these steps:

1. Click the Apple Guide icon in this folder to highlight it.
2. Hold down the Option key and drag the Apple Guide icon to the System Folder icon. (The System Folder should be closed.)
3. When you see a message asking if you want to put Apple Guide in the Extensions folder, click OK.
4. A second dialog will appear warning you that an item named "Apple Guide" already exists in the Extensions folder. Click OK to replace the existing version.
5. Select Restart from the Special menu.

Drive Setup update

This folder contains Drive Setup version 1.0.4, which includes the following improvements:

- corrects a problem with some IDE drives
- corrects a problem that could lead to multiple partitions having the same date and time stamp (this problem is most likely to occur on very fast systems)

Drive Setup version 1.0.4 does not need to be installed. To use it, double-click the Drive Setup icon in this folder. If you like, you can move Drive Setup out of this folder to a more convenient location on your hard disk (or copy it onto a floppy disk).

Ethernet Compatibility extension

Important:

The information in this section is for computers connected to a Novell Netware network. If your computer is attached to a Novell Netware network, read the information in this section and install the Ethernet Compatibility extension.

This folder contains the Ethernet Compatibility extension version 1.0.3, which corrects a problem that occurs when you shut down a PCI-based computer that is connected to a Novell Netware network and is running system software version 7.5.3. Without this extension, your computer may crash when you shut down or restart.

To install Ethernet Compatibility version 1.0.3, follow these steps:

1. Click the ENET Compatibility icon in this folder to highlight it.
2. Hold down the Option key and drag the ENET Compatibility icon to the System Folder icon. (The System Folder should be closed.)
3. When you see a message asking if you want to put ENET Compatibility in the Extensions folder, click OK.
4. Select Restart from the Special menu.

Note:

After you install this extension, you will notice a two-minute delay in shutting down the computer. After two minutes, the machine will resume the shut down process. To avoid this delay, log out of the Netware network before you shut down or restart your computer.

Making a Backup Copy of These Updates

=====

To make a backup copy of these updates, you use a program called Disk Copy.

Before you start, make sure you have a high-density floppy disk. Then follow the steps below. You may want to print these instructions before you begin (open the File menu and choose Print).

1. Locate the disk image named "Updates.image" in this folder and double-click to open it.
2. When the Disk Copy Welcome screen appears, click anywhere inside it.
3. When the Disk Duplicator window appears, click the Make a Copy button.
4. Insert the high-density floppy disk into the disk drive.
5. At the "Are you sure..." message, click the Duplicate button.
6. When you have copied the disk image, remove the floppy disk and label it. Keep this backup disk with your system software CD or floppy disks.
7. Click Stop Copying to close the Disk Copy application.
8. To lock the disk:
 - Look at the back of the disk.
 - Find the square hole with a tab inside it in the corner of the disk.
 - Slide the tab toward the edge of the disk so that the square hole is open.

Important:

You may encounter errors while running Disk Copy if Virtual Memory is turned on. If Virtual Memory is turned on and you see the message "An error (-620) occurred while reading the disk image" or the message "An error (-74) occurred while copying/verifying the disk," turn Virtual Memory off. Then restart your computer, and begin Disk Copy again.

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Tech Info Library Article Number:19773



Tech Info Library

Setting Up A 100Base-T Network: Requirements (5/96)

Revised: 5/13/96
Security: Everyone

Setting Up A 100Base-T Network: Requirements (5/96)

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Article Created: 13 May 1996

TOPIC -----

I'm setting up a Fast Ethernet (100Base-T) network in conjunction with our existing 10Base-T network. I have installed the 100Base-T cards correctly, but am only getting near 10Base-T performance. What could be wrong?

DISCUSSION -----

There are many variables which can affect network performance, as well as some requirements for setting up a 100Base-T or Fast Ethernet network.

First, existing or new cabling should be Category 5 Unshielded Twisted Pair wire (UTP) for optimum performance. Type 1 STP may be used, but will not offer the performance of UTP cable. Also, the diameter of your network must not exceed 205 meters (10Base-T required a maximum diameter of 500 meters).

Next, 100Base-T networks require a 100Base-T compliant hub. If you are going to be replacing your existing 10Base-T network hub, this may require a switchable hub (one that can switch between 10Base-T or 100Base-T) or a hub that has both 10Base-T and 100Base-T connections.

An alternative to a switchable hub is to use a 10/100Base-T bridge between the 10Base-T and 100Base-T segments. This alternative would allow you to add a less expensive non-switching 100Base-T hub for your Fast Ethernet segment and keep your existing non-switching 10Base-T hub. Keeping the two segments separate will also increase overall network bandwidth by separating high traffic and low traffic workgroups.

NOTE: There should be a maximum of one Class 1 hub or two Class 2 hubs (or two repeaters) within the same collision domain.

Client performance may be affected by local activity such as program sharing or other I/O activity like modem, printer, or adb communication. Another factor at the client may be hard drive performance. A typical internal hard drive

sustained transfer rate may not be any more than 4 megabytes per second. Reducing the number of concurrent processes and isolating a fast internal hard drive (or providing a disk array) may increase performance.

Finally, driver code may not be fully native - or native to the currently active network architecture. Check with your vendor for more information regarding driver performance and compatibility with your system software.

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Tech Info Library Article Number:19775



Tech Info Library

Map CP Does Not Observe Daylight Savings Time (5/96)

Revised: 5/13/96
Security: Everyone

Map CP Does Not Observe Daylight Savings Time (5/96)

=====

Article Created: 13 May 1996

TOPIC -----

I am running System Software 7.5. When I check the Daylight Savings Time check box option in the Date & Time control panel, the Map control panel changes my selected city in the Time Zone and my time is off by 1 hour. I have updated to System Software 7.5 Update 2.0 and I still have this problem. What's wrong and how can I avoid this problem?

DISCUSSION -----

When the Daylight Savings Time (DST) check box is checked in the Date & Time control panel, by design, the time will advance by 1 hour. Unfortunately, the Map control panel does not recognize this option being checked when the set button is clicked. As a side effect, the Map control panel incorrectly selects the time zone next to the correct one (1 hour off) and defaults to the city that is alphabetically first in that time zone. This problem should be fixed in a future version of the Map control panel. Currently, there are two workarounds to avoid this problem: 1) If the Daylight Savings Time check box option is checked, don't select the Set button in the Map control panel after setting the correct Time Zone and time in the Date & Time control panel. When changing Time Zones, change cities only in the Date & Time control panel since it recognizes the Daylight Savings Time option. Or 2) If a user wants to be able to change the set location in the Map control panel, make sure the Daylight Savings Time check box option is unchecked in the Date & Time control panel. Set the correct Time Zone and time manually in the Date & Time control panel. Now the set button should work correctly in the Map control panel.

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Tech Info Library Article Number:19776



Tech Info Library

PowerBookControl Strip Moves When Changing Resolution (5/96)

Revised: 5/13/96
Security: Everyone

PowerBookControl Strip Moves When Changing Resolution (5/96)

=====

Article Created: 13 May 1996

TOPIC -----

PowerBooks with System 7.5.2 or later may experience a cosmetic problem with the Control Strip. The problem is that when the PowerBook goes from a lower resolution display to a higher resolution display, the Control Strip may appear half-way up the screen.

DISCUSSION -----

This will only happen if the Control Strip is opened, closed, or moved while it is at the lower resolution. The workarounds are either not to adjust the Control Strip while it is at the lower resolution, or to simply drag the Control Strip back to the desired position while holding down the Option key when the problem occurs.

Apple is currently investigating this problem and hopes to have it fixed in a future system update.

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Tech Info Library Article Number:19777



Tech Info Library

LaserWriter Printers: Envelopes with Windows Suggestions (5/96)

Revised: 5/13/96
Security: Everyone

LaserWriter Printers: Envelopes with Windows Suggestions (5/96)

=====

Article Created: 13 May 1996

TOPIC -----

Can I print envelopes that have cellophane or plastic windows for the address on my LaserWriter printer?

DISCUSSION -----

Apple Computer, Inc. has not done extensive testing on envelopes with cellophane or plastic windows, so we don't have recommendations one way or the other. However, there are some basic guidelines you should follow.

If you decide to use window envelopes, see if the paper manufacturer has made any recommendations on the amount of heat the cellophane or plastic can withstand. The various LaserWriter printers use different amounts of heat to transfer the toner to the paper depending on the model. The faster the printer (pages per minute), the more heat the LaserWriter fuser produces to adhere the toner to the paper.

There are also newer materials similar to tissue paper being used, which are less likely to cause any sort of problems in your LaserWriter printer.

Before using large quantities of envelopes, try one or two to make sure they work properly in your LaserWriter printer.

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Tech Info Library Article Number:19778



Tech Info Library

PC Compatibility Card: 32-bit Disk Access Not Supported (5/96)

Revised: 5/21/96
Security: Everyone

PC Compatibility Card: 32-bit Disk Access Not Supported (5/96)

=====

Article Created: 13 May 1996
Article Reviewed/Updated: 21 May 1996

TOPIC-----

I have a PC Compatibility Card in my Power Macintosh. After installing Windows 95, I got a message that the computer is not running at optimal performance. It then stated that the hard drive, floppy drive, and CD-ROM drive are running in "Compatibility Mode". What is compatibility mode, and is this normal?

DISCUSSION -----

Windows 95 has the ability to use a 32-bit protected-mode driver to access the hard drive controller and other drive controllers. On some equipment, including the PC Compatibility Card, Windows 95 is unable to access the drive controllers in this mode, so Windows 95 must use 16-bit real-mode drivers. This is the Compatibility Mode that Windows 95 mentioned. Using the 16-bit real-mode is normal for the PC Compatibility Cards. Windows 95 has the ability to use either 32-bit or 16-bit drivers, so this should not cause any problems.

Article Change History:
21 May 1996 - Replaced entire discussion.

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Tech Info Library Article Number:19781



Tech Info Library

Pwr Mac 7200 & Sys 7.5.3: Sound Amplification Input Ext. (5/96)

Revised: 5/14/96
Security: Everyone

Pwr Mac 7200 & Sys 7.5.3: Sound Amplification Input Ext. (5/96)

=====

Article Created: 13 May 1996

TOPIC -----

I have a Power Macintosh 7200/75 which I recently upgraded to System 7.5.3. Can I use the Sound Amplification Input extension with System 7.5.3? I noticed that it is not included with the Power Macintosh 7200 series computers which have System 7.5.3 pre-installed on them.

DISCUSSION -----

No, the Sound Amplification Input extension is not supported when you are using System 7.5.3. If you are using System 7.5.3 on a Power Macintosh 7200 computer, you should use a microphone which supplies the proper line level voltage, such as the Apple Plaintalk Microphone.

The Tech Info Library article titled "PlainTalk Microphone: Specifications" provides additional information about the specifications of PlainTalk microphones.

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Tech Info Library Article Number:19782



Tech Info Library

Color One Scanner 600/27: White Border Using Dispatcher (5/96)

Revised: 5/15/96
Security: Everyone

Color One Scanner 600/27: White Border Using Dispatcher (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

I have a Color OneScanner 600/27. When I scan an image with the Apple Color OneScanner Dispatcher software, there is a white line approximately five pixels tall that appears at the bottom edge of the scanned image. Is there something wrong with my scanner?

DISCUSSION -----

This is caused by the Apple Color OneScanner Dispatcher software. The line can be eliminated with any graphic editing application like Photoshop or ClarisWorks.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19784



Tech Info Library

System 7.5 Update 2.0:PCI-based Power Macintosh Computers (5/96)

Revised: 5/17/96
Security: Everyone

System 7.5 Update 2.0:PCI-based Power Macintosh Computers (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

Should I install the System 7.5 Update 2.0 on my Power Macintosh PCI-based computer? It already has System 7.5.3 installed.

DISCUSSION -----

The System 7.5 Update 2.0 contains additional files or updates that enhance your computers stability. PCI-based Power Macintosh computers shipped with system software 7.5.3, it is not necessary to install the update. The System 7.5 Update 2.0 has a few components that are newer than the versions included with system 7.5.3 that shipped with your CPU. The three software updates include Drive Setup update, Apple Guide update, and an Ethernet Compatibility extension. These updates are included in a folder called 'Important Software Updates' on the hard drive of the PCI-based Power Macintosh computer.

The Tech Info Library article titled "System 7.5 Update 2.0: Important Software Updates ReadMe" contains more information that can help you decide if you need to install these updates.

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Tech Info Library Article Number:19785



Tech Info Library

QuickTime Conferencing: Third-Party NT-1 Companies (5/96)

Revised: 5/14/96
Security: Everyone

QuickTime Conferencing: Third-Party NT-1 Companies (5/96)

Article Created: 14 May 1996

TOPIC -----

This article contains a list of third-party companies providing Network Terminal Adapters (NT-1) for the QuickTime Conferencing Kit. A Network Terminal Adapter is required to use QuickTime Conferencing ISDN Kit over a Basic Rate Interface (BRI) ISDN line.

DISCUSSION -----

The QuickTime Conferencing ISDN Kit (NuBus) M4585LL/A allows users of the QuickTime Conferencing Kit to do WAN videoconferencing and collaboration Mac-to-Mac or videoconferencing only Mac-to-PC and Mac-to-Room based system using H.320 hardware codec over Telco-supplied ISDN lines. Includes H.320 codec/ISDN card, H.320 ISDN software and accessory kit.

However, a Network Terminal Adaptor (NT-1) is required to use the QuickTime Conferencing ISDN Kit over a Basic Rate Interface (BRI) ISDN line. The NT-1 terminates the ISDN line at the user's end and powers the ISDN line from the network interface box to the ISDN device. An ISDN line requires power and is unusable in the event of a power outage. Connecting the NT-1 to a Uninterruptable Power Supply is suggested.

A NT-1 can be purchased through your local ISDN provider or you can purchase one from the following companies:

Companies	Phone Number	Model Name
Quicomm	1-800-244-3688	NT-1 Network Terminator
Intellicom	1-800-884-ISDN	Various models
PicturePhone Direct	1-800-810-9966	Tone Commander NT1U-220TC

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Tech Info Library Article Number:19787



Tech Info Library

MAE 2.0: Bootting from boot2 resources fails! Fatal Error (5/96)

Revised: 5/14/96
Security: Everyone

MAE 2.0: Bootting from boot2 resources fails! Fatal Error (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

When starting MAE up, the following error occurs in the shell that MAE started from:

```
# Bootting from boot2 resources fails!  
# Fatal error in Toolbox
```

MAE will not start at this point. MAE was running just fine previously.

DISCUSSION -----

A file in the user's HOME System Folder appears to be corrupt. To correct, try these options:

- 1) In a shell, delete the ".fs_cache" file in the System Folder, the restart MAE.
- 2) If the above does not work, rename the user's System Folder, and launch MAE. This will force MAE to create a new system, and the user can then copy desired control panels and extensions from the previous System Folder to the new one.

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Tech Info Library Article Number:19788



Tech Info Library

Apple Internet Server Solutions 2.0 CD Upgrade (5/96)

Revised: 5/14/96
Security: Everyone

Apple Internet Server Solutions 2.0 CD Upgrade (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

This article describes where to look for upgrade information on the Apple Internet Server Solutions 2.0 CD.

DISCUSSION -----

Apple has received many requests for upgrade information to the announced Apple Internet Server Solutions 2.0 CD-ROM. We have not announced how this will be done, but we are working on an upgrade path. For information on the Apple Internet Server Solution 2.0 CD upgrade, please check the web page at the following URL:

<http://www.solutions.apple.com/products/AISS/updates.html>

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Tech Info Library Article Number:19789



Tech Info Library

Power Macintosh 7500/7600/8500: Video Capture (5/96)

Revised: 3/19/97
Security: Everyone

Power Macintosh 7500/7600/8500: Video Capture (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

This article contains questions about the video capture capabilities of the Power Macintosh 7500, 7600, and 8500 series computers.

Questions Answered in this Article:

=====

1) Question: What is the color spacing in the video capture of the Power Macintosh 7500, 7600, and 8500 series computers? Is it 8-bit red + 8-bit green + 8-bit blue, or is it some other combination that provides 24-bit video?

2) Do the Power Macintosh 7500, 7600, and 8500 series computers use the Phillips TDA-8758 analog-to-digital converter chip? I understand that it only offers 8-bit chrominance and 8-bit luminance capabilities. Doesn't this contradict the claim of a 24-bit video subsystem?

3) I ran an AV test that showed the AV ramp to be displaying 30 discrete levels from dark to light and resembling more of a 5-bit capture than 8-bit. Is Apple's video subsystem a true 24-bit?

DISCUSSION -----

1) Question: What is the color spacing in the video capture of the Power Macintosh 7500, 7600 and 8500 series computers? Is it 8-bit red + 8-bit green + 8-bit blue, or is it some other combination that provides 24-bit video?

Answer: The 24-bit color space for the Power Macintosh 7500, 7600, and 8500 series computers is scaled 24 bpp RGB (8-bit Red + 8-bit Green + 8-bit Blue + 8-bit alpha channel)

The Power Macintosh 7500, 7600, and 8500 series computers capture video in millions of colors (24-bit), and are capable of capturing 32-bit color, using 8 bits as an alpha channel.

2) Question: Do the Power Macintosh 7500, 7600, and 8500 series computers use the Phillips TDA-8758 analog-to-digital converter chip? I understand that it only offers 8-bit chrominance and 8-bit luminance capabilities. Doesn't this contradict the claim of a 24-bit video subsystem?

Answer: The Power Macintosh 7500, 7600, and 8500 series computers do use the Phillips TDA-8758 analog-to-digital video interface. However, this does not limit the video capture to 16-bit. This chip provides two 8-bit analog-to-digital converters (ADCs): one for chrominance and one for luminance. However, since there are direct and specific relationships between luminance (Y) and chrominance (C) values and RGB, the separate 8-bit luminance and chrominance data can be supplied to a digital video decoder (which is an SAA 7196 decoder) for conversion into RGB.

The digital video decoder has a chrominance and luminance processor that converts the luminance and chrominance video data into separate 8-bit "Y" and 8-bit "UV" data ("UV" is used to refer to the digital version of chrominance). The "YUV" data is then fed separately into an RGB matrix where the video data is converted from "YUV" to 24 bpp RGB data (24 bpp for the color information and 8-bits for the alpha channel: 8-bit Red + 8-bit Green + 8-bit Blue + 8-bit alpha channel)

3) Question: I ran an AV test that showed the AV ramp to be displaying 30 discrete levels from dark to light and resembling more of a 5-bit capture than 8-bit. Is the video subsystem used on the Power Macintosh 7500, 7600, and 8500 series computers a true 24-bit system?

Yes, the video subsystem used on the Power Macintosh 7500, 7600, and 8500 series computers is a true 24-bit system. If you create a simple white-to-black gradient using a graphics application, then output that image to an NTSC monitor, the NTSC image will be a smooth gradient, without the "stairstepping" you describe in your test.

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Tech Info Library Article Number:19790

Tech Info Library

[Service Programs Manual Index](#) - [U.S.](#) - [Canada](#)

[CompTIA Codes](#) - [Ordering Parts FAQ](#) - [Product Service Matrix](#) - [REAs](#) - [Service Excellence](#)

TITLE

Open Transport: Error Codes

Article ID: 19791
Created: 5/14/96
Modified: 10/14/97

TOPIC

This article describes the Open Transport error codes.

DISCUSSION

Result code	Value	Meaning
kOTBadAddressErr	-3150	The specified protocol address was in an incorrect format or contained illegal information.
kOTBadOptionErr	-3151	The specified protocol options were in an incorrect format or contained illegal information.
kOTAccessErr	-3152	The user does not have permission to negotiate the specified address or options.
kOTBadReferenceErr	-3153	The specified EndpointRef or TEndpoint * does not refer to a valid endpoint.
kOTNoAddressErr	-3154	The endpoint could not allocate an address, or an address was required and not supplied by the client.
kOTOutStateErr	-3155	The function was issued in the wrong sequence.
kOTBadSequenceErr	-3156	An invalid sequence number was specified, or a NULL call pointer was specified when rejecting a connection request.
kOTLookErr	-3158	An asynchronous event has occurred on this endpoint.
kOTBadDataErr	-3159	The amount of client data specified was not within the bounds allowed by the endpoint.
kOTBufferOverflowErr	-3160	The number of bytes allocated to hold a result is greater than zero, but not sufficient to store the result.
kOTFlowErr	-3161	The endpoint is in asynchronous mode, but the flow control mechanism prevents the endpoint from accepting any data at this time.
kOTNoDataErr	-3162	This endpoint is in non-blocking mode, but no data is currently available. It is also returned by LookupName when no names are found.
kOTNoDisconnectErr	-3163	No disconnect indication is available.
kOTNoUDERR	-3164	No unit data error indication currently exists on this endpoint.
kOTBadFlagErr	-3165	An invalid flag was specified.
kOTNoReleaseErr	-3166	No orderly release indication currently exists on this endpoint.
kOTNotSupportedErr	-3167	This action is not supported by this endpoint.

kOTStateChangeErr	-3168	<p>The endpoint is undergoing a transient state change. This error is returned when a function call is made while an endpoint is in the process of changing states. The client should wait for an event indicating the endpoint has finished changing state and call the function again.</p> <p>Note: The equivalent state-change error code, TSTATECHNG, is not described in the 1992 X/Open XTI specification.</p> <p>This error is also returned if you attempt to use an "incompatible" function while another operation is still ongoing (for example: calling SndUDData while an OptionManagement call is still outstanding).</p>
kOTStructureTypeErr	-3169	An unsupported structure type was passed in the structType field. This error is also returned when the structType field is inconsistent with the endpoint type.
kOTBadNameErr	-3170	The endpoint name is invalid.
kOTBadQLenErr	-3171	The argument qlen when the endpoint was bound with Bind was zero.
kOTAddressBusyErr	-3172	The requested address is in use, or this endpoint does not support multiple connections with the same local and remote addresses. This result code indicates that a connection already exists. As a return value for a Bind call, it may also indicate that no dynamic addresses are available for protocols or configuration methods that allow dynamic addressing.
kOTIndOutErr	-3173	There are outstanding connection indications on the endpoint. All other connection indications must be handled either by rejecting them with SndDisconnect, or by accepting them with Accept.
kOTProviderMismatchErr	-3174	The endpoint that is to accept the connection is not the same kind of endpoint as this one.
kOTResQLenErr	-3175	When this endpoint was bound (see Bind), the qlen parameter was greater than zero. But to accept a connection on an alternate end-point, such as this one, the endpoint must be bound with a qlen parameter equal to zero.
kOTResAddressErr	-3176	The address to which this endpoint is bound differs from that of the endpoint that received the connection request; thus, this endpoint cannot accept this connection request.
kOTQFullErr	-3177	The maximum number of outstanding indications has been reached for the endpoint.
kOTProtocolErr	-3178	An unspecified protocol error occurred.
kOTBadSyncErr	-3179	A call to Sync was made at non-SystemTask time.
kOTCanceledErr	-3180	An outstanding call was canceled.
kOTNoError	0000	The function completed execution without error.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Communications-Networking
Category: Open Transport
Sub Category: General Topics



Tech Info Library

Open Transport Error Codes (5/96)

Revised: 5/14/96
Security: Everyone

Open Transport Error Codes (5/96)

Article Created: 14 May 1996

TOPIC -----

This article describes the Open Transport error codes.

DISCUSSION -----

Begin_Table

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End_Table

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Tech Info Library Article Number:19791



Tech Info Library

Energy Saver: Volume Increases After Waking Up (5/96)

Revised: 5/15/96
Security: Everyone

Energy Saver: Volume Increases After Waking Up (5/96)

=====

Article Created: 14 May 1996

TOPIC-----

When I wake my Power Macintosh 7200/75 computer from sleep, the volume in the Sound control panel is always set to the maximum level. This happens even if I have set the volume to the lowest setting possible prior to putting the computer to sleep. I have a friend who has a Power Macintosh 7200/120 computer and it does not exhibit this symptom. Is there something I can do about this?

DISCUSSION -----

This issue occurs with Power Macintosh 7200 series computers using the Energy Saver control panel version 2.0. It has been resolved with the Energy Saver control panel v2.0.1, which is included in System 7.5 Update 2.0 (System 7.5.3). Your friend's Power Macintosh 7200 series computer came with System 7.5.3 pre-installed, which is why it does not have this problem.

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Tech Info Library Article Number:19792



Tech Info Library

QuickTime: Extras Folder on Macintosh CD (5/96)

Revised: 5/14/96
Security: Everyone

QuickTime: Extras Folder on Macintosh CD (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

My Power Macintosh 7500 came with QuickTime. In the QuickTime Read Me file, it states the QuickTime Extras folder includes sample movie files, the QuickTime Musical instruments extension, and Movie Player 1.0. The Apple Extras folder on my hard disk contains a QuickTime Extras folder, but it does not contain any of these items. Where can I get these?

DISCUSSION -----

On current Macintosh computers, such as the Power Macintosh 7500, the Apple Extras on the hard disk contains a QuickTime extras folder. However, as you discovered, the folder does not contain the sample files. The CD-ROM disc also contains an Apple Extras folder. Within the Apple Extras folder there is a QuickTime Extras folder with sample movies, photos, and music. You can either drag these to your hard disk, or play them directly from the CD-ROM disc.

This article appeared in the 14 May 1996 issue of the Information Alley.

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Tech Info Library Article Number:19794



Tech Info Library

PowerBook 2300/PowerBook 500 with PPC Upgrade Slow Typing

Revised: 6/18/96
Security: Everyone

PowerBook 2300/PowerBook 500 with PPC Upgrade Slow Typing (6/96)

Article Created: 14 May 1996
Article Reviewed/Updated: 15 June 1996

TOPIC -----

Owners of the PowerBook 2300c and the PowerBook 500 with PPC Upgrade may experience performance problems related to an incorrect cache flushing call. Some people have noted that these machines can be much slower than expected in certain situations. In particular people have noticed slow typing in Microsoft Word. They have also noticed slow printing to a serial printer when ARA is active.

DISCUSSION -----

Symptoms -----

The most common symptom is that typing appears to be slow. The user may report that they can easily type faster than the computer can keep up with. There are a number of things which make the problem show up.

Possible Causes -----

If any of the following are true, the symptom may occur. The more that are true, the worse the issue will be.

- 1) Microsoft Office Manager v4.2.x control panel is active in the System Folder.
- 2) Microsoft Word 6.0.x is being used.
- 3) Express Modem software is loaded and turned on.
- 4) The Launcher is active in the background.

Resolution -----

Apple has identified the cause and has fix this issue with System 7.5.3 Revision 2. This software can be found on Apple Computer's online software update sites. If you do not have access to online services, please refer to Tech Information

Library article, "Macintosh System 7.5.3 Revision 2: FAQ."

These articles can help you locate the software update mentioned here:

* "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.

* "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 18 June 1996.

Article Change History:

18 Jun 1996 - Added Info Alley publication info and reworded.

15 Jun 1996 - Added System 7.5.3 Revision 2 fix.

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Tech Info Library Article Number:19795



Tech Info Library

Chinese Language Kit:Enable WorldScript Before Installing (5/96)

Revised: 5/14/96
Security: Everyone

Chinese Language Kit:Enable WorldScript Before Installing (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

I have a Power Macintosh 7200 computer, and I am having difficulty installing the Chinese Language Kit. Following the instructions in the Power Macintosh 7200 and 9500 Series ReadMe file, I first installed the WorldScript Updater 1.0, then I installed the Chinese Language Kit version 1.1 and the Chinese Language Kit Updater. I even disabled the extensions using the Extension Manager control panel before installing the Chinese Language Kit so that they would not interfere with the installation process. However, when I restarted the computer after completing the installation, the computer locked up. What could be causing this to happen?

DISCUSSION -----

From your description it is likely that you disabled the WorldScript extensions before you installed the Chinese Language Kit. By doing this, the Chinese Language Kit installer did not recognize that you had a later version of WorldScript already installed so it installed WorldScript 1.0, which is not compatible with your computer.

To resolve this, restart the computer, enabling the WorldScript and System extensions in the Extensions Manager. Then, reinstall the Chinese Language Kit and Updater.

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Tech Info Library Article Number:19796



Tech Info Library

MAE: Can't Open /dev/appletalk/lap/ethertalk0/control (5/96)

Revised: 5/14/96
Security: Everyone

MAE: Can't Open /dev/appletalk/lap/ethertalk0/control (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

I just launched MAE 2.0, and see the message "Unable to open the file '/dev/appletalk/lap/ethertalk0/control, please be sure the file exists'" in the UNIX window from which I launched MAE. What does this mean?

DISCUSSION -----

AppleTalk is not installed properly. An AppleTalk installation must be preformed as root on each system you want to run MAE. You cannot copy your MAE binaries from machine to machine. The AppleTalk installation correctly configures your kernel and creates device files used by AppleTalk.

In addition, you may see this error if you have just installed MAE and not yet restarted your workstation.

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Tech Info Library Article Number:19797



Tech Info Library

PCI Token Ring Card Compatibility Questions (3/97)

Revised: 3/14/97
Security: Everyone

PCI Token Ring Card Compatibility Questions (3/97)

Article Created: 14 May 1996
Article Reviewed/Updated: 14 March 1997

TOPIC -----

- Is Apple's PCI Token Ring Card compatible with any Power Macintosh that has a PCI slot? If not, with which Power Macintosh computers is it compatible?
- I also noticed that the ReadMe on the Install disk only specifies the Power Macintosh 7500, 8500 and 9500 series computers are compatible. Does that mean it is not compatible with the Power Macintosh 5400 series computers?
- Are the PCI Token Ring cards and PCI DOS Compatibility cards compatible with each other?
- What about the PCI Token Ring cards and Softwindows compatibility?

DISCUSSION -----

PCI-Based Power Macintosh Compatibility

The Apple PCI Token Ring Card will work with and is supported by:

- Power Macintosh 7200/120 computers*
- Power Macintosh 5400 Performa computers
- Power Macintosh 7500, 7600, 8500, and 9500 series computers
- Workgroup Server 7250 series computers
- Workgroup Server 8550 series computers

*NOTE: As stated in the PCI Network Installer ReadMe file, the Apple PCI Token Ring Card is not compatible with the Power Macintosh 7200/75 and 7200/90 series computers.

Incompatible With DOS Compatibility Card

..TIL19798-PCI_Token_Ring_Card_Compatibility_Questions_3-97.pdf

The PCI Token Ring card and the PCI DOS Compatibility cards can be used in machines that support each card. There is not a working driver that will allow the PCI DOS Compatibility card to communicate using the PCI Token Ring card. A driver is included with the DOS Compatibility software but it is not supported at this time.

Compatible With Softwindows 2.0

According to Insignia Solutions, makers of Softwindows, the Apple PCI Token Ring card is compatible with Softwindows 2.0.

NOTE:

This article provides information about a non-Apple product, Softwindows. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Insignia Solutions, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

14 Mar 1997 - Added details about PC card.
07 Jun 1996 - Clarified 7200 compatibility.
21 May 1996 - Added info about 7200 compatibility.

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Tech Info Library Article Number:19798



Tech Info Library

Fax Sender GX: Using GeoPort as Fax Server (5/96)

Revised: 5/14/96
Security: Everyone

Fax Sender GX: Using GeoPort as Fax Server (5/96)

=====

Article Created: 14 May 1996

TOPIC -----

I've heard that I can use Fax Sender GX to set up a computer on an AppleTalk network to act as a central server for sending faxes, but I'm not sure how to do this.

DISCUSSION -----

Yes, you can use Fax Sender GX in this way. It's useful because other users on the network can send faxes without having the modem hardware installed in their computers.

In order to do this, the server must have the appropriate hardware installed, and both the server and client machines must have QuickDraw GX (version 1.1 or later) and the fax software installed. To install the fax software on a client machine, select the "Fax Sender GX Client Software" Custom Install option in the Apple Telecom Installer.

Note: If you are sharing your Express Modem or GeoPort Telecom Adapter on an AppleTalk network, try to minimize the time you spend in Fax preview. While you are previewing, other Fax Sender GX users may be paused.

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Tech Info Library Article Number:19799



Tech Info Library

PowerBook 140 and 170 and the Apple Fax/Data Modem (5/96)

Revised: 5/14/96
Security: Everyone

PowerBook 140 and 170 and the Apple Fax/Data Modem (5/96)

Article Created: 13 May 1996

TOPIC -----

This article discusses some common facts about the PowerBook 140 and 170 and Apple Fax/Data Modem

DISCUSSION -----

- The modem that originally shipped with the PowerBook 140 and 170 was called the Apple Fax/Data Modem.
- The latest version of the Software that shipped exclusively for the Apple Fax/Data Modem is called FAX Sender 1.0.3.
- The latest supported Software for this modem is Express Modem 1.5.5 and fulfillable through CR fulfillment option.
- Telecom 2.3.2 was tested with the modem and works if the PowerBook is running 7.1 or later.
- Earlier versions of the Express Modem software had to be "Added" over the top of the FAX Sender Software (not true with 1.5.5 and telecom 2.3.2)
- Express modems do NOT work in PowerBook 100, 140, 145, 145b, 150 or 170 models.
- To identify a PowerBook modem, open a modem application like Zterm and enter the command ATl0 or ATl4. The response will identify "data/send FAX" for the Apple Fax/Data Modem. Using the same command with an Express Modem, the response is: "APPLE EXPRESS MODEM....."

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Tech Info Library Article Number:19800



Tech Info Library

Calendars and More: Disk Error Message (5/96)

Revised: 5/30/96
Security: Everyone

Calendars and More: Disk Error Message (5/96)

Article Created 15 May 1996
Article Reviewed/Updated: 30 May 1996

TOPIC -----

I recently purchased a Color Stylewriter 1500. I am trying to use the program Calendars and More, which was included with the Color Stylewriter. Every time I double-click on the icon for Calendars and More, I receive a message that there has been a disk error. My friend has a Color Stylewriter 2500 and she has the same problem. Is there anything I can do about this?

DISCUSSION -----

To use the Calendars and More application, you must insert the Apple Color Printing CD in the CD-ROM drive. The Calendars and More application requires information stored on the Apple Color Printing CD to work properly. If you need additional information, contact the publisher of the CD, Mindscape.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
30 May 1996 - Added vendor's name.

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Tech Info Library Article Number:19801



Tech Info Library

Getting Started With Cyberdog 1.0 File (5/96)

Revised: 2/17/97
Security: Everyone

Getting Started With Cyberdog 1.0 File (5/96)

=====

Article Created: 15 May 1996

TOPIC -----

This article is the Getting Started With Cyberdog file.

DISCUSSION -----

Contents

- Overview of Cyberdog
- Starting Up
- Creating a Notebook of Internet Resources
- Using the Log
- Exploring the Internet
- Searching for Information on the Internet
- Receiving and Sending Mail
- Sorting and Filtering Mail
- Searching through Mail Messages
- Reading Newsgroup Articles
- Subscribing to Additional Newsgroups
- Sorting and Filtering News Articles
- Searching Newsgroups
- Overview of OpenDoc

This document provides pointers for getting the most from the Cyberdog beta software. For more information, check Cyberdog home page on the World Wide Web:
<http://cyberdog.apple.com>

Overview of Cyberdog

Cyberdog is an integrated suite of tools for the Internet that includes these features:

- World Wide Web browser
- E-mail reader and handlers

- Newsgroup reader and handlers
- Gopher browser
- File transfer and remote login facilities (FTP and Telnet)
- Utilities for storing and organizing Internet information
- Security facilities

Cyberdog software integrates a set of full-featured Internet tools with a common interface. Cyberdog's Internet Starting Point combines these tools into one easy-to-use package, making Internet solutions simple. The Starting Point is Cyberdog's predesigned way of using the Cyberdog tools. Because Cyberdog is based on OpenDoc component technology, you can also use Cyberdog "parts" to create your own documents with embedded Internet functionality, thus creating your own Internet "starting point."

For more information about OpenDoc, see the section "Overview of OpenDoc" at the end of this document.

Starting Up

The procedures in this document assume that, in addition to an Internet connection, you have properly installed Cyberdog. For more information on downloading and installing, see the Cyberdog home page on the World Wide Web: <http://cyberdog.apple.com>.

Cyberdog installation places a folder named Cyberdog b2 Folder on your hard disk. It contains these files and folders:

- Cyberdog Starting Point file
- First Notebook file
- Other Cyberdog Documents folder
- Tools folder

To use Cyberdog features, double-click the Starting Point icon in the Starting Point folder. A screen with six buttons appears:

- Notebook is linked to the file named First Notebook.
- Log is linked to your personal log file.
- Explore is linked to the Cyberdog Explore page on the World Wide Web, so clicking this button connects you to the Internet.
- Search is linked to a search engine page on the World Wide Web, so clicking this button connects you to the Internet.
- Discuss: The right-hand button is linked to your mail trays, or a setup screen for your mail server. The right-hand button is linked to available news servers.

Hints, Pointers, and Highlights

Some pointers of particular interest:

..TIL19802-Getting_Started_With_Cyberdog_1-0_File_5-96_(TA35495).pdf

- If the Cyberdog menus don't appear in the Internet Starting Point custom document, hold down the Option key and click on any of the Starting Point buttons to restore the Cyberdog menus.
- You can select any Internet object icon and drag it to any Cyberdog component, such as mail or a notebook, or to the Macintosh desktop (Finder). You can also select a text URL, for example, in a mail message or document, and drag it into your notebook or mail.
- You can go to a URL from within a mail message by double-clicking the URL icon.
- Mail and News use the same message and sending formats. You can include pictures, links and attachments in either.

Creating a Notebook of Internet Resources

You use the Notebook to create a personalized collection of Internet resources, providing a means to quickly access the information that's most useful to you. The Notebook is actually an OpenDoc container that holds Internet items, including e-mail addresses, as well as addresses for Web sites, FTP sites, Gopher sites, Telnet sites, and newsgroups. You can also use the Notebook to save pictures and other files available on the Internet; You can also include your newsgroups and mail trays.

Opening a notebook

To open a notebook, double-click the First Notebook icon in the Cyberdog b2 folder, or click the Notebook button that appears on the Starting Point screen.

Adding an item to a notebook

To create a notebook entry, open a notebook, then:

- Drag any Internet item with an icon and a name into a notebook.

Or:

- Select a URL text string and drag it into a notebook.

Or:

1. From the Notebook menu, choose Add Item To Notebook.
2. Type in the Internet address.
3. Click OK.

To add an item while a notebook is either open or closed:

1. From the Cyberdog menu, choose Add Selection to Notebook or Add Window to Notebook.

2. Follow the instructions in the dialog box to place the item in the appropriate notebook and category.

Adding an e-mail address to a notebook

To have e-mail addresses show up in special address lists (described in the later section on mail) add those addresses to your default notebook. Unless you change it the default is the First Notebook.

To add an e-mail address:

- From the Mail/News menu, choose Add E-mail Address to Notebook.

Or:

- Drag any e-mail address, such as one that appears in the address field of an e-mail message, into a notebook.

Or:

- Drag any mailto: URL from a web page into the notebook.

Deleting an item from a notebook

You can use any of these methods to delete a notebook entry:

- Drag any notebook item to the Trash.

Or:

- Select a notebook item and press the Delete key.

Or:

- With a notebook item selected, choose Delete from the Edit menu.

Renaming a notebook item

To rename a notebook item, select the name of the item you want to rename, then choose Rename Item from the Edit menu. (Unlike Macintosh file names, you can NOT rename a notebook item by selecting it and typing over it.)

Organizing a notebook with categories

You can organize your Internet information by creating notebook categories. Note that unlike folders on the Macintosh desktop, you can only make one level of categories; you can't put one category inside another.

To create a category:

1. Choose Add Category from the Notebook menu.
2. Give the category a name.

3. Drag in any items that you want to appear in that category. A bar shows where the item will appear.

Creating multiple notebooks

If you save a large number of Internet items, you may find it useful to create multiple notebooks to organize those Internet resources. For example, you might find it useful to create a Work Notebook, a Finance Notebook, a Kids' Notebook and a Hobbies Notebook. You can create as many notebooks as you wish.

No matter how many notebooks you have, Cyberdog recognizes just one default notebook. Unless you specify otherwise, Cyberdog uses First Notebook as the default. These are the differences between the default notebook and the other notebooks:

- The only e-mail and newsgroup addresses that show up in address lists are those that you store in the default notebook. (See the section on mail or more information.)
- If you add an item to a notebook using the Add Item... menu command, the default notebook is preselected in the dialog box that lets you choose the notebook to which you're adding the item.
- The Notebook button in the Cyberdog Starting Point window is linked to your default notebook.

To create a new notebook:

1. Open a notebook.
2. From the Document menu, select New.

Setting the default notebook

Cyberdog uses First Notebook as the default. To specify a different default notebook:

1. Open the notebook that you want to make the default.
2. From the Notebook menu, choose Set Default Notebook.

Renaming a notebook

Renaming a notebook (including the First Notebook) is just like changing the name of any other file on the Macintosh. To rename a notebook:

1. In the Cyberdog Tools folder, select the notebook you want to rename.
2. Press Enter to highlight the name.
3. Type in the new name for the notebook.

Opening multiple notebooks

To open multiple notebooks:

1. While in Cyberdog, setup a default notebook if you have not already done so (see earlier section). You must have a default notebook set for this to work.
2. Close all Cyberdog windows so that Cyberdog quits.
3. Launch the non-default notebook by double-clicking on it from the Finder.
4. Once that has opened, use the Show Default Notebook menuitem in the Cyberdog menu to open the default notebook you set earlier.

IMPORTANT Do NOT open multiple notebooks by double-clicking on more than one notebook icon or by using the Open menuitem in the Document menu. Each notebook you open this way requires additional random access memory (RAM), which can cause your computer to run out of memory.

Deleting a notebook

To delete a notebook:

1. If you are deleting the default notebook, be sure to set a new default notebook, as described in the previous section "Setting the Default Notebook," before deleting the old one.
2. Close all Cyberdog windows. (This step applies to the b2 version of Cyberdog, but won't be necessary in later releases.)
3. Drag the notebook to the Trash.

Using the Log

The Log is a record of Internet sites you've visited, including Web sites, FTP sites, newsgroups, and picture and text files. You can drag items from the Log to a notebook and to the Macintosh desktop.

Cyberdog automatically updates the Log, keeping track of each site you visit. When you disconnect and then reconnect to the Internet, the Log from previous sessions is maintained. The Log holds up to 200 entries, dropping the oldest entries drop off the end of the list.

You can sort items in the Log by any of these methods:

- name (alphabetical), with items in alphabetical order
- time (chronological), with items in chronological order from most recent to oldest. If you go to a particular site more than once, only one item shows up in the Log.
- navigation path (hierarchical), which gives a categorical grouping according

to the Internet server and path name. This view gives the server name at the top of each category, then lists sites within that server.

Deleting a Log entry

Cyberdog automatically adds entries to the Log, but you can delete any Log entries at any time. To delete entries:

1. Click the Log button in the Starting Point window.
2. Scroll to the Log entry you want to delete and select it. To select multiple items, hold down the Shift key as you click each item.
3. Press the Delete key or choose Clear from the Edit menu.

Exploring the Internet

The Cyberdog Internet Explorer page contains basic information about "surfing" the World Wide Web, plus links to Internet sites that the Cyberdog team finds especially appealing. There's also a link to information about the Cyberdog team,

To connect to the Cyberdog Internet Explorer page, click the Explore button in the Starting Points window. A small opening window and moving dog icon appear, indicating that your computer is in the process of connecting. The message next to the icon indicates which phase of the connection is in progress. To cancel the connection, click the dog icon.

When enough information has arrived, the window expands to full size and displays the Cyberdog Internet Explorer page.

Searching for Information on the Internet

The Search button in the Cyberdog Starting Point window connects you to the Cyberdog Internet Search page on the World Wide Web. This page offers a choice of different search engines. The typical search engine lets you enter one or more words, or "strings," then searches for instances of that word in all the Internet sites it can find. This particular engine searches only World Wide Web, Gopher, FTP services, and newsgroups; it does not search mail.

Receiving and Sending Mail

With Cyberdog, you can embed any file inside your messages, open files and URLs from inside messages, and automatically sort and filter mail. Cyberdog also provides the same message and sending formats for both e-mail and newsgroups. E-mail and newsgroups use common headers and text areas that behave consistently, and both allow styled text and embedded objects.

Setting Up Mail

In order to use Cyberdog mail, you first need an Internet mail account that uses the POP (for receiving mail) / SMTP (for sending mail) protocols. Your Internet service provider can give you the information you need to setup this up.

To check whether Cyberdog mail is already set up, in the Cyberdog Starting Point window, click the button on the right above Discuss (the button with the mailbox). If you have already been using a mail application with mail preferences already set up in Internet Config, such as Eudora, Cyberdog opens the Mail Trays window and displays an In Tray corresponding to that Internet mail account. You don't need to take any further steps to set up mail.

If Cyberdog prompts you to use the Connect To command from the Cyberdog menu, or if there is no In Tray in your Mail Trays window, you need to set up mail.

To set up Cyberdog mail:

1. In the Cyberdog Starting Point window, click the button on the right above Discuss (the button with the mailbox).
2. From the Cyberdog menu, choose Connect To.
3. Fill in the information in the Mail dialog box.
4. Click OK. Cyberdog sets up information for the mail account, and opens the In Tray window for that account.
5. From the Edit menu, you can choose Cyberdog Preferences and enter your preferences for receiving mail and working with messages.

Setting up additional accounts

If you have multiple mail accounts, follow the steps in the previous section to set up an In Tray for each mail account.

Downloading and reading mail

To download mail from your Internet mail server:

- From the Mail/News menu, choose Check Mail. Cyberdog connects to the mail server and immediately downloads any messages.

Or, to download mail automatically:

1. In the Mail Trays window, select the desired In Tray.
2. From the Trays menu, choose Account Info.
3. In the dialog box that opens, specify whether you want mail downloaded at specific time intervals, or whenever the In Tray is opened.

Sending Mail

To compose and send a mail message:

1. From the Mail/News menu, choose New Message.

Or:

Open a received message and click the Reply button or the Forward button at the top of the message window.

Or:

Double-click an e-mail address that you saved in a notebook or on the Macintosh desktop, or click a mail URL on any World Wide Web page.

2. Type in your message. You can embed any file by dragging it in to the text area of a message. You can use any font or color of text you choose, but keep in mind that the recipient's mail application might affect the look of your message.

3. You can create mail stationery by saving the message using the Letterheads menuitem in the Message menu. The information in the message, such as letterhead, favorite URLs, and frequently-used addresses automatically appears whenever you later select this file in the Letterhead dialog that opens when you request a new message.

4. From the Message menu, choose either Send Now or Send Later. Send Now causes Cyberdog to immediately connect to the mail server and send your message. Send Later places the message in the Out Tray but doesn't send it until you select Send Now at some later time.

5. Close the message. Cyberdog prompts you to indicate whether you'd like to save the message as a file on your Macintosh.

Sorting and filtering mail

If you send or receive large amounts of mail, you can use Cyberdog mail handlers to simplify and streamline your mail processing. For example, you can use a mail handler to automatically direct all mail from the University of California in to your UC mail tray. Or, you can have Cyberdog place all messages with "Australia" or "Travel" in the subject in your Vacation mail tray.

To set up mail handling, choose Mail Handlers from the Mail/News menu. In the dialog box appears, you can define what parts of the mail message you want Cyberdog to look at, and specify the mail tray that you want to receive a particular type of mail (be sure to create any personal mail trays you might want to filter mail to before you setup your mail handlers).

Searching through mail messages

You can search through all your messages for particular text or information. For example, you may want to collect together all the messages about a certain topic (say, "Our Trip to Hawaii"). Even if these have been saved in different folders, the search facility will find all messages containing, say, the text "Hawaii" and list them for you.

To search through your mail messages:

1. From the Mail/News menu, choose Search in Messages.
2. In the Search dialog box that appears, specify which trays to search in, what text to look for, or a received date.

The search returns a "relevance-ranked" list, which means that the more times the criteria you specified were found in a message, the higher that message will be in the list.

Reading Newsgroup Articles

Cyberdog is preconfigured to connect to some newsgroups of general interest.

To view the articles within a newsgroup:

1. Click the News button above the Discuss label.
2. Click the triangle to display the list of newsgroups that are already available.

To follow a discussion in a newsgroup, drag the item from the Newsgroup window in to your notebook. Your notebook will keep track of the messages you've read. Be sure to save your notebook. Note that if you read newsgroups in your newsgroup window instead of from your notebook, each time you close the window Cyberdog loses track of which messages you've read.

Subscribing to additional newsgroups

To subscribe to a new newsgroup:

1. Choose Connect To from the Cyberdog menu.
2. Fill in the server information. This can be a URL (Web address).
3. Select Choices. The newsgroup appears in the Newsgroups window.

To subscribe to individual newsgroups, drag them from the window to your notebook.

Sorting and filtering news articles

You can use handlers to sort and filter mail messages, much the same way as you can sort and filter e-mail. This enables you to filter out articles that you don't want to read.

To set up a news handler:

1. From the Mail/News menu, choose Create News Handler.
2. Select the news group or discussion you want the handler to apply to.
3. From the Mail/News menu, select Apply to Selection.

..TIL19802-Getting_Started_With_Cyberdog_1-0_File_5-96_(TA35495).pdf

If you want display articles you've already read, or articles that you've filtered out, select Display Read or Display Unwanted Items in the Trays menu.

Handlers will work automatically each time you open a newsgroup. Note that only handlers that apply to that newsgroup or to All newsgroups will be used to filter in that particular group.

Searching newsgroups

You can use the Search button on the Starting Point screen to search newsgroup titles, but not the content of individual articles within a newsgroup. After you enter the Search command, Cyberdog displays all the groups that match your search criteria. You can save the newsgroups that interest you by dragging them to a notebook.

Overview of OpenDoc

Although you don't need to know anything about OpenDoc to use Cyberdog, this section provides a brief introduction for you if you're interested in the software architecture that underlies Cyberdog.

OpenDoc is Apple's new component technology for object embedding. OpenDoc changes your experience of the Macintosh in three main ways:

- Object embedding

OpenDoc allows computer objects, such as pictures, command buttons, and even windows, to be embedded inside other objects. The Cyberdog Starting Point window, which appears when you first launch Cyberdog, is an example of a container document with embedded buttons, which are OpenDoc parts. The title is an embedded picture, the six buttons are embedded "cyberbuttons," and the button labels are embedded text.

- Interchangeable software parts

Each of Cyberdog's main parts (listed in the previous section, "Overview of Cyberdog") is a piece of software that is fully interchangeable with other "Cyber-savvy" software. As more parts become available from Apple and other developers, you will be able to drop other Internet facilities into Cyberdog and use them seamlessly in combination with what's already there.

- User interface changes

These OpenDoc changes to Macintosh menus show up in Cyberdog:

- the Document menu replaces the File menu
- the Close command replaces the Quit command
- menus change depending on which part is active

For more information about OpenDoc, check this site:

<http://opendoc.apple.com>

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Tech Info Library Article Number:19802



Tech Info Library

UNIX vi Editor: Basic Overview of Commands (5/96)

Revised: 5/15/96
Security: Everyone

UNIX vi Editor: Basic Overview of Commands (5/96)

Article Created: 15 May 1996

TOPIC -----

This article provides a basic overview of the UNIX vi editor.

DISCUSSION -----

This is just an overview of some of what vi (pronounced vee-eye) can do. It is by no means an exhaustive coverage of this workhorse of the UNIX community. Although quite old, vi has lasted because it's consistent across platforms, very powerful, simple, and much easier to use than 'ed' in its line editor mode, called ex, when doing system file repair. Think of ex as vi with only one line visible at a time. There is also read only vi, called view.

vi has 3 modes, command mode, insert mode, and line mode (also known as 'ex' mode). You are in command mode when you first start vi. You enter insert mode when you enter one of the several insert commands. Line or ex mode is entered from command mode by typing a colon ':', which brings you to a command line at the bottom of the screen. Since it's a full screen editor, vi needs to have a correct display variable set; if it does not understand the display environment, vi will enter into ex instead.

Insert Modes: (Use ESC to get back to command mode.)

i = insert before cursor, a = append after cursor.
I = Insert at beginning of line. A = Append to end of current line.
o = open blank line below cursor for text, O = above line open.
s = delete character at cursor and substitute text.
S = delete line and substitute text.
R = overstrike existing characters with new characters.

Edit Commands:

cw = change a word (overwrite mode). ESC to exit.
cc = change the entire current line. Exit with ESC.

C = change from current position to end of line, same as c\$.
r = replace one character
dw = delete word. dd = delete current line.
D = delete from current position to end of line.
x = delete a character at current position.
X = delete character before cursor (like a backspace).
ZZ = write file and quit vi.

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Tech Info Library Article Number:19803



Tech Info Library

Color LW 12/600 PS: User's Guide Incorrect About RAM (2/97)

Revised: 2/26/97
Security: Everyone

Color LW 12/600 PS: User's Guide Incorrect About RAM (2/97)

Article Created: 15 May 1996
Article Reviewed/Updated: 26 February 1997

TOPIC -----

In the Color LaserWriter 12/600 PS User's Guide, it states that 1, 8, or 16MB SIMMS can be used. However, other sources state that only 1, 4, or 16MB SIMMS can be used. Which is correct?

DISCUSSION -----

The Color LaserWriter 12/600 PS User's Guide is incorrect. You cannot use 8MB SIMMS in the Color LaserWriter 12/600 PS printer. The Tech Info library article titled "CLW 12/600 PS & CLW 12/660 PS: Memory Configuration" lists the various memory configurations you can use in the printer.

Article Change History:
26 Feb 1997 - Corrected the referenced TIL article title.

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Tech Info Library Article Number:19804



Tech Info Library

Apple CD-ROM: Eject Button Disabled w/ Mounted Volumes (5/96)

Revised: 5/15/96
Security: Everyone

Apple CD-ROM: Eject Button Disabled w/ Mounted Volumes (5/96)

=====

Article Created: 15 May 1996

TOPIC -----

My Macintosh computer has a built-in CD-ROM. When I press the eject button, the CD-ROM disc is not ejecting. Why?

DISCUSSION -----

When a CD-ROM disc is being used by the Mac OS, the disc is considered a mounted volume. The eject button is disabled on all mounted volumes. The correct procedure for ejecting a CD-ROM disc from the drive is the same as any mounted volume, either drag the disc icon to the trash, or use the Put Away command from the File Menu (cmd-Y).

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Tech Info Library Article Number:19805



Tech Info Library

NSI 1.5.1 and System 7.5 Update 2.0 (5/96)

Revised: 5/15/96
Security: Everyone

NSI 1.5.1 and System 7.5 Update 2.0 (5/96)

=====

Article Created: 15 May 1996

TOPIC -----

Should I, or do I need to install the Network Software Installer (NSI) 1.5.1 after I have installed the System 7.5 Update 2.0?

DISCUSSION -----

No, you should not install NSI 1.5.1 after updating to System 7.5.3 with System 7.5 Update 2.0. In the System 7.5 Update 2.0 Read Me it states:

"Files no longer needed
=====

The Update automatically deletes the files listed below -- unless you renamed any of them, in which case, you should remove the files.

•• Several standalone files are now merged into the System 7.5 Update enabler or the System file. This update deletes the old (standalone) versions of the following files:

- ...
- Network Software Installer (v1.5.1 and later)"

NSI 1.5.1 should be used with System 7.0 to System 7.5.1.

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Tech Info Library Article Number:19806



Tech Info Library

Apple Modem Tool: Maximum throughput (12/96)

Revised: 12/3/96
Security: Everyone

Apple Modem Tool: Maximum throughput (12/96)

=====

Article Created: 16 May 1996
Article Reviewed/Updated: 3 December 1996

TOPIC -----

What is the maximum throughput of the Apple Modem Tool?

DISCUSSION -----

The original serial port driver for the Macintosh, as documented in Inside Macintosh, only allowed settings of up to 57.6 kbps on the serial ports. This speed is usually not attainable by the older 68xxx Macintosh systems. With the introduction of SerialDMA architecture, present in the 660 AV and 840 AV systems as well as Power Macintosh models (with the exception of the 5200, 6200, 5300, 6300, and PowerBook 5300 systems) it may be possible to drive the serial ports at speeds up to 230.4 kbps.

The SerialDMA 2.0.2 driver documentation describes these higher speed control calls. In the future, we expect to see updated tools that take advantage of these higher speed calls. Since the Macintosh Toolbox only allowed a maximum setting of 57.6 kbps nearly all communications software, such as the Apple Modem Tool and the Serial Tool, use 57.6 kbps as the maximum.

A PC Card modem is not subject to the same limitations as communications through a serial port. Since PC Cards can handle 10 Mbs Ethernet connections it is certain that unless the manufacturer has done some very poor engineering, the only limitation is the ability of the modem to handle the data throughput.

This article appeared in the 17 May 1996 issue of Information Alley.

Article Change History:
03 Dec 1996 - Corrected spelling.

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Tech Info Library

System 7.x: Desktop Rebuilds Automatically (5/96)

Revised: 5/31/96
Security: Everyone

System 7.x: Desktop Rebuilds Automatically (5/96)

Article Created: 20 May 1996
Article Reviewed/Updated: 31 May 1996

TOPIC-----

The following article documents four different scenarios in which a Macintosh computer running System 7.x can rebuild the desktop, or appear to rebuild the desktop, without the Command and Option keys being pressed at startup.

DISCUSSION -----

7.5 PROGRESS BAR APPEARS TO INDICATE THE DESKTOP IS BEING REBUILT

When starting up under System 7.5 it appears that the Macintosh is always rebuilding the desktop. A progress bar that fills in during the startup process creates the perception that the desktop is being rebuilt.

The progress bar is a new feature in System 7.5 that provides feedback on the status of the startup process. The progress bar is not an indication that the desktop is being rebuilt.

If the desktop is actually being rebuilt, either automatically or on demand, you will see in the window the words "Rebuilding Desktop..."

7.X FILE OR FOLDER NAMED "DESKTOP" AT ROOT LEVEL OF HD

Under System 7.x, if the desktop is rebuilt at every restart, it may be because you have a file or folder at the root level of your hard drive named "Desktop." Removing the item named, "Desktop," or renaming it solves the problem. This can also occur if the file or folder is invisible. If this is the case, you will need to make it visible or delete it using a disk or file utility such as ResEdit.

DESKTOP REBUILDS AFTER INSTALLING SYSTEM 7.5

This is a normal feature of System 7.5. But, this should only occur the first time you restart the computer following the installation.

MACINTOSH EASY OPEN AUTOMATICALLY REBUILDS THE DESKTOP

After you have installed System 7.5 and restarted, you may find that your system will rebuild the desktop with subsequent restarts. These additional rebuilds are caused by Macintosh Easy Open (MEO). MEO builds a table of file types, applications, and the translators available to those applications that give them the ability to open different file types.

This modification of the desktop file provides additional information that MEO uses to locate applications that can open various file types.

For Macintosh computers with Macintosh Easy Open, follow these steps to rebuild the desktop properly:

Step 1

Use Extensions Manager to turn off ALL extensions and control panels EXCEPT Macintosh Easy Open.

Step 2

Restart your computer.

Step 3

Hold down the Command (Apple) Key and the Option key until prompted to rebuild the desktop.

Step 4

Let the rebuild completely finish.

Article Change History:

31 May 1996 - Made changes in wording.

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Tech Info Library Article Number:19808



Tech Info Library

Workgroup Server 8550: Drive Options (4/97)

Revised: 4/11/97
Security: Everyone

Workgroup Server 8550: Drive Options (4/97)

Article Created: 16 May 1996
Article Reviewed/Updated: 11 April 1997

TOPIC -----

Q: What are my options for adding additional drives to the Workgroup Server 8550?

Q: What is special about the bracket that is included in the full height bay at the bottom of the Computer?

Q: Does Apple officially support the installation of half-height drives in the hard drive bracket assembly in the Workgroup Server 8550? I am asking because I want to add a second hard drive; not replace the original drive.

DISCUSSION -----

Q: What are my options for adding additional drives to the Workgroup Server 8550?

A: The workgroup server 8550 has four bays for drives. All 8550s come with a CD-ROM in the top bay (bay number one), a Floppy drive in the bay beneath that (bay number two) , and a Hard Drive in the bottom bay (bay number four). The third bay down can be filled with a DAT drive depending upon the configuration purchased.

Q: What is special about the bracket that is included in the full height bay at the bottom of the Computer?

A: The bottom bay (bay number four) is a full height bay with special hard drive bracket (p/n 922-2253) mounted inside it. This mounting bracket has an additional fan to keep the drive(s) cool. Adding an additional "low profile (1" high)" drive to this bracket does not require a mounting tray, only a screw kit to keep the drive secure.

Note: 922-2253 can be installed into an 8500 or an 8100.

Begin_Graphic

```
+-----+
[   bay 1   ]
[   CD-ROM  ]
[ ----- ]
[   bay 2   ]
[   Floppy  ]
[ ----- ]
[   bay 3   ]
[ Empty/DAT ]
[           ]
[ ----- ]
[   bay 4   ]
[   HD      ]
[ with part# ]
[   922-2253 ]
+ ----- +
```

End_Graphic

Q: Does Apple officially support the installation of 1/2 height drives in the hard drive bracket assembly in the Workgroup Server 8550? I am asking because I want to add a second hard drive; not replace the original drive.

A: No, Apple will not officially support the installation of half-height hard drives in the Workgroup Server 8550. The special hard drive bracket (p/n 922-2253) will only support the addition of a "low profile (1" high)" drive.

NOTE: Even though it may be possible to physically fit a half-height hard drive in the special hard drive bracket (p/n 922-2253), the screw holes which mount the drive to the bracket will not match up. If you do somehow manage to install this type of drive, Apple will not support its use in your Workgroup Server 8550.

Article Change History:

11 Apr 1997 - Corrected section on half-height drives.

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Tech Info Library Article Number:19809



Tech Info Library

Control Strip: Missing High Resolution Video Options (5/96)

Revised: 5/21/96
Security: Everyone

Control Strip: Missing High Resolution Video Options (5/96)

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Article Created: 17 May 1996

TOPIC -----

This article describes the video options in the Control Strip control panel for Macintosh computers connected to high resolution monitors.

The Control Strip is missing the 1280x960 and 1280x1024 resolution options since I upgraded to 7.5.3 with System 7.5 Update 2.0. Both options are available in the Monitors & Sound control panel. When I select one of the higher resolutions, it shows up in the Control Strip until I change the resolution to a lower resolution. I am unable to get both high resolution options to show in Control Strip at the same time.

DISCUSSION -----

The current design of the Control Strip control panel dictates that it will only show the 'standard' resolutions for the monitor. The 'extended' or highest resolutions (usually less than 72 dpi) will not be listed in the Control Strip. Therefore, in this particular case the 1280x960 and 1280x1024 resolutions will be missing. Apple Engineering is investigating this issue. There is no known information as to if or when a change this issue will be fixed.

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Tech Info Library Article Number:19811



Tech Info Library

PCI-Based DOS Compatibility Card: Read Me (5/96)

Revised: 5/17/96
Security: Everyone

PCI-Based DOS Compatibility Card: Read Me (5/96)

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Article Created: 17 May 1996

TOPIC -----

This article contains the Readme file for the PCI-based DOS Compatibility Card.

DISCUSSION -----

Important Information for users of

- PC Compatibility Card (for use with Macintosh models with a PCI expansion slot)
- DOS Compatibility Software Update

This document provides late-breaking information that could not be included in the PC Compatibility Card User's Manual or in the DOS Compatibility Software Update User's Manual.

Be sure to read the first section, "Before You Install," before you install the Compatibility Card software. You can read the rest of this document later.

Contents

- Before You Install
- Third-Party Applications
- PC System
- Macintosh System
- Memory
- Printing
- Networking
- Shared Folders and Disks
- PC Clipboard
- Video
- Technical Support
- User's Manual Corrections

Before You Install

System Software

If you are using a Power Macintosh or Performa 6100 series DOS Compatible System, you can use Operating System 7.1.2 or 7.5.3 with the DOS Compatibility Software Update.

If you are using a Macintosh Performa 630, Quadra 630, or Performa 640CD DOS Compatible, you should use System 7.5.3 with the DOS Compatibility Software Update.

If you are currently using System 7.5, 7.5.1, or 7.5.2, you should install the System 7.5 Update 2.0 to update to System 7.5.3. You can order System 7.5 Update 2.0 on a CD or a high density floppy disk set for \$13 shipping/handling plus tax from the Apple Order Center by calling 1-800-293-6617, extension 984.

For PC Compatibility Card users, System 7.5 Update 2.0 is on the PC Compatibility Card Mac OS Software CD. To install the update, follow the instructions in the PC Compatibility Card User's Manual.

External PC-Formatted SCSI Devices

If you use a dedicated PC-formatted partition or SCSI device instead of a drive container, you may experience some disk read/write errors. Apple recommends using drive containers on Macintosh-formatted partitions or SCSI devices as your primary method of data storage.

Installing Windows 95 Operating System

Follow these guidelines when you install Windows 95 on your system:

- Lock your installation disks.
- Select "Continue" instead of "Retry" at the end of disk 2.
- If you choose to make a startup disk, make sure the disk is already formatted. An unformatted disk will not be recognized.
- After you are done with the installation, refer to the PC Compatibility Card User's Manual for information about setting up printing. During installation, do not print the test page when you are prompted to do so.

Mouse Drivers 9.01

For PC Compatibility Card users, Mouse Drivers 9.01 is available on the PC Utilities CD. To install the mouse drivers, run SETUP.EXE in the MSMOUSE directory. If you are using Windows 3.1 or Windows for Workgroups, install both the DOS and Windows mouse drivers. If you are using Windows 95 or DOS 6.22, install the DOS mouse driver only.

When you install the DOS mouse driver, the installer may display an error message indicating that it could not find a mouse attached to the computer. You can ignore the message if your mouse is properly connected to an ADB port on your computer or keyboard.

Online Help in the PC Environment

You can install online Help for the PC environment when you install the support software. If you install Help, it will be available in the PC environment in the HELP directory in the directory where Apple software is installed.

To start Help in Windows 95:

1. Open "My Computer."
2. Open the C drive.
3. Open the Apple software folder. (The default folder name is "Apple.")
4. Open the Help folder.
5. Double-click the SETUPHELP application.

To start Help in Windows:

1. In the Program Manager, choose Run from the File menu.
2. Type C:\APPLE\HELP\SETUPHELP.EXE and then click OK.

Third-Party Applications

Connectix RAM Doubler

Do not use RAM Doubler and the PC Compatibility Card software together. They are not compatible.

Symantec AntiVirus for Macintosh

If Symantec AntiVirus for Macintosh (SAM) is installed and you mount a drive container, your screen may appear to freeze for a few minutes while SAM scans the container for viruses. The drive container will mount once the scan is complete.

Microsoft Backup

In Windows 95, you cannot use Microsoft Backup because it needs a PC floppy drive controller that does not exist in your Macintosh. Instead, use a Macintosh backup program to back up your PC container file.

However, you can use Microsoft Backup in Windows 3.1 or Windows for Workgroups. To do so, configure the backup manually by following these steps:

1. Add the following line to the [386enh] section of your SYSTEM.INI file:

```
device=vfintd.386
```

Your SYSTEM.INI file is in the WINDOWS directory.

2. Start the Microsoft Backup program.
3. Click "No" in the Auto-configure dialog box.

4. In the Configuration Window, select "1.44 Mb 3.5" in the Drive A: list box.

You may also click "Configure" from the standard toolbar at the top. Do not click the Compatibility Test. button because it may cause a system "freeze."

5. Click Backup on the standard toolbar.

6. If you are backing up to floppy disks, choose "MS-DOS Path" from the Backup To: list box. Type "A:\\" in the second list box that appears.

You can type a different path to back up to a network device.

7. Continue with your back up.

When you use the Compare or Restore options, you must choose "MS-DOS Path" in the Compare From and Restore From list boxes, respectively.

Insignia SoftWindows and Soft PC

You can use drive containers created with SoftWindows or Soft PC, but you will not be able to boot from them. When you select a container created with SoftWindows or Soft PC, be sure to choose a drive letter other than C.

Windows PaintBrush

Prior to switching to the Macintosh environment, make sure that a menu is not pulled down in either PaintBrush for Windows 3.1 or PaintBrush for Windows for Workgroups. When you switch back to the PC environment, the portion of a menu that overlaps your painting may inadvertently get incorporated into the painting.

Other Programs

Apple recommends using only the memory management programs that are included with DOS or Windows. Do not use third-party memory management programs.

A program that attempts to directly control the floppy controller (such as a backup program) will not work properly.

Any program that sends data to the parallel port during setup or initialization may cause a blank page to print on your printer.

Some utility programs may incorrectly report the clock speed of the Cyrix 5x86 microprocessor on the 7-inch PC Compatibility Card. This may occur on any PC that uses this microprocessor.

PC System

Shut Down Properly

IMPORTANT Be sure to quit all open PC applications and exit Windows before shutting down the PC or the Macintosh. Failing to do so will result in the loss of any unsaved data and might result in corruption of the drive container or

partition.

When you need to reboot the PC in the PC environment, use the "warm boot" keyboard shortcut instead of the "cold boot" shortcut whenever possible. You should only cold boot the PC environment when warm booting doesn't work. (Cold-booting erases cached data and may corrupt disk data.)

To warm boot the PC, press Control-Alt (Option)-Del.

To cold boot the PC, press Command-Control-Alt-Del.

Symantec Norton AntiVirus for Windows 95

Before you change the number of display colors in the Display Settings control panel, turn off Norton AntiVirus Auto-Protect by double-clicking its icon in the Task bar and clicking Disable in the dialog box that appears.

Formatting disks or creating a Rescue disk may not work properly if Norton AntiVirus is installed. If you encounter a problem, do the following:

1. Double-click the "Norton AntiVirus Auto-Protect" icon in the Task bar.
2. Click Options, and then click Advanced.
3. Change the "Low-level format of hard disk" option to "Allow," and then click OK.

QuickTime for Windows

When playing QuickTime movies in the PC environment, you may notice synchronization problems between the audio and video.

International Keyboard Support

If you are using an international keyboard, be sure to install and use the keyboard files on the PC Utilities CD. (The supported languages vary from country to country.) The keyboard files that come with Windows and Windows 95 may not work with your keyboard.

Using a CD-ROM Drive

Currently, the PC Compatibility Card only recognizes the following types of CDs: PC format (ISO 9660), dual format (disks formatted for both the Macintosh and PCs), and audio. Some specialized formats are not supported.

Using a Modem

If you are having problems using a modem with Windows 95, you may be able to correct the problems by disabling the "Use flow control" or "Use error control" options for the modem. To do so, follow these steps:

1. Click the Start button, choose the Settings menu item, and then choose Control Panel.
2. Double-click the Modem icon.

3. Click the Properties button.
4. Select the Connection tab in the dialog box that appears.
5. Click the Advanced button
6. Turn off the "Use flow control" or "Use error control" options, and click OK.

Also, make sure to set the modem speed to 19200 baud or less.

Macintosh System

Starting Up the PC and Macintosh Environments

Allow the Macintosh to completely finish rebuilding the desktop before attempting to switch to the PC environment. If you switch during the rebuilding of the desktop, a system "freeze" could occur.

Also, the Energy dialog box may appear each time you start your Macintosh; you can turn off this message at startup by opening and closing the Energy Saver control panel.

If you set up your Macintosh to switch to the PC environment on startup, disable the shut down warning in the General Controls control panel. Otherwise, you may have to wait for your Macintosh to start up when you switch back to the Macintosh environment.

To disable the shut down warning:

1. Choose Control Panels from the Apple menu.
2. Double click General Controls to open it.
3. In the Shut Down Warning area, turn off the "Warn me if computer was shut down improperly" checkbox.
4. Close the General Controls window.

Working with Locked PC Containers

You cannot boot from a locked PC container, a PC container that is open on your desktop, or a PC container that is on a write-protected file server.

You may not be able to mount a locked PC container if file sharing is turned on. You can correct the problem by either unlocking the PC container or turning off file sharing.

Configuring Serial Ports in PC Setup Control Panel

After mapping and remapping a PC COM port to one of the Macintosh serial ports, you may have to restart the PC and the Macintosh for the remapping to take effect.

If you are using Apple Remote Access (ARA) 2.0 or 2.0.1, you may not be able to start your Macintosh properly after mapping a PC COM port to a Macintosh serial

port. To correct the problem, restart while holding down the Shift key to temporarily turn off all system extensions. Then remove the Serial Port Arbitrator from the Extensions folder inside your System Folder, and restart your computer. (Prior to using ARA, unmap the PC COM port and restart your Macintosh.)

You can also correct this problem by upgrading to ARA 2.1 when it is available.

Memory

Some DIMMs (dual inline memory modules) will not work with the PC Compatibility Card. When you purchase memory, request Fast Page Mode memory instead of EDO (extended data output) memory.

Printing

Apple LaserWriter Driver

If you are using a PostScript printer, you should install and use the most recent version of the Apple LaserWriter printer driver software. The current version number is 8.3. Older versions may generate inverted images when printing from the PC environment. Apple LaserWriter 8.3 comes with System 7.5 Update 2.0. It is also available separately on the Apple World Wide Web site.

Windows 95 Add Printer Wizard

When you use the Add Printer Wizard to set up a printer, do not print a test sheet until the printer is configured according to the instructions in your user's manual. Then you can print a test sheet by doing the following:

1. In the Printers window, click the icon of the printer you just added.
2. Choose Properties from the Printer menu.
3. In the dialog box that appears, click Print Test Page.

LaserWriter Select 300 and Personal LaserWriter 300 Printers

The LaserWriter Select 300 and Personal LaserWriter 300 printers are not fully supported. Files printed in the PC environment may not print properly on these printer models.

PostScript Printing

When printing to a PostScript printer from the PC environment, be sure to print one file at a time. Printing multiple files may cause a PostScript error. To verify that the file has finished printing, check the Windows 95 Printer queue.

Epson Emulation

Some documents may not print properly from the PC environment to a non-PostScript printer using Epson emulation. Here are some suggestions for correcting common problems. For additional information, see the section on

setting printer options in the PC Compatibility Card User's Manual.

Problem: Text near the top and bottom of each page doesn't print or is cut off, or text that should print at the bottom of one page prints on the next page.

Solution: Try choosing "No gaps between pages" in the PC Print Spooler Preferences dialog box, and try printing again. (When you print after choosing this option, the PC Print Spooler software will print 66 lines per page instead of 60 lines per page.)

Problem: You have chosen "No gaps between pages" in the PC Print Spooler Preferences dialog box, but text near the top and bottom of each page still doesn't print or is cut off.

Solution: Most laser and ink jet printers cannot print close to the edges of a page. Find out what the minimum margins are for your printer. (Look for this information in the specifications section of the manual that came with your printer.) Then set the top and bottom margins to at least these amounts in the DOS or Windows application from which you are printing.

Printers that Support the "Printer Specific" Option

If you are using the PowerPrint package from GDT Softworks to print on a PC-compatible parallel printer, you should choose Printer Specific in the PC Print Spooler Preferences dialog box. Currently, the PowerPrint package is the only printer driver that supports the "Printer Specific" option.

Saving a Printer File

To save a printer file such as a PostScript file in the PC environment, use the option in your Windows printer driver to print to a file. Do not map a PC COM port to a text file in the PC Setup control panel, and then print to that port in the PC environment.

Networking

Windows for Workgroups TCP/IP and Windows 95

When upgrading from Windows for Workgroups to Windows 95, make sure to install the Windows 95 TCP/IP stack. You may have problems using the Windows for Workgroups TCP/IP stack with Windows 95.

Network Drivers

The MacODI and MacNDIS drivers are in the root directory on the PC Software floppy disk.

Windows 95 PROTOCOL.INI File

If an error message appears stating that there are illegal decimal characters in the PROTOCOL.INI file, the Windows 95 Network control panel may have incorrectly removed some of the double quotes necessary within the file. (The MacNDIS\$ section in PROTOCOL.INI has some lines with double quotes, placed there by the

SETNET utility.) If you modify network settings with the Network control panel, it removes the double quotes from the file. To correct the problem, restore the double quotes in the file.

Use MacODI with Netware Client 32

In Windows 95, use the MacODI driver to connect a Netware 32-bit client to a Netware 4.1 server.

Using ODI with Windows 95

You may experience system "freezes" if you are using NetBEUI or TCP/IP with ODI in Windows 95. To correct this problem, delete the following line from the STARTNET.BAT file in the NWCLIENT directory:

```
C:\WINDOWS\ODIHL.P.EXE
```

Also, add the above line to the end of your AUTOEXEC.BAT file.

Shared Folders and Disks

Sharing Floppy Disks and CDs is not Supported

A floppy disk or a CD should not be set up as a shared folder between the Macintosh and PC environments. This is unsupported and can cause unpredictable results.

Adding/Removing Shared Folders in Windows 95

When you add or remove a Shared Folder, the View in "My Computer" does not immediately change. It requires two refreshes to correctly update the Shared Folder status.

Opening or Saving Shared Folder Files

With some Windows 95 programs, you may not be able to open or save files in a shared folder. You may have to move a file out of the shared folder before you can open it, or save a file to a different location and then move it into the shared folder.

In Windows 3.1 or Windows for Workgroups, you cannot save a file to a shared folder that is empty. To work around this problem, type a full path and filename into the Save As dialog box, or keep at least one file in a shared folder.

Naming Shared Folders

When you name a folder in the Macintosh environment that you intend to share with the PC environment, you may want the name to be within the DOS 8.3 character filename guidelines. Otherwise, the sharing software will truncate and translate name to fit the guidelines. For more information about naming files, see your DOS manual.

Network Disks as Shared Folders

If you set up a shared disk on a network as a shared folder and later the network configuration changes, you may continue to be prompted with a dialog box at startup to mount a shared disk that no longer exists on the network. To prevent the dialog box from appearing, reassign the drive letter to a new drive. If you cannot remember the drive letter, drag the PC Setup Preferences file to the Trash.

PC Clipboard

Using Compressed Images in the Clipboard

In some cases, you may need to expand a compressed image file in the Macintosh environment to correctly transfer the image to the PC environment.

Tips

If you are having trouble copying and pasting text or images between the Macintosh and the PC environments, try the following tips:

- Instead of using the Paste command, use the Paste Special command if it is available in the application you are pasting into.
- If you cannot paste an image into a word processing program in the PC environment, try pasting the image into a graphics program, such as PaintBrush. Then, copy the image to the clipboard from the graphics program and try pasting into your word processing program.
- Instead of copying and pasting, use a shared folder to transfer an entire file from one environment to another. Some Macintosh and Windows programs can open files created on other platforms. For example, ClarisWorks for Windows can open ClarisWorks files created on a Macintosh, and vice versa. Even if you are using two different programs, you may be able to save a file in a common file format that both programs understand, such as RTF for text, and EPS or TIFF for graphics. (Check the manuals that came with your programs to see if they support common file formats.)
- If you must use the clipboard to transfer a lot of data or a large graphic, try transferring the data in smaller pieces or making more memory available to the application. For more information on increasing a program's memory, see the "Memory" topic of Macintosh Guide, available in the Guide (?) menu.
- If you are copying and pasting a PhotoCD image, make sure you are copying an expanded version of the image.

Large Bitmap Transfers

If you are transferring large bitmap images from the PC to the Macintosh environment, you may have to increase the memory allocated to the PC Clipboard application. To increase the memory allocation:

1. Open the System Folder, then open the Extensions folder.

2. Select the PC Clipboard icon, open the File menu, and choose Get Info.
3. In the Preferred Size text box, enter a larger memory allocation, such as 1000K.
4. Close the PC Clipboard Info window.

Pasting Graphics Created in Microsoft Word 6.0 for Macintosh

If you have difficulty copying a graphic from a Microsoft Word 6.0 document in the Macintosh environment and pasting it into the PC environment, try this method instead:

1. Select the graphic in Word 6.0 and choose Cut from the Edit menu.
2. Place an insertion point in the Word 6.0 document, open the Edit menu, and choose Paste Special.
3. In the Paste Special dialog box, select Picture format and click OK.
4. Select the graphic you just pasted, and choose either Cut or Copy from the Edit menu.
5. Switch to the PC environment, and try pasting the graphic.

Video

For best results, use Apple multiple scan monitors with the PC Compatibility Card.

Video Driver switching in Windows 95

Some 16 color 640x480 modes use the Windows 95 video drivers instead of the ATI video drivers. The ATI options will not appear in the control panel when the Windows 95 video drivers are being used. To make the ATI options available, change the color depth to a higher value, such as 256 colors.

Monitor Adapters

Selecting a "pass-through" mode on a monitor adapter may cause the PC Compatibility Card to incorrectly sense the monitor. When the PC Compatibility Card does not sense the monitor because of an incorrect monitor adapter setting, it will automatically assume that the monitor is a 14" RGB monitor and restrict the resolution to 640x480. Make sure that the monitor adapter correctly represents the attached monitor.

AppleVision 1705 Display

The AppleVision 1705 Display will only appear to the PC as a DDC monitor if you use the optional 1705 VGA adapter cable and a VGA-to-Macintosh video adapter to connect the display to the PC Compatibility Card. Using the standard Apple-supplied cable will result in the monitor being identified as a 17" multiscan monitor. Although the PC Setup control panel lists Multiscan 17" in

the Displays pop-up menu, you should select AppleVision 1705 in the Windows Display control panel.

AppleVision 1710 and 1710AV Displays

If the PC Setup Control Panel indicates an Apple 14" monitor when an AppleVision 1710AV monitor is connected, do the following:

- Reinstall the AppleVision software that came with the monitor.
- If you are using only this monitor, or you are connecting two monitors with the AppleVision 1710AV used to view the Macintosh environment, make sure to connect one ADB cable between your monitor and your computer, and another ADB cable between the port on the monitor and your keyboard.

Macintosh 21" Color Display

If you are using the Macintosh 21" Color Display with Windows 95, do not select a 24 bit driver in the Display control panel, even though it is an available selection. Select an 8 or 16 bit driver instead. Choosing a 24 bit driver may cause the PC environment to boot improperly.

Screen Display

When used with some monitors, a particular monitor resolution (such as 640x480) may cause the display to show a smaller viewable area surrounded by a black border. To correct the problem, try selecting a different monitor resolution.

If your PC Compatibility Card has 1MB of video memory installed, then the only refresh rates available at 1280x1024 resolution are interlaced display modes. However, Apple multiple scan monitors and many third-party monitors do not support interlaced display modes. To display 1280x1024 resolution, you may have to upgrade the video memory on the 12" card to 2MB, which supports higher refresh rates.

If you are using a third-party monitor and it does not display properly, try these suggestions to correct the problem:

- Use the Windows 95 Display control panel to select your monitor name. If your monitor name is not available, select the SuperVGA monitor option that matches the maximum resolution supported by your monitor.
- Use the ATI FlexDesk or the Windows 95 control panel to set the refresh rate to 60Hz.
- If the monitor still does not display properly, reduce the resolution.

Fixed Frequency Monitors

Playing a Video for Windows (.AVI) file in full-screen mode may not work properly on a fixed frequency monitor. A multisynchronous or multiple scan monitor will work properly. Refer to the PC Compatibility Card User's Manual for information about supported monitors and video modes.

Fixed frequency monitors do not support video "Mode X" (320x240 resolution), which is primarily used by game programs.

Playing Video Files

When playing real-time based video files or games in the PC environment, you may notice synchronization problems between the audio and video.

Optimizing MPEG playback in Windows 95

You have three ways to optimize MPEG file playback performance in Windows 95; you can adjust virtual memory, CD-ROM caching, and ATI MPEG Player settings. There is no single best way to configure the system. The instructions here show you where to find the configuration files you can use to optimize playback for your particular circumstances.

To adjust virtual memory settings, follow these steps:

1. Click the Start button, open the Settings menu, and choose Control Panel.
2. Double-click the System icon to open it.
3. Click the Performance tab, and click the Virtual Memory button.

There are a variety of options in the Virtual Memory window. These options allow you to let Windows automatically manage your virtual memory, or allow you to set up virtual memory to try and optimize the performance yourself.

4. Click OK when done and close all the open windows.
5. Shut down Windows and restart for your changes to take effect.

To adjust CD-ROM caching settings, follow these steps:

1. Click the Start button, open the Settings menu, and choose Control Panel.
2. Double-click the System icon to open it.
3. Click the Performance tab, and click the File System button.
4. Click the CD-ROM tab.

5. Decrease or increase the size of the Supplemental Cache to optimize performance. Also, choose the speed of your CD-ROM drive from the "Optimize access pattern for" pop-up menu.

6. Click OK.

To set ATI MPEG Player properties, follow these steps:

1. Click the Start button, open the Settings menu, and choose Control Panel.

2. Double-click the Multimedia icon to open it.
3. Click the Advanced tab.
4. Click the plus signs to expand the Multimedia Drivers and Media Control Devices lines.
5. Select ATI MPEG MCI Driver line.
6. Click the Properties button.
7. Click Settings.
8. Change the CPU Utilization, image size, display, and Audio/Video options in the MCI ATI MPEG Configuration window.
9. Click OK to save the settings.

Technical Support

Apple will provide technical support for Apple-branded software and for DOS 6.22 because it is included with the PC Compatibility Card. If you are having a problem with Windows, Windows for Workgroups, or Windows 95, contact Microsoft Product Support. See the support information that came with your Windows package for more information.

User's Manual Corrections

Please note the following corrections in your PC Compatibility Card User's Manual:

- Page 70: The table should indicate that the Apple CD-ROM extension is installed in the Extensions folder.
- Page 77, 79, 174, 175, 176: Each of these pages contains a DOS "CD" command that will not work properly unless you type the following DOS command first:

E: <return>
- Page 87: In the AUTOEXEC.BAT file, omit the line that loads Macshare into high memory. Instead, the line should appear in your CONFIG.SYS file as
INSTALLHIGH=c:\apple\macshare.com.
- Page 90: The PowerPrint package is sold by GDT Softworks, Inc. You can phone GDT at (800) 663-6222 or (604) 473-3600, or visit their worldwide web site at <http://www.gdt.com>.
- Page 111: In "Using Floppy Disk Drives and Floppy Disks," add the following information to the list: "You can only access an unlocked floppy disk in the environment that was active when you inserted the disk."
- Page 142-43: Step 4 of "Installing NetWare Client Software" should be, "Insert the disk containing the NetWare client software and select PC Compatibility

Ethernet Adapter."

- Page 147: Step 2 of "Installing NetBEUI in Windows for Workgroups" should be, "In Windows, open the Network Setup control panel, click Drivers, and click Add Adapter. Then select NetBEUI."
- Page 161: The title of the section should be "Installing Microsoft TCP/IP-32 Protocol Stack in Windows 95." To install IPX/SPX for use with an NDIS driver in Windows 95, see page 159.
- Page 164-65: There is an unnecessary line listed in the PROTOCOL.INI file for using Microsoft TCP/IP with an NDIS driver in Windows for Workgroups. Delete ProtocolDot2="FF,F0,E0" (the thirteenth line).
- Page 169-71: After step 10 in "Running the Network Protocol Setup (SETNET) Utility," the "Important" note is incorrect. It should say, "If you are using ODI with Windows 95, you may need to manually add the following two lines to your PROTOCOL.INI file before running the SETNET utility."

Also, Using PC Sound with the PC Compatibility Card only describes Sound Blaster functionality for DOS and Windows. For information on using Sound Blaster with Windows 95, refer to online help.

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Tech Info Library Article Number:19812



Tech Info Library

PowerBook: Sys 7.5 Update 2.0 Changes (5/96)

Revised: 5/17/96
Security: Everyone

PowerBook: Sys 7.5 Update 2.0 Changes (5/96)

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Article Created: 17 May 1996

TOPIC -----

Below is a list of components that have changed from PowerBook 5300 System Software Update to System 7.5.3, by installing System 7.5 Update 2.0. Each component that has changed has been listed, along with a description of what the changes were between the two versions.

DISCUSSION -----

Item	PowerBook 5300 System Software Update	System 7.5 Update 2.0
====	=====	=====

APPLE MENU ITEMS

CHOOSE	7.5	7.5.4
Support for Open Transport.		

FIND FILE	1.1.1	1.1.2
Numerous fixes.		

CONTROL PANELS

APPLE MENU OPTIONS	1.1	1.1.2
--------------------	-----	-------

Fixed a problem with international sorting where items would end up out of order if the script system and the file system had different ideas about sorting order. (Finnish suffered from the problem.)

EXTENSIONS MANAGER	3.0.2	3.0.3
--------------------	-------	-------

3.0.3 made a change so that internal Apple projects find it easier to build a set of extensions for projects. This change will not be seen by end users.

GENERAL CONTROLS

7.5.5

7.5.7

Changed the default setting of the Improper Shutdown dialog to ON. This changed from 7.5.5 to 7.5.6, and then back again with 7.5.7.

LAUNCHER

2.7

2.8

Allow for the selection of an initial default category by name instead of by number. Also changed the default button spacing for the three button sizes so that 9x3 small buttons, 6x2 medium buttons and 4x1 large buttons have exactly the same window size.

MONITORS

7.5.4

7.5.5

This version works on all Macintoshes (except the Plus and Classic). The changes were to make Monitors work with Display Manager 2.0 on pre-7.5.2 CPUs, by merging the 7.5.2 versions with the 7.5 version.

MOUSE

7.5.2

7.5.3

Added back Mouse Tracks and Thick I-Beam cursor to PowerBooks which support them. Mouse 7.5.2 had removed them for all PowerBooks.

NETWORK

3.0.2

3.0.3

Open Transport support. (The network control panel was made OT aware so it will not run if OT is active.)

NETWORK SOFTWARE SELECTOR

This utility allows a user of 68030-, 68040-, and early PowerPC-based computers to choose between Open Transport and classic AppleTalk networking if both are installed. (You must restart the computer for the change to take effect.) PCI-based computers support only Open Transport.

SPEECH

N/A

1.4.1

Allows you to change the default voice and other Speech Manager related settings.

TRACKPAD

7.5.4

7.5.5

Fixes a problem where the mouse and trackpad settings would lose sync over restart on PowerBook 500 series machines.

CONTROL STRIP MODULES

MONITOR BITDEPTH

N/A

1.0

Part of the Control Strip package. It allows the user to easily change the bit depth of a monitor.

MONITOR RESOLUTION

N/A

1.0.1

Support for Display Manager 2.0 on pre-7.5.2 CPUs. (Similar to the Monitors changes.)

EXTENSIONS

EM EXTENSION	3.0.2	3.0.3
--------------	-------	-------

Same as Extensions Manger Control Panel 3.0.3.

ABOUT APPLE GUIDE	1.2	1.3
-------------------	-----	-----

Some wording was changed.

ABOUT COLOR SW PRO CMM	1.0	1.0.1
------------------------	-----	-------

Some wording was changed.

APPLE GUIDE	1.2.7	2.0.2
-------------	-------	-------

- Fixed script system handling by first attempting to use the script code from the current database. This enables better handling of localized database files and fixes a Look For problem in Japan systems.

- Fixed a memory leak (~2k) of an international resource that occurred everytime a database was opened. This occurred in Apple Guide's heap.

- Fixed a bug in <Delete Index> that affected Japanese systems.

- Fixed problems with mixed mode handling of installed coach and context handlers. This occurred on PowerMacs running native Apple Guide 1.2.5 and installing handlers from native or 68K applications.

- Fixed an index bug that originally surfaced on Japanese systems. When multiple mixin files (aka additions) were in use, items would disappear from the index list. The real culprit here was a bug that was dropping every 21st index item from the combined index list from all the mixins in use. This bug would occur on any system software version, not just Japanese.

- Fixed improper handling of international resources that could crash some systems.

- Fixed a problem where mixin files whose gestalt criteria failed on PowerMacs causing Apple Guide to shut down completely. For example, if you are on a PowerMac and a PowerBook mixin was present on the machine, v1.2.5 would completely shut down because that mixin couldn't be used. It now just ignores that mixin and continues running.

- Now built with a 'weak' link to QuickTime. This means that when run on a PowerMac, Apple Guide will continue to run even if QuickTime isn't installed. Previously, 1.2.5 would refuse to start up if QuickTime wasn't present on the machine.

- Added Gestalt selector 'ag_v' to return the current installed version of Apple Guide. Very similar to the 'sysv' result code.

- Added localizable error strings used in various abort msgs.

- Modified index sorting code to default to USACII sorting only if the current script is Roman and the current language is English. Previously, 1.2.5 would default to USASCII on any Roman script system.

..TIL19813-PowerBook-Sys 7-5 Update 2-0 Changes 5-96.pdf

- Fixes an incompatibility with Microsoft Office Manager introduced by Apple Guide version 2.0.
- Fixes a problem which could cause Apple Guide to crash at undetermined points.

```
APPLE MODEM TOOL          1.5          1.5.5
Supports higher speed serial connections (up to 230kb) due to the new
SerialDMA driver which is supported on the Macintosh 680x0 AV and Power
Macintosh desktop machines.
```

APPLESHARE	3.6.1	3.6.1RevB
Set the bundle bit. This fixes a problem where the icon of the AppleShare file might not be displayed correctly.		

FINDER HELP	7.5.3	7.5.5
Just keeping in sync with the Finder.		

FINDER SCRIPTING EXTENSION	7.5.3	7.5.5
Just keeping in sync with the Finder.		

IRTALK 1.2 1.3.1

IRTalk 1.3.1 provides support for Open Transport. A machine that is using IRTalk and has OT installed and turned on, must have IRTalk 1.3 or greater, or a crash will occur.

LASERWRITER 8	8.3.2	8.3.3
A change was made to keep third party applications that fail to call PROpen from crashing when printing.		

MACINTOSH GUIDE	1.2	1.3
A large number of changes and additions were made to the Guide information.		

NETWORK EXTENSION	7.1.3	7.5.5
Keeping in sync with the Finder. Some BlockMove calls were changed to BlockMoveData for speed.		

PB 5300 GUIDE ADDITIONS	1.0	1.3
A large number of changes and additions were made to the Guide information.		

PRINTER DESCRIPTIONS

```

LASERWRITER 16/600 PS-J                N/A                1.1
  Slight changes to printer information for driver usage.

```

LASERWRITER 4/600 PS N/A 1.0

Postscript parameters and printer information for the LW 4/600 PS printer.

LASERWRITER COLOR 12/600 PS N/A 1.1.1
Slight changes to printer information for driver usage.

PRINTER SHARE 1.1.2 1.1.3

..TIL19813-PowerBook-Sys_7-5_Update_2-0_Changes_5-96.pdf

Increased the stack space internally to work with Open Transport. Printer Share 1.1.3 is required to work with Open Transport.

SHORTCUTS

1.2

1.3

A number of small changes were made to ShortCuts, including a few wording changes, as well as some additional tips.

SPEECH MANAGER

1.3

1.4

Previous to version 1.4 of the PlainTalk family of software, all of Apple's text-to-speech software and speech recognition was packaged together in one big installer (and there was no Spanish text-to-speech before version 1.4). As of version 1.4, there are three separate installers: "English Text-to-Speech", "Mexican Spanish Text-to-Speech", and "English Speech Recognition". The text-to-speech installers both install the Speech Manager extension.

VOICES

N/A

Different sounding voices for use with Speech 1.4 (MacinTalk 2 or 3 depending on the CPU).

SYSTEM FOLDER

FINDER

7.5.4

7.5.5

Fixes a crash that would occur when you drag one Zip disk onto another.

SYSTEM 7.5.2 UPDATE

N/A

7.5.3

This replaces the PowerBook 5300/190/2300 Enabler. It includes the following additional bug fixes:

- Fixed a problem with the BatteryPrediction code which could cause a PowerBook to crash when the machine is booted.
- Fixed a problem where At Ease would hang when command-power was depressed without a debugger present.
- Fixed a problem in PowerMgrLib that could cause a crash when turning AppleTalk off, then back on, then opening the Chooser.
- Includes the 2300c track pad update.
- Includes the 7.5.2 Printing Fix.
- Changed a constant (kMaxDepth) from 8 to 16 in MouseTracks.c (part of QuickDraw). This is a test to see whether or not mouse tracks can be turned on based on the screen depth and it was too shallow.
- Fixed a problem where PC cards were left unlocked after waking from sleep, which could lead to possible data loss.
- Fixed a problem with notification manager alerts on all machines. Before the fix, the alerts that involve a flashing icon, could result in the wrong icon being used in the Application Menu after the alert is dismissed. Another of the problems this fixes is that the clock (all machines) and battery level indicator

..TIL19813-PowerBook-Sys_7-5_Update_2-0_Changes_5-96.pdf

(PowerBooks/Duos) would be erased, stay blank briefly, and be redrawn when an alert sound is played.

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Tech Info Library Article Number:19813



Tech Info Library

Mouse Tracks with PowerPC-based PowerBook computers (2/97)

Revised: 2/14/97
Security: Everyone

Mouse Tracks with PowerPC-based PowerBook computers (2/97)

Article Created: 20 May 1996
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article describes an issue with the Mouse Tracks or Thick I-Beam features in the Mouse control panel with PowerPC-based PowerBook computers.

DISCUSSION -----

If the Mouse Tracks or Thick I-Beam feature is turned on in the Mouse control panel on a PowerPC-based PowerBook* or PowerBook 190 computers when an external display is attached, the external display image will not redraw correctly. The display will show white boxes or images of the cursor when the cursor is moved. The workaround is to turn off Mouse Tracks or Thick I-Beam.

In system prior to System 7.5.3 these options will not be available in the Mouse control panel. On the PowerBook Duo 2300c this occurs when connected to a MiniDock, not a Duo Dock. Apple is investigating this issue. It is not known when or if this will be changed.

* The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, 1400cs and 3400c. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

This article was published in the Information Alley on 10 February 1997.

Article Change History:

14 Feb 1997 - Added new computer model.
10 Feb 1997 - Added keyword.
20 Jan 1997 - Added info about 1400 series computers.

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Tech Info Library Article Number:19815



Tech Info Library

PowerBook: No SCSI Disk Mode Symbol (5/96)

Revised: 5/22/96
Security: Everyone

PowerBook: No SCSI Disk Mode Symbol (5/96)

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Article Created: 20 May 1996

TOPIC -----

This article describes the startup behavior of PowerBook computers that support SCSI Disk Mode or HD Target Mode.

When I connect a PowerBook 5300 in HD Target Mode to my desktop Macintosh computer I do not get the SCSI disk mode symbol on the PowerBook screen as the manual suggests. Is this a problem?

DISCUSSION -----

The behavior of your PowerBook 5300 computer is normal. Due to power draw or requirements the PowerBook 500, 190, or 5300 series computer screen may remain blank when the PowerBook is powered on.

Power on the PowerBook first. If connected, power on another SCSI device. Last power on the desktop computer. The SCSI disk mode symbol with the SCSI ID number of the PowerBook will appear.

Most PowerBook computers will not exhibit this behavior. It is not an indication of a hardware problem if the SCSI Disk Mode symbol appears after powering on another SCSI device in the chain or the desktop Macintosh computer.

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Tech Info Library Article Number:19816



Tech Info Library

Backing Up a PowerShare Server (5/96)

Revised: 5/20/96
Security: Everyone

Backing Up a PowerShare Server (5/96)

Article Created: 20 May 1996

TOPIC -----

This article describes backing up a PowerShare Server. This information is taken from the "PowerShare Design Guide."

DISCUSSION -----

Mail Servers

Stop the PowerShare mail server application before backing-up any mail data. Because the mail server is always routing messages, it is not possible to get a "snap-shot" without quitting the application. Backup all the data in the PowerShare Mail Data folder. To restore, quit the mail server application, remove all the data in PowerShare Mail data folder, restore to this folder, and restart.

Catalog Servers

To backup a catalog server in single server environment, the server application must first be stopped. Then, all the data in the PowerShare Catalog Data folder can be backed up. To restore, bring down the server, remove the data in the PowerShare Catalog Data folder, restore to this folder, and restart.

In most multi-server environments, backup and restore can be handled via PowerShare replication services. Replication allows copies of folders to exist on many machines. As long as each folder is replicated on at least one other system, a synchronized backup is always available. If any machine is lost, the folders it manages can be replicated back onto it, when it is brought on-line. However, if an off-site backup is required, a bit more planning is needed. For smaller systems, one catalog server must be a master catalog server maintaining all the folders. A backup of this system can be performed by stopping the catalog application and backing-up all the data in the PowerShare Catalog Data folder. In larger systems, where multiple catalog servers might have to be used to store the entire catalog, backup copies of the catalog data is needed on each

machine.

If any one server goes down, use replication to bring it back on-line. If multiple servers are damaged, and one good copy of a folder is not available on any server, then the catalog must be restored onto a master server from tape. Replication can be used to update all the other servers, bringing the system back to operating level.

As long as one catalog server remains up during the backup or restore process, users have access to the system. Even when a folder is missing from a system, they can still have access to any other folder that is available on a running server.

Here are rules for backup and restore in a multi-server PowerShare environment.

- 1) Make sure that a copy of every folder exists on tape, another server, or both.
- 2) When backing-up, stop (Quit) the application. Backup the data in the PowerShare Catalog Data folder.
- 3) When restoring to a server that has crashed, remove all the data in the PowerShare Catalog Data folder. Restore from tape or use replication.

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Tech Info Library Article Number:19818



Tech Info Library

PC Compatibility Cards: Joystick Channel Support (5/96)

Revised: 5/20/96
Security: Everyone

PC Compatibility Cards: Joystick Channel Support (5/96)

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Article Created: 20 May 1996

TOPIC -----

Does the joystick port on the PC Compatibility Cards have both joystick channels?

DISCUSSION -----

The PCI-based PC Compatibility Cards support both joystick channels. Many 'enhanced' PC joysticks use both joystick channels to support additional buttons. Since the PC Compatibility Cards have both channels, you can use these joysticks, or with a standard joystick port splitter you can attach two standard PC joysticks.

The DOS Compatibility Cards for the following computers do not support both joystick channels:

Quadra 610 DOS Compatible
Power Macintosh 6100 DOS Compatible
LC 630 DOS Compatible
Performa 640 DOS Compatible

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Tech Info Library Article Number:19821



Tech Info Library

PC Compat Card: Quit Windows Prior to Shutting Down (5/96)

Revised: 5/20/96
Security: Everyone

PC Compat Card: Quit Windows Prior to Shutting Down (5/96)

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Article Created: 20 May 1996

TOPIC -----

My Macintosh automatically shuts itself down after the idle time specified in the Energy Saver control panel. I have a PC Compatibility Card installed in this computer, and I understand that I'm supposed to exit Windows before shutting down. Does the Energy Saver control panel do this for me?

DISCUSSION -----

Before shutting down or restarting your computer, you should exit Windows 3.1 or shut down Windows 95. However, the Energy Saver control panel is not able to exit Windows or shut down Windows 95 for you. Since the Energy Saver control panel cannot do this, you should either make sure you shut down or exit Windows before the computer shuts itself off, or you should have the computer put itself to sleep instead of shutting down. To put your Macintosh in the sleep mode instead of shut down do the following:

Step 1

Open the Energy Saver control panel.

Step 2

Click the "Shut down instead of sleeping" checkbox. This removes the checkmark.

Step 3

Close the Energy Saver control panel.

Step 4

Restart your Macintosh computer.

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Tech Info Library Article Number:19822



Tech Info Library

PC Compatibility Card: Troubleshooting COM Port Mapping (5/96)

Revised: 5/20/96
Security: Everyone

PC Compatibility Card: Troubleshooting COM Port Mapping (5/96)

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Article Created: 20 May 1996

TOPIC -----

I have a PC Compatibility Card in my Macintosh computer. When I try to map a COM port to one of the Macintosh serial ports in the PC Setup control panel, the selection is dimmed.

DISCUSSION -----

If a serial port is already in use, the PC Setup control panel will not allow you to select that port. To select that port, you need to disable the other software first. Common causes are:

- AppleTalk may be active on that port
- Communications software may be using that port. Fax software that is set to automatically receive a fax will also block out that port
- PC Setup may already have that port mapped on the other COM port selection

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Tech Info Library Article Number:19823



Tech Info Library

PC Compatibility Card: PostScript Errors From Windows 95 (5/96)

Revised: 5/20/96
Security: Everyone

PC Compatibility Card: PostScript Errors From Windows 95 (5/96)

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Article Created: 20 May 1996

TOPIC -----

I have a Power Macintosh and I am running Windows 95 on my DOS Compatibility Card. When I try to print from Windows 95 to my LaserWriter printer, I get a PostScript error from Mac OS Print Monitor.

DISCUSSION -----

A PostScript error may occur if you print more than one document at a time on the Windows environment. When printing a second job, make sure Windows has already finished sending the first print job.

Also, some of the settings for the Windows 95 printer driver need to be changed from their defaults. Here are the steps to configure your Windows 95 printer driver properly:

Step 1

Open the printer icon for your printer

Step 2

Choose Properties from the File menu

Step 3

Select the tab labeled Details

Step 4

Click Spool Settings

Step 5

Click "Disable bi-directional support for this printer"

Step 6

Click OK

Step 7

Click Port Settings

Step 8

Make sure the box labeled "Check port state before printing" is unchecked

Step 9

Click OK

Step 10

Select the tab labeled PostScript

Step 11

Click Advanced

Step 12

Make sure the boxes labeled "Send CTRL+D before Job" and "Send CTRL+D after Job" are unchecked

Step 13

Click OK

Step 14

Close the Properties window.

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Tech Info Library Article Number:19824



Tech Info Library

DOS Compatibility Cards: Only Some SCSI Devices Supported (5/96)

Revised: 5/23/96
Security: Everyone

DOS Compatibility Cards: Only Some SCSI Devices Supported (5/96)

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Article Created: 20 May 1996
Article Reviewed/Updated: 23 May 1996

TOPIC -----

I have a DOS Compatibility Card in my Macintosh computer, and would like to use some SCSI devices with Windows. What SCSI devices are supported using the DOS Compatibility Card?

DISCUSSION -----

The DOS Compatibility Cards support Mac- or PC-formatted SCSI hard drives, as well as all Apple CD-ROM drives except for the Apple PowerCD and AppleCD SC drives. Other SCSI devices such as scanners, non-Apple CD-ROM drives are not supported.

Article Change History:
23 May 1996 - Added AppleCD SC to the discussion.

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Tech Info Library Article Number:19825



Tech Info Library

PC Compatibility Card: Text Cutoff at Edge of Page (5/96)

Revised: 5/20/96
Security: Everyone

PC Compatibility Card: Text Cutoff at Edge of Page (5/96)

=====

Article Created: 20 May 1996

TOPIC -----

I have a PC Compatibility Card in my Power Macintosh computer. When I print to my QuickDraw printer from the PC side, text near the top and bottom of each page doesn't print or is cut off, or text that should print at the bottom of one page prints on the next page.

DISCUSSION -----

Try choosing "No gaps between pages" in the PC Print Spooler Preferences dialog box, then print again. When you print after choosing this option, the PC Print Spooler software prints 66 lines per page instead of 60 lines per page.

Steps to Select No Gaps Between Pages

=====

Step 1

Go to Extensions folder in System Folder

Step 2

Double-click PC Print Spooler

Step 3

Go to the File menu and select Preferences

Step 4

Select "No gaps between Pages"

Step 5

Click OK

If "No gaps between pages" is selected in the PC Print Spooler Preferences dialog box, but text near the top and bottom of each page still does not print or is cut off, find out the minimum margins for your printer. Most laser and ink jet printers cannot print close to the edges of a page. Then set the top and bottom margins to at least these amounts in the DOS or Windows application you are using.

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Tech Info Library Article Number:19826



Tech Info Library

PC Compatibility Card: Only Built-in Ethernet Supported (5/96)

Revised: 5/20/96
Security: Everyone

PC Compatibility Card: Only Built-in Ethernet Supported (5/96)

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Article Created: 20 May 1996

TOPIC -----

Can I use a PCI-based Ethernet or Token Ring card with my PC Compatibility Card?

DISCUSSION -----

The PCI-based PC Compatibility Cards support only the built-in Ethernet port on your Power Macintosh computer. On this port, you may run AppleTalk, TCP/IP, IPX/SPX, and/or NetBEUI.

Although the PC Compatibility Card software comes with a Token Ring ODI driver, it has not been fully tested and is not supported.

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Tech Info Library Article Number:19827



Tech Info Library

System 7.5 Update 2.0: Monitors & Sound Gamma Settings (5/96)

Revised: 5/20/96
Security: Everyone

System 7.5 Update 2.0: Monitors & Sound Gamma Settings (5/96)

Article Created: 9 April 1996
Article Reviewed/Updated: 20 May 1996

TOPIC -----

I have a Power Macintosh 7200/75 computer, System 7.5 Update 2.0, Apple Multiple Scan 15 Display. I recently upgraded to System 7.5.3 by installing the System 7.5 Update 2.0.

I am now using the Monitors & Sound control panel. If I change just the Gamma setting, a prefs file is not created and saved. Likewise, if there is an existing prefs file, it is not updated if I change only the Gamma setting. Why is this happening? How can I work around it?

DISCUSSION -----

We were able to reproduce this symptom using a Power Macintosh 7200/75 computer running System Update 2.0 and a 15 Inch Multiple Scan Display.

One workaround we discovered is that if you change both the Resolution as well as the Gamma settings in the Monitors & Sound control panel, it seems to lock in the setting after you restart the computer. This is one way to save the changes you have made.

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Tech Info Library Article Number:19828



Tech Info Library

CameraMan Screen Shots Fill Hard Disk (5/96)

Revised: 5/31/96
Security: Everyone

CameraMan Screen Shots Fill Hard Disk (5/96)

Article Created: 20 May 1996

TOPIC-----

My school purchased HyperCard 2.3.x, which came bundled with Multimedia Utilities & ADDMotion II from Motion Tool Works. Ever since this package has been installed, I have noticed that our available hard drive space has been decreasing rapidly. I have also noticed a frequent clicking sound coming from the computers while the students are using them.

DISCUSSION-----

This is caused by an extension called CameraMan. The CamerMan extension is installed as part of the Multimedia Utilities & ADDMotion II bundle, which is bundled with HyperCard 2.3.x. CameraMan is a product of Motion Tool Works.

CamerMan provides function key shortcuts for features like taking screen shots. These functions would otherwise require more complicated key combinations to execute.

The screen shot feature produces a camera shutter sound as it makes a PICT file of what appears on your screen. Since it only takes one key, students will start pressing the key frequently to produce the sound.

The resulting PICT files will be saved automatically at the top (root) level of your hard drive directory and be labeled "Picture 1". If you keep taking screen shots, you will get "Picture 2", "Picture 3", and so on. These files will eventually take up a significant amount of hard disk space.

CamerMan adds function key shortcuts for other procedures, as well. The function key shortcuts are documented in the following table.

Function Key	Action
=====	=====
F12	take screen shot (PICT)
F13	start recording QT sequence

F14	pause QT recording
F15	top QT recording

The extension can be turned off using the Extensions Manager control panel. To turn off the CameraMan extension, follow these steps.

Step 1

Choose Control Panels from the Apple Menu.

Step 2

Double-click the Extensions Manager icon to open it.

Step 3

Click on the check next to the Cameraman extension to turn it off.

Step 4

Restart your computer.

For additional information on CameraMan or other Motion Tool Works products, contact Motion Tool Works.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19829



Tech Info Library

AppleShare 4.2.1: File Server Cache Questions & Answers (5/96)

Revised: 5/21/96
Security: Everyone

AppleShare 4.2.1: File Server Cache Questions & Answers (5/96)

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Article Created: 21 May 1996

TOPIC -----

This article answers the following questions about AppleShare 4.2.1 cache.

- 1) How does AppleShare 4.2.1 displace files from cache. When cache is full, does one users file get removed when another user opens a file?
- 2) If numerous users open the same file, does that file get cached just once?
- 3) Any difference in icon and folder caching?

DISCUSSION -----

1) Question: How does AppleShare 4.2.1 displace files from cache. When cache is full, does one users file get removed when another user opens a file?

Answer: The AppleShare 4.2.1 cache has been completely redesigned. From the administrator perspective memory is now managed as a single block of memory. There are no longer barriers between one user's portion of cache and any other users.

While the administrator views memory as a single block of memory, that may grow, AppleShare manages it in smaller pieces. It tries to keep as much data in cache as possible. Three things need to happen before a file (or a portion of a file) is displaced from the AppleShare cache:

- A read request must come for data not already in cache.
- AppleShare will attempt to expand the size of its cache.
- The cache expansion request does not succeed because either physical memory is exhausted, or because of the way the administrator has configured cache.

The cache scheme being used is called least recently used (LRU) which is fairly

common. AppleShare examines its blocks of data, and data with the longest unused access time will be cleared out to make room for the new data coming from the disk.

2) Question: If numerous users open the same file, does that file get cached just once?

Answer: Yes, just once. That is the key to AppleShare's new performance. It now makes much better use of memory.

From the end user perspective security is still enforced, but assuming two user's both have access to the same file and are reading it at about the same time, it will only be read into memory once. If the file remains in memory and some time later another user requests the same file, no additional data will be read from disk (since it is already in the cache), this user will get the data more quickly than the first requestor.

Now a heavily used file may end up staying in the cache indefinitely on a server with plenty of memory.

3) Question: Any difference in icon and folder caching?

Answer: There are no significant difference that we are aware of. The data elements are smaller than for regular stored data. This means you can keep more of them in a block.

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Tech Info Library Article Number:19830



Tech Info Library

Network Server: Status Panel Number Descriptions (5/96)

Revised: 5/21/96
Security: Everyone

Network Server: Status Panel Number Descriptions (5/96)

Article Created: 21 May 1996

TOPIC -----

This article lists the more common values on the front status panel of the Network Server 500 and 700.

DISCUSSION -----

LCD System Action

510 The system has started the configuration manager.
511 The configuration manager has completed.
517 The system is attempting to mount the / (root) and /usr file systems.
538 The configuration manager is passing control to a configuration method
539 The configuration method has completed.
551 The system is attempting to varyon the root volume group.
553 The system has completed phase one of the boot process.
591 The system is configuring the Logical Volume Manager (LVM).
593 The system is configuring the low-function graphics terminal.
594 The system is configuring the rendering context manager.
704 The system is configuring a SCSI disk drive.
723 The system is configuring a CD-ROM or other SCSI device.
727 The system is configuring an asynchronous device.
731 The system is configuring a pseudo TTY.
811 The system is configuring the system planar (motherboard).
812 The system is configuring the standard I/O adapter.
814 The system is configuring the NVRAM.
821 The system is configuring the standard keyboard adapter.
823 The system is configuring the standard mouse adapter.
826 The system is configuring on-serial port 1.
828 The system is configuring the standard floppy disk adapter.
831 The system is configuring serial port 2.
868 The system is configuring the integrated SCSI adapter.
874 The system is configuring the graphics subsystem adapter.
921 The system is configuring a keyboard.

925 The system is configuring a mouse.

935 The system is configuring a 3.5-inch diskette drive.

9002 The system is configuring a SCSI-2 adapter.

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Tech Info Library Article Number:19831



Tech Info Library

DECK II and Power Macintosh 7xxx computers (5/96)

Revised: 5/21/96
Security: Everyone

DECK II and Power Macintosh 7xxx computers (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

This article describes an issue with the applicatin DECK II by Macromedia on some Power Macintosh 7xxx computers.

DISCUSSION -----

Macromedia has confirmed a problem with DECK II, a digital multi-track audio recording application, on some Power Macintosh 7200, 7500, and possibly 7600 computers.

The symptom is after recording a sound the audio tracks will not be in synchronizion. The audio tracks can be shifted manually to put them back in synchronization.

The issue occurs with any version of DECK II up to version 2.5.1. It occurs with either the 1/8" sound input jack or the RCA input jack. They have confirmed some Power Macintosh 7xxx computers do not exhibit this symptom.

Macromedia is investigating this problem and plans to have a resolution in a future software update of DECK II.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19832



Tech Info Library

AppleSearch: WAIS directory servers (5/96)

Revised: 6/4/96
Security: Everyone

AppleSearch: WAIS directory servers (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

The three WAIS directory servers that are configured for use with the AppleSearch WAIS Gateway are no longer available or are unreliable.

DISCUSSION -----

Here is a list of directory servers that from the comp.infosystems.wais news group:

```
:ip-name "wais.sdsu.edu"  
:tcp-port 210  
:database-name "SDSU-directory-of-servers"
```

```
:ip-name "archie.au"  
:tcp-port 210  
:database-name "au-directory-of-servers"
```

```
:ip-name "irit.irit.fr"  
:tcp-port 210  
:database-name "directory-irit-fr"
```

```
:ip-name "ds.internic.net"  
:tcp-port 210  
:database-name "resources"
```

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Tech Info Library Article Number:19834



Tech Info Library

Energy Saver: Empty Folders After Shutdown (5/96)

Revised: 5/22/96
Security: Everyone

Energy Saver: Empty Folders After Shutdown (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

I have a Power Macintosh 9500/120 running System 7.5.3. I frequently let the computer shut itself down using the Energy Saver control panel. When I restart, I have an empty folder on my hard disk that is named with the date and time of the shutdown. Is there something wrong?

DISCUSSION -----

There is nothing wrong with your computer. The Energy Saver control panel that comes installed on your computer contains a feature named "Document Auto-Save". The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application.

The computer saves these documents in the folder named with the date and time. In your case, the computer appears to be shutting down while no applications are running, so no documents are saved.

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Tech Info Library Article Number:19835



Tech Info Library

PowerBook Duo: Removing When Stuck In A Duo Dock (1/97)

Revised: 1/24/97
Security: Everyone

PowerBook Duo: Removing When Stuck In A Duo Dock (1/97)

Article Created: 14 May 1996
Article Reviewed/Updated: 24 January 1997

TOPIC -----

I have a PowerBook Duo that is stuck in its Duo Dock. It will not eject. I need to get it out. Is there a way to separate it from the Dock without breaking it?

DISCUSSION -----

There are a couple of different steps you should take to determine why a PowerBook Duo will not eject from a Duo Dock.

Step 1

Verify that the Duo Dock is plugged into a known working outlet and has power. Without power, the eject button will not work. If the DuoDock is making a clicking sound the power supply may failing. A failed power supply disables the electrical eject mechanism.

Step 2

Check the position of the lock on the left side of the unit. All Apple Duo Docks have a locking mechanism to deter theft. The lock should in the open position (turned towards the "open lock" icon). If the Duo Dock is locked, neither the electric nor manual eject buttons will eject the Duo.

Step 3

Verify that a monitor or other heavy object has not been placed on top cover of the dock. In some cases, heavy monitors can cause the upper case lid to bow, pinching the Duo inside the dock.

Step 4

You can manually eject the Duo from the Dock much like you can manually eject a

floppy disk. Take a key and insert it into the manual eject slot, located half-way back on the left side of the Dock. Push the key into the slot. This will disengage the Duo Dock locking mechanism. When the locking mechanism is released the Duo may need to be wiggled or nudged from side to side. Or you might try to gently push it further into the dock while holding the key which should release it.

Step 5

If the above steps fail take the unit to your Local Service Provider to have the Duo removed.

Article Change History:

24 Jan 1997 - Reworded for clarity.

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Tech Info Library Article Number:19836



Tech Info Library

StyleWriter Printers: Ink Cartridge Life Span (2/97)

Revised: 2/22/97
Security: Everyone

StyleWriter Printers: Ink Cartridge Life Span (2/97)

Article Created: 21 May 1996
Article Reviewed/Updated: 22 February 1997

TOPIC -----

This article provides the average life span, or yield, of the StyleWriter printer ink cartridges.

DISCUSSION -----

The table below gives you the average yield of the various StyleWriter ink cartridges.

Begin_Table

StyleWriter Model	Apple Part #	Yield
Color StyleWriter Pro		
Cyan	M1949G/A	210 pages at 7.5% coverage
Magenta	M1950G/A	210 pages at 7.5% coverage
Yellow	M1951G/A	210 pages at 7.5% coverage
High-Capacity Black	M3822G/A	600 pages at 5% coverage
Color StyleWriter 2400		
Color StyleWriter 2500		
Color Cartridge	M3328G/A	2000 pages at 7.5% coverage
Black Cartridge	M3240G/A	900 pages at 5% coverage

	Color Tank	M3329G/A	100 pages at 7.5% coverage	
+-----+				
	Black Tank	M3330G/A	100 pages at 7.5% coverage	
+-----+				
	PhotoGrade Ink Cartridge*	M5579G/A	45 pages	
+-----+				
	Color StyleWriter 2200			
+-----+				
	Color Cartridge	M3908G/A	2000 pages at 7.5% coverage	
+-----+				
	Black Cartridge	M3909G/A	3000 pages at 5% coverage	
+-----+				
	High-Cap Black 3-pk	M3910G/A	540 pages at 5% coverage	
+-----+				
	Color Tank 3-pk	M3911G/A	120 pages at 7.5% coverage	
+-----+				
	Black Tank 3-pk	M3912G/A	90 pages at 7.5% coverage	
+-----+				
	Color StyleWriter 1500			
+-----+				
	CMY Cartridge	M4609G/A	100 pages at 7.5% coverage	
+-----+				
	Black Cartridge	M8041G/C	500 pages at 5% coverage	
+-----+				
	StyleWriter I			
	StyleWriter II			
	StyleWriter 1200			
	StyleWriter 1500			
	Portable StyleWriter			
+-----+				
	Black	M8041G/C	500 pages at 5% coverage	
+-----+				

* The PhotoGrade Ink Cartridge is part of the PhotoGrade Print Kit available for the Color StyleWriter 2500. It should be used only with the special paper and software included in the kit.

End_Table

Article Change History:

22 Feb 1997 - Updated with PhotoGrade Ink Cartridge information.

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Tech Info Library Article Number:19837



Tech Info Library

Color OneScanner 600/27: Dispatcher Isn't Releasing RAM (5/96)

Revised: 5/21/96
Security: Everyone

Color OneScanner 600/27: Dispatcher Isn't Releasing RAM (5/96)

Article Created: 21 May 1996

TOPIC -----

I am using an Apple ColorOne 600/27 Scanner and the Dispatcher software. After scanning a document with Dispatcher, then closing the application, Photoshop will not open because of an Out of Memory error. I checked "About this Macintosh" and there is 10 MB of RAM missing. This is the amount allocated to Dispatcher. I had 55 MB of RAM allocated to Photoshop, and when I reduce the amount of memory Photoshop uses, it opens properly. I can also restart my Macintosh and then open Photoshop without changing the amount of RAM allocated to Photoshop.

DISCUSSION -----

We believe you encountered a ColorSync 2.0.1 problem that should be addressed in a future release of ColorSync. What is likely happening is a ColorSync PPC library code fragment is not getting unloaded. Although the memory fragment is small in size, if it is the middle of a large contiguous block of memory, then the "Largest Unused Block" of memory is reduced proportionately.

As you have discovered, the workaround is to quit the application then restart your Macintosh computer. To minimize the problem, minimize the launching. You should also quit the Dispatcher software before launching and working with your other applications that require a lot of RAM.

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Tech Info Library Article Number:19838



Tech Info Library

AppleShare 4.2.1: More Memory for File Server Program (5/96)

Revised: 5/22/96
Security: Everyone

AppleShare 4.2.1: More Memory for File Server Program (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

Does AppleShare 4.2.1 perform better if additional memory is allocated to the AppleShare File Server application?

DISCUSSION -----

No, with AppleShare 4.2.1 the AppleShare File Server application that you see in the Apple menu is really a facade application, and it does not really do the work of file sharing. The suggested memory allocation of 200K is all that is needed. There is no practical benefit from expanding the amount of memory for the application partition.

The file server program (strictly speaking, the File Server Extension) is an extension, and giving it more memory is not a finder operation. For more information on AppleShare File Server memory and cache, search for Technical Information Library article, "AppleShare 4.2.x: File Server Memory & Cache Usage."

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Tech Info Library Article Number:19840



Tech Info Library

Hebrew/Arabic LK Custom Remove Won't Reset Text Settings (5/96)

Revised: 5/21/96
Security: Everyone

Hebrew/Arabic LK Custom Remove Won't Reset Text Settings (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

The Custom Remove feature of the Hebrew or Arabic Language Kit Installer does not reset the Text control panel settings, if the System Direction is had previously been set at 'Right to left' and the cursor appearance is set to "split".

DISCUSSION -----

We tested the issue you describe by installing the Hebrew Language Kit, setting the control panel settings as you described, and then installing the Cyrillic Language Kit.

Steps To Reproduce

Step 1

Install Hebrew Language Kit.

Step 2

After restart, set System Direction to 'Right to left'.

Step 3

Set the cursor Appearance to 'split'.

Step 4

Remove Hebrew LK using the Installer.

Step 5

After restart, install the Cyrillic Language Kit.

The System Direction is still "Right to Left" and the cursor appearance is still "split". The Cyrillic Language Kit alone does not offer a way to reset these options.

Workaround

The workaround to this problem is to reinstall the Hebrew or Arabic Language Kit, and manually reset the System Direction and Cursor Appearance before custom removing it. Apple engineers are aware of this issue and are working to resolve it.

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Tech Info Library Article Number:19841



Tech Info Library

LaserWriter 16/600 PS: Font & Paper Tray PCL Commands (5/96)

Revised: 5/22/96
Security: Everyone

LaserWriter 16/600 PS: Font & Paper Tray PCL Commands (5/96)

Article Created: 22 May 1996

TOPIC -----

What are the commands to change character pitch, font, and the paper tray on the LaserWriter 16/600 PS using the TCP/IP UNIX environment?

DISCUSSION -----

The commands for changing the character pitch, font, and paper tray are HP PCL commands that need to be embedded in the text document from the UNIX workstation. The following PostScript code when downloaded to the LaserWriter 16/600 PS or LaserWriter Select 360 prints out a few pages of examples that provide the HP PCL escape sequences to obtain those samples:

```
%=====
% Begin PostScript code
%
/LaserJetIII /ProcSet findresource
/FontReport get exec
%
% End PostScript code
%=====
```

Note:

Prior to downloading the HP PCL escape sequences, if the printer's interface (parallel, serial, or Ethernet) is set for PostScript then it must be put into PCL5 emulation by including the following PostScript at the beginning of the print job:

```
%=====
% Begin PostScript code
%
currentfile /LaserJetIII statusdict /emulate get exec
%
% End PostScript code
```

%=====

As provided in the example pages that will be printed, the font and pitch selections are changed with the following escape sequences:

Note:

<esc> is the escape character in all of the following sequences.

Begin_Table

PCL Commands		What the PCL Command Does
<esc>(s#T		typeface selection (# corresponds to 1 of 4 typefaces available)
<esc>(slP		proportional spacing ON (Must be enabled for certain typefaces to be printed)
<esc>(s#H		pitch selection (# is usually 10 or 16.66 which is built-in)
		For paper tray selection
<esc>&l#h		to select a specific tray (l = lowercase L, and # corresponds to a number below)
		0 - source current (default)
		1 - upper tray
		2 - manual feed
		3 - manual feed envelope
		4 - lower tray
		5 - middle tray
		6 - envelope feeder

End_Table

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Tech Info Library Article Number:19842



Tech Info Library

Mac OS and the Year 2000 (6/96)

Revised: 1/20/97
Security: Everyone

Mac OS and the Year 2000 (6/96)

Article Created: 22 May 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

You may have wondered whether the clock in your Macintosh computer will continue to function into the next (twenty-first) century. Many stories have been circulated about computers not being able to handle dates past a certain year.

This article contains some questions and answers dealing with the Macintosh computer, Power Macintosh computer, and Mac OS and what will happen in the year 2000 and beyond.

- 1) Will the Mac OS have a problem with dates in the year 2000?
- 2) Why can I not set the date in the Date & Time control panel past the year 2019?
- 3) Is the year 2000 a leap year?
- 4) Will my Apple PC or DOS compatibility card be able to handle the year 2000?

DISCUSSION -----

- 1) Question: Will the Mac OS have a problem with the year 2000?

Answer: No. The Mac OS has always correctly handled dates between January 1, 1904 and February 6, 2040. The current Mac OS date and time utilities handle all dates between 30,081 B.C. and 29,940 A.D. All applications and system software which use the supplied Mac OS date and time utilities will have no problems with the year 2000. The only possible issues would come if an application does not use the routines supplied by the Mac OS for manipulating dates and times. If you believe you have such an application, please contact the manufacturer of that application for an update.

- 2) Question: Why can I not set the date in the Date & Time control panel past the year 2019?

Answer: The Date & Time control panel constrains the year to the range 1920 to 2019. This was done because the original Macintosh System 6 General control panel only displayed a 2-digit year. A programmer can set the date beyond 2019 by calling a Mac OS supplied routine. Apple expects to release a revised Date & Time control panel as part of Mac OS 8.

3) Question: Is the year 2000 a leap year?

Answer: The rule for leap years is that all years divisible by 4 are leap years, except those years divisible by 100. The exception is that years divisible by 400 are leap years. This means that 1800 and 1900 were not leap years, but the year 2000 is a leap year.

4) Question: Will my Apple PC or DOS compatibility card be able to handle the year 2000?

Answer: DOS supports years 1980 through 2099. Follow these steps to set the date:

DOS

From DOS, use the date command the DATE command.

Format the date as: mm-dd-yy for years 1980 - 1999, or mm-dd-yyyy for 1980-2099.

Windows 3.x

For Windows 3.x use the Date & Time Control Panel found in the Main Program group, Control Panel icon. Click the numbers and change with the arrows. Note the four digit year format can be selected in the International Control Panel.

Windows 95

For Windows 95 go to Start Menu, Settings, Control Panel, Date/Time and set the date and time there also by selecting the value and changing with arrows.

Newer applications should also not have a problem with full year dates (2xxx), check with the vendor or test the application.

Article Change History:

20 Jan 1997 - Added info about DOS card & combined with another article.

03 Jun 1996 - Made corrections for technical accuracy.

30 May 1996 - Added information on the Date & Time control panel.

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Tech Info Library Article Number:19843



Tech Info Library

HyperCard: Problem with Type 3 Error Opening Power Tools (5/96)

Revised: 5/24/96
Security: Everyone

HyperCard: Problem with Type 3 Error Opening Power Tools (5/96)

=====

Article Created: 24 May 1996

TOPIC -----

This article describes type 3 errors when opening the Power Tools stack installed with the MultiMedia Learning Tools Bundle.

When I open the Power Tools HyperCard stack I get a type 3 error. Is there a problem with the stack?

DISCUSSION -----

The Power Tools stack in this bundle has an issue with the GeneralPalette XCMD. The resolution is to replace the Power Tools stack. The latest Power Tools stack is available from the online Apple Software Updates locations in the updated HyperCard 2.3.5 Stacks. A Power Tools stack from HyperCard 2.3.x can also be used.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:19844



Tech Info Library

Adobe Acrobat and Multiple Master Fonts (5/96)

Revised: 5/23/96
Security: Everyone

Adobe Acrobat and Multiple Master Fonts (5/96)

=====

Article Created: 22 May 1996

TOPIC -----

In the Fonts folder of my PowerBook 5300cs computer I have Adobe Sans MM and Adobe Serif MM. Why do they not show up in the fonts menu of my word processor?

DISCUSSION -----

Adobe Acrobat is bundled with some of the new Apple Macintosh computers. It installs the substitution fonts Adobe Sans MM and Adobe Serif MM for rendering the fonts to create Portable Document Format (PDF) files. These fonts are called Multiple Master Fonts (MMF) and are not the standard type fonts that would show up in the fonts menu.

Multiple Master Fonts is a font technology that lets you create thousands of font instances, the way the character looks, from a single typeface. Multiple Master Fonts design includes one or more design axis; including weight, width, style, and optical size. This provides solutions to common but hard-to-fix page composition problems such as copy fitting that otherwise cannot be solved without artificially squeezing, stretching, or compromising the type.

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Tech Info Library Article Number:19845



Tech Info Library

Power Macintosh: Teleport Flash Update Fails PCI-Based (5/96)

Revised: 5/23/96
Security: Everyone

Power Macintosh: Teleport Flash Update Fails PCI-Based (5/96)

=====

Article Created: 22 May 1996

TOPIC -----

I tried to run Teleport Flash Update on my 7500 Power Macintosh computer, but it keeps telling me it "won't run on this Macintosh." Why does it run OK on my Quadra 800?

DISCUSSION -----

Description Of Issue

When attempting to run the flash updater for the TelePort Platinum on a Power Macintosh 7200, 7500, 8500, or 9500 series computer an error indicating the "Flasher will not run on this Macintosh" appears. The GlobalFax software version affected is 2.5.3 or higher.

Solution

- This issue has been fixed with firmware version 1.401 now available on all electronic forums.
- Customers must flash the TelePort Platinum modem on all non-PCI-based Macintosh computers.

Affected Products

The Global Village Teleport Platinum is the only modem affected by this issue. No other Global Village modem products (PowerPort 1xx, PowerPort 5xx/Duo, GlobalFax only, OneWorld) are affected.

Only Use Updater On External Modems

The most recent flash update for TelePort modems (1.401) was designed for use ONLY with external TelePort serial modems. Customers who attempt to run the TelePort flash updater 1.401 on their bundled internal TelePort PlatinumV (on

Macintosh Performa computers) will get an error message, and the Flasher application will not run at all.

Article Change History:

23 May 1996 - Added info about only using on an external modem.

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Tech Info Library Article Number:19846



Tech Info Library

Workgroup Server 9150/120 Has A Processor Fan (5/96)

Revised: 6/4/96
Security: Everyone

Workgroup Server 9150/120 Has A Processor Fan (5/96)

=====

Article Created: 22 May 1996

TOPIC -----

Workgroup Server 9150/120 has a processor fan. Does the Workgroup Server 9150/80 also require a fan?

DISCUSSION -----

The Workgroup Server 9150/120 has a processor fan. This processor fan is not necessary for a Workgroup Server 9150/80.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19847



Tech Info Library

Arabic Language Kit and Compound Words (5/96)

Revised: 5/23/96
Security: Everyone

Arabic Language Kit and Compound Words (5/96)

=====

Article Created: 21 May 1996

TOPIC -----

Customers may call to complain that they are lacking a "zero space/half space" feature, or that compound words are incorrectly run together when using SimpleText Persian with the Arabic Language Kit.

DISCUSSION -----

Some Arabic word processors support a feature which automatically inserts a space between compound words. SimpleText Persian does not offer this feature. At this time, users will have to supply this space manually using the space bar.

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Tech Info Library Article Number:19849



Tech Info Library

WorldWrite Registration and Product Sticker (5/96)

Revised: 5/23/96
Security: Everyone

WorldWrite Registration and Product Sticker (5/96)

=====

Article Created: 22 May 1996

TOPIC -----

I just purchased the Arabic Language Kit. The WorldWrite registration card asks me to attach a product sticker to the registration card and mail it in, but I did not receive a product sticker. What should I do?

DISCUSSION -----

If you are missing the sticker, just write in the name and order number of the product purchased. The WorldWrite registration card included with the Arabic Language Kit, Cyrillic Language Kit, and Hebrew Language Kit may call for this sticker. The order numbers for the language kits are as follows:

Begin_Table

Language Kit	Order Number
-----	-----
Arabic Language Kit	M4454Z/A
Cyrillic Language Kit	M4455Z/A
Hebrew Language Kit	M4453Z/A

End_Table

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Tech Info Library Article Number:19850



Tech Info Library

MAE 2.0: Cause of Segmentation Fault at Startup (5/96)

Revised: 6/4/96
Security: Everyone

MAE 2.0: Cause of Segmentation Fault at Startup (5/96)

=====

Article Created: 22 May 1996

TOPIC -----

MAE will fail to start, and an error in the shell that MAE starts from will contain one of these messages:

SOLARIS:
Segmentation fault, core dump.

HP-UX:
pid <number> rec'd a sigsegv for stack growth failure possibly causes:
insufficient memory or swap space or stack size exceeded maxssize. Segment
fault, core dump.

What is the cause and solution of the segment fault?

DISCUSSION -----

The first thing to check is that the user has the latest version of MAE (Currently 2.0.2). If the problem persists, it is due to the fact that the user has more than 591 characters in the PATH environment variable. The workaround at this time is the following:

Step 1

Start MAE up with the full path.
An example would be '/opt/apple/bin/mae'. This will allow MAE to startup without referring to the PATH environment variable.

Step 2

Reduce the PATH to less than 591 characters.

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Tech Info Library Article Number:19851



Tech Info Library

Powerbook: Multiple Scan Monitors No Image (5/96)

Revised: 5/28/96
Security: Everyone

Powerbook: Multiple Scan Monitors No Image (5/96)

=====

Article Created: 24 May 1996

TOPIC -----

I connected my Apple Multiple Scan 14 inch monitor to my PowerBook 5300c and my external monitor is not displaying an image. I have checked the cables and the same monitor and cable work fine with a desktop computer. The PowerBook has no problem with an external Apple 13 inch Color Display. Can you help?

DISCUSSION -----

This may be a timing issue. Apple's Multiple Scan monitors, and some other monitors, are designed with an energy saving feature. When no video signal is being sent to the monitor from the computer, the monitor will go into sleep mode to conserve energy. The PowerBook computer is designed to check if an external monitor is attached during start up, if the computer does not see the monitor it will not send out video signals to save energy.

If you turn on the monitor and let it go into sleep mode and then turn on the PowerBook computer you will get no image on the external display. Likewise, if you turn on the PowerBook first, then turn on the display after the PowerBook has already started up you will not get an image on the external monitor.

The proper way to power up is to turn on the monitor first and immediately turn on the PowerBook. The monitor will be on and awake when the PowerBook is starting up, so the PowerBook will recognize the monitor and send out video signals to the external monitor.

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Tech Info Library Article Number:19852



Tech Info Library

PacerTerm Print Issue to an Apple LaserWriter (5/96)

Revised: 5/23/96
Security: Everyone

PacerTerm Print Issue to an Apple LaserWriter (5/96)

=====

Article Created: 23 May 1996

TOPIC -----

Configuration: Macintosh running PacerTerm (3.10), DEC Mainframe (VT420 session). Printing to an Apple LaserWriter over the network.

Issue: When printing, the underlines come out as an Å. They are using the DEC Supplemental character set.

DISCUSSION -----

Getting underlines to print from the Macintosh VT terminal client (or any other VT terminal emulation client for that matter) is not trivial.

- Underlined text on the PacerTerm screen (or any VT terminal client) is created through standard VT escape sequences to start and stop underlining. In other words, when text is to be underlined, an escape sequence is sent by the host to start underlining, and another escape sequence is sent when underlining is to be turned off. These escape sequences are what is captured by PacerTerm in the session, so when the user selects print, these escape codes are in turn printed (this is most likely what the Å is).

- Printing underlines typically are handled easily by DEC line printers attached to the mainframe, or a terminal with a serial port. The DEC line printers are able to "interpret" the above mentioned escape sequences (or any other line drawing escape codes) and so can print underlines.

- PacerTerm supports serial printing via "AUX Printing" in the Terminal mode settings. You may be able to connect a DEC line printer to the Macintosh computer's serial port, though implementation could get quite messy. A program/driver would be needed to handle the printer session -- sending escape sequences to start and stop flow of the serial stream through the Macintosh computer's serial port.

- As a "shot in the dark," you may try to cut-and-paste the data to a Macintosh

word processor to see if the underlines come through.

The bottom line is that printing underlines is not possible from PacerTerm at this time. It's not an impossible feature to implement at the application level, but there would have to be some intelligence in the application to "note" which sections of text are underlined, and then integrate them with the calls made to the Mac OS Font Manager.

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Tech Info Library Article Number:19853



Tech Info Library

AIX: Logical Volume Manager Overview (5/96)

Revised: 5/31/96
Security: Everyone

AIX: Logical Volume Manager Overview (5/96)

=====

Article Created: 31 May 1996

TOPIC -----

This article contains an overview of the Logical Volume Manager in AIX.

DISCUSSION -----

Logical Volume Manager Overview

In a traditional UNIX environment, a hard drive is configured and formatted into distinct sections, called partitions or slices. A disk may be formatted to contain one or more of these partitions, each of which is empty and unassigned until used for a particular purpose. Most partitions later have some kind of file system created with them. These file systems can later be mounted somewhere under the root file system and accessed. Other partitions are deliberately left empty and used for system purposes, such as paging or swapping, or for specific applications such as Oracle, which use the empty space in an application specific way. Under this arrangement, a file can only be as large as the file system that contains it, which in turn can only be as large as the partition that contains it. The partition can never be larger than the single physical disk that contains it.

AIX has a way around these limitations. A traditional disk partition or slice in UNIX is replaced by something called a logical volume. The disk space that makes up a logical volume can span multiple disks, and be made up of blocks of non-contiguous space. Since a logical volume is not hard wired to a fixed amount of physical disk space, it can be dynamically enlarged without affecting the file system contained within it. That file system can then be enlarged later on to take advantage of the additional space added to the volume. Volumes can also be mirrored or striped for reliability or high speed access.

In AIX, an actual hard drive is known as a physical volume. Hard disks are grouped together to form volume groups. A volume group can contain one or more hard drives, and a hard drive can belong to only one volume group. The one thing all hard disks in a volume group have in common is, they all use the same size

unit of disk allocation space, which is called a physical partition. A physical partition can be anywhere from 1 to 256 MB in size. Physical partitions are the smallest units of space allocation on a physical disk. AIX comes with one default volume group, known as rootvg. All of the logical volumes necessary to boot and run the system are a part of rootvg. These volumes (and the file systems within them are):

Begin_Table

- /dev/hd4 '/' (root)
- /dev/hd2 /usr
- /dev/hd1 /home
- /dev/hd3 /tmp
- /dev/hd6 Paging space (not a file system)
- /dev/hd8 Journal File System log space (also not a file system)
- /dev/hd5 The boot logical volume (contains kernel, file system and other structures required to boot the system)
- /dev/hd9var /var

End_Table

A system can have many volume groups; all except for the rootvg are user defined and configured.

A logical partition is the same size as a physical partition; each one maps to an actual physical partition somewhere in the volume group. A logical volume consists of one or more logical partitions from within a volume group. Since logical volumes can be increased, it stands to reason that they can be expanded (the size of) one logical partition at a time. The default size of a logical partition in the rootvg (under Apple's version of AIX) is 16 MB. This logical storage method allows for a tremendous amount of storage capacity per system. The system limits are:

Begin_Table

- Volume groups 255
- Physical volumes 32 per volume group
- Physical partitions 1016 per physical volume, up to 256 MB each in size
- Logical volumes 256 per volume group
- Logical partitions 32,512 per logical volume

End_Table

Striping and Mirroring

One of the advantages to a logical storage management system is, striping and mirroring can be easily set up. Striping allows the data blocks that make up a file to be spread over two or more disks. The data blocks used in AIX striping are called stripe units; they can be 4K to 128K bytes in size. These stripe units (contained within logical partitions on different disks) allow parallel access to the data blocks of a file. This can greatly reduce file I/O access time.

Mirroring is when a logical partition maps to more than one physical partition with the same volume group (usually physical partitions on different physical volumes). All the logical partitions with a mirrored logical volume will be mapped to two, or possibly 3 different physical partitions. Mirroring can slow the performance of the logical volume, but it is very useful in cases where data redundancy and availability are critical.

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Tech Info Library Article Number:19854



Tech Info Library

System 7.5 Update 2.0 and CalComp (5/96)

Revised: 5/23/96
Security: Everyone

System 7.5 Update 2.0 and CalComp (5/96)

=====

Article Created: 23 May 1996

TOPIC -----

I installed System 7.5 Update 2.0, and now I have a conflict with CalComp's Drawing slate control panel version 1.9a. It crashes on startup or if the control panel is double-clicked.

DISCUSSION -----

CalComp Technical Support states version 1.9a of their software will work with System 7.5.3 if the CalComp software is reinstalled after upgrading to 7.5.3.

However, CalComp Technical Support recommends upgrading to version 2.0. It is available on their ftp site,

<ftp.calcomp.com>

or on their BBS, 714-236-3045.

On both locations, the file name is "adb20a.sea".

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Tech Info Library Article Number:19855



Tech Info Library

CalComp, Inc. (5/96)

Revised: 5/23/96
Security: Everyone

CalComp, Inc. (5/96)

=====

Article Created: 23 May 1996

CalComp Inc.

2411 West La Palma Ave.
Anaheim, CA 92801

800-225-2667 (800-CAL-COMP)

714-821-2000

FAX: 714-821-2832

Internet: <ftp.calcomp.com>

Bulletin Board: 714-236-3045

Company Profile:

A leading manufacturer of plotters, digitizes, and printers for the CAD and graphics markets.

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Tech Info Library Article Number:19856



Tech Info Library

Startup Disk Control Panel and Quadra 840AV (5/96)

Revised: 5/23/96
Security: Everyone

Startup Disk Control Panel and Quadra 840AV (5/96)

=====

Article Created: 23 May 1996

TOPIC -----

I have a Quadra 840AV and I just installed System 7.5 Update 2.0. Now, every time I use the Startup Disk control panel to choose the internal hard disk as the startup disk, it will start up from the external disk. My friend has a Centris 660AV and it does the same thing. What's wrong?

DISCUSSION -----

The difficulty you are experiencing is caused by an incompatibility between the Startup Disk control panel version 7.5.2, which is part of System 7.5 Update 2.0, and Quadra and Centris 660AV and 840AV computers.

This control panel writes information to the parameter RAM (PRAM) to identify the hard disk from which the computer will start up. In this case, the information is not being stored properly.

Because the control panel setting is not working, the computer will simply use the SCSI device with the highest SCSI ID to start up. An external device will typically have a higher SCSI ID than your internal hard disk (the internal hard disk that shipped with your Macintosh computer has a SCSI ID of 0).

There are currently two ways to work around this. First, you can use an older version of the Startup Disk control panel. Startup Disk control panel version 7.3.2, which comes with System 7.5 or System 7.5.1, will work without complications.

Secondly, you can reset the PRAM to reset the default startup disk to your internal hard disk. To reset the PRAM, restart the computer and hold down the Command (Apple), Option, P, and R keys. Wait for the computer to make its startup chime twice. You may then release the keys. Be aware that resetting the PRAM will reset such settings as the sound volume and mouse speed to their default value, and will purge the contents of a RAM disk if you are using one.

Apple is working on a newer version of the Startup Disk control panel that will fix this problem. We hope to have this control panel included in a future system software update.

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Tech Info Library Article Number:19857



Tech Info Library

At Ease for Workgroups: After Deleting Preferences (5/96)

Revised: 5/29/96
Security: Everyone

At Ease for Workgroups: After Deleting Preferences (5/96)

=====

Article Created 23 May 1996

TOPIC -----

Occasionally, At Ease for Workgroups administrators delete the At Ease preferences because they have forgotten the passwords. This article provides answers to questions administrators may have after they have deleted the At Ease preferences.

DISCUSSION-----

WHAT HAS HAPPENED TO THE ADMINISTRATOR NAME?

Q: I threw away At Ease Preferences because I forgot the administrator's password. What is the Administrator name now?

A: If you restart after trashing the At Ease Preferences file, then there is no administrator name, and there is no password. When you launch At Ease Setup you will not be asked for a name or a password.

WHICH SECURITY MENU OPTION?

Q: There are two options in At Ease Setup under the Security menu, Administrator Setup and Change Password. Which one should I choose to reset the Administrator information?

A: You should choose Administrator Setup. Here are the steps to reset the Administrator information:

Step 1

From the Security Menu, choose Administrator Setup.

Step 2

Double-click on "At Ease Administrator" in the Administrator Setup window.

Step 3

Type the new password in the Password field.

Note: Do not press the enter or return key after entering the password the first time; if you do, At Ease displays this error message:

"You must enter the same new password in both fields."

Step 4

Press the Tab key and enter the new password again

Step 5

Type a clue, if desired

Step 6

Click on the OK button.

Step 7

If you want to change the administrator name, do so by typing a new name into the Administrator Name field.

WHAT IF I ELECT TO USE CHANGE PASSWORD?

Q: What happens if I choose Change Password from the Security menu?

A: Use this option if you simply want to enter the main administrator's password and clue, but you don't want to change the administrator's name. The administrator name will remain "At Ease Administrator."

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Tech Info Library Article Number:19859



Tech Info Library

Apple PCI Token Ring Card: Does Not Work With LLC 2 (5/96)

Revised: 5/24/96
Security: Everyone

Apple PCI Token Ring Card: Does Not Work With LLC 2 (5/96)

=====

Article Created: 24 May 1996

TOPIC -----

I cannot seem to get 802.2 Logical Link Control version 2 (LLC 2) support when using Apple's PCI Token Ring card. I am using Attachmate's IRMA for the Mainframe 4.0.5. Attachmate tells me that Apple's PCI Token Ring card does not support this protocol. I tried to use the MacMainframe software and the LLC 2 section is grayed out.

What is wrong? Does the Apple PCI Token Ring Card not support LLC 2?

DISCUSSION -----

No, Apple's PCI Token Ring card does NOT support LLC 2. Apple has no plans at this time to add support for LLC 2.

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Tech Info Library Article Number:19861



Tech Info Library

AppleTalk Remote Access: PowerBook/Modem Configurations (6/96)

Revised: 6/7/96
Security: Everyone

AppleTalk Remote Access: PowerBook/Modem Configurations (6/96)

Article Created: 24 May 1996
Article Reviewed/Updated: 7 June 1996

TOPIC -----

How do I configure AppleTalk Remote Access (ARA) for various PowerBook computers, different versions of system software and different modems?

DISCUSSION -----

The following chart provides the set up data for ARA with different PowerBook and modem configurations listed in the following format:

Begin_Table

Computer model and modem type tested:	Others PowerBook models that should be compatible with this modem
---------------------------------------	---

Compatible system software version
PowerBook(PB) [setup] version: configuration
Express Modem (EM) version: configuration
CCL: Modem script selection
Port name in Remote Access Setup

PowerBook 170 with ExpressModem 2400: 100, 140

Sys 7.1	Sys 7.1
PowerBook v 7.1: Internal Modem	PowerBook v 7.1.2: Internal Modem
CCL: Apple Modem 2400	CCL: Apple Modem 2400
Modem Port	Modem Port

Sys 7.1	Sys 7.1
PowerBook v 7.1.3: Internal Modem	PowerBook v 7.3: Internal Modem
CCL: Apple Modem 2400	CCL: Apple Modem 2400
Modem Port	Modem Port

Sys 7.1
PowerBook v 7.1.2: Internal Modem
CCL: Apple Modem 2400
Modem Port

Sys 7.5
PB Setup v 7.3.1: Internal Modem
CCL: Apple Modem 2400
Modem Port

Sys 7.5
PB Setup v 7.3.1: Internal Modem
CCL: Apple Modem 2400
Modem Port

Sys 7.5
PB Setup v 7.3.1: Internal Modem
CCL: Apple Modem 2400
Modem Port

Sys 7.5
PB Setup v 7.3.1: Internal Modem
CCL: Apple Modem 2400
Modem Port

NOTE: These computers do not require the Express Modem control panel be installed.

PowerBook 180c with Express Modem 14400: 160, 165, 165c, 180

Sys 7.1
PowerBook v 7.1: External Modem
EM v 1.2.2
CCL: EM 14400
Modem Port -- Doesn't work

Sys 7.1
PowerBook v 7.1.2: External Modem
EM v 1.0.4
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PowerBook v 7.1.3: External Modem
EM v 1.1.2
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PowerBook v 7.3: NA
EM v 1.5.3
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PB Setup v 7.1.2: External Modem
EM v 2.0
CCL: EM 14400
Internal Modem -- Doesn't work

Sys 7.5
PB Setup v 7.3.1: NA
EM v 1.0.4
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: Normal
EM v 1.1.2
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: NA
EM v 1.5.3
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: NA
EM v 2.0
CCL: EM ARA 2.x
Internal Modem

Power Macintosh: Desktop models

Sys 7.1.2
EM v1.5.1
CCL: GeoPort Telecom
GeoPort

Sys 7.1.2
EM v2.0
CCL: GeoPort Telecom ARA 2.x
Modem or Printer port (the serial port
where modem is connected)

Sys 7.5
EM v1.5.1
CCL: GeoPort Telecom
GeoPort

Sys 7.5
EM v2.0
CCL: GeoPort Telecom ARA 2.x
Modem or Printer port (the serial port
where modem is connected)

PowerBook 520c: 520, 540, 540c

Sys 7.1
PBSetup v 7.3.1: Normal
PowerPort 500 v2.0.8

CCL: GV Mercury/Gold/Silver 1.0

Internal Modem

Sys 7.1
PBSetup v 7.3.1: NA
PowerPort for 500 & Duo series v 2.5:
Normal
CCL: GV Mercury/Gold/Silver 1.0 or GV
High Speed for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: Normal
PowerPort 500 v2.0.8:

CCL: GV Mercury/Gold/Silver 1.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: NA
PowerPort for 500 & Duo series v 2.5:
Normal
CCL: GV High Speed for ARA 2.0
Internal Modem

PowerBook 250: 210, 230, 270, 280

Sys 7.1
PowerBook v 7.1: External Modem
EM v 1.2.2
CCL: EM 14400
Modem Port -- Doesn't work

Sys 7.1
PowerBook v 7.1.2: External Modem
EM v 1.0.4
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PowerBook v 7.1.3: External Modem
EM v 1.1.2
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PowerBook v 7.3.1: NA
EM v 1.5.3
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.1
PowerBook v 7.3.1: NA
EM v 2.0
CCL: EM ARA 2.x
Internal Modem

Sys 7.5

Sys 7.5

PB Setup v 7.3.1: Normal
EM v 1.0.4
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

PB Setup v 7.3.1: Normal
EM v 1.1.2
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: NA
EM v 1.5.3
CCL: EM 14400 or EM for ARA 2.0
Internal Modem

Sys 7.5
PB Setup v 7.3.1: NA
EM v 2.0
CCL: EM for ARA 2.0
Internal Modem

End_Table

Article Change History:
07 Jun 1996 - Corrected spelling error.

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Tech Info Library Article Number:19862



Tech Info Library

Pioneer 4400 Laserdisc Player & Power Macintosh 8500 (5/96)

Revised: 5/24/96
Security: Everyone

Pioneer 4400 Laserdisc Player & Power Macintosh 8500 (5/96)

Article Created: 24 May 1996

TOPIC -----

My Power Macintosh 8500 computer crashes when using a videodisc controller HyperCard stack, Macromedia Authorware, or Director-based application . This software does not crash Macintosh computers other than the 8500.

Has something changed in PCI-based computers with system software or the serial controller that would cause a HyperCard XCMD, which has worked with 680x0- and PowerPC NuBus-based computers, to crash the 8500?

System Information

Power Macintosh 8500
System 7.5.2
Open Transport 1.0.8
SerialDMA patch installed
Serial Port Arbitrator not present

Here are the details

This computer's hard disk has been formatted using Apple formatting utilities, and I've installed new system software. No other third-party software is present on the hard disk except for the HyperCard stack.

When stack is launched and "initialize laserdisc" response is 'yes', the system crashes.

I have analyzed the code, and the following section is the part that calls the resource (in the stack resource fork) called "controlVideo" from HyperCard v2.3. Once the call is executed, the system crashes. This spot is marked with "--->>", and I believe this is where the crash occurs. Do you concur?

Begin_Table

Start of HyperCard Script below line

```
-----  
on initializeThePlayer  
  global diskIsInitialized  
  
  show background button "Initializing--Please Wait"  
  
  put line 1 to 8 of the script of this stack into PLAYER_LIST  
  sort items of PLAYER_LIST  
  put ShowList(PLAYER_LIST,return,"Please Select Correct Model  
Player.",false,"Select,No Disc,Go Home")into RESP  
  if line 1 of RESP is "Select" then  
    put item 1 of line 2 of RESP into PLAYER_TYPE  
    if PLAYER_TYPE is "Pioneer 8000" then put "Pioneer 4200" into PLAYER_TYPE  
    setvideoplayer PLAYER_TYPE  
--->>    controlVideo init  
    put videoStatus() into areYouThere  
    if areYouThere = "noAnswer" then  
      answer "The Player Must be Connected and Turned On.  Please check."  
      put false into diskIsInitialized  
-----
```

End of HyperCard Script above line

End_Table

Can you please tell me what is wrong.

DISCUSSION -----

Apple has discovered an issue with the way the serial laserdisc driver XCMDs access Open Transport 1.0.8 in System Software 7.5.2 with SerialDMA 2.0.2.

Fortunately, System 7.5 Update 2.0 fixes this crashing problem. You may have to rewrite the XCMD to talk to Open Transport 1.1 correctly. Voyager Corporation has an XCMD that is reported to work with a Power Macintosh 8500.

Check the Player

In troubleshooting this problem further, we discovered that a Pioneer 4400 player put out 7.5 volts on the RXD line to the Power Macintosh 8500 instead of the 5 volts as it should. We inserted a 1K ohm resistor in the RXD line of the Pioneer CC-04 cable and that fixed this issue.

We called Pioneer and we were informed Pioneer was aware that certain Pioneer 4400 players put out too much voltage. This was fixed in a revision to the player after 1994. The player Pioneer player we investigated was manufactured in August of 1992, its serial number starting with MH390.

We then tested a Power Macintosh 8500 with System 7.5 Update 2.0 installed, used HyperCard 2.3.5 with Voyager's Videodisc Toolkit version 2.3, and everything worked fine.

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Tech Info Library

AppleSearch 1.5 and Supported XTND Translators (5/96)

Revised: 5/25/96
Security: Everyone

AppleSearch 1.5 and Supported XTND Translators (5/96)

=====

Article Created: 25 May 1996

TOPIC -----

On my Apple Internet Server Solution (AISS) server, I'm getting Type 1 errors when trying to index four files created in Microsoft Word 6.0. When I have tried to index the files, my AppleSearch server hangs during indexing. What is wrong?

DISCUSSION -----

The AppleSearch server uses XTND translators to extract text from the files in its information sources. The following DataViz XTND translators are included with the AppleSearch product:

- MacWrite versions 4.5, 5.0, and II
- WordPerfect for Macintosh versions 1.0, 2.0, and 2.1
- Microsoft Word for Macintosh versions 3.0, 4.0, 5.0, and 5.1
- Microsoft Works (word processing) versions 2.0 and 3.0
- FrameMaker MIF versions 2.0 and 3.0
- PageMaker version 4.0
- Ragtime version 3.1
- AppleWorks
- WriteNow versions 2.0 and 3.0
- Nisus version 3.0
- PICT (text extraction only)
- Excel (tab text only, no formula)
- Microsoft Word for Windows versions 1.0 and 2.0
- WordPerfect for Windows version 5.1

If you try using later XTND translators, than what ship with AppleSearch, you may or may not have problems. Apple supports only those translators that ship with AppleSearch 1.5.

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Tech Info Library Article Number:19864



Tech Info Library

Troubleshooting A Hung CDE Interface (5/96)

Revised: 5/28/96
Security: Everyone

Troubleshooting A Hung CDE Interface (5/96)

=====

Article Created: 28 May 1996

TOPIC -----

This article describes some basic troubleshooting steps to follow when the Common Desktop Environment (CDE) you are using on your Network Server becomes hung up or frozen.

DISCUSSION -----

Overview

=====

There are times, especially when a Network Server is being set up, modified or configured, that the Common Desktop Environment (CDE) can get hung, or will slow down to the point where it is unusable.

Indications of this include:

- taking a very long time to log in or log off,
- applications not responding or not launching from the main panel,
- and dterm or smit sessions not starting.

Errors Caused by Changes to TCP/IP

Most of these symptoms are caused by changes, or errors in TCP/IP networking software, setup, or configuration. CDE is an X based application, and is particularly sensitive to changes or errors in the networking environment, including loss of network connection, an invalid or duplicate host name, setting up TCP/IP with the wrong network address, subnet mask, default router address, or incorrect DNS server. Any of these can keep CDE from starting, or, if the changes are made while CDE is running, can immediately "stall" the entire application.

These problems can be most easily avoided by making sure that all TCP/IP setup is correctly and permanently configured before starting CDE for the first time. Install_assist has numerous options for system configuration, including network

configuration. It is best to take the time and do all system configuration up front. If you have started using the system, choose "Command Line" or "Fail Safe" (a simple motif interface) login options rather than the default, which will launch CDE, until the system has reached it's final configuration and is stable. Remember, system configuration through smitty is always available in any environment.

If problems occur, the solution is to quit out of CDE, stop all networking services, correct the problem, and then restart networking, and finally CDE. If CDE is totally hung, it may still be possible to login over a serial terminal or through AppleTalk services. The following paragraphs describe various solutions, in increasing order of complexity.

Host Name Has Changed

=====

The simplest error to fix is that the host name has changed since the parent process of CDE (dtlogin) was started. The X variable, DISPLAY, will therefore be out of sync. Logging out of CDE, or killing the parent dtlogin, then restarting CDE, should be sufficient. (Lines starting with '#' are the actual commands to enter.)

Step 1

```
# ps -ef |grep dtlogin
```

```
root 2990 1 0 Apr 02  - 0.00  /usr/dt/bin/dtlogin -daemon
root 3516 2990 0 Apr 02  - 0.00  dtlogin <:0> -daemon
```

Step 2

```
# kill 2990
```

(Note that the dtlogin session killed is the one whose parent ID is '1', or init. Do not use a kill -9!)

Step 3

Repeat step 1 above, but grep for 'dtsession' instead of 'dtlogin'; kill it as in step 2, substituting the appropriate Process ID. (The process ID is the next numeric field following the name of the process owner.)

Then restart dtlogin and CDE:

```
# /etc/rc.dt
```

Solving More Serious Problems

=====

Step 1

Stop CDE, the parent dtlogin, and any remaining dtsessions as described above.

Step 2

```
# stopsrc -g nfs
(Stops nfs. Also stop other TCP/IP applications.)
```

Step 3

```
# ifconfig en0 down
(Brings down network interface.)
```

Step 4

```
# rmdev -l en0 -d
(Removes the network interface.)
```

If the entire CDE environment is potentially corrupted, you may need to do the following two steps. Otherwise, got to step 7.

Step 5

```
# mv /etc/dt /etc/dt.hold
(Removes all custom CDE components.)
```

Step 6

```
# mkdir /etc/dt
```

Step 7

At this point, using smit, completely reconfigure the networking interface and TCP/IP from the beginning. When you are done make sure that /etc/hosts and /etc/resolv.conf hold the correct information, and have no duplicate entries.

Step 8

Restart the system. This starts all networking daemons and X applications correctly. Before rebooting, you may also briefly test CDE by running /etc/rc.dt. (It is possible to just continue working after starting CDE, but the restart gives the best possible opportunity to start all networking services correctly.)

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Tech Info Library Article Number:19867



Tech Info Library

PowerBook Video Mirroring: Issues and Workarounds (5/96)

Revised: 5/29/96
Security: Everyone

PowerBook Video Mirroring: Issues and Workarounds (5/96)

=====

Article Created: 28 May 1996
Article Reviewed/Updated: 29 May 1996

TOPIC -----

This article describes all of the known issues with the video mirroring mode on PowerBook computer systems. Where possible, known workarounds have been provided.

DISCUSSION -----

What Is Video Mirroring And How Does It Work?

=====

Video mirroring is a feature provided on Macintosh PowerBook computers (it can also be used on some desktop Macintosh systems). If your PowerBook computer has an external monitor attached, you can use it to show the same images displayed on your built-in screen. This feature can be useful when you are making a presentation.

When an external monitor is connected to the PowerBook computer, video mirroring is by default "off" and the system is in normal "dual-screen" mode. To activate video mirroring, use the Video Mirroring Control Strip module or go to the PowerBook Display control panel.

When the PowerBook is in video mirroring mode, everything displayed on the primary device (usually the internal display) is then drawn again on the external device using the CopyBits routine (from the QuickDraw toolbox). The CopyBits routine copies a bitmap image from one region to another. If the two display devices are at different bit depths, then the image may have to be scaled down or dithered during the CopyBits process.

Video Mirroring Issues And Workarounds

=====

QuickTime Movies Are Slow And "Jerky"

When the PowerBook computer is in video mirroring mode, one video controller is having to draw everything twice. Because of this, QuickTime movies will not play back at the same frame rate as they will in a normal video mode.

To optimize QuickTime playback performance in video mirroring mode,

- set the color bit depth to 256 colors on both monitors
- keep the movie window size as small as possible
- turn off virtual memory

Issues With Presentation Applications

Slide presentation applications, such as Powerpoint and Persuasion, that make use of "fade and dissolve" type transitions may perform more slowly when in video mirroring mode. The same issues that cause QuickTime movie playback to be slow (see above) will also cause complex transition effects in slide presentation programs to be slow. With complex transitions, the amount of information for CopyBits to process increases dramatically, potentially causing a performance decrease. Simpler transition effects will cause less of a burden on the system.

Optimum performance can be achieved by using some of the following suggestions in the creation and delivery of the presentations:

- keep color settings to the minimum bit depth actually needed
- set both monitors to the same bit depth
- reduce use of animation transition effects to a minimum
- minimize use of complicated graphics
- minimize number of individual graphics per slide
- turn off virtual memory during presentations
- disable extensions that are not required during the presentation

Graphics Anomalies May Occur On A Mirrored Display

It is up to the application software to deal with multiple displays correctly. Some third-party software applications assume that displays can't overlap, and therefore don't make appropriate changes to all of the devices listed in the device list provided by toolbox routines such as GetDeviceList and GetNextDevice. This can result in screen regions getting updated on one display but not on the other when in video mirroring mode.

Although there is no Apple workaround for this type of problem (the third-party developer should address this in their software), you can usually choose which display will have the anomalies by making a particular display the "main" monitor. To do this, drag the menu bar onto the desired monitor icon in the Monitors control panel before activating video-mirroring mode. You may also need to drag the Happy Mac icon onto the desired monitor. To see the Happy Mac icon, hold down the Option key while the Monitors control panel is open. The anomalies will usually show up on the monitor that is NOT the "main" monitor. Also, setting both monitors to the same bit depth will reduce the chances of this happening.

Some applications, especially games, will draw directly to the screen instead of using Apple's QuickDraw routines to draw as normal. Drawing directly to the screen can be advantageous because it allows for faster speed and more direct control of timing. However, video mirroring mode exclusively uses QuickDraw routines to draw screen images twice. If a program is using non-QuickDraw routines to draw graphics, those graphics will appear corrupted on the device that is NOT selected as the "main" device in the Monitors control panel (discussed above) when video mirroring is active.

Most games will provide an option to turn QuickDraw graphics on or off instead of forcing the user to use non-QuickDraw graphics. Look in the Preferences section of the game for this setting.

Mouse Tracks with PowerBook 5300 & 190 Series

On PowerBook 5300 and 190 series computers, when in video mirroring mode, Mouse Tracks will only work on the internal PowerBook display. This is a current limitation of the PowerBook 5300 and 190 series computers. When in "dual-screen" mode, the cursor may leave cursor trails on the external monitor when Mouse Tracks is on. Until this is fixed, we recommend that you leave Mouse Tracks off when an external monitor is connected.

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Tech Info Library Article Number:19868



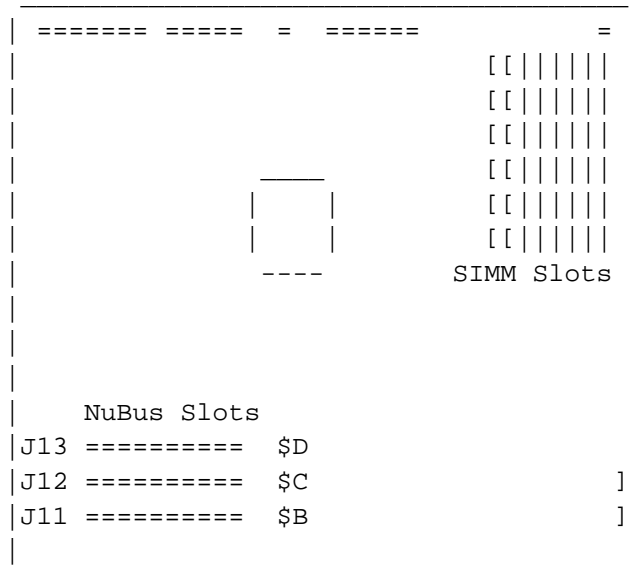
Revised: 5/28/96
Security: Everyone

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TOPIC -----

Discussion -----

PowerMacintosh 8100 / Workgroup Server 8150 Board Layout



CONNECTOR POSITION

J11

J12

J13

NUBUS SLOT ID

\$B

\$C

\$D

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Tech Info Library Article Number:19869



Tech Info Library

Apple IP Gateway 1.0.1: Read Me (12/96)

Revised: 12/11/96
Security: Everyone

Apple IP Gateway 1.0.1: Read Me (12/96)

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Article Created: 28 May 1996
Article Reviewed/Updated: 11 December 1996

TOPIC -----

This article is the Apple IP Gateway 1.0.1 ReadMe file.

DISCUSSION -----

This document provides late-breaking information not covered in the "Apple IP Administrator's Guide." It's a good idea to print this document and keep it with the guide.

This Read Me contains the following sections:

- INSTALLING THE GATEWAY ON NON-U.S. SYSTEMS
- USING MANUAL MACTCP ADDRESSES WITH APPLE REMOTE ACCESS CLIENTS
- TROUBLESHOOTING NETWORK ERRORS ON THE GATEWAY
- SETTING UP MULTIPLE GATEWAYS IN THE SAME ZONE
- TUNING THE APPLE IP GATEWAY
- LOCATING THE SNMP MIB FOR THE APPLE IP GATEWAY
- INSTALLING APPLE IP GATEWAY ON APPLESHARE 4.0
- INSTALLING APPLE IP GATEWAY ON OPEN TRANSPORT
- BUG FIXES/CHANGES IN THIS RELEASE

INSTALLING THE GATEWAY ON NON-ENGLISH LANGUAGE SYSTEMS

If you are installing the Apple IP Gateway on a non-English language Mac OS computer, you should run the Network Software Installer before proceeding with the rest of the installation process. See the section "International Users" in Chapter 2 of the "Apple IP Gateway Administrator's Guide" for details.

Apple recommends that you use Easy Install to install the gateway software on a non-English language Mac OS computer. If you use Custom Install, a message appears to warn you that continuing the installation replaces local-language versions of some AppleTalk system files (such as the Network control panel, AppleTalk, and EtherTalk) with English-language versions. If you click Continue,

the installation will replace all files with the same names as the files being installed. Thus, there may be two different versions of some AppleTalk system files on the startup disk—a local-language version and an English version. If you click Cancel, a message informs you that an error has occurred during installation, and the software on the startup disk was not changed.

USING MANUAL MACTCP ADDRESSES WITH APPLE REMOTE ACCESS CLIENTS

If an Apple Remote Access (ARA) client is using a manual (static) IP address, the ARA connection must be established before MacTCP is opened in order for TCP/IP application programs to work over the remote link. To ensure that MacTCP is not opened before the ARA connection, INITs that open MacTCP at startup of the Macintosh (such as SNMP TCP/IP Transport) should be removed from the user's system folder. Users who require such INITs must configure MacTCP to acquire an automatic (dynamic) IP address.

TROUBLESHOOTING NETWORK ERRORS ON THE GATEWAY

Network errors in the Gateway Information window (see the section "Monitoring the Gateway" in Chapter 3 of the "Apple IP Gateway Administrator's Guide" for details), may indicate that the domain name server (DNS) information is misconfigured on either the gateway machine or on client machines. If the gateway cannot find a DNS server, whether because the address is misconfigured or the server is unavailable, the gateway counts those failed attempts as network errors. If you do not have a DNS server, leave the DNS information blank in the MacTCP Administration window.

SETTING UP MULTIPLE GATEWAYS IN THE SAME ZONE

You can set up multiple Apple IP Gateways in the same AppleTalk zone. Doing so allows you to balance the gateway service load between multiple machines, as well as to provide service to an additional 253 users per gateway.

To set up multiple gateways, you must configure the gateway to provide automatic addresses only; you cannot use manual addresses with multiple gateways. Also, Power Macintosh clients will not be able to locate a gateway if there are multiple gateways in a zone. Only MacTCP clients on non-Power Macintosh machines will be able to locate a gateway if multiple gateways are in use.

Follow these steps to set up multiple gateways in the same zone:

- 1) Purchase another copy of the Apple IP Gateway and install it on another machine.
- 2) Set up the second gateway machine in the same zone as the original gateway.
- 3) Divide the automatic address range of the original gateway into two ranges. Configure the original gateway with one of these ranges and the second gateway with the remaining range.
- 4) Start both gateways.

Clients connect to the first gateway that responds. When a gateway has no more addresses to give out, it ceases responding, thus allowing another gateway to

respond to the client.

IMPORTANT: If you have Power Macintosh clients that need to access a gateway, do not set up multiple gateways in the same zone.

TUNING THE APPLE IP GATEWAY

If you are an experienced network administrator and would like to modify the gateway's internal parameters to suit your particular networking environment, you can obtain an Apple Business Systems (ABS) Technical Note that describes which parameters you can modify through use of a Macintosh software resource editor such as ResEdit. The document, entitled "IPGateway01 Tuning the Apple IP Gateway," is available through the following electronic sources:

- FTP: anonymous ftp to abs.apple.com, directory ~ftp/abs/
- AppleLink: through the path, Support/Developer Support/Developer Services/Technical Documentation/ABS Technical Notes
- Developer CD: Technical Documentation/ABS Technical Notes (on the reference library disk)

LOCATING THE SNMP MIB FOR THE APPLE IP GATEWAY

The gateway supports the SNMP MIB entitled "MacIP Management Information Base," which is available in the appendix of the "Apple IP Gateway Administrator's Guide" or electronically (in text form) on the "Apple IP Gateway Installer" disk 2, Network Management folder.

INSTALLING APPLE IP GATEWAY ON APPLESHARE 4.0

Apple IP Gateway installs Apple Shared Library Manager 2.0, which is not compatible with AppleShare 4.0. If you intend to run Apple IP Gateway and AppleShare 4.0 on the same Macintosh, upgrade to AppleShare 4.0.2 before installing the Apple IP Gateway.

INSTALLING APPLE IP GATEWAY ON OPEN TRANSPORT

Apple IP Gateway cannot be installed on a machine running Open Transport.

BUG FIXES/CHANGES IN THIS RELEASE

- Two clients connected to the same IP Gateway can talk to each other.
- The IP Gateway now works with external SCSI Ethernet devices.
- The Gateway does not allow the user to enter overlapping Static and Dynamic address ranges.
- The Gateway detects when a client with a static IP address changes its AppleTalk address as may occur when the client restarts.
- The Gateway Manager displays Macintosh names and AppleTalk addresses sorted in the correct order.
- A problem with Balloon help was fixed.

Article Change History:

11 Dec 1996 - Actual Read Me file.

04 Jun 1996 - Updated article format.

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Tech Info Library Article Number:19870



Tech Info Library

Substitution Fonts For Acrobat Or Adobe Type Manager (5/96)

Revised: 5/28/96
Security: Everyone

Substitution Fonts For Acrobat Or Adobe Type Manager (5/96)

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Article Created: 28 May 1996

TOPIC -----

I just installed Quick Draw GX on my PowerBook 5300 and now when I start up I get a message that says "The Substitution fonts necessary for Acrobat or Super Adobe Type Manager are missing. Please reinstall either software package". What does this mean and what should I do to correct the problem?

DISCUSSION -----

You need to run the Acrobat installer. It is located on the Hard Disk in the following location: Applications *f* -> Adobe Acrobat Reader 2.0.*f*. The icon labeled AcroRead.Mac is an installer. Double click it to install the required fonts. After the installation, restart the PowerBook and you will not get the error message any longer.

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Tech Info Library Article Number:19871



Tech Info Library

ColorSync 2.0.1: Version Information (5/96)

Revised: 5/28/96
Security: Everyone

ColorSync 2.0.1: Version Information (5/96)

=====

Article Created: 28 May 1996

TOPIC -----

What changes were made in ColorSync version 2.0.1?

DISCUSSION -----

The following changes were included in ColorSync version 2.0.1

Fixed several minor bugs relating to color conversion

- The default CMM did not produce correct results in the case of setting up a matching session with 3 or more profiles with absolute rendering intent.
- Default CMM did not handle bitmaps/pixmaps with rowbytes larger than 200K bytes per scan line correctly.
- With acceleration component installed, ColorSync did not switch among multiple active color worlds properly.
- Postscript related functions returned paramErr if a value other than 1 or 2 was passed to the "flag" field. Since the "flag" field is defined as "reserved", ColorSync will not check the value passed in that field in 2.0.1 release.
- CMXYZtoFixedXYZ color conversion function did not produce correct results.
- LabToXYZ color conversion returns wrong color when perform conversion in place.
- LuvToXYZ color conversion function did not clip underflow errors correctly.

Changed Files

The only changed file is the ColorSync system extension. The control panel,

profiles, and interface files are the same as 2.0 release.

New Files

AppleVision 1710 - 9300
Apple Multiple Scan 14
Apple Multiple Scan 1705
Apple Multiple Scan 15

ColorSync 2.0.1 is included in the following disk sets:

SW 1200 v 2.1.2
CSW 1500 v 2.2
CSW 2200 v 2.1.2
CSW 2400 v 2.1.2
CSW 2500 v 2.2.

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Tech Info Library Article Number:19873



Tech Info Library

Mac OS 7.5.3 Revision 2: Overview & Installation (8/96)

Revised: 10/14/96
Security: Everyone

Mac OS 7.5.3 Revision 2: Overview & Installation (8/96)

Article Created: 29 May 1996
Article Reviewed/Updated: 5 August 1996

TOPIC -----

This article is the Macintosh System 7.5.3 Revision 2 Overview and Installation file.

DISCUSSION -----

Who should install System 7.5.3 Revision 2?

Apple is recommending that only customers with specific system software and Macintosh computers update their systems with System 7.5.3 Revision 2. There is no benefit for other customers.

The only systems which will benefit from System 7.5.3 Revision 2 are as follows:

- All PowerBook systems using Connectix RAM Doubler
- All PowerBook 5300 and PowerBook Duo 2300 systems
- All PowerBook 200 or 500 Series systems which have been upgraded with the Macintosh PowerBook Processor Card Upgrade Kit with PowerPC (or upgraded with similar third party products).
- All Macintosh 7200, 7500, 7600, 8500, and 9500 systems

You should install System 7.5.3 Revision 2 only if you have a computer with System 7.5.3 installed or a PowerBook with System 7.5.2, PowerBook Enabler 1.2 or later installed. To find out what system software version your computer is using, follow these steps:

1. Make sure you are in the Finder.
2. Choose About This Macintosh from the Apple menu.
The system software information is in the About This Macintosh window.

What is System 7.5.3 Revision 2?

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System 7.5.3 Revision 2 is a set of system software enhancements that improves the reliability and performance for the computers described above.

When you install System 7.5.3 Revision 2, you get the following enhancements:

- Better reliability for PowerBooks using RAM Doubler
If you have a PowerBook using system software 7.5.3, and use RAM Doubler (version 1.6.1 or earlier), you may have experienced a problem when waking your PowerBook from sleep. This software fixes this problem.
- Overall performance enhancements for PowerBook 2300 computers and PowerBook 500 or Duo series computers with the PowerPC Upgrade Card installed.
- Improved reliability when using PC-formatted floppy disks with PowerBook 500 series or Duo series computers with the PowerPC Upgrade Card installed.
If you have a PowerBook 500 series or Duo series computer with the PowerPC Upgrade Card installed, PC-formatted floppy disks that were formatted on your computer may be unreadable in DOS or Windows computers. This software fixes this problem.
- Improved reliability on PCI-based computers (Macintosh 7200, 7500, 7600, 8500, and 9500 computers) and PowerBook 5300 computers, PowerBook 2300 computers, and PowerBook 500 or Duo series computers with the PowerPC Upgrade Card installed.
- Improved reliability when copying files to a 1 gigabyte hard disk.
If you have a PCI-based computer with a 1 gigabyte drive, this software helps avoid problems when copying files to the hard disk.
- Improved reliability when using the Startup Disk control panel.
In rare instances, when you turn on a PCI-based Power Macintosh computer it may not start up from the disk selected in the Startup Disk control panel. This software fixes this problem.

Before you Install

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Note that if you have an AppleVision monitor, you should install "AppleVision for System 7.5 Update 2.0 fix version 1.0" before you install this update.

When you install this software, an extension called Startup Tuner is installed in your Extensions folder. This extension ensures that your computer will correctly start up from the disk selected in the Startup Disk control panel.

It is recommended that you run the Disk First Aid application found on the "Disk Tools" disk that shipped with your computer. Double-click the Disk First Aid icon and follow the instructions on the screen. Disk First Aid checks your hard disk for problems. If you have a problem using Disk First Aid, see the manual

that came with your computer.

Installing System 7.5.3 Revision 2

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Before you install System 7.5.3 Revision 2, your computer should have System 7.5.3 installed or System 7.5.2, PowerBook Enabler 1.2 or later installed. To find out what system software version your computer is using, follow the steps in "Who should install System 7.5.3 Revision 2" above.

Follow these steps to install System 7.5.3 Revision 2:

1. Open the Extensions Manager control panel.
2. Choose either "System 7.5.3" or "System 7.5.2" from the Sets pop-up menu (one of these two choices will appear, depending on the version of system software your computer is using).
3. If you have third-party peripherals that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, alternative input devices, network card drivers, and removable media.)
4. Restart your computer.
5. Insert the System 7.5.3 Revision 2-1 disk into the floppy disk drive, and double-click its icon to open it.
6. Double-click the Installer icon to open it.
7. After you read the licensing agreement, click Agree to continue with the installation.
8. Make sure that the destination disk indicated on the screen is the one on which you want to install system software. If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.
9. Click Install.
10. Follow the instructions on the screen. On-screen messages tell you when you need to insert the other disk.
11. When the installation is complete, Click Restart to restart your computer.
12. Use the Extensions Manager to turn on additional extensions (you'll need to restart your computer for the extensions to work). If you encounter problems, choose the set of extensions you chose before the installation (see step 5), restart your computer, then turn on extensions one at a time to determine if one of them is incompatible.

Article Change History:

05 Aug 1996 - Removed keyword.

18 Jul 1996 - Replaced entire discussion with current information.

10 Jul 1996 - Added keyword.

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Tech Info Library Article Number:19875



Tech Info Library

AISS and Drag Installation (5/96)

Revised: 5/29/96
Security: Everyone

AISS and Drag Installation (5/96)

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Article Created: 29 May 1996

TOPIC -----

I was installing the Apple Internet Server Solution (AISS) software with the AISS 2.0 CD this week, and found a minor problem. In the RealAudio Server 1.0 folder, there is a folder pointing to the RealAudio folder, requesting that it be put in the Preferences folder.

When I placed it there and attempted to start the management application, I got an error. What is wrong?

DISCUSSION -----

The RealAudio folder should be placed in the Extensions folder, rather than the Preferences folder. If you place the RealAudio folder there, RealAudio should work properly.

Also, if you use the installer instead of drag installing, you will not experience this issue. This is because the installer places the RealAudio folder (and other AISS software) in the correct location.

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Tech Info Library Article Number:19876



Tech Info Library

QuickTime: Frequently Asked Questions (FAQ) (5/96)

Revised: 5/29/96
Security: Everyone

QuickTime: Frequently Asked Questions (FAQ) (5/96)

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Article Created: 24 May 1996

TOPIC -----

Where can I find out more about QuickTime software and developer information?

DISCUSSION -----

A comprehensive internet site containing this information can be found at:
<http://www.QuickTimeFAQ.org/>

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Tech Info Library Article Number:19877



Tech Info Library

MacTCP -> Open Transport (7/96)

Revised: 7/3/96
Security: Everyone

MacTCP -> Open Transport (7/96)

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Article Created: 29 May 1996
Article Reviewed/Updated: 3 July 1996

TOPIC -----

I upgraded my non-PCI Macintosh with Open Transport. How do I configure the TCP/IP control panel so it uses my old configuration?

DISCUSSION -----

Open Transport is Apple's new networking architecture which provides support for AppleTalk and TCP/IP protocols. Users with other network protocol stacks should seek assistance from the software vendor.

AppleTalk

Open Transport replaces the Network control panel with the AppleTalk control panel.

1 - Set the "Connect via" menu in AppleTalk control panel to the network interface you used in the "Network" Control Panel.

Network ->	AppleTalk
-----	-----
LocalTalk	Printer port
EtherTalk	Ethernet
Remote Only	Remote Only

NOTE: Token Ring is currently unsupported. Since there are no PCI Token Ring cards, obviously there will be no selection.

NOTE: LocalTalk can be used with the modem port. Remember to move your connector to the modem port if you use this selection.

2 - Set "current zone" in AppleTalk control panel to "current zone" from "Network" Control Panel

3 - Close the control panel for changes to take effect.

In "AppleTalk" Control Panel provides additional features, please see your documentation for more information.

TCP/IP

Open Transport replaces the "MacTCP" control panel with "TCP/IP" control panel.

NOTE: Some installer will automatically configure Open Transport to your old MacTCP settings.

MacTCP supported many configuration methods. Depending on the method MacTCP used, use the following steps:

- MacTCP Interface = Localtalk, Ethertalk, Remote Only
Obtain address = server

1 - Set "Connect via" menu to "AppleTalk (MacIP)" in "TCP/IP" control panel.

2 - Set "Configure" menu to "Using MacIP Server"

3 - Set "MacIP server zone" to the zone selection from "MacTCP" control panel.

4- Close the "TCP/IP" control panel for changes to take effect.

- MacTCP Interface = Localtalk, Ethertalk, Remote Only
Obtain address = manually

1 - Set "Connect via" menu to "AppleTalk (MacIP)" in "TCP/IP" control panel.

2 - Set "Configure" menu to "Using MacIP Manually"

3 - Set "MacIP server zone" to the zone selection from "MacTCP" control panel.

4 - Copy "IP address" and "Subnet mask" from "MacTCP" control panel to "TCP/IP" control panel.

5 - Copy "Domain Name" from "Domain" that was selected as "Default" in "MacTCP" control panel.

6 - Copy "Router address" from "Gateway Address" in "MacTCP" control panel.

7- Copy "Name server addresses" from the "IP address" entries in "Domain Name Server Information.

8 - Close the "TCP/IP" control panel for changes to take effect.

- MacTCP Interface = Ethernet
Obtain address = manually

1 - Set "Connect via" menu to "Ethernet" in "TCP/IP" control panel.

2 - Set "Configure" menu to "Manually"

3 - Copy "IP address" and "Subnet mask" from "MacTCP" control panel to "TCP/IP" control panel.

4 - Copy "Domain Name" from "Domain" that was selected as "Default" in "MacTCP" control panel.

5 - Copy "Router address" from "Gateway Address" in "MacTCP" control panel.

6- Copy "Name server addresses" from the "IP address" entries in "Domain Name Server Information."

7 - Close the "TCP/IP" control panel for changes to take effect.

- MacTCP Interface = Ethernet
Obtain address = server

1 - Set "Connect via" menu to "Ethernet" in "TCP/IP" control panel.

2 - Set "Configure" menu to "Using BOOTP" or "Using RARP". You may need to ask your network administrator which network server is in use.

3- If you choose RARP, the server will provide only an IP address.

4- Close the "TCP/IP" control panel for changes to take effect.

Note: Obtain address "dynamically" is no longer supported in any fashion. Apple recommends the use of manual addressing, or adoption of a network configuration protocol such as RARP, BOOTP, or DHCP.

Note: TCP/IP also adds support for configuration via DHCP, a feature not offered in MacTCP.

Article Change History:

03 Jul 1996 - Corrected typographical error.

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Tech Info Library Article Number:19878



Tech Info Library

Powerbook 2300: Dock Issue W/Third-Party Ethernet Cards (5/96)

Revised: 5/29/96
Security: Everyone

Powerbook 2300: Dock Issue W/Third-Party Ethernet Cards (5/96)

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Article Created: 29 May 1996

TOPIC -----

I just purchased a Macintosh Powerbook 2300 (Duo) series computer. When I put it in my Duo Dock Ethernet does not work. It works fine with my PowerBook Duo 230 computer. What could be wrong?

DISCUSSION -----

It is possible that some non-Apple (third-party) Ethernet NuBus cards installed in a Apple Duo Docking stations will not work with the PowerBook 2300 series computers even if they work with all other PowerBook Duo computers.

In contrast, the Apple Ethernet NB card (M0417LL/B) works with all models of PowerBook Duo computers including the 2300 series. It is possible that some third-party Ethernet board manufacturers may not have followed the Apple design specifications closely enough, resulting in some problems with the 2300 series.

If you have a non-Apple Ethernet card in your Duo Docking station that is not working with a PowerBook 2300 series computer, you should contact the vendor of that NuBus Ethernet board/card for more information concerning compatibility.

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Tech Info Library Article Number:19880



Tech Info Library

Power Macintosh and GeoPort Troubleshooting Steps (5/96)

Revised: 5/29/96
Security: Everyone

Power Macintosh and GeoPort Troubleshooting Steps (5/96)

Article Created: 29 May 1996

TOPIC -----

I just got my GeoPort Telecom Adapter version 2.x for my Power Macintosh computer and I cannot get it to work. What do I do?

DISCUSSION -----

Before you use an online service, terminal software, or Internet connection software make sure the modem software is working. As a test, send the "My First Fax" document to someone. If Faxing the document does not work, here are some troubleshooting steps you can use to get your GeoPort Telecom Adapter working:

Step 1

Make sure you have the correct version of the Apple Telecom software installed on your computer. Apple recommends Apple Telecom v2.3.2 or later, and this software can be found online at Apple Computer's software update locations.

Step 2

Check the physical connections of the GeoPort Telecom Adapter.

- The GeoPort Telecom Adapter should be connected to the computer's modem port.
- The telephone cable should be connected to the GeoPort Telecom Adapter's RJ11 jack with a telephone jack icon.
- Optional, a telephone can be connected to the GeoPort Telecom Adapter's RJ11 jack with a telephone icon.

Step 3

Make sure that your settings in the Express Modem control panel are set appropriately.

- Express Modem is turned on.
- Under advanced options set the progress sounds to keep on until carrier.

NOTE: This is for troubleshooting purposes only. It will leave the speaker on until the carrier is established. After you have verified that the modem is functioning, you may select another option more suitable to you.

Step 4

Delete the following preferences

- Express Modem Preferences
- Fax terminal Log
- Fax terminal prefs
- Fax viewer prefs
- Finder prefs
- GeoPort teltool prefs

Step 5

Clear the parameter ram.

- Turn machine off.
- Restart machine and hold down option-command-p-r keys.
- Keep keys held down until you hear at least two startup chimes.

Step 6

Make sure AppleTalk is set to inactive in the AppleTalk control panel on the PCI based Power Mac computer models (7200, 7500, 8500 or 9500).

Step 7

Turn on only the extensions needed to run the GeoPort and restart the machine

- Use the extensions manager to select the system set
- Turn on fax extension, fax sender, telephone manager, and express modem.

Step 8

Upon restarting your machine, make sure the GeoPort and Fax extensions load. During startup the fax extension appears as a fax with a piece of paper rolling out of it and the geoport extension is a telephone with buttons that will flash. If either of these do not appear, appear with an X over them, or are dark and do not show animation try turning on just the geoport extensions listed in step 6. If they continue to not load at startup, delete and reinstall the Apple Telecom software.

Step 9

Disconnect and reconnect the GeoPort Telecom Adapter from the back of the computer while it is turned on. This will reset the GeoPort.

Step 10

Delete and reinstall the Apple Telecom software.

Step 11

Try another phone jack. Make sure that it is an analog line as opposed to a digital line. Analog lines have been the standard for sometime in telephone or voice signal. However, digital lines are being installed for use as well.

Step 12

Clean install the system software and then install the Apple Telecom software.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:19881



Tech Info Library

MacTest Pro for Power Macintosh Read Me (5/96)

Revised: 5/30/96
Security: Everyone

MacTest Pro for Power Macintosh Read Me (5/96)

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Article Created: 29 May 1996

TOPIC -----

This article is the MacTest Pro for Power Macintosh Read Me file.

DISCUSSION -----

The February 1996 Macintosh Family Diagnostics Update Mailing includes separate CD's, diskettes, and User's Guides for MacTest™ Pro for Power Macintosh, and for MacTest Pro for 680x0-based Macintosh computers.

The information in this READ ME file refers to MacTest Pro for Power Macintosh, and is effective as of 02/21/96. This file contains important information about the MacTest Pro for Power Macintosh application, its test modules, and the MTP Emergency (PPC) application. This information supersedes some sections of the MacTest Pro for Power Macintosh User's Guide (073-0414-A).

WHAT'S NEW

- MacTest Pro for Power Macintosh v1.0 and MTP Emergency (PPC) v1.0 are designed to launch only on Power Macintosh computers; these applications will not launch on 680x0-based Macintosh computers. Use the MacTest Pro v1.3 and MTP Emergency v1.1 applications to diagnose 680x0-based Macintosh computers.
- For Macintosh Quadra and Centris computers upgraded with the Power Macintosh Upgrade Card, and for Macintosh 630 series, LC 475, LC 575, and Quadra 605 computers upgraded with the Macintosh Processor Upgrade Card, use MacTest Pro v1.3 (for 680x0-based machines) with the Power Macintosh Upgrade Card Tests module, and use MTP Emergency v1.1.
- The new test modules which run only with MacTest Pro for Power Macintosh have the suffix "(PPC)" to distinguish them from the test modules which run only on 680x0-based Macintosh computers.

- A new test module, "Serial Loopback Tests (PPC)", replaces the functionality of the "Communication Ports Tests" in the previous version of MacTest Pro.
- The "DOS Compatible Card Tests" and the "MacTest Pro Help" modules have not yet been converted for MacTest Pro for Power Macintosh; the CPU-specific test modules which are 680x0-based will not be converted; there are no plans at this time to convert "Modem Tests"; the "Machine Checker " test module is undergoing major design changes for Power Macintosh, and is not yet available.
- The Display Service Utility v1.0 is included on the MacTest Pro for Power Macintosh CD and on the "MacTest Pro (App+Mods2 PPC)" disk.

BOOTABLE MACTEST PRO FOR POWER MACINTOSH CD

The MacTest Pro for Power Macintosh CD v1.0 is bootable on almost all Power Macintosh computers. Instructions for booting from the CD are included in the CD Guide booklet. Electronic copies of current documentation and the most recent System Software Enablers are provided on the CD.

Note that you may launch MacTest Pro for Power Macintosh, MTP Emergency (PPC), and the printer and display utilities from the CD whether or not you to boot from the CD. Refer to the electronic document "How to Use this CD" located on the CD for more information.

BOOTABLE DISKS

Two of the four disks in the MacTest Pro for Power Macintosh disk set are BOOTABLE emergency startup disks. Please review the information below and refer to the labels on the emergency disks to determine which disk to use for the machine you are testing. The MTP Emergency (PPC) application is the same on both of the bootable disks. Instructions for using the MTP Emergency (PPC) disks are included in the "Using the MTP Emergency (PPC) Disks" section of the MacTest Pro for Power Macintosh User's Guide.

- Use the "MTP Emergency (PCI PPC)" disk with the following computers: Power Macintosh 7200, 7500, 8500 and 9500 series, and PowerBook 5300 and 2300 series. This disk contains the MTP Emergency application, System 7.5.2, and required enablers.
- Use the "MTP Emergency (NuBus PPC)" disk with the following computers: Power Macintosh 6100 series, 7100 series, 8100 series, Performa 6100 series, Apple Workgroup Servers 6150, and 8150. This disk contains the MTP Emergency (PPC) application, System 7.5, and required enablers.

NOTE: The Apple Workgroup Server 9150 requires different system software than

what is provided on either of the MTP Emergency (PPC) disks. To create a bootable

emergency disk for this computer, please refer to the instructions included

in the

electronic document "How to Make Floppy Disks", which is located in the "Build Diskettes" folder on the MacTest Pro for Power Macintosh CD.

NOTE: For the Performa 6200 and 6300 series, and for the Power Macintosh 5200 and 5300 series, you must boot from the Apple Macintosh CD which came with

the computer. Then launch MTP Emergency (PPC) from the "MTP Emergency (NuBus PPC)" disk. (It is not possible to create a bootable MTP Emergency (PPC)

disk for these computers, due to the size of system software.)

NONBOOTABLE DISKS

Two of the four disks in the new MacTest Pro for Power Macintosh disk set are nonbootable: they do not contain System files.

- "MacTest Pro (App+Mods1 PPC)" contains the MacTest Pro for Power Macintosh application, the commonly used CPU and peripheral test modules, Hardware Info, Software Info, and the READ ME and VERSION INFO files.
- "MacTest Pro (App+Mods2 PPC)" contains the MacTest Pro for Power Macintosh application, tests for serial ports and cards, as well as printer and display utilities.

OPERATING TIPS - WORKAROUNDS - KNOWN BUGS

The "Operating Tips - Workarounds - Known Bugs" listed here are either new with this release or represent issues that all MacTest Pro for Power Macintosh users MUST be aware of. An electronic copy of the most recent User's Guide is included in the "Documentation" folder on the MacTest Pro for Power Macintosh CD.

... Display Service Utility ...

Display Service Utility is not a test module; it is a stand-alone application distributed with MacTest Pro for Power Macintosh as a convenience to service technicians. Refer to the Display Service Utility's own READ ME file for more information.

Because Display Service Utility's "settings restore" option creates a file to temporarily store settings, it cannot be run from the CD-ROM or other locked media. Move the Display Service Utility application to the hard drive or to an unlocked disk before using it.

... MacTest Pro for Power Macintosh ...

Although Power Macintosh computers with PCI expansion slots can support the

addition of NuBus cards via a third-party PCI-to-NuBus bridge product, MacTest Pro for Power Macintosh at this time does not support any NuBus cards installed in such a bridge. For example, the Hardware Info test module will not list these cards in the Expansion Slot Information.

Help text cannot be printed.

Printing with QuickDraw GX is currently not supported.

Test modules that turn off AppleTalk (see User's Guide for additional information) can interrupt some network services, such as the Apple Laserwriter Bridge. This results in an alert to the user, which must be dismissed by the user before testing will continue. This interruption can impact the looping of tests. Do not leave the machine unattended until at least one loop of testing has been completed.

... MTP Emergency (PPC) ...

Always connect SCSI hard drives to the standard SCSI connections provided by the Power Macintosh hardware before running diagnostic tests. If you run hard drive tests on drives connected to a 3rd party SCSI bus (i.e. expansion slot card), then MacTest Pro for Power Macintosh may hang, or may incorrectly report a hard drive failure. If you subsequently run a logic board test, it may incorrectly report a logic board failure. Do not reject a hard drive or logic board based on these false reports. Turn off the Power Macintosh, reconnect the SCSI hard drive to a standard SCSI connection and restart. Then launch MacTest Pro for Power Macintosh and start the tests again.

The CPU clock speed that is displayed in the Hardware Info Log and by MTP Emergency is an approximation based on information gathered from the system; the presence of accelerator cards may affect the accuracy of this information.

On some Workgroup Servers, the machine name may be reported as the Power Macintosh on which the Workgroup Server is based (or vice-versa) depending on the version of System software which is running. For example, a Workgroup Server 6150 may be incorrectly identified as a Power Macintosh 6100.

... Ethernet Card Tests (PPC) ...

The "Test Info" and the "Operation Info" in the MacTest Pro for Power Macintosh application state that you may run the Ethernet Card Tests (PPC) while the card is connected to a network. This is INCORRECT. Running the test while connected to a network may result in a crash or false failure of the test. To run the test correctly, disconnect the card from the network, and restart the Macintosh before launching MacTest Pro for Power Macintosh.

... Expansion Card Tests (PPC) ...

This first release of Expansion Card Tests (PPC) covers only NuBus cards; it does not yet cover the HPV video card in the PDS slot, nor does it cover any cards in PCI slots.

... Mass Storage Device Tests (PPC) ...

The Mass Storage Device Tests (PPC) module is designed to test all CD-ROM drives, hard drives and tape drives released by Apple, when installed with driver software by Apple. The test module will load and attempt to run on non-Apple devices (see below) and/or with non-Apple drivers (such as FWB CD-ROM Toolkit), however the Mass Storage Device Tests (PPC) module has not been tested with third-party CD-ROMs and drivers. Any results which may be obtained will not be reliable.

Mass Storage Device Tests (PPC) does not currently support CD-ROMs with blocksizes other than 2048 bytes, or hard drives with blocksizes other than 512 bytes (such as 4Gb drives which may have blocksizes larger than 512 bytes). Any results which may be obtained will not be reliable.

Mass Storage Device Tests (PPC) can test a PCMCIA card which is an IDE hard drive (except on PowerBook 500 series computers). The test module may load and attempt to test other PCMCIA devices (such as flash cards), however any test results which may be obtained will not be reliable.

When you are testing a DDS-DC tape drive, be sure to use a properly formatted known-good tape (for example, if you insert a 'Helical Scan' tape, the test will fail). Also, if the write protect switch on the tape is enabled, the test will fail.

Mass Storage Device Tests (PPC) can only test devices on the primary SCSI bus. To test devices which are connected to a secondary or tertiary SCSI bus, you must first disconnect the device, and reconnect it to the primary SCSI bus.

Before running the Hard Drive Seek Test option of the Mass Storage Device Tests (PPC) module on a Power Macintosh 7200, 7500, or 8500 series computer, you must set the Control Panel Energy Saver Sleep Setup settings to "Never". Otherwise, the test may hang or fail when the hard drive goes to sleep (spins down).

When running Mass Storage Device Tests (PPC), if the CD-ROM test disc was already inserted in the CD-ROM drive when a test failure is detected, the CD-ROM test disc may not eject from the CD-ROM drive. To eject the CD-ROM test disc, run the CD-ROM portion of the Mass Storage Device Tests (PPC) again, and then cancel the test after the CD-ROM test disc is ejected. Or, reboot the computer, and the CD-ROM test disc will be ejected automatically.

VERSION INFO -----

Information about the current versions of System Enablers, and MacTest Pro for Power Macintosh test modules can be found in the accompanying VERSION INFO file.

(This file is TIL article 19884)

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Tech Info Library Article Number:19882



Tech Info Library

MacTest Pro 680x0-based Macintosh computers Read Me (5/96)

Revised: 5/30/96
Security: Everyone

MacTest Pro 680x0-based Macintosh computers Read Me (5/96)

=====

Article Created: 29 May 1996

TOPIC -----

This article is the MacTest Pro for 680x0-based Macintosh computers Read Me file.

DISCUSSION -----

The February 1996 Macintosh Family Diagnostics Update Mailing includes separate CD's, diskettes, and User's Guides for MacTest™ Pro for 680x0-based Macintosh computers, and for MacTest Pro for Power Macintosh.

The information in this READ ME file refers to MacTest Pro for 680x0-based Macintosh computers, and is effective as of 02/21/96. This file contains important information about the MacTest Pro application, its test modules, and the MTP Emergency application. This information supersedes some sections of the MacTest Pro User's Guide for 680x0-based Macintosh computers (073-0326-F).

WHAT'S NEW

- MacTest Pro v1.3 and MTP Emergency v1.1 are designed to launch only on 680x0-based Macintosh computers; these applications will not launch on Power Macintosh computers. Use the MacTest Pro for Power Macintosh and MTP Emergency (PPC) applications to diagnose Power Macintosh computers.
- For Macintosh Quadra and Centris computers upgraded with the Power Macintosh Upgrade Card, and for Macintosh 630 series, LC 475, LC 575, and Quadra 605 computers upgraded with the Macintosh Processor Upgrade Card, use MacTest Pro v1.3 (for 680x0-based machines) with the Power Macintosh Card Tests module, and use MTP Emergency v1.1.
- For 68000-based Macintosh computers (Macintosh Plus, SE, Classic, Portable, and PowerBook 100) only the MTP Emergency application is available. For 68020,

68030, 68040, and 68LC040-based computers, both MTP Emergency and the MacTest Pro application are available.

- The following test module updates include minor bug fixes and enhancements:

- Communication Ports Tests v1.3
 - Expansion Card Tests v3.0
 - File Checker v2.1.1
 - Hardware Info v1.9.7
 - Software Info v1.9.1

- The Display Service Utility v1.0 is now included on the MacTest Pro CD and on the "MacTest Pro (App+Mods Vol2)".

BOOTABLE MACTEST PRO CD

The MacTest Pro CD v5.0 is bootable on almost all 680x0-based Macintosh, PowerBook, and Performa computers. Instructions for booting from the CD are included in the CD Guide booklet. Electronic copies of current MacTest Pro documentation and the most recent System Software Enablers are provided on the MacTest Pro CD.

You may launch MacTest Pro, MTP Emergency, and the printer and display utilities from the CD whether or not you to boot from the CD. Please refer to the electronic document "How to Use this CD" located on the CD for more information.

BOOTABLE DISKS

Two of the four disks in the MacTest Pro (for 680x0-based Macintosh computers) disk set are BOOTABLE emergency startup disks. Between the two, these disks will boot all 680x0-based Macintosh computers except for the PowerBook 190 (see the User's Guide section "MTP Emergency - Creating Emergency Disks" for more information). The MTP Emergency application is the same on both of the bootable disks. Instructions for using the MTP Emergency disks are included in the "Using the MTP Emergency" section of the MacTest Pro User's Guide.

- Use the "MTP Emergency (680x0)" bootable 1.44MB disk with Motorola 680x0-based Macintosh computers which are equipped with a 1.44 MB floppy drive. This disk contains the MTP Emergency application and System 7.5.

- Use the "MTP Emergency (SSW 6.0.8)" bootable 800K disk for 680x0-based Macintosh computers which are equipped with only an 800K floppy drive. These include the Macintosh Plus, SE, SE/30, Macintosh II, IIx, and IIfx -- if the computer has never been upgraded to include a 1.44 MB floppy drive. This disk contains the MTP Emergency application, System 6.0.8, and Finder.

NONBOOTABLE DISKS

Two of the four disks in the MacTest Pro disk set are nonbootable; they do not contain System files.

- "MacTest Pro (App+Mods Vol1)" contains the MacTest Pro application, the commonly used CPU and peripheral test modules, Hardware Info, Software Info, and the READ ME and VERSION INFO files.
- "MacTest Pro (App+Mods Vol2)" contains the MacTest Pro application, tests for serial ports, modems and cards, and printer and display utilities.

OPERATING TIPS - WORKAROUNDS - KNOWN BUGS

The "Operating Tips - Workarounds - Known Bugs" listed here are either new with this release or represent issues that all MacTest Pro users MUST be aware of. An electronic copy of the most recent MacTest Pro User's Guide is included in the Documentation folder on the MacTest Pro CD.

... MacTest Pro CD ...

If a PowerBook 160 has been set to "24 bit mode", the MacTest Pro CD will not boot the machine. You may boot from the MTP Emergency disk, or you may set the PowerBook 160 to "32 bit mode", then boot from the CD.

Because Display Service Utility's "settings restore" option creates a file to temporarily store settings, it cannot be run from the CD-ROM or other locked media. Move the Display Service Utility to the hard drive or to an unlocked disk before using it.

If you boot a Macintosh Classic II, Color Classic, or SE30 from the MacTest Pro CD, then use the Shutdown option in the "Special" menu within the MacTest Pro application, you may get a dialogue box requesting that you "Please insert the disk: MacTest Pro", even though the CD is still in the drive. After a moment the Macintosh will shut down properly, however you may need to eject the CD manually. To avoid this problem, quit MacTest Pro, and then use the Finder "Special" menu, Shutdown option.

... MacTest Pro Application ...

Help text cannot be printed.

Drag launching a test module causes window refresh problems, and the module will not appear in the Test Selection region of the Main Window until you refresh the window. Also, a "did not load" message will appear in the Operation Info log even though the test module actually did load.

Test modules that turn off AppleTalk (see User's Guide for additional information) can interrupt some network services, such as the Apple Laserwriter Bridge. This results in an alert to the user, which must be dismissed by the user before testing will continue. This interruption can impact the looping of tests. Do not leave the machine unattended until at least one loop of testing

has been completed.

If you already have a version of the Help test module loaded in MacTest Pro, do not manually load another version of the Help test module. If you wish to use a different version of the Help test module, quit MacTest Pro, move the old version out of the Test Modules folder, and replace it with the new Help test module.

... MTP Emergency Application...

Always connect SCSI hard drives to the standard SCSI connections provided by the Macintosh hardware before running diagnostic tests. If you run hard drive tests on drives connected to a 3rd party SCSI bus (i.e. expansion slot card), then MacTest Pro may hang, or may incorrectly report a hard drive failure. If you subsequently run a Logic Board Test, MacTest Pro may incorrectly report a logic board failure. Do not reject a hard drive or logic board based solely on these false reports. Turn off the Macintosh, reconnect the SCSI hard drive to a standard SCSI connection and restart the Macintosh. Then launch MacTest Pro and start the tests again.

On a PowerBook or PowerBook Duo, always disconnect external monitors before running MTP Emergency, unless you are specifically testing the external VRAM. In that case, be sure that video mirroring is OFF before launching MTP Emergency, otherwise the system may crash.

On a PowerBook Duo 250 running under System 7.1, MTP Emergency may incorrectly identify the machine as a PowerBook Duo 230.

On a Macintosh Centris 660AV, MTP Emergency may quit with a "type 3 (illegal instruction) error" after looping for four or more hours, when the machine is booted from the CD or a floppy. Do not reject a logic board based solely on this behavior. Boot the computer from the hard drive, and rerun the test.

On the Macintosh Centris 610 and Quadra 610, MTP Emergency may crash or hang after looping for four or more hours; do not reject a logic board based solely on this behavior.

On the Macintosh Centris 610 and Quadra 610 MTP Emergency may incorrectly report that VRAM has failed at address "\$1"; do not reject VRAM or a logic board based solely on this behavior.

On a Macintosh 630 or 640 series DOS Compatible computer, MTP Emergency may quit with a "type 2 (address) error" after looping for four or more hours, when the machine is booted from the CD or a floppy. Do not reject a logic board based solely on this behavior. Boot the computer from the hard drive, and rerun the test.

To launch MTP Emergency on a Macintosh LC which has System 6.0.8 on the internal hard drive, you must boot from the MTP Emergency disk. (On a Macintosh LC, if you boot with System 6.0.8 from the hard drive, and then launch MTP Emergency from either the hard drive or a floppy, the machine will hang. If you attempt to launch MTP Emergency from the CD, an inappropriate dialogue will appear indicating that the CD desktop is damaged and must be rebuilt, which is not true

since the CD is read-only media.)

On some machines (e.g. the Macintosh Quadra 900, the Macintosh LC II, and the PowerBook 540), the percent numbers reported in the status line "Running Video RAM test... (___% complete)" do not appear to match the patterns being displayed on the monitor. This is caused by the interaction between the screen-handling routine and interrupt timing, and does not indicate any problem with the functionality of computer's VRAM or with the VRAM test.

The CPU clock speed that is displayed in the Hardware Info Log and by MTP Emergency is an approximation based on information gathered from the system; the presence of accelerator cards may affect the accuracy of this information.

... Communication Ports Tests ...

Do not loop the Network File Transfer option of the Communication Ports Tests in combination with logic board tests. If the looping feature is used with a logic board test marked "(Must Restart)", then the Network File Transfer test will report a false failure.

The Network File Transfer option of the Communication Ports Tests requires that the file server selected in the Setup window be in the same "zone" as the test machine; if it is not, then the Network File Transfer test may report a false failure.

... Ethernet Card Tests ...

The "Test Info" and the "Operation Info" in the MacTest Pro application state that you may run the Ethernet Card Tests while the card is connected to a network. This is INCORRECT. Running the test while connected to a network may result in a crash or false failure of the test. To run the test correctly, disconnect the card from the network, and restart the Macintosh before launching MacTest Pro.

... Mass Storage Device Tests ...

The Mass Storage Device Tests module is designed to test all CD-ROM drives, hard drives and tape drives released by Apple, when installed with driver software by Apple. The test module will load and attempt to run on non-Apple devices (see below) and/or with non-Apple drivers (such as FWB CD-ROM Toolkit), however MacTest Pro has not been tested with third-party CD-ROMs and drivers.

Mass Storage Device Tests does not currently support CD-ROMs with blocksizes other than 2048 bytes, or hard drives with blocksizes other than 512 bytes (such as 4Gb drives which may have blocksizes larger than 512 bytes). Any results which may be obtained will not be reliable.

Mass Storage Device Tests can test a PCMCIA card which is an IDE hard drive (except on PowerBook 500 series computers). The test module may load and attempt to test other PCMCIA devices (such as flash cards), however any test results which may be obtained will not be reliable.

When you are testing a DDS-DC tape drive, be sure to use a properly formatted

known-good tape (for example, if you insert a 'Helical Scan' tape, the test will fail). Also, if the write protect switch on the tape is enabled, the test will fail.

When running Mass Storage Device Tests, if the CD-ROM test disc was already inserted in the CD-ROM drive when a test failure is detected, the CD-ROM test disc may not eject from the CD-ROM drive. To eject the CD-ROM test disc, run the CD-ROM portion of the Mass Storage Device Tests again, and then cancel the test after the CD-ROM test disc is ejected. Or, reboot the computer, and the CD-ROM test disc will be ejected automatically.

VERSION INFO

Information about the current versions of System Enablers, and MacTest Pro test modules can be found in the accompanying VERSION INFO file.

Version info document can be found in TIL article 19897.

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Tech Info Library Article Number:19883



Tech Info Library

MacTest Pro for Power Macintosh Version Info (1/97)

Revised: 1/20/97
Security: Everyone

MacTest Pro for Power Macintosh Version Info (1/97)

Article Created: 29 May 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article is the MacTest Pro for Power Macintosh Version Information file.

DISCUSSION -----

The information in this VERSION INFO file is effective as of 02/21/96, and remains effective until the next update of MacTest Pro for Power Macintosh.

SUMMARY -----

This file contains useful information about the current versions of all MacTest Pro for Power Macintosh test modules and disks, as well as all currently available System Enablers.

MacTest Pro disk	Current Version	Notes

MacTest Pro (App+Mods1 PPC)	1.0	
MacTest Pro (App+Mods2 PPC)	1.0	
MTP Emergency (NuBus PPC)	1.0	1
MTP Emergency (PCI PPC)	1.0	2
MacTest Pro (PPC)	1.0	

Notes:

- 1 - 1.44 MB disk for use on Power Macintosh computers with NuBus slots
- 2 - 1.44 MB disk for use on Power Macintosh computers with PCI slots, and PowerPC based PowerBooks**

** The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally

..TIL19884-MacTest_Pro_for_Power_Macintosh_Version_Info_1-97.pdf

PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

Test Module/Application Name	Current Version	Notes
MacTest Pro for Power Macintosh	1.0	
MTP Emerg (PPC)	1.0	1
Ethernet Card Tests (PPC)	1.0	
Expansion Card Tests (PPC)	1.0	
File Checker (PPC)	1.0	
Floppy Drive Tests (PPC)	1.0	
Hardware Info (PPC)	1.0	
Mass Storage Device Tests (PPC)	1.0	
Power Macintosh Tests Vol. 1	4.1	
Power Macintosh Tests Vol. 2	1.0.2	
Power Macintosh Tests Vol. 3	3.0	
PowerBook Series Tests (PPC)	1.0	
RAM/VRAM Tests (PPC)	1.0	
Software Info (PPC)	1.0	
Serial Loopback Tests (PPC)	1.0	

Notes:

- 1 - available on the MTP Emergency disks and MacTest Pro CD (PPC) only.

..... SYSTEM ENABLERS

The most current System Enablers are located in the System Enablers folder located on the MacTest Pro CD.

In some situations, the field appearing in several MacTest Pro windows that identifies the name of the machine being tested can be left blank or list a non-specific computer, e.g. "Macintosh". It can occur when using System 7.5 (or later). The correct name should still appear in the Hardware Info Log. Also the blank, or non-specific field display does not impact tests in any way. You can sometimes change the machine name display by removing from the bootable disk any System Enablers that are not required for the machine under test. Refer to the list of System Enablers below to determine which Enabler is required for each machine.

..... PERFORMA SYSTEM ENABLERS

Macintosh Performa 6100 series machines do not require System Enablers, however they do require System 7.5 or later.

Performa	System Enabler	Current Version	Notes
Performa 5200 series	System Enabler 406	1.0	A, B
Performa 5300 series	System Enabler 406	1.0	A, B
Performa 6200 series	System Enabler 406	1.0	A, B
Performa 6300 series	System Enabler 406	1.0	A, B

Notes:

- A - Requires System Software 7.5
- B - Requires System 7.5 Update 1.0

..... MACINTOSH & POWERBOOK SYSTEM ENABLERS

All bootable MacTest Pro Emergency (1.44) disks include System 7.5 and the appropriate Enabler files for the machines that are tested with those disks. Following is a list of the current Enabler files, the machines they support, and the current version numbers.

Most machines that require System Enablers prior to System 7.5, do not require those Enablers when running System 7.5 (or later).

Macintosh	System Enabler	Current Version	Notes
PowerBook 2300/5300	PowerBook 5300/2300/190 Enabler	1.2.1	D
Power Macintosh (NuBus only)	PowerPC Enabler	1.1.1	A
Power Macintosh 5200/75LC	System Enabler 406	1.0	A,B
Power Macintosh 5300/100LC	System Enabler 406	1.0	A,B
Power Macintosh 7200 series	System Enabler 701	1.1	D
Power Macintosh 7500/100	System Enabler 701	1.1	D
Power Macintosh 8500/120	System Enabler 701	1.1	D
Power Macintosh 9500 series	System Enabler 701	1.1	D
Workgroup Server 6150/66	WKGS Enabler	1.0	C
Workgroup Server 8150/110	WKGS Enabler	1.0	C
Workgroup Server 9150/120	WKGS Enabler	1.0	C

Notes:

- A - Requires System Software v7.5 or later
- B - Requires System 7.5 Update 1.0
- C - Requires System Software v7.5.1 or later
- D- Requires System Software v7.5.2 or later

Article Change History:

20 Jan 1997 - Added info about PPC-based PowerBook computers.

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Tech Info Library Article Number:19884



Tech Info Library

Printers: General Information on Metric Paper Sizes (5/96)

Revised: 5/29/96
Security: Everyone

Printers: General Information on Metric Paper Sizes (5/96)

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Article Created: 29 May 1996

TOPIC -----

This article contains information on different Metric paper and envelope size dimensions.

DISCUSSION -----

ISO Paper Sizes
=====

The paper formats defined by ISO in the A, B and C series are used today in nearly all countries apart from North America.

The formats have been determined according to the following rules:

- A0 has an area of one square meter.
- The aspect ratio of all members of the A, B and C-series is $\sqrt{2} = 1.41421\dots$
- You get the next higher format by cutting the paper in two equal pieces parallel to the shorter side. This results again in a 1 : $\sqrt{2}$ format (that's the big advantage of this format).
- The size of a B-series paper is the geometric mean between the size of the corresponding A-series paper and the next bigger A-series paper. For example, B1 is between A1 and A0.
- The size of a C-series paper is the geometric mean between the size of the A-series and B-series paper with the same number.

This means that the following formulas give the dimensions in meters:

Begin_Table

Paper Size	Width	Height
A-series	$2^{(-1/4 - n/2)}$	$2^{(1/4 - n/2)}$
B-series	$2^{(-n/2)}$	$2^{(1/2 - n/2)}$
C-series	$2^{(-1/8 - n/2)}$	$2^{(3/8 - n/2)}$

End_Table

Larger sizes have smaller numbers. Sizes larger than those with $n = 0$ are written as 2 A0 and 4 A0 rather than A(-1) and A(-2).

The following table lists the official definitions of the paper sizes which are the values from the above formulas rounded more-or-less to an integral number of millimeters:

Begin_Table

Paper Size	Dimension (millimeters)	Paper Size	Dimension (millimeters)	Paper Size	Dimension (millimeters)
4 A0	1682 x 2378				
2 A0	1189 x 1682				
A0	841 x 1189	B0	1000 x 1414	C0	917 x 1297
A1	594 x 841	B1	707 x 1000	C1	648 x 917
A2	420 x 594	B2	500 x 707	C2	458 x 648
A3	297 x 420	B3	353 x 500	C3	324 x 458
A4	210 x 297	B4	250 x 353	C4	229 x 324
A5	148 x 210	B5	176 x 250	C5	162 x 229
A6	105 x 148	B6	125 x 176	C6	114 x 162
A7	74 x 105	B7	88 x 125	C7	81 x 114
A8	52 x 74	B8	62 x 88	C8	57 x 81
A9	37 x 52	B9	44 x 62	C9	40 x 57
A10	26 x 37	B10	31 x 44	C10	28 x 40

+=====+=====+=====+=====+=====+=====+

End_Table

Some of the more popular sizes

Begin_Table

Size		Purpose
A0		technical drawings
A4		letters, magazines, documents
A5		books
C4,C5,C6		envelopes
B4,A3		supported by many copy machines, newspapers

End_Table

There are also strip formats possible, for example:

Begin_Table

Size	Dimensions
1/3 A4	99 x 210
2/3 A4	198 x 210
1/4 A4	74 x 210
1/8 A4	37 x 210
1/4 A3	105 x 297
1/3 A5	70 x 148

End_Table

All these formats are paper end formats. In other words, these are the dimensions of the paper delivered to the user/reader. Other standards define slightly bigger paper sizes for applications where the paper will be cut to the end format later (for example, after binding).

The ISO DL envelope format has the dimensions 220 x 110 millimeters.

The values contained in this Tech Info Library article come from DIN 476 (Dec 1976) which is the German version of the ISO 216 standard.

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Tech Info Library Article Number:19885



Tech Info Library

Power Macintosh 5400/120: Description (10/96)

Revised: 10/9/96
Security: Everyone

Power Macintosh 5400/120: Description (10/96)

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Article Created: 29 May 1996
Article Reviewed/Updated: 9 October 1996

TOPIC -----

This article contains a description of the Power Macintosh 5400/120 computer.

NOTE: This computer is only available through educational channels.

DISCUSSION -----

Overview

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With its state-of-the-art RISC-based processor and advanced multimedia capability, the all-in-one Apple Macintosh Power Macintosh 5400 computer is ready to inspire your creativity and boost your productivity.

The computer's 120-megahertz PowerPC 603e processor and 16 megabytes of RAM let you easily run an abundance of Macintosh applications—and there's plenty of room to store them on the 1.6 GB internal hard drive.

The Power Macintosh 5400 includes a CD-ROM drive for multimedia applications and a 15-inch monitor (12.8-inch diagonal viewable image size) to display vibrant colors. There's also a built-in microphone to directly record your own sounds. Multimedia play-back is made more lifelike through the built-in stereo speakers enhanced by SRS 3D surround sound and the Macintosh 16-bit stereo sound system.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The Power Macintosh 5400/120 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access.

If you need even more advanced capabilities in the future, expansion is easy through the industry-standard Peripheral Component Interconnect (PCI) slot and built in SCSI support.

Features

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Power and Speed

- 120 MHZ 603e processor
- 32K internal cache
- Optional High Performance Module (256K level 2 cache)

Memory and Storage

- 16 MB of RAM (expandable to 136 MB)
- 1 MB DRAM frame buffer (separate from RAM) for video memory, not expandable
- Apple SuperDrive floppy disk drive (reads and writes Mac OS, Windows, DOS, OS/2, and ProDOS files)
- Internal 1.6 GB hard disk drive
- Internal quadruple- or 8x-speed CD-ROM drive, depending on configuration

Display

- 15-inch multiple-scan color display (supports more than 32,000 colors)

Expansion

- 7" PCI expansion slot
- I/O communications slot for Ethernet networking (accepts Twisted Pair, Thin Coax, or AAUI Ethernet Cards)
- Has video slot for NTSC, PAL, and SECAM video-input card
- Includes expansion bay for television tuner
- External drop box provides expansion for NTSC or PAL video output

Built-in Multimedia Technologies

- Optional Video capture card lets you record video from camcorder, VCR, or laserdisc. Note: Some configurations of the Power Macintosh 5400/120 include this card.
- Optional Video-out connector for connecting to an LCD projection panel or a second monitor
- Optional TV Tuner
- 16-bit sound in/out with SRS 3D surround sound enhancement

Networking

- Built-in AppleTalk networking
- File sharing without a dedicated server
- Includes 10 Base-T Ethernet networking with the Apple 10BaseT Ethernet CS II card

Ordering Information

•Power Macintosh 5400/120 (16/1.6GB) with built-in 15-inch multiple-scan color display, AppleCD 600i Plus CD-ROM drive, stereo speakers, microphone, AppleDesign Keyboard, and mouse.
Order No. B2765LL/A

Ordering Information

•Power Macintosh 5400/120 (16/1.6GB) with built-in 15-inch multiple-scan color display, 8x-speed CD-ROM drive, stereo speakers, microphone, AppleDesign Keyboard, and mouse.
Order No. M5184LL/B

Note: This configuration is available in the Higher Education channel ONLY.

Optional Enhancements

•High Performance Module (256K level 2 cache)
Order No. M4505LL/A

•Apple Video System
Order No. M2894LL/D

•Apple TV/FM Radio System
Order No. M4586LL/A

•Apple Presentation System
Order No. M2895LL/A

•External Video Connector
Order No. M4099LL/D

•10Base2 (thin coax) Ethernet Card
Order No. (M4773ZM/A)

•AAUI (Apple standard) Ethernet Card
Order No. M4774ZM/A

•PC Compatibility Card with 586 100-MHz processor
Order No. M4091LL/B

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

09 Oct 1996 - Revised order number for PC Compatibility Card.
12 Aug 1996 - Clarified video capture card configuration.
12 Jul 1996 - Updated configurations.

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Tech Info Library Article Number:19886



Tech Info Library

H.320/ISDN Dialing Strings for Apple Media Conference (5/96)

Revised: 5/29/96
Security: Everyone

H.320/ISDN Dialing Strings for Apple Media Conference (5/96)

=====

Article Created: 29 May 1996

TOPIC -----

How do I enter the SPIDs (Service Provider IDs) in Apple Media Conference for an ISDN line if it's an NI1 line, or if it's a 5ESS line?

DISCUSSION -----

In the United States there are two standards of ISDN lines, National Internet 1 (NI1) and 5ESS. The two standards were created by Northern Telecom and AT&T respectively when the initial H.320 specification did not clearly define the protocol that is used on the D (signaling) channel. Which standard you use depends on what type of equipment has been installed at you telephone provider's central office.

NI1 internet service usually consists of two separate SPIDs. One number for each B (bearer) channel. Typically these B channels are 64 Kbps wide, and when bonded, can provide a 128 Kbps effective throughput connection (144 Kbps including 16 Kbps D channel).

5ESS service usually consists on only one SPID that represents both B channels. AT&T initially thought they might run out of phone numbers, so their switch uses the single number to activate 2 B channels, all seamless to the ISDN customer. Typically these 5ESS B channels are 56 Kbps wide, and when bonded, can provide a a 112 Kbps effective throughput connection (128 Kbps including 16 Kbps D channel).

So with that in mind, here are some sample strings you might use when dialing an ISDN line from Apple Media Conference.

Sample local call, 1 channel
XXXXXXX

Sample local call, 2 channels*
XXXXXXXX&XXXXXXXX

Sample local call, 1 channel needing outside line prefix
9XXXXXXX or 8XXXXXXX

Sample local call, 2 channels* needing outside line prefix
9XXXXXXX&9XXXXXXX or 8XXXXXXX&8XXXXXXX

Sample long distance call (800 area code), 1 channel
1800XXXXXXX

Sample long distance call (800 area code), 2 channels*
1800XXXXXXX&1800XXXXXXX

Sample long distance call (800 area code), 1 channel outside line prefix
91800XXXXXXX or 81800XXXXXXX

Sample long distance call (800 area code), 2 channels* outside line prefix
91800XXXXXXX&91800XXXXXXX or 81800XXXXXXX&81800XXXXXXX

Sample long distance call (800 area code), 1 channel long distance access code
103331800XXXXXXX

Sample long distance call (800 area code), 2 channels long distance access code
103331800XXXXXXX&103331800XXXXXXX

* 2 Channel calls requiring both numbers are applicable ONLY when calling a
H.320 system using a NI1 line.

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Tech Info Library Article Number:19887



Tech Info Library

Color LaserWriter 12/600 PS: Printer Utility and Win95 (3/97)

Revised: 3/10/97
Security: Everyone

Color LaserWriter 12/600 PS: Printer Utility and Win95 (3/97)

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Article Created: 30 May 1996

TOPIC -----

I want to turn off the startup page on my Color LaserWriter 12/600 PS from my Windows 95 computer. I am using the bi-directional parallel cable to connect to the printer.

DISCUSSION -----

You cannot use the Apple Printer Utility under Windows 95 except through Netware configurations. On Windows 95 you can use the Apple Printer Utility with NetWare only. If you do not have NetWare you can use the Apple Printer Utility on the parallel port from a Windows 3.1 system.

When you run the Apple Printer Utility, it gives you two options: Parallel and Network. Parallel is automatically greyed out. This is normal. The Network option is for using the utility through a Netware connection.

Article Change History:
10 Mar 1997 - Made minor typographical corrections.

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Tech Info Library Article Number:19889



Tech Info Library

LaserWriter 16/600 PS: Novell Frame Types (5/96)

Revised: 5/31/96
Security: Everyone

LaserWriter 16/600 PS: Novell Frame Types (5/96)

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Article Created: 30 May 1996

TOPIC -----

I am running a Novell Network, and have multiple frame types, 802.2 and 802.3. When I startup my LaserWriter 16/600ps it will only see part of my network. I have isolated it down to the frame type. I have concluded that it switches frames types randomly. Is there a way to manually set it? Is it possible to lock this setting in?

DISCUSSION -----

The LaserWriter 16/600 PS sends a request to the network at startup. Whichever server responds first determines the frame type the printer will use. There is no software that allows you to switch or manually set this option. You may want to contact Novell for suggestions on using the same frame type across your network.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19891



Tech Info Library

Color LaserWriter 12/600PS: Installing Internal Hard Drive(5/96)

Revised: 6/3/96
Security: Everyone

Color LaserWriter 12/600PS: Installing Internal Hard Drive(5/96)

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Article Created: 30 May 1996

TOPIC -----

I'm trying to install an internal 40 MB hard drive into my Color LaserWriter 12/600 PS. It is not recognizing the hard drive. When I power up the printer, the status panel indicates a hard drive error; the following LEDs are on: [Paper Out/Paper Jam/Magenta toner/Maintenance Light #2].

When installing the hard drive, I noticed that the connector on the hard drive is larger than the ribbon cable connector. On which side of the hard drive connector should I align the ribbon cable?

DISCUSSION -----

It's likely that the ribbon cable is not properly connected to the hard drive.

Align the ribbon cable on the left side of the hard drives connector. After the ribbon cable is connected, there should be four rows of pins exposed on the right side of the hard drive connector.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19892



Tech Info Library

Apple Remote Access and Shutdown Delay (5/96)

Revised: 5/30/96
Security: Everyone

Apple Remote Access and Shutdown Delay (5/96)

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Article Created: 30 May 1996

TOPIC -----

Why does my Power Macintosh 9500 freeze on shutdown when the Apple Remote Access (ARA) 2.0.1 extension is active? How can I stop this from happening?

DISCUSSION -----

Your Power Macintosh 9500 is technically not freezing, it is pausing as ARA examines the serial port during the shutdown process. Since the pause may take up to 10 minutes, the computer certainly could appear to be frozen. Upgrading your system software with System 7.5 Update 2.0 will solve this issue.

NOTE: This issue seems to occur when using an external modem and not when using a GeoPort. This is because the GeoPort uses its own drivers, while an external modem communicates through the serial port drivers which is causing this issue.

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Tech Info Library Article Number:19893



Tech Info Library

PC Compatibility Cards: General Questions & Answers (11/96)

Revised: 11/14/96
Security: Everyone

PC Compatibility Cards: General Questions & Answers (11/96)

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Article Created: 30 May 1996
Article Reviewed/Updated: 14 November 1996

TOPIC -----

The article answers the following general questions about Apple's PCI PC Compatibility Cards:

1) Previously PC/DOS Compatibility cards did not have joystickA/joystickB capabilities. Because of this, customers were not able to hook up the 'enhanced' joysticks that are becoming more common (FlightStick Pro, Wingman Extreme, etc). Do these new PC Compatibility Cards have full joystick port capabilities?

2) The APPLEVDO.INF file that comes with PC Setup 1.5 has VDIFs for Apple's current display models for Windows 95. Some customers have asked for a monitor description file for their Apple monitors on 'real' PC-compatible computers. The refresh rates for the generic SVGA VDIFs included with Win95 are not very good. Will this file be posted to Apple's Software Updates areas?

3) In Appendix D of the 7-inch PC Compatibility Card User Manual (technical specifications), it states that the card is compatible with 640 x 480 and 800 x 600 resolutions. However, Appendix C of the user manual refers to resolutions up to 1280 x 1024. Why is Appendix C different from Appendix D?

4) Some customers must provide their Ethernet addresses before being allowed to connect to their university or business network. Because of the processor chipset on the new PC Compatibility cards (Curio Prime) having two Ethernet IDs, some customers will need to provide BOTH of these ID numbers. Is there any way to find out both Ethernet IDs? Do the processor chipset's (Curio Prime) dual Ethernet IDs share the network bandwidth or do they each have a full 10 MB bandwidth?

5) How does Apple officially distinguish between the two PC Compatibility cards? I have seen them referred to as "the 7-inch card" or "the 12-inch card" as well as by "with Pentium" or "with 586". Which is correct?

6) How much and what kind of VRAM (video DRAM) come with the PC Compatibility Cards?

DISCUSSION -----

1) Question: Previously PC/DOS Compatibility cards did not have joystickA/joystickB capabilities. Because of this, customers were not able to hook up the 'enhanced' joysticks that are becoming more common (FlightStick Pro, Wingman Extreme, etc). Do these new PC Compatibility Cards have full joystick port capabilities?

Answer: The joystick port does support both A and B channel, so the enhanced joysticks should work.

2) Question: The APPLEVDO.INF file that comes with PC Setup 1.5 has VDIFs for Apple's current display models for Windows 95. Some customers have asked for a monitor description file for their Apple monitors on 'real' PC-compatible computers. The refresh rates for the generic SVGA VDIFs included with Win95 are not very good. Will this file be posted to Apple's Software Updates areas?

Answer: The APPLECD0.INF file will be posted to all of Apple's Software Updates sites.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

3) Question: In Appendix D of the 7-inch PC Compatibility Card User Manual (technical specifications), it states that the card is compatible with 640 x 480 and 800 x 600 resolutions. However, Appendix C of the user manual refers to resolutions up to 1280 x 1024. Why is Appendix C different from Appendix D?

Answer: Appendix D refers to SVGA modes that are supported by the 7-inch PC Compatibility card. Appendix C covers resolutions the 7-inch PC Compatibility card can support with multiple-scan monitors only.

The 12-inch PC Compatibility card can have an additional 1 MB of VRAM added to it which allows it to support the additional SVGA modes of 1024 x 768 and 1280 x 1024.

4) Question: Some customers must provide their Ethernet addresses before being allowed to connect to their university or business network. Because of the processor chipset on the new PC Compatibility cards (Curio Prime) having two Ethernet IDs, some customers will need to provide BOTH of these ID numbers. Is there any way to find out both Ethernet IDs? Do the processor chipset's (Curio

Prime) dual Ethernet IDs share the network bandwidth or do they each have a full 10 MB bandwidth?

Answer: The Ethernet addresses are sequential. The forty-eighth bit of the address is ignored at the data link error. Any utility that worked on the PC to get the Ethernet address should still work. One example is Netmanage's Chameleon. It displays the Ethernet address on the PC in its configuration window. WINIPCFG.EXE also returns the Ethernet address. This is included with Microsoft TCP/IP in Windows 95.

5) Question: How does Apple officially distinguish between the two PC Compatibility cards? I have seen them referred to as "the 7-inch card" or "the 12-inch card" as well as by "with Pentium" or "with 586". Which is correct?

Answer: The official names are:

- 7-inch PC Compatibility Card
586 processor
- 12-inch PC Compatibility Card
Pentium processor

6) Question: How much and what kind of VRAM (video DRAM) come with the PC Compatibility Cards?

Answer:

7 Inch (586 Card)

1 MB video DRAM, non-expandable

12 Inch (Pentium Card)

1 MB video DRAM (physical/logical), expandable to 2 MB(physical/logical) total using:

Two of the 5V, 256K x16, 60 ns, standard fast paged mode SOJ (standard outer J pin) package DRAM chips (40-pin).

Some sample manufacturers and their part numbers are:

Micron #MT4C16257DJ-6

NEC #UPD424260LE60R

Samsung #KM416C256BJ-6

Hyundai #HY514260BJ-60

Article Change History:

14 Nov 1996 - Added info about VRAM.

29 Jul 1996 - Reworded for clarity.

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Tech Info Library Article Number:19894



Tech Info Library

Plenum Cable Definition (5/96)

Revised: 5/30/96
Security: Everyone

Plenum Cable Definition (5/96)

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Article Created: 30 May 1996

TOPIC -----

I sometimes see network cabling referred to as "plenum" cable. What does this mean?

DISCUSSION -----

Plenum is the area between the ceiling and the floor above it. This is a common location for network cabling. Some federal, state and local fire codes restrict the type of cabling (for data and other uses) than can be installed in this area.

Plenum cable is usually teflon-coated. In the event of a fire, it is designed to burn without giving off toxic fumes. Fire code restrictions typically require non-plenum cable to be installed in a protective conduit.

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Tech Info Library Article Number:19896



Tech Info Library

MacTest Pro For 68k Macintosh Computers Version Info (6/96)

Revised: 5/30/96
Security: Everyone

MacTest Pro For 68k Macintosh Computers Version Info (6/96)

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Article Created: 29 May 1996

TOPIC -----

This article is the MacTest Pro for 68K Macintosh computers Version Information file.

DISCUSSION -----

..... VERSION INFO

The information in this VERSION INFO file is effective as of 02/21/96, and remains effective until the next update of MacTest Pro.

SUMMARY

This file contains useful information about the current versions of all MacTest Pro 68K test modules and disks, as well as all currently available System Enablers.

MacTest Pro disk	Current Version	Notes

MacTest Pro (App+Mods Vol1)	7.0	
MacTest Pro (App+Mods Vol2)	7.0	
MTP Emergency (SSW 6.0.8)	5.0	2
MTP Emergency (680x0)	5.0	1
MacTest Pro CD	5.0	

Notes:

- 1 - 1.44 MB disk, for use on 68K Macintosh computers with 1.44 MB floppy drive.
- 2 - 800 K disk, for use on 68K Macintosh computers with 800K floppy drive.

Test Module/Application Name	Current Version	Notes
MacTest Pro Application	1.3	
MTP Emergency Application	1.1	1
Communication Ports Tests	1.3	
DOS Compatible Card Tests	2.0	
Ethernet Card Tests	2.0	
Expansion Card Tests	3.0	
File Checker	2.1.1	
Floppy Drive Tests	1.2	
Hardware Info	1.9.7	
Machine Checker	1.5	
Macintosh Tests Vol. 1A	3.0	
Macintosh Tests Vol. 1B	2.0	
Macintosh Tests Vol. 2	7.0.1	
Macintosh Tests Vol. 3	2.0	
MacTest Pro Help (B&W)	2.0	
Mass Storage Device Tests	3.0	
Modem Tests	1.1	
Power Macintosh Card Tests	2.0	
PowerBook Series Tests	2.0	
RAM/VRAM Tests	1.0.1	
Software Info	1.9.1	
Workgroup Server PDS Card Tests	1.1	

Notes:

1 - available on the MTP Emergency disks and MacTest Pro CD only.

.....
..... SYSTEM ENABLERS

The most current System Enablers are located in the System Enablers folder located on the MacTest Pro CD.

In some situations, the field appearing in several MacTest Pro windows that identifies the name of the machine being tested can be left blank or list a non-specific computer, e.g. "Macintosh". This occurs on some machines when both a regular Macintosh System Enabler and a newer Performa System Enabler (3xx series) are on the same bootable disk. It can also occur when using System 7.5 (or later). The correct name should still appear in the Hardware Info Log. Also the blank, or non-specific field display does not impact tests in any way. You can sometimes change the machine name display by removing from the bootable disk any System Enablers that are not required for the machine under test. Refer to the list of System Enablers below to determine which Enabler is required for each machine.

..... PERFORMA SYSTEM ENABLERS

The Macintosh Performa 200, 400, 405, 410, and 430 do not require System Enablers.

The Performa 580CD and 640 series require System Software 7.5, and System 7.5 Update 1.0.

Performa	System Enabler	Current Version	Notes
Performa 250	System Enabler 332	1.1	A, I
Performa 275	System Enabler 332	1.1	B, I
Performa 450	System Enabler 308	1.0	C, I
Performa 460/466/467	System Enabler 308	1.0	D, I
Performa 475/476	System Enabler 364	1.1	E, I
Performa 520	System Enabler 332	1.1	F, I
Performa 550	System Enabler 332	1.1	G, I
Performa 575/577/578	System Enabler 364	1.1	E, I
Performa 600	System Enabler 304	1.0.1	H, I
Performa 630 series	System Enabler 405	7.1.2p	J

Notes:

- A - Australia only market. Can also be tested using System Enabler 401 v1.0.5.
- B - Japan only market. Has no equivalent Macintosh System Enabler.
- C - Can also be tested using System Enabler 003 v1.1.
- D - Has no equivalent Macintosh System Enabler.
- E - Can also be tested using System Enabler 065 v1.2.
- F - Japan only market. Can also be tested using System Enabler 403 v1.0.2.
- G - Can also be tested using System Enabler 403 v1.0.2.
- H - Can also be tested using System Enabler 001 v1.0.1.
- I - Requires System Software 7.1p (Performa version)
- J - Requires System Software 7.1.2p (Performa version)

..... MACINTOSH & POWERBOOK SYSTEM ENABLERS

All bootable MacTest Pro Emergency (1.44) disks include System 7.5 and the appropriate Enabler files for the machines that are tested with those disks. Following is a list of the current Enabler files, the machines they support, and the current version numbers.

The Macintosh Plus, SE, SE/30, Classic, Classic II, LC, LC II, Macintosh II, IIX, IICX, IICI, IIFX; PowerBook 100, 140, 145, 145B, 170; Quadra 700, 900, 950; and Apple Workgroup Server 95/95+ do not require System Enablers.

The Macintosh LC 580 requires System Software 7.5, and System 7.5 Update 1.0. Most machines that require System Enablers prior to System 7.5, do not require those Enablers when running System 7.5 (or later).

Macintosh	System Enabler	Current Version	Notes
Macintosh IIfx	System Enabler 001	1.0.1	G
Macintosh IIfx	System Enabler 001	1.0.1	G
Macintosh LC III	System Enabler 003	1.1	G
Macintosh LC 475	System Enabler 065	1.2	G
Macintosh LC 520	System Enabler 403	1.0.2	G
Macintosh LC 550	System Enabler 403	1.0.2	G
Macintosh LC 575	System Enabler 065	1.2	G
Macintosh LC 630	System Enabler 405	7.1.2p	F

Macintosh Color Classic	System Enabler 401	1.0.5	GMacintosh
Centris 610	System Enabler 040	1.1	G
Macintosh Centris 650	System Enabler 040	1.1	G
Macintosh Centris 660AV	System Enabler 088	1.2	C, G
Macintosh Quadra 605	System Enabler 065	1.2	G
Macintosh Quadra 610	System Enabler 040	1.1	G
Macintosh Quadra 630	System Enabler 405	7.1.2p	F
Macintosh Quadra 650	System Enabler 040	1.1	G
Macintosh Quadra 660AV	System Enabler 088	1.2	C, G
Macintosh Quadra 800	System Enabler 040	1.1	G
Macintosh Quadra 840AV	System Enabler 088	1.2	G
PowerBook 150	PowerBook 150 Enabler	1.1	G
PowerBook 160	System Enabler 131	1.0.3	A, G
PowerBook 165	System Enabler 131	1.0.3	A, G
PowerBook 165c	System Enabler 131	1.0.3	A, G
PowerBook 180	System Enabler 131	1.0.3	A, G
PowerBook 180c	System Enabler 131	1.0.3	A, G
PowerBook 190 Series	PowerBook 5300/2300/190 Enabler	1.2.1	H
PowerBook Duo 210	PowerBook Duo Enabler	2.0	B, G
PowerBook Duo 230	PowerBook Duo Enabler	2.0	B, G
PowerBook Duo 250	PowerBook Duo Enabler	2.0	G
PowerBook Duo 270c	PowerBook Duo Enabler	2.0	G
PowerBook Duo 280	PowerBook Duo Enabler	2.0	D
PowerBook Duo 280c	PowerBook Duo Enabler	2.0	D
PowerBook 520/540	PowerBook 500 Series	1.0.2	D
Power Macintosh Upgrade Card	PowerPC Upgrade Card	1.0.1	G
Macintosh Processor Upgrade	601 Processor Upgrade	1.0	E
Workgroup Server 60	System Enabler 040	1.1	G
Workgroup Server 80	System Enabler 040	1.1	G
Apple Macintosh TV	System Enabler 404	1.0	G

Notes:

- A - System Enabler 131 replaces System Enabler 111 and System Enabler 121.
- B - PowerBook Duo Enabler replaces System Enabler 201.
- C - Macintosh Centris 660AV has been renamed to Macintosh Quadra 660AV.
- D - Requires System Software v7.1.1 or later.
- E - Requires System Software v7.5 or later.
- F - Requires System Software v7.1.2.
- G - Requires System Software 7.1
- H - Requires System Software v7.5.2 or later

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Tech Info Library Article Number:19897



Tech Info Library

7.5.3 and WGS95 PDS card (5/96)

Revised: 5/31/96
Security: Everyone

7.5.3 and WGS95 PDS card (5/96)

Article Created: 31 May 1996

TOPIC -----

A customer is trying to install system 7.5.3 on an Apple Workgroup Server 95. System 7.5 seems to install without problem but after installing the update 2.0, it hangs during the initial boot sequence.

DISCUSSION -----

This appears to be caused by the presence of the PDS card. The Apple PDS card included with the AWS 95 is only intended to be used with the Apple Workgroup Server 95 and Under the A/UX operating system shipped with it. This card was never tested under any other system software and none of the available versions of the Macintosh System software available now or in the future include drivers to support this card.

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Tech Info Library Article Number:19901



Tech Info Library

Retrospect 3.0: Virtual Memory and dev.c-1027 error (5/96)

Revised: 2/11/97
Security: Everyone

Retrospect 3.0: Virtual Memory and "dev.c-1027" error (5/96)

=====

Article Created: 30 May 1996

TOPIC -----

When I use Retrospect 3.0 on my PowerMacintosh 7250 and 8550 I get an error message "dev.c-1027."

DISCUSSION -----

Apple only supports Retrospect when it is bundled with the PowerMacintosh 7250 and 8550 computers, Dantz provides technical support any other configuration of this product.

The following workaround to this problem was posted to internet page:
<http://www.macintouch.com/>:

May 10, 1996: Here's a workaround from Dantz for a problem with Retrospect 3.0 in a configuration with more than 40 MB or RAM:

The following instructions patch Retrospect 3.0 to avoid an Assertion check at "dev.c-1027" error. This problem only occurs when you have more than 40 MB of installed RAM, and are also using Apple's Virtual Memory or RAM Doubler by Connectix.

- 1.Open your copy of Retrospect with ResEdit.
- 2.Find the 'Def#' resource and open it.
- 3.Scroll to the end and locate the text "key: PhMP".
- 4.Change the data field that says "\$00000028" to say "\$00000000".
- 5.Save and Quit.

Your patched copy of Retrospect 3.0 will now work properly with Virtual Memory or RAM Doubler enabled.

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19903



Tech Info Library

MAE: Explanation of Color Flashing (5/96)

Revised: 5/30/96
Security: Everyone

MAE: Explanation of Color Flashing (5/96)

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Article Created: 30 May 1996

TOPIC -----

Whenever I run a color intensive application on MAE (like Canvas or JPEGView) on my Sparc5 (Solaris 2.5, CDE 1.0.1), the non-MAE windows on my screen explode into a festive assortment of colors. Clicking out of the MAE window and back onto the CDE Workspace returns CDE to its proper colors, but causes the MAE images to go crazy. I've tried resetting the colormap (xstdcmap -all), which took care of some ghostview problems, but nothing has worked for MAE. Any suggestions?

DISCUSSION -----

This is called color flashing, and it is sometimes unavoidable. You apparently have an 8-bit display on your workstation. This means the hardware supports 256 simultaneous colors out of a possible 16 million.

As an example, what happens if MAE is using 256 colors and your other X applications are using some combination of 256 different colors? The X server notices which window has the colormap focus and loads the hardware colormap with the corresponding set of colors. Change the focus to a different window, and the server loads that window's set of colors.

To avoid this, use fewer colors or get a 24-bit framebuffer. Note also that the MAE General control panel has an option to help reduce flashing, but it has limitations.

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Tech Info Library Article Number:19904



Tech Info Library

MAE: Zero Key on Sun Type 5 Keyboard Does Not Work (5/96)

Revised: 5/30/96
Security: Everyone

MAE: Zero Key on Sun Type 5 Keyboard Does Not Work (5/96)

=====

Article Created: 30 May 1996

TOPIC -----

When running MAE and using a Sun Type 5 keyboard, the Zero key (0) on the keypad does not work.

DISCUSSION -----

Although the README for Patch 2.0 notes this as being fixed, the fix was never incorporated in the release. However, engineering has posted a release on [http:// www.mae.apple.com](http://www.mae.apple.com) or <ftp.support.apple.com> to correct this.

Locate the following directory:

/pub/mae/patches/mae_2.0_updates/sun_key_0

This directory contains keymap definitions for MAE v2.0 or 2.0.1 when using a Sun Type 5 keyboard. Specifically, the zero (0) key on the keypad will now function properly.

To install and use these files, perform the following steps:

Step 1

FTP all files in the directory `patches/mae_2.0_updates/sun_key_0' to your local workstation.

Step 2

Place the files (except for the README) into the directory:

lib/KeymapDepot/sun

This directory is located within the Apple directory in which you originally

installed MAE. Note that this action replaces the following files within the
`sun` subdirectory:

sun.default
sun.type5.PC.US
sun.type5.UK
sun.type5.US
sun.type5.french
sun.type5.german
sun.type5.japanese

Step 3

If you already had MAE active when you performed Steps 1 and 2, open the MAE
Keyboard Control Panel and select any file that is different from the one you
currently have selected. Then reselect your desired file. This action reloads
the keymap file with the new version. Alternatively, you can also perform the
Restart command from the Special menu in the MAE Finder.

Step 4

If you did not have MAE active when you replaced the files, no other actions are
necessary. The new keymaps will be utilized when you start MAE.

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Tech Info Library Article Number:19906



Tech Info Library

MAE 2.0: AT_sigio select:bad file number Shell Error (5/96)

Revised: 5/30/96
Security: Everyone

MAE 2.0: "AT_sigio select:bad file number" Shell Error (5/96)

=====

Article Created: 30 May 1996

TOPIC -----

While MAE is running, I notice the following error in the shell that MAE was started from:

AT_sigio select:bad file number

What is the reason for this, and what is the workaround?

DISCUSSION -----

This error is a result of too many open files within the MAE environment, and can be caused by several factors. This typically, but not always, occurs when attempting to perform a network function like printing, copying, and so on. These factors include:

- A large number of fonts.
- Several applications open at the same time.
- Applications that open files for temporary purposes, like 'scratch' files common in graphic applications.
- Database applications that open several resource files.
- Attempting to print files that have a large number of embedded graphics.
- Several users connected with Personal File Sharing while you attempt to open applications.
- A large number of control panels and/or extensions

To resolve this, you will first need to determine which of the factors above is causing this error message, and then minimize its use.

As of May 1996, there is no resolution to this issue. It is caused by NFILES in A/UX (MAE's source) hard coded to 128. This will not be addressed in MAE 2.0.x.

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Tech Info Library Article Number:19907



Tech Info Library

MAE 2.0: Appropriate Version of STREAMS With HP-UX 9.0.x (5/96)

Revised: 5/30/96
Security: Everyone

MAE 2.0: Appropriate Version of STREAMS With HP-UX 9.0.x (5/96)

Article Created: 30 May 1996

TOPIC -----

This article explains which version of the STREAMS package included on the MAE CD-ROM disc is appropriate for HP-UX 9.0.x. STREAMS is not necessary for either HP-UX 10.x, or for Solaris, because it's built into the OS.

NOTE: Apple has licensed the STREAMS package from HP for use with the AppleTalk kernel components within MAE. If a user has an issue with the STREAMS package, they should to contact their HP support representative.

DISCUSSION -----

Begin_Table

HP-UX Version	STREAMS version
-----	-----
9.0.1	STREAMS3
9.0.2*	STREAMS3
9.0.3	STREAMS3
9.0.4*	STREAMS5
9.0.5	STREAMS5
9.0.7	STREAMS5
9.0.8*	STREAMS5

End_Table

* These HP-UX version are also released for the HP9000 Series 800 systems, however, these OS versions will load on the HP9000 Series 700 systems. MAE is intended only for the HP9000 Series 700 systems.

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Tech Info Library Article Number:19908



Tech Info Library

MAE 2.0: UltraSPARC Issues (5/96)

Revised: 5/30/96
Security: Everyone

MAE 2.0: UltraSPARC Issues (5/96)

Article Created: 30 May 1996

TOPIC -----

What issues, if any are there with the UltraSPARC, Sun's new workstation?

DISCUSSION -----

MAE is supported on Sun's UltraSPARC workstation. However, there are a few issues that Apple is aware of at this time.

Failed to get ROM memory at startup of MAE

MAE 2 requires Patch 2 to run under Solaris 2.5 and the UltraSPARC. Upgrade MAE with this patch, and restart your workstation. Upon this restart, MAE will launch successfully.

AppleTalk and 'hme' network interface

MAE, by default, will change permission of the 'le' network interface to allow any user to use AppleTalk. However, the UltraSPARC has a new interface, called 'hme'. To let users, other than root, use AppleTalk on these systems, change the permissions of /devices/pseudo/clone@0:hme to 'rw' for all users.

UltraSPARC with Creator 3D Graphics card

If a user maximizes the MAE window, using the large box button on the upper right corner of the CDE Motif window, will no longer be refreshed, causing window positions to 'remove' items in the background.

This has been isolated to a bug within CDE and the 3D Graphics card. Apple and Sun engineering are currently working on a solution. The workaround is to not maximize the MAE window to the full size of the screen. Users can issue the command 'xrefresh', but this is not always capable of fixing this issue.

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Tech Info Library Article Number:19909



Tech Info Library

MAE 2.0 DEMO: Error fatal libX11.so.4: can't open file (6/96)

Revised: 6/6/96
Security: Everyone

MAE 2.0 DEMO: Error "fatal libX11.so.4: can't open file" (6/96)

=====

Article Created: 30 May 1996
Article Reviewed/Updated: 6 June 1996

TOPIC -----

I installed MAE 2.0 Demo and restarted my workstation. After adding the license.dat file in the apple directory, I attempted to start the MAE Demo and got the following error in the shell:

```
MAE 2.0.2LM Copyright 1994-1996 Apple Computer, Inc., All rights reserved.  
ld.so.1: /opt/apple/bin/legal: fatal: libX11.so.4: can't open file:  
errno=2  
Killed
```

What is the solution?

DISCUSSION -----

If your workstation is running Solaris, you need to include the following in the environment variable LD_LIBRARY_PATH directory /usr/openwin/lib.

```
For csh  
'setenv LD_LIBRARY_PATH /usr/openwin/lib'  
For sh or ksh  
'export LD_LIBRARY_PATH=/usr/openwin/lib'
```

MAE 2.0 Demo uses a default X Window that uses the libX11.so.4 file to state legal information, and uses that variable to locate the file.

Article Change History:
06 Jun 1996 - Added Solaris reference.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19910



Tech Info Library

PowerBook: Cable Identification List (4/97)

Revised: 4/4/97
Security: Everyone

PowerBook: Cable Identification List (4/97)

Article Created: 06 April 1996
Article Reviewed/Updated: 04 April 1997

TOPIC -----

This article describes the PowerBook cables, sales part numbers, and service part numbers.

DISCUSSION -----

Begin_Table

Name of Cable -----	Finished Goods -----	Service Part Number -----
HDI-30 SCSI System Cable	M2538LL/A	590-0717
HDI-30 SCSI Disk Adapter Cable	M2539LL/A	590-0718
PowerBook Video Adapter Cable	M3927LL/A	922-0831

End_Table

Apple HDI-30 SCSI System Cable

This cable is used to connect an external SCSI device to your PowerBook. The cable consists of an HDI-30 connector (male, 29 pins) and a Centronics 50 pin connector (male).

Apple HDI-30 SCSI Disk Adapter

This cable is used to connect your PowerBook to a desktop Macintosh computer in SCSI Disk Mode. The cable consists of an HDI-30 connector (male, 30 pins) and a Centronics 50 pins connector (male).

PowerBook Video Adapter Cable

This cable is used to connect an external monitor to the Micro DV-14 Video Out

..TIL19911-PowerBook-Cable_Identification_List_4-97_(TA35597).pdf

port on your PowerBook. The cable consists of a DV-14 connector (male) and a DB-15 connector (female).

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

04 Apr 1997 - Corrected service part numbers.

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Tech Info Library Article Number:19911



Tech Info Library

Color OneScanner 600/27: SW Compat w/ Color OneScanner?(5/96)

Revised: 5/31/96
Security: Everyone

Color OneScanner 600/27: SW Compat w/ Color OneScanner?(5/96)

=====

Article Created: 31 May 1996

TOPIC -----

Is the Color OneScanner Dispatcher software that was included with the Color OneScanner 600/27 compatible with the original Color OneScanner?

DISCUSSION -----

No, the Color OneScanner Dispatcher software does not support the original Color OneScanner.

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Tech Info Library Article Number:19914



Tech Info Library

PC Exchange and Disappearing Files (5/96)

Revised: 5/31/96
Security: Everyone

PC Exchange and Disappearing Files (5/96)

=====

Article Created: 31 May 1996

TOPIC -----

I am using PC Exchange with a DOS-formatted SCSI drive and files seem to disappear sometimes. Why does this occur?

DISCUSSION -----

PC Exchange (2.0.x) has a limit of displaying 512 files in a subdirectory. Apple is aware of this and it is being investigated by Engineering. There is no known information as to when or if a fix will be available.

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Tech Info Library Article Number:19917



Tech Info Library

Monitors Control Panel and Hidden Resolutions (5/96)

Revised: 5/31/96
Security: Everyone

Monitors Control Panel and "Hidden" Resolutions (5/96)

=====

Article Created: 31 May 1996

TOPIC -----

I was told that my Macintosh Quadra 800 computer supports 800x600 video resolution. I know my monitor also supports this resolution, but I cannot see an option for 800x600 in the Monitors control panel. Is there something I can do to use this resolution?

DISCUSSION -----

800x600 is not a Macintosh resolution. However, some Macintosh computers can support this resolution when used with the appropriate monitor. Unfortunately, computers using System 7.5.1 and higher do not support non-Macintosh "hidden" resolutions, such as 800x600 and 640x400.

If your computer and monitor can both support the non-Macintosh resolution you are looking for, and you do not have System 7.5.1 or higher, you may be able to use the following procedure to select a non-Macintosh resolution.

Step 1

Choose Control Panels from the Apple Menu.

Step 2

Open the Monitors control panel.

Step 3

Hold down the Option key while clicking the 'Options' button in the Monitor control panel.

Step 3

Choose the desired resolution, then click OK.

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Tech Info Library Article Number:19918



Tech Info Library

MAE 2.0: Loss of AppleTalk (5/96)

Revised: 5/31/96
Security: Everyone

MAE 2.0: Loss of AppleTalk (5/96)

Article Created: 31 May 1996

TOPIC -----

MAE appears to lose it's access to the AppleTalk network. This typically occurs over the course of a few days, and I have to restart the workstation to get connected to the AppleTalk network again. Stopping and starting the AppleTalk stack with '~/apple/bin/appletalk' does not appear to help.

I sometimes see the error 'Unable to locate /tmp/AppleTalk.Muxid' in the shell that they start MAE from as well.

DISCUSSION -----

When this occurs, verify whether the file '/tmp/AppleTalk.Muxid' is present. If the file is missing, this would explain why MAE is no longer able to access the AppleTalk stack. This file is necessary for MAE to bring up and down the AppleTalk stack cleanly. If the file is removed while MAE is running, it will leave MAE in an odd state that can only be corrected by restarting of the workstation, which will bring the AppleTalk stack back into a clean state.

Some reasons why the file may be missing are; a cron job that deletes files in the /tmp directory at night, or a user indiscriminately removes items in /tmp.

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Tech Info Library Article Number:19919



Tech Info Library

Power Macintosh 5400 & 6400: Switching to Ethernet (10/96)

Revised: 10/29/96
Security: Everyone

Power Macintosh 5400 & 6400: Switching to Ethernet (10/96)

=====

Article Created: 31 May 1996
Article Reviewed/Updated: 29 October 1996

TOPIC -----

I have a Power Macintosh 5400/120 computer which comes with the Apple CS II Ethernet card pre-installed. Using the Network Software Selector, I have switched from Open Transport to Classic AppleTalk. However, the Network control panel does not have an option to switch to EtherTalk. I checked the Extensions folder and the Apple Ethernet CS II extension is installed. How do I switch to EtherTalk?

DISCUSSION -----

The Apple Ethernet CS II card and software only function under Open Transport. Under Classic AppleTalk, the Power Macintosh 5400/120 and Power Macintosh 6400 computers cannot switch to Ethertalk. To connect to an Ethernet network using the Apple Ethernet CS II card and the Power Macintosh 5400/120 or Power Macintosh 6400, you must switch to Open Transport, restart the computer, and then use the AppleTalk control panel to switch to Ethernet.

This article was published in the Information Alley on 3 June 1996.

Article Change History:
29 Oct 1996 - Added 6400 to the title.
20 Sep 1996 - Added Power Macintosh 6400 to discussion.
27 Jun 1996 - Added keyword.

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Tech Info Library Article Number:19921



Tech Info Library

At Ease 3.0.2 Update: Read Me (5/96)

Revised: 6/3/96
Security: Everyone

At Ease 3.0.2 Update: Read Me (5/96)

=====

Article Created: 31 May 1996

TOPIC -----

This article contains the ReadMe file for the At Ease for Workgroups 3.0.2 Updater.

DISCUSSION -----

Contents

=====

Requirements for Updating

- Version 3.0 Already Installed
- Workgroup Version of At Ease
- Update Some or All Workstations
- Using an AppleShare Server for At Ease

Updating Procedure

- Installation Options
- Updating from the Floppy Disk
- Updating Over the Network
- Files the Updater Needs to Locate
- Use an Updated Copy of the Administration Program
- New Desktop Printer Extension

Changes in Version 3.0.2

- Using the Lock Startup Disk Feature
- System Startup Crash While Using Open Transport
- Fixed Possible HD Corruption on IDE Hard Disks When Using Lock Startup Vol Feature

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- Launching Applications from Other Applications
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- At Ease Setup Changes

Clarifications

- Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)
- CD-ROMs and At Ease
- Documents Created by Approved Applications
- Server Mounting in At Ease
- Disk Security
- At Ease and File Sharing
- Maximum Number of Connected Users on an At Ease Server
- Bypassing At Ease at Startup on Certain Power Macintoshes
- At Ease and RAM Doubler

Major Problems Corrected in Version 3.0.1 and 3.0.2

- Users Visible After Update from Version 2.x
- No Report of Damaged Preferences File at Log-in
- Faster Logging In or Out on Large Systems
- Documents Panel Remains Visible
- Setup Application Correctly Recognizes Setups
- Virex Incompatibility Corrected
- Items in the Apple Menu Remain Visible
- Servers Mount Correctly
- Import Users Function Works Correctly
- Middle Level Administration

The At Ease 3.0.2 Updater will update your current version of At Ease for Workgroups 3.0 or 3.0.1 to the latest version, 3.0.2. The change in version 3.0.2 includes three fixes: a fix to allow the Lock Startup Disk to work (under the constraints described later), a fix for a crash that occurs when starting an At Ease machine up with Open Transport, and a fix for possible HD corruption on IDE hard disks when using the "Lock startup volume" feature. A detailed list of all changes appears at the end of this document.

Requirements for Updating

=====

Version 3.0 Already Installed

You can only use the Updater application on a workstation that has version 3.0 or 3.0.1 installed. The Updater will not run if you have an older version (2.x or a lower number) installed. If you have an earlier version of At Ease for Workgroups, you should first update it to version 3, then use the Updater.

Workgroup Version of At Ease

Any workstation you update with the Updater must have At Ease for Workgroups installed. You should not use this Updater to update a workstation that has the non-workgroup version of At Ease installed. The updated software has not been

tested with the non-workgroup version, and most changes in this version involve network enhancements that will not be used in the non-workgroup version.

In addition, the Updater application will not update the version of At Ease Setup (the administration program) for the non-workgroup product. If you use the Updater on a non-workgroup workstation, you may not be able to run your existing At Ease Setup (non-workgroups) application on that workstation.

Update Some or All Workstations

The databases used by At Ease 3.0, 3.0.1, and 3.0.2 are fully compatible. That means you can update some At Ease workstations on the network and not update others. To benefit from all the enhancements in this version, however, you should update all of the workstations used by At Ease.

Using an AppleShare Server for At Ease -----

If your At Ease server is an AppleShare volume, all workstations must use version 3. Any workstation that has an older version of At Ease will get a message reporting that the At Ease Preferences file is bad when it tries to access the server.

Updating Procedure

=====

Installation Options

There are two ways of updating one or more machines using At Ease for Workgroups by using the Updaters floppy disk on each workstation or by installing the updated software over the network.

Updating from the Floppy Disk

1. Turn off At Ease on each workstation that you are updating. (See the users manual for instructions, if necessary.)
2. Insert the Updater disk.
3. Open the At Ease 3.0.2 Updater application.
4. Click Begin in the greeting that appears.
5. If the Updater cannot find a file it needs to update, a message appears asks you to locate that file. (If you cannot find the file, click Skip to cancel the update.)
6. Locate the missing file and repeat the update procedure.

Updating Over the Network

1. Copy the Updater application to an AppleShare server volume to which your workstations have access.
2. Make sure the application is locked. (Select the Updaters icon, choose Get

Info from the File menu, then click to place an X in the box labeled Locked.)

3. Turn off At Ease on each workstation you are updating.

Tip: Before updating any workstations on the network, you may want to turn At Ease off on machines you will be updating by using the Update Computers feature. Then, after you have updated your At Ease machines, you can turn At Ease on by using this same feature. (See the users manual for instructions, if necessary.)

4. Mount the server volume that contains the Updater application.

5. Open the Updater application.

6. Click Begin in the greeting that appears.

Files the Updater Needs to Locate

In most cases, the Updater will attempt to locate and update the At Ease and At Ease Startup files automatically. If it cannot find either of these files, it will ask you for the location of the missing file. If you cannot find these files, you can click the Skip button to stop the update, leaving your files as version 3.0 or 3.0.1.

Some administrators remove the administration program on certain workstations. For this reason, the Updater will display a message asking you to locate the setup program on your disk. If you cannot locate the program, click the Skip button to bypass this request.

Use an Updated Copy of the Administration Program

Be sure to update the copy of At Ease Setup (Workgroups) you use to administer At Ease to version 3.0.2. You should also remove any non-updated copies of this program from your hard disk (or disks). Do not leave multiple copies of the setup program on the workstations, because you may inadvertently open an old version of this program.

New Desktop Printer Extension

The Updater disk includes an Apple Extras folder. This folder contains a version of the Desktop Printer Extension that fixes some problems that may occur when using the restricted Finder mode in At Ease.

The Desktop Printer Extension is used by printer drivers for some of the newest printers. You only need to install this extension (version 1.03) if you are using an earlier version of it. If the Desktop Printer Extension is not already in the Extensions folder inside your System Folder, or you have a newer version of the extension, do not install it. (Installing this extension will do nothing on computers that are not already using it, but it will occupy a small amount of memory.) Use the Get Info command in the Finder to view the version of the extension if you are not sure what it is.

To install the extension:

1. Open the Apple Extras folder on the Updater disk.
2. Drag the Desktop Printer Extension icon to the System Folder on your hard disk.
3. Click OK each time a message appears.

Changes in Version 3.0.2

=====

Using the Lock Startup Disk Feature

A bug was inadvertently introduced in version 3.0.1 that prevents the Lock Startup Disk feature from working correctly. Though it may appear that the feature is active on those machines that are able to use it (indicated by a checkmark in the box next to the feature), it may actually not be active and users will be able to view the startup volume by booting from a floppy disk (or another bootable volume). After updating your machines to 3.0.2, you should first attempt to make sure the feature is disabled, quit the administration application, and then re-enable it. This will ensure that the latest update code is installed on your startup disk.

Note that this feature will not work on all Macintoshes. You should read the section later (Disk Security) on compatibility of this feature with your computer.

System Startup Crash While Using Open Transport

A fix was made to the At Ease Startup extension to fix a problem with a system crash that occurs on 68K machines that have Open Transport networking enabled. This crash may also show up on certain PPC machines (notably 7500s).

Fixed Possible HD Corruption on IDE Hard Disks When Using Lock Startup Vol Feature

----- This version fixes a possible hard disk corruption problem on some IDE internal drives when the "Lock startup volume" feature is activated on certain newer computers using an IDE (ATA) internal hard disk. This includes the PowerBook 190, PowerBook 2300, and PowerBook 5300 computers, but not the Quadra 630. If this occurs, the primary behavior is that the computer will display a "sad Mac" screen at reboot time.

Version 3.0.2 does not repair an already affected hard disk. If you have encountered this problem, the utility "At Ease-IDE Utility" will allow you to recover your hard disk. This utility is available on this disk. See the "At Ease-IDE Utility" Read Me for additional information.

Changes in Version 3.0.1

=====

Launching Applications from Other Applications

Normally, for security reasons, At Ease will not allow applications to start, or sublaunch, other applications. You can allow users to sublaunch applications in At Ease in one of two ways: (a) by installing the sublaunched application in the

users setup; or (b) by using the Application Preferences command (in the Options menu) in At Ease Setup and putting an X in the box labeled Can be launched by other applications for each sublaunched application. Unfortunately, this process can be confusing.

Version 3.0.1 simplifies this procedure by providing one way to allow sublaunching for all applications. The User Settings dialog box (which you open by choosing User Settings in the Security menu) now contains a checkbox labeled Always permit sublaunches. When this checkbox is selected, At Ease always allows applications to start other applications. (This setting takes precedence over any setting in the Application Preferences dialog box.)

By checking this option, an administrator does not have to worry about selecting individual applications for sublaunching. The checkbox can be best thought of as a compatibility mode feature that allows many applications to work better.

Log-in Procedure

To improve the log-in speed, At Ease no longer saves the panel or page information. Thus, when a user logs back into the panels environment, she or he will always be brought to the first page of the brown panel.

At Ease Setup Changes

When At Ease Setup starts up, it now checks the internal databases. This check can take a few seconds (when no users are logged in to the At Ease server) to almost a minute (on slow networks, when users are already logged into At Ease). A message advises you that this check is taking place.

Clarifications

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Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)

In the Read Me file for At Ease 3.0, the section titled At Ease for Workgroups 3.0 and Kid Pix Studio explains how to use At Ease 3.0 with Kid Pix Studio. The information for setting up subprograms with the Application Preferences command contains an error for the file KPS 5. The file creator for KPS 5 should be Kid5, not Kid4. Note: The i character is generated by first typing Option-i, then immediately typing i.

CD-ROMs and At Ease

An administrator can selectively allow CD-ROMs to be used on a workstation. This feature applies only to discs that can be loaded into the CD-ROM drive of the users computer. It does not apply to discs in CD-ROM drives that are connected to an AppleShare file server. These drive appear to At Ease as AppleShare volumes, not CD-ROM drives.

Documents Created by Approved Applications

Documents that are available to users may be opened if the application that created the document is on the approved list in At Ease. The software creates this list by searching locations to which the users of a setup have access,

including the setup folder, the Apple Menu Items folder, the Control Panels folder, and the Startup Items folder. Folders are searched only if the users of the setup have access to them.

If any documents (or stationery pads) exist in those locations, then the program assumes that the application that created them is also approved. For example, if the Apple Menu Items folder contains a SimpleText stationery pad, and users of that setup have access to other items in the Apple menu, those users will be able to open any SimpleText documents, no matter where the documents are located. This is true for both panels and for the restricted Finder.

Server Mounting in At Ease

The administrator can select whether users of a particular setup can either (a) start up with the last server volumes used or (b) use the Choosers marked startup volumes instead. The program permits only one of these options for a given setup.

This feature can be set in At Ease Setup (Workgroups) by selecting a setup and then putting an X in the box labeled Always remember the user's last-used AppleShare logins. When the checkbox is selected, any AppleShare volumes mounted at log-out will be remembered by At Ease and remounted the next time the user logs in. When the checkbox is not selected, any server volumes that were set in the Chooser to connect at startup will mount with the same privileges as were set with the Chooser. Because this feature operates on a user-by-user basis, the setting must always be the same for any user who belongs to multiple setups.

If a server has volumes (such as a CD-ROM drive) to which you want users to have access when they log in, you should leave the remember checkbox unselected and use the Chooser to set up the volumes to be mounted on each workstation. You must do this on each computer, because the AppleShare information is stored in the system folder of the workstation and not on the server volume.

Disk Security

The disk security in At Ease prevents users from starting up a workstation from a floppy disk and accessing the startup hard disk. This feature was introduced in At Ease 2.0. In Version 3.0, it is a box labeled Lock Startup Volume in the User Settings dialog box.

If At Ease detects that the security option cannot be used on a workstation, it dims the menu command. The two primary reasons why the Lock Startup Volume option cannot be used are:

Unknown hard disk driver

If you have reformatted your startup disk with a non-Apple hard disk driver, the disk security option may not work with that driver. If the Lock Startup Volume checkbox is dimmed, please contact the driver software manufacturer to see if that disk driver is compatible with this At Ease feature.

Non-partitioned IDE drives

Some Macintosh computer models use a hard disk drive mechanism called IDE (or ATA) for the startup disk. (Computers that use this drive type include the Power Macintosh 5200, 5300, and 6200, and the Macintosh PowerBook models 150, 190, and 5300.)

The security in At Ease requires that the startup hard disk drives are partitioned. All SCSI hard drives are partitioned at the factory, and in the future, the IDE drives will be partitioned. But for current Macintosh models with IDE drives that are not partitioned, the disk security will work only if the IDE drive is reformatted using a partitioned driver. One program that can partition these drives is Drive7, from Casa Blanca Works. (The IDE hard drive must be reformatted in order to partition it. You cannot just update the driver on the disk.)

At Ease and File Sharing

Turning on file sharing on a computer using At Ease 3.0 or 3.0.1 is not recommended. At Ease attempts to turn off file sharing when a restricted Finder user starts up. You should be sure that file sharing is turned off (in the Sharing Setup control panel).

Maximum Connected Users on an At Ease Server

Because At Ease can open up to four files on the server for each machine that is in the login screen, it is possible that some versions of AppleShare will not allow as many machines to connect as it may indicate in the AppleShare Admin File Server Preferences dialog. Version 4.2 of AppleShare should eliminate this restriction.

Bypassing At Ease at Startup on Certain Power Macintoshes

Certain newer Macintoshes that use System 7.5.2 may allow the user to bypass At Ease by holding down the shift key at startup time. This problem has been fixed in System 7.5.3, but an easy workaround for the time being is to turn on the "Don't allow shift key at startup to disable extensions" checkbox in the setup application. You may need to do this on each machine that is having the problem.

At Ease and RAM Doubler

RAM Doubler version 1.6 is not compatible with At Ease 3.0.1. Users may experience crashes when launching applications from At Ease if RAM Doubler is installed. Apple recommends customers contact Connectix Corporation to determine if an updated version is available. For more information, contact Connectix at (800) 950-5880 or (415) 571-5100.

Major Problems Corrected In Version 3.0.1

Users Visible After Update from Version 2.x

When users update from version 2.x to version 3.0, sometimes users that were already in At Ease did not show up in the setup application. The resulting

display would show setups, but no users. Users should now appear after the automatic update from 2.x to this version (3.0.1).

No Report of Damaged Preferences File at Log-in

On certain network systems (especially if workstations are not turned off periodically), a message indicating that the application preferences may be damaged appeared when a workstation logged in even though other computers would be working properly. Restarting the server would usually clear up this problem. This problem has been fixed in version 3.0.1.

Faster Logging In or Out on Large Systems

In server-based At Ease labs with many installed users, workstations would take an excessively long period of time to log in or out. In version 3.0.1, the log-in and log-out time has been lessened for very large networks. Apple further recommends that you use version 4.2 (or later) of AppleShare if you are encountering problems with slow log ins or log outs.

Documents Panel Remains Visible

When a user was logged in, a message occasionally reported that the server had been disconnected. The documents panel would disappear and not reappear, even though the server volume was not actually disconnected. This problem has been corrected.

Setup Application Correctly Recognizes Setups

The problem in which the setup application interpreted one or more setups as locked (so that they could not be modified by the administrator) has been corrected.

Virex Incompatibility Corrected

The Virex application was not compatible with At Ease 3.0. If both were installed, the system would cause a crash at startup. This problem has been corrected.

Items in the Apple Menu Remain Visible

Occasionally some aliases in the Apple menu were deleted when a restricted Finder user returned to the log-in screen. This problem has been corrected.

Servers Mount Correctly

A problem that sometimes prevented server volumes selected in the Chooser from mounting when a user logged in has been corrected. (This feature only works if the users setup has the Always remember the user's last-used AppleShare logins turned off. See the users manual for instructions.)

Import Users Function Works Correctly

A number of changes were made to the import users function, including correcting

a problem that prevented cancellation of importing when many errors occurred.

Middle-Level Administration

Middle-level administrators can now add users to setups that they own.

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Tech Info Library Article Number:19923



Tech Info Library

Using AIMS on a TCP/IP Network With Windows PCs (5/96)

Revised: 5/31/96
Security: Everyone

Using AIMS on a TCP/IP Network With Windows PCs (5/96)

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Article Created: 31 May 1996

TOPIC -----

I am setting up an Apple Internet Mail Server (AIMS) on a company network for internal e-mail. This mail server will be the only Macintosh computer on our network, so I'll need to configure the PCs with a TCP stack. How do I do this and have the PCs use AIMS?

DISCUSSION -----

If your PC computers are using Windows, they should either have an add in, or built-in TCP stack. Your PCs will also need to have a POP3 Mail client like Eudora installed. If you are using Windows 95, you need to install the TCP stack on each of the clients. Usually the default installation does not install TCP, so you need to install it manually.

Since you want an internal e-mail system, you can use IP addresses to identify all of the computers. If you use IP addressed, you should disable DNS (domain name server) when you setup the TCP properties on the PCs. If you want to use domain names, you will need to run a DNS on one of the computers.

MacDNS, a DNS application, can be run on the same Macintosh computer as AIMS. With a DNS users can refer to others as "user@mycompany.com" as oppose to "user@192.0.0.0"

If you have trouble setting up the TCP/IP connection in Windows, please contact Microsoft for further support.

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Tech Info Library Article Number:19924



Tech Info Library

Power Macintosh 5400/120: ReadMe (5/96)

Revised: 5/31/96
Security: Everyone

Power Macintosh 5400/120: ReadMe (5/96)

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Article Created: 31 May 1996

TOPIC -----

This article contains the Read Me file for the Power Macintosh 5400/120 computer.

DISCUSSION -----

This document provides late-breaking information that could not be included in your user's manual.

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Tips

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Improving Video Capture

You can increase the speed of video capture by taking one or more of the following actions:

- Turn off virtual memory in the Memory control panel.
- Turn off AppleTalk. (You can quickly turn AppleTalk on or off with the Control Strip, or use the Chooser instead.)
- Reduce the size of the capture window. (160x120 is the best size; also, 320x240 is good.)
- Do not run programs other than the capture application while capturing video.
- Turn off the Menubar Clock in the Date & Time control panel.
- Turn off all unnecessary extensions. Do not turn off QuickTime. (Use the Extensions Manager control panel to turn off extensions; then restart your computer.)
- Make sure that your hard disk has enough free space to record. If you notice a decline in performance, use a disk optimizer to improve your disk's efficiency.

Software for the GeoPort Adapter and Express Modem

Apple Telecom software is available on the CD that came with your computer. Apple Telecom is the software for the GeoPort Adapter for PowerPC-based computers and the Express Modem for PowerBook computers.

In the U.S. and Canada, MegaPhone is included with the Apple Telecom software. MegaPhone is a screen-based telephone application that supports the telephone capabilities of the Apple Telecom 2.x software using the GeoPort Adapter, such as dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information.

In the U.S., Canada, and Japan, Apple Telecom is also available as part of the GeoPort Adapter Kit, which can be purchased separately. The kit includes MegaPhone as well as SITcomm SE/GTA (a terminal emulation program). Apple Telecom, along with MegaPhone (but without SITcomm) is also available as a free upgrade on CompuServe, America Online, and Apple Internet sites.

If you are using a GeoPort Adapter with Apple Telecom software on any Macintosh model with a PCI expansion slot (such as the 5400, 7200, 7500, 8500, or 9500), be sure to disable LocalTalk by disconnecting any devices attached to the printer port (serial devices can remain attached).

Installing Acrobat Reader from the System Software CD

Adobe Acrobat Reader lets you view and print any Portable Document Format (PDF) file. You'll find several PDF files on your computer's hard disk and on the system software CD that came with your computer. These PDF files contain instructions for using many of the special software programs that came with your computer.

The Acrobat Reader installer file is located in the Apple Extras folder on your hard disk and on the system software CD that came with your computer. You have to run the installer file before you can use Acrobat Reader. Refer to the Installing Acrobat Reader document for installation instructions.

Using the QuickTake 150 Camera

For best results, use the QuickTake Image Access control panel to look at images in the camera and transfer them to your Macintosh. This method is faster and more reliable than using the PhotoFlash program.

Troubleshooting

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More troubleshooting information on the problems described below and on other topics, refer to Macintosh Guide (available in the Guide menu when the Finder is active) and the manuals that came with your computer.

Printing Problems

Your system freezes or experiences other problems when printing on a LaserWriter Select 300 or 310 printer. This problem can occur when you attempt to print and your printer is not connected properly to your computer. Trying to cancel printing in the Print Monitor will not solve the problem and may either produce a flashing error message or cause your computer's performance to slow down.

Check to make sure your printer is connected to your computer. If you see a message with a Continue button, click Continue. Normal printing is resumed.

You have trouble printing on a StyleWriter or StyleWriter II printer. Use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver; it is not compatible with PowerPC-based computers.

You have trouble printing with Apple PhotoFlash. Make sure that you have designated a printer in the Chooser. After doing so, open the File menu and choose the Print command.

You can't use the "Print Later" option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the "Print Later" option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension and restart your computer.

To turn off the Assistant Toolbox extension:

1. Open the Apple () menu and choose Control Panels.
2. Open the Extensions Manager control panel.
3. In the list of extensions, click next to the Assistant Toolbox extension to remove the checkmark.
4. Restart your computer.

You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer. This problem can occur when the amount of memory Stickies uses is set below 150K. Try increasing the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

Performance Problems

You see a message that not enough memory is available. This problem can occur for several reasons. For detailed tips on memory-related problems, refer to both the troubleshooting information in the manuals that came with your computer, and to the information on memory in Macintosh Guide (available in the Guide menu when the Finder is active).

If this problem occurs after you have opened the Extensions folder in the System Folder and scrolled through a long list of extensions, you can restore normal performance by restarting your computer.

Problems with Sound

When you play back sound you've recorded, you notice clicks, pops, or skips. This problem can occur if you have virtual memory turned on while you're recording sound. Turn off virtual memory before recording. For instructions on turning off virtual memory, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Adjusting the volume slider in Apple Video Player and other sound applications does not affect the volume, or it turns the volume all the way up or all the way down (allowing no in-between settings). This problem occurs on some newer models that handle sound differently from some older application programs. You can use the system sound settings to adjust the volume. Follow these steps:

1. Open the Apple () menu and choose Control Panels.
2. Open the Monitors & Sound control panel.
3. Click the Sound button.

4. Use the volume or level slider (whichever is available) to adjust the sound volume.

You're using a program that requires the Sound control panel to set sound options. Some application programs that use sound require the Sound control panel, an older control panel that has been replaced on your computer by the Monitors & Sound control panel.

You can install the Sound control panel by doing a custom installation of system software. For instructions, refer to the information on custom installation in the Troubleshooting chapter of the manual that came with your computer. When the Custom Install dialog box appears, click "Sound control panel" in the list, then click Install.

Hypercard version 2.3.3 or earlier does not record sound properly on your computer. Other sound recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within Hypercard 2.3.

Networking and File Sharing Problems

IMPORTANT For information about Open Transport, see the information on networking in Macintosh Guide and in the manual that came with your computer. Additional information about Open Transport is on your hard disk in a separate folder.

AppleShare displays incorrect information for large drives. If you use File Sharing to share a disk larger than 2 gigabytes (GB), some older computers connected to your computer may display an incorrect size for the disk in the Get Info box. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

Since these older computers do not support the larger drives, they also cannot report correct information about the drives. (Computers with System 7.5 display correct information.)

You can't reconnect to a server. If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu, you get a message that the disk could not be opened because you do not have enough access privileges or because the server can't be found on the network. To reconnect to the server:

1. Close any open files. If any of your files contain changes that need to be saved, use the Save As command to save them on an available disk.
2. Choose the server from the Recent Servers item in the Apple menu.
3. If necessary, replace the files on the server with the ones you saved on an available disk when the server was not available.

You see zones and/or servers listed in the Chooser, but the network cable is not connected to the computer. This problem can occur if you disconnect the network cable from the back of your computer while the Chooser is open. Be sure to shut down your computer before disconnecting a network cable.

You have problems using AppleShare Server Software version 4.1 or 4.2.

AppleShare server software versions 4.1 and 4.2 are not intended for use with PCI-based computers, such as the Power Macintosh 5400, 7200, 7500, 8500, and 9500 computers. If you attempt to use AppleShare server software version 4.1 or 4.2 with these models, you may experience problems.

Problems Using a RAM disk

You see a message that your RAM disk is unreadable. Under some circumstances you may see the following message after setting up a RAM disk:

"This disk is unreadable by this Macintosh. Do you want to initialize the disk?"
(Important: This message applies to the RAM disk, not to your hard disk, which will not be initialized.)

Decrease the size of the RAM disk. If you see the message again, decrease the size again. Continue to decrease in small amounts until the message no longer appears.

Problems with Programs Freezing or Quitting Unexpectedly

MoviePlayer quits unexpectedly. Using MoviePlayer 2.1, you can play a movie at double (2X) size. You cannot present a movie (that is, play the movie on a second monitor) at double size. Presenting a movie at 2X size results in the Movie Player quitting without warning.

Wiggleworks freezes, quits unexpectedly, or won't produce sound. Wiggleworks 1.0 requires special software, Macintalk Pro, to produce sound. The version of Macintalk Pro that comes with Wiggleworks is not compatible with your computer. After installing Wiggleworks, you need to drag a newer version of Macintalk Pro (version 1.4 or later) to the Extensions folder (inside your System Folder).

There are two ways to obtain Macintalk Pro version 1.4:

Install PlainTalk from the Apple Extras folder. PlainTalk includes Macintalk Pro version 1.4, which is placed in the Extensions folder when you install PlainTalk.

Download Macintalk Pro from Apple Computer's America Online or Internet sites. Refer to the manual that came with your computer for information about connecting to Apple's online sites.

If you are unable to obtain Macintalk Pro version 1.4, you can order it from Apple by phone. Refer to the service and support information that came with your computer for the phone number you should call.

Note: Your computer comes with Macintalk 3. Wiggleworks 1.0 does not work with Macintalk 3. To hear sound with Wiggleworks you must have Macintalk Pro version 1.4 in your Extensions folder, but it is not necessary to remove Macintalk 3.

Maple V quits unexpectedly when you change your monitor resolution. This can occur if you use the Control Strip to change the monitor resolution while the Maple V program is active. Use the Monitors & Sound control panel instead of the Control Strip to change screen resolution. For instructions on using the

Monitors & Sound control panel, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

When you try to install Adobe Premiere Deluxe, the mouse freezes. This can occur if you have virtual memory turned on and AppleTalk active when you try to install Adobe Premiere Deluxe. Turn off virtual memory and make AppleTalk inactive before installing. For instructions, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

This problem does not occur if you select Adobe Premiere 4.2 installation instead of Adobe Premiere Deluxe.

Problems Using Infrared Features

Farallon AirPath v1.0 and Apple IR File Exchange don't work on your computer. Also, Farallon AirDock and other infrared devices are not detected through a serial port that has been selected in the AppleTalk control panel, nor has the string "(IR)" been appended to the port name. Infrared (IR) features are not fully supported on desktop computers running system software version 7.5.3. An AirDock connected to a selected AppleTalk serial port will, in most cases, operate normally (though forwarding features are disabled). This lets you connect to the desktop system using Personal File Sharing. These problems do not occur on PowerBook computers, and will be corrected on desktop computers in a future update.

Compatibility Problems

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At Ease for Workgroups 3.0 and 3.0.1

In the At Ease Setup program, the "Lock startup volume" checkbox in the User Settings dialog box is dimmed and unavailable. To make the checkbox available, install the At Ease for Workgroups Updater version 3.0.2, which is in the Apple Extras folder on the system software CD that came with your computer.

If you are using a version of At Ease prior to 3.0.2, do not remove the "At Ease ATA Extension" in your Extensions folder. (This extension prevents the "Lock startup volume" checkbox from being available.) If you are using At Ease 3.0.2 or later or you are not using At Ease at all, you may remove the "At Ease ATA Extension."

For more information, refer to the SimpleText file in the the At Ease for Workgroups Updater folder in the Apple Extras folder on the system software CD that came with your computer.

Ethernet Cards

The Ethernet CS II Card requires Open Transport software. To use Open Transport, open the Network Software Selector application in the Apple Extras folder, and select Open Transport networking. Then use the AppleTalk and TCP/IP control panels to set up networking with the Ethernet CS II Card. (Do not use the Network and MacTCP control panels.)

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MacIPX is not supported currently by Open Transport and therefore does not work with the Ethernet CS II Card or with any Ethernet PCI card.

The currently shipping versions of Apple IP Gateway and AppleTalk Internet Router are not compatible with Open Transport.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

QuarkXPress

To use QuarkXPress with System 7.5.3 on a PowerPC-based computer, you must upgrade to QuarkXPress version 3.32.

SAM Virus Detection

SAM (Symantec AntiVirus for Macintosh) version 4.0 does not work with System Software version 7.5.3. To use SAM, you must obtain SAM version 4.0.6 or later from Symantec Corporation.

Note: The first time you restart your computer after installing SAM, the screen may be only partially redrawn (with a rectangular area missing) after you dismiss the SAM startup message. This screen problem only occurs once after you install SAM.

STF PowerFax PE

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory lets your application use less memory.

Your computer comes with virtual memory turned off. With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?" and "Tips for PowerPC-based computers."

For best performance, try setting virtual memory to no more than 150% of the memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

If virtual memory is turned on and you notice performance problems (such as unusually slow computer response) when using certain application programs, you may want to turn off virtual memory.

To improve performance, you can also install more memory (RAM) in your computer. See the user's manual that came with your computer for more information.

Important Information About Document Auto-Save

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The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

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Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with your Macintosh model. Macintosh PC Exchange provides an easier method for accessing DOS and Apple II ProDOS disks on a MacOS-based computer.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a MacOS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use Macintosh PC Exchange to mount the MacOS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both MacOS- and DOS-format partitions, Macintosh PC Exchange will recognize only the MacOS partition. In addition, Macintosh PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use Macintosh PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use Macintosh PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a MacOS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple

MacOS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for Macintosh PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, click the device's icon to select it and choose Put Away from the File menu. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use either the disk setup and partitioning software that came with the SCSI controller card installed in your PC or the one that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, Macintosh PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

- A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your computer.
- Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:19925



Tech Info Library

LaserWriter: Printer Software for Windows 95 (6/96)

Revised: 6/25/96
Security: Everyone

LaserWriter: Printer Software for Windows 95 (6/96)

Article Created: 3 June 1996
Article Reviewed/Updated: 25 June 1996

TOPIC -----

This article describes the Apple LaserWriter Printer Software for Windows 95.

- Installing the Printer Driver Software
- Files Installed
- Using the Apple Color LaserWriter 12/600 PS
- Obtaining Printer Supplies for the Color LaserWriter 12/600 PS
- Apple Printer Utility 2.0.2

DISCUSSION -----

About Your Apple LaserWriter Printer Software for Windows 95

This document contains some important reminders and some information that is not in the manual that comes with your printer. You may want to print this document and keep it for future reference.

Installing the Printer Driver Software
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- 1) Start Windows 95.
- 2) Exit from any applications that are now running.
- 3) Insert Printer Disk 1 for Windows 95 into your floppy disk drive.
- 4) Click on the "Start" icon of the Task-Bar and select "Run...".
- 5) In the dialog that appears, type a:\setup (where a: is your floppy diskette drive indicator), and click OK. Follow the installer instructions.

Files Installed

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These PostScript Driver files are placed in c:\windows\system:

PSCRIPT.INI
FONTS.MFM
ICONLIB.DLL
PSCRIPT.DRV
PSCRIPT.HLP
PSMON.DLL
TESTPS.TXT

The ReadMe file, Apple Printer Utility, and required DLLs are placed by default in c:\lwutils:

README.TXT
APU.EXE
APU.HLP
IDPSVCS.DLL
SPX_WPS.DLL

Required DLLs for NetWare are placed in c:\windows\system:

NWCALLS.DLL
NWIPXSPX.DLL

During installation the Add Printer Wizard installs APPLE380.SPD and the selected PostScript Printer Description file in c:\windows\system:

APLWGRI2.PPD
APLWCOB1.PPD

For APLWCOB1.PPD file APLWCOB1.ICM is installed into c:\windows\system\color.

Using the Apple Color LaserWriter 12/600 PS

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NetWare Rprinter Printer Number

The printer may obtain the Rprinter Printer Number automatically.

About the Demonstration Page

When the power is turned on, the Color LaserWriter 12/600 PS automatically prints a startup page and a demonstration page. For legal and B5 paper sizes, only the startup page prints; the demonstration page is not printed. You can use the Apple Printer Utility to turn off the printing of the startup and demonstration pages.

NOTE: The startup and demonstration pages can not be turned off from a PC running Windows 95 if the Color LaserWriter 12/600 PS is connected to your PC through the parallel port. You must be connected to the printer via a network to

use this option of the Apple Printer Utility.

About the Apple Color LaserWriter 12/600 PS Status Panel

As described in the Color LaserWriter 12/600 PS manual, Appendix G, the status panel lights aid in indicating hardware service problems found during printer startup. If the Alert light is flashing and all the door lights are flashing, check all the printer doors; one of them is open. If the Paper OUT and Paper Jam lights are flashing alternately, a hardware problem has been detected. To identify the problem, notice which toner lights (C, M, Y, Bk) and how many of the maintenance lights (in the area on the right-hand side of the status panel) are on, and refer to the table below. Each area listed under "Problem" represents a general circuit area for the service technician to investigate, not necessarily the exact cause of the problem.

Begin_Table

Toner Lights On	# Consumable Lights On	Problem
C	0	I/O Controller Board
C	1	SIMM, Slot J11
C	2	SIMM, Slot J10
M	2	Hard Drive
M	3	I/O Controller ROM
Y	0	Fuser
Y	1	Oil Pump in Fuser
Y	2	Thermal Sensor in Fuser
Y	3	Paper Feed Unit
Bk	0	DC Controller
Bk	1	Power Supply
Bk	2	Toner Carousel
Bk	3	Laser/Scanner Circuit
M & Bk	0	Main Motor
M & Bk	1	Drum Motor
M & Bk	2	Laser/Scanner
C & Bk	0	Controller Fan
C & Bk	1	Fuser Fan
C & Bk	2	Main Fan

End_Table

If you have an external SCSI hard disk drive attached but do not turn it on before you turn on the printer's power, the printer may indicate a hardware failure. To correct the problem, turn the hard disk drive on and restart the printer.

Using NetWare Banner Pages

The Color LaserWriter 12/600 PS is a PostScript printer only. If you are using NetWare 4.x, use PostScript banner pages only. If you use another type of banner

page, your print job as well as the banner page will not print. Do not use banner pages at all with NetWare 3.x. If you do, neither the banner page nor your print job will print.

Printing Over Novell Networks

By default, binary PostScript sent via the Novell network is encoded in Tagged Binary Communications Protocol (TBCP). The printer's TBCP filtering mode for Novell is also on by default. If you change the Protocol Options to "None" from the Printer Control Panel's PostScript setup, you must send the following PostScript to turn off TBCP filtering for Novell on the printer:

```
%=====
% Begin PostScript Code
%
true 0 startjob
(%PrintServer%)
<</Filtering /None>> setdevparams
%
% End PostScript Code
%=====
```

If you subsequently change the Protocol Option back to "Default", you must send the following PostScript to turn on TBCP filtering for Novell on the printer:

```
%=====
% Begin PostScript Code
%
true 0 startjob
(%PrintServer%)
<</Filtering /InterpreterBased>>
setdevparams
%
% End PostScript Code
%=====
```

The Novell filtering mode cannot be changed within a PostScript job, so the above PostScript sets the filtering mode outside the job context; thus it becomes permanent. If your printer's password has been changed from the default setting, replace the "true 0 startjob" line with "true <your password> startjob".

Obtaining the Best Results for Business Graphics

To obtain the best results for business graphics, colors should be 100% saturated. For example, to print pure yellow, define yellow as 100% red and 100% green without any blue. Then print your document, ensuring the Send Full Color Data option on the Job Control tab dialog is selected.

Printing on Legal-Size Paper

In the standard memory configuration, the Color LaserWriter 12/600 PS uses a higher compression technique for legal-sized paper using only the cyan, magenta, and yellow color planes. As a result of this compression technique, very complex pages may show missing pixels in fine lines or small text, "jaggies" (edges with low-resolution appearance) and color changes. To improve the image quality of such pages, you can increase the printer's memory to 16 MB or more. With at least 16 MB of printer memory, the Color LaserWriter 12/600 PS can achieve the same quality with legal-size pages as with letter and A4 sizes using all four color planes (cyan, magenta, yellow, and black.)

Printing Images on the Color LaserWriter 12/600 PS Printer

The Color LaserWriter 12/600 PS printer's highest resolution for printing images is 150 x 150 dpi. No gain in image quality is achieved if higher resolution images are used. All other types of documents print at 600 x 600 dpi.

Avoiding Hue Shifts When Printing to File

When you save an image in an Encapsulated PostScript (EPS) file all the PostScript settings relating to the original output device in effect are saved along with the image data. When the image is printed later, the settings that were in effect may cause major hue shifts. To prevent these hue shifts save the image in TIFF format instead of EPS.

The Density Control Panel

The Color LaserWriter 12/600 PS has been adjusted at the factory to produce the best possible image quality. However, small variations exist among different printers. To make subtle changes to image quality, you can use the Density Control Panel on the back of the printer.

NOTE: If changing the settings produces inferior image quality, return to the factory settings by following these steps: Select each color using the Color Select button, then press the - or + button to move the indicator light to the center position. When the indicator is in the center, press Enter to make the setting permanent. Repeat this procedure for all four colors.

Printer's Processor Speed

In the printer manual, Appendix A contains a typographical error: the microprocessor speed is 30 MHz, not 25 MHz as printed.

Using the Color LaserWriter 12/600 PS with a Windows NT Server

Using a Windows NT Server may cause spurious job records to be entered in the printer's Job Log if the printer is busy. The jobs will have a status of "cancelled."

Obtaining Printer Supplies for the Color LaserWriter 12/600 PS

=====

To order printer supplies for the Color LaserWriter 12/600 PS direct from Apple, call 1-800-600-7805. For order numbers, see Appendix A of the printer manual.

- toner cartridges
- transparencies
- photoconductor cartridge (includes toner disposal boxes)
- fuser oil
- fuser

Instructions for replacing the fuser are in Appendix F of the printer manual.

Instructions for replacing other printer parts come in the new packages.

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696, extension 525.

Apple Printer Utility 2.0.2

=====

Using the Apple Printer Utility with Other Apple Printers

You can use the Apple Printer Utility for Windows only with the Apple Color LaserWriter 12/600 PS. For other Apple printers use the LaserWriter Utility for Windows that came with the printer.

Using the Apple Printer Utility on the Parallel Port

On Windows 95 you use the Apple Printer Utility with NetWare only. If you don't have NetWare you can use the Apple Printer Utility on the parallel port from a Windows 3.1 system.

Opening Dialogs within the Apple Printer Utility

Use the check boxes to open individual dialogs within the Apple Printer Utility.

Article Change History:

25 Jun 1996 - Updated with Apple Printer Utility information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19926



Tech Info Library

Apple Printer Utility 2.0.2 (6/96)

Revised: 6/3/96
Security: Everyone

Apple Printer Utility 2.0.2 (6/96)

=====

Article Created: 3 June 1996

TOPIC -----

This article describes the Apple Printer Utility 2.0.2 included with the Apple LaserWriter Printer Software for Windows 95.

DISCUSSION -----

Using the Apple Printer Utility with Other Apple Printers

You can use the Apple Printer Utility for Windows only with the Apple Color LaserWriter 12/600 PS. For other Apple printers use the LaserWriter Utility for Windows that came with the printer.

Using the Apple Printer Utility on the Parallel Port

On Windows 95 you use the Apple Printer Utility with NetWare only. If you don't have NetWare you can use the Apple Printer Utility on the parallel port from a Windows 3.1 system.

Opening Dialogs within the Apple Printer Utility

Use the check boxes to open individual dialogs within the Apple Printer Utility.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19927



Tech Info Library

Network Server: Apple PCI Ethernet Card Install Tips (6/96)

Revised: 6/17/96
Security: Everyone

Network Server: Apple PCI Ethernet Card Install Tips (6/96)

=====

Article Created: 3 June 1996
Article Reviewed/Updated: 17 June 1996

TOPIC -----

This article describes installation tips for the Apple PCI Ethernet Card (10 MB/sec Ethernet Card-AAUI, Thin Coax, Twisted Pair).

I am installing an Apple PCI Ethernet Card (10 MB) in my Network Server 500. I am following the installation instructions for the software driver. SMIT keeps tellingme installation failed. How do I get this driver to install?

DISCUSSION -----

The manual discusses setting several settings in the SMIT screen. The driver for the PCI Ethernet card uses the driver from the 100TX card and the 100TX driver needs to be installed with the following steps. Switch the following two settings as shown:

- For the Automatically Install Requisite Software field, specify YES.
- For the Overwrite Same or New Versions field, specify NO.

This article was published in the Information Alley on 17 June 1996.

Article Change History:
17 Jun 1996 - Added Info Alley publication date.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19928



Tech Info Library

Can't use colon character in Macintosh file name (6/96)

Revised: 6/4/96
Security: Everyone

Can't use colon character in Macintosh file name (6/96)

=====

Article Created: 03 June 1996

TOPIC -----

I'm trying to create a folder with a name that contains a colon, but whenever I type a colon I get a dash instead. Why is this?

DISCUSSION -----

You can not use a colon in a Macintosh file or folder name. A colon is used by the Macintosh file system to delimit the path of a file. For example, if you put a file on the desktop named "test" when using System 7 or later, the path name is "Macintosh HD:Desktop Folder:test". This assumes the hard drive is named "Macintosh HD" so the "test" is located in a directory named "Desktop Folder" which is located at the root level of "Macintosh HD".

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19929



Tech Info Library

MacDNS 1.0.3: Read Me (6/96)

Revised: 6/3/96
Security: Everyone

MacDNS 1.0.3: Read Me (6/96)

=====

Article Created: 3 June 1996

TOPIC -----

This article is the MacDNS 1.0.3 ReadMe file.

DISCUSSION -----

This Read Me document describes late-breaking information about your MacDNS software and its documentation. You may want to print this document for future reference.

Product information

MacDNS 1.0.3 fixes some problems in MacDNS 1.0.2 and earlier versions, providing improved performance and reliability. Upgrading to version 1.0.3 is recommended for all MacDNS customers.

This version of MacDNS is available under the terms of a no-fee license. The license agreement is presented when the software is run for the first time. Click the "Agree" button to accept the terms of the agreement.

MacDNS and Open Transport

Open Transport 1.1 or later is recommended for use with MacDNS and all PowerPC-based Workgroup Servers.

For Workgroup Server models 7250 and 8550, the Workgroup Server Software CD-ROM disc that came with your server contains Open Transport software version 1.1 and system software version 7.5.3.

For Workgroup Server models 6150, 8150, and 9150, the Macintosh System 7.5 Update 2.0 (which updates your system software to version 7.5.3) includes Open Transport software version 1.1. Look for information about system software updates and about the latest version of Open Transport on Apple forums and Apple Web sites on the Internet.

Changes to MacDNS

This section provides details about the changes in the 1.0.3 release of MacDNS.

- Sometimes MacDNS would stop responding to incoming requests; no further UDP notifications were received until the application was quit and relaunched. To prevent this situation and insure long-term reliability, MacDNS now performs a periodic test of its own responsiveness (approximately once a minute), closing and reopening the UDP stream on port 53 if it has become blocked. This guarantees that if the server ever gets into an unresponsive state, it will always correct itself within a minute.
- Fixed a bug which could cause a crash on older Macintosh models with "32-bit dirty" ROMs, such as the IICx, when displaying the license agreement dialog. The license text is now automatically displayed in the language appropriate for the currently active system; the popup menu of languages has been removed.
- MacDNS now automatically opens the Message Log window when it is launched for the first time.
- Fixed a bug where information about currently open windows, including the size and position of the Cached Hosts window, was not correctly saved to the preferences file.
- Fixed a bug where \$ORIGIN statements following the SOA record in an existing BIND zone file were being ignored. This could cause MacDNS to import some entries with an incorrect domain name suffix.
- Fixed a problem where "Look Up Host" occasionally did not retrieve the IP address for a host name, depending on the parent server being asked. Previously, "Look Up Host" only generated queries of type ANY and MX. It now additionally asks for an A record, if one was not returned from the ANY request.
- Fixed a problem where the "Look Up Host" status message remained "Idle..." during a lookup.
- Corrected a problem in the way parent server responsiveness was measured when more than one parent server was specified. This problem could cause significant slowdowns in overall response time under certain conditions. If "A" and "B" were specified as parent servers, and A subsequently went offline, MacDNS could continue to send queries to A first instead of B, even though B was obviously the preferred server to use.
- Fixed a bug where MacDNS could include its own IP address when generating the default list of parent servers, if the MacTCP control panel on the server machine was configured to use its own IP address as its DNS server. (It is illegal, and normally not possible, to specify your own IP address as a parent server in MacDNS, since endless request looping will occur.)
- MacDNS now prevents an alias from being entered as a mail exchanger host name. The use of alias names as mail exchangers is illegal, since it can cause mail loops.

- Fixed a cosmetic bug where the size box of a resizable window was not refreshed correctly, and added a gray background to the column header area of host list windows.
- Removed the "Are you sure you want to quit?" dialog in response to user feedback, since it prevented quitting and relaunching the server under automated script control.

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Tech Info Library Article Number:19930



Tech Info Library

LaserWriter 12/640 PS: Product Description (11/96)

Revised: 11/27/96
Security: Everyone

LaserWriter 12/640 PS: Product Description (11/96)

Article Created: 3 June 1996
Article Reviewed/Updated: 27 November 1996

TOPIC -----

This article contains the Apple LaserWriter 12/640 PS product description.

DISCUSSION -----

The Apple LaserWriter 12/640 PS is a high-quality monochrome laser printer that provides outstanding results—and offers even more impressive paper-handling flexibility, including optional duplex (double-sided) printing. It's ideal for office desktop publishing use, whether your organization is involved in business, government, or education. And its networking compatibility makes it a natural for workgroups that use multiplatform local area networks or organizationwide "intranets."

Featuring an advanced laser printer engine, the Apple LaserWriter 12/640 PS can handle up to 12 pages per minute, at an impressive 600 dots per inch. Its built-in FinePrint technology and support for PhotoGrade enable this printer to provide crisp, clear text and superior-quality gray-scale images. And the LaserWriter 12/640 PS can print on a wide range of media—from A4 paper to postcard stock, and even transparencies and labels—and on paper weights from 16 to 50 pounds.

Different organizations have different paper-handling needs— a fact that the Apple LaserWriter 12/640 PS was designed to accommodate through a number of printer options. There's a duplex-printing option, so you can get professional-looking double-sided output without resorting to a copy machine. In addition, there's a 500-sheet cassette and feeder for large jobs (or larger workgroups), envelope cassette that works with the 500-sheet feeder to handle a wide variety of envelopes (and even postcards), and a special face-up output tray (ideal for printing on transparencies, labels, postcards, envelopes, or heavier paper stocks because it reduces page curl).

Yet for all of its quality, performance, and flexibility, the LaserWriter 12/640

PS remains an economical laser printing solution—made even more affordable by this printer's outstanding networking capability, which enables flexible printer sharing on a wide variety of networks. It even comes with Adobe PostScript Level 2 and PCL 5—so no matter what type of computer and which applications you're using, if you choose the LaserWriter 12/640 PS, you and your colleagues can start printing high-quality output immediately.

Features

=====

Breakthrough print quality

- Offers 600- by 600-dpi resolution for sharp, clear printing
- Includes Apple's FinePrint and PhotoGrade* technologies for enhanced text and graphics quality
- Offers optional duplex printing for professional-looking double-sided output*
- Provides a choice of 64 scalable TrueType fonts for printing in any size and in a wide variety of styles

High performance

- Comes with 4MB of RAM, expandable to 64MB using industry-standard 72-pin SIMMs
- Prints at a fast 12 pages per minute
- Provides impressive performance through its powerful RISC processor—the 30-MHz AMD 29040

Compatibility

- Features built-in, all-ports-active LocalTalk, Ethernet, and bidirectional parallel interfaces, so it's easy to share your printer with others—including users of PCs running Windows
- Includes the Adobe PostScript Level 2 and PCL 5 page-description languages for compatibility with your applications

Convenience

- Offers easy, single-button installation of printing software and fonts
- Supports flexible paper handling with a built-in 250-sheet universal cassette and 80-sheet multipurpose tray, which can handle a variety of media types and sizes
- Works with a number of easy-to-install printer options, which can be combined in various ways to further enhance paper-handling flexibility

Note:

- * Requires at least 12MB of RAM

System Requirements

=====

- For the Mac OS, an Apple Macintosh, Power Macintosh, PowerBook, or other

..TIL19932-LaserWriter_12-640_PS-Product_Description_11-96.pdf

Mac OS-based personal computer with Macintosh system software version 7.1 or later, 8MB of RAM recommended, a CD-ROM drive (2), and a hard disk drive with 5MB of available space (for printer software and fonts)

- For Microsoft Windows 95, an IBM or IBM-compatible personal computer with an 80486 processor or later, 8MB of RAM, and a CD-ROM drive*
- For Microsoft Windows 3.1 or later (1) or Windows for Workgroups 3.11, an IBM or IBM-compatible personal computer with an 80386 processor or later, MS-DOS version 3.3 or later (version 5.0 or later recommended), 4MB of RAM, and a CD-ROM drive (2)

Notes:

- (1) This printer can also be used with a system running MS-DOS without Windows.
- (2) For systems without a CD-ROM drive, high-density 3.5-inch floppy disks containing the printer software are available on request.

Ordering Information

=====

Begin_Table

+=====+	
Product	Apple Part Number
+=====+	
Apple LaserWriter 12/640 PS	M3977LL/A
+----- Includes the following Items -----+	
• Apple LaserWriter 12/640 PS	
• LaserWriter 12/640 Accessory Kit containing the following:	
- Printer software for the Mac OS and Windows on CD-ROM	
- Adobe ATM software for the Mac OS and Windows on CD-ROM	
- Adobe Acrobat Reader software for the Mac OS and Windows on CD-ROM (USA only)	
- Setup and user's guide	
- Power cord	
• LaserWriter 12/640 PS Toner Cartridge	
+-----+	
LaserWriter 12/640 PS Owner's Manual	030-7414 (avail as only service part)
+-----+	
LaserWriter 12/640 PS Duplex Printing Unit	M4697G/A
+-----+	
LaserWriter 12/640 PS 500-Sheet Cassette and Feeder	M4682G/A
+-----+	
LaserWriter 12/640 PS Envelope Cassette	M4680G/A
+-----+	
LaserWriter 12/640 PS Face-up Output Tray	M4698G/A
+-----+	

LaserWriter 12/640 PS Toner Cartridge	M4683G/A	
+	+	+

End_Table

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

27 Nov 1996 - Corrected retail part number of product.

16 Aug 1996 - Added manual part number to the table.

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Tech Info Library Article Number:19932



Tech Info Library

LaserWriter 12/640 PS: Technical Specifications (11/96)

Revised: 11/27/96
Security: Everyone

LaserWriter 12/640 PS: Technical Specifications (11/96)

Article Created: 3 June 1996
Article Reviewed/Updated: 27 November 1996

TOPIC -----

This article contains the technical specifications for the LaserWriter 12/640 PS printer.

DISCUSSION -----

Technical Specifications
=====

Print Engine and Controller

- 30-MHz AMD 29040 RISC processor
- Engine life of 300,000 pages
- No monthly maximum duty cycle

Print Quality

- 600-dpi resolution
- FinePrint, Apple's resolution-enhancement technology
- PhotoGrade, Apple's graphic image-enhancement technology (requires at least 12MB of RAM) Memory
- 4MB of RAM standard (industry-standard 72-pin SIMMs)
- Expandable to 64MB with optional memory upgrades

Interfaces

- LocalTalk port
- Bidirectional parallel port
- Ethernet port (supports EtherTalk, TCP/IP, and Novell NetWare IPX protocols)

Print Speed

- 12 pages per minute maximum (actual speed varies depending on images printed and computer used)

Fonts

- 64 TrueType fonts (35 Adobe Type 1 fonts in ROM)

Languages Supported

- Adobe PostScript Level 2
- PCL 5

Paper-handling Capabilities

- 250-sheet built-in universal cassette
- 80-sheet multipurpose tray

Paper-handling Options

- Duplex-printing unit (requires at least 12MB of RAM)
- 500-sheet cassette and feeder
- Envelope cassette (requires 500-sheet cassette and feeder)
- Face-up output tray

Print Materials

- 16- to 50-lb. weight
- Paper: U.S. letter, U.S. legal, A4, A5, B5, C5, executive, Com-10, Monarch, DL, and postcard
- Most letterhead and colored stock, labels, and envelopes
- Medium-weight photocopier transparencies

Power Requirements

- U.S./Japan: 104 to 126 V, 58 to 62 Hz
- Europe/Australia: 198 to 264 V, 48 to 63 Hz

Power Consumption

- Continuous 12 ppm mode: 267 W average
- Standby mode: 15 W average

Environmental Requirements

- Temperature: 50 to 90 deg. F (10 to 32 deg. C)
- Humidity: 15% to 80% noncondensing
- Toner cartridge transit environment: 32 to 95 deg. F (0 to 35 deg. C)

Size and Weight

- Height: 9.25 in. (23.5 cm)
- Width: 15.94 in. (40.5 cm)

- Depth: 16.65 in. (42.3 cm)
- Weight: 26.5 lb. (12.0 kg)

System Requirements

=====

- For the Mac OS, an Apple Macintosh, Power Macintosh, PowerBook, or other Mac OS-based personal computer with Macintosh system software version 7.1 or later, 8MB of RAM recommended, a CD-ROM drive (2), and a hard disk drive with 5MB of available space (for printer software and fonts)
- For Microsoft Windows 95, an IBM or IBM-compatible personal computer with an 80486 processor or later, 8MB of RAM, and a CD-ROM drive*
- For Microsoft Windows 3.1 or later (1) or Windows for Workgroups 3.11, an IBM or IBM-compatible personal computer with an 80386 processor or later, MS-DOS version 3.3 or later (version 5.0 or later recommended), 4MB of RAM, and a CD-ROM drive (2)

Notes:

- (1) This printer can also be used with a system running MS-DOS without Windows.
- (2) For systems without a CD-ROM drive, high-density 3.5-inch floppy disks containing the printer software are available on request.

Ordering Information

=====

Begin_Table

+=====+	
Product	Apple Part Number
+=====+	
Apple LaserWriter 12/640 PS	M3977LL/A
+----- Includes the following Items -----+	
• Apple LaserWriter 12/640 PS	
• LaserWriter 12/640 Accessory Kit	
containing the following:	
– Printer software for the Mac OS and	
Windows on CD-ROM	
– Adobe ATM software for the Mac OS and	
Windows on CD-ROM	
– Adobe Acrobat Reader software for the	
Mac OS and Windows on CD-ROM (USA only)	
– Setup and user's guide	
– Power cord	
• LaserWriter 12/640 PS Toner Cartridge	
+-----+	
LaserWriter 12/640 PS Owner's Manual	030-7414 (avail as only
	service part
+-----+	
LaserWriter 12/640 PS Duplex Printing Unit	M4697G/A
+-----+	

LaserWriter 12/640 PS 500-Sheet	M4682G/A	
Cassette and Feeder		
+-----+		
LaserWriter 12/640 PS Envelope Cassette	M4680G/A	
+-----+		
LaserWriter 12/640 PS Face-up Output Tray	M4698G/A	
+-----+		
LaserWriter 12/640 PS Toner Cartridge	M4683G/A	
+=====+		

End_Table

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

27 Nov 1996 - Corrected the retail part number of product.
16 Aug 1996 - Added manual part number to the table.

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Tech Info Library Article Number:19933



Tech Info Library

System 7.5.3: Revision 2 or Updated to Revision 2 (6/96)

Revised: 6/6/96
Security: Everyone

System 7.5.3: Revision 2 or Updated to Revision 2 (6/96)

=====

Article Created: 03 June 1996
Article Reviewed/Updated: 6 June 1996

TOPIC -----

I have a Power Macintosh 5400/120 computer, which came pre-installed with System 7.5.3. However, the About Box states that it is System 7.5.3, Revision 2. I have another computer with System 7.5.3 installed on it, but it does not mention Revision 2. What is Revision 2?

DISCUSSION -----

System 7.5.3 Revision 2 is a set of system software enhancements that improves the reliability and performance for the certain Macintosh computers.

Computers that include System 7.5.3 Revision 2 pre-installed will display System 7.5.3 Revision 2 in the About Box. However, if customers install Revision 2 over System 7.5.3, the About Box will display System 7.5.3, Updated to Revision 2.

This distinction in the About Box between Revision 2 and Updated to Revision 2 is to help determine whether System 7.5.3 Revision 2 pre-installed or updated on the computer.

Additional information about System 7.5.3 Revision 2 is available in the Tech Info Library articles, "Mac OS 7.5.3 Revision 2: Overview & Installation" and "Mac OS 7.5.3 Revision 2: Fixes, Updates, Changes".

Article Change History:
06 Jun 1996 - Changed distribution status.

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Tech Info Library Article Number:19934



Tech Info Library

QuickTime Conferencing: Firewall Issues (5/96)

Revised: 6/3/96
Security: Everyone

QuickTime Conferencing: Firewall Issues (5/96)

=====

Article Created: 3 June 1996

TOPIC -----

We have a firewall on our large campus network. QuickTime Conferencing (QTC) works fine inside the firewall, but when trying to go through it, the TCP/IP port appears to be selected at random. Is there a way to specify the port so we can configure the firewall to let QTC work?

DISCUSSION -----

QTC will not work across firewalls, but the router can be reconfigured with the proper "well known port number" 458 (Conference) & 545 (Broadcast) to accommodate QTC packets. Unsecured range is 6000-6255, but it may change.

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Tech Info Library Article Number:19935



Tech Info Library

System 7.5.3 Rev 2: Important SW Updates Isn't Included (6/96)

Revised: 6/6/96
Security: Everyone

System 7.5.3 Rev 2: "Important SW Updates" Isn't Included (6/96)

=====

Article Created: 3 June 1996
Article Reviewed/Updated: 6 June 1996

TOPIC -----

I have a PCI-based Power Macintosh computer, which came pre-installed with System 7.5.3. I'm planning on installing System 7.5.3, Revision 2, but I need to know if the software in the Important Software Updates folder is included with this updater.

DISCUSSION -----

No, System 7.5.3, Revision 2 does not provide the Drive Setup update, AppleGuide update, and Ethernet Compatibility extension included in the Important Software Updates folder on PCI-based Power Macintosh computer with System 7.5.3 pre-installed. These updates are considered to be part of System 7.5.3 for these computers and must be installed in addition to System 7.5.3, Revision 2.

Article Change History:
07 Jun 1996 - Changed distribution status.
06 Jun 1996 - Modified title.

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Tech Info Library Article Number:19937



Tech Info Library

7.5.1 WorldScript Installer: Read Me (6/96)

Revised: 6/3/96
Security: Everyone

7.5.1 WorldScript Installer: Read Me (6/96)

=====

Article Created: 03 June 1996

TOPIC -----

This article contains the ReadMe file for the 7.5.1 WorldScript Installer.

DISCUSSION -----

7.5.1 WorldScript Installer
=====

Who Should Install WorldScript?

This installer will install files needed by WorldScript technology for users running Mac OS 7.5 and above. Users of the Japanese and Chinese Language Kits or applications which depend on WorldScript technology should install these pieces as they improve the stability and performance of your system. QuickDraw GX and Power Macintosh users should upgrade to these pieces as they provide important improvements over previous versions.

Using the WorldScript Installer

The Easy Install option of the WorldScript Installer updates your existing WorldScript files. If you want to install additional files, you can use the Custom Install option of the Installer.

1. To open the WorldScript Installer, double-click the Installer icon on the disk you received with your WorldScript update package.
2. To update existing WorldScript files on your startup hard disk, click Install.

To install additional files, choose Custom Install from the pop-up menu, then click to put an X in the box next to each item you want to install. When you're finished choosing items, click Install.

The files are installed on your hard disk. You may be prompted to restart your computer after installation.

About the WorldScript Installer

The WorldScript Installer installs the following files:

WorldScript I (version 7.5.2) used for complex one-byte processing of languages such as Arabic and Hebrew,

WorldScript II (version 7.5.1) used for two-byte processing of languages such as Chinese, Japanese, and Korean,

InputBackSupport (version 7.5.3) provides support for two-byte fonts; automatically installed with WorldScript II.

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Tech Info Library Article Number:19938



Tech Info Library

Apple Internet Mail Server and Novell (5/96)

Revised: 6/4/96
Security: Everyone

Apple Internet Mail Server and Novell (5/96)

=====

Article Created: 03 June 1996

TOPIC -----

I have an Ethernet network of Macintosh computers and we use a Apple Internet Mail Server (AIMS) for mail. I want to connect our small Novell Network so the PC users can use the AIMS for mail also. I found POPMAIL.exe on the net; now how do I connect the networks?

DISCUSSION -----

If your PC's are running Windows 95, it supports multiple protocols, and you can setup a TCP stack to run along side the IPX stack. Then you need a properly configured POP/SMTP e-mail client like Eudora for example.

You can connect different platforms together using Ethernet. The Macintosh and PC computers will not see each other because they are running different protocols, but with software like AppleShare Client for Windows by Apple Computer, Personal MacLan Connect by Miramar Software, or COPS Talk by COPS Inc. will let PC and Macintosh computers share files.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:19940



Tech Info Library

QuickTime Musical Instruments: Instruments Included (6/96)

Revised: 6/4/96
Security: Everyone

QuickTime Musical Instruments: Instruments Included (6/96)

Article Created: 4 June 1996

TOPIC -----

Which musical instruments are included with the QuickTime Musical Instruments extension?

DISCUSSION -----

The following list of the instruments included with the QuickTime Musical Instruments extension is arranged by instrument category.

Begin_Table

Piano

Acoustic Grand Piano
Bright Acoustic Piano*
Electric Grand Piano*
Honkytonk Piano*
Rhodes Piano
Chorused Piano*
Harpsichord
Clavinet

Chromatic Percussion

Celesta*
Glockenspiel*
Music Box*
Vibraphone
Marimba
Xylophone*
Tubular bells*
Dulcimer*

Organ

Hammond Organ
Percussive Organ*
Rock Organ*
Church Organ*
Reed Organ
Accordion*
Harmonica*
Tango Accordion*

Guitar

Acoustic Nylon Guitar
Acoustic Steel Guitar*
Electric Jazz Guitar*
Electric Clean Guitar*
Electric Guitar Muted*
Overdriven Guitar*
Distortion Guitar
Guitar Harmonics*

Bass

Acoustic Fretless Bass*
Electric Bass Fingered
Electric Bass Picked*
Fretless Bass*
Slap Bass 1
Slap Bass 2*
Synth Bass 1*
Synth Bass 2*

Ensemble

Acoustic String Ensemble
Acoustic String Ensemble 2*
Synth Strings 1*
Synth Strings 2*
Aah Choir
Ooh Choir*
SynthVox*
Orchestra Hit

Reed

Soprano Sax*
Alto Sax
Tenor Sax*
Baritone Sax*
Oboe
English Horn*
Bassoon*
Clarinet

Synth Lead

Square Wave*
Saw Wave
Calliope*
Chiffer*
Charang*
Solo Vox*
5th Saw Wave
Bass & Lead*

Synth Effect

Ice Rain*
Sound Tracks*
Crystal*
Atmosphere*
Brightness*
Goblins*

Strings & Orchestra

Violin
Viola*
Cello*
Contrabass*
Tremolo Strings*
Pizzicato Strings*
Orchestra Harp*
Timpani

Brass

Trumpet
Trombone*
Tuba*
Muted Trumpet*
French Horn
Brass Section*
Synth Brass 1*
Synth Brass 2*

Pipe

Piccolo*
Flute
Recorder*
Pan Flute
Bottle Blow*
Shakuhachi*
Whistle
Ocarina*

Synth Pad

Fantasy
Warm
Polysynth
Choir*
Bowed*
Metal*
Halo*
Sweep*

Ethnic

Sitar
Banjo
Shamisen*
Koto*
Kalimba*
Bag Pipe*

Echoes*
Space*

Fiddle*
Shannai*

Percussive

Tinkle Bell*
Agogo
Steel Drums
Woodblock*
Timpani*
Melodic Tom
Synth Drum*
Reverse Cymbal

Sound Effects

Guitar Fret Noise*
Breath Noise*
Seashore
Bird Tweet
Telephone Ring
Helicopter
Applause*
Gunshot

Drum Kits

Standard Kit
Room Kit
Power Kit*
Electronic Kit*
Analog Kit*
Brush Kit*
Orchestra Kit*

End_Table

Instruments followed by a "*" are interpolated from other instruments.

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Tech Info Library Article Number:19941



Tech Info Library

QuickTime Conferencing: ISDN H.320 Card Installation (6/96)

Revised: 6/10/96
Security: Everyone

QuickTime Conferencing: ISDN H.320 Card Installation (6/96)

=====

Article Created: 10 June 1996

TOPIC -----

This article contains instructions for installing the QuickTime Conferencing (QTC) ISDN Kit into your Macintosh computer. The QTC ISDN kit can be installed into a Macintosh 7100/66AV, 7100/80AV, 8100/80AV, 8100/100AV, or other 71XX or 81XX computers that have an Apple AV card installed. You need at least 16 MB of physical RAM and need to be running System 7.5 or later version of the Mac OS. Additionally, you will need the QuickTime Conferencing software, (either came with your QuickTime Conferencing 100 Camera or can be purchased on-line at <http://quicktime.apple.com>) an NT-1, (NOT INCLUDED IN YOUR ISDN KIT) and an ISDN line with a S-interface.

NOTE:

These steps are for the NuBus ISDN Kit only, NO PCI solution currently. The ISDN H.320 card is not compatible with the Macintosh Quadra 840AV computer.

DISCUSSION -----

Instructions for Card Installation
=====

Step 1

Power off your Macintosh computer.

Step 2

Disconnect all cables going to the computer.

Step 3

Remove the case of your Macintosh computer so you have access to the NuBus slots.

Step 4

Ground yourself with an anti-static wrist strap, or touch the exposed metal of the power supply.

Step 5

Remove any NuBus card supports.

Step 6

Remove one of the NuBus slot covers.

Step 7

Install the H.320 card into the NuBus slot where you removed the slot cover.

Step 8

Make sure the card is firmly seated in the NuBus slot.

Step 9

Install any Nubus supports that were previously removed

Step 10

Connect the ribbon cable on the H.320 card to the DAC connector on the AV card. The DAV cable will then plug into the DAV connector on the logic board.

Step 11

Replace the computer case.

Step 12

Reconnect all cables going to the computer.

Step 13

Power on the computer.

Connecting Your Computer to the NT-1 and Wall Jack

=====

Step 1

Get your NT-1 (NOT included in the Apple QTC ISDN kit) out and verify that it came with a power adaptor and either an RJ-11 or RJ-45 cable.

Step 2

Plug the power adaptor into the wall, then plug the other end into the NT-1.

Step 3

Take the cable that came with the NT-1 and plug one end into your ISDN wall jack, and then plug the other end into the 'U Loop Back' jack on the NT-1.

Step 4

Take the cable that came with your QTC ISDN Kit and plug one end into the S/T&U jack on the NT-1 and plug the other end into the RJ-45 jack on the H.320 card you installed in your computer.

Step 5

Disregard the state of the NT-1 lights until you have fully installed all applicable software, restarted the computer, and actually set up the software

Instructions for Camera Installation

=====

If you have the Apple QuickTime Conferencing 100 camera, and a Power Macintosh AV, use the hydra cable (S-video on one end, Composite [RCA] and 12 Volt power on the other end) that came with the camera.

How to Connect the Video Cable

Step 1

Connect the S-video end to the VIDEO-IN port on the AV card (the IN port is the one furthest away from the NuBus connector).

Step 2

Take the other end of the cable and connect the composite end to the RCA jack on the back of the camera.

Step 3

Plug the power end to the power jack on the back of the camera.

Step D

Open the camera shutter (slide knob on side) to expose the lens. A green light indicates you have power.

Other Video Cameras

You can use another camera as long as you can plug the camera into the S-video port of a Power Macintosh AV computer.

You cannot use a camera, such as Connectix's QuickCam, which uses the serial port.

Handset Installation =====

Your QTC ISDN Kit comes with a telephone handset. This handset is useful to use when you either need to have a more private conversation, or when ambient background noise is at a level that interferes with your conference. To connect the handset, simply plug the cable into the RJ-11 port on the RJ-11 jack on the H.320 card.

Software Installation =====

Step 1 -----

Install the Network Software Installer (NSI) 1.5 or later

Step 2 -----

Install QuickTime Conferencing (QTC) Software 1.0.2 or later

Step 3 -----

Install the H.320/ISDN software 1.0.5 or later

Step 4 -----

Restart your Macintosh computer

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Tech Info Library Article Number:19942



Tech Info Library

System 7.5.3 Revision 2: Change in About This Macintosh (6/96)

Revised: 6/6/96
Security: Everyone

System 7.5.3 Revision 2: Change in About This Macintosh (6/96)

Article Created: 4 June 1996
Article Reviewed/Updated: 6 June 1996

TOPIC -----

This article describes the changes which occur in About This Macintosh command under the Apple menu.

DISCUSSION -----

After installing the update on any computer, the version of Mac OS shown in About this Macintosh command in the Apple menu will remain the same, that is, System Software 7.5.3.

After installing Macintosh System 7.5.3 Revision 2 on a Macintosh running System 7.5.3, the second line in About this Macintosh will read Updated to Revision 2. After installing on an PowerBook with System 7.5.2 and Enabler 1.2, the second line will read System Enabler 1.2.4

Since this update will be incorporated into the reference release of System 7.5.3 there is no need to install the update over it. The first line of About this Macintosh for systems running Unity will be System Software 7.5.3. The second line will be Revision 2.

Below is a summary of About This Macintosh Changes:

- PowerBook computers with System 7.5.2 and Enabler 1.2, the second line changes from "Enabler 1.2.1" to "System Enabler 1.2.4"
- Macintosh computers with System 7.5 Update 2.0, the second line changes from "System 7.5 Update 2.0" to "Updated to Revision 2"
- Macintosh computers shipped with System 7.5.3, the second line changes from having nothing to "Updated to Revision 2"

Article Change History:

06 Jun 1996 - Changed distribution at product introduction.

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Tech Info Library Article Number:19943



Tech Info Library

Macintosh System 7.5.3 Revision 2: FAQ (1/97)

Revised: 1/17/97
Security: Everyone

Macintosh System 7.5.3 Revision 2: FAQ (1/97)

Article Created: 4 June 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article lists the most frequently asked questions (FAQ) and answers about Macintosh System 7.5.3 Revision 2. This FAQ contains the following questions:

- 1) What is System 7.5.3 Revision 2?
- 2) When will it be available?
- 3) Why is it called 'Revision 2'?
- 4) Do I still need to install System 7.5 Update 2.0?
- 5) Does Macintosh System 7.5.3 Revision 2 contain the 'Important Software Updates' included with PCI Power Macintosh systems?
- 6) Who should install System 7.5.3 Revision 2?
- 7) What bug fixes are provided by Macintosh System 7.5.3 Revision 2?

DISCUSSION -----

- 1) Question: What is System 7.5.3 Revision 2?

Answer: System 7.5.3 Revision 2 is a set of system software enhancements that improves the reliability and performance for the computers mentioned in a later question. The objective of this update is to quickly respond to bugs and deliver them on one disk, small enough where most people will want to obtain it electronically (through the Internet or on on-line services). The fixes it provides will be incorporated into an upcoming reference release of System 7.5.3. This update is the first of a series of rapid response updates for System 7.5.x that will be released prior to Mac OS 8.

- 2) Question: When will it be available?

Answer: Apple announced Macintosh System 7.5.3 Revision 2 on June 7, 1996. It is available online via the following Apple Internet sites:

Worldwide Web: <<http://www.info.apple.com/swupdates>>
ftp: <<ftp://ftp.info.apple.com>>

and Apple Computer Higher Education gopher server at info.hed.apple.com.

The update also will be posted on several online services including:

America Online - keyword: applecomputer
CompuServe - GO APLSUP

Customers who do not have access to an online service or the Internet can order the update on two floppy disks in the U.S. for a \$13 shipping and handling fee. The number to call in the United States to order the update is 1-800-293-6617, ext. 1198. The number to call in Canada to order the update is 1-800-361-6075. The update will also be incorporated in the upcoming reference release of Mac OS 7.5.3 (Unity).

3) Question: Why is it called 'Revision 2'?

Answer: Apple has decided to call this product System 7.5.3 Revision 2 and not use the term "update" for two reasons:

- Revision 2 will provide improvements only for specific computers running the current system software version, which is different from all other updates Apple has released in the past.
- In addition, Apple wanted to avoid confusion with other current system software update type of products from Apple.

Apple selected the "2" in "Revision 2" since it already has released two minor versions of System 7.5 version 7.5.3. After installing System 7.5.3 Revision 2, all systems running System 7.5 version 7.5.3 will have all of the most current system improvements.

4) Question: Do I still need to install System 7.5 Update 2.0?

Answer: Apple released System 7.5 Update 2.0 several months ago, and still is recommending that customers using pre-7.5.3 versions of System 7.5 install it if they have not already. In addition, if your Power Macintosh came with System 7.5.3 pre-installed on it, and the About This Macintosh dialog does NOT read System 7.5.3 Rev 2, you should install the System 7.5.3 Update 2.0 software. You cannot skip the System 7.5 Update 2.0 and just install System 7.5.3 Revision 2 since System 7.5 Update 2.0 and System 7.5.3 Revision 2 do NOT contain all of the same fixes. So, if your computer requires System 7.5.3 Revision 2, then you should first install System 7.5 Update 2.0 and then install System 7.5.3 Revision 2, regardless which computer you have. After installing the above, you can then install System 7.5.5 Update for the latest version of System 7.5.

5) Question: Does Macintosh System 7.5.3 Revision 2 contain the 'Important Software Updates' included with PCI Power Macintosh systems?

Answer: No. You should install these in addition to the Macintosh System 7.5.3 Revision 2 update.

6) Question: Who should install System 7.5.3 Revision 2?

Answer: Apple is recommending that only customers with specific system software and Macintosh computers update their systems with System 7.5.3 Revision 2. There is no benefit for other customers.

The only systems which will benefit from System 7.5.3 Revision 2 are as follows:

- All PowerBook systems using Connectix RAM Doubler
- All PowerBook 5300 and PowerBook Duo 2300 systems
- All PowerBook 200 or 500 Series systems which have been upgraded with the Macintosh PowerBook Processor Card Upgrade Kit with PowerPC (or upgraded with similar third party products).
- All Macintosh 7200, 7500, 7600, 8500, and 9500 systems

You should install System 7.5.3 Revision 2 only if you have a computer with System 7.5.3 installed or a PowerBook with System 7.5.2, PowerBook Enabler 1.2 or later installed. To find out what system software version your computer is using, follow these steps:

Step 1

Make sure you are in the Finder.

Step 2

Choose About This Macintosh from the Apple menu. The system software information is in the About This Macintosh window.

7) Question: What bug fixes are provided by Macintosh System 7.5.3 Revision 2?

Answer: When you install System 7.5.3 Revision 2, you get the following enhancements:

- Better reliability for PowerBooks using RAM Doubler. If you have a PowerBook using System Software 7.5.3, and use RAM Doubler (version 1.6.1 or earlier), you may have experienced a problem when waking your PowerBook from sleep. This software fixes this problem.
- Overall performance enhancements for PowerBook 2300 computers and PowerBook 500 or Duo series computers with the PowerPC Upgrade Card installed.
- Improved reliability when using PC-formatted floppy disks with a PowerBook 500 series computers with the PowerPC Upgrade Card installed. If you have a PowerBook 500 series computer with the PowerPC Upgrade Card installed,

PC-formatted floppy disks that were formatted on your computer may be unreadable in DOS or Windows computers. This software fixes this problem.

- Improved reliability on PCI-based computers (Macintosh 7200, 7500, 7600, 8500, and 9500 computers) and PowerBook 5300 computers, PowerBook 2300 computers, and PowerBook 500 or Duo series computers with the PowerPC Upgrade Card installed.

- Improved reliability when copying files to a 1 gigabyte hard disk. If you have a PCI-based computer with a 1 gigabyte drive, this software helps avoid problems when copying files to the hard disk.

- Improved reliability when using the Startup Disk control panel. In rare instances, when you turn on a PCI-based Power Macintosh computer it may not start up from the disk selected in the Startup Disk control panel. This software fixes this problem.

Article Change History:

17 Jan 1997 - Updated online references.

29 Oct 1996 - Updated for System 7.5.5 Update in Question 4.

19 Sep 1996 - Removed keyword.

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Tech Info Library Article Number:19944



Tech Info Library

System 7.5.1: Desktop Files and Folders (6/96)

Revised: 6/4/96
Security: Everyone

System 7.5.1: Desktop Files and Folders (6/96)

=====

Article Created: 04 June 1996

TOPIC -----

This article describes changes in the way System 7.5.1 and higher address files and folders named "desktop."

DISCUSSION -----

System 7.5.1 and later will not rebuild the desktop if a folder named desktop is saved to the root level of the hard disk.

However, a file named "Desktop" at the root level of the hard disk will still cause the system to rebuild the desktop once. After the system rebuilds the desktop, the system will make the "Desktop" file invisible and transform the file into an ordinary System 6.0.X Desktop file. As such, it will no longer cause desktop rebuilds.

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Tech Info Library Article Number:19945



Tech Info Library

Apple Game Sprockets (6/96)

Revised: 6/4/96
Security: Everyone

Apple Game Sprockets (6/96)

Article Created: 04 June 1996

TOPIC -----

This article describes the Apple Game Sprockets.

DISCUSSION -----

Apple Game Sprockets is a software development kit (SDK) designed to make life easier for game developers. With it, developers will be able to create advanced multimedia and Internet-enabled games for Mac OS-based computers. It will enable all Mac OS-compatible games to feature real-time 3D graphics, 3D sound, Internet support, speech recognition, and input device/monitor control.

Available royalty-free to all developers, Game Sprockets profoundly simplifies the creation of Apple Macintosh entertainment software. Game Sprockets includes the final release of QuickDraw 3D RAVE (Rendering Acceleration Virtual Engine), a multi-platform technology that enables game developers to incorporate plug-and-play 3D acceleration hardware.

Apple Game Sprockets, named to reflect its extensible nature, is a set of application programming interfaces (APIs) designed to work seamlessly with other Apple multimedia technologies such as QuickTime, QuickTime VR, QuickTime Conferencing, and QuickDraw 3D. Developers can "mix-and-match" individual sprockets to enhance and complement the existing features of their title.

Using Apple Game Sprockets, a typical "twitch" game could take on new realism and excitement with the addition of real-time 3D graphics and 3D stereo sound. A new interface makes it easy for games to implement advanced joystick features. If desired, this game might also include speech recognition, multi-player contests across the Internet, videoconferencing, and animation. Best of all, these games can be created and enjoyed on any PowerPC-based Macintosh computer.

Apple has established a World Wide Web site to provide developers with quick releases and updates of these new technologies. The Web site is at <http://www.dev.apple.com/games/>.

The current Apple Game Sprockets SDK includes:

- NetSprocket - Internet connectivity and multi-player gaming API
- SoundSprocket - 3D sound and Sound Manager API
- SpeechSprocket - speech recognition API
- InputSprocket - digital joystick control and input device API
- DrawSprocket - multiple buffering/display control API
- QuickDraw 3D RAVE - fast, multi-platform 3D graphics API

Technical Details

NetSprocket

NetSprocket provides standard, customizable user interface dialogs for configuration, log-in, and hosting a game across the network. A simple set of calls allows messages to be singlecast, multicast or broadcast to other machines within the game. A theoretical maximum of 2 billion users can simultaneously use NetSprocket across a broadband connection.

NetSprocket also provides transparent access to Internet-oriented gameplay and multi-player gaming. This API uses Open Transport for TCP/IP, AppleTalk (with support for LocalTalk, EtherTalk or TokenTalk) and modem communication access. By utilizing a client/server topology, it is possible for gamers to use multiple protocols in a single session and with minimal overhead (a total of 28 bytes are used per player for the message header). NetSprocket also support the creation of groups for broadcast of data to specific users across the network.

SoundSprocket

SoundSprocket incorporates a standardized API for accessing both traditional sound functions as well as new 3D sound technologies developed by Apple. For 3D sound, the listener and each sound channel are given specific positions and velocity vectors in a virtual audio space. These positions are changed during game play, along with the sounds themselves, to give the impression of spatiality and movement.

The signal processing, taking advantage of the capabilities of the PowerPC microprocessor, simulates Doppler Effect, distance attenuation, environmental reverberation and spatial positioning. The 3D effect may be effectively presented over speakers or headphones -- it is also fully integrated with the camera position used in QuickDraw 3D, which enables sound to "follow" the player in 3D space.

InputSprocket

InputSprocket provides a compact API through which games can communicate with drivers for analog or digital joysticks and other game oriented input devices in a plug and play fashion. It also provides user interface elements that allow

player override of the default control options through specified dialog boxes. Mouse and keyboard support are also enabled, as are multiple input device support.

DrawSprocket

DrawSprocket allows developers to easily utilize multiple (double or triple) buffering on the Macintosh for smooth display of graphic images. Multiple buffering is achieved by DrawSprocket using the best option available on the user's system -- true double buffering in hardware, page-flipping, efficient memory copies or through the traditional CopyBits function call. The game does not need to be aware of the hardware specifics to use this benefit.

DrawSprocket also enables configuration of display resolution or color depth without leaving the game environment (no need to access the sound and displays control panel) and screen sizing/blanking. A sprite engine, available through QuickTime, may also be used in tandem with DrawSprocket.

SpeechSprocket

Based on Apple's PlainTalk technology, SpeechSprocket allows developers to easily include high-quality speech recognition in their game titles.

QuickDraw 3D RAVE

Recently announced as the first component of Apple Game Sprockets, RAVE enables developers to transparently access 3D graphics accelerators for maximum speed and throughput while also providing exceptional 3D rendering speed in software. RAVE lets game developers leverage their existing rendering technologies - a key issue for vendors seeking to differentiate their content. RAVE is shipping now for Power Macintosh and Microsoft Windows 95, with a Windows NT version due in April 1996.

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Tech Info Library Article Number:19946



Tech Info Library

Power Macintosh 7200 PC Compatible: DOS Factory Settings (6/96)

Revised: 6/4/96
Security: Everyone

Power Macintosh 7200 PC Compatible: DOS Factory Settings (6/96)

=====

Article Created: 4 June 1996

TOPIC -----

This article contains the original CONFIG.SYS and AUTOEXEC.BAT files for the Power Macintosh 7200/120 PC Compatible computer.

DISCUSSION -----

Here are the contents of these files as shipped from the factory.

CONFIG.SYS
=====

```
DOS=HIGH,UMB
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
DEVICE=C:\DOS\EMM386.EXE NOEMS
DEVICEHIGH=C:\DOS\SETVER.EXE
DEVICEHIGH=C:\APPLE\CDROM.SYS /D:CDDRVR
FILES=40
LASTDRIVE=M
STACKS=9,256
DEVICE=C:\VIBRA16\DRV\VIBRA16.SYS /UNIT=0 /BLASTER=A:220 I:5 D:1 H:5
DEVICE=C:\VIBRA16\DRV\CTMMSYS.SYS
INSTALLHIGH=C:\APPLE\MACSHARE.COM
```

AUTOEXEC.BAT
=====

```
ECHO OFF
SET SOUND=C:\VIBRA16
SET BLASTER=A220 I5 D1 H5 P330 T6
SET MIDI=SYNTH:1 MAP:E
LOADHIGH C:\VIBRA16\DIAGNOSE /S
LOADHIGH C:\VIBRA16\MIXERSET /P /Q /SP:255
```

```
SET MOUSE=C:\MOUSE
LOADHIGH C:\MOUSE\MOUSE.EXE /Q
LOADHIGH C:\DOS\MSCDEX.EXE /S /D:CDDVR /L:E
C:\DOS\SMARTDRV.EXE /X
PATH=C:\MOUSE;C:\DOS;C:\MACH64
SET TMP=C:\TMP
SET TEMP=C:\TMP
```

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Tech Info Library Article Number:19947



Tech Info Library

QuickDraw 3D: Requires SimpleText 1.3 (6/96)

Revised: 6/4/96
Security: Everyone

QuickDraw 3D: Requires SimpleText 1.3 (6/96)

=====

Article Created: 04 June 1996

TOPIC -----

I just installed QuickDraw 3D on my computer. When I try to open one of the sample files from the QuickDraw 3D folder, I get an error message that says, "SimpleText cannot display this kind of document." What can I do?

DISCUSSION -----

QuickDraw 3D requires version 1.3 or newer of SimpleText to display 3D documents. The QuickDraw 3D software includes version 1.3 or newer of SimpleText.

Be sure to remove any older versions of SimpleText or TeachText from your hard disk. This will ensure that you are opening your QuickDraw 3D documents with version 1.3 or newer of SimpleText.

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Tech Info Library Article Number:19948



Tech Info Library

At Ease for Workgroups: Volumes Dismount at Startup (6/96)

Revised: 6/4/96
Security: Everyone

At Ease for Workgroups: Volumes Dismount at Startup (6/96)

=====

Article Created: 04 June 1996

TOPIC-----

I am an At Ease for Workgroups administrator and I can not get my users' AppleShare volumes to mount at startup. I have set them up to mount at startup in the Chooser, but they never do. What is going on?

DISCUSSION-----

Most likely your problem is caused by the "Always remember the user's last-used AppleShare logins" option in At Ease Setup (Workgroups). When this setting is enabled, AppleShare volumes that are specified to mount at startup will not mount at startup.

This setting is enabled by default, so many users are not aware that it is enabled. In addition, it can only be accessed through the Security options Pane. Since the setup process does not require an administrator to change any of the Security options, users are not always aware that the option is there.

Follow these steps to disable the option.

Step 1

Launch the At Ease Setup (Workgroups) application

Step 2

Click the New User button

Step 3

Double-click the Panels icon, whether or not you intend to provide the user with Finder access, restricted Finder access, or Panels access.

Step 4

Click the Security Button (the button with the lock icon).

Step 5

Click on the "Always remember the user's last-used AppleShare logins" radio button to disable it.

Step 6

Continue with the setup. If you are setting up a user with Finder access, double-click on the Finder icon

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Tech Info Library Article Number:19949



Tech Info Library

Apple TV/FM Radio System: Description (7/96)

Revised: 7/9/96
Security: Everyone

Apple TV/FM Radio System: Description (7/96)

=====
Article Created: 4 June 1996
Article Reviewed/Updated: 9 July 1996

TOPIC -----

This article contains a description of the Apple TV/FM Radio System.

DISCUSSION -----

Overview
=====

The Apple TV/FM Radio System brings the world of electronic media to your Macintosh system.

Now you can stay current on late-breaking news, expand your horizons with instructional shows, or enjoy entertainment programs—all while you continue to work on your Macintosh. Your computer becomes an even more powerful communications tool when you save audio or video clips for use in your business, education, or personal multimedia projects.

The Apple TV/FM Radio System consists of a plug-in card with TV and FM radio tuners, plus easy-to-use control software. Connectors on the back of the tuner card let you attach cable TV or antenna feedlines. An FM antenna is included.

The TV control software combines the familiarity of standard television controls with exciting new features. Enter your own channel descriptions, set program alerts, and lock channels with password protection. Use closed captioning to watch programs without disturbing others or to monitor newscasts while you're listening to the radio. With a single click, shrink the TV window to one corner of your screen to free up space on your Macintosh desktop, expand it to full size for easy viewing from across the room, or set it to any size in between.

Switch to the FM radio application and enjoy music or talk shows. You can preset any number of stations, and for even more convenience, there are six car radio-style buttons with customizable labels for your favorite stations.

You can run the TV and FM radio applications at the same time to keep an eye on a TV program while listening to music, or to listen to the radio commentary for a TV sportscast. If you have two speakers built into or attached to your Macintosh system, you can even listen to radio and TV programs in stereo.

There's also a remote-control unit that lets you change TV and radio stations, adjust the volume, and control the CD player in your Macintosh system.

The Apple TV/FM Radio System works with the Apple Video System to help you perform powerful multimedia tasks easily. Just click to capture and save still frames, video clips, or audio. Then simply paste the saved items into presentations, reports, and letters to make them really come alive. Audio and video can be played back with any application that supports Apple's QuickTime multimedia technology.

Features

=====

Multimedia-rich

- Watch TV in a window or listen to the radio while you work
- Make your documents come alive with audio and video clips
- View up to 181 television channels
- Enjoy full FM broadcast band coverage

Easy to use

- Control programs look like familiar television and car-radio front panels
- Single-click startup for control programs
- One-button capture for images, video clips, and sound

Customizable

- Enter your own descriptions on radio buttons and TV lists
- Assign passwords to prevent children from accessing specific TV channels
- Set reminders for your favorite programs
- Resize the TV window to take up just as much or as little screen space as you want

Comprehensive

- TV and FM radio tuners
- Control software
- Handheld remote control (batteries included)
- Indoor antenna

Ordering Information

=====

Apple TV/FM Radio System

Order No. M4586LL/A

- Apple TV and FM Radio Tuner card
- Apple Video Player software
- Apple FM Radio Player software
- Infrared remote control
- FM antenna (twin-lead dipole with F connector; can also be used for limited TV reception)
- Apple TV/FM Radio System User's Manual
- Apple TV/FM Radio System Installation Manual (Europe only; for other regions, installation information is provided in the user's manual)

Related Products

=====

Apple Video System

Order No. M2894LL/D

Apple Presentation System

Order No. M2895LL/A

Apple MPEG Media System

Order No. M4243LL/A

Article Change History:

- 09 Jul 1996 - Changed article status.
- 26 Jun 1996 - Corrected part numbers

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19950



Tech Info Library

PC Compatibility Card: Installing in Power Mac 5400/120 (4/97)

Revised: 4/16/97
Security: Everyone

PC Compatibility Card: Installing in Power Mac 5400/120 (4/97)

=====

Article Created: 04 June 1996
Article Reviewed/Updated: 16 April 1997

TOPIC -----

I am trying to install a 7-inch PC Compatibility card in a Power Macintosh 5400/120. None of the documentation included with either product tells me how to do this. Can I install the PC Compatibility card into the Power Macintosh 5400/120?

DISCUSSION -----

Your description indicates that you have revision A of the card (M4091LL/A). Revision B of the card (M4091LL/B) is slightly redesigned and provides full compatibility in the 5400/120; installation instructions are also included.

The revision A card can be installed in the Power Macintosh 5400/120. However, you will first have to remove the Apple External Video Connector from the logic board of the Power Macintosh 5400/120.

Install the 7-inch PC Compatibility card into the PCI slot and insert the GIMO card (the small video board that's connected to the DOS card with a ribbon connector) into the slot previously occupied by the Apple External Video Connector.

Do not use the audio cables that come with the 7-inch PC Compatibility card for installation in the Power Macintosh 5400/120. The GIMO connector card also handles the audio signal.

Article Change History:
16 Apr 1997 - Edited rev /B information.

Copyright 1996-1997, Apple Computer, Inc.

Tech Info Library Article Number:19952



Tech Info Library

Macintosh Computers: What is SRS Sound? (11/96)

Revised: 11/15/96
Security: Everyone

Macintosh Computers: What is SRS Sound? (11/96)

Article Created: 4 June 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

I have a Power Macintosh 5400/120 computer, and I've noticed that there is an option in the Sound & Monitors control panel called SRS Sound. I can only Enable or Disable it. However, I'm not really sure what SRS Sound is or what benefits it provides if I enable it.

DISCUSSION -----

SRS (Sound Retrieval System) is proprietary technology from SRS Labs, which Apple has licensed and implemented on the Power Macintosh 5400 and 6400; Macintosh Performa 6400 series; and Macintosh Performa 6360/160 computers in order to enhance the sound field of these computers.

The useability, compatibility, and performance of the computer is not affected if SRS sound is enabled or disabled. However, enabling SRS yields a more spacious stereo sound from the computer. You can try it both ways to determine which you prefer.

Stereo, Surround Sound, and SRS are all common forms of sound expansion techniques, but SRS differs primarily because it does not require special encoding or recording processes or critical listening position ("sweet spot").

Instead, SRS uses psychoacoustic (how your ears and brain interpret the sound) principles. The result is that any sound can be played back using SRS and you do not need to listen to it from a specific location to experience the effect. SRS accomplishes this by processing the ambient or reflected sounds so that they take on the audio characteristics of sounds naturally entering the ear from the side. The brain thus perceives these sounds as though they were actually coming from the sides or, in some cases, from behind the head, rather than from the two front stereo speakers.

The following chart provides an overview of the differences among stereo,

surround sound, and SRS. Additional information about SRS is available from SRS Labs web site <<http://www.srslabs.com/>>.

Begin_Table

Characteristics	Stereo	Surround Sound	SRS
Encoding	YES Using 2 or more microphones	YES Using 4 or 5 microphones or special	NO Works with any source such as mono, stereo, techniques or surround technologies
Channels	YES Left (L) & Right (R) channels.	YES 4 or 5 channels Front left chan- nel to front rt. speaker, and so on.	NO
Speakers	2	4 or 5 Surrounding listener	2
Sweet spot?	YES	YES	NO

End_Table

Note: The word 'SRS' and the SRS Symbol - (•) - are registered trademarks of SRS Labs, Inc.

This article was published in the Information Alley on 07 June 1996.

Article Change History:

15 Nov 1996 - Added 6360

02 Aug 1996 - Added 6400.

25 Jul 1996 - Made title more generic.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19953



Tech Info Library

Apple TV/FM Radio System: Tech Specifications (12/96)

Revised: 12/2/96
Security: Everyone

Apple TV/FM Radio System: Tech Specifications (12/96)

Article Created: 4 June 1996
Article Reviewed/Updated: 2 December 1996

TOPIC -----

This article contains a list of the technical specifications for the Apple TV/FM Radio System.

DISCUSSION -----

Technical Specifictions
=====

TV Tuner

- Up to 181 channels
- F connector, permits connection of:
 - Antenna feedline (the indoor antenna provided for the FM tuner can also pick up strong TV signals)
 - Standard or HRC (harmonically related carrier) cable TV feedline

Apple Video Player software

- Variable window size
 - Smallest (about 1/16 of screen)
 - Normal (about 1/4 of screen)
 - Largest (as much of screen as possible)
 - Any user-defined size between the smallest and largest options
- Up to 125 channel presets
 - Pop-up menu lets you assign a description (such as station name, network affiliation, or type of programming) to each channel
 - Each description can have as many as 15 characters
- Auto Tune function automatically adds all clearly received channels

to the channel list (channels can also be added and deleted manually)

- Push-button controls for video source selection
 - TV tuner
 - Composite video
 - S-video
- Sliding controls for video adjustment
 - Brightness
 - Sharpness
 - Contrast
 - Color
- Push-button controls for video standard selection
 - NTSC
 - PAL
 - SECAM
- Up/down buttons for channel selection
- Push-button controls for audio mode selection
 - Stereo
 - Mono
 - SAP (second audio program channel for descriptive video or foreign language translations)
- Sliding controls for audio adjustment
 - Volume
 - Balance
 - Treble response
 - Base response
- One-click operation for capturing still frames or video clips
- Optional movie compression
- Closed captioning/video text
 - CC 1
 - CC 2
 - Text 1
 - Text 2
- Reminders function lets you store up to 25 program reminders; on-screen alert box appears at the program start time. You can also request a notification prior to the beginning of the program. (You do not need to be running Apple Video Player for the alert box to appear.)
- Optional lockout (with password protection) on any channel
- "Hot key" capability instantly makes Apple Video Player the active program on your system

-
- Frequency range:
 - U.S.: 88.1 to 107.9 MHz
 - Europe: 88.1 to 107.9 MHz
 - Japan: 76.0 to 90.0 MHz
 - F connector, permits connection of:
 - Indoor antenna provided with system
 - Standard cable TV connector (for cable systems that offer FM stations)

Apple FM Radio Player Software

- Six preset buttons for instant access to your favorite stations
- User-selectable button labels:
 - Number (1 through 6)
 - Frequency
 - Station name
 - Description, such as type of programming (maximum 4-6 characters, depending on character width)
- Pop-up station selection menu
 - Holds any number of stations
 - Can be labeled with frequency, station name, and description (maximum 31 characters)
- Auto Add function that finds clear stations and adds them to pop-up menu
- Manual tuning functions
 - Seek up/down
 - Step up/down
- Sliding volume control
- Menu options for:
 - Signal range (Local, DX)
 - Signal strength (All Stations, All Except Weakest, Strong, Strongest Only)
 - Audio mode (Stereo, Mono)
- One-click recording
 - Adjustable compression ratio/sampling rate
 - Record time indicator

Remote Control

- Infrared link with Macintosh system
- FM radio controls
 - Channel up/down (cycles among all preset stations)
 - Audio volume up/down
 - Audio mute
- TV controls

- Channel up/down (cycles among all preset stations)
 - Audio volume up/down
 - Audio mute
 - TV window size, switches between current and largest size (or previous size, if current size is the largest)
 - TV/Macintosh (launches or quits out of the Apple Video Player application)
- CD-ROM controls
 - Audio volume up/down
 - Audio mute
 - Play/pause
 - Stop/eject
 - Previous track
 - Next track
- Macintosh controls
 - Power on/off
 - TV/Macintosh

System Requirements

=====

- Any Apple Macintosh computer with a video-in slot and a port for an internal TV tuner card (refer to the technical specifications for your Macintosh system)*
- Apple video-in card (included with Macintosh systems or can be purchased separately with the Apple Video System)
- TV antenna or cable TV feedline (with F connector)

* Macintosh 5200 and 5300 series computers may require the purchase of a new back panel (Apple part number 922-2190) replacing the original back panel (Apple part number 922-1397). Contact your Apple reseller for details.

Ordering Information

=====

Apple TV/FM Radio System

Order No. M4586LL/A

- Apple TV and FM Radio Tuner card
- Apple Video Player software
- Apple FM Radio Player software
- Infrared remote control
- FM antenna (twin-lead dipole with F connector; can also be used for limited TV reception)
- Apple TV/FM Radio System User's Manual
- Apple TV/FM Radio System Installation Manual (Europe only; for other regions, installation information is provided in the user's

manual)

Related Products

=====

Apple Video System

Order No. M2894LL/D

Apple Presentation System

Order No. M2895LL/A

Apple MPEG Media System

Order No. M4243LL/A

NOTE:

Product specifications and part numbers are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

02 Dec 1996 - Corrected part number for back panel.

08 Aug 1996 - Corrected part number for video system.

09 Jul 1996 - Changed article status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19954



Tech Info Library

QuickTime Conferencing ISDN Kit: Description (6/96)

Revised: 6/4/96
Security: Everyone

QuickTime Conferencing ISDN Kit: Description (6/96)

Article Created: 4 June 1996

TOPIC -----

This article describes the QuickTime Conferencing ISDN Kit.

DISCUSSION -----

The Apple QuickTime Conferencing ISDN Kit lets you hold virtual meetings with people around the world -- right from your own desk -- by enabling your Macintosh computer to interoperate with other systems that support the ITU-T H.320 international standard for videoconferencing.

The kit extends the reach of your QuickTime Conferencing software to the international ISDN network. Using the kit's software and NuBus* expansion card, you can conduct point-to-point videoconferencing sessions over ISDN lines with any other H.320-compliant Macintosh computer, IBM-compatible personal computer, or room-based video conferencing system.

When you connect over ISDN with colleagues who are also using Apple videoconferencing software on Macintosh systems (or third-party software that supports QuickTime Conferencing), you can collaborate as well as videoconference, sharing an electronic "white board" that both parties can view and mark up. White board contents can be saved to the Macintosh desktop for later viewing.

The kit works with Apple's QuickTime Conferencing software (sold separately). In true Macintosh tradition, QuickTime Conferencing leverages the powerful built-in capabilities of Macintosh systems to make videoconferencing -- usually a complex, expensive technology -- easy to use and surprisingly affordable. With a Macintosh AV system and QuickTime Conferencing software, you can work with colleagues over Ethernet LANs and the Internet. Now, with the ISDN Kit, you can also connect over ISDN lines.

The QuickTime Conferencing ISDN Kit: It turns your Macintosh desktop into an ISDN-based communications and collaboration center with international

interoperability.

* PCI version scheduled for early 1996.

Features

Interoperability and flexibility

- Makes videoconferencing with almost anyone, anywhere, as easy as making a phone call
- Works with any Macintosh computer, IBM PC or compatible computer, or room-based videoconferencing system that complies with the H.320 international standard for videoconferencing
- Extends the capabilities of Apple's videoconferencing software (QuickTime Conferencing and Apple Media Conference) so that you can videoconference over ISDN networks

High quality ISDN videoconferencing

- State-of-the-art ISDN-based videoconferencing provides a high-quality, dedicated network connection and guaranteed information transfer rate of 128 Kbps
- High throughput is achieved via powerful H.320 compression/decompression software
- The worldwide ISDN communications infrastructure lets you videoconference to most locations, saving the time and costs of travel

Affordability

- Provides a single-card solution for high-performance videoconferencing
- Leverages the built-in audio and video capabilities of Macintosh AV systems
- Preserves your investment in previously purchased videoconferencing systems, ISDN lines, and personal computers
- Supports the H.320 international standard to ensure long-term interoperability

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19955



Tech Info Library

QuickTime Conferencing ISDN Kit: Technical Specifications (6/96)

Revised: 6/4/96
Security: Everyone

QuickTime Conferencing ISDN Kit: Technical Specifications (6/96)

=====

Article Created: 4 June 1996

TOPIC -----

This article provides the technical specifications for the QuickTime Conferencing ISDN Kit.

DISCUSSION -----

Technical Specifications

Support of these videoconferencing standards:

- ITU-T H.320 standard with H.261 video codec featuring CIF and QCIF video formats
- G.711, G.722, and G.728 audio compression standards

System requirements

- One of the following Macintosh systems*:
 - Power Macintosh 7100AV
 - Power Macintosh 8100AV
- 16MB of RAM
- System 7.5 or later (PowerTalk installation recommended; lets users call other video-conferencers via PowerTalk information cards)
- A hard disk drive
- A CD-ROM drive
- An Apple PlainTalk microphone
- A videoconferencing camera (such as the Apple QuickTime Conferencing Camera 100, included in the QuickTime Conferencing Kit)
- Apple QuickTime Conferencing system extension (included in the QuickTime Conferencing Kit)
- Apple Media Conference application (included in the QuickTime Conferencing Kit)
- An ISDN NT-1 box and power supply (may not be required in some instances; check with your ISDN provider for further information)
- An ISDN network connection with 2 B+D capability
- One of the following remote systems:

- A Macintosh computer that supports the H.320 standard
- An IBM PC or compatible computer that supports the H.320 standard
- An H.320-compliant room-based videoconferencing system
- Optional: External powered speakers

* As of September 15, 1995. Check with your Apple reseller for an up-to-date list of compatible models.

Ordering Information

QuickTime Conferencing ISDN Kit

Order No. M4585LL/A

All packages include:

- NuBus* expansion card containing:
 - H.320 software
 - ISDN hardware and jack
 - Handset interface and jack
- QuickTime Conferencing H.320 software
- Telephone handset and cord
- ISDN cable
- Installation manual

* PCI version scheduled for early 1996.

Volume and site licensing packages of Apple Media Conference software are available. Please visit the following QuickTime Web site for ordering procedures and other QuickTime Conferencing information:

<http://quicktime.apple.com>

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:19956



Tech Info Library

Vivo Software, Inc (6/96)

Revised: 6/5/96
Security: Everyone

Vivo Software, Inc (6/96)

=====

Article Created: 4 June 1996

Vivo Software, Inc

411 Waverley Oaks Road
Waltham, MA 02154

800-VIVO-411 (800-848-6411)

617-899-8900 (Local Telephone Number)

617-899-1400 FAX

Internet: <http://www.vivo.com>

E-Mail: info@vivo.com

Company Profile:

Vivo Software Inc. offers video communications software and technology over low bit rate PSTN and IP networks. They provide products for real-time video playback and real-time videoconferencing over ISDN and POTS.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19957



Tech Info Library

H.320/ISDN Test System (6/96)

Revised: 6/5/96
Security: Everyone

H.320/ISDN Test System (6/96)

Article Created: 5 June 1996

TOPIC -----

This article describes a method to test your H.320/ISDN system using Apple Media Conferencing.

DISCUSSION -----

Question:

How can I test my H.320/ISDN system using Apple Media Conference?

Answer:

Vivo Software Inc. maintains the 'Vivo320 Test Call Center' H.320 videoconferencing system set to auto-answer 24 hours a day and 7 days a week. Their telephone number for the video conferencing is 617-492-0911. Vivo Software uses a 5ESS switch so there is only one phone number to dial. Launch Apple Media Conference then ensure these settings have been set correctly.

Begin_Table

```
Setting menu
  Preferences
    Conference
      Connection type: H.320 card
      Connect via:
        ISDN, 2 channel
      or
        ISDN, 2 channel, 56k adaptation
```

End_Table

Once the settings are correct, select "Call..." from the File menu. Remember to enter any prefixes to access an outside line (8 or 9) or any applicable long distance prefixes (1 or long distance carrier prefix).

The Tech Info Library article titled "Locating Vendor Information" can help you search for Vivo Software's address and phone number.

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Tech Info Library Article Number:19958



Tech Info Library

Apple MessagePad: Upgrading German MessagePad 120 in U.S. (6/96)

Revised: 6/5/96
Security: Everyone

Apple MessagePad: Upgrading German MessagePad 120 in U.S. (6/96)

=====

Article Created: 5 June 1996

TOPIC -----

This article describes the limitations when upgrading international versions of an Apple MessagePad in the United States.

I purchased an Apple MessagePad 120 with the ROM v 1.3 while stationed in Germany. Now that I have returned to the U.S., I would like to get the MessagePad upgraded to the 2.0 ROM. Will Apple Computer upgrade a German ROM v 1.3 at the U.S. upgrade facility?

DISCUSSION -----

The ROM is not the only difference in these units. There is also a German language set of silk-screened buttons at the bottom of the touchpad or display.

There is a limitation for the upgrade on an Apple MessagePad with an international configuration. Apple Computer will do the upgrade for the standard upgrade price plus shipping and handling. This does not include the replacement of the touchpad or display.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19959



Tech Info Library

ARA Server, Open Transport, and LocalTalk Problem (10/96)

Revised: 10/23/96
Security: Everyone

ARA Server, Open Transport, and LocalTalk Problem (10/96)

=====

Article Created: 5 June 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

I have a Power Macintosh 7200/90, with System 7.5.3 from Update 2.0, Open Transport 1.1, Apple Remote Access (ARA) Personal Server 2.0.1, and Global Village Platinum modem, acting as an ARA server on a LocalTalk network (with no zones) of 15 devices. Any client calling in is able to see the LocalTalk servers and printers in the Chooser, but they cannot connect to them. When connecting to a server, they get no response. When attempting to print to a printer, they get the message, "The printer is switched off or disconnected."

Another ARA Personal Server, a Macintosh Classic, on the network lets clients connect without a problem.

I have tried resolving this by doing the following to no avail:

- I tried setting ARA 2.0.1 clients to Remote Only in the Network control panel.
- I did a clean install of System 7.5.3 with Update 2.0, ARA Personal Server 2.0.1, and Global Village software on the Power Macintosh 7200/90.

What is wrong?

DISCUSSION -----

There is a known problem with ARA servers running Open Transport on a LocalTalk network. Clients will be able to see services but will be unable to connect to them as you described above.

This issue has been fixed with Open Transport 1.1.1 which is available on Apple Computer's online services. These articles can help you locate Open Transport 1.1.1:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

23 Oct 1996 - Updated with Open Transport 1.1.1 availability.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19960



Tech Info Library

Modem: Using Register Feature as Testing Option (6/96)

Revised: 6/5/96
Security: Everyone

Modem: Using Register Feature as Testing Option (6/96)

=====

Article Created: 5 June 1996

TOPIC -----

This article describes how to test the modem dial out functions.

I just setup my new Performa 640. I am trying to get the modem to dial up a bulletin board but I am not sure I have the ZTerm application setup correctly or if the modem is functioning correctly. Is there an easier way to test the modem?

DISCUSSION -----

As a simple alternative test option you can use the registration feature of the modem. The registration feature is previously setup by the modem manufacturer. If you have a Global Village modem installed use the following steps:

- Open the TelePort control panel. (Use the PowerPort control panel for Global Village modems installed in PowerBook computers)
- Select the "Register..." option in the control panel.
- Follow the instructions as prompted.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19961



Tech Info Library

AICK: What is the 800 Number for the Registration Server (6/96)

Revised: 6/5/96
Security: Everyone

AICK: What is the 800 Number for the Registration Server (6/96)

=====

Article Created: 5 June 1996

TOPIC -----

I have the Apple Internet Connection Kit (AICK), and I am trying to connect to the Internet Registration Server to decide which Internet Service Provider to choose. When I first launched the Apple Internet Dialer, the 1-800 phone number was listed, but I changed the number. I cannot find the original phone number anywhere to change it back. What is the 1-800 number for the Registration Server?

DISCUSSION -----

The telephone number in the AICK, Apple Internet Dialer for the Registration Server is 1-800-247-5067.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19962



Tech Info Library

AICK: Setting Up with Existing Service Provider (6/96)

Revised: 6/5/96
Security: Everyone

AICK: Setting Up with Existing Service Provider (6/96)

=====

Article Created: 5 June 1996

TOPIC -----

I have the Apple Internet Connection Kit (AICK) and I'm trying to set it up with my existing Internet service provider (ISP). When I launch the Apple Internet Dialer, it wants me to set up an account with a new service provider. How do I tell it to use my existing ISP?

DISCUSSION -----

When you first run the Apple Internet Dialer, it assumes you do not have internet access and guides you through setting up an account with a new ISP. If you already have dial-up access with an ISP, you can set it up by following these steps:

Step 1

Launch the Apple Internet Dialer application

Step 2

Choose Define Provider Information from the Provider menu.

Step 3

Enter the appropriate information for your ISP. if you do not know this information, call your ISP for the necessary information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19963



Tech Info Library

Sayett Technology (6/96)

Revised: 6/5/96
Security: Everyone

Sayett Technology (6/96)

=====

Article Created: 5 June 1996

Sayett Technology

7 Norton St.
Honeowey Falls, NY 14472

800-678-7469 (Tech Support & Sales)

716-624-1290 (Main Phone Number)

716-264-9265 (FAX)

Internet: sayett@eznet.net

<http://www.eznet.net/sayett>

Company Profile:

Manufacturers of Liquid Crystal Display (LCD) projectors and panels.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19964



Tech Info Library

QuickMorph and Apple Menu Options (6/96)

Revised: 6/5/96
Security: Everyone

QuickMorph and Apple Menu Options (6/96)

=====

Article Created: 05 June 1996

TOPIC -----

I just purchased a Power Macintosh 5400/120. I installed Hypercard 2.3.3, which comes bundled with AddMotion II. Every time I try to use the QuickMorph component of the AddMotion II software, it crashes. What can I do about this?

DISCUSSION -----

Try deselecting the "Remember recently used items" checkbox in the Apple Menu Options control panel. Follow these steps to deselect this checkbox:

Step 1

Select Control Panels from the Apple Menu

Step 2

Double-click the Apple Menu Options icon.

Step 3

Click the checkbox labeled "Remember recently used items" to deselect it.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19965



Tech Info Library

Power Macintosh 5400 and Remote Control (6/96)

Revised: 6/5/96
Security: Everyone

Power Macintosh 5400 and Remote Control (6/96)

=====

Article Created: 05 June 1996

TOPIC -----

I just bought a Power Macintosh 5400/120 and I noticed it did not include a remote control. Was it supposed to be included? What can I do?

DISCUSSION -----

No, the remote control is not included with the Power Macintosh 5400/120. However, there are two other options available to you.

First, you can contact a local, Apple-authorized service provider and inquire about purchasing the remote control which is included with the Apple TV/Video System. The service part number is 922-0549. Service providers may not have service parts available.

You may also use any remote control which uses the Sony command set. This includes Sony TV remotes, and universal remotes which can be programmed with the Sony command set.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19966



Tech Info Library

Drive Setup: What's New in v1.0.5 & v1.1? (6/96)

Revised: 6/5/96
Security: Everyone

Drive Setup: What's New in v1.0.5 & v1.1? (6/96)

=====

Article Created: 05 June 1996

TOPIC -----

I noticed that the Power Macintosh 5260/100 includes version 1.0.5 of Drive Setup, and the Power Macintosh 5400/120 includes version 1.1. What is different in these versions from version 1.0.4, which was included with System 7.5 Update 2.0?

DISCUSSION -----

Following are the changes made to versions from Drive Setup version 1.0.4 to 1.0.5 and 1.1:

1.0.4 -> 1.0.5

- Drive Setup 1.0.5 waits 3 seconds between calls to the Disk Init Package ensuring that volume creation dates are different. This prevents a problem with custom icons not appearing correctly on drives with multiple partitions.

1.0.5 -> 1.1

- Provides DMA support for ATA based machines.
- Fixed a problem where an ATA device's capacity was not correctly recognized.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19967



Tech Info Library

Power Macintosh 5400/120 & Apple System Profiler 1.0.1 (6/96)

Revised: 6/5/96
Security: Everyone

Power Macintosh 5400/120 & Apple System Profiler 1.0.1 (6/96)

=====

Article Created: 05 June 1996

TOPIC -----

Was Apple System Profiler 1.0.1 revised to add support for the Power Macintosh 5400/120? I tried versions 1.0 and 1.0.1 on this computer, and the results appear to be the same.

DISCUSSION -----

Version 1.0.1 of Apple System Profiler does not include any enhancements specifically for the Power Macintosh 5400/120. If you are using version 1.0, it is not necessary to upgrade to version 1.0.1.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19970



Tech Info Library

Pwr Mac 5200/5300/6200/6300:Rep. Ext. Pro. Fact Sheet/Q&A(2/97)

Revised: 2/3/97
Security: Everyone

Pwr Mac 5200/5300/6200/6300:Rep. Ext. Pro. Fact Sheet/Q&A(2/97)

=====

Article Created: 6 June 1996
Article Reviewed/Updated: 03 February 1997

TOPIC -----

This article contains questions about the Repair Extension Program for Power Macintosh and Performa 5200, 5300, 6200, and 6300 computers.

Questions Answered in this Article:

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- 1) What is a Repair Extension Program?
- 2) What models are included in this Repair Extension Program?
- 3) Is this repair program different from the product recall I heard about recently?
- 4) Are Powerbook computers included in this program?
- 5) What is the Repair Extension Program for the Apple Power Macintosh and Performa 5200, 5300, 6200, and 6300 computers?
- 6) What are the details of the repair?
- 7) How does a customer know if his/her computer is affected by the quality issues that Apple has identified?
- 8) Where can customers obtain this diagnostic software?
- 9) How is Apple notifying customers who may be affected by these quality issues?
- 10) I have already called 1-800-SOS-APPL about getting my computer system repaired under this program. Do I need to call Apple again?

- 11) Are there any known safety issues with these products?
- 12) Is there a cost to customers?
- 13) How long will it take to get an affected computer system repaired?
- 14) Are these worldwide programs?
- 15) How does Apple define a system freeze?
- 16) What if my computer exhibits problems not caused by the components that Apple has identified?
- 17) Is Apple extending the warranty on my computer?
- 18) What are the dates of this Repair Extension Program?

DISCUSSION -----

- 1) Question: What is a Repair Extension Program?

Answer: A Repair Extension Program is one mechanism Apple uses to correct known quality issues exhibited during or after the warranty period. Quality is a top priority at Apple, and this repair program addresses certain quality issues that have surfaced with these products. Apple is implementing this repair program as part of the company's goal to provide a high level of customer satisfaction to its customers.

- 2) Question: What models are included in this Repair Extension Program?

Answer: The models included in this program are Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.)

- 3) Question: Is this repair program different from the product recall I heard about recently?

Answer: This is the same program. In early May, we alerted Apple resellers about these Repair Extension Programs so that they would have time to prepare for customer calls and questions. Our communications to our resellers received widespread media coverage, which characterized these programs as a recall. But it's the same program; we are in the process now of letting customers know that we're ready to begin repairing affected Power Macintosh and Performa computers. This is a repair extension program, not a product recall.

- 4) Question: Are PowerBook computers included in this program?

Answer: We are activating the Power Macintosh and Performa Repair Extension

Program this week. Details about the PowerBook 5300 and 190 Repair Extension Programs will be announced to customers in about a week or so.

5) Question: What is the Repair Extension Program for the Apple Power Macintosh and Performa 5200, 5300, 6200, and 6300 computers?

Answer: The Repair Extension Program for the Apple Power Macintosh and Performa 5200, 5300, 6200, and 6300 computers addresses two potential quality issues with these models:

- * Frequent system freezes (the cursor does not move on the screen and the menu-bar clock does not advance) because of specific known components that have been identified by Apple, and/or,

- * Sudden or intermittent change in the video monitor's hue because of a particular cable.

With this Repair Extension Program, Apple has identified known hardware issues the company will repair

- * at its cost

- * for as long as Apple services these products. In the United States, that is seven years after the company stops manufacturing the products. In other countries, the time period is different.

6) Question: What are the details of the repair?

Answer: The repair procedures for this program may include:

- * Running diagnostic (5xxx-6xxx Tester) software to determine whether the computer is affected by specific known component issues on the logic board.

- * Checking the logic board and repair or replace, as appropriate.

- * As appropriate, determining whether the monitor may be affected by a sudden or intermittent change in color hue and replace a cable to correct if necessary.

7) Question: How does a customer know if his/her computer is affected by the quality issues that Apple has identified?

Answer: In each country, customers can contact their service providers or call the service number designated for their country. In the United States, customers should contact their Apple Authorized Service Provider or call 1-800-SOS-APPL to determine whether their computer may be affected by these quality issues. In addition, Apple is making simple diagnostic software widely available; this software can help identify whether a particular computer may be affected by the component issues that cause system freezes.

8) Question: Where can customers obtain this diagnostic software?

Answer: The software, 5xxx-6xxx Tester 1.0, is available in the following locations:

** America Online (keyword: applecomputer) path: software -> Macintosh -> Utilities

** CompuServe (GO APLSUP)

** The Internet:

ftp://ftp.info.apple.com/Apple.Support.Area/Apple_SW_Updates/US/Macintosh/Utilities/5xxx-6xxx_Tester_1.0.sea.hqx

9) Question: How is Apple notifying customers who may be affected by these quality issues?

Answer: Many customers heard about this program through media coverage and have already called Apple. Apple has begun to contact these customers through phone calls or letters to provide specific details on program participation and/or to schedule a repair. Information on the Repair Extension Program is also available on Apple's Web site: <<http://www.info.apple.com>>.

10) Question: I have already called 1-800-SOS-APPL about getting my computer system repaired under this program. Do I need to call Apple again?

Answer: Apple will contact you either by phone or by mail with information about the program. If for any reason you do not hear from Apple by mail or phone by June 21, 1996, please call Apple toll-free at 1-800-SOS-APPL or contact your local service provider.

11) Question: Are there any known safety issues with these products?

Answer: No.

12) Question: Is there a cost to customers?

Answer: The specific repairs outlined in this program will be at Apple's cost.

13) Question: How long will it take to get an affected computer system repaired?

Answer: Apple is committed to repairing systems as soon as possible. The length of time to get a system repaired will depend on the number of requests Apple receives, as well as parts availability.

14) Question: Are these worldwide programs?

Answer: These are worldwide programs, but it is important to note that the quality issues differ on a country-by-country basis.

15) Question: How does Apple define a system freeze?

Answer: For purposes of this Repair Extension Program, a system freeze is defined as when the cursor (arrow) does not move on the screen and the menu bar clock does not advance. The system freeze can be caused by known hardware component issues, which is what Apple is repairing under this program.

A condition defined by Apple as a system "hang", "crash", "bomb," or "lockup," is when the cursor will still move on the screen but pressing the mouse button has no effect. With this condition, users may also see an error dialog box on the screen (for example ID = Type 11). This type of error is caused by one of several possible software issues not addressed by this program.

If a customer is experiencing an issue that has not been identified by Apple as part of this program, the service provider or Apple phone-support representative (1-800-SOS-APPL) will work with the customer to determine an appropriate course of action.

16) Question: What if my computer exhibits problems not caused by the components that Apple has identified?

Answer: It is possible that system freezes or video issues can occur for reasons unrelated to the component problems described above. Any such issues would not be covered by this Repair Extension Program. If a customer is experiencing an issue that has not been identified by Apple as part of this program, the service provider or Apple phone-support representative (1-800-SOS-APPL) will work with the customer to determine an appropriate course of action.

In many cases, installation of Mac OS Version 7.5.3 may correct issues customers might be having with system freezes that are unrelated to the component issues Apple has identified. Customers who wish to install Mac OS Version 7.5.3 can obtain the software by calling 1-800-293-6617, ext. 984.

17) Question: Is Apple extending the warranty on my computer?

Answer: Under this Repair Extension Program, Apple, at its option, will repair or replace the specific components the company has identified. This program does not extend the repair of any other systems, parts, or components beyond the warranty period.

18) Question: What are the dates of this Repair Extension Program?

Answer: The Repair Extension Program starts on June 4, 1996 and will expire seven years after Apple stops manufacturing the specific Power Macintosh or Performa computers.

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03 Feb 1997 - Added correct online location of tester utility

27 Jun 1996 - added keyword.

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TITLE

PCI Power Macintosh Computers: Upgrade Card Matrix

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TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

Is there any way to determine which Processor Upgrade Cards are compatible with the various PCI-based Power Macintosh computers?

DISCUSSION

The following chart provides compatibility information for the various Processor Upgrade Cards available for the following computers:

- Power Macintosh 7300, 7500, 7600, 8500, and 8600 series computers
- Power Macintosh 9500, 9600
- Apple Workgroup Servers 7350, 855,0 and 9650

All PCI-based Power Macintosh computers listed above will support Processor Upgrade Cards of up to 233 MHz.

Important: Processor cards for the following Power Macintosh computers are not compatible with the computer models listed above. Also, processor cards for the computer models listed above are not compatible with the following Power Macintosh computers:

- Power Macintosh 8600/250
- Power Macintosh 8600/300
- Power Macintosh 9600/300
- Power Macintosh 9600/350
- Apple WorkGroup Server 9650/350

The following information will assist you in reading the matrix below.

Service Parts Number

Apple-authorized service providers use the service part numbers to order service parts from Apple.

Assembly Number

If you do not know the finished goods or service part numbers of a particular processor card, use the assembly code to determine compatibility. The assembly part numbers are placed on the card with either a sticker or white stenciling.

Label

Some cards may have a label on them to clarify compatibility but some labels inaccurately identify which machines the card will work with. Rely on the service part number instead.

Note: Some cards are being upgraded to the appropriate level when sent in from the field. Please check the Service Price Pages and the Service Source CD for more information.

Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500

Speed (MHz)	Service P/N	Assembly Number	Label	7300	7500	7600	8500	8600
100	661-0917	630-1219	none	-	Yes	Yes	Yes	-
120	661-0925	630-1733	none	-	Yes	Yes	Yes	-
-	-	630-1734	none	-	Yes	Yes	Yes	-

-	-	630-2054	none	-	Yes	Yes	Yes	-
-	-	630-2055	none	-	Yes	Yes	Yes	-
120	661-1272	630-1351	none	-	-	-	Yes	-
-	-	630-1568	none	-	-	-	Yes	-
132	661-1002	630-1451	9500 only	-	-	-	-	-
-	-	630-1735	9500 only	-	-	-	-	-
-	-	630-1736	9500 only	-	-	-	-	-
132	661-1157	630-1885	none	-	Yes	Yes	Yes	-
-	-	630-2059	none	-	Yes	Yes	Yes	-
-	-	630-2269	none	-	Yes	Yes	Yes	-
-	-	630-2270	none	-	Yes	Yes	Yes	-
132	661-1259	630-1886	8500/9500 only	-	-	-	Yes	-
-	-	630-2060	8500/9500 only	-	-	-	Yes	-
150	661-1146	630-1737	9500 only	-	-	-	-	-
-	-	630-2307	9500 only	-	-	-	-	-
150	661-1250	630-1940	8500/9500 only	-	-	-	Yes	-
-	-	630-2061	8500/9500 only	-	-	-	Yes	-
-	-	630-2088	8500/9500 only	-	-	-	Yes	-
-	-	630-2308	8500/9500 only	-	-	-	Yes	-
166	661-1267	630-2122	7300 only	Yes	-	-	-	-
-	-	630-2248	7300 only	Yes	-	-	-	-
-	-	630-2488	7300 only	Yes	-	-	-	-
-	-	630-2489	7300 only	Yes	-	-	-	-
-	-	600-5567	7300 only	Yes	-	-	-	-
180	661-1222	630-2099	8500/9500 only	-	Yes	Yes	Yes	-
-	-	630-2224	8500/9500 only	-	Yes	Yes	Yes	-
-	-	630-2240	8500/9500 only	-	Yes	Yes	Yes	-
-	-	630-2249	8500/9500 only	-	Yes	Yes	Yes	-
-	-	630-2264	8500/9500 only	-	Yes	Yes	Yes	-
180	661-1305	630-2240	7300 only	Yes	-	-	-	-
-	-	630-2249	7300 only	Yes	-	-	-	-
-	-	630-2490	7300 only	Yes	-	-	-	-
-	-	630-2491	7300 only	Yes	-	-	-	-
-	-	630-2501	7300 only	Yes	-	-	-	-
-	-	630-2506	7300 only	Yes	-	-	-	-
-	-	600-5568	7300 only	Yes	-	-	-	-
-	-	600-5744	7300 only	Yes	-	-	-	-
180MP	661-1280	630-2124	9500 only	-	-	-	-	-
-	-	630-2225	9500 only	-	-	-	-	-
-	-	630-2316	9500 only	-	-	-	-	-
-	-	630-2380	9500 only	-	-	-	-	-
-	-	600-5157	9500 only	-	-	-	-	-
200	661-1223	630-2100	9500/8550 only	-	-	-	-	-
-	-	630-2200	9500/8550 only	-	-	-	-	-
-	-	630-2201	9500/8550 only	-	-	-	-	-
-	-	630-2250	9500/8550 only	-	-	-	-	-
-	-	630-2266	9500/8550 only	-	-	-	-	-
200	661-1307	630-2201	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes

-	-	630-2250	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2399	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2480	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2486	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2502	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2507	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	630-2508	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	600-5561	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
-	-	600-5745	7300, 7600, 8600, 9600	Yes	-	Yes	-	Yes
200	661-1462	630-2204	7300, 7600, 9600	Yes	-	Yes	-	-
-	-	630-2481	7300, 7600, 9600	Yes	-	Yes	-	-
200MP	661-1269	630-2125	9600 only	-	-	-	-	-
-	-	630-2259	9600 only	-	-	-	-	-
-	-	630-2262	9600 only	-	-	-	-	-
-	-	630-2401	9600 only	-	-	-	-	-
-	-	600-4832	9600 only	-	-	-	-	-
233	661-1349	630-2390	9600 only	-	-	-	-	-
-	-	630-2503	9600 only	-	-	-	-	-
-	-	630-2509	9600 only	-	-	-	-	-
-	-	600-5495	9600 only	-	-	-	-	-
-	-	600-5746	9600 only	-	-	-	-	-
233	661-1494	630-2602	7300, 7600, 8600, 9600	Yes	Yes	Yes	Yes	Yes
250	661-1439	630-2234	8600 only	-	-	-	-	Yes
-	-	630-2562	8600 only	-	-	-	-	Yes
-	-	630-2515	8600 only	-	-	-	-	Yes
-	-	600-5714	8600 only	-	-	-	-	Yes
300	661-1442	630-2236	8600/9600	-	-	-	-	Yes
-	-	630-2563	8600/9600	-	-	-	-	Yes
-	-	630-2631	8600/9600	-	-	-	-	Yes
-	-	630-5216	8600/9600	-	-	-	-	Yes
-	-	630-2637	8600/9600	-	-	-	-	Yes
-	-	630-2636	8600/9600	-	-	-	-	Yes
-	-	600-5715	8600/9600	-	-	-	-	Yes

Power Macintosh 9500, 9600, G3

Speed (MHz)	Service P/N	Assembly Number	Label	9500	9600	G3
100	661-0917	630-1219	none	Yes	-	-
120	661-0925	630-1733	none	Yes	-	-
-	-	630-1734	none	Yes	-	-
-	-	630-2054	none	Yes	-	-
-	-	630-2055	none	Yes	-	-

120	661-1272	630-1351	none	Yes	-	-
-	-	630-1568	none	Yes	-	-
132	661-1002	630-1451	9500 only	Yes	-	-
-	-	630-1735	9500 only	Yes	-	-
-	-	630-1736	9500 only	Yes	-	-
132	661-1157	630-1885	none	Yes	-	-
-	-	630-2059	none	Yes	-	-
-	-	630-2269	none	Yes	-	-
-	-	630-2270	none	Yes	-	-
132	661-1259	630-1886	8500/9500 only	Yes	-	-
-	-	630-2060	8500/9500 only	Yes	-	-
150	661-1146	630-1737	9500 only	Yes	-	-
-	-	630-2307	9500 only	Yes	-	-
150	661-1250	630-1940	8500/9500 only	Yes	-	-
-	-	630-2061	8500/9500 only	Yes	-	-
-	-	630-2088	8500/9500 only	Yes	-	-
-	-	630-2308	8500/9500 only	Yes	-	-
166	661-1267	630-2122	7300 only	-	-	-
-	-	630-2248	7300 only	-	-	-
-	-	630-2488	7300 only	-	-	-
-	-	630-2489	7300 only	-	-	-
-	-	600-5567	7300 only	-	-	-
180	661-1222	630-2099	8500/9500 only	Yes	-	-
-	-	630-2224	8500/9500 only	Yes	-	-
-	-	630-2240	8500/9500 only	Yes	-	-
-	-	630-2249	8500/9500 only	Yes	-	-
-	-	630-2264	8500/9500 only	Yes	-	-
180	661-1305	630-2240	7300 only	-	-	-
-	-	630-2249	7300 only	-	-	-
-	-	630-2490	7300 only	-	-	-
-	-	630-2491	7300 only	-	-	-
-	-	630-2501	7300 only	-	-	-
-	-	630-2506	7300 only	-	-	-
-	-	600-5568	7300 only	-	-	-
-	-	600-5744	7300 only	-	-	-
180MP	661-1280	630-2124	9500 only	Yes	-	-
-	-	630-2225	9500 only	Yes	-	-
-	-	630-2316	9500 only	Yes	-	-
-	-	630-2380	9500 only	Yes	-	-
-	-	600-5157	9500 only	Yes	-	-
200	661-1223	630-2100	9500/8550 only	Yes	-	-
-	-	630-2200	9500/8550 only	-	-	-
-	-	630-2201	9500/8550 only	-	-	-
-	-	630-2250	9500/8550 only	-	-	-
-	-	630-2266	9500/8550 only	-	-	-
200	661-1307	630-2201	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2250	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2399	7300, 7600, 8600, 9600	-	Yes	-

-	-	630-2480	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2486	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2502	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2507	7300, 7600, 8600, 9600	-	Yes	-
-	-	630-2508	7300, 7600, 8600, 9600	-	Yes	-
-	-	600-5561	7300, 7600, 8600, 9600	-	Yes	-
-	-	600-5745	7300, 7600, 8600, 9600	-	Yes	-
200	661-1462	630-2204	7300, 7600, 9600	-	Yes	-
-	-	630-2481	7300, 7600, 9600	-	Yes	-
200MP	661-1269	630-2125	9600 only	-	Yes	-
-	-	630-2259	9600 only	-	Yes	-
-	-	630-2262	9600 only	-	Yes	-
-	-	630-2401	9600 only	-	Yes	-
-	-	600-4832	9600 only	-	Yes	-
233	661-1349	630-2390	9600 only	-	Yes	-
-	-	630-2503	9600 only	-	Yes	-
-	-	630-2509	9600 only	-	Yes	-
-	-	600-5495	9600 only	-	Yes	-
-	-	600-5746	9600 only	-	Yes	-
233	661-1460	337s2280	G3 only	-	-	Yes
-	-	337s2282	G3 only	-	-	Yes
-	-	337s2270	G3 only	-	-	Yes
-	-	337s2278	G3 only	-	-	Yes
-	-	600-5731	G3 only	-	-	Yes
233	661-1494	630-2602	7300, 7600, 8500, 8600, 9600	Yes	Yes	-
250	661-1439	630-2234	8600 only	-	-	-
-	-	630-2562	8600 only	-	-	-
-	-	630-2515	8600 only	-	-	-
-	-	600-5714	8600 only	-	-	-
266	661-1461	337s2281	G3 only	-	-	Yes
-	-	337s2283	G3 only	-	-	Yes
-	-	337s2271	G3 only	-	-	Yes
-	-	337s2279	G3 only	-	-	Yes
-	-	600-5732	G3 only	-	-	Yes
275	661-1461	337s2284	G3 only	-	-	Yes
-	-	337s2274	G3 only	-	-	Yes
-	-	600-6257	G3 only	-	-	Yes
300	661-1442	630-2236	8600/9600	-	Yes	-
-	-	630-2563	8600/9600	-	Yes	-
-	-	630-2631	8600/9600	-	Yes	-
-	-	630-5216	8600/9600	-	Yes	-
-	-	630-2637	8600/9600	-	Yes	-

-	-	630-2636	8600/9600	-	Yes	-
-	-	600-5715	8600/9600	-	Yes	-
300	661-2059	337s2277	G3 only	-	-	Yes
-	-	337s2285	G3 only	-	-	Yes
-	-	600-6492	G3 only	-	-	Yes
350	661-1443	630-2511	9600 only	-	Yes	-
-	-	630-2564	9600 only	-	Yes	-
-	-	630-2517	9600 only	-	Yes	-
-	-	630-2685	9600 only	-	Yes	-
-	-	630-2686	9600 only	-	Yes	-
-	-	600-5716	9600 only	-	Yes	-

Apple Workgroup Servers 7350, 8550, 9650/233

Speed (MHz)	Service P/N	Assembly Number	Label	AWS 7350	AWS 8550	AWS 9650/233	G3 Server
132	661-1157	630-1885	none	-	Yes	-	-
-	-	630-2059	none	-	Yes	-	-
-	-	630-2269	none	-	Yes	-	-
-	-	630-2270	none	-	Yes	-	-
180	661-1305	630-2240	7300 only	Yes	-	-	-
-	-	630-2249	7300 only	Yes	-	-	-
-	-	630-2490	7300 only	Yes	-	-	-
-	-	630-2491	7300 only	Yes	-	-	-
-	-	630-2501	7300 only	Yes	-	-	-
-	-	630-2506	7300 only	Yes	-	-	-
-	-	600-5568	7300 only	Yes	-	-	-
-	-	600-5744	7300 only	Yes	-	-	-
200	661-1223	630-2100	9500/8550 only	-	Yes	-	-
-	-	630-2200	9500/8550 only	-	Yes	-	-
-	-	630-2201	9500/8550 only	-	Yes	-	-
-	-	630-2250	9500/8550 only	-	Yes	-	-
-	-	630-2266	9500/8550 only	-	Yes	-	-
233	661-1349	630-2390	9600 only	-	-	Yes	-
-	-	630-2503	9600 only	-	-	Yes	-
-	-	630-2509	9600 only	-	-	Yes	-
-	-	600-5714	9600 only	-	-	Yes	-
233	661-1460	337s2280	G3 only	-	-	-	Yes
-	-	337s2282	G3 only	-	-	-	Yes
-	-	337s2270	G3 only	-	-	-	Yes
-	-	337s2278	G3 only	-	-	-	Yes
-	-	600-5731	G3 only	-	-	-	Yes
233	661-1494	630-2602	7300, 7600, 8500, 8600, 9600	Yes	Yes	Yes	-

Note: Some cards are being upgraded to the appropriate level when sent in from the field. Please check the Service Price Pages and the Service Source CD for more information.

This article was published in the Information Alley on 07 June 1996.

Document Information

Product Area: Computers
Category: Power Macintosh
Sub Category: General Topics

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Tech Info Library

Epigraphx (6/96)

Revised: 6/6/96
Security: Everyone

Epigraphx (6/96)

=====

Article Created: 6 June 1996

Epigraphx

965 Terminal Way
San Carlos, CA 94070

415-802-5858 (Phone)

415-802-5850 (FAX)

Company Profile:

Epigraphx designs, implements, and manages fax services that streamline document delivery and data capture.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19975



Tech Info Library

PC Exchange and ZIP Drive Issues (6/96)

Revised: 6/6/96
Security: Everyone

PC Exchange and ZIP Drive Issues (6/96)

Article Created: 6 June 1996

TOPIC -----

There have been reports of issues with the Iomega ZIP drive and the PC Exchange control panel. Users are either not able to select the Iomega ZIP drive in the PC Exchange control panel, or they cannot see all of the files or folders on the drive.

Below is greater detail users have reported:

- In the PC Exchange control panel, after clicking Options..., no device driver for a Iomega ZIP drive is available.
- When using PC Exchange to mount a ZIP drive, not all of the files or folders are seen in the Finder. When choosing Find File in the File menu on the ZIP drive, the files and folders are visible, but these files still do not show up in the finder. All of the files and folders are visible when using the ZIP drive on a PC.

DISCUSSION -----

Iomega ZIP drive and the PC Exchange control panel

The reason you cannot see the ZIP drive in the PC Exchange control panel is because PC Exchange has an internal list of supported devices and the ZIP drive is not on the list. The ZIP drive will probably not be added to this list because the driver that ships with the drive is PC Exchange aware. DOS formatted ZIP cartridges can be used with the driver that ships with the drive.

You need to run the installer which puts the Iomega Driver extension in the extensions folder. Restart the Macintosh, insert a DOS formatted ZIP cartridge, and it appears on the desktop. The cartridge may need to be formatted using SCSIUTIL.EXE that ships with the ZIP drive. There is no need to configure PC Exchange to mount the cartridge, however, PC Exchange, Access PC, or DOS Mounter must also be installed on the Macintosh.

Cannot see all of the files or folders on the drive

Below are two issues we are aware of that may be causing this:

- PC Exchange (2.0.x) has a limit of displaying 512 files in a subdirectory.
- This sounds similar to an issue with CD-ROM discs. All of the files and folders could not be seen on a CD-ROM when Connectix Corporation's RAM Doubler 1.5.1 is installed, and file sharing is turned on. This incompatibility was fixed in RAM Doubler 1.5.2 or later. You should upgrade RAM Doubler, if RAM Doubler is being used.

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Tech Info Library Article Number:19976



Tech Info Library

Power Macintosh 5400/120: All Software Isn't Installed (6/96)

Revised: 6/6/96
Security: Everyone

Power Macintosh 5400/120: All Software Isn't Installed (6/96)

=====

Article Created: 6 June 1996

TOPIC -----

I recently performed a clean installation of System 7.5.3 Revision 2 on my Power Macintosh 5400/120. However, it appears that I no longer have the software that was originally installed. What other software needs to be installed? Is there any particular order I need to reinstall this software?

DISCUSSION -----

Your Power Macintosh 5400/120 computer includes the following pre-installed software. The items are listed in the same order as the software is installed at the factory, but you do not need to install the software in any particular order.

- System 7.5.3 Revision 2

This installer is located on the Apple Macintosh CD: Install System Software: System 7.5.3 installation (alias).

- Apple Video Player

This installer is located on the Apple Macintosh CD: Apple Extras: TV/FM Software: Install Video Software.

This installer places both the Apple Video Player and the Apple FM Radio in the Apple Menu Items folder. There is not a Custom Install option for this installer. However, currently the Apple FM Radio does not add any functionality to your computer so you may safely remove it.

- QuickDraw 3D

This installer is located on the Apple Macintosh CD: Apple Extras: QuickDraw 3D: Installer.

- QuickDraw 3D Scrapbook

After installing QuickDraw 3D, you will have a Scrapbook file containing two 3D models in the following location:

Hard Drive: Apple Extras: QuickDraw 3D Folder: Scrapbook file

In order to use this Scrapbook, you need to put it in your System Folder and replace the Scrapbook file that is currently there.

IMPORTANT: If you replace your current Scrapbook file with the one created by QuickDraw 3D, you will lose any information that you have added. Be sure to copy this information before replacing the file.

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Tech Info Library Article Number:19978



Tech Info Library

WorldScript: Component Names & Version History Questions (6/96)

Revised: 6/6/96
Security: Everyone

WorldScript: Component Names & Version History Questions (6/96)

Article Created: 6 June 1996
Article Reviewed/Updated: 7 June 1996

TOPIC -----

What is the difference between "WorldScript Updater", "WorldScript Pieces Install", and "7.5.1 WorldScript Updater"?

Why is the WorldScript Power Adapter extension installed by the System 7.5.3 installer, when the rest of the required software (if you happen to be using WorldScript) is not?

DISCUSSION -----

Different Names For The Same Thing

"WorldScript Updater", "WorldScript Pieces Install", and "7.5.1 WorldScript Updater" are all the same thing. The next WorldScript Update is expected to have only one name.

Worldscript Updater Versions

There are two versions of the "Worldscript Updater" currently available, version 1.0 and version 1.0.1. Version 1.0 is currently posted online. New machines, such as the Power Macintosh 5400/120, include version 1.0.1, which should be used in place of version 1.0.

The changes in 1.0.1 are as follows:

Begin_Table

Version 1.0	Version 1.0.1
-------------	---------------

InputBackSupport	(7.5.1)	InputBackSupport	(7.5.3)*
WorldScript I	(7.5.1)	WorldScript I	(7.5.2)**
WorldScript II	(7.5.1)	WorldScript II	(7.5.1)***

End_Table

* Version 7.5.3 of InputBackSupport includes changes for the Korean Language Kit (KLK) support.

** Version 7.5.2 of WorldScript I fixes a bug that occurred when used with Adobe Type Manager and fixes a problem in the Hebrew and Arabic Setting control panels.

*** Version 7.5.1 of WorldScript II was not revised for version 1.0.1.

Why The WorldScript Power Adapter Is Always Installed

=====

The WorldScript Power Adapter extension includes patches that improve overall printing performance. These improvements are independent of Language Kit software. This is why it is installed by the System 7.5.3 installer while the rest of the required Language Kit/Worldscript software is not. The name of this extension may be misleading, except that it also includes some WorldScript enhancements.

Article Change History:

07 Jun 1996 - Updated for clarity.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19979



Tech Info Library

12 Inch PC Compatibility Card: Video RAM Explanation (6/96)

Revised: 6/6/96
Security: Everyone

12 Inch PC Compatibility Card: Video RAM Explanation (6/96)

=====

Article Created: 6 June 1996

TOPIC -----

In reading the PC Compatibility Card User's Manual (for 12-inch card), it is explained on page XIII that 1 MB of video DRAM can be added to the card. Yet on page 195, the DRAM chip is described as being "256K x 16". Further, the silk screening on the card and the part number of the chips that are soldered down suggest that the chips are indeed 256K.

How is it that we are getting the first 1 MB of video DRAM by using two chips that are 256K each? And how can 1 MB of video DRAM be added by using two 256K chips?

DISCUSSION -----

The DRAM used is 256K X 16, this multiplies out to 4,096,000 bits. Each byte is made up of 8 bits, so 4,096,000 bits divided by 8 bits equals 512,000 bytes. Using two of these 256K x 16 video DRAM chips adds up to 1,024,000 bytes (or 1 MB).

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Tech Info Library Article Number:19980



Tech Info Library

Apple MessagePad 120: Upgradeable to MessagePad 130? (6/96)

Revised: 4/21/97
Security: Everyone

Apple MessagePad 120: Upgradeable to MessagePad 130? (6/96)

=====

Article Created: 6 June 1996

TOPIC -----

I own an Apple MessagePad 120 and would like to have a backlit screen like the one that comes standard on the Apple MessagePad 130. Is there an upgrade available?

DISCUSSION -----

There is no upgrade available. Upgrading from a Apple MessagePad 120 to an Apple MessagePad 130 would require a new screen and a new logic board. The cost of such an upgrade would be significant, making it more practical to purchase a MessagePad 130 instead of upgrading your Apple MessagePad 120.

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Tech Info Library Article Number:19982



Tech Info Library

At Ease 3.0.1: Can't Lock Power Macintosh 7200 Hard Disk (6/96)

Revised: 6/21/96
Security: Everyone

At Ease 3.0.1: Can't Lock Power Macintosh 7200 Hard Disk (6/96)

=====

Article Created: 6 June 1996
Article Reviewed/Updated: 21 June 1996

TOPIC -----

I cannot lock the startup volume with At Ease 3.0.1 running on Power Macintosh 7200 computers with System 7.5.3. The option is available in the User Settings menu, and is checked, but I can still start up from a CD-ROM disc or floppy disk and access the hard drive.

DISCUSSION -----

This issue is resolved in At Ease 3.0.2, which is available on the online services.

Once you update to At Ease 3.0.2, you should disable the Lock StartupDisk feature, quit the administration application, and then re-enable Lock StartupDisk. This will ensure that the latest update code is installed on your startup disk.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
21 Jun 1996 - Changed distribution status.
18 Jun 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19983



Tech Info Library

Mac OS and Microsoft Works 4.0b (6/96)

Revised: 6/7/96
Security: Everyone

Mac OS and Microsoft Works 4.0b (6/96)

=====

Article Created: 7 June 1996

TOPIC -----

I cannot get Microsoft Works 4.0B loaded on my Macintosh computer which is running Mac OS 7.5.3. After clicking on Setup on disk 1, I get a message saying "Install was unsuccessful." I never even get to the first dialog box.

DISCUSSION -----

Microsoft Technical Support stated that Microsoft Works 4.0b installs correctly on Mac OS 7.5.3. They did state that virtual memory should be turned on and the Mac OS date should be set to the standard US date format. If the problem persists, please contact Microsoft directly.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19984



Tech Info Library

Color LaserWriter 12/600PS: Moving Precautions and Errors (6/96)

Revised: 6/20/96
Security: Everyone

Color LaserWriter 12/600PS: Moving Precautions and Errors (6/96)

Article Created: 18 June 1996

TOPIC -----

What precautions should be taken when transporting or moving the Color LaserWriter 12/600 PS to another location? What errors may occur after moving the printer and what can I do to eliminate them?

DISCUSSION -----

The Color LaserWriter 12/600 PS is large and heavy, and requires special handling considerations before moving in order to prevent damage. The printer circulates a supply of oil through the fusing system to coat the fuser rollers. Moving a Color LaserWriter without first removing the fuser oil bottle and all remaining oil will most likely result in spilled oil. Spilled oil can contaminate the oil overflow sensor causing an error condition or image quality problems if it gets on the transfer drum or other parts of the imaging system. Although less severe, the oil can create a mess if it migrates onto the interior and exterior plastics.

The following procedures in addition to those documented in the User's Guide can be taken to minimize problems when moving the Color LaserWriter 12/600 PS printer.

Moving Instructions
=====

Moving Within the Same Office

For general movement within the same office the printer can be transported on a cart as long as it is not tipped while lifting or moving the printer. If the printer is tipped, oil will spill from the open oil pan at the bottom of the fuser assembly. If there is any possibility that the printer will be tipped then the fuser oil should be removed.

Moving to Another Location Without Repackaging The Printer

Remove the four toner cartridges, waste toner bottle, fuser oil bottle, and the photoconductor. Use the orange shipping fixture for the photoconductor to protect it from damage and insert it into the lightproof bag if available. The waste toner bottle should be capped to prevent toner leakage.

Pump the teal green paper jam release lever on the right of the fuser assembly 50 times to transport oil already in the system back to the oil reservoir. Use a small turkey baster or a large syringe to extract the oil from the reservoir. Repeat the procedure if necessary until all of the oil has been removed.

Remove the fuser assembly from the printer using the procedures documented in the fuser replacement section of the LaserWriter 12/600 PS User's Guide. Seal the fuser assembly in a plastic bag and transport it separate from the printer. Reinstall the fuser assembly and the consumables after the printer has been placed in its new location.

Shipping to Another Location in the Original Packaging

Follow the instructions above for moving the printer without repackaging, adding the following steps:

Reinstall the orange transfer drum shipping screw assembly that ships with all new printers. This screw is necessary to prevent damage to the delicate transfer drum and its drive mechanism.

Tape closed any plastic covers that could open or become dislodged during transport. Use fiber reinforced packaging tape similar to that originally used to package the printer. Pay particular attention to the front door, fuser access door, multipurpose tray, and the paper cassette tray.

Carefully inspect the cardboard cover, foam shipping blocks, and wooden pallet before repackaging the printer. DO NOT reuse damaged packaging materials or severe shipping damage may result.

Reinstall the fuser assembly and the consumables after the printer has been placed in its new location.

Setting up the Printer and Eliminating Potential Errors

=====

Once the printer is at its new location, make sure it is installed onto a level surface. If the Color LaserWriter is not placed on a level surface then fuser oil may accumulate in the fuser assembly oil catch tray causing an error condition. A fuser oil pump overflow error is indicated on the status panel by alternately flashing the paper out and paper jam LEDs while the yellow toner cartridge LED and the photoconductor maintenance LEDs remain on.

Follow these steps to eliminate the oil overflow condition:

Step 1: Level The Printer And Its Supporting Surface

Use a small line level to verify that the surface the printer will be placed on is flat and level. If the surface that the printer is placed on is level and stable then it is unlikely that any additional leveling of the printer will be necessary once it is put into place. Many tables contain leveling feet which make leveling easier.

Check the printer to see if it is level by opening the top cover and placing a line level on the yellow felt covered surface of the fuser assembly. The front of the printer must be no higher than the rear to aid the flow of fuser oil back to the oil reservoir.

CAUTION:

Under NO circumstances allow the FRONT of the printer to be higher than the REAR of the printer.

Leveling the Color LaserWriter 12/600 PS from left to right is not as critical.

Step 2: Pump The Fuser Jam Release Lever To Remove Excess Oil

Open the fuser access door to locate the teal green fuser paper jam release lever. Pump the lever 50-70 times to manually remove excess oil from the fuser assembly oil catch tray and move it back to the oil reservoir. Under most circumstances this action will allow the oil overflow sensor flag to drop back to its normal operating position.

Step 3: Allow Oil To Flow Back Into Reservoir

Raise the right front corner of printer no more than 1 inch and hold for 15-20 seconds.

Step 7: Power On Printer

Turn the printer back on and wait for startup pages or ready LED.

If these steps do not correct the problem, the printer may require service to resolve this issue.

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Tech Info Library Article Number:19989



Tech Info Library

QuickTake 100 & System 7.5.3 Incompatibility (10/96)

Revised: 10/18/96
Security: Everyone

QuickTake 100 & System 7.5.3 Incompatibility (10/96)

Article Created: 11 June 1996
Article Reviewed/Updated: 18 October 1996

Topic-----

After installing the System 7.5 Update 2.0 on my Power Macintosh, I am no longer able to view pictures from my QuickTake 100. When trying to view a picture, the application either quits or I get a message that says "Unable to view the slide because of an error."

Discussion-----

This was previously thought to be an incompatibility with the System Update 2.0 Enabler. However, through further investigation, we have determined the cause to be an incompatibility between QuickTime 2.1 and the QuickTake 1.0 application. To correct this, you need to use QuickTime 2.5 instead of QuickTime 2.1.

Article Change History:
18 Oct 1996 - Changed distribution and workaround.
09 Jul 1996 - Reformatted and reviewed.
25 Jun 1996 - Updated with new information and workaround.

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Tech Info Library Article Number:19990



Tech Info Library

Apple System Profiler On A Power Macintosh 7600/120 (6/96)

Revised: 6/11/96
Security: Everyone

Apple System Profiler On A Power Macintosh 7600/120 (6/96)

=====

Article Created: 11 June 1996

TOPIC -----

When I used the Apple System Profiler (ASP) 1.0 on my Power Macintosh 7600/120, it said that it was a Power Macintosh 7600/100.

Since I upgraded to the latest version of ASP, version 1.0.1, it now says that my Macintosh is simply a "Power Macintosh."

Since neither ASP version 1.0 or 1.0.1 seem to be able to identify my computer, which version should I be using?

DISCUSSION -----

Apple System Profiler version 1.0.1 was written to support the new Enhanced PCI-based Power Macintosh computers* including the Power Macintosh 7600/120.

However, Apple Engineering is aware that version 1.0.1 still does not properly identify the Power Macintosh 7600. Apple intends to address this issue in the next release of Apple System Profiler.

*NOTE: The enhanced PCI-based Power Macintosh computers include the following computer series:

- Power Macintosh 7200/120
- Power Macintosh 7600/120
- Power Macintosh 8500/132
- Power Macintosh 8500/150
- Power Macintosh 9500/150

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Tech Info Library Article Number:19992



Tech Info Library

AppleShare: Changing Startup Disks (6/96)

Revised: 6/11/96
Security: Everyone

AppleShare: Changing Startup Disks (6/96)

Article Created: 11 June 1996

TOPIC -----

This article describes how to change the startup disk when using AppleShare File and/or Print Server. For additional information please check the AppleShare Admin Guide, which provided the information below, that came with your AppleShare software or Workgroup Server.

DISCUSSION -----

At some point, you may want to change startup disks. In addition to installing AppleShare on the new disk, there are additional steps you need to take to maintain your original user accounts and access privileges.

To change startup disks:

Step 1

Connect the hard disk you want to use as the startup disk for the server computer.

Step 2

Install System Software and AppleShare software on the new startup disk.

Supported Mac OS releases:

AppleShare 3.0.1	- System 7.0 or greater
AppleShare 4.0.1/4.0.2	- System 7.0.1 or greater
AppleShare 4.1	- System 7.1.2 or greater
AppleShare 4.2	- System 7.5.1 or greater
AppleShare 4.2.1	- System 7.5.3

Step 3

From the Finder, copy the User & Groups Data File and File Server folder from the Preferences folder on the original startup disk to the Preferences folder on the new startup disk. The Preferences folder is inside the System Folder.

IMPORTANT: If you have been providing print service from the original startup disk and want to do so from the new startup disk, you also need to copy the AppleShare Print Server folder from the old Preferences folder.

Step 4

From the AppleShare Admin program, copy any other files or folders from the original startup disk to the new startup disk. To copy folders to the new startup disk while retaining their access privileges, choose Copy <Item> from the Privileges menu.

This step is necessary only if you are replacing the original startup disk. If you plan to use both hard disks, you can skip this step.

Step 5

Click the new disk's icon in the new disk's Startup Disk control panel. To open the Startup Disk control panel, choose Control Panels from the Apple menu, then double-click the Startup Disk icon.

Step 6

Choose Restart from the Special menu. After the server computer has restarted, you can provide file service from the new startup disk.

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Tech Info Library Article Number:19993



Tech Info Library

Language Kits: How to View Web Sites in Other Languages (6/96)

Revised: 6/11/96
Security: Everyone

Language Kits: How to View Web Sites in Other Languages (6/96)

=====

Article Created: 11 June 1996

TOPIC -----

I have the Japanese Language Kit installed on my computer and am using the Apple Internet Connection Kit, which includes Netscape as the web browser application. I would like to be able to view web sites in Japanese, but the text appears garbled. How can I setup Netscape to properly view Japanese?

DISCUSSION -----

Netscape allows you select different language encoding and font displays. You can setup different fonts for different encodings and just change the encoding whenever you look at a different web site.

Follow these steps to change the language encoding to Japanese in Netscape v1.1 and v2.0.

Netscape 1.1
=====

Step 1

Choose Preferences from the Options menu.

Step 2

Choose Fonts and Colors from the pop-up menu.

Step 3

Choose Japanese from the For the Encoding pop-up menu.

Step 4

Set Japanese Fonts to Font setting.

Step 5

Set Default Encoding to SJIS and check Auto Select.

Netscape 2.0

=====

Step 1

Choose General from the Options menu.

Step 2

Choose Fonts panel.

Step 3

Choose Japanese from the For the Encoding pop-up menu.

Step 4

Set Japanese Fonts to Font Setting.

Step 5

Click OK.

Step 6

Choose Documents Encoding from the Options menu.

Step 7

Choose Japanese Auto-Detect

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19994



Tech Info Library

European Mikrograf Corporation (6/96)

Revised: 6/11/96
Security: Everyone

European Mikrograf Corporation (6/96)

=====

Article Created: 11 June 1996

European Mikrograf Corporation

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Scotts Valley, CA 95066

408-461-6061 (PHONE)

408-461-6056 (FAX)

e-mail: info@ugraf.com

URL: <http://www.ugraf.com>

Company Profile:

European Mikrograf Corporation is a publisher of professional print spooling and Open Prepress Interface (OPI) solutions including Helios EtherShare OPI.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19996



Tech Info Library

AppleShare Workstation 3.6.2 & System 7.5.3 Performance (6/96)

Revised: 6/11/96
Security: Everyone

AppleShare Workstation 3.6.2 & System 7.5.3 Performance (6/96)

=====

Article Created: 11 June 1996

TOPIC -----

I have Power Macintosh computers running System 7.5.3, AppleShare Workstation 3.6.2 connecting to an AppleShare File Server 4.2.1 on a 10Base-T network. I'm getting complaints from users that they are getting slower performance in Finder Copies, to or from the server, than they were with computers were running System 7.5.2 and AppleShare Workstation 3.6.1.

Is there an issue with the AppleShare Workstation 3.6.2 software running with System 7.5.3 in regards to performance?

DISCUSSION -----

The issue you describe is known, and it will be resolved in the version of AppleShare Workstation that ships with the next major revision of AppleShare.

Apple is also considering the possibility of including a fix, to the AppleShare Workstation, in a system update release.

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Tech Info Library Article Number:19997



Tech Info Library

Legato Systems, Inc. (6/96)

Revised: 6/11/96
Security: Everyone

Legato Systems, Inc. (6/96)

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Legato Systems, Inc.

3145 Porter Drive
Palo Alto, CA 94304

415-812-6000 (PHONE)

415-812-6032 (FAX)

Fax-on-demand: 415-812-6156

e-mail: www@legato.com

URL: <http://www.legato.com/>

Company Profile:

Legato Systems, Inc. is a provider of network-wide data storage management software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19998



Tech Info Library

Macintosh 5xxx/6xxx Tester: Read Me (12/96)

Revised: 12/5/96
Security: Everyone

Macintosh 5xxx/6xxx Tester: Read Me (12/96)

Article Created: 11 June 1996
Article Reviewed/Updated: 5 December 1996

TOPIC -----

This article contains the ReadMe file for the 5xxx/6xxx Tester application, which should be used with all Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers to test for known component issues that may cause system freezing.

Note: The models that may be affected by these systems are Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.)

DISCUSSION -----

5XXX/6XXX Tester
=====

The 5XXX/6XXX tester is designed to perform a diagnostic test on the logic board. It is designed to test for known component issues which may cause system freezing. It should only be run on Power Macintosh/Performa 5XXX/6XXX series computers, as the information it provides is only of benefit for those machines. Please note that this application is not designed for use with the Power Macintosh/Performa 5400, 6360 and 6400 computers.

If you are experiencing problems with your computer other than system freezing, please contact Apple computer or an authorized Apple service provider. Other helpful information can be found in the "Troubleshooting" section of your User's Guide or on Apple's internet web site. Apple's web site is located at <<http://www.info.apple.com>>.

If this application is run on a Power Macintosh/Performa 5XXX/6XXX series computer and it finds a problem, it will present one of the following messages:

The logic board has been checked and a potential issue has been found. Please contact Apple customer support or an Apple Authorized Service Provider to have the logic board replaced as part of the repair extension program.

A potential issue with the Cache has been found. Please contact Apple customer support or an Apple Authorized Service Provider to have the Cache replaced as part of the repair extension program.

If no problems have been found, this application will present the following message:

The logic board has been checked and none of the specific, known hardware issues that are covered under this program were found. If you are experiencing problems, we recommend that you verify that any software applications you are using are compatible with your computer. You can do this by contacting the developer of the software. You should also follow the procedures described in the troubleshooting section of the User's Guide to reduce any freezing issues you are experiencing.

Article Change History:

05 Dec 1996 - Replaced discussion with current readme version.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:19999



Tech Info Library

Power Macintosh 5400/120: Disk Icon at Startup (7/96)

Revised: 7/13/96
Security: Everyone

Power Macintosh 5400/120: Disk Icon at Startup (7/96)

Article Created: 12 June 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

Whenever I start up my Power Macintosh 5400/120 computer, a disk icon appears on the screen before the "happy Macintosh". Sometimes when this happens, a flashing question mark also appears in the disk icon. This has happened since the first time I started up the computer. What is causing this?

DISCUSSION -----

The Power Macintosh 5400/120 computer does not have a startup volume selected in the Startup Disk control panel. So, the computer checks the floppy drive, then the SCSI bus, and finally the IDE ATA bus for the startup volume. This checking can cause a slight delay in the start up process. This phenomenon is normal on the Power Macintosh 5400/120, but you can follow these steps to resolve it:

Step 1

Open the Startup Disk control panel.

Step 2

Select the internal hard disk as the Startup Disk.

Step 3

Close the control panel and restart the computer.

The computer should now start up normally. However, resetting the Parameter RAM (PRAM) on the computer deselects the Startup Disk again, causing the issue to reappear. So, after resetting PRAM, you need to repeat these steps.

This article was published in the Information Alley on 13 July 1996.

Article Change History:

17 Jun 1996 - Added additional information

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20000



Tech Info Library

PowerBook 5300 & 190: Sound Specs Questions & Answers (6/96)

Revised: 6/28/96
Security: Everyone

PowerBook 5300 & 190: Sound Specs Questions & Answers (6/96)

Article Created: 12 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

- 1) What are the total harmonic distortions from input to output?
- 2) What is the frequency response of the sound?
- 3) I need some information about all the other sound specifications for the Macintosh PowerBook 190 and 5300 series computers.

DISCUSSION -----

NOTE: Complete information on these topics is available in the PowerBook 190 and 5300 developer notes.

- 1) Question: What are the total harmonic distortions from input to output?

Answer: Total harmonic distortion and noise is less than 0.05 percent with a 1-V rms sine wave input. The signal-to-noise ratio (SNR) is 85 dB, with no audible discrete tones.

- 2) Question: What is the frequency response of the sound?

Answer: 20hz to approximately half the selected sampling rate which would be 22Khz, 11Khz, or 5.5Khz.

- 3) Question: I need some information about all the other sound specifications for the Macintosh PowerBook 190 and 5300 series computers.

Answer:

Output Impedance

The Output Impedance, nominal is 32 ohms.

Frequency Response Of The Speakers

The frequency response of the speakers will be 20 Hz to 20,000 Hz.

Line Level Input

Line Level is a standard in the audio field and now in the computer industry. Line level is defined as 1 volt peak to peak. Line Level provides an industry standard so that all audio and other electronic equipment can operate properly together. Most VCRs, including both home and professional audio equipment use Line Level as a standard.

Audio Input

The audio input of the 190 and 5300 series PowerBook is specified to operate at 5.6V Peak to Peak.

Line In Impedance

Line In Impedance: 6.8K ohms

Max Input

Max Input before clipping, Singer (sound chip) gain = 0 dB is 2 Vrms, nominal 5.6 Vpp

Max Output

Max Output into 10 k ohm load 1.4 Vrms, nominal 2 V Peak to Peak. The output level will of course drop with a low impedance load like headphones; the 2 Vpp, 32 ohm Thevenin equivalent is well suited to drive headphones.

16-bit stereo

CD-quality, 16-bit stereo sound capable of driving headphones or other stereo equipment.

Analog/Digital Conversion

Digital-to-analog and analog-to-digital conversion sampled at 11.035, 22.050, or 44.100 kHz.

This article was published in the Information Alley on 12 June 1996.

Article Change History:

28 Jun 1996 - Added info about PowerBook 190 and corrected technical info.

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Tech Info Library Article Number:20002



Tech Info Library

Apple Media Tool: Not Enough Internal Memory Error (6/96)

Revised: 6/18/96
Security: Everyone

Apple Media Tool: Not Enough Internal Memory Error (6/96)

=====

Article Created: 17 June 1996

TOPIC -----

I created a runtime multimedia project using Apple Media Tool 2.0. When I try launching this project on my Power Macintosh 8100 an error message appears that reads: Not Enough Internal Memory (2). When I launch this project on my Power Macintosh 8500, I get further into the presentation before this same error message appears.

I have allocated 30 MB of additional memory to Apple Media Tool, but that has not helped either. According to the About This Macintosh screen, Apple Media Tool is only using approximately 4 MB of the 30 MB.

DISCUSSION -----

There is an undocumented feature in Apple Media Tool 2.0 to increase the project Heap and Stack, which allows you to build larger and more complex projects.

To increase the project Heap and Stack, hold down the Control key on the keyboard while launching Apple Media Tool and Runtime Maker. You should increase the size of the heap from 4K to 10K to build and compile larger and more complex projects.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20004



Tech Info Library

System 7.5 Update 2.0: System 7.5.3 Differences (6/96)

Revised: 6/13/96
Security: Everyone

System 7.5 Update 2.0: System 7.5.3 Differences (6/96)

Article Created: 13 June 1996

TOPIC -----

I am using System 7.5.3 that came pre-installed on my Power Macintosh 8500/132. What are the differences between the System 7.5.3 included on my computer versus System 7.5.3 on a different computer, such as a Macintosh that had System 7.5 Update 2.0 installed? Do I need to install System 7.5 Update 2.0 on my Power Macintosh 8500/132?

DISCUSSION -----

There are a few differences between System 7.5.3 as it appears on Enhanced PCI-based Power Macintosh computers (Power Macintosh 7200/120, 7600/120, 8500/132, 8500/150, and 9500/150) versus existing Macintosh computers upgraded to System 7.5.3. The files that are different are listed below:

Begin_Table

Name	Version in A	Version in B
Apple Menu Options	1.1.1	1.1.2
Apple Video Player	1.3.2	1.4
Mouse control panel	7.5.2	7.5.3
Monitor Resolution control strip	1.0	1.0.1
Apple Modem Tool	1.5	1.5.5
Open Transport Guide Additions	1.3	1.3.1
Video Startup extension	1.3.2	1.4

A - System 7.5.3 on Enhanced PCI Power Macintosh computers
B - System 7.5 Update 2.0

End_Table

System 7.5 Update 2.0 is focused on fixing issues with computers that came out prior to the Enhanced PCI-based Power Macintosh computers. Bug fixes included in System 7.5 Update 2.0 that may be of benefit to enhanced PCI-based Power Macintosh users are listed below:

- System 7.5 Update 2.0 fixes a memory leak in Standard File, which causes 512 bytes of memory to be orphaned in the application heap, each time a file is opened.
- System 7.5 Update 2.0 fixes an obscure bug in the Power Manager which causes a system freeze under the following scenario:
 - AppleTalk is off
 - Open the AppleTalk or TCP/IP control panels, which turns on AppleTalk

This bug is easily avoidable by turning on AppleTalk from the Chooser before opening the AppleTalk or TCP/IP control panels.

- System 7.5 Update 2.0 fixes an obscure bug where the system may freeze during startup. It only occurs if there is insufficient memory available during startup. Possible scenarios are: majority of memory is used by a RAM Disk, majority of memory is used by the Disk Cache, and/or many memory intensive third party extensions are installed.
- System 7.5 Update 2.0 fixes a bug in the Display Manager. This bug appears when a system with menus that are too large to appear on the screen. For example, using a 640 x 480 screen on a Macintosh with many items in the Apple Menu Items folder could cause this bug to appear.
- System 7.5 Update 2.0 fixes a bug in how the Display Manager saves the Preferences file. When this bug occurs, the Macintosh desktop may not appear at startup.
- System 7.5 Update 2.0 fixes a bug in the Notification Manager. Without this fix, the wrong flashing icon could appear in the Application menu. In addition, this fixes issues with the clock and battery level indicators not being redrawn correctly when an alert sound is played.
- System 7.5 Update 2.0 makes the default recording mode on all PCI-based Power Macintosh computers to be the same as other Macintosh computers.
- System 7.5 Update 2.0 includes Apple Video Player 1.4, which fixes a system freezing issue on computers with MPEG cards.
- System 7.5 Update 2.0 includes Apple Menu Options 1.1.2, which has shown to improve compatibility with some third party software.

We believe that it is unlikely that Enhanced PCI-based Power Macintosh users will be impacted by these bugs. However, it is possible to avoid these issues by installing System 7.5 Update 2.0 on an enhanced PCI-based Power Macintosh.

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Tech Info Library

ImageWriter LQ shifting page with QuickDraw GX 1.1.3 (6/96)

Revised: 6/18/96
Security: Everyone

ImageWriter LQ shifting page with QuickDraw GX 1.1.3 (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I am using an ImageWriter LQ with System 7.5.3 and QuicDraw GX 1.1.3. When printing using the QuickDraw GX driver, the page shifts down one inch and then starts to print. With QuickDraw GX disabled and using the ImageWriter LQ driver (version 7.0.1), the page backs up one inch before printing so the print job starts in the right place.

DISCUSSION -----

Apple has reproduced this issue and is looking into it. It appears that the ImageWriter LQ GX driver starts printing about 3/4" from the top of the page. This occurs no matter which options (paper size, manual feed, and so on) are selected.

Until a fix for this issue is available, there are two possible workarounds if you wish to continue to use QuickDraw GX:

- If your application is QuickDraw GX aware, you can use the GX Paper Type Editor (which is part of the custom install of QuickDraw GX Utilities) to lessen the added space at the top of the page by 1/4". Follow these steps to create a custom paper type:

Step 1

Create a custom paper type, modeling it after US Letter and giving it a top margin of 0" instead of the default 1/4".

Step 2

Save this paper type in the Extensions folder

Step 3

Use the Page Setup dialog box to select the custom paper type for the page being printed.

- If your application is not QuickDraw GX-aware, use QuickDraw GX Helper, which lets you disable QuickDraw GX desktop printers. So, you can use the non-GX ImageWriter LQ driver even with QuickDraw GX enabled. This method will provide the original margins.

QuickDraw GX Helper is not installed as part of the Easy install option of QuickDraw GX. You must use the Custom install option and specifically choose QuickDraw GX Utilities.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20007



Tech Info Library

AppleShare 4.2.1: Product Description (7/96)

Revised: 7/1/96
Security: Everyone

AppleShare 4.2.1: Product Description (7/96)

Article Created: 13 June 1996
Article Reviewed/Updated: 1 July 1996

TOPIC -----

This article describes AppleShare 4.2.1.

DISCUSSION -----

AppleShare is high-performance, easy-to-use file and print sharing software that allows networked Macintosh and Microsoft Windows (including Windows 95) software-based computers to share files, applications, and printers.

With AppleShare file server software, organizations can store all of their shared files and applications in a single, central location, providing convenient, easy access to every user on the local area network. By allowing networked users to centralize all key files and applications for easy sharing, AppleShare improves everyone's productivity. It eliminates time spent looking for files, worrying about misplaced documents, and determining the file or application version.

AppleShare print server software offers all users queued access to up to five networked printers. This time saving function allows users to be more productive because they can use their computers to tackle other tasks instead of waiting for documents to print.

With Apple Remote Access MultiPort Server software -- now included with AppleShare -- Macintosh users can access AppleShare servers over a dial-up link, so even mobile users can take advantage of AppleShare file, print, and application services. The AppleShare network architecture coexists with other application programs and networking services such as Novell NetWare, Windows for Workgroups, and even the Internet.

Yet for all of its power and capabilities, AppleShare is extremely easy to set up, use, and maintain. It continues in the "plug and play" tradition established by the Macintosh more than a decade ago; most system administrators find that

they can get an AppleShare server up and running within 15 minutes. And overall maintenance—including the addition and deletion of users—is so simple that a dedicated, full-time administrator is not required. In fact, because AppleShare is so easy to install, maintain, reconfigure, and expand, it offers the lowest long-term cost of ownership of any product in its class.*

Whether your organization is a small or medium-size business, a classroom, or a department within a global enterprise, AppleShare improves collaboration and increases efficiency for all users.

*Based on a report by Business Research Group, Newton, MA

Features

Powerful file and print services

- Lets users store their files and applications in a single, central location
- Makes it easy and efficient to print documents to networked printers
- Provides comprehensive, easy-to-implement security
- Includes Apple Remote Access MultiPort Server software for remote connections to AppleShare servers and services (AppleShare 4.2.1 only)

Ease of use

- Installs with a single click of the mouse
- Can be up and running in minutes
- Makes day-to-day management quick and easy
- Users can take advantage of file and print services from either Macintosh computers or Windows software-based PCs

Compatibility

- Includes full support for both Macintosh and Windows clients
- Server works with all Mac OS-compatible applications

Performance and scalability

- Supports up to 250 users
- Performs up to 10 times faster than built in Mac OS file sharing
- Can be configured for use in an AppleTalk network of any size
- Is scalable from LocalTalk to Ethernet networks, and beyond
- Offers highest performance when running on PowerPC-based Workgroup Servers

Ordering and Licensing Information

AppleShare 3.0.1

Order No. M0090LL/B

AppleShare 4.0.2

Order No. M3995Z/A

AppleShare 4.2.1

Included with certain Workgroup Servers and available as an upgrade for AppleShare 4.x customers. Includes Apple Remote Access MultiPort Server software version 2.1. and the AppleShare Client for Windows 1.0.2.

AppleShare Client for Windows 1.0.2

Order No. M3481Z/B

Included in all Workgroup Server configurations; client network license allows the installation of the client software on any Windows software based PC on the network; includes Windows 95 support (with third-party software).

For more information, please see Tech Info Library article, "AppleShare Client for Windows 1.0.2 and Windows 95."

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

01 Jul 1996 - Clarified Windows 95 support.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20009



Tech Info Library

AppleShare 4.2.1: Product Details (8/96)

Revised: 8/22/96
Security: Everyone

AppleShare 4.2.1: Product Details (8/96)

=====

Article Created: 13 Jun 1996
Article Reviewed/Updated: 22 August 1996

TOPIC -----

This article provides the product details and order information for AppleShare 4.2.1.

DISCUSSION -----

Product Details

Capabilities and services

- Includes file and print servers
- Supports Mac OS program linking and publish and subscribe
- Features an open environment that allows additional network services
- Macintosh client software built into every Macintosh; Windows client software sold separately
- Includes Apple Remote Access MultiPort Server software for remote dial-up connections (AppleShare 4.2.1 only)

Sharing options

- On-line CD-ROM exchange
- Sharing of folders or entire disks
- Easy server selection through the Chooser
- Intuitive, consistent access to shared resources
- User-controlled access to information

Print spooling

- Provides spooling for up to five networked printers
- Offers centralized queue management
- Accepts simultaneous print requests
- Frees client workstations for use immediately
- Includes print log for up to 1,000 print jobs

Administrator control

- Administrator can set number of connected users
- Server messages can be broadcast or sent to selected users
- Administrator can set cache sizes to maximize performance

Security

- Minimum password length
- Password aging
- Password history to prevent immediate reuse
- Ability to disallow saved passwords
- Account disabled after specified number of password failures
- Adjustable time limit for temporary accounts
- Guest access allowed; turned off by default
- Copy-protection setting for documents
- "Lock" setting for folders
- Adjustable number of concurrent application launches
- Inherited folder privileges
- Administrator log-off of any user

Network requirements

- An AppleTalk network connection (via LocalTalk, Ethernet, Token Ring, or dial-up connection via Apple Remote Access software)

AppleShare Product Family

AppleShare software comes in three versions that are designed to accommodate a variety of workgroup sizes and performance needs.

AppleShare 3.0.1 is designed for smaller work-groups of Macintosh and Windows software-based computers that have outgrown the basic file-sharing capabilities of the Mac OS. It runs on 68030-based, or earlier, Macintosh computers.

AppleShare 4.0.2 offers significant performance improvements over AppleShare 3.0.1, and runs on 68040-based Macintosh computers. Like AppleShare 3.0.1, it's appropriate for smaller, cross-platform workgroups that want to move beyond simple Mac OS file sharing, and is extremely easy to set up and administer.

AppleShare 4.2.1 is the highest-performance AppleShare version available. Optimized for Apple PowerPC processor-based Workgroup Servers, it offers higher performance and supports more users than previous versions, yet retains the ease of use shared by the other product offerings in the AppleShare family.

Begin_Table

Specifications	3.0.1	4.0.2	4.2.1	Pro 1.1
-----	-----	-----	-----	-----
Concurrent logons	120	150	250	200
Open files	346	346	3,000	5,000
Users	8,192	8,192	8,192	8,192
Groups	8,192	8,192	8,192	8,192
Users in group	8,191	8,191	8,191	8,191
Groups per user	42	42	42	42
Locked ranges/user	20	20	20	20
Apple II logon	yes	yes	yes	no

Apple II network startups	40	n/a	n/a	n/a
Minimum RAM	4MB	8MB	16MB	16MB
System software	7.0	7.1	7.5.1	A/UX 3.1

End_Table

Supported platforms

AppleShare Server

- AppleShare 3.0.1: 68030-based (or earlier) Macintosh computers
- AppleShare 4.0.2: 68040-based Macintosh computers*
- AppleShare 4.2.1: PowerPC processor-based Workgroup Servers only (NuBus and PCI)

AppleShare Client

- Macintosh
 - An Apple Macintosh computer with an internal hard disk drive and at least 4MB of RAM
 - Mac OS software version 6.0.7 or later
 - System 7.5.1 or later required for optimal performance of AppleShare 4.2
- Windows
 - Any IBM or 100 percent compatible computer running Intel processor 386 or greater; ISA, MicroChannel, VISA, EISA, PCI, and internal buses; 4MB of RAM
 - Windows 3.1, 3.11; Windows 95; and Windows for Workgroups 3.11 software
 - MS-DOS 5.0 or later
 - Ethernet network adapter card
 - NDIS 3.0 or ODI network interface driver

*AppleShare 4.0.2 is not designed to run on the Macintosh Quadra 660AV and Macintosh Quadra 840AV computers.

Ordering and Licensing Information

AppleShare 3.0.1

Order No. M0090LL/B

AppleShare 4.0.2

Order No. M3995Z/A

AppleShare 4.2.1

Order No. M4353Z/B

Included with certain Workgroup Servers and available as an upgrade for AppleShare 4.x customers. Includes Apple Remote Access MultiPort Server software version 2.1. and the AppleShare Client for Windows 1.0.2.

AppleShare Client for Windows 1.0.2

Order No. M3481Z/B

Included in all Workgroup Server configurations; client network license allows the installation of the client software on any Windows software based PC on the

network; includes Windows 95 support (with third-party software)

For more information, please see Tech Info Library article, "AppleShare Client for Windows 1.0.2 and Windows 95."

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

22 Aug 1996 - Added part number.

01 Jul 1996 - Clarified Windows 95 support.

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Tech Info Library Article Number:20010



Tech Info Library

LaserWriter 12/640 PS: Text on Envelopes Smears (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: Text on Envelopes Smears (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I am printing envelopes using a LaserWriter 12/640 PS printer and some of the text on the envelopes is getting smeared. How can I prevent this?

DISCUSSION -----

There will be some level of smearing when you print envelopes. Smearing occurs where the envelope is thickest, most commonly appears near the edge of the envelope. In order to minimize the amount of smearing, you should avoid printing close to the edge of the envelopes.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20011



Tech Info Library

LaserWriter 12/640 PS: Complex Jobs Require More RAM (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: Complex Jobs Require More RAM (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I am trying to print a document which contains multiple pages on a LaserWriter 12/640 PS printer. However, I continue to get a single sheet of paper with text that reads:

```
%%[Error: ioerror; OffendingCommand: image; ErrorInfo: DCTDecodeFilter Cannot  
allocate 58608 bytes ]%%  
%%[Flushing: rest of job (to end-of-file) will be ignored]%%
```

Why can I not print this document?

DISCUSSION -----

The document you are trying to print is too complex for the amount of RAM you have installed in the printer. When either complex images or documents containing a large number of multiple fonts on a single page are sent to a 4MB LaserWriter 12/640 PS printer, you will see this error.

The only way to prevent this in the future is to either simplify your documents or add additional memory.

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Tech Info Library Article Number:20012



Tech Info Library

LaserWriter 12/640 PS: Duplex Unit Constantly Jams (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: Duplex Unit Constantly Jams (6/96)

Article Created: 13 June 1996

TOPIC -----

I have a LaserWriter 12/640 PS printer with the optional duplex unit attached. I am having a problem with paper constantly getting jammed in the duplex unit. How can I correct this?

DISCUSSION -----

Make sure that the duplexer paper guide and connector clips are installed correctly. The instructions for installing the duplex printing unit are on pages 133-141 of the LaserWriter 12/640 PS User's Guide. These instructions are also listed below for your convenience.

Installing the Duplex Printing Unit

With the optional duplex printing unit, you can print on both sides of the paper (often called duplex printing or two-sided printing). You can only duplex print from the paper cassettes. You cannot duplex print from the multipurpose tray.

Note:

The duplex printing unit requires a minimum of 12 MB memory in the printer. For instructions on adding printer RAM, see pages 152-158 in your LaserWriter 12/640 PS User's Guide.

Begin_Table

+=====+	
If you want to	You need this much
	printer memory
+=====+	
Turn on PhotoGrade or use the	12 MB
duplex printing option	
+-----+	

Turn on PhotoGrade and duplex print	20 MB	
on all size paper (except legal)		
+-----+		
Turn on PhotoGrade and duplex print	24 MB	
on all size paper (including legal)		
+=====+		

End_Table

Follow these instructions for installing the LaserWriter 12/640 PS duplex printing unit.

Before you install the duplex printing unit:

- * The printer must be turned off and the power cord unplugged.
- * The printer must be disconnected from your computer or network.

The duplex printing unit adds approximately 2 inches to the height and 4 inches to the depth of the LaserWriter 12/640 PS. Begin by selecting a location for the LaserWriter 12/640 PS that provides enough room to accommodate the increased height and depth of the printer.

If you intend to keep the printer in its current location, make sure that adequate room will be available for opening the top cover and the duplex printing unit door, and maintaining the printer. You will also need to temporarily move the LaserWriter 12/640 PS from its current location to place the duplex printing unit in its place. When moving the printer, be sure to place it on a strong, flat, and, stable surface that can support its weight.

IMPORTANT:

You must remove the optional 500-sheet cassette and feeder from the LaserWriter 12/640 PS if it is already attached. The duplex printing unit must be installed between the LaserWriter 12/640 PS and the 500-sheet cassette and feeder. For instructions on removing the 500-sheet cassette and feeder, see "Removing the 500-sheet Cassette and Feeder" later in this chapter.

Step 1

Turn off and unplug the printer, and disconnect the network cables.

Step 2

Unpack the duplex printing unit and remove any packing materials. Set aside the small package of items.

Step 3

Lift up the back end of the duplex printing unit and slide the metal brace onto the post.

The brace is located on the left side of the duplex printing unit near the back.

Step 4

Unpack the duplex printing unit key.

Step 5

Remove the three covers located in the back of the printer. Remove the two top covers by inserting the key into the side of the covers and pushing gently on the key (the covers will snap off). Remove the bottom cover by inserting the key into the bottom side of the cover and pushing downward (you may need to use some force to remove this cover.)

IMPORTANT:

Be careful when removing the covers so that they do not fall inside the LaserWriter 12/640 PS.

Step 6

Place the bottom cover and the duplex printing unit key in a safe place in case you need them in the future.

If you decide to remove the duplex printing unit, use the cover to prevent dust and other material from getting inside the printer.

Step 7

Place the duplex printing unit where you want the LaserWriter 12/640 PS to be located.

Orient the duplex printing unit so that its tray and the printer's multipurpose tray and paper cassette will be on the same side when the printer is attached.

Step 8

Insert the paper guide for the duplex printing unit into the opening in back of the printer.

Hint:

There are two tabs on the bottom of the paper guide that fit into slots in the back of the printer. When inserting the paper guide, slide it back and forth to easily locate these slots.

The paper guide helps direct the paper to the duplex printing unit.

Step 9

Insert the locking connectors into the slots located on the bottom of the paper guide and push the connectors until they snap into place.

The locking connectors secure the paper guide to the printer.

Step 10

Lift the LaserWriter 12/640 PS, position it directly over the duplex printing unit and gently lower the printer until it sits evenly on the duplex printing unit.

As you lower the printer, align the corners of the printer directly over those of the duplex printing unit.

Step 11

Remove the cassette from the printer and the tray from the duplex printing unit.

Step 12

Insert the four locking connectors into the slots located on the front and back of the printer and duplex printing unit.

The locking connectors secure the printer to the duplex printing unit.

Step 13

Insert the cassette into the printer and the tray into the duplex printing unit.

Step 14

Gently close the duplex printing unit door until it latches into place against the printer. If the door does not close easily, check to make sure the brace is not locked in place.

Step 15

Reconnect the power cable to the printer and reconnect the printer to the network, then turn on the printer.

Step 16

Configure your printer to use the duplex printing unit.

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Tech Info Library Article Number:20013



Tech Info Library

LaserWriter 12/640 PS: Duplex Option Is Not Available (6/96)

Revised: 6/24/96
Security: Everyone

LaserWriter 12/640 PS: Duplex Option Is Not Available (6/96)

Article Created: 13 June 1996
Article Reviewed/Updated: 24 June 1996

TOPIC -----

I installed the optional duplexer on my LaserWriter 12/640 PS printer, but the duplex option is dimmed. How do I use the duplex option?

DISCUSSION -----

In order to use the optional duplex accessory, you must have a minimum of 12MB of RAM in your LaserWriter 12/640 PS printer. The table below shows the options available depending on the amount of RAM you have installed. The LaserWriter 12/640 PS printer uses industry standard 72-pin SIMMs (70ns or faster). The Tech Info Library article titled "LaserWriter 12/640 PS: Memory Configurations" contains a complete list of possible memory configurations.

Begin_Table

RAM Installed	Options Available
4MB (Standard)	None. You cannot access either PhotoGrade or duplex printing.
12MB	You can enable either PhotoGrade OR duplex printing.
20MB	You can enable both PhotoGrade and duplex printing. Duplex printing is available up to to US letter.
24MB and greater	You can enable both PhotoGrade and duplex printing. Duplex printing is available for all paper sizes including US legal.

End_Table

NOTE:

Additional memory also enables you to download additional fonts and provides greater document caching.

Article Change History:

24 Jun 1996 - Corrected typographical error.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20014



Tech Info Library

LaserWriter 12/640 PS: Image Interference w/ FinePrint ON (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: Image Interference w/ FinePrint ON (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I have a LaserWriter 12/640 PS printer which sometimes prints strange lines on my Images. I do not notice this problem in the text areas, only on the images. Why?

DISCUSSION -----

Sometimes you will get these unwanted interference lines when you have FinePrint ON and you are printing images. FinePrint is designed for text, not images. By default FinePrint is OFF. To get rid of these interference lines, make sure FinePrint is turned OFF.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20015



Tech Info Library

LaserWriter 12/640 PS: Memory Configurations (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: Memory Configurations (6/96)

Article Created: 13 June 1996

TOPIC -----

This article contains the possible memory configurations of the LaserWriter 12/640 PS printer.

DISCUSSION -----

The LaserWriter 12/640 PS printer ships with 4MB of RAM. Installing additional memory provides additional features.

Begin_Table

+=====+	
RAM Installed	Options Available
+=====+	
4MB (Standard)	None. You cannot access either PhotoGrade or duplex printing.
+-----+	
12MB	You can enable either PhotoGrade OR duplex printing.
+-----+	
20MB	You can enable both PhotoGrade and duplex printing. Duplex printing is available up to to US letter.
+-----+	
24MB and greater	You can enable both PhotoGrade and duplex printing. Duplex printing is available for all paper sizes including US legal.
+-----+	

End_Table

Note:
Additional memory also enables you to download additional fonts and provides

greater document caching.

RAM Upgrade Specifications
=====

To increase the printer's RAM, purchase SIMMs with the following specifications:

SIMM Dimensions

Length: 107.95 mm +/- 0.20 mm (4.25 in. +/- .008)
Height: 25.53 mm (1.005 in.) maximum

SIMM Sizes and Speeds

Begin_Table

+=====+			
SIMM Size	Configuration	Speed	Connector type
+=====+			
4 MB SIMM	1 M X 32 bit	70 ns or less	72-pin
	(one 4 MB bank)		
+-----+			
8 MB SIMM	2 M X 32 bit	70 ns or less	72-pin
	(two 4 MB banks)		
+-----+			
16 MB SIMM*	4 M X 32 bit	70 ns or less	72-pin
	(one 16 MB bank)		
+-----+			
32 MB SIMM*	8 M X 32 bit	70 ns or less	72-pin
	(two 16 MB banks)		
+=====+			

End_Table

Note:

* Must have a 2 KB row (11 bit x 11 bit) refresh configuration. 16 MB SIMMs with a 4 KB row (10 bit X 12 bit) refresh configuration are not compatible with the printer.

Installing RAM
=====

Your printer comes with 4 MB of RAM installed in Bank A/B. The table below lists RAM configurations you can use.

Begin_Table

+=====+			
Amount of Memory	Bank C/D	Bank A/B	
(megabytes)	(left slot)	(right slot)	
+=====+			

4 MB	0 MB	4 MB	
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20 MB	4 MB	16 MB	
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24 MB	8 MB	16 MB	
+-----+	+-----+	+-----+	+
32 MB	16 MB	16 MB	
	+-----+	+-----+	+
	0 MB	32 MB	
+-----+	+-----+	+-----+	+
36 MB	4 MB	32 MB	
+-----+	+-----+	+-----+	+
40 MB	8 MB	32 MB	
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48 MB	16 MB	32 MB	
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	32 MB	16 MB	
+-----+	+-----+	+-----+	+
64 MB	32 MB	32 MB	
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End_Table

Pages 152-158 in the LaserWriter 12/640 User's Guide provides detailed instructions on installing additional memory in your LaserWriter printer.

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Tech Info Library Article Number:20017



Tech Info Library

LaserWriter 8.4: PostScript Fax Isn't Supported (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 8.4: PostScript Fax Isn't Supported (6/96)

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Article Created: 13 June 1996

TOPIC -----

I have a LaserWriter Select 360 with the fax option. I am currently using the LaserWriter 8.2.3f printer driver. I noticed there is now a LaserWriter 8.4 printer driver. Can I use this software?

DISCUSSION -----

PostScript fax support is not supported with the LaserWriter 8.4 printer driver. In order to retain full support of the fax functions, you must continue to use the LaserWriter 8.2.3f printer driver. If you use the latest 8.3.x printer driver (8.3.4), you have limited functionality when faxing documents. In order to maintain the highest level of functionality, Apple recommends using the LaserWriter 8.2.3f printer software with all LaserWriter fax devices.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20018



Tech Info Library

LaserWriter 8.4: PostScript VM Errors (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 8.4: PostScript VM Errors (6/96)

Article Created: 13 June 1996

TOPIC -----

I am using the LaserWriter 12/640 PS printer, and printing a complex document. However, when I try to print the document I keep getting a single page with some printing that says something about a PostScript VM Error.

I tried printing the document on a different LaserWriter and it printed properly. Why?

DISCUSSION -----

When printing very complex documents with multiple fonts and graphics you may see this. This is related to the LaserWriter 8.4 printer driver, which ships with the LaserWriter 12/640 PS printer.

There are a few things you can do that will help when using the LaserWriter 8.4 printer driver.

- Reduce the number of fonts used in the document.
- Turn ON Unlimited Downloadable Fonts in a Document
- Use a previous version of the LaserWriter driver (8.3.4 is the latest version of the 8.3.x driver).

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20019



Tech Info Library

LaserWriter 8.4: Obtaining Third-Party PPD Files (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 8.4: Obtaining Third-Party PPD Files (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

This article discusses issues that may arise using the LaserWriter 8.4 printer software with non-Apple printers.

DISCUSSION -----

If you use the LaserWriter 8.4 printer software with third-party printers (non-Apple printers), many of the enhancement options offered by these printers, such as resolution enhancement smoothing, do not work. In some cases you may not even be able to print with the existing vendor supplied PPD file.

In order to print to a non-Apple printer using the LaserWriter 8.4 driver, you should contact the vendor of the printer to obtain a LaserWriter 8.4 compatible PPD file.

You can also use the Generic PPD file, however you will not have all of the printer options available to you.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20021



Tech Info Library

LaserWriter 8.4: Trouble Printing Documents in Foreground (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 8.4: Trouble Printing Documents in Foreground (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I am using the LaserWriter 8.4 printer software, and when I print from several of my applications, the printing fails. Why?

DISCUSSION -----

The LaserWriter 8.4 printer driver offers both foreground and background printing. When you use foreground printing, the driver does not create a spool file on your hard disk, while this increases the printing time, this also causes printing problems with some applications. Applications known to have problems using foreground printing, there may be other applications as well, include Adobe Persuasion, Adobe Photoshop, Microsoft PowerPoint 4.0, Microsoft Excel 5.0, Intuit Quicken 6.0, Claris Draw, and Claris Impact.

To print properly from these applications, turn ON background printing in the print dialog.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20022



Tech Info Library

LaserWriter 12/640 PS: White Streaks on Printout (6/96)

Revised: 6/17/96
Security: Everyone

LaserWriter 12/640 PS: White Streaks on Printout (6/96)

=====

Article Created: 13 June 1996

TOPIC -----

I am getting white streaks on my printouts from my LaserWriter 12/640 PS printer. How can I correct this?

DISCUSSION -----

You need to clean the mirror inside the LaserWriter 12/640 PS printer.

Cleaning the LaserWriter 12/640 PS Mirror
=====

Step 1

Open the printer cover.

Step 2

Remove the toner cartridge.

Step 3

Slide the yellow plastic square back and forth.

This removes any toner residue.

Step 4

Replace the toner cartridge.

Step 5

Close the printer cover.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20023



Tech Info Library

Apple System Profiler 1.0.1: Read Me (6/96)

Revised: 6/14/96
Security: Everyone

Apple System Profiler 1.0.1: Read Me (6/96)

=====

Article Created: 14 Jun 1996

TOPIC -----

This article is the Apple System Profiler 1.0.1 ReadMe file.

DISCUSSION -----

About the Apple System Profiler

Apple System Profiler lets you gather information about the configuration of your computer. The information the Apple System Profiler reports is helpful if you place a call to the Apple User Assistance Center.

If you have one of the computers listed below, we recommend that you install Apple System Profiler on your machine now. Note that you MUST be running Mac OS version 7.5.2 or 7.5.3 to successfully install Apple System Profiler.

- Power Macintosh 9500, 8500, 8100, 7600, 7500, 7200, 7100, 6100, 5400, 5300 and 5200 series.
- PowerBook 5300, 2300 and 190 series.
- Macintosh Performa 6300, 6200, 6100, 5300 and 5200 series.

Apple System Profiler will only install on the computers listed above. Do NOT attempt to install it on any other computers.

To install, follow these steps:

- 1) Locate the Apple System Profiler Installer. It is in the same folder as this document.
- 2) Copy the Installer onto your startup disk. (To copy, drag the Installer icon to your hard disk.)
- 3) Double-click the Apple System Profiler Installer application.

You'll see a confirmation message when installation is complete. The Apple System Profiler is placed in the Apple menu. To use it, open the Apple menu and choose Apple System Profiler.

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Tech Info Library Article Number:20024



Tech Info Library

Apple Memory Guide: What is it? (6/96)

Revised: 6/14/96
Security: Everyone

Apple Memory Guide: What is it? (6/96)

=====

Article Created: 14 June 1996

TOPIC -----

What is the Apple Memory Guide?

DISCUSSION -----

The Apple Memory Guide (AMG) is the next generation memory configuration tool from Apple Computer, Inc. It combines the contents of the SIMM Stack, and the Memory Stack from the Service Source CD into one Adobe Acrobat document. You need Acrobat Reader version 2.0.1 or later to use AMG.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20025



Tech Info Library

Drive Setup 1.0.5: ReadMe (1/97)

Revised: 1/20/97
Security: Everyone

Drive Setup 1.0.5: ReadMe (1/97)

=====

Article Created: 14 June 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article contains the Read Me file for Drive Setup 1.0.5.

DISCUSSION -----

What's New in Drive Setup 1.0.5?

-
- * No changes to the SCSI driver.
 - * No changes to the IDE driver
 - * Updated Drive Setup application to assure that volume creation dates are different when creating multiple partitions on a hard drive. This change fixes a problem where, in rare cases, custom icons may appear incorrectly on a volume with multiple partitions with the same creation dates.

Drive Setup 1.0.5 requires System Software 7.5 or later and is only supported for use with the following systems:

- Power Macintosh systems (including PowerPC-based Performa systems)
- PowerPC-based PowerBook computers*
- Macintosh 580- and 630-series systems and PowerBook 190 series

Drive Setup does not currently support the Macintosh Processor Upgrade. If the upgrade is installed in a Macintosh 580- or 630-series system, use the "601 Processor Upgrade" control panel to turn the card off before using Drive Setup.

* The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

Article Change History:

..TIL20026-Drive_Setup_1-0-5-ReadMe_1-97_(TA35686).pdf

20 Jan 1997 - Added details about PPC PowerBook Computers.

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Tech Info Library Article Number:20026



Tech Info Library

Megaphone 1.0.3P: Read Me (6/96)

Revised: 6/14/96
Security: Everyone

Megaphone 1.0.3P: Read Me (6/96)

=====

Article Created: 14 June 1996

TOPIC -----

This article contains the ReadMe file for Megaphone 1.0.3P.

DISCUSSION -----

In order to use MegaPhone 1.0.3P, it is recommended that you also install Audio Volume Extension 1.1 and Telephone Manager 2.0. Look for these extensions in your Extensions folder inside the System Folder. If they are not installed, download the software from Apple SW Updates and install them before using MegaPhone.

MegaPhone 1.0.3P Info

This is the release of the 1.0.3 code base for Performas which has the same feature set as described for 1.0.2P. This version ships with the 5200, 5300, 6200, and 6300 desktop computers. All users of 1.0.2P can move forward to 1.0.3P.

Major problems addressed (in addition to those addressed for version 1.0.3):

1. For some users, on some calls, once the call was connected, MegaPhone would hang up. This is fixed.
2. For some users, the volume of the recorded messages was very low. The volume has been increased a little. (Some users are also able to fix this problem by adjusting the recording volume in the Telephone Setup control panel).
3. This version works with the Global Village TelePort Platinum V and the Global Village TelePort Gold IIv modems.
4. Users using pulse (rotary) dialing could not dial long distance numbers. This is fixed.

Installing MegaPhone 1.0.3P

This version of the installer will install all of the software components needed to run MegaPhone on your Macintosh Performa.

To install MegaPhone, double click on the file named "Install MegaPhone". Choose the hard disk you wish to install on, and then select the "Install" button. After you restart your machine, you can then launch MegaPhone. There will be a MegaPhone folder located inside your Applications folder.

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Tech Info Library Article Number:20027



Tech Info Library

QuickDraw 3D 1.0.6: Read Me (6/96)

Revised: 6/14/96
Security: Everyone

QuickDraw 3D 1.0.6: Read Me (6/96)

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Article Created: 14 June 1996

TOPIC -----

This article contains the ReadMe file for QuickDraw 3D 1.0.6.

DISCUSSION -----

Important Information About QuickDraw 3D

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QuickDraw 3D enables your Macintosh computer to display three-dimensional graphics using applications designed to take advantage of QuickDraw 3D. It also provides a common file format, called 3DMF (for "3D metafile"), for exchanging 3D documents, and acceleration services which support plug-and-play accelerator cards.

Installation

The following are required to install and run QuickDraw 3D:

- * a PowerPC based computer with a minimum of 16 megabytes of memory (RAM)
- * MacOS System 7.1.2 or later

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models, and textures that allow you to explore the 3D capabilities of your Macintosh:

* SimpleText version 1.3.1 and Scrapbook version 7.5.1. These applications allow you to open and interact with 3DMF models.

* A new Scrapbook File with sample 3DMF models.

* A number of 3DMF models provided by Model Masters and Viewpoint Datalabs International.

* Textures provided by Wraptures and Xaos Tools.

You can expect more applications using QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

QuickDraw 3D performance and image quality

For better performance, we recommend that Virtual Memory be turned off.

QuickDraw 3D has been optimized to display three-dimensional graphics of high quality. To display high-quality images, and obtain the best performance from your system, we recommend that you set your system to display thousands or millions of colors.

Troubleshooting

If you try to start an application that uses QuickDraw 3D and get the message "The application '<application name>' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions Folder, inside the System Folder:

- * QuickDraw 3D
- * QuickDraw 3D Accelerator
- * QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try the following:

- * Quit other open applications.
- * Reduce the amount of memory allocated to the application. This is done by:
 - selecting the application's icon in the Finder
 - choosing "Get Info..." from the File menu
 - typing a lower number in the boxes for Minimum Size and Preferred Size
- * Install more memory (RAM).

If you are using a localized system, and you install this U.S. software, you will need to copy the "Scrapbook File" in the "QuickDraw 3D Folder" to the System Folder on your Macintosh. Otherwise, when you select the Scrapbook from the Apple menu, you will get an empty scrapbook. Note that this operation will replace any existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

Some of the sample models included with QuickDraw 3D, such as Big Ben and Red Hatchback, are highly detailed (they contain additional 3D modeling data such as vertex normals and surface UVs) and thus will require a larger amount of memory than the other supplied models. If you experience problems when opening these files from SimpleText, you should open only one file at a time.

How QuickDraw 3D uses memory

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D are open, the library does not take up memory space (RAM). Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared library doesn't increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from "temporary memory." This memory shows up in the "About This Macintosh..." window as memory used by the System. When you quit the application, the memory becomes available, but the size shown in the "About This Macintosh..." window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed).

If you need to reinstall QuickDraw 3D

If you need to reinstall QuickDraw 3D, follow these steps:

1. Open the "QuickDraw 3D Install" folder and double-click the Installer icon.
2. After installing QuickDraw 3D, restart your computer.
3. If you want the items in the "QuickDraw 3D Extras" folder, drag the folder to the newly-created "QuickDraw 3D Folder" inside the "Apple Extras" folder.

Removing QuickDraw 3D

If you wish to remove QuickDraw 3D, follow these steps:

1. Open the "QuickDraw 3D Install" folder and double-click the Installer icon.
2. Choose Custom Remove from the pop-up menu.
3. Click the box next to each item to put a check in it.
4. Click Remove.
5. Restart your computer.

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Tech Info Library Article Number:20028



Tech Info Library

System 7.5 Update 2.0: Late Breaking Tips (1/97)

Revised: 1/29/97
Security: Everyone

System 7.5 Update 2.0: Late Breaking Tips (1/97)

Article Created: 14 June 1996
Article Reviewed/Updated: 29 January 1997

TOPIC -----

This article contains additional information for installing and using System 7.5 Update 2.0.

DISCUSSION -----

This document gives you some helpful information for installing and using System 7.5 Update 2.0 ("Update 2.0"). Since releasing Update 2.0, Apple has been monitoring our customers' experience with installing and using it. After receiving a significant amount of feedback on this software release, there is some helpful information that we can provide to ensure that the transition to the new version of System 7.5 goes as smoothly as possible.

1. Read the "Installing This Update" Read Me. It is very important that you follow the directions in this read me when you install Update 2.0.
2. Use Disk First Aid Make sure you use the Disk First Aid program to test and, if necessary, repair the disk on which you're going to install the update. On the CD, Disk First Aid can be found by using the path:

System 7.5 Update 2.0 Installation System 7.5 Update 2.0 System 7.5 Update 2.0 -
1 Utilities f Disk First Aid

On the floppy disks, Disk First Aid can be found on System 7.5 Update 2.0 - 1, in the Utilities folder. For instructions on using Disk First Aid, see the manual that came with your computer.

3. Update your hard disk driver. Make sure you update your hard disk driver to the latest version available. If you are using an Apple driver, both Apple HDSC Setup and Drive Setup are available with Update 2.0. Most 68K computers (the 68K computers that are exceptions are listed below) should use HDSC Setup. All PowerPC computers, and the following 68K computers that have IDE hard disks

should use Drive Setup:

Macintosh LC 580 Macintosh LC 630 Macintosh LC 630 DOS Macintosh Quadra 630 series computers Macintosh Performa 580 series computers Macintosh Performa 630 and 640 series computers PowerBook 150 series computers* PowerBook 190 series computers

Also, if you have a 68K computer and have installed a PowerPC Upgrade Card, you should use Drive Setup.

*Special note about the PowerBook 150 series computers: you do not need to update the driver on your computer (as described in the user's manual) with Drive Setup. (The driver on your computer is contained in it's ROM.)

On the CD, Apple HDSC Setup can be found by using the path:

System 7.5 Update 2.0 Installation System 7.5 Update 2.0 System 7.5 Update 2.0 - 1 Utilities f Apple HD SC Setup

On the floppy disks, Apple HDSC Setup can be found on System 7.5 Update 2.0 - 1, in the Utilities folder.

To use Drive Setup 1.0.4, from either the CD or the floppies, you must first custom install it. This can be done by opening the System 7.5 Update 2.0 Installer, and selecting Custom Install in the upper pop-up menu. Then open the triangle next to "Applications", and select "Drive Setup".

4. Use the Extensions Manager control panel to turn off all non-Apple extensions before installing the update. To do this, select "System 7.5 Only" if your current system software is 7.5 or 7.5.1, or "System 7.5.2" if your current system software is 7.5.2, then restart your computer. After the update is installed you can then go back and again use the Extensions Manager control panel to turn your extensions back on. See the "Installing This Update" Read Me for complete steps and information.

5. Do not rename or move files around within your System Folder before installing Update 2.0. The Installer makes some assumptions that certain files will be in certain places. If these files are moved or renamed, files that are installed could be placed in the wrong place, or not installed at all.

If you believe you have moved or renamed files, and are not sure how to move or rename them so that Update 2.0 will install correctly, then you should perform a clean install of the system software on your computer. For instructions on how to perform a clean install, see the manual that came with your computer .

6. If you have an AppleVision Display and you have problems after installing the Update 2.0, you should install AppleVision Fix 1.1. This software fixes such problems as:

- * When you press the buttons on the front of the display, you see a message that says "No AppleVision Display is connected."

- * You have a Power Macintosh 7200 and cannot find the Monitors & Sound control panel in the Control Panels folder.

- * The Monitors & Sound control panel does not have Geometry, Color, and Monitor

Sound buttons. (NOTE: The Monitor Sound button appears only if you have an AV monitor.)

* You can't change the resolution of the AppleVision Display or you can't open the AppleVision Setup control panel.

* Macintosh Guide does not contain information on the AppleVision Software or Display.

AppleVision Fix 1.1 can be found on the following online services:

* America Online - keyword: applecomputer

* CompuServe - GO APLSUP

* Internet -

- Worldwide Web: <<http://www.info.apple.com/swupdates>>

- ftp: <<ftp://ftp.info.apple.com>>

7. System 7.5 Update 2.0 will require more RAM, especially on PowerPC-based systems. The increased amount of RAM which System 7.5 Update 2.0 requires will vary greatly depending on which Macintosh system you are updating, and what your system configuration is.

According to tests run by Apple, the RAM reserved for system software for many 680x0-based Macintosh systems will increase less than 100K as compared to System 7.5.1, while the RAM reserved for system software for many Power Macintosh systems will increase 300K-850K as compared to 7.5.1. The results you will see may vary.

8. Use the following tips for these specific situations:

* Using Connectix RAM Doubler on a PowerBook. There is an incompatibility between System Software 7.5.3 and Connectix RAM Doubler and PowerBook computers. On PowerBook computers running System 7.5.3 and RAM Doubler, if you put the PowerBook to sleep and then wake it up, the machine may crash with a Type 8 error. Apple is currently working on this problem, and will have a solution available in the near future. In the meantime, there are two ways to workaroud this problem. First, the problem will not occur if MacsBug is installed. The MacsBug software can be found on the same on-line services listed above. The path to use is: Apple SW Updates: US: Macintosh: Utilities: MacsBug 6.5.3. Secondly, the problem will not occur if RAM Doubler is turned off.

* Using PCI PowerPC Computers with Ethernet. PowerPC-based computers with PCI slots might have a different physical Ethernet address after you install Update 2.0. The update fixes a bug that caused an incorrect physical Ethernet address to be used in environments where TCP/IP addresses are obtained using BootP, DHCP, or RARP. To see the new Ethernet address after you install the update, open the File menu in the AppleTalk or TCP/IP control panel and choose Get Info. If you install the update and are no longer able to use your TCP/IP-based applications, contact your network system administrator. If you have access to the Internet, detailed information regarding this issue can be found in the article "System 7.5.3 and Physical Ethernet Address Change" in the Technical Information Library. The Apple Technical Information Library (TIL) is available on the Internet at <http://www.info.apple.com/til.html/>.

Apple will continue to monitor any other feedback that we receive from customers using System 7.5 Update 2.0 and provide more information as appropriate.

Article Change History

29 Jan 1997 - Corrected AppleVision Fix version to 1.1.

17 Jan 1997 - Updated Online Information

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Tech Info Library Article Number:20029



Tech Info Library

AppleSearch Server 1.5.1 Patch Read Me (6/96)

Revised: 6/17/96
Security: Everyone

AppleSearch Server 1.5.1 Patch Read Me (6/96)

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Article Created: 17 June 1996

TOPIC -----

The following article is the ReadMe document for the AppleSearch Server 1.5.1 patch.

DISCUSSION -----

Warning

This patch cannot work properly while virus detection software is running. Please make sure that you have disabled any virus detectors before applying the patch.

About this patch

This program will patch the AppleSearch Server application (version 1.5) to enable WAIS gateway functionality with Open Transport. If you are not using Open Transport, it is not necessary to apply this patch. The version of the application will be updated to 1.5.1 after the patch is applied. All other AppleSearch component version numbers will remain 1.5.

This patch application was made with ResCompare, a free resource comparison and patch generation utility. ResCompare can be FTP'ed from most Macintosh archive sites. Send e-mail inquiries regarding ResCompare to Michael_Hecht@mac.sas.com.

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Tech Info Library Article Number:20030



Tech Info Library

LaserWriter 8.4: Read Me Document (1/97)

Revised: 1/17/97
Security: Everyone

LaserWriter 8.4: Read Me Document (1/97)

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Article Created: 14 June 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article contains the LaserWriter 8.4 Readme document.

DISCUSSION -----

About Your Apple LaserWriter Printer Software for the Mac OS

This document contains some important reminders and some information about your Apple LaserWriter Printer Software for Mac OS-based computers. You may want to print this document and keep it for future reference. The topics are:

- Desktop PrintMonitor Version 2.0
- Apple Printer Utility Version 2.1
- LaserWriter 8 Printer Driver Version 8.4

Desktop PrintMonitor Version 2.0

New Features in Version 2.0

- Desktop printer icons can be moved off the desktop and into folders.
- A printer menu located on the right-hand side of the menu bar provides a convenient means to switch the user's default printer (custom install).
- A control strip module with functionality identical to the printer menu is provided for PowerBook systems and other systems employing the Control Strip software.
- Enhanced user interface.

Hints and Shortcuts

- The Desktop Printers folder in the Apple Menu provides a convenient shortcut to desktop printers. This is especially helpful if you have moved your desktop printer icons off the desktop.
- Command-L key combination is a shortcut equivalent to the Set Default Printer command in the Printing menu.
- Holding down the Option and Shift keys makes the Hold and Resume buttons function as Stop Print Queue and Start Print Queue.
- To print additional copies of a file, you can select the spool file waiting in the print queue and choose Duplicate from the File menu.

Creating Desktop Printers

To create a desktop printer, select a printer in the Chooser and click the Create/Setup button. If you have System 7.5 or later, you can create multiple desktop printers from within the Chooser, but if you're running an older version of system software, you can only create one desktop printer per Chooser session.

System Software Requirements for Desktop Printing

Desktop printing requires System 7.1 or later of the Macintosh Operating System (Mac OS). If you have System 7.0 or earlier and you want to use desktop printing, you can upgrade your Mac OS-based computer to use a later version of system software. Contact your Apple-authorized dealer.

Using Desktop PrintMonitor on a Non-English System

If no desktop printer icon appears after you install the printer software, it may mean the Installer installed PrintMonitor 7.1.2 and did not install the Desktop PrintMonitor. (PrintMonitor 7.1.2 is installed if you have an earlier version of the PrintMonitor. Later versions of the PrintMonitor are not replaced.) You have three choices:

- Use PrintMonitor 7.1.2 (or a later version).
- Obtain a set of installation disks for the printer software in the language of your system software from your Apple-authorized dealer and install it.
- Upgrade your system software to System 7.5.1 and install the printing software again. An English language version of the Desktop PrintMonitor software is installed.

Using the Desktop Printer Menu and the Printer Selector Control Strip

The desktop printer menu extension can be installed using the Custom Install option.

The Desktop Printer menu appears on the right-hand side of your menu bar. It will normally appear to the immediate left of the Guide menu. The Desktop Printer menu lists the names of all active desktop printers. A check mark is displayed next to the name of the default printer. Selecting the name of a printer from this list makes the printer the new default.

The Printer Selector control strip module is installed only on computers that already have control strip software installed. The Printer Selector adds an

item to the control strip that provides functionality identical to the Desktop Printer menu.

Support and Compatibility Information

- Some third-party printers do not support desktop printing. If your printer is not an Apple product, and no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the driver that is compatible with Desktop PrintMonitor.
- When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.
- Desktop PrintMonitor supports drag-and-drop printing for all files that cause the Print Command in the File menu to become enabled. Since clipping files do not enable the Print command, drag and drop printing is not supported for them.
- Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax Sender is fully functional when Desktop PrintMonitor is installed, however, it does not get the benefit of Desktop PrintMonitor's features. When you select Fax Sender in the Chooser you will not have a default desktop printer until you choose a printer icon and select "Set Default Printer" from the Printing menu.
- Spool files and desktop printers must use the same version of the LaserWriter 8 driver. You may encounter errors if you drag spool files that were created with one version of LaserWriter 8 to a desktop printer created with another version of the LaserWriter 8 driver.

Tips for Desktop Printing Troubleshooting

Error message "-192" or "15"

- Problem: After installing Desktop PrintMonitor and restarting your Mac OS computer you see error messages "-192" or "15" when you try opening files or folders in the Finder. This may occur when Now Startup Manager's preferences file has become corrupted.

Solution: Restart your computer with extensions disabled (hold down the Shift key while restarting), delete Now Startup Manager's preferences file, and restart the computer again with extensions enabled. Important: Before deleting your Now Norton Startup preferences, you may want to record them or write them down before you delete this file.

Desktop printer cannot be found

- Problem: When you try to print, your spool files are moved to the Trash and an alert is displayed saying that the desktop printer could not be found.

Solution: There are two likely solutions to this problem. First, it is possible that your desktop printer has somehow become damaged. To fix this, drag the

desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Second, your printer software may not be using a file format that is completely compatible with Desktop PrintMonitor. If your printer software is not published by either Apple Computer or Adobe Systems, it is possible that it is not making proper and legitimate use of PrintMonitor. If this is the case, your printer software will not work properly with Desktop PrintMonitor. The only resolution to this problem is to disable Desktop PrintMonitor and use old PrintMonitor. To print the documents you were working on follow these steps:

1. Empty the Trash.
2. Go to the Chooser and turn off background printing.
3. Print documents again.

To correct desktop printing:

4. Drag the desktop printer to the Trash.
5. Go to the Chooser and turn background printing back on.
6. Create a new desktop printer.

Not enough memory message when dragging files to desktop printer

- Problem: When you drag documents created by different software applications to your desktop printer icon, a message is displayed indicating that there is not enough memory to continue.

Solution: You may not have enough memory available to launch all of the software applications corresponding to the documents you have selected. You can resolve this situation by printing your documents individually or in smaller groups.

Options dimmed in Printing menu

- Problem: "Get Printer Info" and "Change Setup" appear in your Printing menu, but can't be selected.

Solution: These are two new functions supported by LaserWriter v8.4. If these or other items in the menu appear dimmed and cannot be selected, it is because you are using a version of the printing software that doesn't support their respective functions.

Apple Printer Utility Version 2.1

The Apple Printer Utility program works with all Apple PostScript Level 2 printers.

Printing the Font Sample List

Duplicate fonts in the printer's ROM, RAM or hard disk, may not print on the font sample sheet and font totals may be incorrect. However, these fonts are available and will print correctly on any documents printed by the user. Note: the hard disk option is not available for all Apple printers.

Working with a Large Number of Downloaded Fonts

If you plan on working with a large number of downloaded fonts, you will need to increase the memory allocation for the Apple Printer Utility. To do this, quit the Apple Printer Utility, select its icon and choose Get Info from the File menu. Increase the memory in the Preferred Size box, then close the Get Info window. The amount of memory required grows dynamically as the number of fonts in the printer increase. Increase the Apple Printer Utility's Preferred Size memory by 100K to 500K and try printing again.

Working with Kanji Systems

The script mode changes to Kotoeri when clicking into an input field. To recover from this problem select a one-byte script from the script menu in the upper right corner of the screen.

Working with Kanji/Japanese Fonts

Downloading Kanji fonts is not a supported feature of this software and program errors may occur. Increase the Apple Printer Utility's Preferred Size memory by the size of each Kanji font you want to download.

Downloading PostScript Fonts on a GX System With the Apple Printer Utility

When GX is installed, any PostScript fonts (often called Type 1 fonts) in the Fonts folder are converted to GX fonts, and the original PostScript fonts are copied to a new folder called •Archived Type 1 Fonts• which is created in the System Folder. If you want to download these fonts to your printer using the Apple Printer Utility, you must send the fonts in the •Archived Type 1 Fonts• folder, not the GX-converted versions in the Fonts folder. Downloading GX fonts that were not previously Type 1 fonts and converted by GX works correctly.

Removing Fonts From a Hard Disk Attached to a Printer

This paragraph is relevant if you are using a printer that will have a hard disk drive attached to it. The LaserWriter 12/640 PS does not support a hard disk drive attachment.

If a font is downloaded to both the printer's RAM and the printer's hard disk with the same name, and you remove the font on the hard disk, the RAM font will also be removed. If you remove the RAM font, the font on the hard disk will not be removed.

LaserWriter 8 Printer Driver Version 8.4

The software includes version 8.4 of the Apple LaserWriter 8 printer driver, which works with many Apple LaserWriter printers. This section contains information about LaserWriter 8 and information on using it with several of the printers.

What's New in Version 8.4

LaserWriter 8.4 provides a new user interface that is simpler and easier to use.

It also provides single-pass printing for foreground print jobs, more background printing options, and more layout options.

Larger Print Area

Some printers support both US Letter and US Letter Small paper sizes. To prevent text from clipping or wrapping to the next line on different printers, use US Letter Small. To get the widest possible margins from your printer model, use US Letter.

Using PostScript Fax

PostScript Fax is an option for the LaserWriter Select 360, the LaserWriter 16/600 PS, and the LaserWriter Pro 810. If you use a PostScript Fax option with any of these printers, you should use LaserWriter 8f version 8.2.3f. PostScript Fax is no longer supported with LaserWriter drivers 8.3.x and beyond. See the section "How To Get Updated Printer Software" at the end of this Read Me for information on obtaining LaserWriter 8f version 8.2.3f if you don't already have it.

Using Color Matching

When ColorSync 2.0 is installed and the ColorSync Profiles folder contains printer profile(s), there are two options in addition to color/grayscale output:

- PostScript Color Matching/Printer's Default is the preferred color-matching choice. When you are printing to a PostScript Level 2 printer, and it is efficient to let the printer do most of the work, this option is a good choice.
- ColorSync Color Matching is an alternative color-matching selection. It invokes the ColorSync system software to perform color matching for the printed document, matching your monitor and printer's profile and sending the correct color information to the printer. With ColorSync Color Matching, most of the work is done by your Macintosh.

Here are some tips on using color matching:

- Color output will vary depending on the application you are using.
- Documents that use ColorSync 1.0 embedded profiles convert to the profile set up in the ColorSync 2.0 System Profile control panel.
- When you print with PostScript Color Matching selected and ColorSync 2.0 is not installed, the driver uses the Apple 13" RGB Standard profile.
- Application programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT file corrects the problem.

PPD Files

The LaserWriter 8 driver uses PostScript Printer Description (PPD) files to

determine the characteristics of the printers it uses. PPD files contain information about individual PostScript printers. For example, PPD files describe the paper-handling capabilities of printers: the number of paper trays, their capacity, and the paper sizes they handle.

To take full advantage of your printer's features, you need to go through a simple setup procedure. When selecting your printer for the first time, or after installing an additional option, click the Create/Setup button in the Chooser. This procedure causes the LaserWriter driver to query the printer for its characteristics and associate a particular PPD file with the printer.

If you get an error about the preferences file when you choose an option that is specific to your printer, you may have an outdated PPD file. You should contact the vendor of your printer for an update.

Creating EPS Files

You can create an encapsulated PostScript (EPS) file in many application programs by clicking File in the Print dialog box, then clicking Save. When you create an EPS file, note the following:

- Creating EPS files with the All option selected in the Font Inclusion pop-up menu in the EPS dialog box can result in very large files. If you include all fonts in an EPS file and save the file with the Unlimited Downloadable Fonts option selected, you may create an extremely large file.
- If you create an EPS file with no fonts included and open the document, fonts in the document appear on your screen, but Courier may be substituted when you print.
- When you create EPS files with preview information included, other programs that create their own PostScript code may not display the EPS file accurately on the screen.

Using the LaserWriter 8 Driver With the Kanji System

To print Japanese characters using KanjiTalk or the Japanese Language Kit, your system must have WorldScript II version 7.5.1 or later.

Using QuickDraw GX Fonts on a non-QuickDraw GX System

If you are using the QuickDraw GX versions of the fonts Hoefler Text or Skia with a non-QuickDraw GX system, you may encounter line-layout problems on screen or with your print-outs.

Using the LaserWriter 8 Driver With Applications

Some programs do not yet take advantage of the new features of the LaserWriter 8 driver or have small incompatibilities that may result in printing problems. If you experience problems with an application, please contact the publisher of the program. In some cases a newer version of the program may be available.

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The following list describes some special cases that you should be aware of when working with some applications. (There may be other problems with these programs, or with other programs, not mentioned in this document.)

- **Foreground vs Background Printing:** LaserWriter 8.4 offers both foreground and background printing. In foreground, LaserWriter 8.4 doesn't spool the file being printed. An application may fail when printing in the foreground if the application assumes the driver will make a spool file.

When printing in the foreground you may experience problems with these applications: Persuasion, Photoshop, PowerPoint 4.0, Excel 5.0, Quicken, PageMaker 6.0, ClarisDraw, and Claris Impact.

If you experience problems with foreground printing, change to background printing and try again.

- Color output will vary depending on the application you are using.
- With many application programs, you cannot use the Flip Horizontal, Flip Vertical, landscape page orientation, and Layout option in the Page Setup dialog box in combination.
- Some programs may print in color even when Black and White mode is selected.
- Programs that generate their own PostScript may have problems color matching EPS or TIFF images correctly. Converting the image to a PICT corrects the problem.
- **Tray Selection:** Applications that don't utilize LaserWriter 8.4's new capabilities have some limitations with tray selection when printing from Finder. To work around these problems, print from within the application and contract the vendor of the application.

Adobe Acrobat 2.1

- Acrobat retains the settings used for one printout and applies these settings to subsequent print jobs, unless options are reset by the users.

Adobe Illustrator 5.5

- Multiple-page documents may not print correctly when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.

Adobe Type Manager 3.9

- Documents may sometimes generate PostScript errors when printing outline fonts from a Macintosh 9500 using ATM 3.9. This can be fixed by replacing ATM 3.9 with an earlier version.

Aldus Freehand 4.0 & Freehand 5.0

- Documents do not print correctly when you choose a page layout from the

Layout pop-up menu in the Page Setup dialog box.

Aldus PageMaker 5.0

- Documents that have been set up using a page layout from the Layout pop-up menu may not print correctly with the Print-Option command; use the Print command with PageMaker's Thumbnail option.
- When using a page layout from the Layout pop-up menu with the Print-Option command, the document will be printed in reverse order.
- Rotated graphics may not print correctly when you hold down the Option key and click Print in the Print dialog box.
- You cannot print legal-size documents from the paper cassette of the Personal LaserWriter 320; print such documents by selecting Manual Feed or by holding down the Option key and clicking Print in the Print dialog box.

Aldus SuperPaint 3.5

- Rotated or filled polygons print as solid gray objects.
- Gradient fills may not print when copied into other programs.

Canvas 3.5.2

- When you select the Substitute Fonts option in the Page Setup Options dialog box, text may be incorrectly spaced if you use the Geneva, New York, or Monaco fonts.

ClarisDraw 1.0

- Some shapes that contain gradients may not print correctly.

CricketPresents 2.1

- You cannot import an EPS file created with the LaserWriter 8 driver when it has been saved without preview information.

DeltaGraph Pro 3.0.4

- Printing with Unlimited Downloadable Fonts may cause some elements to be shifted and fonts to substitute Courier.

FileMaker Pro 2.1

- When you choose a page layout from the Layout pop-up menu in the Page Setup dialog box, documents that contain EPS graphics may appear clipped when printed.

Informed Designer/Manager 1.4.2

- Do not print documents that contain JPEG images in Black and White mode; your system will restart.

- When you select the Unlimited Downloadable Fonts option, some graphic elements may shift or disappear when printed.

MacDraw Pro 1.5

- Rotated text within a frame that is placed in another application may not print correctly.

Microsoft Excel 5.0

- Colored horizontal cell borders will often not appear in the printout. This happens with any color printing option and on most printers.
- When you select Page Setup, Excel displays its own dialog box. Click the Options button to open the Page Setup dialog box generated by the LaserWriter driver. Most of the settings in Excel's window match the corresponding option in the driver's window. However, the scaling size may be different in the two dialog boxes. The size displayed in the Excel window is the size that will be used when you print from Excel.

Microsoft PowerPoint 3.0

- Polygons and ovals filled with gradients and without a border line may shift locations on the page when printed.

Microsoft Works 3.0

- Printing documents that have rotated objects with rounded corners results in a PostScript error.

Microsoft Works 4.0

- Works 4.0 color print outs may not match what appears on your screen. Experiment with the color options to determine which one generates the best printout for your needs.

Microsoft Word 6.0

- Each section of a document is treated as a separate file when printed.

Netscape 2.0.1

- Netscape may print a pale gray background to an older LaserWriter printer.
- When printing a multiple-page document, Netscape may print below the margins on the intermediate pages.
- Graphics that seem to be transparent on screen will be printed on your documents.

Painter 3.0

- When you print using the Invert option, images do not print inverted correctly.

QuarkXPress 3.3.1

- Be sure to use the PPDs provided with QuarkXPress when you choose a page layout from the Layout pop-up menu in the Page Setup dialog box.
- Some imported JPEG files may not print correctly.

RagTime 3.2

- You cannot print documents that contain PICT or TIFF files.

ReadySetGo! 6.0

- Use ReadySetGo! version 6.0 or later with the LaserWriter 8 printer driver; earlier versions will not work.
- With the Unlimited Downloadable Fonts option selected, you may not be able to print complex documents.
- Documents that use pen patterns will print patterns as solid gray.

How to Get Updated Software

Apple Software Updates are available on CompuServe (GO APLSUP), America Online (keyword: applecomputer), and on the Internet at:

- US, WWW site: <<http://www.info.apple.com/swupdates>>
- US, FTP site: <<ftp://ftp.info.apple.com>>
- Europe, FTP site: <<ftp://ftp.info.euro.apple.com>>

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Tech Info Library

LaserWriter 8.4: Apple LaserWriter Printer Tips (10/96)

Revised: 2/17/97
Security: Everyone

LaserWriter 8.4: Apple LaserWriter Printer Tips (10/96)

Article Created: 14 June 1996
Article Reviewed/Updated: 15 October 1996

TOPIC -----

This article contains the Apple LaserWriter Printer Tips file, which ships with the LaserWriter 8.4 software.

DISCUSSION -----

Apple LaserWriter Printer Tips
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This document contains some information and tips for achieving the best results with your printer. When using the LaserWriter 8 driver, you should be aware of the following situations. Some happen with all LaserWriter printers, and others happen only with specific models.

All LaserWriter Printers

- Some printers support both US Letter and US Letter Small paper sizes. To prevent text from clipping or wrapping to the next line on different printers, use US Letter Small. To get the widest possible margins from your printer model, use US Letter.
- Some printers with small amounts of memory will not print documents containing large numbers of fonts. If a document using multiple fonts doesn't print using the LaserWriter 8 driver, try selecting Unlimited Downloadable Fonts in the Page Setup PostScript Options dialog box and print again. Alternatively, try power-cycling the printer and printing the document again.
- If you encounter a timeout (PostScript error -8993) when printing multiple copies of large and complex documents in the background, print the documents one at a time or select foreground printing to avoid this problem.

Apple LaserWriter 12/640 PS Printer

Obtaining Printer Supplies for the Apple LaserWriter 12/640 PS

To order printer supplies for the LaserWriter 12/640 PS direct from Apple, call 1-800-600-7805. For your reference, the part numbers are listed below:

M4683G/A LaserWriter 12/640 PS Toner Cartridge
M4682G/A LaserWriter 12/640 PS 500-Sheet Cassette and Feeder
M4680G/A LaserWriter 12/640 PS Envelope Cassette
M4697G/A LaserWriter 12/640 PS Duplex Printing Unit
M4698G/A LaserWriter 12/640 PS Face-Up Output Tray

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696, extension 525.

Printer Memory Requirements

The printer comes with 4 megabytes (MB) of memory. If you will be using PhotoGrade or the optional duplex printing unit, you will need to add memory. The printer uses SIMMs that can be purchased from many electronics and computer outlets. See "RAM upgrade specifications" in Appendix D of your user's manual for more information.

Total memory requirements for the possible configurations that require additional memory are:

- PhotoGrade - 12 MB
- Duplex Printing Unit - 12 MB
- PhotoGrade and Duplex Printing Unit for all paper sizes except legal - 20 MB
- PhotoGrade and Duplex Printing Unit for all paper sizes - 24 MB

Using PhotoGrade and the Duplex Printing Unit

If your printer has at least 12 MB of memory but less than 24 MB, you cannot always use PhotoGrade and the duplex printing unit at the same time (see "Printer Memory Requirements" above). If you select two-sided printing with PhotoGrade, and PhotoGrade cannot be used at the same time, two-sided printing will override PhotoGrade.

About the Duplex Printing Unit and the Multipurpose Tray

The LaserWriter 12/640 PS does not allow the multipurpose tray to be used with the duplex printing unit. The printer driver user interface provides a user interface switch that allows you to switch between the multipurpose tray and two-sided printing. If you have the multipurpose tray selected, two-sided printing is disabled. If you want to use two-sided printing, select a tray other than the multipurpose tray, then make your two-sided printing selection. Similarly, if you have two-sided printing selected, you must deselect it before the user interface allows you to select the multipurpose tray.

About Paper Jams and the Multipurpose Tray

If you are printing from the multipurpose tray and your printer jams, check that you are specifying the correct paper size in your page setup. The printer may

jam if you select the multipurpose tray and have the wrong size paper in the multipurpose tray for the job that you are printing.

Using the Envelope Feeder

By default, the multipurpose tray takes priority over the envelope feeder. However, if the multipurpose tray is set to the same paper size as the envelope feeder, the printer will pull the paper from the multipurpose tray instead of the envelope feeder.

Use one of these methods to have the printer use the envelope feeder as the paper source:

- Pick the envelope tray as the paper source in the Print dialog. The envelope tray is identified as "Envelope Feeder/".
- Set the multipurpose tray to a size other than the desired envelope size using the Apple Printer Utility.
- Make "Cassette (Optional)" Installed and Preferred by clicking on the printer's icon and then selecting Change Setup from the Printing menu.

Using RARP with Subnet Mask and Default Gateway

This note is applicable if you will be printing from a UNIX computer using TCP/IP.

When the printer uses RARP to determine its IP address, it ignores any defined values for the subnet mask and default gateway.

You cannot use RARP for regular IP address configuration. RARP can be used once when the printer is initially configured, to set an IP address long enough to connect to the printer via telnet. Then, with telnet set the IP address, subnet mask, and default gateway.

Apple Color LaserWriter 12/600 PS Printer

This section provides additional information on using the Color LaserWriter 12/600 PS Printer.

About the Demonstration Page

When the power is turned on, the Color LaserWriter 12/600 PS automatically prints a startup page and a demonstration page. For legal and B5 paper sizes, only the startup page prints; the demonstration page is not printed. You can use the Apple Printer Utility to turn off the printing of the startup and demonstration pages.

About the Apple Color LaserWriter 12/600 PS Status Panel

As described in the Color LaserWriter 12/600 PS manual, Appendix G, the status panel lights aid in indicating hardware service problems found during printer startup. If the Alert light is flashing and all the door lights are flashing, check all the printer doors; one of them is open. If the Paper Out and Paper Jam lights are blinking alternately, a hardware problem has been detected. To identify the problem, notice which toner lights (C, M, Y, Bk) and how many of

the maintenance lights (in the area on the right-hand side of the status panel) are on, and refer to the table below. Each area listed under "Problem" represents a general circuit area for the service technician to investigate, not necessarily the exact cause of the problem.

If you have an external SCSI hard disk drive attached but don't turn it on before you turn on the printer's power, the printer may indicate a hardware failure. To correct the problem, turn the hard disk drive on and restart the printer.

Obtaining the Best Results for Business Graphics

To obtain the best results for business graphics, colors should be 100% saturated. For example, to print pure yellow, define yellow as 100% red and 100% green without any blue. Then print your document, selecting the Color/Grayscale option in the Print Options dialog.

Printing on Legal-Size Paper

In the standard memory configuration, the Color LaserWriter 12/600 PS uses a higher compression technique for legal-size paper using only the cyan, magenta, and yellow colors. As a result of this compression technique, very complex pages may show missing pixels in fine lines or small text, "jaggies" (edges with low-resolution appearance), and color changes. To improve the image quality of such pages, you can increase the printer's memory to 16 MB or more. With at least 16 MB of printer memory, the Color LaserWriter 12/600 PS can achieve the same quality with legal-size pages as with letter and A4 sizes using all four colors (cyan, magenta, yellow, and black.)

Printing Images on the Color LaserWriter 12/600 PS Printer

The Color LaserWriter 12/600 PS Printer's highest resolution for printing images is 150 x 150 dpi. No gain in image quality is achieved if higher resolution images are used. All other types of documents print at 600 x 600 dpi.

Avoiding Hue Shifts When Printing to File

When you save an image in an Encapsulated PostScript (EPS) file all the PostScript settings relating to the original output device in effect are saved along with the image data. When the image is printed later, the settings that were in effect may cause major hue shifts. To prevent these hue shifts save the image in TIFF format instead of EPS.

The Density Control Panel

The Color LaserWriter 12/600 PS has been adjusted at the factory to produce the best possible image quality. However, small variations exist among different printers. To make subtle changes to image quality, you can use the Density Control Panel on the back of the printer. NOTE: If changing the settings produces inferior image quality, return to the factory settings by following these steps: Select each color using the Color Select button, then press the - or + button to move the indicator light to the center position. When the indicator is in the center, press Enter to make the setting permanent. Repeat

this procedure for all four colors.

Setting Your ColorSync System Profile for Best Printing Results

Before using ColorSync color matching to print to the Color LaserWriter 12/600 PS printer, set the ColorSync System Profile for the monitor connected to your system. To do this, open Control Panels in the System Folder and double-click ColorSync System Profile. Make sure the following settings are selected:

- Set the profile for the monitor connected to your system. For the best color match when printing, select the "page-white" or "D50" system profile for your type of monitor if one is available.
- For the best visual match between the colors on your monitor and printed colors, select the Page-White Gamma option in the Monitors control panel. To select a gamma option, open the Monitors control panel, then hold down the Option key while you click the Options button. In the Options window, click the Use Special Gamma checkbox to put an X in it. Then choose Page-White Gamma from the list.
- On a multiscan monitor, make sure that the color temperature, or intensity, is set to 9300K (the default setting). See the monitor manual for instructions. If the Page-White Gamma option is selected with a color temperature other than 9300K, your monitor colors could look too red or too blue compared to printed colors.

Obtaining Printer Supplies for the Apple Color LaserWriter 12/600 PS

To order printer supplies for the Color LaserWriter 12/600 PS direct from Apple, call 1-800-600-7805. For order numbers, see Appendix A of the printer manual:

- toner cartridges
- transparencies
- photoconductor cartridge (includes toner disposal boxes)
- fuser oil
- fuser

Instructions for replacing the fuser are in Appendix F of the printer manual. Instructions for replacing other printer parts come in the new packages.

For the location of the nearest Apple-authorized dealer, call 1-800-538-9696, extension 525.

LaserWriter 16/600 PS

If Tray Switching is turned on and you have an optional 500-sheet feeder that contains the same size paper as the 250-sheet feeder, use the 500-sheet feeder as the preferred paper source for optimal printing performance. See the manual that came with your printer for instructions on selecting the 500-sheet feeder as the preferred paper source.

LaserWriter Pro 810

- With some graphics programs, bitmapped graphics printed with the Precision Bitmap Alignment option in the Page Setup PostScript Options dialog box will be reduced in size by 25%.

LaserWriter Pro 600 and 630

- When you print envelopes from the optional envelope feeder, you cannot use Auto Select as the Paper Source (in the Print dialog box).
- When you print at a resolution of 600 dots per inch (dpi), bitmapped images may appear with lines across the image. When bitmapped images are printed at 300 dpi, lines across the image do not appear.

LaserWriter II NT and II NTX

- If you select both the Smooth Graphics and the Invert Image options in the Page Setup PostScript Options dialog box, a PostScript error results.
- Do not use the B5 tray to print envelopes on a LaserWriter II NT. Use the letter tray instead.

LaserWriter IIg and IIx

- When you select paper sources from the First Page From and Remaining From pop-up menus in the Print dialog box, selecting Manual Feed for either source sets the driver to print the first page from the manual feed tray.
- The US Legal paper size has been changed on some LaserWriter IIx/IIg printers to be more compatible with other Apple LaserWriter printers. To prevent text from clipping or wrapping to the next line on different printers, use US Legal Small. To get the widest possible margins from your printer model, use US Legal.
- Some form-printing application programs cannot print forms using the Layout settings in the Layout dialog box.

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Tech Info Library

DOS Compatibility Software Update 1.5 Read Me (6/96)

Revised: 2/17/97
Security: Everyone

DOS Compatibility Software Update 1.5 Read Me (6/96)

Article Created: 17 June 1996

TOPIC -----

The following article is the ReadMe document for the DOS Compatibility Software Update.

DISCUSSION -----

Important Information About the DOS Compatibility Software Update
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Contents

- Introduction
- What's included with the DOS Compatibility Software Update
- System Software Compatibility
- Additional Information

Introduction

=====

The DOS Compatibility Software Update is a set of software enhancements that improves the reliability and performance of the following:

- Power Macintosh 6100 DOS Compatible computer
- Macintosh Performa 6100 DOS Compatible computer
- Macintosh Performa 630 and 640CD DOS Compatible computers
- Macintosh LC 630 DOS Compatible computer

This update also works with any Power Macintosh 6100 or Macintosh Performa 6100 series computer that has a DOS Compatibility Card installed.

IMPORTANT: If you are using a PC Compatibility Card with any Macintosh that has a PCI expansion slot, you do not need to install this update.

What's included with the DOS Compatibility Software Update

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- The "Disk Images" folder contains disk images that you can use to update your DOS Compatibility Software. The instructions for working with these disk images are in the online DOS Compatibility Card Software Update User's Manual.
- The "User's Manual" folder contains the DOS Compatibility Card Software Update User's Manual in Adobe Acrobat (PDF) format. To open this manual, you need Acrobat Reader, which is available for free on most online services and at the Adobe Systems World Wide Web site (<http://www.adobe.com>). If you ordered the DOS Compatibility Software Update on floppy disks, Acrobat Reader is already included. You can install it by double-clicking the ACROREAD.MAC icon in the Acrobat Reader folder.

System Software Compatibility

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If you are using a Power Macintosh or Performa 6100 series DOS Compatible computer, you can use Operating System 7.1.2 or 7.5.3 with the DOS Compatibility Software Update.

If you are using a Macintosh Performa 630, Quadra 630, or Performa 640CD DOS Compatible, you should use System 7.5.3 with the DOS Compatibility Software Update.

If you are currently using System 7.5, 7.5.1, or 7.5.2, you can install the System 7.5 Update 2.0 to update to System 7.5.3. You can order System 7.5 Update 2.0 on a CD or a high-density floppy disk set from the Apple Order Center by calling 1-800-293-6617. You can also download System 7.5 Update 2.0 from many online services or the Apple Support and Information World Wide Web site (<http://www.info.apple.com>).

LaserWriter Software Compatibility

If you are using System 7.1.2 with a Power Macintosh or Performa 6100 series DOS Compatible computer that is connected to a PostScript printer, you need to install the LaserWriter 8.3.3 software. You can download this software from an online service or the Apple Support and Information World Wide Web site (<http://www.info.apple.com>). If you ordered the DOS Compatibility Software Update on floppy disks, you already have this software in the "LaserWriter 8.3.3" folder.

If you are using System 7.5.3, you do not have to install LaserWriter 8.3.3 because System 7.5.3 already includes it.

Additional Information

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The rest of this Read Me file contains information that could not be included in the online DOS Compatibility Card Software Update User's Manual.

Configuring Sound Blaster Properly

To configure Sound Blaster properly for Windows 95, refer to "Sound Problems" in the troubleshooting chapter of the DOS Compatibility Card Software Update User's Manual. Otherwise, your system may crash when attempting to play 16-bit sounds.

Berkeley Systems After Dark for DOS

Do not use the After Dark screen saver for DOS in the PC environment. Once the screen saver activates, it is not possible to return to the PC environment.

Networking

If you are using System 7.5.3 with any of the Macintosh computer models listed at the beginning of this Read Me file, use the Network Software Selector to select the "Use classic networking" option, which is the default setting. Do not use Open Transport.

Shared Memory

Windows 95 performance will be much better on a 6100 series Macintosh computer if there is 8MB or more memory installed on the DOS Compatibility Card itself. Though the 6100 series Macintosh supports shared memory between the Macintosh and the DOS Compatibility Card, system performance will be better if you install memory directly on the DOS card instead of using the shared memory feature.

The updated DOS Compatibility software no longer supports shared memory with the Macintosh Performa 630 and 640CD DOS Compatible computers. If you removed the memory that was initially installed on the DOS Compatibility Card in one of these computer models, you must re-install the memory in order to use the new software.

Serial Port

The DOS Compatibility Card does not support Carrier Detect (CD). You must configure your communications applications so they do not use CD. Most communications applications can be set to respond to the CARRIER string sent back by most modems.

DOS Clipboard not Supported

The original DOS Compatibility Card software included a DOS Clipboard feature. This feature is no longer supported in the current software.

Power Macintosh or Performa 6100 Series DOS Compatible

Shut down a 6100 series DOS Compatible Macintosh before connecting a new monitor. (If you connect a monitor while this computer is running, you may not be able to configure the monitor properly in the PC Setup control panel. To correct the problem, shut down your computer and then restart.)

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Tech Info Library Article Number:20033



Tech Info Library

PowerTalk Mail Reader 1.1 Read Me (6/96)

Revised: 6/17/96
Security: Everyone

PowerTalk Mail Reader 1.1 Read Me (6/96)

Article Created: 17 June 1996

TOPIC -----

The following article is the ReadMe document for the PowerTalk Mail Reader 1.1.

DISCUSSION -----

Important Information About the PowerTalk Mail Reader Control Panel

System requirements

To use PowerTalk Mail Reader, you must use Macintosh system software version 7.5.3 or later. PowerTalk Mail Reader does not work with earlier versions of system software.

What is PowerTalk Mail Reader?

PowerTalk Mail Reader lets you select the application for reading standard AppleMail-type letters. After you use the reader to choose an application, that application opens all AppleMail letters you receive.

How to install PowerTalk Mail Reader

To use PowerTalk Mail Reader, drag its icon to your Control Panels folder and restart the computer. (The control panel takes approximately 15K of disk space, with an additional 1K for the MailReader Preferences file.)

How to remove PowerTalk Mail Reader

To remove PowerTalk Mail Reader, drag the PowerTalk Mail Reader control panel and the MailReader Preferences file (in the Preferences folder in the System Folder) to the Trash.

How to use PowerTalk Mail Reader

To use the PowerTalk Mail Reader, double-click its icon. Click Change. In the dialog box that appears, select the desired application.

To revert to AppleMail, click Select AppleMail.

Compatible AppleMail readers

AppleMail letters use a format called Standard Interchange Format (SIF). Any application that can read SIF can read AppleMail letters. The following applications read SIF:

- BBEdit 3.0
- ClarisWorks 3.0
- MacWrite Pro 1.5
- Microsoft Word 6.0
- Nisus Writer 4.0
- WordPerfect 3.0
- PowerMail 1.0

Some mail-reading applications also read other file formats. For example, some can read text and pictures, but not sound or movies. Contact the application's publisher for a complete description of its features.

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Tech Info Library Article Number:20034



Tech Info Library

PowerTalk Manager 1.5 Read Me (6/96)

Revised: 6/17/96
Security: Everyone

PowerTalk Manager 1.5 Read Me (6/96)

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Article Created: 17 June 1996

TOPIC -----

The following article is the ReadMe document for PowerTalk Manager 1.5.

DISCUSSION -----

This version of the PowerTalk Manager contains:

- A fix to a system freeze that may occur when opening a PowerShare Catalog from the PowerTalk Mailer.
- The new Mailbox API

PowerTalk Manager 1.5 is compatible with any system running PowerTalk version 1.1 or higher (compatible with System 7.5, 7.5.1, 7.5.2, and 7.5.3). PowerTalk Manager version 1.5 requires Open Transport 1.1 or higher.

To install the new PowerTalk Manager 1.5, follow these steps:

- 1) Open the Extensions folder in the System Folder
- 2) Drag the PowerTalk Manager that is in that folder to the Trash
- 3) Drag PowerTalk Manager 1.5 to the Extensions Folder in the System Folder
- 4) Reboot

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Tech Info Library Article Number:20035



Tech Info Library

Apple Network Administrator Toolkit Read Me (7/96)

Revised: 7/15/96
Security: Everyone

Apple Network Administrator Toolkit Read Me (7/96)

Article Created: 17 June 1996
Article Reviewed/Updated: 11 July 1996

TOPIC -----

The following article is the ReadMe document for the Apple Network Administrator Toolkit.

DISCUSSION -----

This document contains important information about the Apple Network Administrator Toolkit. Please read it carefully before you install or use the software.

Apple Network Assistant 2.0
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1. The Announce feature requires Ethernet network or another network of similar performance.
2. Certain workstations, such as the LC, LCII and PowerBook Duos, cannot support the Talk feature. An error message appears when you try to use the Talk command with these workstations.
3. If the Talk or Announce features are not working correctly on a workstation, make sure that the Sound Input option is set to a microphone. See your Macintosh user's manual for instructions on how to do this.
4. If you share a workstation screen with a workstation that has a smaller monitor, you will see only part of the shared screen.
5. If you share or observe a workstation screen that is running the Apple Video Player program, the TV signal will not appear on the other workstations.
6. The Share Screen and Announce commands work with up to 100 workstations at a

time.

7. With the Share Screen, Observe, and Control features, the higher the number of colors on a monitor or the higher the resolution setting for a monitor, the greater the time required to transfer information across the network.

8. If you plan on sharing a screen with several workstations, it is better to select all the workstations at once, then use the Share Screen command, rather than selecting the workstations incrementally.

9. You will not be able to use the Control, Observe, Share Screen, Announce, or Talk features with a workstation connected to the network via Apple Remote Access.

10. If you share a screen or copy files across a router, you may notice a decrease in performance, particularly when copying files to workstations on LocalTalk.

11. If you are using IRTalk, make sure both sides of the connection are running with either classic networking or with Open Transport networking.

12. If you use the Change Settings command to turn on file sharing on a workstation that does not have File Sharing software installed, you will not get an error message, even though file sharing will not be turned on. File sharing must be installed on a workstation for this command to work. Use the Software Version Report to verify that File Sharing software is installed on workstations.

13. If you are using the Copy Items command to copy files to an AppleShare file server and the server is busy, you may get an error message stating "Item in use." Wait until the server is not busy and try again.

At Ease for Workgroups 4.0
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Using the At Ease Administration program

14. If there is a single Administrator for the At Ease server and the password for this Administrator is lost or forgotten, it is possible to redefine the password by discarding the At Ease Preferences file on the At Ease server. (See the section "Administering At Ease" in Chapter 7, "Tips and Troubleshooting," in the At Ease section of the Apple Network Administrator Toolkit manual.) However, if you discard the At Ease Preferences file, information about approved volumes and approved desktop printers will be lost. You should use the Security menu in the At Ease Administration program to reestablish the list of approved volumes and the list of approved desktop printers. You should also edit each workgroup on the server and reestablish its data storage volume, the allowed desktop printers, and any volumes to be mounted at login.

Upgrading from version 2.0 or version 3.0

15. If you are upgrading from earlier versions of At Ease for Workgroups (2.x or 3.x) and you wish to use the "Lock Startup Volume" feature with version 4.0, follow these steps:

- Open the At Ease Administration program and choose System Settings from the Security menu. In the System Settings dialog box that appears, make sure that the option "Prevent users from bypassing security by starting up from a floppy disk" is NOT selected. Then quit the At Ease Administration program.
- Restart all At Ease workstations so they display the At Ease login screen. (You may wish to use Network Assistant to do this.)
- Open the At Ease Administration program again and open the System Settings dialog box. This time, SELECT the option "Prevent users from bypassing security." Quit the At Ease Administration program.
- Restart all the At Ease workstations again.

Improving security

16. Some newer Macintosh models running system software version 7.5.2 may allow users to bypass At Ease by holding down the Shift key at startup. To solve this problem, open the System Settings dialog box (using the Security menu in the At Ease Administration program) and make sure the "Don't allow Shift key at startup" option is selected. Alternatively, you can upgrade the workstations to system software version 7.5.3.

17. A user may be able to modify a document in a workgroup shared folder or a volume shared folder by opening it, changing the contents, and using the Save command. This can happen even if you have not given the user's workgroup permission to save to these shared folders. To prevent users from modifying a document in a shared folder, you can lock the document by opening the folder on the server, selecting the document, and choosing Get Info from the File menu. In the Info window that appears, click the "Locked" checkbox in the lower-left corner to put an X in it.

18. You can prevent workgroup members from opening applications from removable media by leaving the "Allow applications to be opened from removable media" option unchecked. (See the section "Setting Locations for a Workgroup" in Chapter 4, "Creating At Ease Users and Workgroups.") However, leaving this option unchecked does not prevent users from launching applications on CD-ROM discs. To prevent users from opening applications on CD-ROM discs, you can specify the exact CD-ROM discs and files on these discs a workgroup can use. (See the section "Defining Access to CD-ROM Discs" in Chapter 6, "Administering the At Ease System.")

19. At Ease administrators should be aware that the list of "allowed" applications, desk accessories, and control panels for a workgroup is created at login time when At Ease scans the workstation for

- all items for the current workgroup created by the At Ease

Administration program

- items in the Apple Menu Items folder (if the workgroup has access to it)
- the Chooser (if the workgroup has access to it)
- the Print Monitor
- items in the Startup Items folder (if the workgroup will launch items in this folder)
- items in the Shutdown Items folder
- items in the Control Panels folder (if the workgroup has access to it)
- approved sublaunched programs

If an application or an alias to an application exists in any of these locations, workgroup members will be able to open it (from the restricted Finder, for example) even if you did not give them permission to do so when you created the workgroup. Likewise, if a document exists in any of these locations, workgroup users will be able to open the application that created it without having explicit permission to do so.

Note that the user's own documents folder is not included in the list of scanned locations. (If it were, a user could copy any application from a floppy disk to this folder and open it.)

At Ease and the restricted Finder

20. The instructions in Macintosh Guide (available from the Guide menu in system software version 7.5 or later) may not work for users in the restricted Finder. For example, a user who requests instructions from Macintosh Guide on how to adjust the sound volume on his or her workstation will not be able to complete the required steps if the Administrator has not given him or her access to the control panels.

21. When a user in the restricted Finder inserts a floppy disk or has access to another local volume, any desktop items on that disk or volume are placed in a folder called Items for Desktop. When the user ejects the disk or unmounts the volume, the items remain in this folder.

22. In the restricted Finder, a user may drag any folder (such as another user's folder) into his or her own folder. If the user does not have access to the dragged folder, the Finder adds an empty folder of the same name to the target folder, but does not copy any files from the dragged folder.

23. In the restricted Finder, RAM disks should not be used.

At Ease and CD-ROM discs

24. At Ease for Workgroups includes a security feature to prevent users from ejecting CD-ROM discs without first entering an administrator password. However, with some CD-ROM drives you can eject a CD-ROM disc manually. At Ease cannot prevent users from ejecting CD-ROM discs in this way.

25. At Ease can display only one CD-ROM panel at a time. If a workstation has a second CD-ROM drive and the user inserts another permitted CD-ROM disc in this

drive, it will not appear until the first CD-ROM has been ejected.

26. At Ease treats CD-ROM drives that are connected to an AppleShare file server as AppleShare volumes, not CD-ROM drives. An administrator cannot use the "CD-ROM Preferences" command on the Maintenance menu to prevent access to these drives.

At Ease and desktop printers

27. To add desktop printers to the Access to Printers list, you should first create the desktop printers in the Finder (not the Panels or restricted Finder environments), then run the At Ease Administration program.

28. Before users log in to a workstation that will be using desktop printers, you should go into the Finder at that workstation and create the desktop printers. Also, make sure that the background printing option is turned ON for StyleWriter and LaserWriter printers. (If it isn't, users may print multiple copies and exceed their page quota, if they have one. The number of pages recorded in the activity log will also be incorrect.) AppleTalk ImageWriters do not print in the background, but if they have been properly set up as desktop printers, At Ease will correctly count the number of copies and enforce any page quotas.

29. If you set a page quota for a workgroup that is using desktop printers, it is best not to allow this workgroup access to the Chooser. (A user could create other desktop printers during a session and bypass the page quota and activity logging.)

Known software conflicts

30. Users may experience problems if an At Ease workstation is running system software version 7.1.2. You should upgrade the system software on At Ease workstations to version 7.5 or later.

31. Current versions of the Speed Copy extension are not compatible with At Ease and should be removed from At Ease workstations.

32. Using the WorldScript Power Adapter extension (version 7.5, 7.5.1, or 7.5.2) on an At Ease Power Macintosh workstation may cause a crash. You can remove the extension or upgrade to system software version 7.5.3 or later.

33. In the restricted Finder environment, the Apple Internet Dialer does not work properly. Use this application from the Panels or Finder environments.

Backing up the At Ease server

34. If you are using Retrospect to back up the At Ease server, you should set the option "Lock out volumes during backup." This will avoid any problems if an At Ease workstation happens to be logged in to the server at the time of the backup. (Other backup programs may have similar options.)

Restoring the At Ease server

35. To ensure that your At Ease server operates correctly after restoring the At Ease server information from a backup copy, refer to the section "Restoring At Ease Information" in Chapter 6, "Administering the At Ease System," and perform these additional steps:

- Open the restored folder At Ease Items WG.
- Open the At Ease Setups folder and drag the Setups.idx file to the Trash. Then close the At Ease Setups folder.
- Open the At Ease Users folder and drag the Users.idx file to the Trash. Then close the At Ease Users folder.

You do not need to restart the computer after restoring the At Ease information.

At Ease and Kid Pix Studio

36. Kid Pix Studio sublaunches several helper applications. To allow Kid Pix Studio to sublaunch these applications successfully, choose Application Preferences from the Maintenance menu of At Ease Administration program and click the Custom button. In the Custom Add screen, add each of the following applications:

Begin_Table

Name	File Creator
KPS 0	Kîd0
KPS 1	Kîd1
KPS 2	Kîd2
KPS 3	Kîd3
KPS 4	Kîd4
KPS 5	Kîd5

End_Table

To type the î character in the file creator names, hold down the Option key while you type the letter i, then release the Option key and immediately type the letter i again.

Miscellaneous points

37. Because At Ease can open up to four files on the server for each workstation that is in the login screen, it is possible that versions of AppleShare earlier than 4.2.1 will not allow as many workstations to connect as specified in the File Server Preferences dialog in the AppleShare Admin program.

38. If there is very little free disk space on the At Ease server, users may experience difficulty logging in.
39. If you delete a user from At Ease, the Internet preferences for this user are not deleted from the At Ease Users folder on the At Ease server. You can delete the preferences manually in the Finder by dragging them to the Trash.
40. At Ease usually identifies applications for a workgroup by file creator ID, not by file name. If two applications on an At Ease workstation have different names but the same file creator ID, the wrong application may be opened. (This might happen, for example, if two separate installer files with different desktop icons are both based on the same installer application.)
41. If a workgroup is required to open and save documents in approved locations and if an AppleShare volume that is not the user document volume is mounted, members of the workgroup will see the volume name dimmed in the Save dialog box. They cannot save to this volume.
42. A user who starts out in the At Ease Panels environment, then switches to the Finder by using the Go to Finder command, may experience problems when opening control panels through the Control Panels submenu in the Apple menu. In most cases, the control panel will appear in front of the At Ease panels, even though the user has switched to the Finder. In certain cases, a message will appear stating that the control panel can't be opened. To avoid these problems, an At Ease user who switches to the Finder by using the Go to Finder command should avoid opening control panels through the Control Panels submenu. Instead, the user should choose Control Panels from the Apple menu and release the mouse button to open the Control Panels window, then double-click the control panel they want to use.
43. The Disk Usage window in the User Disk Space report indicates the total number of bytes in the user's document folder, not the amount of disk space actually used. If you compare this number with the folder size information reported by the Finder (using the Get Info command), you will notice that the Finder number is usually larger.
44. On the Special menu in the Panels environment, an administrator may not see the At Ease Administration program listed even though the program is installed on the startup disk of the workstation. To fix this problem, go into the Finder on the workstation and open the folder that contains the At Ease Administration program. Then go back to the Panels environment.
45. You should not add more than 400 items to a workgroup.

General recommendations for workstations, servers, and networks

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46. Extensions provide important enhancements to a workstation's or server's capabilities. Since they require RAM, you should use the Extensions Manager to turn on only those extensions that are really needed, particularly at workstations with less RAM.

47. For maximum server performance, you can put the System Folder on a RAM disk. (The RAM disk feature is available on newer Macintosh models.)

48. Apple workgroup servers provide built-in hard disks that are 20-30 percent faster than desktop Macintoshes. Faster hard disk access can significantly improve overall server performance.

49. Use the Network Performance command in Apple Network Assistant to check periodically on network performance and to troubleshoot network problems.

Article Change History:

11 Jul 1996 - Added keyword

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Tech Info Library Article Number:20036



Tech Info Library

AppleVision Software Fix ReadMe (6/96)

Revised: 6/14/96
Security: Everyone

AppleVision Software Fix ReadMe (6/96)

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Article Created: 14 June 1996

TOPIC -----

This article is the AppleVision Software Fix for System 7.5 Update 2.0 Read Me File.

DISCUSSION -----

This document contains important information for AppleVision customers.

Who needs to install the AppleVision Software Fix?

If you have an AppleVision Display and you have problems after installing the System 7.5 Update 2.0, you should install the AppleVision Software Fix. This software fixes such problems as:

- When you press the buttons on the front of the display, you see a message that says "No AppleVision Display is connected."
- You have a Power Macintosh 7200 and can't find the Monitors & Sound control panel in the Control Panels folder.
- The Monitors & Sound control panel does not have Geometry, Color, and Monitor Sound buttons. (Note: The Monitor Sound button appears only if you have an AV monitor.)
- You can't change the resolution of the AppleVision Display or you can't open the AppleVision Setup control panel.
- Macintosh Guide does not contain information on the AppleVision Software or Display.

How to install the AppleVision Software Fix

After you install System 7.5 Update 2.0 and AppleVision Software 1.0.x, you can install the AppleVision Software Fix. Follow these steps:

- 1) If you don't already have an AppleVision Software Fix floppy disk, then copy the AppleVision Software Fix online disk image to a floppy disk.

- 2) Insert the floppy disk in your computer and double-click the Installer icon.

What is installed?

On a 68040 or non-PCI Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Display Enabler version 2.0.2 is added to the Extensions folder.
- (2) AppleVision Guide Additions version 1.1 is added to the Extensions folder.

On a PCI-based Power Macintosh computer, the installer adds the following files to the System Folder:

- (1) Monitors & Sound version 1.1 is added to the Control Panels folder.
- (2) SystemAV version 1.1 is added to the Extensions folder.
- (3) AppleVision version 1.0.4 is added to the Extensions folder.
- (4) Monitors & Sound Guide Additions version 1.0 is added to the Extensions folder.
- (5) AV Monitors Guide Additions version 1.0 is added to the Extensions folder.
- (6) SimpleSound version 1.0 is added to the Apple Menu Items folder.

If you have a 68040 or non-PCI Power Macintosh

When you installed System 7.5 Update 2.0, if you used the Custom Install option to put the Monitors & Sound control panel on a 68040 or non-PCI Power Macintosh, the AppleVision software will not work. To use the AppleVision Software, follow these steps:

- 1) Remove the Monitors & Sound control panel from the Control Panels folder.
- 2) Remove AppleVision extension from the Extensions folder.
- 3) Restart the computer.
- 4) Install AppleVision Software version 1.0.x.
- 5) Install the AppleVision Software Fix.

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Tech Info Library Article Number:20037



Tech Info Library

AppleShare 4.2 to 4.2.1 Updater Read Me (6/96)

Revised: 6/14/96
Security: Everyone

AppleShare 4.2 to 4.2.1 Updater Read Me (6/96)

Article Created: 14 Jun 1996

TOPIC -----

This article is the AppleShare 4.2 to 4.2.1 Updater Read Me file.

DISCUSSION -----

Apple recommends that all customers using AppleShare 4.2 or AppleShare 4.2 v1.0.2 upgrade to AppleShare 4.2.1, which supersedes the previous releases.

There are two ways for customers to do this. First, they can call (800) 293-6617 ext 759 and order an upgrade kit for the cost of shipping and handling (\$6.95).

The other method of upgrading is to use the AppleShare 4.2->4.2.1 Updater.

NOTE:

The AppleShare 4.2 to 4.2.1 Updater will not modify AppleShare 4.2 v1.0.2. Those customers will need to use their original AppleShare 4.2 CD-ROM to drag the old version of the File Server Extension to the extensions folder. An alternative to the drag install is to run the AppleShare installer again and replace the AppleShare 4.2 v1.0.2 application with the older AppleShare 4.2 when prompted.

Installation Instructions

On a system with AppleShare 4.2 already installed, complete the following steps to upgrade to AppleShare 4.2.1.

- 1) Double Click on the patching application
- 2) Click on the patch button.
- 3) Four components will be patched. You will be prompted to locate each of the following in your system folder.
 - AppleShare File Server

- FileServer Extension
- AppleShare Admin
- AppleShare Admin Guide

4) After patching all four components a message will be displayed that the patch was successfully applied.

5) Restart your server.

6) Launch AppleShare 4.2.1.

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Tech Info Library Article Number:20038



Tech Info Library

Power Macintosh 5400/120: Need to Install Revision 2? (7/96)

Revised: 7/13/96
Security: Everyone

Power Macintosh 5400/120: Need to Install Revision 2? (7/96)

Article Created: 14 June 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

I have seen the list of computers that should have System 7.5.3 Revision 2 installed on them. However, I have a Power Macintosh 5400/120 computer, which I thought had Revision 2 pre-installed on it, but this computer is not among those listed. Do I need Revision 2 on this computer? If so, why is it not listed with the others?

DISCUSSION -----

The Power Macintosh 5400/120 requires System 7.5.3 Revision 2. However, Revision 2 is already pre-installed on the hard drive and included in the system software installer on the CD-ROM disc. Since Revision 2 is already installed, you do not need to re-install it using the updater installer. The list of computers that should have Revision 2 installed includes only those computers that need to be updated. It does not include computers that ship with Revision 2 already installed.

This article was published in the Information Alley on 14 June 1996.

Article Change History:
13 Jul 1996 - Added alley info.

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Tech Info Library Article Number:20039



Tech Info Library

Macintosh: Sound Terminology Definitions (6/96)

Revised: 6/14/96
Security: Everyone

Macintosh: Sound Terminology Definitions (6/96)

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Article Created: 14 June 1996

TOPIC -----

The Power Macintosh 8500 technical specifications refers to "A-weighted" in the audio section. What is this?

DISCUSSION -----

The first tentative standard for sound level meters (Z24.3) was published by the American Standards Association and the Acoustical Society of America in 1936. Two frequency curves "A" and "B" were modelled on the ear's response to low and high levels of sound respectively. The two curves became a standard or "weighted" measurement.

Apple uses an "A-weighted" curve at low frequencies to mark the decibels at which noise begins to be apparent to the human ear. The level just under the point at which noise is detected would contain "no audible discrete tones."

Sound in and sound out can also be measured by its quality - in bits and sample rates. Sound is captured using a sample rate - or the number of times the computer listens in a given period to the audio source. Higher numbers (44.1 kHz) denote an increased number of times the computer is capturing information. After the sound is captured, it is stored in memory measured in bits. With more room to store subtle nuances, 16 bit audio is more realistic than 8 bit audio.

Older Macintosh computers used mic-level to capture audio which was not pre-amplified. Pre-amplified audio is more sensitive and is necessary for speech recognition or nuances that occur at low levels. The differences between mic-level and line-level audio can be measured in the amount of decibels per one milliwatt (dBm) where mic-level is between -60dBm to -20dBm and nominal line-level is +4dBm.

Finally, captured audio can become distorted if amplified beyond a certain point. The point at which sound begins to exhibit noise which did not exist in the original source is measured as Total Harmonic Distortion. The result is the

loudest decibel reading measured without any audible discrete tones (tones audible to the human ear).

More information on audio terminology can be found at the Acoustical Society of America homepage, <http://asa.aip.org>

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Tech Info Library Article Number:20040



Tech Info Library

LaserWriter Select 360: Multipurpose Tray Now Available (4/97)

Revised: 4/3/97
Security: Everyone

LaserWriter Select 360: Multipurpose Tray Now Available (4/97)

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Article Created: 14 June 1996
Article Reviewed/Updated: 3 April 1997

TOPIC -----

I have a LaserWriter Select 360 printer and I need to replace the multipurpose tray. My Apple service provider has not been able to find the replacement tray part number.

DISCUSSION -----

The Multipurpose Tray (P/N M2037G/A) for the LaserWriter Select 300, LaserWriter Select 310, and LaserWriter Select 360 is no longer available on the finished goods price list. The multipurpose tray can be ordered as a service part using part number 922-2863.

Article Change History:
03 Apr 1997 - Updated article, tray now available.

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Tech Info Library Article Number:20041



Tech Info Library

PowerTalk 1.1.6: ftp Text Document (6/96)

Revised: 6/15/96
Security: Everyone

PowerTalk 1.1.6: ftp Text Document (6/96)

Article Created: 15 Jun 1996

TOPIC -----

This article is the text document with PowerTalk 1.1.6 at Apple Computer's ftp software update sites.

DISCUSSION -----

Name: PowerTalk
Version: 1.1.6
Released: December 5, 1995
Description: The posting of this software is intended for customers who upgraded their PowerBook 500 series computers to PowerPC. For more information, please see the PowerTalk Guide included with this software.

This software consists of two self-extracting archives of Disk Copy 1440K disk images. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disks.

Disk Copy can be found in the Utilities folder posted here.

PowerTalk 1.1.6 consists of 2 disks:

Name as Posted	Actual Disk Name
PT 1.1.6-1of2.sea	Install.sea
PT 1.1.6-2of2.sea	PowerTalk.sea

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Tech Info Library Article Number:20043



Tech Info Library

PowerTalk 1.2.3: ftp Text Document (6/96)

Revised: 6/15/96
Security: Everyone

PowerTalk 1.2.3: ftp Text Document (6/96)

Article Created: 15 Jun 1996

TOPIC -----

This article is the text document with PowerTalk 1.2.3 at Apple Computer's ftp software update sites.

DISCUSSION -----

Name: PowerTalk
Version: 1.2.3
Released: March 18, 1996
Description: This version of PowerTalk is included on the System 7.5 Update 2.0 CD. It is recommended for customers who are using PowerTalk and System 7.5 Update 2.0.

This software consists of two self-extracting archives of Disk Copy 1440K disk images. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disks.

Disk Copy can be found in the Utilities folder posted here.

PowerTalk 1.2.3 consists of 2 disks:

Name as Posted	Actual Disk Name
PT 1.2.3-Disk1of2.sea	Install
PT 1.2.3-Disk2of2.sea	PowerTalk

PowerTalk 1.2.3 includes the following enhancements:

- PowerTalk Catalogs Extension version 1.1.1 no longer displays an out-of-memory error when you open a catalog.
- PowerTalk AppleMail version 1.1.2 works better on systems with many fonts installed and defaults to "sender only" for mail replies.

- PowerTalk DigiSign Utility version 1.1.1 improves printing on HP DeskWriter C and 550-style printers.
- Direct Dialup version 1.1.1 works better when dialing using a long string and won't time out while sending a large letter or a letter with a large enclosure.
- Fixes a potential crash problem that occurs if both PowerTalk and At Ease are installed. While PowerTalk and At Ease no longer crash when used together, accessing all of Power Talk's functionality requires the Finder (open the Special menu in At Ease and choose Go To Finder).

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Tech Info Library Article Number:20044



Tech Info Library

LaserWriter 8 version 8.3.4 Read Me (6/96)

Revised: 6/18/96
Security: Everyone

LaserWriter 8 version 8.3.4 Read Me (6/96)

=====

Article Created: 17 June 1996

TOPIC -----

This is the ReadMe file from LaserWriter 8.3.4.

DISCUSSION -----

What is the LaserWriter 8 version 8.3.4?

PowerPC-based computers may have difficulty printing to some third party network printers or print spoolers in certain network configurations. When printing to one of these devices, your computer may freeze or never complete printing, and you may need to restart your computer or cancel the printing job. LaserWriter 8 version 8.3.4 fixes this problem. Note: If you have already installed LaserWriter 8 version 8.4 you do not need version 8.3.4.

In addition to installing LaserWriter 8 version 8.3.4, you should make sure that your computer's system software is version 7.5.3 or later. For information on obtaining system software version 7.5.3, refer to Apple Computer's America Online or Internet sites, or see the custom support information that came with your computer to call Apple directly.

To install this LaserWriter version 8.3.4 follow these steps:

1. Locate the System Folder on the computer's hard disk. Don't open the System Folder.
2. Drag the file named "LaserWriter 8" to the System Folder.
3. A message appears asking if you want the LaserWriter 8 extension to be put into the Extensions folder. Click OK. If a second message appears stating that LaserWriter 8 already exists and asks you if you would like to replace it, click OK.
4. Open the Special menu and choose Restart.

IMPORTANT

If the second message does not appear, then you do not currently have LaserWriter 8 and the associated files installed. Do the following:

1. Refer to the printed manual that came with your computer, and follow the instructions for doing a custom installation.
2. In the Custom Install dialog box you'll see a list of items that can be installed. Click the arrow to the left of the "Printing" check box to reveal the list of printers.
3. Click to put an X in the "LaserWriter 8" checkbox.
4. Click Install. If a message appears stating that you have a newer version already installed, click Newer.
5. Quit the Installer. Open the Special menu and choose Restart.
6. Install LaserWriter 8 version 8.3.4.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20046



Tech Info Library

AppleCD 600e: Installing Software from Floppy Disk (6/96)

Revised: 6/25/96
Security: Everyone

AppleCD 600e: Installing Software from Floppy Disk (6/96)

=====

Article Created: 25 June 1996

TOPIC -----

This article describes how to install the AppleCD 600e software on Macintosh computers, which did not previously have the CD-ROM software installed on them. Without the CD-ROM software installed, your Macintosh will not recognize the Startup CD disc.

DISCUSSION -----

Many of the newer Macintosh computers have built-in support for CD-ROM drives. These Macintosh computers have the basic CD-ROM drivers in ROM. If your computer does not have the CD-ROM drivers in ROM, you will not be able to startup your Macintosh computer with the Startup CD included with the AppleCD 600e CD-ROM drive. In order to get the CD-ROM drivers installed, you must copy the Apple CD-ROM extension to a floppy disk. You will have to use a Macintosh computer with a CD-ROM drive to copy the Apple CD-ROM extension from the CD-ROM included with the AppleCD 600e drive.

Copying Minimum CD-ROM Files
=====

Step 1

Open the CD-ROM Software folder on the CD-ROM Setup disk.

Step 2

Drag the Apple CD-ROM file to a floppy disk.

Step 3

Choose Restart from the Special menu.

Let your Macintosh start up from the normal startup drive.

Step 4

Insert the floppy disk with the Apple CD-ROM file on it into your Macintosh computer.

Step 5

Drag the Apple CD-ROM file onto the closed System Folder on the hard drive.

A dialog appears explaining that extensions need to be stored in the Extensions folder.

Step 6

Click OK

This places the Apple CD-ROM file in the Extensions folder.

Step 7

Choose Restart from the Special menu.

Allow the Macintosh to start up from the hard disk.

Step 8

Insert the CD-ROM Setup CD in the CD-ROM drive.

The CD-ROM disc will appear on your desktop.

Step 9

Double-click Installer on the CD-ROM Setup volume to finish installing all files from the CD-ROM Setup volume.

When the Installer is done, an Installation Complete dialog with a Restart button appears.

Step 10

Click Restart.

After restarting, your Macintosh is able to use the AppleCD 600e drive.

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Tech Info Library Article Number:20048



Tech Info Library

Portable StyleWriter: Out of Paper Error (6/96)

Revised: 6/18/96
Security: Everyone

Portable StyleWriter: Out of Paper Error (6/96)

=====

Article Created: 17 June 1996

TOPIC -----

I have a Portable StyleWriter and when I choose Print, a dialogue box appears telling me that the printer is out of paper, but the printer has paper loaded. What am I doing wrong?

DISCUSSION -----

In the Print dialogue box there is an option for Feed: Automatic or Manual. If Manual is selected, the printer will prompt you to insert a sheet of paper. If Automatic is selected, you will not see this dialogue box.

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Tech Info Library Article Number:20049



Tech Info Library

MessagePad System Update 2.0 (526060)US ReadMe (6/96)

Revised: 6/17/96
Security: Everyone

MessagePad System Update 2.0 (526060)US ReadMe (6/96)

=====

Article Created: 17 June 1996

TOPIC -----

This article is the MessagePad System Update 2.0 (526060)US Read Me file.

DISCUSSION -----

This document describes the product enhancements included in MessagePad 130 System Update 2.0 (526060)US.

System Update 2.0 (526060)US is for Apple MessagePad 130 customers in the United States. This version will install over the following system software versions for MessagePad 130:

- version 2.0 (525314)

If this system update is already installed on your MessagePad, you will not damage your MessagePad by reinstalling the update. Also, you will not damage an original MessagePad, MessagePad 100, MessagePad 110, MessagePad 120 or other Newton PDA if you attempt to install this system update by mistake.

Before you install any system update, you should backup your MessagePad 130 with the Newton Backup Utility or to a storage card (PCMCIA card).

This is the base system update that ships on the MessagePad 130 with Newton 2.0 in the United States. It is being provided in the event you accidentally erase it from your MessagePad.

Changes in System Update 2.0 (526060):

- Old ToDo's can now be deleted from the Dates overview.
- Pending alarms no longer trigger immediately after setting the clock to the day of the alarm.
- The StyleWriter 1500 and 2500 have been added to the printer list.
- Deleting found ToDo's from the find overview no longer causes a -48809

error.

- A clipping/scaling problem with large pictures was corrected.
- Class 2 Faxing now works as expected.
- The "=95 MessagePad" string has been removed from the reset and sleep screens.
- The back light can now be turned on at the same time the unit is turned on instead of requiring a separate toggle of the power switch.
- Tapping stop during reception of a System Update works correctly.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20050



Tech Info Library

Color OneScanner 600/27: Scanning 35mm Slides (6/96)

Revised: 6/18/96
Security: Everyone

Color OneScanner 600/27: Scanning 35mm Slides (6/96)

=====

Article Created: 17 June 1996

TOPIC -----

Is it possible to scan 35mm slides or negatives on the Apple Color OneScanner 600/27?

DISCUSSION -----

Flatbed scanners which allow you to scan in negative or positive film require a transparency adapter. The Color OneScanner 600/27 does not have a transparency adapter, and was not designed to support scanning of any type of film.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20051



Tech Info Library

Apple Network Administrator Toolkit Specifications (7/96)

Revised: 7/15/96
Security: Everyone

Apple Network Administrator Toolkit Specifications (7/96)

Article Created: 17 June 1996
Article Reviewed/Updated: 11 July 1996

TOPIC -----

The following article contains a list of technical specifications and service and support information for the Apple Network Administrator Toolkit.

DISCUSSION -----

Technical Specifications
=====

At Ease for Workgroups 4.0

- Access controls for:
 - Applications
 - Documents
 - Apple Menu items
 - User's local hard disk
 - Servers
 - CD-ROM discs
 - Floppy disks
 - Printers
- User types:
 - Administrator (full privileges)
 - Teacher (full or limited privileges, as designated by the administrator)
 - Student (limited privileges)
- Up to 200 different setups, each of which can include any combination of students, teachers, and administrators
- Choice of interface (At Ease, restricted Finder, or full Finder) for each setup
- Centralized server-based file storage
- Configurable disk-space quotas for user documents
- Printer quotas

- Shared folders (including drop boxes for student assignments and teacher handouts)
- Interface assigned to a user name, so each user always gets the same interface no matter where he or she logs in
- Save options (as access privileges allow):
 - To the local hard disk
 - To a designated server
 - To removable-media devices (floppy disks, Zip disks, Syquest drives)
- Security options
 - Disable log in after a certain number of password attempts
 - Prevent users from changing their passwords
 - Prevent users from setting their passwords to null
 - Allow users to log in by selecting their user names from a displayed list, or require them to type in their user names
- Optional "Speak Buttons" command for beginning readers who may have trouble reading At Ease button names

Apple Network Assistant

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(Unless otherwise noted, all listed features can be performed on multiple systems at once.)

- Determine hardware and software configurations (including version numbers)
- Check for outdated, missing, or extraneous software (applications and system extensions)
- Copy files or folders
 - Applications, system files, and documents can automatically be put in the proper folders on the destination system(s), based on their location on the originating system
 - A special broadcast protocol can copy files to multiple networked Macintosh systems in the same time it takes to copy them to a single system
- Restore a system configuration by mirroring the administrator's hard disk
- Delete files and folders
- Modify systems settings (such as sound volume or printer selection)
- Restart or shut down
- Broadcast audio messages to selected users or hold a two-way conversation with one user
- Work with users by viewing and controlling their screens
- Share an administrator's or user's screen with others in the lab
- Launch or quit applications on client systems
- Lock computer screens

Apple User and Group Manager

=====

- Find available network services
 - AppleShare servers

- At Ease for Workgroups servers
- First Class servers
- Create, delete, and modify user accounts and groups
- Copy user and group data between servers (such as between AppleShare servers, or from an AppleShare server to a First Class server)
- Consolidate user lists from multiple servers
- Import user lists from databases, text documents, and so on
- Export user lists to text files

System requirements

=====

Administration system

- Apple Macintosh, PowerBook, Power Macintosh, or other Mac OS-based computer (except Mac Plus)
- 8MB of RAM
- Mac OS software version 7.1 or later
- AppleShare Client software (included with Mac OS)
- Display with at least 640- by 480-pixel resolution
- CD-ROM drive (on administration system or server)
- AppleTalk network connection (Ethernet is recommended, and required for screen-sharing functions)

Client systems

- Apple Macintosh, PowerBook, Power Macintosh, or other Mac OS-based computer (except Mac Plus)
- 4MB of RAM
- Mac OS software version 7.1 or later
- AppleShare Client software (included with Mac OS) At Ease for Workgroups 4.0 server system
- AppleShare 3.0 or later software (AppleShare 4.0 or later recommended)
- AppleTalk network connection (Ethernet recommended)

Ordering Information

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Apple Network Administrator Toolkit

Retail Order No. 435010U

Education Order No. 435036U

- At Ease for Workgroups 4.0 software
- Apple Network Assistant software
- Apple User and Group Manager software
- User manual

For up to 10 Macintosh systems

Volume licenses are available for purchase. Consult your authorized ClarisPLUS reseller or representative for purchasing information.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

For presales information or to order products:

Clariss Corporation
5201 Patrick Henry Drive
Box 58168
Santa Clara, CA 95052-8168
1-800-544-8554

Clariss Canada, Inc.
3 Church Street, Suite 402
Toronto, Ontario M5E 1M2
1-800-361-6075

<http://www.clariss.com/>

Clariss distributes Apple software products
and is a wholly owned subsidiary of
Apple Computer, Inc.

For presales or technical information:

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014
1-800-SOS-APPL
<http://www.apple.com/>

Article Change History:
11 Jul 1996 - Added keyword

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Tech Info Library Article Number:20052



Tech Info Library

Apple Network Administrator Toolkit Description (7/96)

Revised: 7/15/96
Security: Everyone

Apple Network Administrator Toolkit Description (7/96)

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Article Created: 17 June 1996
Article Reviewed/Updated: 11 July 1996

TOPIC -----

This article contains a description of the Apple Network Administrator Toolkit.

DISCUSSION -----

Overview
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Finally there is a powerful yet easy-to-use management software for networked Macintosh systems. The Apple Network Administrator Toolkit has the applications you need to control and manage all the systems on your network from a single point.

Whether you are an educator, a computer lab director, or the administrator of a business network, the Apple Network Administrator Toolkit will help you stay productive and keep your networked systems running securely and efficiently. It will make your job easier from the moment you start using its comprehensive suite of tools.

Flexible access and management

Protect applications, documents, CDs, and system settings on all your Macintosh computers with the latest version of Apple's popular security and access management tool, At Ease for Workgroups 4.0. You can create different At Ease configurations for classes or individuals, and assign privileges for each setup -- all from a central location. You also have a choice of interfaces for each workgroup: the simplified At Ease interface, a secure version of the traditional Macintosh desktop, or the standard Finder. Simply assign the working environment most appropriate for each user or group.

Network wide management

..TIL20053-Apple_Network_Administrator_Toolkit_Description_7-96.pdf

With Apple Network Assistant software, you can manage a group of networked Macintosh computers from a central location. Ensure that everyone is using the right version of each application. Check the version numbers on each networked computer, then quickly create a list of machines to be updated -- a simple mouse click, and Apple Network Assistant will simultaneously update each machine.

You can also restart or shut down multiple systems with a single click, quickly and easily restore a computer's hard disk to a known configuration, and delete unnecessary files from multiple systems in one simple step.

The special screen-sharing function of Apple Network Assistant allows you to give personal assistance across a network of computers. Let users view your Macintosh screen while you perform a task, or share someone else's screen with everyone. View multiple users' screens at once, or get a closer look at each screen one by one. Even take control of a user's system to demonstrate an action.

User and group management

Tired of having to type in long lists of names and passwords for each network resource? Apple User and Group Manager software saves you time and effort by letting you consolidate user lists from multiple sources. Add users quickly by copying part or all of a list from one server to another, or by importing student or employee lists. Create users and groups, and change passwords. The Manager supports AppleShare 3.0, First Class 2.5, and At Ease for Workgroups 4.0 servers.

The Apple Network Administrator Toolkit: Powerful tools for network management.

Features

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Flexible access and management

- Assign different interfaces for novice and advanced Macintosh users
- Define application and document access privileges for each user or group
- Control access to selected applications, files, CD-ROMs, servers, printers, and other resources
- Set the maximum number of pages each user can print

Network wide management

- Manage all your networked Macintosh systems from a single location
- Check software versions, file modification dates, disk space, amount of RAM, and other system attributes
- Restore a system's hard disk to a previous configuration
- Help users with computer tasks by sharing your Macintosh screen or by viewing or controlling theirs

User and group management

- Consolidate user lists from multiple sources
- Drag and drop user and group data from one service to another
- Create user lists from existing school registers or employee databases

Article Change History:

11 Jul 1996 - Added keyword

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Tech Info Library Article Number:20053



Tech Info Library

Power Macintosh 5260/100 & 5400/120: Using System 7.5.1 (7/96)

Revised: 7/13/96
Security: Everyone

Power Macintosh 5260/100 & 5400/120: Using System 7.5.1 (7/96)

=====

Article Created: 17 June 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

This article contains questions about using System 7.5.1 on Power Macintosh 5260/100 and Power Macintosh 5400/120 computers.

DISCUSSION -----

1) Question: Was System 7.5.1 tested on the Power Macintosh 5260/100?

Answer: During the development cycle of the Power Macintosh 5260/100, System 7.5 Update 2.0 had just been completed. Because of this, both System 7.5.1 and 7.5.3 were fully tested on the Power Macintosh 5260/100.

2) Question: Will System 7.5.1 work on the Power Macintosh 5260/100?

Answer: Yes, you can install System 7.5.1 from the Power Macintosh 5260/100 system software CD without installing System 7.5 Update 2.0. However, with the many fixes and improvements included with System 7.5.3, Apple recommends that you use System 7.5.3.

3) Question: Was System 7.5.1 tested on the Power Macintosh 5400/120?

Answer: No, the Power Macintosh 5400/120 requires System 7.5.3, Revision 2. Because of this requirement, System 7.5.1 was not tested on this computer.

4) Does System 7.5.1 work on the Power Macintosh 5400/120?

Answer: No, the Power Macintosh 5400/120 requires System 7.5.3, Revision 2 and cannot be downgraded to System 7.5.1.

This article was published in the Information Alley on 15 June 1996.

Article Change History:

13 Jul 1996 - Added alley info.

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Tech Info Library Article Number:20054



Tech Info Library

Color StyleWriter 2400: Color Printing in Landscape Mode (6/96)

Revised: 6/24/96
Security: Everyone

Color StyleWriter 2400: Color Printing in Landscape Mode (6/96)

=====

Article Created: 24 June 1996

TOPIC -----

I have a Color StyleWriter 2400 and I cannot print color documents in Landscape Mode. Black and white and grayscale documents print properly in Landscape, but when I print in color, the computer locks up after printing approximately 8% of the job. I am using the latest version of the Color StyleWriter 2400 driver (version 2.1.2). What am I doing wrong?

DISCUSSION -----

The Color StyleWriter 2400 driver will not print color in Landscape Mode if virtual memory is active. In order to print color documents in Landscape, you can turn off virtual memory, use the Quickdraw GX version of the driver, or use the new Color StyleWriter 2500 driver.

These articles can help you locate the software mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20056



Tech Info Library

Printer Share: Prints when Server is Asleep (6/96)

Revised: 6/20/96
Security: Everyone

Printer Share: Prints when Server is Asleep (6/96)

=====

Article Created: 19 June 1996

TOPIC -----

If an Apple serial or SCSI printer (such as the Personal LaserWriter SC or the StyleWriter series) is being shared with Printer Share from a Macintosh that is in Energy Saver "Sleep" mode, will the printer still print a job sent from another Macintosh computer on the network?

DISCUSSION -----

Yes. Although the monitor remains dark on the Macintosh that is sharing the printer, the processor and hard drive become active and the job prints properly.

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Tech Info Library Article Number:20057



Tech Info Library

AppleShare Custom Settings ReadMe (6/96)

Revised: 6/20/96
Security: Everyone

AppleShare Custom Settings ReadMe (6/96)

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Article Created: 20 June 1996

TOPIC -----

The following article is the Read Me document for the AppleShare Custom Settings (ASCS) application.

DISCUSSION -----

Important Information about AppleShare Custom Settings

There are two reasons that an administrator might choose to use the AppleShare Custom Settings (ASCS) application to configure their AppleShare server.

- To enable large volume support on servers with volumes between 2 and 4 gigabytes.
- To increase the number of open files the server will support for remote clients.

The vast majority of AppleShare sites will not require either of these options. The AppleShare Custom Settings application can only be run on systems with AppleShare 4.2.1 or later.

Large Volume Support

When a client mounts a server volume, AppleShare returns the disk information for the volume mounted. Support for large volumes that are greater than 2 gigabytes was added with System 7.5. Versions of the Finder prior to 7.5 are not able to function correctly with volumes that are larger than 2 gigabytes.

Since AppleShare can't determine the version of system software a client is using, it ensures that the disk information is 'clipped' to 2 gigabytes for backward compatibility. In this case, clients generally function as you would expect with a significant caveat. While the user is able to copy data to or from such a volume, the disk information displayed in the Finder is not accurate. Only the 'in disk' or the 'available' will be accurate. The other value will be

inaccurate.

For administrators who understand the backward compatibility issues, the AppleShare Custom Settings makes it possible to configure AppleShare 4.2.1 or later server to return accurate disk information for volumes up to 4 gigabytes in size.

WARNING: If a client running system software prior to System 7.5 mounts an AppleShare server with the large volume support enabled and the volume is larger than 2 gigabytes, the Mac may crash and data loss can occur. Apple will only support this option with clients and servers that are using System 7.5 or later.

Maximum Number of Open Files

The Mac O/S allows a maximum of 346 open files at any one time. This number includes files opened by the system on the user's behalf. Also, a file with both the data and resource forks open, count as two files. For multi-user database applications using AppleShare this limitation can significantly reduce the number of users that can be supported at any one time.

However, often these applications are opening the same file(s) over and over in read only mode. For example, each user that signs in might open the user-id file. A feature introduced with AppleShare 4.2 was the ability to track and count these read only requests and, while the 346 unique file limit remained, it allowed many more users to access the database.

Most servers will not run into the default limit of 3,000 open files. However, for those that do, the administrator can now increase the maximum number of concurrent open files to 6,000 using the AppleShare Custom Settings application.

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Tech Info Library Article Number:20058



Tech Info Library

Macintosh 5xxx/6xxx Tester: Logic Board & Cache Messages (7/96)

Revised: 7/13/96
Security: Everyone

Macintosh 5xxx/6xxx Tester: Logic Board & Cache Messages (7/96)

Article Created: 18 June 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

I am using the 5xxx/6xxx Tester 1.0 to see if my computer qualifies for the Repair Extension Program for Power Macintosh and Performa 5200, 5300, 6200, and 6300 computers*. I need to know if this program will report both the logic board and the cache DIMM issues if my computer has them both?

DISCUSSION -----

The 5xxx-6xxx Tester 1.0 first checks for the logic board issue, and then it checks for the cache DIMM issue. A dialog is presented for the first issue found. So, it is possible that your computer could be experiencing both the logic board and the cache issue, but the Tester application only reports the logic board issue. However, when the logic board is repaired, it is replaced with one that has the correct cache DIMM. Thus, if your computer is experiencing both issues, they will both be corrected in the Repair Extension Program even though the Tester reports only the logic board issue.

Note that if your computer is only experiencing the cache DIMM issue, the 5xxx/6xxx Tester will display the appropriate message.

*Note:

The models included in this program are Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.)

This article was published in the Information Alley on 19 June 1996.

Article Change History:
13 Jul 1996 - Added alley info.

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Tech Info Library Article Number:20059



Tech Info Library

Installing System 7.5, Version 7.5.3 Read Me (6/96)

Revised: 6/28/96
Security: Everyone

Installing System 7.5, Version 7.5.3 Read Me (6/96)

Article Created: 19 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Installing System Software, Macintosh System 7.5, Version 7.5.3 ReadMe file.

DISCUSSION -----

What is Macintosh System 7.5, Version 7.5.3?

System 7.5, Version 7.5.3 consists of four major components:

- software to upgrade your computer to System 7.5
- QuickDraw GX for more powerful printing, typography, and color publishing capabilities
- PowerTalk electronic mail and collaboration software
- OpenDoc software which supports a new type of software called a "part." Many parts will be available from third-party software manufacturers who support OpenDoc technology.

Before you install

Read the following tips before you install system software version 7.5.3:

- Installing on a PowerBook

You cannot install this software on a PowerBook using SCSI disk mode. To correctly install on a PowerBook, install from the floppy disks or the CD. (SCSI disk mode is when you connect your PowerBook with a SCSI Disk Adapter cable to another computer and use the PowerBook as an external hard disk.)

- Installing printer software

When you use the Easy Install option to install this software, it updates the

existing software on your hard disk. If you want additional software (such as a specific printer driver) that was not already on your computer but is included with this upgrade kit, use the Custom Install option.

- Minimum RAM disk requirements for a RAM disk

The new minimum RAM disk size is 416K. If a smaller RAM disk exists during the installation of this software, it will be turned off and its contents lost when the computer is restarted. Therefore, before installing this software on a computer with a RAM disk smaller than 416K, move all the contents of the RAM disk to another disk.

- Default Control Panel Settings

This software resets all settings in the Apple Menu Options and Views control panels to their default values. If you have made changes to either or these control panels, you will need to set them again after installing this software. If you have set Apple Menu Options to track more than ten items in any category, you may want to move some of those items out of their folders before you install the software, which deletes all but the ten most recent items in each category.

- Using the CD-ROM

To eject the CD-ROM, drag its icon to the trash. The CD should eject automatically from the CD-ROM drive when you restart your computer. If this does not happen, turn off the computer and manually eject the CD.

- Virtual Memory

If you have a PCI-based Macintosh and choose the Clean Install option, virtual memory will be turned on after you install System 7.5, Version 7.5.3.

With any Macintosh model, if you choose the Clean install option to install a Universal System for any Macintosh, virtual memory will be turned on after you install System 7.5, Version 7.5.3.

To turn virtual memory off, open the Memory control panel and click the "Off" radio button.

- Installing on a Macintosh Plus

To install System 7.5, Version 7.5.3 on a Macintosh Plus, you will need a CD-ROM drive, the CD version of System 7.5.3, and System 7.0 on 800K floppy disks.

- 1) Install System 7.0.

System 7.0 on 800K floppy disk images are available on the Internet from:
ftp://ftp.info.apple.com/Apple.Support.Area/Apple.Software.Updates/US/Macintosh/System/System_7.0

- 2) Restart your computer.

- 3) Insert the System 7.5 Version 7.5.3 CD.

Continue with steps 3-8, under "Step 3: Install System 7.5" below.

Installing System 7.5

=====

You can install System 7.5 from floppy disks or a CD-ROM disc (depending on what came in your package). Install System 7.5 before you install PowerTalk, QuickDraw GX, OpenDoc, or any other software that requires System 7.5.

Use the following guidelines to help ensure a successful installation:

- Turn off disk security, virus protection, or screen saver programs before beginning.
- If you are having problems during an installation, try quitting the Installer and restarting your computer with extensions off. If you are already using System 7.5, open the Extensions Manager control panel and choose "System 7.5.x" in the Sets pop-up menu. If you are using an earlier version of system software, hold down the Shift key while you restart.
- To ensure a smooth upgrade to system software version 7.5.3, check with the manufacturers of any third-party software you use to make sure it is compatible with version 7.5.3. Also see Appendix A ("Testing for Compatibility") in the manual that came with your upgrade kit for more information on software compatibility.
- If you are installing on a PowerBook, make sure your PowerBook is plugged in and set not to go to sleep. For instructions, see the manual that came with your computer.
- If At Ease software is installed on your computer, you must turn it off before you install this software. For instructions, see the manual that came with At Ease.
- If you are installing from installation disks you made from the disk images that come on the CD, make sure the Disk Tools disk and the installation disks are all locked before you use them. To lock a floppy disk, slide the plastic tab in the upper-left corner down.

Step 1: Check your hard disk

- 1) Shut down your computer.
- 2) Insert the Disk Tools disk for your model of computer into the floppy disk drive.

IMPORTANT: The following Disk Tools disks come with your upgrade kit:

- Disk Tools 1: for 68K computers with SCSI hard disks
- Disk Tools 2: for all PowerPC computers and all 68K computers that have an IDE hard disk, which include the Macintosh LC 580, LC 630, LC 630 DOS, Quadra 630 series computers, Performa 580 series computers, Performa 630 series computers, PowerBook 150, and PowerBook 190 series computers. Also, if you have a 68K computer and have installed a PowerPC Upgrade Card, you should use the Disk Tools 2 disk.

- 3) Turn on your computer. The Disk Tools icon appears on your screen. If you see an error message on the screen telling you the wrong Disk Tools disk was inserted, look for the other Disk Tools disk in your kit and insert it.
- 4) Double-click the Disk First Aid icon and follow the instructions on the screen. Disk First Aid checks your hard disk for problems. If you have a problem using Disk First Aid, see the Troubleshooting chapter in the manual that came with your upgrade kit.
- 5) When you are finished, choose Quit from the File menu.

Step 2: Update the driver

Important If you have a PowerBook 150 series computer, you can skip this step.

IMPORTANT: If you have a Power Macintosh 5200 series computers with 800 Megabyte hard disk, you should use the version of the Drive Setup software that came with your computer rather than the version included in this upgrade kit.

- From the Disk Tools 1 disk

If you are using the Disk Tools 1 disk, follow these steps:

- 1) Double-click the Apple HD SC Setup icon.
- 2) Click Drive until the disk you want to update appears.
- 3) Click Update and follow the instructions on the screen.
- 4) Turn off your computer.

- From the Disk Tools 2 disk

If you are using the Disk Tools 2 disk, follow these steps:

- 1) Double-click the Drive Setup icon to open it.
- 2) In the list of drives, click the disk you want to update.
- 3) Pull down the Functions menu and choose Update Driver.
- 4) When a message tells you that the update is complete, choose Quit from the File menu.
- 5) Turn off your computer.

Step 3: Install System 7.5

- From floppy disks

- 1) Insert the Install Disk 1 disk into a floppy disk drive.
- 2) Turn on your computer.
- 3) Open the Installer by double-clicking its icon.
All system software files are compressed. The Installer program will expand them during installation. Do not drag them to your hard disk.
- 4) When you see the Installer's welcome screen, click Continue. The Easy Install dialog box appears.

- 5) Make sure that the destination disk indicated on the screen is the one on which you want to install system software. If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.
 - 6) Click Install. The Installer updates the software in the System Folder on your hard disk.
 - 7) Follow the instructions on the screen. On-screen messages tell you if you need to insert other disks. It takes at least 20 minutes to complete the installation using floppy disks. (It takes 10-20 minutes using the CD-ROM disc.) Installation times vary depending on your computer model.
 - 8) When the installation is complete, restart your computer. If for some reason the installation was not successful, try the installation again.
- From the CD-ROM disc

If you are using an Apple CD-ROM drive, you should first start up your computer from the CD, then install the software. Follow these steps:

- 1) Insert the CD-ROM disc in the CD-ROM drive.

If you are using an external CD-ROM drive: Turn on the CD-ROM drive and insert the CD before starting your computer.

If you are using an internal CD-ROM drive that uses a caddy: Insert the CD before starting your computer.

If you are using an internal CD-ROM drive that does not require a caddy: Turn on the computer, insert the CD, and then turn off your computer.

- 2) Turn on your computer.

If you are using an Apple CD-ROM drive, hold down the C key on your keyboard until you see the Welcome to Macintosh message.

NOTE: This startup procedure will not work on all computers and CD-ROM drives. See the SimpleText documents in the Before You Install folder for late-breaking information.

- 3) Open the Install System Software folder on the CD.
- 4) Follow steps 3-8 in the previous section, "From Floppy Disks."

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20060



Tech Info Library

52xx/62xx Diagnostic Utility & 5xxx/6xxx Tester: Difference 6/96

Revised: 11/12/96
Security: Everyone

52xx/62xx Diagnostic Utility & 5xxx/6xxx Tester: Difference 6/96

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Article Created: 19 June 1996

TOPIC -----

When I attempt to run the 52XX/62XX Diagnostic Utility on my Macintosh Performa 6290, a message appears stating: Sorry this application runs on a Macintosh 5200 or 6200 series computer. What does this mean? I thought this application was provided by Apple to see if the computer qualifies for the Repair Extension Program.

DISCUSSION -----

It appears that you are confusing two different diagnostic utilities that Apple has provided for some Power Macintosh and Performa computers: the 52xx/62xx Diagnostic Utility and the 5xxx/6xxx Tester. Although the names of these utilities are similar, they are used to test for different issues in specific computers.

The 52xx/62xx Diagnostic Utility was made available to detect an issue with a small number of PowerPC 603 microprocessors used in ONLY Macintosh Performa 5200, 6200, and Power Macintosh 5200/75 LC computers. Only computers within a specific serial number range were potentially affected by this issue. The Diagnostic Utility was posted on the online services, but it has since been removed with the posting of the 5xxx/6xxx Tester.

The 5xxx/6xxx Tester should be used to test for known component issues that may cause system freezing in ALL Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers, including the Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this program because Apple corrected all the known issues with this product prior to manufacturing.) The 5xxx/6xxx Tester is available on the online services.

For additional information about the 52xx/62xx Diagnostic Utility, 5xxx/6xxx

Tester and related issues, search in the Tech Info Library using the search string "5200 and issue" to locate following Tech Info Library articles:

- "Macintosh 5200/6200: Microprocessor Issue"
- "Macintosh 5xxx/6xxx Tester: Read Me"
- "Pwr Mac 5200/5300/6200/6300:Rep. Ext. Pro. Fact Sheet/Q&A"
- "Macintosh 5200/5300/6200/6300: Repair Extension Program"

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20061



Tech Info Library

About Macintosh System 7.5 Read Me (6/96)

Revised: 6/28/96
Security: Everyone

About Macintosh System 7.5 Read Me (6/96)

Article Created: 19 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the About Macintosh System 7.5 ReadMe file.

DISCUSSION -----

Congratulations on upgrading your computer to System 7.5, Version 7.5.3. This document adds to and updates the information that came with your upgrade kit. It is a good idea to read this document now, and keep a copy handy for future reference.

If your computer is connected to a printer, choose Print from the File menu to print a copy of this document. When you are finished reading and printing, choose Quit from the File menu to quit the SimpleText application program.

Contents
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Tips

- Using the Installer
- General information about system software version 7.5.3
- Using a LaserWriter LS
- Using the Recent Documents command in the Apple menu

New Features in System Software Version 7.5.3

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- Ethernet address
- AppleVision
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- Sound and speech
- Problems starting your computer
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- AppleShare and Speed Copy
- Novell Netware
- Drive Setup
- Conflict Catcher
- Daystar Accelerator Cards
- SAM
- PowerBook-related problems
- DOS compatible-related problems
- CD-ROM related problems

Tips

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Using the Installer

- If you use the Custom Install option to install a system for Any Macintosh, two updated enablers are installed. This is normal for the Any Macintosh option. Do not delete one or both of these enablers.
- If you use the Custom Install option to install a system for Any Macintosh, the Monitors & Sound control panel, the Monitors control panel, and the Sound control panel are all installed. This is normal for the Any Macintosh option, as some computers use the Monitors & Sound control panel, and some use the separate Monitors control panel and Sound control panel.
- If you install system software version 7.5.3 on a Quadra 630, the Screen control panel is installed even though this control panel will not work on your computer.
- If you install system software version 7.5.3 on a Power Macintosh 6100, the AutoPower On/Off and the CPU Energy Saver control panels are installed even though these control panels will not work on your computer.

General information about system software version 7.5.3

System software version 7.5.3 provides the enhancements introduced in System 7.5, System 7.5 Update 1.0, System 7.5 Update 2.0, and System 7.5.3 Revision 2.

The Installer places the latest versions of all components it finds on the disk it is updating, including any components that you disabled using the Extensions Manager. After you run the Installer, the updated components will be in the same folders as they were before you installed this system software version. For example, new versions of disabled extensions will be in the Extensions (Disabled) folder, and new versions of disabled control panels will be in the Control Panels (Disabled) folder.

The file called System 7.5 Update replaces the enabler on all computers capable of running system software versions 7.5 and/or 7.5.1. Computers that did not previously need an enabler to work with system software versions 7.5 and 7.5.1

still need the System 7.5 Update file since it contains most of the fixes delivered in this update.

The file called System 7.5.2 Update replaces the enabler file on all computers capable of running system software version 7.5.2.

This system software version includes all of the fixes included with the previously released 7.5.2 Printing Update, the PowerBook 5300 System Software Update, the PowerBook 2300c Update, System 7.5 Update 2.0, and System 7.5.3 Revision 2. You do not need these updates if you install this system software version.

After you install this software, the About This Macintosh window says "System Software 7.5.3." The window also says "Revision 2".

Using a LaserWriter LS

Many LaserWriter LS users are unaware that this printer is supported by the LaserWriter 300 driver. To make this clear, this release will install this driver as the LaserWriter 300/LS. You must select LaserWriter 300/LS from the Chooser before you can print using this driver.

Using the Recent Documents command in the Apple menu

You can easily open any of your most recently used documents by choosing the Recent Documents command in the Apple menu, then choosing a document from the sub menu. However, this feature can increase the time it takes to open some applications. This occurs because the recent-documents tracking includes all files that are opened—even those opened by an application as part of its launch sequence (such as drop-in filters used by desktop publishing packages). You can reduce the increased opening time by turning off the recent-documents tracking. You can either:

- turn off "recent documents" tracking in the Apple Menu Options control panel
- turn off Apple Menu Options in the Extensions Manager

New features in system software version 7.5.3

If you are already familiar with an earlier version of System 7.5, you should notice greater stability and performance on your computer once you install version 7.5.3. You should also note the following new features:

- Open Transport v.1.1, a major re-implementation of the network system software for use on all 68030, 68040, and PowerPC-based computers, except the desktop 5200, 5300, 6200, and 6300 series computers. If you chose the Easy Install option, Open Transport will be turned on only if you were using it before you installed the new system software version. For more information, see the Open Transport Information folder, inside the Apple Extras folder.
- The Network Software Selector (NSS) enables users of most 68030, 68040, and

early PowerPC-based computers to choose between Open Transport networking software and classic AppleTalk if both are installed. (You must restart the computer for the change to take effect.) PCI-based computers support only Open Transport. NSS is in the Apple Extras folder; information on using it is built into the application.

NSS is intended to ease the transition to Open Transport by allowing you to use the older networking software if there is a compatibility problem with an application and Open Transport. Once the problem is resolved, you should switch back to Open Transport.

NOTE: Because MacTCP is incompatible with Open Transport v.1.1, MacTCP is disabled any time Open Transport is selected using the Network Software Selector. (Open Transport uses the TCP/IP control panel instead of MacTCP.) If, however, you reselect classic AppleTalk, MacTCP will be enabled again, but you will need to re-enter the IP settings in the MacTCP control panel.

- For users of the older networking software, this update includes MacTCP 2.0.6, which

- shortens retransmission delays
- prevents potential out-of-memory errors
- makes configuring communications easier
- gives users more control over which servers to contact and in what order

NOTE: If MacTCP was not previously installed, then you will need to use the Custom Install option to install it. (IS THIS CORRECT?)

- When you rebuild the desktop, comments typed in a file's Get Info window are no longer deleted.

- The Name field (used in Finder windows set to one of the list views) is wider, allowing you to see more characters in file names.

- If you're using an alias to connect to a server and your password has expired or needs to be changed, you'll see a message that the password needs to be changed.

- PowerPC-based computers with PCI expansion slots now use the Monitors & Sound control panel, instead of the Sound & Displays control panel, to control monitor and sound settings. You can do a custom installation to install the Sound control panel if you need it for older applications. (The Monitors & Sound control panel works only on PCI-based computers.)

- The Memory control panel now uses a larger default setting for the disk cache to increase performance.

- When you open an application by double-clicking a document, you can set the default location of saved items to the folder containing the document you opened, instead of the Documents folder or the folder containing the application. You set this preference by turning on the "Folder that is set by the application" option in the General Controls panel.

- CloseView no longer uses keyboard shortcuts that were already used by the Finder. The new keyboard shortcuts for CloseView are:
 - Command-Option-K: turns CloseView on or off
 - Command-Option++ (the plus sign): increases magnification
 - Command-Option-- (the minus sign): decreases magnification
- SimpleText version 1.3.1 supports QuickDraw 3D.
- When file sharing is turned on, removable disks and CD-ROM discs are automatically shared (except for audio CDs, which will no longer be shared). To eject a removable disk or CD-ROM disc, you no longer have to turn off file sharing, as long as no other user is currently connected to that volume.
- The Power key can now be used to turn the computer off. To shut down the computer, press the Power key. When the dialog box appears, you can shut down your computer, restart your computer, put it to sleep (if your computer supports sleep), or cancel the shutdown. PowerBook 100 series computers do not have a Power key on their built-in keyboard, but if you attach an external keyboard, you can use the keyboard's Power key to turn off the computer. This feature is not supported on the Macintosh Plus.
- A new AppleScript automated task-Share a Folder (No Guest)-lets you automatically share a folder with the guest access disabled.
- Launcher version 2.8 includes the following fixes and enhancements, introduced in System 7.5 Update 1.0:
 - Supports Macintosh drag and drop, making it easier to add or remove items.

To add an item: Open the Launcher and drag the item into the Launcher window or onto a category button. The system creates a new Launcher button for the item by placing an alias in the Launcher Items folder. The original item remains on your hard disk.

To remove an item from the Launcher: Hold down the Option key and drag the button out of the Launcher.

To move a Launcher button to a new category: Hold down the Option key and drag the button to a category button along the top of the Launcher window.

To open a file using the Launcher: Drag the file's icon onto a Launcher button that represents an application program. For example, you can open a SimpleText file by dragging its icon onto the SimpleText button. If the program the button represents can open the file, the button is highlighted when you drag the file to it.

To put a file into a folder: Drag the file's icon onto the Launcher button that represents the folder.

To resize the currently visible Launcher buttons: Hold down the Command

key and click inside the Launcher window. Then choose a new size from the pop-up menu.

To open a category button's folder (located in the Launcher Items folder): Hold down the Option key and click the category button.

Known problems and their workarounds

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Ethernet address

PowerPC-based computers with PCI expansion slots might have a different physical Ethernet address after you install this system software version. This software fixes a bug that caused an incorrect physical Ethernet address to be used in environments where TCP/IP addresses are obtained using BootP, DHCP, or RARP. To see the new Ethernet address after you install this software, open the File menu in the AppleTalk or TCP/IP control panel and choose Get Info. If you install this software and are no longer able to use your TCP/IP-based applications, contact your network system administrator.

AppleVision

If you use AppleVision software, use version 1.0.2 or later. Earlier versions of AppleVision are not compatible with system software version 7.5.3. If you have a 1710AV monitor and a PCI-based computer, use AppleVision 1.0.4 and the Monitors & Sound control panel. If you have a 1710AV monitor and a non-PCI-based computer, use AppleVision 1.0.2, the Sound control panel, and the Monitors control panel. When you install this system software, the correct control panels should be installed.

Apple Video Player

Apple Video Player displays an incorrect dialog box if it's opened on a computer that does not have video-in capability. Apple Video Player displays a message that the Video Startup extension was not installed properly instead a message that video-in is required for the application to run.

Printing problems

- If you choose the Easy Install option, your printer driver will be updated but no new printing software will be installed. To obtain all of the most recent printer drivers after you do an Easy Install, choose Custom Install. Then check the Printing checkbox and click Install.

- If, when you try to print, you see a message that your printing preferences are missing or damaged, or you see a message telling you there is not enough memory, open the Chooser and select a printer.

- Some versions of the LaserWriter driver (version 7.2 and earlier) and the QuickDraw GX printer drivers still have the problems that interfere with PCI-based computers trying to print on a busy printer or trying to print large documents. If you experience these problems, select the LaserWriter 8.3.2 driver

from the Chooser.

Energy Saver control panels

- Two different control panels are named "Energy Saver." The older version worked by dimming the external screens of certain computers. The newer Energy Saver, which works differently, works only on PowerPC computers with PCI expansion slots.

The universal System Folder that can be created with this release (using the Any Macintosh choice in the Custom Install option) only contains the newer Energy Saver. If your universal System Folder requires both versions of the Energy Saver, do the following:

- 1) Rename the newer Energy Saver.
- 2) Use the Custom Install option to install the older Energy Saver.

Sound and speech

- HyperCard version 2.3.3 or earlier does not record sound properly on computers with PCI expansion slots. Other sound-recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

- If you have a Macintosh Centris 660AV, Quadra 660AV, or Quadra 840AV, some system alert sounds may not play correctly with the alert volume turned down. To avoid the problem, keep the alert volume turned all the way up and adjust the Built-In system volume as follows:

- 1) Open the Sound control panel.
- 2) Choose Volumes from the pop-up menu.
- 3) Adjust the volume.

Problems starting your computer

If your computer has a 68000 processor and the computer won't start up, try pressing the Shift key (to turn off extensions) while you restart. If there is a "Color StyleWriter 2000 CMM" file in your Extensions folder (inside the System Folder), take this file out of the Extensions folder and restart your computer. (To use the Color StyleWriter 2000 series printer, you need a 68020 or higher processor.)

- Speech version 1.4.1 can cause a Macintosh Plus (a model which does not support speech) to hang during startup. If your Macintosh Plus hangs during startup, do the following:

- 1) Restart the computer while holding down the Space bar.
- 2) When the Extensions Manager dialog box appears, turn off Speech.

SCSI Probe

SCSI Probe's optional extension *command space* will freeze on shutdown.

AppleShare and Speed Copy

There is an incompatibility between AppleShare Workstation software version 3.6.1 and Connectix Speed Copy (part of Speed Doubler version 1.1 or earlier). Use the Extensions Manager to turn off Speed Copy before you install this system software version, and contact Connectix to get the latest version of Speed Doubler. (You can contact Connectix at <http://www.connectix.com>, 415-571-5100, or 800-950-5880.)

Novell Netware

The Ethernet Compatibility extension version 1.0.3 is installed with this system software to fix a problem in the system shutdown code that affected PCI computers connected to certain networks, such as Novell Netware. A side effect of this fix is a two-minute delay in shutting down the computer.

Drive Setup

If, when using Drive Setup on some IDE hard drives, the "Update driver," "Customize volume," and "Test disk" options are dimmed, back up all data on the IDE disk onto another disk, and use Drive Setup to reinitialize the IDE disk.

Conflict Catcher

When using Conflict Catcher, a disabled extension may be moved to the top level of your hard disk. If this happens and you try to turn on the extension in the Extensions Manager control panel, you will not be able to turn it on, even though it appears in the list.

Daystar Accelerator Cards

If you have a Power Macintosh Upgrade Card and a Daystar accelerator card installed, the Power Macintosh Card control panel will be installed, even though it is not applicable to your computer.

SAM

SAM needs to be 4.0.8 or later, which is also true for System 7.5.2.

PowerBook-related problems

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- If you have a PowerBook 190 with Open Transport active and are using the IR port, networking may not work after you restart the computer. Try putting the computer to sleep and waking it up, or choosing the printer/modem port and then switching back to the IR port.
 - If you are making disks from the disk images included on the CD, they may not work correctly with PowerBook 5300 and 190 series computers. To use such disks on a PowerBook 5300 or 190 series computer, make sure you make the disks on that computer.
 - If you copy the Installer to a PowerBook, and then use that PowerBook in SCSI disk mode to install System 7.5.3 on another computer, it will install the

appropriate system software for the computer your PowerBook is connected to in SCSI disk mode, not for the PowerBook.

DOS-compatible-related problems

- On DOS-compatible computers, CD-ROM Setup version 5.0.4 or later does not recognize DOS-formatted CDs, unless the CD is inserted in the computer when you turn the computer on.
- When used with SerialDMA, DOS Compatibility software will not be able to use hardware handshaking on the PC serial port.

CD-ROM related problems

- You may have problems starting your computer from the System 7.5, Version 7.5.3 CD, or mounting the CD on your computer if you have an older computer, an older CD-ROM drive, or a non-Apple CD-ROM drive. If this happens, try starting up from the appropriate Disk Tools disk, then reinsert the CD, and install the software from the CD.
- The CD that comes this kit may not be automatically ejected from the CD-ROM drive when you restart your computer. If this happens, manually eject the CD.
- Digital audio recording and playback can occasionally "skip" if virtual memory is turned on. To reduce this skipping, turn off virtual memory.

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20063



Tech Info Library

Color OneScanner 600/27: Expected Lamp Life (6/96)

Revised: 6/20/96
Security: Everyone

Color OneScanner 600/27: Expected Lamp Life (6/96)

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Article Created: 20 June 1996

TOPIC -----

What is the expected life of the scanner lamp used in the Color OneScanner 600/27?

DISCUSSION -----

The lamp in the Color OneScanner 600/27 is a Xenon Lamp (white) and is designed to last for 100,000 scans or 5 years, which ever comes first. The lamp is not available seperately as a replacement part, but is part of the Optical Assembly, Apple Service P/N: 661-1084.

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Tech Info Library Article Number:20065



Tech Info Library

Apple Remote Access Client 2.1: Description (6/96)

Revised: 6/20/96
Security: Everyone

Apple Remote Access Client 2.1: Description (6/96)

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Article Created: 20 Jun 1996

TOPIC -----

This article describes Apple Remote Access (ARA) Client 2.1.

DISCUSSION -----

Apple Remote Access Client software provides an easy, productive, and secure way to connect a desktop Apple Macintosh or PowerBook computer to information and resources at a remote location. And because it works with all Apple Remote Access compatible servers -- including the Apple Remote Access MultiPort Server and Personal Server software -- it lets you choose the level of server support you need, whether you belong to a small workgroup or a multinational corporation.

Apple Remote Access Client is designed with efficiency and productivity in mind. It installs in minutes and is remarkably easy to use, minimizing the need for ongoing support. For example, the software's built-in DialAssist technology makes dialing back to the office network simple, even for international travelers. It lets you build dialing sequences that help mask the complexities of the worldwide telephone system -- so you can connect easily from anywhere in the world. And Apple Remote Access Client has features that help you manage everything from repeat connections to connection time.

In addition, because it supports the Mac OS, Apple Remote Access Client software lets you work with such familiar features as the Chooser, the Finder, and the Alias Manager. In short, it provides everything Macintosh or PowerBook users need to help them get their work done easily and efficiently -- wherever they are.

Features

Ease of use

- Lets you get started in only minutes
- Allows you to access services remotely, in the same intuitive way as you

work with services locally

- Provides built-in context-sensitive help

Adaptability

- Works with all Apple Remote Access compatible servers, including both the Apple Remote Access Personal Server and the Apple Remote Access MultiPort Server
- Supports both Apple Remote Access 1.0- and 2.0-compatible servers
- Offers a range of dialing and connection options
- Supports a variety of leading modems

Remote productivity

- Supports the Mac OS, so you can work with such familiar features as the Chooser, Finder, and Alias Manager
- Helps you manage everything from repeat connections to connection time
- Masks the complexities of the worldwide telephone system through its integrated DialAssist technology

Powerful security features

- Allows administrators to select the level of security that's most appropriate for their organization's needs (when used in conjunction with Apple Remote Access MultiPort Server software)
- Provides you with a secure method of access, whether you're connecting from home or from a hotel outside the country

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20067



Tech Info Library

Apple Remote Access Client 2.1: Technical Specifications (6/96)

Revised: 6/20/96
Security: Everyone

Apple Remote Access Client 2.1: Technical Specifications (6/96)

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Article Created: 20 Jun 1996

TOPIC -----

This article provides the technical specifications for Apple Remote Access (ARA) 2.1 Client.

DISCUSSION -----

Technical Specifications

Modem support and scripts

- Modem scripts are available for a range of Hayes-compatible modems and ISDN terminal adapters.
- Additional scripts may be available. Contact your modem manufacturer for more details.
- If you understand connection control languages (CCLs) and are an experienced programmer, you may be able to write the necessary modem script yourself. The Apple Remote Access Modem Toolkit (see ordering information) includes everything you need to write these scripts.

Dialing and connection management

- Built-in DialAssist technology automatically generates dialing sequences for mobile users
- Manual or automatic dialing
- Redial or alternate number option
- Tone and pulse dialing
- Ignore dial tone option supports nonstandard telephone equipment
- Adjustable connection reminders
- Universal disconnect desk accessory

Compatibility

- Works with any Apple Remote Access-compatible server
- Supports both Apple Remote Access 1.0- and 2.0-compatible servers

Connection types supported

- Standard telephone
- ISDN2
- Cellular(2)

(2) ISDN and cellular connections require additional Apple or third-party products.

Error detection/data compression

- Includes several built-in components that allow for error-free and optimized delivery of data
 - Smart buffering (developed by Apple Computer, Inc.) for data transfer optimization
 - MNP, an industry standard for error detection
 - V.42bis, an industry standard for data compression

Specifications

- User name maximum length: 31 characters
- Password maximum length: 8 characters

System requirements

- A Macintosh computer with at least 4MB of RAM (8MB for Power Macintosh)
- Macintosh System Software 7.1 or later (version 7.5 or later required for Power Macintosh)
- An Apple or other Hayes-compatible modem (14.4 kbps or faster recommended)
- Modem cable with hardware handshaking
- Apple Remote Access Personal Server or MultiPort Server (or any Apple Remote Access-compatible server)

Ordering Information

----- Apple Remote Access Client

Order No. 402000U

- Apple Remote Access Client software and installer
- Apple Remote Access Client User's Guide

Apple Remote Access Client

Volume licenses for Client software can be purchased for quantities of 25 or more users; consult your authorized ClarisPLUS reseller or representative for purchasing information.

Apple Remote Access MultiPort Server

Order No. M5214Z/C (NuBus version)

Order No. 436000Z (PCI version)

Apple Remote Access Personal Server

Order No. 409000U

Apple Remote Access Modem Toolkit version 2.0

Order No. R0129LL/C

This product is available from APDA.(1)

(1) APDA Developer's Association offers convenient, worldwide access to over 300

Apple and third-party development tools, resources, and information for anyone interested in developing applications on Apple platforms. To order APDA products or receive a free copy of the APDA Tools Catalog, call 1-800-282-2732 (U.S.), 1-800-637-0029 (Canada), or 716-871-6555 (International).

Product specifications are subject to change. Check with your Claris reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20068



Tech Info Library

ARA MultiPort Server 2.1 PCI version: Description (6/96)

Revised: 6/20/96
Security: Everyone

ARA MultiPort Server 2.1 PCI version: Description (6/96)

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Article Created: 20 June 1996

TOPIC -----

This article describes Apple Remote Access (ARA) MultiPort Server 2.1 PCI version.

DISCUSSION -----

The Apple Remote Access MultiPort Server provides a flexible, scalable, and secure way to offer network access to large numbers of remote or mobile users. Used in conjunction with one or more Apple Remote Access Serial Cards, it allows a Macintosh computer or a Workgroup Server to support up to 16 simultaneous dial-up connections.¹ This provides an ideal solution for workgroups or entire organizations that want to enable employees to work productively and efficiently no matter where their location -- whether at home, out of town, or even out of the country.

Unlike conventional complex server software, the Apple Remote Access MultiPort Server is designed to streamline administrative tasks, while maximizing administrator productivity and control. The software installs in minutes and features sophisticated management capabilities, allowing administrators to flexibly manage and maintain connections. Adding ports is simple, and the server features an automatically generated activity log that can be exported to a variety of programs for further analysis.

On the client side, the Apple Remote Access Client software is also designed with efficiency and productivity in mind. From its single-step installation to such productivity-enhancing features as full Mac OS integration and extensive connection-management capabilities, it provides everything users need to help them get their work done easily and efficiently -- wherever they are.

Users can also be confident that their work will be secure. The Apple Remote Access MultiPort Server offers a host of sophisticated security features that allow administrators to maintain the integrity of the network. These features -- such as password aging, location validation, and the ability to filter access to

services -- make it one of the most secure remote access servers available. And because its security architecture is supported by leading third-party security vendors, administrators can choose to augment the server's built-in security features with additional challenge-and-response security modules.

Features

Ease of use

- Takes only minutes to set up a server and to add users or ports as needed
- Provides built-in context-sensitive help

Multilevel security

- Provides a variety of sophisticated security features, making it one of the most secure remote access servers available
- Is supported by leading third-party security vendors, so administrators can choose to augment its built-in capabilities with additional security modules

Scalable solution

- Allows a Macintosh computer, Power Macintosh computer, or a Workgroup Server to support up to 16 simultaneous dial-up connections(1)
- Runs on a variety of Macintosh computers, so you can choose the system that's appropriate for your needs

Powerful administrative capabilities

- Allows flexible port configurations
- Offers comprehensive user-management facilities
- Tracks resource usage and automatically generates an activity log that can be exported for further analysis

Flexible client capabilities

- Supports a variety of connections, including cellular and ISDN(2)
- Is fully integrated with the Mac OS, so remote users can work with such familiar tools as the Chooser, Alias Manager, and

(1) The Apple Remote Access MultiPort Server includes support for 6 ports and is available for Power Macintosh computers and Workgroup Servers with a PCI expansion bus (Mac OS based). Support for 12 or 16 ports requires purchase of 1 or 2 additional Apple Remote Access MultiPort Server packages respectively.

(2) ISDN and cellular connections require additional Apple or third-party products.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20069



Tech Info Library

ARA MultiPort Server 2.1.1 PCI version: Specifications (8/96)

Revised: 8/28/96
Security: Everyone

ARA MultiPort Server 2.1.1 PCI version: Specifications (8/96)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 August 1996

TOPIC -----

This article provides the technical specifications for the Apple Remote Access (ARA) MultiPort Server 2.1.1 PCI version.

DISCUSSION -----

Technical Specifications

Administrator control and monitoring

- Ability to monitor and manage server activity by port and user
- Ability to broadcast messages or send them to selected users
- Ability to adjust connection time by user
- Ability to disconnect any single user or all users

Security

- User name and password authentication
- Adjustable password length
- Filtering of network services by account
- Ability to disallow client use of Save Password option
- Account disable after specified number of password failures
- Password aging
- External security architecture (for example, for providing challenge-and-response authentication through a third-party security module)
- Callback feature that verifies the user's identity by returning calls to a predetermined phone number
- Activity log for recording user and server activities
- Administrative password option

Modem support and scripts

- Modem scripts are available for a range of Hayes-compatible modems and ISDN terminal adapters.

- Additional scripts may be available. Contact your modem manufacturer for more details.
- If you understand connection control languages (CCLs) and are an experienced programmer, you may be able to write the necessary modem script yourself. The Apple Remote Access Modem Toolkit includes everything you need to write these scripts.

Network types supported

- Support for any AppleTalk network; the most common network choices include:
 - LocalTalk
 - Ethernet
 - Token Ring

Connection types supported

- Standard telephone
- Cellular*
- ISDN*

* ISDN or cellular support requires additional third-party products.

Error detection/data compression

- Includes several built-in components that allow for error-free and optimized delivery of data
 - Smart buffering (developed by Apple Computer, Inc.) for data transfer optimization
 - MNP, an industry standard for error detection
 - V.42bis, an industry standard for data compression

Specifications

- Maximum number of simultaneous connections: 16
- User name maximum length: 31 characters
- Password maximum length: 8 characters
- Total number of user records: 8,192
- Maximum connect time: selectable
- Maximum number of activity log entries: 32,767

Licensing information

- Comes with license to install Apple Remote Access MultiPort software on a single Macintosh and to install Apple Remote Access Client software on up to six systems.
- Additional client software must be purchased or licensed separately; consult your authorized Apple reseller or representative for information.

System requirements

For the server side

- A Power Macintosh with 1 or more PCI expansion slots and at least 8MB of RAM
- Macintosh System Software 7.5 or later
- A hard disk drive, CD-ROM drive, and an Apple SuperDrive floppy disk drive

- Apple Remote Access Serial Card and Apple 6-port RS-232 Cable (included)
- One or more Hayes-compatible 9,600 bps/V.32 or higher-speed modems
- Apple Remote Access Client

For the client side

- A Macintosh computer with at least 4MB of RAM (8MB for Power Macintosh)
- Macintosh System Software 7.1 or later (version 7.5 or later required for Power Macintosh)
- An Apple or other Hayes-compatible modem (14.4 kbps or faster recommended)
- Modem cable with hardware handshaking
- Apple Remote Access Personal Server or MultiPort Server (or any Apple Remote Access-compatible server)

Ordering Information

Apple Remote Access MultiPort Server

Order No. 436000Z

- Apple Remote Access MultiPort Server software and installer on CD-ROM disc (includes support for six ports)
- Apple Remote Access Client software and installer on CD-ROM disc (with license to install software on up to four client systems); additional client software can be purchased separately
- PCI 6-port Serial Card
- Apple 6-port RS-232 Cable

Apple Remote Access Client

(single-pack)

Order No. 402000U

Apple Remote Access Client

Volume licenses for Client software can be purchased for quantities of 25 or more users; consult your authorized ClarisPLUS reseller or representative for purchasing information.

Product specifications are subject to change. Check with your Claris reseller for the most current information about product specifications and configurations.

Article Change History:

28 Aug 1996 - Changed version number.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20070



Tech Info Library

Apple Remote Access Personal Server 2.1: Description (6/96)

Revised: 6/20/96
Security: Everyone

Apple Remote Access Personal Server 2.1: Description (6/96)

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Article Created: 20 June 1996

TOPIC -----

This article describes Apple Remote Access (ARA) Personal Server 2.1.

DISCUSSION -----

Apple Remote Access Personal Server software includes everything you need to allow a Macintosh computer to communicate with another Macintosh or an entire AppleTalk network over standard telephone lines. It takes only minutes to set up and offers powerful capabilities that can help make an individual or a small workgroup of Macintosh users even more productive, no matter where they are.(1)

With Apple Remote Access Personal Server, you can work wherever you like -- at home or on the road -- and retain access to all of the resources of your office computer or network. You and your colleagues can send and receive electronic mail, collaborate on a shared project, or print to a network-connected printer. Yet doing all of this is as simple as if you were working at your office.

Getting started with Apple Remote Access Personal Server is easy. The software features single step installation that requires no special technical knowledge. And because the Apple Remote Access Personal Server adjusts automatically to your network, it leaves you free to focus on your own work instead of worrying about the details of networking.

In today's increasingly complex and mobile world, Apple Remote Access Personal Server provides convenient, direct access to information and resources at a remote location for computer users on the go. So, whether you want to share files with a neighbor or collaborate on a project with colleagues around the world, Apple Remote Access Personal Server can help you get the job done -- quickly, easily, and affordably.

Features

Ease of use

- Installs in only minutes
- Provides everything you need for both the calling and the answering Macintosh computers -- client and server software -- in one convenient package(1)
- Lets individuals or small organizations access services remotely, in the same intuitive way as they work with services locally
- Requires no specialized equipment

Adaptability

- Enables individuals or small organizations to take advantage of remote access to a single Macintosh computer or an entire AppleTalk network
- Supports a variety of leading modems
- Supports a range of network types, including LocalTalk, Ethernet, and Token Ring

High performance

- Features built-in industry standard data compression and error detection
- Provides increased efficiency, with smart buffering technology from Apple
- Is optimized for a variety of connection types

Built-in security

- Includes several security options that allow you to restrict access to information
- Generates an activity log to track usage

Flexible client capabilities

- Supports a variety of connections, including cellular and ISDN(2)
- Is fully integrated with the Mac OS, so remote users can work with such familiar tools as the Chooser, Alias Manager, and the Finder

(1) Includes software for one client. Additional client software must be purchased or licensed separately.

(2) ISDN and cellular connections require additional Apple or third-party products.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20071



Tech Info Library

Apple Remote Access Personal Server 2.1: Specifications (6/96)

Revised: 6/20/96
Security: Everyone

Apple Remote Access Personal Server 2.1: Specifications (6/96)

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Article Created: 20 June 1996

TOPIC -----

This article provides technical specifications for Apple Remote Access (ARA) Personal Server 2.1.

DISCUSSION -----

Technical Specifications

Modem support and scripts

- Modem scripts for a range of Hayes-compatible modems and ISDN terminal adapters.
- Additional scripts may be available. Contact your modem manufacturer for more details.
- If you understand connection control languages (CCLs) and are an experienced programmer, you may be able to write the necessary modem script yourself. The Apple Remote Access Modem Toolkit (see ordering information) includes everything you need to write these scripts.

Network types supported

- Support for any AppleTalk network; the most common network choices include:
 - LocalTalk
 - Ethernet
 - Token Ring

Connection types supported

- Standard telephone
- Cellular(2)
- ISDN2

Error detection/data compression

- Includes several built-in components that allow for error-free and optimized delivery of data

- Smart buffering (developed by Apple Computer, Inc.) for data transfer optimization
- MNP, an industry standard for error detection
- V.42bis, an industry standard for data compression

(2) ISDN and cellular connections require additional Apple or third-party products.

Performance

Spreadsheets, text, and files with redundant data can be compressed more efficiently than certain other files (such as programs) and can therefore be transferred at much higher rates.

Security

- User name and password authentication
- Callback feature that verifies the user's identity by returning calls to a predetermined phone number
- Activity log for recording calling and answering activities
- User account disabled after seven incorrect password attempts

Specifications

- Maximum number of simultaneous connections: (1)
- User name maximum length: 31 characters
- Password maximum length: 8 characters
- Maximum connect time: selectable
- Total number of user records: 100
- Maximum number of activity log entries: 1,000

Licensing information

- Comes with license to copy and install the Apple Remote Access Personal Server software for your own use on up to two Apple computers owned and/or operated by you.
- Additional client software must be purchased or licensed separately; consult your authorized reseller or representative for information.

System requirements

- A Macintosh computer with at least 4MB of RAM (8MB for Power Macintosh)
- Macintosh System Software 7.1 or later (version 7.5 or later required for Power Macintosh)
- An Apple or other Hayes-compatible modem (14.4 kbps or faster recommended)
- Modem cable with hardware handshaking

Ordering Information

Apple Remote Access Personal Server

Order No. 409000U

- Apple Remote Access Personal Server software and installer
- Apple Remote Access Personal Server User's Guide

Apple Remote Access Client

(single-pack)

Order No. 402000U

Apple Remote Access Personal Server

Volume licenses for Client software can be purchased for quantities of 25 or more users; consult your authorized ClarisPLUS reseller or representative for purchasing information.

Apple Remote Access Modem Toolkit version 2.0

Order No. R0129LL/C

This product is available from APDA.(1)

(1) APDA Developer's Association offers convenient, worldwide access to over 300 Apple and third-party development tools, resources, and information for anyone interested in developing applications on Apple platforms. To order APDA products or receive a free copy of the APDA Tools Catalog, call 1-800-282-2732 (U.S.), 1-800-637-0029 (Canada), or 716-871-6555 (International).

Product specifications are subject to change. Check with your Claris reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20072



Tech Info Library

System 7.5, Version 7.5.3: About Disk Tools Read Me (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: About Disk Tools Read Me (6/96)

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Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the About Disk Tools ReadMe file.

DISCUSSION -----

System 7.5, Version 7.5.3 comes with two Disk Tools disks:

- Disk Tools 1 - for 68K computers with SCSI hard disks
- Disk Tools 2 - for all PowerPC computers, and the following 68K computers that have IDE hard disks:

Macintosh LC 580
Macintosh LC 630
Macintosh LC 630 DOS
Macintosh Quadra 630 series computers
Macintosh Performa 580 series computers
Macintosh Performa 630 and 640 series computers
PowerBook 150 series computers*
PowerBook 190 series computers

If you have a 68K computer and have installed a PowerPC Upgrade Card, you should use the Disk Tools 2 disk.

If you insert one Disk Tools disk into your computer and you see an error message on the screen telling you the wrong Disk Tools disk was inserted, use the other Disk Tools disk.

Using Drive Setup

This Disk Tools 2 disk comes with a new version of Drive Setup (version 1.0.4) that fixes a problem that occurred with some types of IDE hard disks. If your

computer has an IDE hard disk, you should update your driver as part of the installation of this software. When using Drive Setup on some IDE hard disks, the "Update driver," "Customize volume," and "Test disk" options are dimmed. To use these options, back up all data from the IDE disk onto another disk, and use Drive Setup to reinitialize the IDE disk.

*Special note about PowerBook 150 series computers

You do not need to update the driver on your hard disk (as described in the user's manual) with Drive Setup. (The driver on your computer is contained in its ROM.)

Article Change History:

28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20073



Tech Info Library

System 7.5, Version 7.5.3: Installing OpenDoc Read Me (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: Installing OpenDoc Read Me (6/96)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Installing OpenDoc ReadMe file.

DISCUSSION -----

OpenDoc technology supports a new type of software called a "part." You use parts to easily add new features to your applications. You add features by dragging parts into documents created by any OpenDoc-aware application. You can also create documents entirely out of OpenDoc parts.

Installing OpenDoc

To install the OpenDoc libraries and extensions that will enable you to use OpenDoc parts, double-click the OpenDoc Installer alias.

When the Easy Install dialog box appears, click Install.

NOTE: To install OpenDoc, you must be using system software version 7.1.1 or later for a 68K Macintosh, or system software version 7.1.2 for a Power Macintosh.

Installing over previous versions of OpenDoc

Before installing over an older version of OpenDoc, turn extensions off by holding down the Shift key as you restart the computer.

Getting more information

For more information about OpenDoc and developers who are producing both OpenDoc parts and OpenDoc-aware applications, look on the World Wide Web at <http://opendoc.apple.com>.

Article Change History:

28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20074



Tech Info Library

System 7.5, Version 7.5.3: Installing PowerTalk ReadMe (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: Installing PowerTalk ReadMe (6/96)

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Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Read Me for Installing PowerTalk file that comes with System 7.5, Version 7.5.3.

DISCUSSION -----

If you have System 7.5 installed and your Macintosh has at least 8 megabytes (MB) of memory, you can install PowerTalk.

Step 1: Install PowerTalk Software

IMPORTANT: If At Ease software is installed on your computer, you must turn it off before you install PowerTalk. For instructions, see the manual that came with your At Ease software.

- 1) Quit any open application programs or desk accessories.
- 2) Locate the PowerTalk folder, and open the folder by double-clicking its icon.
- 3) Open the PowerTalk Installer by double-clicking its icon.

All PowerTalk files are compressed. The Installer program will expand them during installation. Do not drag them to your hard disk.

- 4) If you see a dialog box asking what you want to install, click PowerTalk.
- 5) When you see the PowerTalk Installer's welcome screen, click Continue.

The Install PowerTalk dialog box appears.

- 6) Make sure that the destination disk indicated on the screen is the one on which you want to install PowerTalk.

If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

- 7) Click Install.

The Installer places PowerTalk software on your hard disk. PowerTalk software includes system software (installed in your System Folder) and application programs (installed in the PowerTalk folder, inside the Apple Extras folder on the hard disk).

- 8) Follow the instructions on the screen.

On-screen messages report the installation status. It takes a few minutes to complete.

- 9) When the installation is complete, restart your computer.

If for some reason the installation was not successful, try again.

New icons on your screen

Once your PowerTalk software is installed and you have restarted your computer, two new icons appear on your screen.

The Mailbox is the place where all correspondence resides. To look at your In Box or Out Box, you open the Mailbox. (After you set up your system, the word Mailbox changes to your name.)

The Catalogs icon opens to show all the catalogs to which you have access—AppleTalk, PowerShare servers, and any other services on your network.

Step 2: Set Up Your System

PowerTalk system software provides different levels of access security. The most basic safeguard is the key chain access code. Your access code provides access to all your network servers and services with a single password. Until you set up and use your access code, your catalog and mail services are locked (inaccessible).

IMPORTANT: How you set up your system depends on whether you have access to a server (called the PowerShare server) that manages network communications. If you are not sure whether or not you have a PowerShare server account, assume that you do not.

Setting up without a PowerShare server account

PowerTalk does not require the use of a network server. When you set up without a server account, you can communicate using AppleMail or mail-capable applications.

If you don't have a PowerShare server account, follow these steps:

- 1) Choose Unlock Key Chain from the Special menu in the Finder.

If you wish, you can also open the Mailbox.

The welcome screen appears.

- 2) Read the screen and click Proceed.

A dialog box appears, asking if you have a PowerShare account.

- 3) Click No.

A dialog box appears, asking you to set your key chain access code.

- 4) Type your name and the access code you want to use.

IMPORTANT: Once your access code is set, you enter it each time your computer starts up. You can leave the access code blank, if you do not want to use a password.

Here are some tips for choosing an access code:

- It should not be your name.
- It must be at least six characters long. (The longer it is, the harder it will be to guess.)
- Mix upper- and lowercase letters and use numbers, as in "4Me!Only."
- Make it easy to remember and don't write it down.
- Keep track of which letters are uppercase—the access code is case-sensitive.

- 5) When a confirmation dialog box appears, type your access code again and click OK.

You can change your access code at any time in the PowerTalk Setup control panel.

- 6) When you see the next confirmation box, click OK.

As soon as the confirmation box closes, open your Date and Time control panel and make sure that the date, time, and time zone are all set correctly.

You now have access to PowerTalk services. The name of your Mailbox changes to show that you are its owner.

Setting up with a PowerShare server account. If you have access to a PowerShare server, follow these steps:

- 1) Choose Unlock Key Chain from the Special menu in the Finder.

If you wish, you can also open the Mailbox.

The welcome screen appears.

- 2) Read the screen and click Proceed.

A dialog box appears, asking if you have a PowerShare account.

- 3) Click Yes.

The computer searches for the PowerShare services available to you.

- 4) When the navigation dialog box appears, select the PowerShare service you want to access and click OK.

You can also double-click the PowerShare service's name.

A dialog box appears, asking for account information.

- 5) Type your name and the password of your PowerShare account as set up by your system administrator.

As a convenience to you, PowerTalk software initially sets your key chain access code to be the same as your PowerShare password. (You use your access code to open all services.) You can change your key chain access code in the PowerTalk Setup control panel.

IMPORTANT: Changing your key chain access code does not change your PowerShare password. You'll need to use your PowerShare password when you check your mail from a computer other than your own.

- 6) When you see the confirmation box, click OK.

After a moment another confirmation box appears with additional information. Click OK.

You now have access to PowerTalk services. The name of your Mailbox changes to show that you are its owner.

Step 3: Name your computer on the network

If you are on an AppleTalk network, the name of your computer appears in the AppleTalk catalog, and people can send you mail at that "address" without the need for a PowerShare server. If you name your computer clearly in the Sharing Setup control panel, people can find your address more easily. Many people use their own names in naming their computers (for example, "Sarabeth Herman's Macintosh").

To check the name of your computer, follow these steps:

- 1) Choose Control Panels from the Apple menu.
- 2) Open Sharing Setup.

- 3) Add any missing information, or change the current information by selecting and retyping.

Make sure that the name in the Macintosh Name text field is accurate; this information defines your network identity.

IMPORTANT: If you have more than one computer on the same network, be certain that the computer names are different.

- 4) Close the Sharing Setup control panel by clicking its close box.

IMPORTANT: If you want to use your AppleTalk catalog and the network, be sure that AppleTalk is turned on in the Chooser.

Turning off PowerTalk

To turn off collaboration services for an extended period, click the Off button in the PowerTalk Setup control panel and restart your computer.

When you choose this option, collaboration services won't be available at all when you restart the computer. (Your Mailbox and Catalogs will not appear on the desktop.) You'll use this option when you know that you won't be needing PowerTalk services and accounts on a particular personal computer for a while. You may also use it to save memory, since PowerTalk uses no memory when it is turned off.

To turn PowerTalk back on, open the PowerTalk Setup control panel, and click the On button. Then restart your computer.

Article Change History:

28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20075



Tech Info Library

System 7.5, v7.5.3: Before You Install QuickDraw GX (4/97)

Revised: 4/16/97
Security: Everyone

System 7.5, v7.5.3: Before You Install QuickDraw GX (4/97)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Before You Install QuickDraw GX Read Me file for System 7.5, Version 7.5.3.

DISCUSSION -----

Before You Install QuickDraw GX
=====

Printing and Faxing from QuickDraw GX

To print with QuickDraw GX, you need a QuickDraw GX printer driver for your printer.

- If you have an Apple printer, the QuickDraw GX versions of your currently installed printer drivers are installed with the QuickDraw GX software. All Apple printers (except the Apple Color Printer, and Color StyleWriter Pro) have GX drivers. The Color StyleWriter Pro will have a GX driver available soon.
- If you have a non-Apple printer, check with your Apple-authorized dealer or contact your printer vendor directly to make sure that you have the right printer driver for your printer. For printer vendor contact information, see the "QuickDraw GX Printer Driver Upgrade Information" section below.
- The AppleTelecom 2.0 package—with Express Modem and GeoPort fax drivers—is compatible with QuickDraw GX. For more information, see the "QuickDraw GX Fax Information" section later in this file.

QuickDraw GX and WorldScript I and WorldScript II

Make sure that you are using WorldScript I and WorldScript II version 7.5.1 or later. QuickDraw GX is not completely compatible with versions of WorldScript I

and WorldScript II prior to 7.5.1.

QuickDraw GX and At Ease

Make sure that you are using At Ease version 2.0.3.

QuickDraw GX Printer Driver Upgrade Information

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If you are using a non-Apple printer, use the information below to contact the vendor about a printer driver upgrade. If your printer's vendor is not listed here, see the manual that came with your printer for contact information.

CalComp

PostScript compatible printers from CalComp should work with the standard LaserWriter GX PostScript driver. If you have any problems using QuickDraw GX with CalComp products and are within the United States or Canada, call CalComp at 800-451-7568. Outside the United States or Canada, contact the office in your area as listed in an appendix of your User's Guide.

Epson America

For information about Epson QuickDraw GX drivers, call the Epson End User Support Center at 1-800-922-8911.

GCC Technologies

For information about GCC QuickDraw GX drivers and upgrade information contact GCC Technical Support at one of these numbers:

Phone Number: 617-276-8620
Fax Number: 617-275-1115
CompuServe: 67004,2302
GEnie: GCC.TECH
America OnLine: GCC TECH

GDT Softworks Inc.

For upgrade information about GDT Softworks products (PowerPrint 2.5, PowerPrint/GX 3.0, PowerPrint/LT 3.0, PowerPrint/NW 3.0, PLOTTERgeist 3.0, PowerPlot 2.0, PowerPlot/LT 2.0, StyleScript 2.0), contact GDT:

GDT Softworks Inc.
Customer Service Upgrades
4664 Lougheed Highway, Suite 188
Burnaby, BC V5C 6B7 Canada

Phone Number: 1-800-663-6222 or 604-291-9121
Fax Number: 604-291-9689
CompuServe: 72137,3246
Internet: customer_service@gdt.com

Hewlett-Packard

If you need Post-Sale Assistance, Technical Assistance, or if you have any kind of questions about H-P peripherals, contact the H-P Computer Products Customer Support Center at 208-323-2551.

For users of DeskWriter 500 series printers, the fastest way to get a QuickDraw GX printer driver is from one of these electronic on-line services:

CompuServe: HP Peripherals forum (HPPER)

Library 9

Internet: IP address - 192.6.71.2

Name - Anonymous

Password - Send User Identification

HP Download Service: 208-344-1691 (modem settings: parity, N; data bits, 8; stop bits, 1)

To receive detailed instructions on accessing these on-line services, contact HP FIRST, Hewlett-Packard's document FAX retrieval service:

Inside the U.S. and Canada: 1-800-333-1917 (Then press 1 for HP FIRST.)

Outside the U.S. and Canada: 208-344-4809

To receive a disk with the QuickDraw GX printer driver, contact the HP Software Distribution Center at 303-339-7009. A nominal charge for materials and shipping applies.

Kodak

Call 1-800-CDKODAK, for technical support. To update and provide discussion for EKC drivers and print utilities, log on to CompuServe and 'go kodak'. In the Library menu, select browse and in the browse sections, select Kodak Printers. You can download these upgrades from CompuServe!

Lasermaster

For QuickDraw GX driver updates from Lasermaster, call Lasermaster Technical Support at 612-944-8509.

Lexmark International

Lexmark/IBM customers can get the latest QuickDraw GX drivers from:

Technical Support: 606-232-3000

Lexmark Bulletin Board: 606-232-5238

Internet: anonymous ftp at ftp.lexmark.com

CompuServe: Go Lexmark

Microspot

For information about "MacPlot Raster GX" and "MacPlot Pen Plotter Professional GX" Chooser level GX drivers or upgrade information, contact the Sales Department:

Microspot
12380 Saratoga-Sunnyvale Road, Suite 6
Saratoga, CA 95070

Phone Number: 1-800-622-7568 (1-800-MACPLOT) or 408-257-4000
America OnLine: MICROSPOT1
CompuServe: 70274,3650

NEC Technologies

Contact NEC Technical Support at 800-388-8888 or use one of the following:

NEC Bulletin Board: 508-635-4706
Main Phone Number: 508-264-8000
Main FAX Number: 508-264-8673

QMS, Inc.

For assistance with QMS printers, drivers, and driver updates, call QMS Customer
Technical Assurance:

Phone Number: 205-633-4500
FAX Number: 205-633-3716

Seiko Instruments

QuickDraw GX is supported by Seiko Instruments for the ColorPoint PostScript
printer line with four drivers:

Begin_Table

Printer Names	Required GX Driver
-----	-----
ColorPoint PS, PSX or PSN	ColorPoint PS/PSX/PSN GX driver
ColorPoint PSE	ColorPoint PSE GX driver
ColorPoint PSH	ColorPoint PSH GX driver
ColorPoint PSF	ColorPoint PSF GX driver

End_Table

All driver upgrades are free and are available now:

Technical Support Department: 1-800-553-5312 (inside USA)
Technical Support Department: 408-922-5800
Seiko Bulletin Board: 408-428-9810

SuperMac Technology

For the SuperMac ProofPositive and the SuperMac Splash -- contact SuperMac
Technical Support at 1-800-541-7680.

Tektronix

In the US and Canada, call Customer Support at 1-800-835-6100 or use the following:

Fax Number: 503-682-2980

Tektronix Bulletin Board: 503-685-4504

International Customers: Please contact your local Tektronix office

Xerox

Xerox offers QuickDraw GX printer drivers for Xerox DocuTech Network Publisher Model 90 and Xerox DocuTech Network Publisher Model 135. For information on how to obtain the driver, customers can send an electronic mail message to:
GX.Roch817@Xerox.com

QuickDraw GX Fax Information

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To fax with QuickDraw GX, you need a QuickDraw GX fax driver for your modem. Use the information below to contact the vendor about a fax driver for your modem.

Apple Telecom 2.0

This package includes Express Modem version 2.0 and GeoPort version 2.0, both of which support QuickDraw GX. To order the Apple Telecom 2.0 upgrade, call 1-800-769-2775 and ask for the Apple Telecom 2.0 upgrade. You can also get the upgrade from the following online services:

CompuServe: GO APLSUP

America OnLine: keyword ftp, then connect to ftp.info.apple.com

FTP: ftp.info.apple.com

Web: <http://www.info.apple.com>

Global Village

GlobalFax version 2.5 supports QuickDraw GX. If you purchase a modem that includes GlobalFax 2.5 software, it will automatically install the GlobalFax GX fax driver as part of the standard installation. If you are using an older version of GlobalFax software, you can buy a GlobalFax 2.5 Upgrade from Global Village by calling 1-800-736-4821 or 1-408-523-1036. For more information about GlobalFax software, check Global Village forums on the following online services:

America Online: global

CompuServe: go global

Global Village BBS: 415-390-8334

Web: <http://www.globalvillag.com>

Cypress Research

If you use Cypress Research FaxPro II, call 408-752-2700 and ask for Technical Support.

STF Technologies

For information about our "FaxPrint GX" printer driver contact STF Customer Service:

Phone Number: 816-463-2021
Fax Number: 816-463-7958
Bulletin Board: 816-463-1131
CompuServe: 74740,1244 (Go STFtech)
America OnLine: STFtech

Using Fonts

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Type 1 Fonts Enabled During Installation

During installation, QuickDraw GX enables any Type 1 fonts found in the System Folder, the Fonts folder, or the Extensions folder. However, you must ensure that each Type 1 font family is in its own suitcase. The installer enabler will not enable your Type 1 fonts if multiple font families are contained in one suitcase. QuickDraw GX does the following:

- creates a new folder called •Archived Type 1 Fonts• in your Fonts folder
- moves all suitcases referring to Type 1 fonts to the •Archived Type 1 Fonts• folder
- moves all Type 1 outline font files to the •Archived Type 1 Fonts• folder
- makes a copy of the original suitcase and puts the copy in the Fonts folder
- creates one or more 'sfnt' font resources from the corresponding Type 1 outline font files and places the resources into the suitcase in the Fonts folder

The 'sfnt' (scalable font) resource was originally specified to contain TrueType font data. When QuickDraw GX enables a font, the 'sfnt' resource may contain either TrueType font data or PostScript Type 1 font data.

You can find instructions for installing QuickDraw GX in the Macintosh System 7.5 Upgrade Guide.

Adobe Type Manager version 3.8.2

ATM version 3.8.2 is installed with this version of QuickDraw GX. ATM 3.8.2 includes native support for Power Macintosh computers.

Type 1 fonts will display and print properly only if ATM is installed and turned on. As with previous versions, ATM 3.8.2 rasterizes Type 1 font data from the POST resource in conventional outline font files (file type LWFN). In addition, ATM 3.8.2 rasterizes Type 1 font data from the 'sfnt' resource in suitcase files (file type FFIL). ATM 3.8.2 does not include font substitution capability.

Enabling Type 1 Fonts After Installation

You may need to enable Type 1 fonts that are not located in the System Folder, the Fonts folder, or the Extensions folder. Or you may need to enable Type 1 fonts installed after you install QuickDraw GX. To enable Type 1 fonts, use the Type 1 Enabler (one of the QuickDraw GX Utilities). You must ensure that each Type 1 font family is in its own suitcase. The Type 1 Enabler will not enable your Type 1 fonts if multiple font families are contained in one suitcase.

To install the QuickDraw GX Utilities and enable Type 1 fonts, see the instructions in Chapter 3 ("Installing QuickDraw GX") of the Macintosh System 7.5 Upgrade Guide.

The Type 1 Enabler supports only Type 1 fonts. If the Type 1 Enabler program encounters a suitcase containing Type 3 fonts, it displays the message "Contains a Type 3 font program" and does not enable the suitcase.

The Type 1 Enabler does not enable hybrid fonts. If you see the message "Contains a hybrid font program (see README file for details)" when the Type 1 Enabler attempts to enable Optima or ITC Eras, it may be because you have an old version of these fonts. These fonts cannot be enabled because they are hybrid fonts. If you are a registered owner of Optima or ITC Eras, call Adobe Systems Technical Support to obtain an upgrade to the non-hybrid versions of these families.

Removing Duplicate Fonts

To make sure that QuickDraw GX properly manages currently installed fonts, you should make sure you have no duplicate fonts installed in the System Folder. Remove any duplicates that you find.

Article Change History:

16 Apr 1997 - Removed reference to on line service.
28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20076



Tech Info Library

System 7.5, Version 7.5.3: PowerPC/PCI Printing Read Me (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: PowerPC/PCI Printing Read Me (6/96)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the PowerPC/PCI Printing ReadMe file which comes with System 7.5, Version 7.5.3.

DISCUSSION -----

Important Information About Printing with a PowerPC PCI-Based Computer on non-Apple Printers

PowerPC-based computers with PCI expansion slots may have difficulty printing to some third party network printers or print spoolers in certain network configurations. When printing to one of these devices, your computer may freeze or never complete printing, and you may need to restart your computer or cancel the printing job.

LaserWriter 8.3.4 addresses this problem.

When it's available, LaserWriter 8, version 8.3.4 can be obtained at:

http://www.support.apple.com/wwwdocs/apple_sw_updates.html.

Article Change History:
28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20077



Tech Info Library

System 7.5, Version 7.5.3: What's New in Version 7.5.3 (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: What's New in Version 7.5.3 (6/96)

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Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the What's New in Version 7.5.3 Read Me file.

DISCUSSION -----

If you already have System 7.5 and are installing to update to version 7.5.3, the following new features are available (either with the Easy Install option, or for OpenDoc, with its own Installer):

- All previously-installed system software components are updated to the latest versions, including any components that you disabled using the Extensions Manager. You will also find performance improvements for some PowerPC-based computers. Some of these improvements are due to the addition of more native system software components, including Apple Guide, the Resource Manager, and the SCSI Manager.
- When dragging icons on PowerPC computers, you will see a translucent image of the icon instead of an outline.
- A new version of Drive Setup (version 1.0.4) fixes a problem that occurred with some types of IDE hard disks. If you use an IDE (ATA) hard disk, you should update your driver as part of the installation of this software. When using Drive Setup on some IDE hard disks, the "Update driver," "Customize volume," and "Test disk" options are dimmed. To use these options, back up all data from the IDE disk onto another disk, and use Drive Setup to reinitialize the IDE disk.
- Open Transport networking software provides improved network flexibility and performance. Open Transport is available on all computers with 68030, 68040, or PowerPC processors, except for the desktop 5200, 5300, 6200, and 6300 series computers. Open Transport may require more RAM than classic AppleTalk.

After you install system software version 7.5.3, Open Transport will be turned

on only if you were using it before you installed the new system software. You can turn on Open Transport with the Network Software Selector program (in the Apple Extras folder after you install the new system software).

For more information, see the Open Transport Information folder, inside the Apple Extras folder.

- Text-to-Speech software is automatically installed. If you don't use this software, you can use the Extensions Manager to turn off MacInTalk (version 2 or 3) and the Speech control panel.

- You have the option to install OpenDoc, a new plug-in software architecture for the Mac OS. OpenDoc technology supports a new type of software called a "part." You use parts to easily add new features to your applications. You add features by dragging parts into documents created by any OpenDoc-aware application. You can also create documents entirely out of OpenDoc parts. A variety of these parts will be available from both Apple and third-party sources, including parts for placing Internet resources directly into documents. No parts come with this upgrade kit.

- When you rebuild the desktop, comments typed in a file's Get Info window are no longer deleted.

- Many previously-released fixes are also included in this system software version, including those in the 7.5.2 Printing Update, the PowerBook 5300 System Software Update, the PowerBook 2300c Update, System 7.5 Update 2.0, and System 7.5.3 Revision 2.

For an overview of all the features in System 7.5, see the manual that came with your upgrade kit.

Article Change History:

28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20078



Tech Info Library

Power Macintosh 5400: Compatible w/ QuickTime Conf.? (6/96)

Revised: 6/20/96
Security: Everyone

Power Macintosh 5400: Compatible w/ QuickTime Conf.? (6/96)

=====

Article Created: 20 June 1996

TOPIC -----

I am attempting to install QuickTime Conferencing 1.0.2 (from the QuickTime Conferencing 1.0 CD) on my Power Macintosh 5400/120 computer. Each time I do so, an error message appears reporting that Network Software Installer 1.5 or later is required. However, when I then attempt to install Network Software Installer 1.5, another message appears stating: The file 'Network' on disk 'Macintosh HD' cannot be replaced by the Installer. No installation will take place. Please move the file to another folder and try again."

I cannot locate a file called "Network" on my hard drive, so I am unable to perform the installation. What can I do? Is QuickTime Conferencing compatible with the Power Macintosh 5400/120?

DISCUSSION -----

QuickTime Conferencing v1.0.2 is not compatible with the Power Macintosh 5400/120. Instead, you should install QuickTime Conferencing v1.0.3, which is in the Apple Extras folder on the hard drive of the Power Macintosh 5400 Series CD.

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Tech Info Library Article Number:20079



Tech Info Library

Mac System 7.5.3: About the Control Panels Folder ReadMe (6/96)

Revised: 10/14/96
Security: Everyone

Mac System 7.5.3: About the Control Panels Folder ReadMe (6/96)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the About the Control Panels Folder Read Me file.

DISCUSSION -----

Macintosh System 7.5.3, What's Inside the Control Panels Folder?

About this document

If you're curious about the contents of the Control Panels folder, this document provides a brief description of each control panel. You can use these descriptions to help determine which control panels you may need and which ones you may not need.

What is a control panel?

A control panel is a small piece of software that allows you to change your computer's settings to meet your needs. For example, you can change the pattern or color of your computer's desktop using the Desktop Patterns control panel.

You can use the Extensions Manager control panel to turn off any control panel you don't need on your computer.

Depending on the type of computer you have, the contents of your Control Panels folder may vary. You might have control panels that were added by third-party applications, and you don't need all the control panels described below. For complete instructions on using control panels, see Macintosh Guide, available in the Guide (question mark) menu when the Finder is the active program.

- Apple Menu Options: You can turn the submenus available in the Apple menu (for recently used documents, programs and servers) on or off. You can also set the number of items that will appear in the menus. Works on all Mac OS-based

computers that use System 7.5.

- **AppleTalk:** You can specify AppleTalk settings (such as connection port and zone) for use with Apple's Open Transport networking. When you install Open Transport, the Network and MacTCP control panels are replaced with the AppleTalk and TCP/IP control panels. Works on all Mac OS-based computers that support Open Transport.

- **ATM GX:** Makes your Type 1 fonts look sharp and clear at any point size—both on your screen and on paper. Improves the output of QuickDraw printers, such as the ImageWriter and StyleWriter series. Works on all Mac OS-based computers that use System 7.5

- **Auto Power On/Off:** You can specify dates and times for your computer to automatically turn on or off, set a warning interval before turning off, and specify that your computer automatically restart after a power failure. Works only on computers that can be turned on from the keyboard (does not work on Macintosh PowerBook 500 models).

- **AutoRemounter:** You can turn off the Losing Network Services message that appears when your PowerBook sleeps. You can also automatically reconnect your computer to any shared disks that were disconnected when your PowerBook went to sleep. Works on all Macintosh PowerBooks except models 100, 140, 145, 145B, and 170.

- **Brightness:** You can adjust screen brightness. Works on Mac OS-based computers with onscreen brightness control, such as the Macintosh Classic and Classic II.

- **Button:** You can disable the built-in volume and contrast buttons on the front of your computer. Useful in classroom situations with young students. Works on the Macintosh Performa and Macintosh LC 500 series of computers.

- **Cache Switch:** You can turn processor caching for 68040-based Mac OS-based computers on or off. For compatibility reasons, processor caching may need to be turned off for some applications. Works on all 68040-based Mac OS computers, such as the Macintosh Quadra, Macintosh Centris, and Performa 400/500 models.

- **Color:** You can set the color of highlighted text and window borders. Works on all Mac OS-based computers that use System 7.5 and have a color monitor.

- **CloseView:** You can magnify your computer display for easier viewing. Works on all Mac OS-based computers.

- **ColorSync System Profile:** Part of the ColorSync system that provides consistent color across various types of equipment (printers, scanners, monitors, and so on). In the control panel, you can view and select ColorSync profiles. Works on all Mac OS-based computers that support ColorSync.

- **Control Strip:** You can display or hide the Control Strip, and specify a font for Control Strip menus. With the Control Strip, you can control a variety of settings directly from your desktop, such as sound volume, monitor resolution, file sharing, and so on. Works with all Mac OS-based computers that use System 7.5.

- **Date & Time:** You can set the date, time, and time zone on your computer. You can also set how dates and times are displayed. Works with all Mac OS-based computers that use System 7.5.
- **Desktop Patterns:** You can change the pattern or color of your computer's desktop. Works with all Mac OS-based computers that use System 7.5.
- **Easy Access:** You can press keys used in keyboard combinations one at a time (Sticky Keys), move the pointer using the numeric keypad (Mouse Keys), and set typing speed with audible response (Slow Keys). Works on all Mac OS-based computers that use System 7.5.
- **Extensions Manager:** You can turn your computer's system extensions on or off. Extensions include items in the Extensions folder, control panels, and other startup programs in the System Folder. Works on all Mac OS-based computers that use System 7.5.
- **File Sharing Monitor:** When file sharing is turned on, this control panel displays a list of users who are connected to your computer. Works on all Mac OS-based computers that use System 7.5.
- **General Controls:** You can set various options, including desktop hiding, Launcher visibility at startup, folder protection to prevent folders and files from being deleted, insertion point blinking rate, menu selection blinking, and the default folder that appears in the Save dialog box. Works on all Mac OS-based computers that use System 7.5.
- **Keyboard:** You can set the repeat rate and delay before repeat for your keyboard. Also lets you switch keyboard layouts. Works on all Mac OS-based computers that use System 7.5.
- **Labels:** You can customize the color and text of file labels. (You can see labels in the Finder.) Works on all Mac OS-based computers that use System 7.5.
- **Launcher:** You can open the Launcher window, where you can easily find and open programs. You can add items to the Launcher by placing an alias to your favorite applications, files, or folders in the Launcher Items folder in the System Folder.
- **MacTCP:** You can control how your computer is connected to network services (such as the Internet) that use TCP/IP protocol. Works on Mac OS-based computers that use System 7.5. Does not work with Open Transport.
- **Macintosh Easy Open:** You can customize the way a Mac OS or DOS/Windows document is translated, so you can open a document when you do not have the application that was used to create the document. Works on Mac OS-based computers that use System 7.5.
- **Map:** You can locate popular cities around the world, and display longitude and latitude coordinates and local time. Lets you set the location of your computer. Works on all Mac OS-based computers that use System 7.5.

- **Memory:** You can control memory settings, including disk cache, virtual memory, and RAM disk configuration. Works on all Mac OS-based computers that use System 7.5. Do not remove this control panel if you use a RAM disk.
- **Monitors:** You can set the number of colors or shades of gray that are displayed. Sets monitor resolution for multiple scan monitors. On some Mac OS-based computers, the Monitors control panel is replaced by the Monitors & Sound control panel.
- **Monitors & Sound:** A combined control panel that replaces the separate Sound and Monitors control panels. (It also replaces the Sound & Displays control panel.) You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on.) Works on PowerPC-based computers with PCI slots.
- **Mouse:** You can set the tracking speed and double-click speed for your mouse. Works on all Mac OS-based computers that use System 7.5.
- **Network:** You can choose between network options installed on your computer. Typical choices are LocalTalk, Ethernet, or Token Ring. Works on all Mac OS-based computers that use System 7.5. Does not work with Open Transport.
- **Numbers:** You can control how numbers and currencies are displayed on your computer (for example, where decimal points appear). Works on all Mac OS-based computers that use System 7.5.
- **PC Exchange:** Allows your Mac OS-based computer to read files from ProDOS and MS-DOS disks. You can specify the Mac OS application program used to open a DOS document. You can also use SyQuest and Bernoulli disks on your desktop. Works on all Mac OS-based computers that use System 7.5.
- **PC Setup:** You can set options for the DOS Compatibility Card. Works on all Mac OS-based computers that support the DOS Compatibility Card.
- **Power Macintosh Card:** Used with 68040-based Mac OS computers that have an expansion card with a PowerPC processor. You can select which processor to use. Works on all Mac OS-based computers with a Power Macintosh Upgrade card.
- **PowerBook:** You can set PowerBook-specific items, including hard disk sleep, system sleep, and screen dimming. You can also set processor cycling and (on certain computers) reduced processor speed. Controls backlight intensity and built-in video. Works on all Macintosh PowerBooks.
- **PowerBook Display:** You can duplicate the images on your PowerBook display on an external monitor. Useful for controlling a presentation from your PowerBook while displaying the presentation on a large room monitor. Works on the Macintosh PowerBooks 160, 165c, 180, 180c, 200, and 500 models.
- **PowerBook Setup:** You can set a unique SCSI ID number for your PowerBook when you're using SCSI disk mode. You can also specify a Normal or Compatible modem

setting for your PowerBook. Use Normal for communication applications that are compatible with the Macintosh Communications Toolbox. Use Compatible for communication applications that are not compatible with the Communications Toolbox. Works on all Macintosh PowerBook 200 and 500 models.

- **PowerTalk Setup:** You can turn collaboration services on or shut them off after a period of inactivity. You can also access your Key Chain. Works on all Mac OS-based computers that support PowerTalk.

- **Screen:** You can control brightness and contrast for a built-in monitor. Works on all Mac OS-based computers with built-in monitors, such as the Macintosh Performa 400/500 models.

- **Serial Switch:** Provides compatibility for some applications that use the printer or modem port. You can set the serial port option to Faster or More Compatible. Works on Macintosh IIfx and Macintosh Quadra 950 computers.

- **Sharing Setup:** You can set file sharing options and specify a network name for your computer. Works on all Mac OS-based computers that use System 7.5.

- **Sound:** You can set the alert sound and volume and specify a sound input and sound output source for your computer. On PowerPC-based computers with PCI slots, this control panel is replaced by the Monitors & Sound control panel.

- **Sound & Displays:** A combined control panel that replaces the separate Sound and Monitors control panels. (In System 7.5.3, Sound & Displays is replaced with the Monitors & Sound control panel.) You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on). Works on PowerPC-based computers with PCI slots.

- **Speech:** You can set options for hearing text read aloud by the computer. If you have Speakable Items software and a PlainTalk-compatible microphone, you can set options for giving spoken commands to the computer. Works on all Macintosh 660AV and 840AV computers. Also works on all PowerPC-based AV computers.

- **Startup Disk:** You can select the disk used to start up your computer. Works on all Mac OS-based computers that use System 7.5.

- **TCP/IP:** You can specify TCP/IP settings for use with Apple's Open Transport networking. When you install Open Transport, the Network and MacTCP control panels are replaced with the AppleTalk and TCP/IP control panels. Works on all Mac OS-based computers that support Open Transport.

- **Text:** You can select from the text features for the script systems installed on your computer. Works on all Mac OS-based computers that use System 7.5.

- **Trackpad:** You can set how far the pointer moves when you move your finger on the trackpad, and how fast you double-click. Works on all Macintosh PowerBook 500/5000 models.

- Users & Groups: You can specify who can access your computer's hard disk when file sharing is turned on. Works on all Mac OS-based computers that use System 7.5.
- Views: You can customize how information is displayed in Finder windows. Works on all Mac OS-based computers that use System 7.5.
- WindowShade: You can set whether to hide a window by clicking on its title bar. Works on all Mac OS-based computers that use System 7.5.

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20080



Tech Info Library

System 7.5.3: What Updates Do I Need for System 7.5.5? (1/97)

Revised: 1/27/97
Security: Everyone

System 7.5.3: What Updates Do I Need for System 7.5.5? (1/97)

Article Created: 20 June 1996
Article Reviewed/Updated: 27 January 1997

TOPIC -----

My Power Macintosh computer included System 7.5.3 pre-installed on the hard drive. However, I have heard that the pre-installed version of System 7.5.3 is not the same as the version of System 7.5.3 that you get by installing System 7.5 Update 2.0.

- 1) Does this mean I also need to install System 7.5 Update 2.0?
- 2) Do I then need to install System 7.5.3 Revision 2 as well?
- 3) Can I skip System 7.5 Update 2.0 and just install Revision 2?
- 4) What is System 7.5 Version 7.5.3?

DISCUSSION -----

- 1) Question: Does this mean I also need to install System 7.5 Update 2.0?

Answer: Although your computer has System 7.5.3 pre-installed, you should still install System 7.5 Update 2.0. System 7.5 Update 2.0 includes some additional fixes that are not included with the pre-installed version of System 7.5.3. After installing System 7.5 Update 2.0, you should then install System 7.5.5 Update.

Alternatively, you can purchase and install System 7.5 Version 7.5.3 which includes the updates and fixes found in System 7.5 Update 2.0 and System 7.5.3 Revision 2. You can then install System 7.5.5 Update.

- 2) Question: Do I then need to install System 7.5.3 Revision 2 as well?

Answer: Revision 2 is a set of six system software enhancements that improves the reliability and performance of some computers using System 7.5.2 (on PowerBook computers ONLY) and System 7.5.3. If you have one of the computers listed below, you should install System 7.5.3 Revision 2 AFTER installing System

7.5 Update 2.0. If your computer is not listed, you can still install System 7.5.3 Revision 2, but it will not provide you with any benefits. System 7.5.3 Revision 2 does not need to be installed before installing System 7.5.5 Update because the fixes from Revision 2 are in System 7.5.5 Update.

- All PowerBook systems using Connectix RAM Doubler
- All PowerBook 5300 and PowerBook Duo 2300 systems
- All PowerBook 200 or 500 Series systems which have been upgraded with the Macintosh PowerBook Processor Card Upgrade Kit with PowerPC (or upgraded with similar third party products)
- All Macintosh 7200, 7500, 7600, 8500, and 9500 systems

3) Question: Can I skip installing System 7.5 Update 2.0 and just install System 7.5.5 Update?

Answer: No. System 7.5.3 (pre-installed), System 7.5 Update 2.0, and System 7.5.3 Revision 2 do NOT contain all of the same fixes. So, if your computer requires System 7.5.3 Revision 2, then you should first install System 7.5 Update 2.0, then install System 7.5.3 Revision 2, and then install System 7.5.5 Update.

Alternatively, you can purchase and install System 7.5 Version 7.5.3 which includes the updates and fixes found in System 7.5 Update 2.0 and System 7.5.3 Revision 2. You can then install System 7.5.5 Update.

4) Question: What is System 7.5 Version 7.5.3?

Answer: System 7.5 Version 7.5.3 contains all the updates and fixes for System 7.5 into one installer that can be used on any Macintosh computer that supports System 7.5. It contains the fixes from System 7.5 Update 1.0, System 7.5 Update 2.0, and System 7.5.3 Revision 2.

System 7.5 Version 7.5.3 is not available on the online services. It is a commercial product which is available from Apple authorized resellers.

The name Unity says it all. It unites all the various flavors of 7.5.3 into one installer that can be used to install on any Mac OS computer.

For additional information about the fixes included in System 7.5 Update 2.0 and System 7.5.3 Revision 2, use the following information to search for related articles in the Tech Info Library:

Search Strings	Article Titles
"system 7.5.3 and update"	System 7.5 Update 2.0: System 7.5.3 Differences
	System 7.5 Update 2.0: What's New in This Update
"revision 2"	Mac OS 7.5.3 Revision 2: Overview & Installation

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 07 June 1996.

Article Change History:

27 Jan 1997 - Made changes to answer to question 2. on System 7.5.5 Update.
29 Oct 1996 - Updated for System 7.5.5 Update.
13 Jul 1996 - Updated information.

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Tech Info Library Article Number:20081



Tech Info Library

Mac System 7.5.3: About the Extensions folder Read Me (6/96)

Revised: 6/28/96
Security: Everyone

Mac System 7.5.3: About the Extensions folder Read Me (6/96)

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Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the About the Extensions Folder ReadMe for Macintosh System 7.5.3.

DISCUSSION -----

Macintosh System 7.5.3, What's Inside the Extensions Folder?

About this document

If you're curious about the contents of the Extensions folder, this document provides a brief description of each extension. You can use these descriptions to help determine which extensions you may need and which ones you may not need.

What is an extension?

An extension is a small file that changes how your computer operates. Unlike a control panel, you typically do not have any direct interaction with an extension. An extension makes the appropriate changes when you start your computer and remains active until you shut down your computer.

Depending on the type of computer you have, the contents of your Extensions folder may vary. You might have extensions that were added by third-party applications, and you don't need to have all the extensions described below. You can use the Extensions Manager control panel to turn off any extension you don't need.

9500 Guide Additions: Adds step-by-step instructions for using features specific to the Power Macintosh 9500 to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

A/ROSE: Allows communication between your computer's main logic board and NuBus cards that run the Apple Real-Time Operating System. Examples of such NuBus cards include the Apple Token Ring 4.16 NB card and the Apple Serial NB card.

About Apple Guide: Provides information about how to use Apple's onscreen help system. You can access About Apple Guide from the Guide (question mark) menu when the Finder is active.

AppleCD Audio Player Guide: Provides step-by-step instructions for using the AppleCD Audio Player. You can access the AppleCD Audio Player Guide from the Guide (question mark) menu, after you install and open AppleCD Audio Player.

Apple CD-ROM: Enables your computer to use an Apple CD-ROM drive.

Apple Color Printer: Enables your computer to print documents on an Apple Color Printer.

Apple Color SW Pro CMM: Contains color-matching information used by ColorSync 2.0 to maintain consistent color between documents.

Apple Guide: Adds Apple Guide functionality to your computer. Apple Guide is Apple's integrated onscreen help system.

Apple Photo Access: Part of the CD-ROM software for viewing Kodak PhotoCDs.

AppleScriptLib: Provides native support for AppleScript on PowerPC-based computers.

AppleScript: Enables automation of repetitive tasks in applications that support it.

AppleShare: Gives you access to shared disks on the network.

AppleTalk ImageWriter: Enables your computer to print documents on a networked ImageWriter II.

AppleVision Guide Additions: Adds step-by-step instructions to Macintosh Guide about how to use AppleVision displays with your computer. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Assistant Toolbox: This is the base extension for AutoRemounter. AutoRemounter works on Macintosh PowerBook computers and allows file synchronization, battery management, and easy mobile computing. It also provides support for a persistent RAM disk and deferred printing. This extension may conflict with the LaserWriter Select 310 printer software to block printing. A solution is to turn off background printing in the Chooser.

Audio CD Access: Lets you play audio CDs on your internal or external CD-ROM drive. Requires the AppleCD Audio Player or equivalent application to control the audio CD.

AV Guide Additions: Adds step-by-step instructions to Macintosh Guide about how

to use AV monitors with your computer. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

AV Setup: Used to control AppleVision displays.

Caps Lock: Provides a visual indication of the state of the Caps Lock key on a Macintosh PowerBook. When Caps Lock is turned on, an "up" arrow appears in the menu bar next to the Guide (question mark) menu. (Not needed on Macintosh PowerBook 500 series computers.)

Clipping Extension: Lets you use the drag-and-drop feature to create clipping files on your desktop.

Color Picker: Presents a standard interface for color selection. Applications can use this tool to let you choose colors.

Color SW 2000 Series CMM: Color-matching information used by ColorSync 2.0 to maintain consistent color between documents printed on a Color StyleWriter 2000 series printer and other color devices.

Color SW 2400: Enables your computer to print documents on a Color StyleWriter 2200 or Color StyleWriter 2400.

Color SW Pro: Enables your computer to print documents on a Color StyleWriter Pro.

ColorSync: Matches colors on your display with the closest matching colors on your printers, scanners, and other devices.

EM Extension: Works with the Extensions Manager control panel, which lets you specify which extensions are turned on when you start your computer.

Energy Saver Guide Additions: Adds step-by-step instructions for using Energy Saver to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Ethernet (Built-In): Used by Open Transport to allow access to the built-in Ethernet port on your computer.

EtherTalk Phase 2: Lets you connect your computer to an Ethernet network.

File Sharing Extension: Enables your computer to share files and folders with other computers on your network.

Find File Extension: Lets you search for files and view the results in a single window. If you turn off this extension and choose Find from the File menu, you'll get the System 7.1 Find dialog box instead of the Find File window.

Finder Help: Provides Balloon Help support for the Finder.

Finder Scripting Extension: Allows you to use AppleScript to automate tasks in the Finder.

Foreign File Access: Enables your computer to work with CD-ROM discs whose contents don't use the standard Mac OS file system (for example, ISO 9660 or High Sierra formats).

Graphics Accelerator: Provides video acceleration for the PCI video card.

High Sierra File Access: Part of the CD-ROM software that lets you view CDs with High Sierra file systems.

IIci/IIsi Monitors: Describes the capabilities of the built-in video card for the Macintosh IIci and IIsi. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

ImageWriter: Enables your computer to print documents on an ImageWriter or ImageWriter II connected to a serial port.

ImageWriter LQ: Enables your computer to print documents on an ImageWriter LQ connected to a serial port.

ISO 9660 File Access: Part of the CD-ROM software that lets you view CDs with ISO 9660 file systems.

LaserWriter: (version 7.2) Enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter 300: Enables your computer to print documents on a Personal LaserWriter 300, LaserWriter Select 300, or a Personal LaserWriter LS.

LaserWriter 8: (version 8.x) A PostScript level II print driver that enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter IISC: Enables your computer to print documents on a LaserWriter IISC connected to a SCSI port. Replaced by Personal LaserWriter SC.

LW Select 310: Enables your computer to print documents on a LaserWriter Select 310.

MacinTalk Pro: Lets your computer read text documents in human-like voices. Older computers (with 68030 or 020 processors) should use MacinTalk 3 instead.

MacinTalk 3: Lets your computer read text documents in human-like voices. Used by MacinTalk version 3. Computers with 68040 or PowerPC processors should use MacinTalk Pro instead.

Macintosh Guide: Contains step-by-step instructions for working in the Finder. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

MacTCP Token Ring Extension: Enables you to connect to a Token Ring network using TCP/IP protocol.

Mailbox Extension: Supports your PowerTalk mailbox. Enables the Mailbox icon to appear on your desktop.

Monitors & Sound Guide Additions: Adds step-by-step instructions for using the Monitors & Sound control panel to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

My Speech Macros: Supports the Speech Macro Editor.

Network Extension: Lets you set Personal File Sharing from the Finder.

Network Guide Additions: Adds step-by-step instructions for using your computer's network to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

ObjectSupportLib: A library developers use to support AppleScript on PowerPC-based computers.

Open Transport Guide Additions: Adds step-by-step instructions for using Open Transport to Macintosh Guide. You access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Open Tpt AppleTalk Library: Used by Open Transport for the AppleTalk communication protocol.

Open Tpt Internet Library: Used by Open Transport for the TCP/IP communication protocol.

Open Transport Library: Used by Open Transport.

OpenTptAppleTalkLib: Used by Open Transport for AppleTalk communication protocol.

OpenTptInternetLib: Used by Open Transport. for the TCP/IP communication protocol.

OpenTransportLib: Used by Open Transport.

PB 500 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 500 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 190 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 190 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 2300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 2300 to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PB 5300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 5300 to Macintosh Guide. You can access

Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Personal LaserWriter SC: Enables your computer to print documents on a Personal LaserWriter SC or a LaserWriter IISC.

Portable StyleWriter: Enables your computer to print documents on a Portable StyleWriter.

PowerBook Guide Additions: Adds PowerBook-specific topics to Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

PowerBook Monitors Extension: Describes the PowerBook built-in display. If you remove this file, your computer can still use the PowerBook video card and you can still select the number of colors your screen can display, but certain options (such as gamma settings) may not be available.

PowerPC Monitors Extension: Supports the AudioVision 14 monitor.

PowerTalk Extension: Supports PowerTalk services. Includes information used by the PowerTalk key chain.

PowerTalk Guide: Provides step-by-step instructions for using PowerTalk. You can access the PowerTalk Guide from the Guide (question mark) menu, after you install PowerTalk.

PowerTalk Manager: Manages your PowerTalk mailbox and services.

Printer Descriptions: Contains descriptions for all printers that use the LaserWriter 8 printer software.

Printer Share: Provides the ability to share non-network printers (for example, the StyleWriter II) across a network.

PrintMonitor: Controls the printing process when background printing is activated.

Quadra AV Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Centris AV computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

Quadra Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Macintosh Centris computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

QuickTime: Provides built-in multimedia support for applications.

QuickTime PowerPlug: Provides native support of QuickTime for PowerPC-based computers when used in combination with QuickTime 2.0. This extension must be

used in addition to QuickTime 2.0.

QuickTime Musical Instruments: Supports 30 Roland Standard MIDI sound samples that can be accessed by QuickTime applications with no additional MIDI equipment.

Scripting Additions: Extends the AppleScript language with special features, such as finding the date or time of day. With scripting additions installed, AppleScript acts as if these features are part of the language. Scripting additions are required only when a script uses them.

Serial (Built-In): Used by Open Transport to allow access to the built-in serial port on your computer.

Shared Library Manager: Provides native support for Open Transport.

Shortcuts: Explains common keyboard equivalents and other shortcuts to use in the Finder. You can access Shortcuts in the Guide (question mark) menu when the Finder is active.

SimpleText Guide: Provides step-by-step instructions for using SimpleText. You can access the SimpleText Guide from the Guide (question mark) menu, after you open SimpleText.

Speech Guide Additions: Adds step-by-step instructions for using speech recognition to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Speech Recognition: Provides support for speech recognition.

SR Monitor: Used to monitor and interpret speech.

Startup Tuner: Ensures correctly starting up from the disk selected in the Startup Disk control panel.

StyleWriter II: Enables your computer to print documents on a StyleWriter II. Replaced by StyleWriter 1200.

StyleWriter 1200: Enables your computer to print documents on a StyleWriter, StyleWriter II, or StyleWriter 1200.

SystemAV: Used for audio-video input.

System Speech Rules: Supports voices and speech dialects.

TokenTalk Phase 2: Used by the Apple Token Ring card.

TokenTalk Prep: Supports TokenTalk Phase II.

Tutorial Items: Provides instructions for learning basic skills on your computer. You can access the tutorial from the Guide (question mark) menu when the Finder is active.

Video Guide Additions: Adds step-by-step instructions for using video to the onscreen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

Video Startup: Used by the Apple Video Player.

WorldScript Power Adapter: Supports language kit software on PowerPC-based computers.

Article Change History:

28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20082



Tech Info Library

Macintosh System 7.5.3: About the System Folder Read Me (6/96)

Revised: 6/28/96
Security: Everyone

Macintosh System 7.5.3: About the System Folder Read Me (6/96)

Article Created: 20 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the About the System Folder ReadMe folder for Macintosh System 7.5.3.

DISCUSSION -----

Macintosh System 7.5.3, What's Inside the System Folder?

About this document

If you're curious about the contents of the System Folder, this document provides a brief description of what's inside.

Depending on the type of computer you have, the contents of the System Folder may vary. You might have items that were added by third-party applications, and you don't need all the items described below.

Finder: Displays the desktop area, where you work with files and disks, and keeps track of your files.

Apple Menu Items folder: When you place an item (folder, application, or document) in this folder, it appears in the Apple () menu. To create submenus, you can place folders inside of folders.

Clipboard: Temporarily stores the last item you cut or copied from a document.

Control Panels folder: Contains individual control panels. You use control panels to adjust your computer's settings. See the "About the Control Panels" document in the Apple Extras folder for more information.

Control Strip Modules folder: Contains modules used by the Control Strip. The Control Strip works on Macintosh PowerBooks and Mac OS-based computers that

support AppleVision displays.

Extensions folder: Contains individual extensions that modify the operation of your computer. Unlike a control panel, an extension works automatically, without your intervention. See the "About the Extensions Folder" document in the Apple Extras folder for more information.

Fonts folder: Contains font suitcases or individual font files. You can place up to 128 suitcase or font files in this folder. PostScript fonts are not included in the 128 file limit. Font suitcases can hold any number of font files, up to a limit of 16 MB.

Launcher Items folder: Contains files, folders, and applications that appear in the Launcher window.

Macsbug: A debugger used by programmers to help diagnose problems with programs, extensions, and so on. Unless you're programming, you don't need Macsbug.

Note Pad: Stores text placed on the Note Pad. (The Note Pad is available in the Apple menu.)

Preferences folder: Contains preferences files created by individual applications. A preference file determines application settings.

PrintMonitor Documents folder: Contains printer files of documents waiting to be printed (if background printing is on in the Chooser).

Scrapbook: Stores items placed in the Scrapbook. (The Scrapbook is available in the Apple menu.)

Shutdown Items folder: Contains applications or scripts that run automatically when you shut down your computer. You can add or remove items from this folder.

Startup Items folder: Contains applications or scripts that run automatically when you start your computer. You can add or remove items from this folder.

System file: Contains some system-wide resources, such as sounds and keyboard layouts.

Universal Enabler: Provides additional system software for your computer.

Article Change History:
28 Jun 1996 - Change status at product release.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20083



Tech Info Library

LaserWriter 8.4: Overview of Features & Benefits (8/96)

Revised: 8/8/96
Security: Everyone

LaserWriter 8.4: Overview of Features & Benefits (8/96)

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Article Created: 20 June 1996
Article Reviewed/Updated: 08 August 1996

TOPIC -----

This article contains an overview of the LaserWriter 8.4 software.

DISCUSSION -----

The LaserWriter 8.4 printer software ships with the LaserWriter 12/640 PS printer. This a new more powerful version of the LaserWriter driver the Mac OS.

Features
=====

- PowerPC Native.
- Improved Performance
- Single Pass Printing
- Improved User Interface
- Backward Compatible

PowerPC Native

The LaserWriter 8.4 driver is PowerPC native, allowing Power Macintosh users full benefit of the PowerPC processor.

The LaserWriter 8.4 driver also operates on 68xxx-based Macintosh computers.

Improved Performance

In tests performed by Apple on a Power Macintosh computer printing to a LaserWriter 12/640 PS, we have seen improvements in speed using LaserWriter 8.4 over previous versions of the LaserWriter driver. Using the new foreground

printing feature further increases performance compared to background printing. Tests were performed by Apple using mainstream applications and printing medium to high complexity documents.

Note:

If you are using Adobe PageMaker 6.0.1 and are printing to the Apple Color LaserWriter 12/600 PS, you may experience slower printing with LaserWriter 8.4. If this happens, Apple recommends using LaserWriter driver v8.3.4.

Single Pass Printing

With previous versions of LaserWriter software, when you printed a document, the print driver first created a spool file on the hard disk and the file was then parsed out to the printer incrementally. With single pass printing, print jobs are now sent directly to the printer, and no spool file is created on your hard disk.

This feature is very important to the graphic arts and publishing industries where a fast time to first page is very important, and their applications commonly create large spool files. Some of these spool files are larger than the remaining storage capacity of their hard disk. Single pass printing is available by selecting Foreground Printing in the Print dialog. Since Foreground printing does not create spool files, running out of disk space is no longer an issue.

Improved User Interface

The LaserWriter 8.4 provides a new and improved user interface for the print and page setup dialogs. This makes it easier to select desktop printers, and format the page for printing. When using Desktop Printing 2.0 (installed with LaserWriter 8.4), the desktop printer icons can be moved anywhere on the hard disk, and can be selected from the menu bar or control strip, as well as from the Print dialog.

Backward Compatible

All Apple LaserWriter printers--from the original LaserWriter to the Color LaserWriter 12/600 PS are supported using the LaserWriter 8.4 printing software.

Macintosh System Requirements

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- Apple Macintosh or Power Macintosh computer with 8MB of RAM.
- Hard Drive with at least 5MB of free space (for printer software and fonts)
- System Software 7.1 or later

This article was published in the 21 June 1996 issue of the Information Alley.

Article Change History:

08 Aug 1996 - Updated improved performance section.

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Tech Info Library Article Number:20084



Tech Info Library

LaserWriter 12/640 PS: Acceptable Paper Sizes & Weights (6/96)

Revised: 6/25/96
Security: Everyone

LaserWriter 12/640 PS: Acceptable Paper Sizes & Weights (6/96)

Article Created: 21 June 1996

TOPIC -----

What paper sizes and weights can I use in the LaserWriter 12/640 PS?

DISCUSSION -----

The LaserWriter 12/640 supports US Letter, A4, B5, Executive and US Legal sized paper in the standard (250 sheet) cassette. The multipurpose tray can hold 80 sheets of standard US Letter paper and other paper sizes from postcard to US Legal. An optional 500 sheet cassette is available that supports US Letter, A4, and US Legal. An envelope cassette that can automatically feed up to 50 envelopes is also available.

The LaserWriter 12/640 PS supports 16 to 28 pound laser quality bond (60-90g/m²) in the paper cassettes and up to 50 pound (190g/m²) stock when fed manually through the multipurpose tray and exited through the face-up output tray. This printer also accepts most textured and colored stock, medium-weight photocopier transparencies, and laser labels. Envelopes can be printed from the multipurpose tray or from the optional envelope cassette.

The paper you use should not scorch, melt, transfer material, or release hazardous emissions when heated to 200 C (393F) for 0.1 seconds.

Begin_Table

Paper Type	Size
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US Letter	8 1/2 x 11" (215.9 x 279.4 mm)
US Letter Small	8 1/2 x 11" (215.9 x 279.4 mm)
US Legal	8 1/2 x 14" (215.9 x 355.6 mm)
US Legal Small	8 1/2 x 14" (215.9 x 355.6 mm)
A4	8.27 x 11.69" (210 x 297 mm)
A4 Small	8.27 x 11.69" (210 x 297 mm)
A5	5.84 x 8.26" (148 x 210 mm)

Executive	7 1/4 x 10 1/2 (184.2 x 266.7 mm)
B5	7.17 x 10 1/2" (182 x 257 mm)

Envelope sizes and weights:

Envelope	Weight	Size
-----	-----	-----
Comm 10	24 lb	4 1/8 x 9 1/2" (104.7 x 241.3 mm)
Monarch	24 lb	3 7/8 x 7 1/2" (98.4 x 190.5 mm)
EuroPostcard	50lb	4.13 x 5.83" (105 x 148 mm)
DL	80g/m^2	110 x 220 mm
C5	90g/m^2	162 x 229 mm

End_Table

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Tech Info Library Article Number:20086



Tech Info Library

System 7.5, Version 7.5.3: Open Transport 1.1 Read Me (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: Open Transport 1.1 Read Me (6/96)

Article Created: 21 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Open Transport 1.1 Read Me with System 7.5, Version 7.5.3.

DISCUSSION -----

Open Transport 1.1 Read Me

Introduction

This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), use Macintosh Guide, available from the Guide (question mark) menu. For technical information about Open Transport, see "Open Transport Technical Info."

Network Software Selector

The Network Software Selector (NSS) enables users of most 68030, 68040, and early PowerPC-based computers to choose between Open Transport networking software and classic AppleTalk if both are installed. (You must restart the computer for the change to take effect.) PCI-based computers support only Open Transport. NSS is in the Apple Extras folder; information on using it is built into the application.

NSS is intended to ease the transition to Open Transport by allowing you to use the older networking software if there is a compatibility problem with an application and Open Transport. Once the problem is resolved, you should switch back to Open Transport.

NOTE: Because MacTCP is incompatible with Open Transport v.1.1, MacTCP is disabled any time Open Transport is selected using the Network Software

Selector. (Open Transport uses the TCP/IP control panel instead of MacTCP.) If, however, you reselect classic AppleTalk, MacTCP will be enabled again, but you will need to re-enter the IP settings in the MacTCP control panel.

- For users of the older networking software, this update includes MacTCP 2.0.6, which
 - shortens retransmission delays
 - prevents potential out-of-memory errors
 - makes configuring communications easier
 - gives users more control over which servers to contact and in what order

Network Interface Options

Open Transport 1.1 supports PCI bus, NuBus, communications slot, and PC-card network interface cards as well as built-in LocalTalk and ethernet network adapters. For Macintosh models without expansion options, Open Transport supports SCSI-attached network adapters.

Third party network interface options available for Open Transport include fast ethernet, ATM, and FDDI.

Compatibility

Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple Computer, Inc.
- existing applications that use MacTCP as specified by Apple Computer, Inc.
- existing devices (such as printers) that you select in the Chooser
- existing NuBus network interface cards

Open Transport is compatible with existing AppleTalk, TCP/IP LocalTalk and ethernet networks. Macintosh computers running Open Transport can be added to an existing network without upgrading other computers on the network.

Dial-up Network Connectivity

For connectivity to AppleTalk networks, Open Transport supports Apple Remote Access version 2.0.1 or later.

For dial-up connectivity to TCP/IP networks, including the Internet, Open Transport supports third party MacTCP software extensions known as Link Access Modules, or "mdevs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided through mdevs.

With the appropriate mdev installed, you use either SLIP (Serial Line Interface Protocol) or PPP (Point to Point Protocol) to connect to Internet Service Providers and other dial-up IP-access points. However, not all versions of all mdevs are supported by Open Transport 1.1. For best results, be sure to use the versions of software recommended below.

Open Transport 1.1 recognizes the following MacTCP mdevs. When installed on your system, they are available in the "Connect Via:" pop-up menu in the TCP/IP

control panel:

- FreePPP - version 1.0.4 or later
- MacPPP - version 2.1.4 SD or later (version 2.2.0 is not recommended).
- InterPPP - version 1.2.9 or later
- InterPPP II - version 1.1 or later
- InterSLIP - version 1.0.1 or later
- MacSLIP - version 3.0.2 or later
- VersaTerm SLIP - version 1.1.4 or later
- Sonic PPP - version 1.0.2 or later
- AOL Link - the most current version is recommended

In addition, there are a number of third party PPP mdevs (including Pacer PPP, FCR PPP and Tribe PPP) which have a common technology base and as a result are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect Via:" pop-up menu in the TCP/IP control panel as "TCP/IP PPP."

NFS/Share 1.3.x and 1.4 are not compatible with Open Transport. To use NFS/Share with Open Transport, you must contact Intercon to obtain a version of NFS/Share that is compatible with Open Transport.

For more information on Open Transport compatibility, contact the developer of the software you want to use.

Obtaining Connectivity Software

FreePPP is shareware and can be found on a variety of Internet sites; typically at "info-mac" mirror sites in the comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com/hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>

MacPPP version 2.1.4 is available as a part of the Apple Internet Connection Kit. For fax information in the US, contact Apple Computer Inc., at 800-462-4396. To locate an Apple reseller near you in the US, call 800-538-9696.

InterPPP, InterPPP II, and NFS/Share are commercial software products. For availability and ordering information in the US, contact InterCon Systems at 800-468-7266 or 703-709-5500.

MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the US, contact TriSoft at 800-531-5170 or 512-472-0744.

VersaTerm SLIP is commercial software developed by Synergy Software. For availability and ordering information in the US, contact Synergy at 610-779-0522.

SonicPPP is commercial software developed by Sonic Systems, Inc. For

availability and ordering information in the US, contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax).

MacPPP and FreePPP

If you experience problems using MacPPP or FreePPP when Virtual Memory is turned on, try turning off Virtual Memory. To find out how to turn off Virtual Memory, see the topic "How do I use hard disk space as memory" in Macintosh Guide, available from the Guide (question mark) menu.

PowerBooks that are updated with the PowerPC Upgrade Card

If you have a PowerBook that is upgraded with the PowerPC Upgrade Card, the AutoRemounter control panel may not work when you are using Open Transport. If you select "After Sleep" instead of "Always" in the AutoRemounter control panel, your computer will reconnect to shared volumes when you wake the PowerBook. It may take approximately 20 seconds to remount the shared volumes.

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20087



Tech Info Library

System 7.5, Version 7.5.3: Open Transp Tech Information (6/96)

Revised: 2/17/97
Security: Everyone

System 7.5, Version 7.5.3: Open Transp Tech Information (6/96)

Article Created: 21 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This article is the Open Transport Technical Information document which comes with System 7.5, Version 7.5.3.

DISCUSSION -----

Open Transport Technical Information

About This Document

This document contains technical information about Open Transport that may be useful to network administrators and managers. You do not need the information in this document in order to use Open Transport on your Macintosh computer.

Contents

Introduction
Files Added by the Open Transport Installer
What's New in Open Transport
 - Static and Dynamic AppleTalk Address Allocation
 - Use of Parameter RAM
Open Transport TCP/IP Features
 - DHCP Server Support
 - DHCP Address Lease Support
 - Windows NT Advanced Server Support
 - Local HOSTS File Support
 - Human Interface Design
 - MacTCP "Server" Addressing Support
 - MacTCP "Dynamic" Addressing Support
 - MacIP Support
 - PPP Connectivity
Application Compatibility with Open Transport

- Backward Compatibility
- Performance
- Large Datagram Support

Introduction

Apple Open Transport is the modern networking and communications subsystem for the Mac OS. It is based on industry standards and brings a new level of networking connectivity, control, and compatibility to MacOS systems, while preserving and enhancing the hallmark of the Macintosh and Mac OS built-in support for easy-to-use networking.

Open Transport is designed to make it easier and more cost-effective to develop Macintosh-based applications for a wide variety of customers and markets. With Open Transport, Mac OS has built-in networking and communications based on cross-platform industry standards including the POSIX compliant X/Open Transport Interface (XTI), UNIX STREAMS and Data Link Provider Interface (DLPI).

Applications written to support Open Transport can directly support a wide range of networking environments (serial, dial-up network, LAN, and WAN), and multiple protocols (AppleTalk, TCP/IP, serial, and others) from a common code base. This capability is sometimes referred to as transport independence.

Open Transport 1.1 includes AppleTalk and TCP/IP protocols, and developer access to serial communications. Apple and third parties are working to add support to Open Transport for Point to Point Protocol (PPP), NetWare (NCP/IPX), Windows 95 (SMB/TCP/NetBIOS), DECnet, LAT, and X.25. Some of these additional capabilities may be incorporated or bundled with future releases of Apple Open

Files Added by the Open Transport Installer

The Open Transport Installer adds the following Extension files to Mac OS System Folder:

Open Transport Library contains the Open Transport code resource for 680x0-based Macintosh systems.

Open Tpt AppleTalk Library contains the code resource for AppleTalk communication protocol for 680x0-based Macintosh systems and AppleTalk compatibility support.

Open Tpt Internet Library contains the code resource for TCP/IP communication protocol for 680x0-based Macintosh systems and MacTCP compatibility support.

OpenTransportLib contains the code resource for PowerPC-based Macintosh systems.

OpenTptAppleTalkLib contains the code resource for AppleTalk communication protocol for PowerPC-based Macintosh systems.

OpenTptInternetLib contains the code resource for TCP/IP communication protocol for PowerPC-based Macintosh systems.

Ethernet (Built-In) contains the code resource allowing access to a built-in Ethernet port.

Serial (Built-In) contains the code resource allowing access to built-in serial ports.

Open Transport Guide Additions is an Apple Guide database that adds Open Transport instructions to Macintosh Guide

Open Transport also installs the new AppleTalk and TCP/IP configuration utilities (control panels) into the Control Panels folder in the System Folder.

What's New in Open Transport

The new Open Transport/AppleTalk and Open Transport/TCP both have been implemented as Open Transport STREAMS modules and as native code on Power Macintosh computers. They support the new XTI APIs, and their shared libraries can be dynamically loaded and unloaded as needed.

Both protocols also support dynamic reconfiguration (changed settings without requiring reboot), and feature new configuration applications offering Basic, Advanced, and Administrator tools. The new configuration applications -- AppleTalk and TCP/IP -- replace the older control panel implementations -- Network, MacTCP, and AdminTCP. To enhance ease of use and backward compatibility, the new applications are stored in the Control Panels folder in the System Folder.

Static and Dynamic AppleTalk Address Allocation

Open Transport/AppleTalk includes support for assigned (manually administered) protocol addresses. This allows AppleTalk nodes to be managed using protocol address as a unique and stable identifier. It can also reduce some of the network traffic associated with AppleTalk's dynamic address assignment features (AARP).

Dynamic addressing continues to be available for those customers who prefer the automated address allocation.

Network managers who prefer to have the network infrastructure automatically assign unique protocol addresses can continue to rely on AppleTalk Address Resolution Protocol (AARP). Network managers who find advantages in having fixed and well-known protocol addresses for each end-node can implement manual addressing.

When manual addressing is selected it is necessary to allocate and assign the initial protocol addresses, which will subsequently be "locked". Some administrators may prefer to do this allocation based on a central numbering plan, creating individual configuration templates (recommended or required settings) for each user. Others may prefer to allow the network to determine the initial address configuration (i.e., use dynamic addressing once), and then lock the uniquely assigned addresses after initialization.

It is important that all nodes on each individual AppleTalk subnet (a given

cable segment assigned a unique network number or network number range) be administered consistently -- either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict between a new dynamic node acquiring an address assigned to an off-line, manually-addressed node. Administrators can enforce the addressing policy for a subnet by locking the addressing mode in the "dynamic" or in the "manual" state. As an administrative precaution, however, Open Transport/AppleTalk does continue to check for the presence of duplicate protocol addresses on the LAN when static addressing is configured.

Use of Parameter RAM

Under the classic AppleTalk networking architecture, AppleTalk's ON/OFF state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name were saved in persistent memory (parameter RAM) for reuse at boot time. To ensure backward compatibility, this information is still stored and retrieved on systems using Open Transport/AppleTalk. However, there are some changes made with Open Transport to accommodate the expanded capabilities of multiple, saved configuration files, and required network settings.

- At boot time, Open Transport reads the current AppleTalk configuration file to determine if AppleTalk should be set to ON or OFF. This value will override the value saved in parameter RAM.
- If the network interface specified in the current AppleTalk configuration file is locked (it is a required setting) and if the specified port is not available or cannot be initialized, AppleTalk compatibility will not automatically switch the port back to LocalTalk. Instead, AppleTalk will remain OFF. The user will receive a dialog notification in the event this occurs.

Open Transport TCP/IP Features

With the broad adoption of TCP/IP -- and the tremendous excitement and visibility of the Internet -- Apple has made a significant investment in bringing a workstation-class implementation of TCP/IP protocols to Mac OS. As with MacTCP, Open Transport/TCP is a full 32-bit stack. Open Transport/TCP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies;
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol;
- IP multicast, for participation as an MBone client;
- simultaneous TCP connections limited only by installed memory and processor power, for increased functionality as a Internet or other TCP/IP network server;
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR);
- support for developer access to raw IP services, as well as TCP and UDP;
- Ethernet version 2 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts;

- implicit and explicit domain name search paths, for increased control of domain name resolution; and,
- multiple IP routers with fail-over, for increased robustness in mission critical applications.

DHCP Server Support

Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport/TCP has been tested with the following DHCP server implementations:

- Competitive Automation,
- FTP Software (<http://www.ftp.com>),
- Hewlett Packard HP-UX (<http://www.hp.com>),
- Microsoft Windows NT Advanced Server,
- Silicon Graphics (<http://www.sgi.com>),
- Sun Solaris and SunOS (<http://www.sun.com>), and
- TGV (<http://www.tgv.com>).

DHCP Address Lease Support

Open Transport/TCP fully supports DHCP address leases. Open Transport/TCP will automatically attempt to renew any address lease that reaches its Renewal Interval, which defaults to half of the lease's lifetime. The Renewal Interval may be configured to a different value by making changes to the configuring DHCP server. Renewal will be attempted regardless of how many times the lease has already been renewed. Should an interface's IP address lease expire, the interface will be closed down.

Windows NT Advanced Server Support

With Open Transport 1.1, Mac OS clients are fully interoperable with the Windows NTAS DHCP server.

Macintosh clients running earlier versions of Open Transport (1.0.x) could experience some interoperability problems due to significant differences between the Microsoft implementation and that of a typical UNIX-based server.

Local HOSTS File Support

Open Transport/TCP supports a HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. This file is parsed when Open Transport/TCP is initialized. As in MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Should a HOSTS file be used, every effort should be made to keep it as small as possible, and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, Open Transport/TCP must be configured using either the Advanced or Administrator mode to select the appropriate file. The

text file must already exist, and can be created with any text editor or word processor. Also note that the HOSTS file selection is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when a user connects via Ethernet on the campus LAN and that same user when dialing-in from a remote location.

Human Interface Design

The Open Transport/TCP configuration application represents a complete overhaul of the human interface from the MacTCP software it replaces. In addition to generic new features noted elsewhere (multiple saved configurations, recommended and required settings, on-line documentation, etc.), key new features include:

- direct entry of IP addresses and subnet mask in standard "dot notation";
- explicit selection of desired configuration method, now including Manual, RARP, BootP, MacIP, and DHCP;
- support for attachment to networks using Classless InterDomain Routing (CIDR);
- support for multiple entries in the router, name server, and explicit domain search lists; and
- improved support for large AppleTalk networks when using MacIP server/gateways.

MacTCP "Server" Addressing Support

MacTCP Server mode addressing is a combination of the Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. When Server mode is selected, MacTCP uses BootP to attempt to acquire an IP address. If BootP fails to provide a valid address, MacTCP tries RARP. Whichever protocol is successful is stored as a preference, and is used first on next system startup. While this "fall-back" approach adds a degree of robustness from the user's point of view, it also adds a degree of unpredictability from a network administrator's point of view.

Based on customer feedback, Open Transport/TCP allows a network administrator to explicitly specify the single method they prefer to use. Thus while both RARP and BootP are supported, the Server mode does not appear as a choice in the Open Transport/TCP configuration utility.

MacTCP "Dynamic" Addressing

Open Transport 1.1 does not support MacTCP "Dynamic" addressing. MacTCP "Dynamic" mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set-up a Macintosh-only standalone TCP/IP network. Use of this Dynamic Addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (the IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Apple has adopted the industry standard DHCP and dropped support for the earlier "dynamic" mode addressing with Open Transport/TCP.

MacIP Support

MacIP, sometimes also referred to as KIP (Kinetics Internet Protocol), is a protocol specification developed as a method for carrying TCP/IP traffic on AppleTalk-only networks -- originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services. MacIP specifies encapsulation of TCP/IP datagrams in AppleTalk packets for transmission over such connections.

Use of MacIP requires a gateway. AppleTalk encapsulated IP packets are sent to the MacIP gateway using AppleTalk protocols (DDP). The gateway strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are destined for the MacIP end-node, that gateway provides the needed encapsulation services.

MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network, acting as a middleman between the MacIP end-node and the appropriate TCP/IP-based hosts on the LAN or WAN.

Open Transport includes end-node support for MacIP. A end-node is configured to use MacIP using the TCP/IP configuration utility by selecting "AppleTalk (MacIP)" in the "Connect via:" pop-up menu. The user (or network administrator) must also specify where on the network (in which zone) to look for the MacIP gateway. Once selected, TCP/IP will be encapsulated in AppleTalk and will be sent out the "Connect via:" interface selected using the AppleTalk configuration utility.

Open Transport/TCP includes a new human interface for selecting the MacIP server which offers the following new features:

- AppleTalk zones are now displayed in a true scrolling list in a movable window. This display is easier to view compared to MacTCP's pop-up menu when there are a large number of zones in the network.
 - The Zone list window now supports selection using the mouse, the arrow keys, and/or "type-select", allowing the user to more quickly select a specific zone from the list.
 - There is an option to display only those AppleTalk zones containing MacIP servers. When selected, this creates a background search task which when completed filters the zone list display to show only those zones containing active MacIP servers.
 - There is a short cut "Current Zone" option which causes the Mac to check the current AppleTalk zone for a MacIP server without requiring the user to select a specific zone. This can be a time-saver for the user and a potential bandwidth-saver on the network, especially when there are mobile users that connect in different locations to a enterprise-wide network for MacIP services.
- Network Interface Options

PPP Connectivity

PPP (Point to Point Protocol) connectivity is not bundled with Open Transport at this time. AppleTalk and TCP/IP connectivity over Open Transport/PPP is planned

to first be offered as a feature of upcoming Apple Remote Access products. ARA products would include necessary Open Transport components.

Apple currently plans to fully merge ARA client and personal server capabilities with basic Open Transport capabilities to offer an integrated communications package for LANs, WANs, and remote networking. These integrated capabilities are also expected to be delivered as a part of a future update to Mac OS. This timetable has not been finalized; details will be announced at a later date.

Application Compatibility with Open Transport

Apple has defined three levels of interoperability with Open Transport. The first -- known as Open Transport Compatible -- is used to describe a network application originally developed for "classic" AppleTalk or MacTCP, that now takes advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the new Open Transport configuration utilities. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

Open Transport Ready applications are those that have been modified to adopt the new Open Transport APIs (XTI). They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport Ready applications not only benefit from the new configuration utilities, but have the opportunity for a significant performance boost when running on Power Macintosh.

The third (highest) category of interoperability is referred to as Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being Power PC native, these applications have been modified to exploit the transport-independent capabilities of Open Transport, i.e., they can be dynamically configured to support AppleTalk, TCP/IP, or serial communications.

Backward Compatibility

Applications that rely on undocumented APIs or examine private data structures in current the AppleTalk or MacTCP may not be fully compatible with Open Transport. Examples include the MacSNMP AppleTalk and TCP/IP Agents (however, MacSNMP and the Macintosh System Agent are compatible), the Apple Internet Router 3.x and some utilities like MacTCP Watcher and MacTCP Spy. Updated versions of these software products will be required for full compatibility.

Performance

Open Transport is written to take advantage of the PowerPC processor -- it is native code. This provides the necessary foundation for increased networking performance in Mac OS. To realize performance gains, however, it is equally important that networking applications also be accelerated for Power Macintosh, and that applications adopt the new Open Transport XTI-based programming interfaces.

The built-in "backward compatibility" support for existing AppleTalk and TCP/IP applications must continue to run as 680x0 code in emulation on Power Macintosh. This protects a customer's investment in networking applications, but also

obscures underlying performance increases from the native protocol implementations.

In general, current Mac OS networking applications are written for the 680x0 processor, and use the "classic" (68K-based) networking programming interfaces. These applications are not likely to see performance boosts with Open Transport, as most of the performance potential is based on the move to native code for the PowerPC processor. Even for Power Macintosh native applications, a continued use of the Open Transport backward compatibility libraries offsets most of the performance gains in the low level protocol handling.

Users who select Power Macintosh native applications that are Open Transport-ready will realize the greatest performance gains. Performance of specific network applications may also be significantly influenced by the processor speed of the system. Customers with demanding, network I/O intensive applications should give strong consideration to the higher performance PowerPC-based Macintosh systems.

However, even with 68K emulated applications using backward compatibility, TCP/IP users are more likely to see some performance improvements with Open Transport. This is because of the differences in the way compatibility is provided for MacTCP vs. AppleTalk, and differences in the two protocol architectures.

Performance will be greater with protocols that use larger datagram sizes -- such as TCP/IP -- than with AppleTalk (which has a fixed and limited datagram size). On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor. Comparative shopping for NICs -- based on price, service, reliability, and performance -- will be in order.

Open Transport running on the built-in Ethernet of the Power Macintosh 9500 has been clocked at 9.3 Mbps throughput using low-level TCP/IP benchmarks. A pre-release version of a third party Open Transport-native implementation of 'NFS' protocols was benchmarked at 8.4 Mbps. Both figures approach theoretical maximum performance for 10 Mbps Ethernet. AppleTalk performance is somewhat lower, with low-level benchmarking coming in at a bit over 7.5 Mbps throughput.

The Open Transport engineering team is continuing to work with NIC developers to realize high-performance DLPI drivers for high-speed datalinks. This is a cooperative effort, with work being done on both driver code and on Open Transport. We expect that high-speed datalink NIC drivers based on Open Transport 1.1 can be fully competitive with other PCI networking products. Of course, performance tuning will be an ongoing priority, as Apple intends to always offer a platform capable of industry leading network performance.

Benchmarking on these types of datalinks, with pre-release Open Transport 1.1, has been underway for some time. Some sample results include:

- 48 Mbps with a Rockwell fast Ethernet card and driver (1500 byte block size)
- 72 Mbps with a Rockwell FDDI card and driver (4K block size)
- 93 Mbps with an Interphase ATM-155 card and driver (8K block size)

These tests were performed using Open Transport/TCP 1.1 beta software, running on a Power Macintosh 9500/132, and reflect memory to memory, point to point transfers (the "SpudPPC" test tool) on a dedicated test bed. In addition to these numbers, we've seen even higher throughput from Fore Systems on their ATM card, using UDP.

AppleTalk performance is expected to be lower than TCP/IP performance due to various technical issues, including DDP packet size and the ATP retry-acknowledgment algorithm. Current testing on fast Ethernet is turning in figures around 35-40 Mbps with a PowerPC native ATP test tool.

Large Datagram Support

Maximum allowable datagram size is dependent on both the selected datalink and the selected protocol stack. Open Transport supports the use of large datagram sizes as appropriate to the protocol and datalink in use.

Because Open Transport/AppleTalk is based on the Phase 2 architecture, datagram size for AppleTalk is limited to a maximum of 617 bytes. Open Transport/TCP supports larger datagrams; up to 1,500 bytes on Ethernet and fast Ethernet, and up to 16K on token ring. Even larger block sizes can be used on FDDI and ATM.

Block size does play a role in maximum throughput; the larger the block size used, the greater the potential end-to-end throughput. Users demanding the highest network throughput may find FDDI to be a more attractive alternative than fast Ethernet because it can support larger block sizes at the same bit rate.

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library

CLW 12/600 PS: Windows Color Management Software (3/97)

Revised: 3/10/97
Security: Everyone

CLW 12/600 PS: Windows Color Management Software (3/97)

Article Created: 21 June 1996
Article Reviewed/Updated: 24 June 1996

TOPIC -----

I am using the Apple Color LaserWriter 1200/600 PS printer with a Microsoft Windows 3.1 computer. When I print using RGB, blue prints a purple, red a magenta, and green a pea green color. Since Windows 3.1 does not include any color management software, is there any way to get the colors I see on my computer screen to match those of the Color LaserWriter printer?

DISCUSSION -----

Color management technology is just starting to become a mature and rich technology. Although this technology is more prevalent on the Macintosh platform because of its desktop publishing/graphics marketshare and ColorSync software, color management systems (CMSs) are making their way into the PC/Windows platform.

You may be able to find a very small handful of CMSs that work with Windows 3.1, though the industry is heading towards color management solutions using Windows 95 since it has a built-in CMS called ICM (Image Color Matching). ICM adopts the platform independent ICC (International Color Consortium) device profiles which the industry has accepted.

The basics of color management are to have an ICC profile of the input device (which characterizes the color range of that device), and an ICC profile of the output device (again which characterizes its own color range). The CMS then is responsible for "matching" as close as possible the two different ranges so that you get WYSIWYG color. Below is how the Macintosh CMS works.

Macintosh Color Management System

The Macintosh uses ColorSync as its CMS. All of the ICC profiles for Macintosh devices reside in the ColorSync Profiles folder. You select the appropriate

monitor the ColorSync Profile control panel, then select the appropriate output color device profile in the Print Options. For the Color LaserWriter 12/600 PS printer or Color LaserWriter 12/660 PS, you would select ColorSync Color Matching and the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS as your output device. ColorSync automatically performs color matching for you.

Microsoft Window CMS Options

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Since you are using Microsoft Windows, you should contact the vendors below to obtain additional information on their Color Management Systems for Windows. Some of these products are only available when you use Windows 95.

+=====+	
Vendor	Product/CMS
+=====+	
Adobe Systems, Inc.	PageMaker 6.0 (includes Kodak's Precision CMS)
+-----+	
Agfa Division,	FotoTune
Bayer Corporation	
+-----+	
Canon USA, Inc.	Calibration for CLCs (for Canon Color Laser Copiers.)
+-----+	
Microsoft Corp.	Windows 95 (includes Image Color Matching engine and ICC device profiles)
+-----+	
Pantone Inc.	ColorDrive 1.5
+-----+	

End_Table

This article also pertains to the Color LaserWriter 12/660 PS printer.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article appeared in the 21 June 1996 issue of the Information Alley.

Article Change History:

10 Mar 1997 - Made minor typographical correction.

23 Oct 1996 - Added Color LaserWriter 12/660 PS to the discussion.

24 Jun 1996 - Made minor typographical correction.

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Tech Info Library Article Number:20090



Tech Info Library

System 7.5, Version 7.5.3: About Desktop Printing (6/96)

Revised: 6/28/96
Security: Everyone

System 7.5, Version 7.5.3: About Desktop Printing (6/96)

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Article Created: 21 June 1996
Article Reviewed/Updated: 28 June 1996

TOPIC -----

This Article Is The About Desktop Printing Document With System 7.5, Version 7.5.3.

DISCUSSION -----

About Desktop Printing

Your New Software Comes With Desktop PrintMonitor Version 1.0.3. You Use Desktop PrintMonitor To Create Printer Icons (or "desktop Printers") On Your Macintosh Operating System (Mac OS) Desktop. You Can Print A Document By Simply Dragging It To A Desktop Printer Icon. Desktop Printers Also Give You More Control Over Printing, Including Setting Printing Priorities And Choosing Specific Times For Printing.

Creating Desktop Printers

You Create Desktop Printers By Selecting A Printer In The Chooser. A Desktop Printer Icon Appears On Your Desktop When You Close The Chooser.

You Can Drag This Icon To Any Position You Want On Your Desktop. You Cannot Move It Off The Desktop.

If You Want, You Can Select Other Printers In The Chooser And Create Other Desktop Printers For Easy Access. You Must Close The Chooser Each Time To Create A Desktop Printer.

The Last Desktop Printer Created Becomes The Default Printer. Your Documents Will Automatically Be Printed On The Default Printer.

Printing With Desktop Printers

You Can Print Documents Within Your Applications As You Normally Do. You Can

Also Print Documents Without Leaving The Finder, Using One Of The Two Methods Described Here. These Methods Are Particularly Efficient When You Have A Number Of Documents You Want To Print At Once.

- Drag The Icons Of The Documents You Want To Print To The Desktop Icon Of The Printer You Want To Use.
- Select The Icons Of The Documents You Want To Print And Choose The Print Command From The File Menu.

The Computer Will Show You The Print Dialog Box So You Can Choose Printing Options. Make Your Choices, Then Click The Print Button.

After A Few Moments, The Document Starts To Print. If Background Printing Is Turned On, You Can Continue Working While The Document Is Printing.

Selecting A Default Printer

If You Have More Than One Printer Available, You Can Select Which You Want To Use. The Printer You Select Is Called The "default Printer." All Your Documents Will Be Printed On The Default Printer Until You Select A New One.

To Change The Default Printer, Use One Of These Three Methods:

- Drag The Document You Want To Print To A Desktop Printer Icon, And It Will Automatically Become The Default Printer.
- Select The Desktop Printer Icon And Use The Printing Menu To Set The Printer As The Default.
- Select A New Printer Using The Chooser.

NOTE: Switching Between Printers May Change How Much Information You Can Fit On A Page. It's Best To Choose A Printer Before You Spend Much Time Formatting The Document.

Working With Desktop Printer Icons

Desktop Printer Icons Change To Indicate Printing Status:

- Plain icon indicates a printer that is not currently chosen for printing.
- Default icon indicates the printer you have currently chosen to print on.
- Printing icon indicates a document is printing on this printer.
- Stopped icon indicates you have stopped the print queue.
- Error icon indicates there is an error on this printer. double-click the icon to see a message.
- Disabled icon indicates this desktop printer is not available.

You Can Do The Following With Desktop Printer Icons:

- Throw Away The Icon. Drag The Icon To The Trash. You Can't Throw Away A Desktop Printer Icon While The Printer Is Printing A Document. (You Can Create Another Desktop Printer Icon For That Printer Whenever You Like.)

Note: You Must Always Have At Least One Printer Icon On Your Desktop. If You Throw Away The Last Icon, It Will Immediately Be Created Again.

- Rename The Icon. Rename The Icon As You Would Any Other Finder Icon. Click The Name To Highlight It, Then Type The New Name. This Changes The Name Of The Icon, Not The Name Of The Printer.

- Move The Icon. You May Drag The Icon Anywhere You Like On The Desktop. However, You May Not Move It Off The Desktop.

- Create An Alias For The Icon. You May Create An Alias For The Icon As You Would Any Finder Icon, By Selecting The Icon And Choosing The Make Alias Command From The File Menu. The Alias May Be Moved Anywhere On Or Off The Desktop.

Monitoring Printing

If You Are Using Background Printing, You Can Use The Desktop Printer Features To Monitor And Control The Documents That Are Waiting To Print. To Learn How To Turn Background Printing On And Off, See Your Printer Manual.

To Monitor The Printing Of Documents:

1) Double-click The Desktop Printer Icon You're Interested In.

A Window Opens Listing The Documents That Are Printing Or Waiting To Print.

Watching The Status Messages Can Be Helpful When Troubleshooting Printing Problems. When More Than One Job Is Waiting To Be Printed, A List Of Print Jobs Appears In The Waiting List, Showing The Order In Which They Will Be Printed (when Sorted By Print Time.)

2) Choose What You'd Like To Do.

- To Cancel A Print Request, Select It By Clicking Its Icon And Click The Remove Button.

You Can Only Select The Currently Printing Document By Clicking Its Icon. (You Can Select More Than One Item At A Time By Holding Down The Shift Key While Clicking.) You Can Also Drag The Icon For The Print Request To The Trash. Note That These Methods Delete Only The Print Request (also Referred To As A Spool File), Not The Document Itself.

- To Put A Print Request On Hold, Select It And Click The Hold Button.

The Print Request Will Stay On Hold Until You Select It Again And Click The Resume Button. You Can Also Put The Document That's Currently Printing On Hold By Dragging It To The List Of Documents Waiting To Print (lower Part Of The Window).

- To Indicate That A Print Request Is Urgent, Select It And Choose Set Print Time From The Printing Menu. In The Dialog Box That Opens, Click Urgent.

- To Indicate That A Print Request Should Not Print Until A Future Time, Select

It And Choose Set Print Time From The Printing Menu. In The Dialog Box That Opens, Click At Time, Then Set The Time You Want.

- To Change The Order Of The Items Waiting To Print, Move Their Place In The List By Dragging Their Titles Up Or Down In The List.
- To Sort The List Of Documents Waiting To Print, Click The Title Of The Column You Want To Sort By.

For Example, To Sort By The Name Of The Document, Click "Document Name." (You Can Also Sort By Choosing The Commands In The View Menu.) The Column Title You Sorted By Is Underlined. Sorting The Items Does Not Change The Order In Which They Will Print. To See That Order, Sort By Print Time.

- To Temporarily Stop All Documents From Printing On This Printer, Choose Stop Print Queue From The Printing Menu.

To Resume Using The Printer, Choose Start Print Queue From The Printing Menu. If The Desktop PrintMonitor Window Is Open, You Can Begin Printing The Document From The First Page By Option-clicking The Resume Button (holding Down The Option Key While Clicking The Resume Button).

Shortcut: The Printing Menu For Starting And Stopping The Print Queue Is Available Without Opening The Window For The Printer, As Long As The Printer's Icon Is Selected On The Desktop.

- To Move A Print Request From One Printer To Another Printer Of The Same Type (for Example, From A LaserWriter 4/600 PS To A LaserWriter 16/600 PS), Drag The Icon For The Print Request To The Icon Of The Printer Where You Want To Move It.

You Can Only Move A Print Request From A PostScript Printer To Another PostScript Printer. The Printing Software Won't Let You Move A Print Request To An Incompatible Printer. For Example, You Can't Move A Request From A LaserWriter Printer To A StyleWriter Printer.

Turning The Manual Feed Notification On Or Off

The Desktop PrintMonitor Is Set Up To Notify You About Manually Feeding Paper The Same Way Your PrintMonitor Was Set. For Example, If You Turned Off Notification For Manual Feeding In Your PrintMonitor, The Desktop PrintMonitor Will Also Have Manual Feed Notification Turned Off.

If You Want To Change How The Desktop PrintMonitor Notifies You About Manual Feeding, Follow This Procedure:

- 1) Hold Down The Shift Key And Restart Your Computer, Keeping The Shift Key Depressed Until The Message "Extensions Off" Or Your Normal Desktop Appears.
- 2) Open Your System Folder And Then Open Your Extensions Folder.
- 3) Double-click The PrintMonitor Application.

- 4) Choose Preferences From The File Menu.
- 5) Select Your Manual Feed Option And Click OK.
- 6) Close The PrintMonitor.
- 7) Restart Your Computer.

Turning Off Or Removing The Desktop Printing Software

----- Removing A Desktop Printer Icon

You Can Remove An Individual Desktop Printer Icon By Dragging It To The Trash. If You Have Only One Desktop Printer, You Can't Get Rid Of The Icon By Dragging It To The Trash. (The Icon Will Reappear If You Do.) To Get Rid Of The Desktop Printer, You Must First Select A Different Desktop Printer As The Default Printer And Then Drag The Desktop Printer Icon To The Trash. If You Don't Want To Use Desktop Printer Icons, See "Turning Off The Desktop PrintMonitor" Or "Removing Desktop Printing Software" For Information About How To Remove The Desktop Printer Software.

Turning Off The Desktop PrintMonitor

If You Don't Want To Use Desktop Printers, You Can Turn Off The Desktop PrintMonitor Using The Extensions Manager (available On Macintosh System 7.5, The Current Version Of The Mac OS).

To Turn Off The Desktop PrintMonitor:

- 1) Open The Extensions Manager Control Panel In The Control Panels Folder.
- 2) Click To Deselect (uncheck) The Desktop PrintMonitor, Desktop Printer Extension, And Desktop Printer Spooler Extensions In The Panel.
- 3) Click The Close Box To Close The Control Panel.
- 4) Restart Your Computer.

Removing The Desktop Printing Software

The Desktop Printing Software Uses Both The Desktop PrintMonitor And The PrintMonitor Software. The Desktop PrintMonitor Requires 200-400K Bytes More Free System Memory In Addition To The Memory Required By The PrintMonitor. If You Don't Want To Use The Desktop Printing Software, You Can Remove It.

To Remove Desktop Printing Software:

- 1) Restart Your Computer With The Extensions Off By Holding Down The Shift Key And Choosing Restart From The Special Menu. Hold The Shift Key Down Until The Message "Extensions Off" Appears Or Until Your Normal Desktop Appears.
- 2) Drag The Following Files From The Extensions Folder To The Trash:

Desktop PrintMonitor 1.0.3
Desktop Printer Spooler 1.0.3
Desktop Printer Extension 1.0.3

3) Restart Your Computer.

Using Save Or Open With Desktop Printers

When You Choose Save Or Open In Your Application Programs, You Will See Your Desktop Printers Listed As If They Were Folders, But You Should Not Save Or Open Any Documents In Them. If You Do, You Will Not Be Able To Access Your Documents.

Having More Than Five Desktop Printers

If You Want To Have More Than Five Or Six Desktop Printers, You Must Increase The Desktop PrintMonitor Memory Allocation By 12K For Each Additional Desktop Printer You Want. To Do So, Select Its Icon (it's In The Extensions Folder Inside The System Folder), Choose Get Info, Type A Larger Number In The Preferred Size Box, Then Close The Get Info Window.

About Creating Duplicate Desktop Printer Icons

If You Use Different Versions Of The LaserWriter 8 Software And Print Using The Desktop PrintMonitor, You May Create Duplicate Desktop Printer Icons For The Same Printer. For Example, Say You Use The LaserWriter 8.3 Driver For Printing And Also Use The LaserWriter 8.2.2f Driver For Faxing. If You Select Your Printer In The Chooser Using The LaserWriter 8.3 Driver, And Select It Later Using The LaserWriter 8.2.2f Driver, Two Desktop Printer Icons Will Appear For That Printer. To Avoid Creating Confusing Duplicate Printer Icons, Primarily Use One Version Of Your Printer Software Driver, Or Rename The Icons With Distinguishing Names.

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28 Jun 1996 - Change status at product release.

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Tech Info Library

System 7.5 v7.5.3 Technical Details: Part 1 of 3 (6/96)

Revised: 6/28/96
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System 7.5 v7.5.3 Technical Details: Part 1 of 3 (6/96)

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Article Created: 21 June 1996
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TOPIC -----

This article is the System 7.5 Technical Details (part 1 of 3) document.

DISCUSSION -----

System 7.5 Technical Details (part 1 of 3)

This file is one of several Read Me files that describe technical details between system software 7.5 and system software 7.5.3. This information is most appropriate for advanced users. For less technical information, see the About System 7.5 document, the Installing System 7.5 document, or the What's New in version 7.5.3 document.

What's in this document (part 1 of 3)

- General information about system software version 7.5.3
- Changes to the Finder
- Changes to Find File
- Changes to Standard File
- Changes to control panels
- Changes to Apple Guide
- Changes to Apple Menu Options

General information about system software version 7.5.3

System software version 7.5.3 provides the enhancements introduced in System 7.5, System 7.5 Update 1.0, System 7.5 Update 2.0, and System 7.5, Revision 2.

This software installs the latest versions of all components it finds on the disk it is updating, including any components that you disabled using the Extensions Manager. After you run the Installer, the updated components will be in the same folders as they were before you installed the update. For example, new versions of disabled extensions will be in the Extensions (Disabled) folder,

and new versions of disabled control panels will be in the Control Panels (Disabled) folder.

The file called "System 7.5 Update" replaces the enabler on all computers capable of running system software versions 7.5 and/or 7.5.1. Computers that did not previously need an enabler to work with system software versions 7.5 and 7.5.1 still need the System 7.5 Update file since it contains most of the fixes delivered in this update.

The file called "System 7.5.2 Update" replaces the enabler file on all computers capable of running system software version 7.5.2.

If you use the Custom Install option to install a system for Any Macintosh, both updated enablers are installed. This is normal for the Any Macintosh option. Do not delete one or both of these enablers.

This update includes all of the fixes included with the previously released 7.5.2 Printing Update, the PowerBook 5300 System Software Update, and the PowerBook 2300c Update. You do not need these updates if you install this software. If you previously installed any of these updates, you should install this software, since it contains additional fixes.

After you install the update, the About This Macintosh window says "System Software 7.5.3." The window also says "Revision 2" to indicate the source of the system software.

Changes to the Finder

This software includes a new version of the Finder with the following changes:

- When you rebuild the desktop, comments typed in a file's Get Info window are no longer deleted. (Of course, if you delete the desktop database -- for example, by making it visible using a utility and then moving it to the Trash -- the comments will be lost because the Finder will have to build a new desktop at startup.)
- The Name field (used in Finder windows set to one of the list views) is wider, allowing you to see more characters in filenames.
- On PowerPC-based computers, icons are translucent while you drag them (rather than simply appearing as outlines). If you drag several icons at once, only the icon under the mouse will be translucent -- the others will still be outlines.
- Copying large numbers of small files is faster. (Previous versions of the Finder updated the bar in the copy progress dialog box approximately thirty times per second; the new version updates the copy progress bar far less frequently.)
- The Finder Update file (once named PowerPC Finder Update) is now part of the Finder. This update deletes all old versions of this file.
- When the Clipboard is active, the Clean Up Window command is dimmed. This eliminates a crashing bug in the Finder.

- The Finder flushes the processor's cache more intelligently, improving the Finder speed on all 68040- and PowerPC-based computers.
- Fixes a problem that caused an out-of-memory error when emptying the Trash if QuickDraw GX was installed.
- Fixes a problem that caused seemingly false out-of-memory messages when trying to open or close Finder windows. This problem sometimes occurred when the desktop had very few icons on it, a window with the Kind column was visible, and a large number of different kinds of documents had been displayed since the last restart.
- Fixes a problem introduced by the Finder that shipped with System 7.5 Update 1.0. The Find window of Find File will now be made active if Find File is already open and you choose Find from File menu (or Find File from the Apple menu).
- If use an alias to connect to a server and your server password has expired or needs to be changed, you'll see a message that the password needs to be changed. (Prior versions told the user that the server couldn't be found.)
- File copies are now done asynchronously, which makes the CPU more available to other applications during copying. If another application is made active during a file copy, the computer does not slow down as much. This effect is most noticeable when using Apple Remote Access.
- Finder window titles are now erased before they are overwritten. (Previous versions rendered window titles unreadable in some circumstances.)

This new version of the Finder also includes the following fixes from the prior update's Finder:

- Corrects a problem at startup that could cause the Finder to open the same list of windows over and over again.
- With QuickDraw GX installed, AppleEvents or AppleScript scripts that send Print or Page Setup commands to the Finder are now handled correctly.
- When you try to make changes to a System or Applications folder that is protected by the General Controls panel, the Finder no longer claims there's an access privileges problem. The warning message now describes why the folder can't be changed and how to turn off folder protection.
- Fixes a problem that occurred the first time you started up your computer after installation (or any time you deleted the old Finder Preferences file). One symptom of this problem was a dialog box stating that the Network control panel could not be used.
- Fixes a problem that caused a crash if a sound and a control panel were both in the Startup Items folder and the sound was opened first. (Items in this folder are opened in alphabetical order.)

- The Finder no longer rebuilds the desktop if it finds a folder named Desktop at the root level; now it rebuilds the desktop only if it finds a file called Desktop.
- Improves the way the Finder handles server volumes that are unexpectedly disconnected while files from the server are still open. Now you can save the contents of most files by using the Save As command (in the File menu of most applications). Large files (those that don't fit entirely in memory) might be lost if the server disconnects unexpectedly. With some applications, however, you can copy the contents that are in memory and paste them into a new document, later merging this document with the original file on the server. (With prior versions of the Finder, this situation could lead to serious problems if the user tried saving the document after the server was disconnected.)
- Changes the way the Finder invokes the Find File extension (of System 7.5) instead of the built-in Find feature introduced in System 7.0. The Find File extension now contains a simple "flag" that tells the Finder to use the new Find File. If you disable or remove this extension, the Finder uses only the older built-in Find. This change enables users to choose between the full-scale Find File and its stripped-down version (the built-in Find command).
- Fixes a problem that caused an out-of-memory error if too many Get Info windows were open at the same time.
- Enables users to open a document that belongs to an already-running background-only application. (In previous versions, the Finder searched only through the list that showed up in the Application menu.)
- The Finder Update file was renamed. (It was previously known as the PowerPC Finder Update file.) This file handled Code Fragment Manager (CFM) error-reporting for missing dynamically linked libraries.
- Speeds up copying from servers by letting the server set its preferred block size for copy requests. (Previously, the Finder always requested 4.5K blocks of data from AppleShare or FileShare volumes.)
- Speeds up copying to and from servers by greatly reducing the number of times the Finder checks for user activity during copy operations.
- Speeds up the copying of small files by changing the way the Finder writes parts of the files. (Previously, the Finder rounded up the size of the file being copied to the minimum allocation block size, which, on a 2GB disk, is 64K.) Now the Finder rounds up small files to a multiple of the size of a disk sector (that is, to increments of 512 bytes).
- Fixes a problem in rebuilding the desktop that caused the Finder to skip applications if it encountered a background-only application while rebuilding the desktop database.
- Eliminates problems in opening some applications or having the wrong icon appear. These problems sometimes occurred when, during rebuilds of the desktop, the Finder included applications that did not have the necessary bundle resources. The Finder no longer includes applications that do not have the

necessary bundle resources, eliminating confusion within the desktop database.

- The Finder now ignores aliases to applications when rebuilding the desktop database.

Changes to Find File

- The following are the changes in Find File 1.1.2:
 - Includes a list of Shortcuts, available from the Guide menu (with the question-mark icon) when Find File is active.
 - Includes a new preference used in sorting by Kind, "Use full descriptions for found items," which gives more specific Kind descriptions. Using this checkbox results in slower sorts; not using it results in faster sorts but with less specific Kind descriptions.
 - Fixes a crashing bug that occurred if the same item was dragged to the same location before the Finder finished the earlier move.
 - Fixes a bug that allowed non-numeric data to be input into the Size search field.
 - Fixes a bug that allowed a pasted item to exceed the length of several search fields.
 - Fixes a bug that allowed too many digits to be entered in the Size search field.
 - Allows you to drag a volume icon onto the Location pop-up menu.
 - Fixes the zoom box on 68K systems.
 - Changes the alert message to be more informative when a server being searched is disconnected.
 - Changes the way the Found Items list displays items that are in the Trash after the Trash has been emptied.
 - Fixes a searching bug that occurred when the Kind requested was "font."
 - Fixes a crash that sometimes occurred when clicking the Stop button in the sorting dialog box. This dialog box now displays a spinner during a sort.
 - Fixes a memory bug that sometimes occurred after several consecutive searches.
 - Fixes a display bug with Found Items that occurred when using large font sizes.
 - Fixes the CD-ROM icon in the Drives pop-up menu.
 - Enables Find File to find invisible files, some of which you can move (such as the Desktop, Desktop DB, and the Desktop DF files).
 - The Clear menu item now deletes only the selected text. (The Clear key no longer deletes anything.)
 - Fixes a bug that occurred when dragging a file onto the Kind search field. Fonts and applications now show up as such, not as documents.
 - Fixes a crash that sometimes occurred when dragging an item from the Found Items window to the desktop.
 - Changes the prompt message when search fields are empty.
 - Cleans up Balloon Help.
 - Includes a new preference to specify transliteration.
 - Speeds up searches in 2-byte languages if no transliteration is necessary to perform the search.
 - Fixes a bug where the filename input for 2-byte languages could exceed maximum length.

• The following are changes introduced with System 7.5 Update 1.0 (Find File 1.1.1):

- Fixes a drag problem with large groups of items. Now Find File displays a confirmation dialog box when you drag more than 50 items.
- Fixes a crashing bug when searching for items whose names contain "desktop." Find File no longer finds invisible desktop files unless explicitly requested.
- Fixes a bug that prevented exact-name matches with foreign file systems.
- Fixes the "spontaneous search" bug, whereby Find File could start searching without any criteria entered. Find File now displays an alert prompting for search information.
- Fixes a bug that sometimes prevented an item in the Found list from being selected by clicking its icon.
- Fixes a memory problem in sorting more than 1100 items.
- Fixes a highlighting problem with the Keyboard menu.
- Scroll bars are now properly drawn.
- Fixes a cosmetic problem with drag-selecting items in the Found list.
- Properly updates the path in the bottom of the Found list window after the user drags items from the list.
- Fixes a hanging bug that could occur when dragging a folder onto the search fields.
- Fixes a pop-up menu bug that sometimes showed the wrong value after switching to the Finder and back to Find File.
- Fixes the search when the Comments field is left blank.

Changes to Standard File

- Fixes an occasional crash in Standard File that occurred when the data cache was not flushed before being disabled.
- Fixes a memory leak with some of the dialog boxes used for opening and saving documents in Standard File.
- Fixes a problem in the dialog box used for opening files that could allow the pop-up menu to be dimmed in Standard File.

Changes to control panels

- PowerPC-based computers with PCI slots now use the Monitors & Sound control panel, instead of the Sound & Displays control panel, to control monitor and sound settings. (System Update 2.0 removes Sound & Displays.) You can do a custom installation to install the Sound control panel if you need it for older applications. (The Monitors & Sound control panel works only on PCI-based computers.)
- The Memory control panel now displays "Will be off after restart" if Virtual Memory is turned off, as a reminder that just turning Virtual Memory off does not fully deactivate it.
- The Memory control panel now uses a larger default setting for the disk cache. After you install this software, the new setting will be used only if the Use

Defaults button in the Memory control panel is clicked. The new default is 32K for each megabyte of physical RAM installed, up to a maximum of 4096K. (Virtual RAM is ignored for this calculation.) Thus, a computer with 16MB of physical RAM would use 512K for its default disk cache size, resulting in better performance for disk-intensive tasks than the original default of 96K.

- Fixes a bug in resizing a RAM disk in the Memory control panel while file sharing is on.
- Fixes a problem in General Controls panel that caused problems with Retrospect Remote if either application or System Folder protection was turned on.
- When you open an application by double-clicking a document, you can set the default location of saved items to the folder containing the document you opened, instead of the Documents folder or the folder containing the application. You set this preference by turning on the "Folder that is set by the application" option in the General Controls panel.
- Fixes a problem in General Controls panel that could hang the computer if Applications folder protection was turned on and there was a document or alias named "Applications" at the root level of the startup disk.
- Fixes a problem in the General Controls panel's folder-protection code that could cause folders to become invisible if Stuffit Spacesaver was installed.
- CloseView no longer uses keyboard shortcuts that were already used by the Finder. The new keyboard shortcuts for CloseView are:
 - Command-Option-K: turns CloseView on or off
 - Command-Option++ (the plus sign): increases magnification
 - Command-Option-- (the minus sign): decreases magnification
- If CloseView is active, it remains active after you change the number of colors on your monitor.
- CloseView no longer hangs the system if Balloon Help is on and an audio CD is inserted.
- Includes the following new international keyboard layouts:
 - French Canadian
 - ISO Canadian
 - Spanish
- Installs the updated versions of the following international keyboard layouts if older versions are already installed:
 - Dutch
 - Flemish
 - German

Changes to Apple Guide

- Includes Macintosh Guide 1.3 (and several new Guide Additions files), which provides updated on screen help for system software.

- Includes Apple Guide version 2.0.2, which includes the following improvements:
 - Fixes problems with displaying coach marks in modal dialog boxes.
 - Fixes a serious memory leak that occurred every time a Guide file was opened.
 - Fixes a problem that caused every twenty-first index item to disappear when multiple additions were in use.
 - Fixes a problem that occurred when Apple Guide encountered additions files that did not apply to the current configuration of hardware and system software (for example, if the QuickTime Guide was installed, but QuickTime itself was not installed or had been turned off with Extensions Manager).
 - Defaults to US ASCII sorting only if the current script is Roman and the current language is English. (Apple Guide 1.2.5 defaulted to US ASCII on any Roman script system.)
 - Fixes problems with coach marks on 68K computers. (Coach marks were sometimes drawn on the wrong menus.)
 - Fixes a Look For problem in Japanese computers by first trying to use the script code from the current database.
 - Fixes a bug in <Delete Index> that affected Japanese computers.
 - Fixes problems with mixed-mode handling of installed coach and context handlers.
 - Fixes a problem that sometimes caused Apple Guide to shut down completely on PowerPC-based computers. For example, if a PowerBook additions file was present on a PowerPC-based desktop computer, Apple Guide 1.2.5 would completely shut down because the additions file couldn't be used. Now, Apple Guide ignores the PowerBook addition and continues running.
 - Fixes a problem that prevented Apple Guide 1.2.5 from starting up if QuickTime wasn't installed on the computer. This problem occurred only on PowerPC-based computers.
 - Includes localizable error strings for use in various abort messages.
- Also includes all the improvements to Apple Guide introduced with System 7.5 Update 1.0 (Apple Guide 1.2.5):
 - Works faster than prior versions on all Mac OS-based computers.
 - Is native on PowerPC-based computers, which also improves performance.
 - Is compatible with At Ease.
 - Makes additions files available in the Guide menu even if the application was opened with AppleScript.
 - Fixes a memory leak of an international resource, which occurred every time a Guide file was opened.
 - Makes windows redraw correctly after coach marks are drawn.
 - Updates no more of the screen than it needs to.
 - Properly draws coach marks in black and white and on a mirrored monitor.
 - Keeps scroll bars active when they should be active.

Changes to Apple Menu Options

- Includes Apple Menu Options v.1.1.2, which introduces the following changes:

- Performs better, with improved stability.
 - Fixes a problem that could hang the computer when the Apple Menu Options preference file was dragged to the Trash.
 - Fixes a problem that could hang the computer if there was a locked alias in the Recent Documents, Recent Applications, or Recent Servers folders. The new version ignores locked aliases.
 - Moved a large 68K patch that caused a general slowdown on PowerPC-based computers. This patch is now active only while the mouse button is held down on the menu bar or in a menu.
 - Increases the height of the editing field used for entering the number of documents, applications, and servers.
 - Fixes a problem that could prevent the Recent Documents, Recent Applications, and Recent Servers folders from being deleted when tracking of those items is turned off.
 - Fixes a problem that could cause Apple Menu Options to hang if its settings were changed and the System Folder was on a locked volume (such as a startup CD or locked floppy disk). The hang would occur when Apple Menu Options tried to write the new settings into the locked preferences file. The new version does not try to record new settings on a locked volume.
 - Fixes a problem with sorting order; Apple Menu Options no longer uses the U.S. standard for modified Roman and Scandinavian alphabets.
 - Prevents Apple Menu Options from deleting original files -- it can now only delete aliases. (This change solves a problem that occurred when users saved documents directly into the Recent Documents folder. Once the document was saved, Apple Menu Options replaced the file with an alias to that file.)
 - Fixes a problem that sometimes caused the contents of the Apple menu to show up in place of the proper contents for submenus.
- Incorporates all of the prior fixes to Apple Menu Options:
- Improves performance.
 - Fixes a problem that could cause an application's menus to disappear.
 - Fixes a problem that could leave the Apple menu highlighted if an application was opened from a submenu within the Apple menu.
 - Shows non-AppleShare servers in the Recent Servers sub-menu.

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library

System 7.5 v7.5.3 Technical Details: Part 2 of 3 (6/96)

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System 7.5 v7.5.3 Technical Details: Part 2 of 3 (6/96)

Article Created: 21 June 1996
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TOPIC -----

This article is the System 7.5 Technical Details (part 2 of 3) document.

DISCUSSION -----

System 7.5 Technical Details (part 2 of 3)

This file is one of several Read Me files that describe technical details between system software version 7.5 and system software version 7.5.3. This information is most appropriate for advanced users. For less technical information, see the About System 7.5 document, the Installing System 7.5 document, or the What's New in version 7.5.3 document.

What's in this document (part 2 of 3)

- Changes to SimpleText
- Changes to the Launcher
- Other new or changed components
- Miscellaneous fixes and enhancements
- Files no longer needed

Changes to SimpleText

- Includes SimpleText version 1.3.1, which supports QuickDraw 3D.
- Includes the following enhancements introduced with the version of SimpleText provided with System 7.5 Update 1.0:
 - Large documents, PICT files, and page ranges (for example, pages 2 and 3 of a 5-page document) print correctly.
 - Page Up, Page Down, and scrolling work better with Portable Digital Documents (PDDs) and other documents.

- Editing features (such as Cut, Copy, the forward delete key on extended keyboards, underlining, and selected text highlighting) work correctly.
- SimpleText documents that use system fonts now retain their fonts when opened on a computer with a different system font.
- Remote program linking (controlling SimpleText with AppleScript from another computer) is enabled by default.
- In the Don't Save/Save/Cancel dialog box, you can type "D" or Command-D for Don't Save.
- If you choose Quit with an unsaved document, and want to cancel the quit, you can do so by choosing Save in the Don't Save/Save/Cancel dialog box, then choosing Cancel in the Save dialog box.

Changes to the Launcher

- Includes Launcher version 2.8, which incorporates minor "behind the scenes" changes not likely to be visible to users.
- Launcher version 2.8 also includes the following fixes and features, introduced in System 7.5 Update 1.0:
 - Supports Macintosh drag and drop, making it easier to add or remove items.

To add an item: Open the Launcher and drag the item into the Launcher window or onto a category button. The system creates a new Launcher button for the item by placing an alias in the Launcher Items folder. The original item remains on your hard disk.

To remove an item from the Launcher: Hold down the Option key and drag the button out of the Launcher.

To move a Launcher button to a new category: Hold down the Option key and drag the button to a category button along the top of the Launcher window.

To open a file using the Launcher: Drag the file's icon onto a Launcher button that represents an application program. For example, you can open a SimpleText file by dragging its icon onto the SimpleText button. If the program the button represents can open the file, the button is highlighted when you drag the file to it.

To put a file into a folder: Drag the file's icon onto the Launcher button that represents the folder.

To resize the currently visible Launcher buttons: Hold down the Command key and click inside the Launcher window. Then choose a new size from the pop-up menu.

To open a category button's folder (located in the Launcher Items folder): Hold down the Option key and click the category button.

Other new or changed components

- Includes Open Transport v.1.1, a major re-implementation of the network system software for use on all 68030-, 68040-, and PowerPC-based computers except the desktop 5200, 5300, 6200, and 6300 series computers. If you choose the Easy

Install option, Open Transport will be turned on only if it you were using it before you installed this version of system software.

For more information, see the Open Transport Information folder, inside the Apple Extras folder.

- The Network Software Selector (NSS) enables users of 68030-, 68040-, and early PowerPC-based computers to choose between Open Transport and classic AppleTalk if both are installed. (You must restart the computer for the change to take effect.) PCI-based computers support only Open Transport.

NSS is in the Apple Extras folder; information on using it is built into the application. NSS is intended to ease the transition to Open Transport by allowing you to use the older networking software if there is a compatibility problem with an application and Open Transport. Once the problem is resolved, you should switch back to Open Transport.

Note: Because MacTCP is incompatible with Open Transport v.1.1, MacTCP is disabled any time Open Transport is selected using the Network Software Selector. (Open Transport uses the TCP/IP control panel instead of MacTCP.) If you reselect classic AppleTalk, MacTCP is enabled again.

- For users of the older networking software, this update includes MacTCP 2.0.6, which

- shortens retransmission delays
- prevents potential out-of-memory errors
- makes configuring communications easier
- gives users more control over which servers to contact and in what order

- Includes SerialDMA 2.0.2 for use on all PowerPC-based computers, the Centris 660AV, Quadra 660AV, Quadra 840AV, as well as the corresponding Performa and Apple Workgroup Server products. SerialDMA provides a complete rewrite of the DMA serial driver, which originally accompanied these computers, thus fixing the occasional system hang, communications time outs, poor communications performance, and other glitches. The new SerialDMA 2.0.2 driver also exceeds the performance and reliability standards for serial communications on the Mac OS platform, providing support for speeds of up to 230,400 baud.

- SerialDMA 2.0.2 is native on PowerPC-based computers.

- Includes a new version of Apple Modem Tool (1.5.5), which supports 115.2K and 230.4K connections on SerialDMA 2.0 machines.

- Includes the latest version of PC Setup (v1.0.7) for use with all DOS Compatible Mac OS computers.

- Includes Screen control panel version 1.0.7. This new version does not crash if it's in the System Folder of a Macintosh SE during startup or when it's opened on any 68000-based Mac OS computer.

- Includes File Sharing 7.6.2. Now, when file sharing is turned on, removable disks and CD-ROM discs will automatically be shared (except for audio CDs, which will no longer be shared). You no longer have to turn off file sharing to eject

a removable disk or CD-ROM disc, as long as no one is currently connected to that volume.

- Includes a faster version of the AppleShare Workstation client software. The new version performs read-ahead and write-behind caching, allowing the Finder to write to a local volume while reading from a remote volume (and vice-versa). The new version also briefly caches some information from the desktop database to avoid unnecessary hits to the disk.

- Includes Apple Video Player 1.4.

Miscellaneous fixes and enhancements

- The Shut Down warning, which appears during startup if the computer was shut down improperly, dismisses itself after two minutes so that startup isn't further delayed. Note that this warning can be turned off completely in the General Controls panel.

- Includes Macintosh Easy Open 1.1.2, which fixes delays when dragging Finder folders.

- The dialog box displayed after the keyboard Power key is pressed cancels itself after one minute.

- Fixes a problem with the Power key. In previous versions, if the Power key was held down just a little too long, the hardware could miss the release of the key. If the next key pressed was the Command key, the hardware would mistakenly think that Command-Power had been pressed and would bring up the programmer's window (or MacsBug if it was installed).

- Color Picker no longer crashes during startup. There is a problem with certain third-party SCSI drivers that mark the drive as removable at the beginning of startup and later mark it as non-removable. Because Color Picker creates an alias to itself during startup, the change to non-removable prevented the Color Picker alias from being resolved later. Color Picker now handles the failure to resolve this alias.

- Fixes a problem introduced by System 7.5 Update 1.0 that prevented 2-byte characters from being used when naming a DOS disk.

- Fixes a problem that allowed the Menu Manager to use an unlocked handle. This fix will eliminate some crash problems, especially when using certain pop-up menus.

- Changes several video drivers to provide better support for new monitors introduced since System 7.5 was released.

- Handles low-memory situations better than previous releases of Sound Manager.

- Fixes a problem that allowed the sound volume to be lower after restarting than it was before restarting; volume should now be properly preserved when restarting.

- The state of the Mute checkbox in the Sound control panel's Volume window is now preserved across restarts.
- Fixes a problem that allowed QuickDraw to leak about 50 bytes of memory in some isolated circumstances.
- Fixes a problem that allowed a nonexistent disk drive to show up in Disk First Aid.
- Fixes a crash problem in the Communications Toolbox that happens if there are more than about 600 zones on a single network. The new limit is just over 8000 zones.
- Fixes a problem on the 630 and 5200 series computers that would cause them to ignore the infrared remote control.
- Fixes a problem that made it take two attempts to unmute the sound using the infrared remote control on 630 and 5200 series computers.
- Presents a dialog box that advises users that audio CDs cannot be shared if an audio CD is selected and the "Share a Folder" or "Share a Folder (no Guest)" automated task is executed. (In the past, the system would hang in this situation.)
- Fixes a bug that caused the wrong font to be used in some cases.
- Fixes a problem that allowed a garbage pattern to be used when redrawing the pattern in a scroll bar.
- Fixes a problem with submenus drawn too large or not drawn at all.
- Fixes a problem that sometimes caused the startup progress bar to draw improperly.
- Fixes a problem in WorldScript Power Adapter that could cause text to wrap randomly in Text Edit fields, or to appear garbled.
- Plugged a small memory leak that sometimes occurred when resizing a window.
- The Power key can now be used to turn the computer off. To shut down the computer, press the Power key. When the dialog box appears, you can shut down your computer, restart your computer, put it to sleep (if it supports sleep), or cancel the shutdown. PowerBook 100 series computers do not have a Power key on their built-in keyboard, but if you attach an external keyboard, you can use the keyboard's Power key (as just described) to turn off the computer. This functionality is not supported on the Macintosh Plus.
- The Synchronize Folders AppleScript automated task handles nested folders properly.
- A new AppleScript automated task-Share a Folder (No Guest)-lets you automatically share a folder with the Guest access disabled.

- Improves system stability when memory is very low.
- Fixes a potential crash problem when shutting down or restarting Japanese systems with QuickTime 2.0 installed.
- Fixes a potential crash problem when pasting large amounts of data.
- No longer opens the wrong original when you select an alias on the desktop of a disk other than the startup disk.
- No longer interferes with custom colors that some applications use in the Open and Save dialog boxes.
- Fixes a potential crash problem that occurs when Stickies opens with a "collapsed" note window.
- Fixes a problem that would allow the Options button in Sound control panel's Sound In window to be dimmed when it should be enabled.
- Fixes sound problems in the Jigsaw Puzzle (caused by a third-party extension).
- PowerTalk Catalogs Extension version 1.1.1 no longer displays an out-of-memory error when you open a catalog.
- PowerTalk AppleMail version 1.1.2 works better on systems with many fonts installed and defaults to "sender only" for mail replies.
- PowerTalk DigiSign Utility version 1.1.1 improves printing on HP DeskWriter C and 550-style printers.
- Direct Dialup version 1.1.1 works better when dialing using a long string and won't time out while sending a large letter or a letter with a large enclosure.
- Fixes a potential crash problem that occurs if both PowerTalk and At Ease are installed. While PowerTalk and At Ease no longer crash when used together, accessing all of Power Talk's functionality requires the Finder (open the Special menu in At Ease and choose Go To Finder).
- Command-Option-Space bar no longer changes the keyboard layout if multiple layouts are installed. This avoids a conflict with some popular games that used these keys for controls within the game, resulting in a seemingly random layout being selected once the game is finished (during the game, the selected layout would change any time the three keys were pressed at once). If you want this functionality restored, open the Keyboard control panel and click the checkbox at the bottom. The conflict with certain games will exist as long as this box is checked.
- WindowShade version 1.3.1 fixes a potential crash problem that occurs when memory is very low.
- Macintosh Easy Open version 1.1.1 works better with drag-and-drop on document converters.

- Fixes a problem in the Menu Manager that could cause memory fragmentation within an application's heap.
- File Sharing no longer causes a crash when Find File is searching a remote volume using Apple Remote Access.
- Fixes a problem in file sharing that caused some files not to get copied. (The symptom of this problem was a dialog box stating that the file could not be copied because it couldn't be found.)
- Fixes a problem causing Type 8 errors on PowerBooks.
- Fixes a problem causing the cache to be erased on PowerBooks.
- PC-formatted floppy disks on PowerBooks will no longer be unreadable on PCs after use on a PowerBook 500 series computer that has been upgraded to a PowerPC.
- Fixes a problem with the DREmulator on PCI-based computers, and the PowerBook 5300 and 2300 series computers.
- Fixes a problem with correctly starting up from the disk selected in the Startup Disk control panel.
- Fixes a problem using SCSI devices on PCI-based computers with 1 gigabyte hard disks.

Files no longer needed

The software automatically deletes the files listed below -- unless you renamed any of them, in which case, you should remove the files.

- Several standalone files are now merged into the System 7.5 enabler, the System 7.5.2 enabler, or the System file. This software deletes the old (standalone) versions of the following files:

- 7.5.2 Printing Fix
- 040 VM Update
- 601 Processor Card Enabler
- 630 SCSI Update
- CFM Updater
- Color Classic Update
- Color Classic Update
- Display Enabler 2.0
- EM Sound Update
- MathLib
- Mount IDE Drive
- Network Software Installer (v1.5.1 and later)
- PowerBook 150 Update
- PowerBook 2300c Update
- PowerBook 5300/2300/190 Enabler
- PowerPC Enabler

- SCSI Manager
- SCSI Manager 4.3 (a renamed version of SCSI Manager)
- Serial Update 406
- SerialDMA
- Sound Manager
- System Enabler 406
- ThreadsLib
- Workgroup Server Enabler

• Several standalone files have been merged into the System 7.5.2 Update enabler. The update deletes the old (standalone) versions of the following files:

- 7.5.2 Printing Fix
- CFM Updater
- PowerBook 5300 Enabler
- PowerBook 5300/190 Enabler
- SerialDMA
- Sound Manager
- System Enabler 701
- ThreadsLib

•• Several standalone files have been merged into or been replaced by various other pieces of the system. The update deletes the old (standalone) versions of the following files:

- Sound & Displays (replaced by Monitors & Sound)
- Apple Multimedia Tuner (rolled into QuickTime 2.1)
- LaserWriter 8.0 (replaced by LaserWriter 8)
- PowerPC Finder Update (renamed in System 7.5 Update 1.0 and merged into the Finder)
- Finder Update (rolled into the Finder)

Article Change History:

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20093



Tech Info Library

System 7.5 v7.5.3 Technical Details: Part 3 of 3 (8/96)

Revised: 8/5/96
Security: Everyone

System 7.5 v7.5.3 Technical Details: Part 3 of 3 (8/96)

Article Created: 21 June 1996
Article Reviewed/Updated: 5 August 1996

TOPIC -----

This article is the System 7.5 Technical Details (part 3 of 3) document.

DISCUSSION -----

System 7.5 Technical Details (part 3 of 3)

This file is one of several Read Me files that describe technical details between system software version 7.5 and system software version 7.5.3. This information is most appropriate for advanced users. For less technical information, see the About System 7.5 document, the Installing System 7.5 document, or the What's New in version 7.5.3 document.

What's in this document (part 3 of 3)

- Changes for PowerPC-based models
- Changes for PowerBook and Duo models
- Changes for other 68K-based models
- Changes for PC cards
- Changes for AppleVision monitors
- Changes related to printing
- Known problems and their workarounds
- Tips

Changes for PowerPC-based models

• PowerPC-based computers with PCI expansion slots now use the Monitors & Sound control panel to control monitor and sound settings instead of the Sound & Displays control panel. You can do a custom installation to install the Sound control panel if you need it for older applications.

• Includes native SCSI (not on desktop 5200, 5300, 6200, and 6300 series

computers).

- Fixes a SCSI

Manager problem that would hang any PowerPC-based computer if a Sony or WangDAT DAT drive was used with Retrospect.

- Fixes a problem on desktop 5200, 5300, 6200, and 6300 series computers running QuickTime 2.1 that would prevent sound from being heard in Fusion Recorder's Record window until either a recording was started or the TV volume in the Sound control panel was unmuted.

- Includes both native and 68K versions of common Modern Memory Manager routines, improving performance of emulated applications by speeding up calls to common routines. (System software versions 7.5 and 7.5.1 included only the native implementations, while system software version 7.5.2 included both native and 68K versions.)

- Includes a rewritten fixed-point math library to provide better performance for QuickDraw, other parts of the system, and all applications that use this library. Because QuickDraw and other parts of the System use this library extensively, installing this update will cause noticeable performance gains.

- PowerPC-based computers with PCI expansion slots might have a different physical Ethernet address after you install this software. The software fixes a bug that caused an incorrect physical Ethernet address to be used in environments where TCP/IP addresses are obtained using BootP, DHCP, or RARP. To see the new Ethernet address after you install this software, open the File menu in the AppleTalk or TCP/IP control panel and choose Get Info. If you install this software and are no longer able to use your TCP/IP-based applications, contact your network system administrator.

- On PowerPC-based computers (including those with PowerPC Upgrade cards) running system software version 7.5 or 7.5.1, this software version introduces the Native Resource Manager. This version of the Native Resource Manager is slightly newer than the version released with system software version 7.5.2. The System 7.5.2 Update file includes the same improved version of the Native Resource Manager.

- Reduces times to open applications on PowerPC-based computers with virtual memory turned on. System 7.5.2 (not 7.5 or 7.5.1) would significantly slow down while opening certain applications, such as Microsoft Excel version 5.0, if virtual memory was turned on. With this system software version installed, launch times should be about the same whether or not virtual memory is turned on.

- Fixes a bug affecting plug-ins that import from an application. This problem existed in all PowerPC-based computers running system software versions 7.1.2, 7.5, 7.5.1, and 7.5.2. and was originally fixed by the CFM Updater extension (distributed with QuickDraw 3D). This version of system software deletes this extension, which is no longer needed.

- Fixes a bug in starting up from removable media with virtual memory on. (Although this bug was fixed in 7.5.2, it still exists in 7.1.2, 7.5, and 7.5.1

PowerPC computers.)

- Fixes problems with the DR Emulator. (The DR Emulator works only on PCI-based computers and the PowerBook 2300, 5300, and 500 upgrade.)
- Fixes a problem in certain IDE drives that resulted in cached data not being written to the disk at shutdown.
- Fixes anti-aliasing errors for Kanji Type 1 fonts.
- Fixes a problem that resulted in off-white often being drawn as white. (This effect, while generally subtle, was significant enough for some applications to merit a fix.)
- Fixes a crash problem (a Type 11 error) in Native QuickDraw; this error occurred when using Quark XPress v3.1.1 with system software versions 7.5 and 7.5.1. System 7.5.2 and later versions corrected this problem. If you have Type 11 errors when using Quark XPress 3.3.1 with System 7.5.3 on a PowerPC-based computer, one suggested solution is upgrading to the latest version of Quark Express.
- Fixes a problem in the Dialog Manager that caused some applications to crash after a dialog box was dismissed.
- Supports DayStar Turbo 601 cards in a Macintosh IIci or IIsi.
- If you use Microsoft Office 4.2.1, you need the extension "Office 4.2x Update For Power Mac," version 1.0.1, and the Microsoft Office Manager control panel, version 4.2.1b. You can download these files from the Internet. Download the MC1164.HQX and MOMPATCH.HQX "patch" (update) files from Microsoft. The patches are available on the Internet at

<ftp://ftp.microsoft.com/softlib/mslfiles>

- Includes changes to native QuickDraw which speed up operations such as scrolling, image filtering, and pattern and text drawing. ("Native QuickDraw" refers to time-critical portions of QuickDraw that have been native since the initial release of PowerPC-based computers.
- Updates video software, thus prevent video scrambling during computer startup.

Changes for PowerBook and PowerBook Duo models

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- Contains a new version of password security software. The version that shipped with the PowerBook 5300 and the PowerBook 190 computers could lock out international users since the software to handle international keyboards does not load until after the password is requested during startup. If the password contained a character that was not available on a U.S. keyboard, it could not be entered and the computer could not finish starting up. The new version of the password security software fixes this problem.
 - Fixes a problem in the Assistant Toolbox that caused the Assistant Toolbox to

be incompatible with Open Transport.

- Fixes a problem that prevented PowerBooks and PowerBook Duos from going to sleep if SimpleText or certain other applications were running in the background.
- Fixes problems with the DR Emulator. (The DR Emulator works only on PCI-based computers and the PowerBook 2300, 5300, and 500 upgrade.)
- PowerBook Duo docks: Pressing the eject button automatically opens items in the Shutdown Items folder and shuts down the computer. No dialog box appears.
- PowerBook 500 models: Improves trackpad performance.
- PowerBook 150: Extends battery life by reducing power requirements during sleep mode. It also prevents the system from freezing when you repeatedly use the internal modem without restarting the computer.
- PowerBook 150: Eliminates the need for the PowerBook 150 Update system extension. Installing Update 2.0 automatically removes this extension from the Extensions folder (inside the System Folder).
- PowerBook 150: Fixes a problem that prevented the internal IDE disk from appearing on the desktop. The problem occurred if the internal IDE disk was selected as the startup disk, and the Command-Shift-Option-Delete keys were held during startup (to start up from an external hard disk).

Changes for other 68K-based models

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- Quadra 900 and 950: Fixes a problem in the Sound control panel. Before this version of system software, the External Line and Internal CD buttons in the Sound control panel were reversed, so that clicking the Internal CD button was interpreted as though the External Line button had been clicked (and vice-versa).
 - Quadra 950: Fixes a problem with the Sound control panel. Before this software version, clicking the Add button sometimes caused the computer to crash.
 - Centris 660AV, Quadra 660AV, and Quadra 840AV: Includes Apple Video Player v.1.4, which replaces the Video Monitor application (which is no longer supported).
 - Quadra 840AV, Quadra 660AV, and Centris 660AV: Includes new video software that prevents video scrambling during computer startup.
 - Quadra 840AV, Quadra 660AV, and Centris 660AV: Fixes a problem in the Dialog Manager that caused some applications to crash after a dialog was dismissed.
 - Performa 630, Quadra 630, and LC 630 with internal IDE drives: Fixes a problem that prevented the internal IDE disk from appearing on the desktop. The problem occurred if the internal IDE disk was selected as the startup disk, and the Command-Shift-Option-Delete keys were pressed during startup (to start up from an external hard disk).

- Quadra 700: Fixes a potential problem that could slow down the mouse or trackball.
- Quadra 840AV: Includes an updated Display Manager which ensures that a multi-sync monitor is set to the correct resolution when you restart the computer.

Changes for DOS Compatibility Cards

- Macintosh Easy Open version 1.1.1 fixes problems with cut and paste between Mac OS and PC applications on Mac OS computers with a DOS Compatibility Card installed.
- Quadra 610 and Centris 610 computers with the 610 DOS Compatibility Card installed receive PC Setup version 1.0.2 (software that was inadvertently not provided with the upgrade disks for System 7.5).

Changes for AppleVision monitors

- If you use AppleVision software, use version 1.0.2 or later. Earlier versions of AppleVision are not compatible with this software.
- If you have a 1710AV monitor and a PCI-based computer, use AppleVision 1.0.4 and the Monitors & Sound control panel.
- If you have a 1710AV monitor and a non-PCI-based computer, use AppleVision 1.0.2, the Sound control panel, and the Monitors control panel.

Changes related to printing

- Includes version 2.1.1 of the StyleWriter 1200 driver, which fixes a crash bug on System 7.5.2-capable computers.
- Includes the LaserWriter 8F (version 8.2.3F) driver, which supports all the fax options on the LaserWriter 16/600. The LaserWriter 8 (version 8.3.3) driver does not support all these fax options.
- Supports QuickTime compressed images and ColorSync 2.0 through the LaserWriter 8 (version 8.3.3) driver.
- The LaserWriter 8 (version 8.3.3) and LaserWriter 8F (version 8.2.3) drivers contain fixes for two common printing problems found on PCI-based computers: freezing when trying to print to a printer that's busy, and freezing when trying to print large documents or printing to LocalTalk-based printers.
- The LaserWriter 8F, version 8.2.3, printer driver provides the following enhancements (introduced in version 8.2):
 - Improves the function of the Setup button in the Chooser; this button automatically looks for the selected printer, selects the appropriate PostScript Printer Definition (PPD) file, and configures the paper trays. (If you prefer to manually configure the PPD files and paper trays, you can do so by clicking the

Setup button a second time.)

- Resets the destination in the Print dialog box to Printer instead of retaining the previous print job's destination. For example, if the previous destination was Fax, the destination automatically resets to Printer for the next job.
- Enables you to tab backwards through the fields in all print dialog boxes by pressing Shift-Tab.

Note: Installing the LaserWriter 8F version 8.2.3 printer driver removes the LaserWriter 8 Prefs file from your system. Thus, after you install, you need to set up your printer using the following steps:

1. Open the Chooser.
2. Click the LaserWriter 8 icon.
3. Click the printer you want to use.
4. Click the Setup button.

Known problems and their workarounds

- Apple Video Player displays an incorrect dialog box if it's opened on a computer that does not have video-in capability. Apple Video Player complains that the Video Startup extension was not installed properly instead of stating that video-in is required for this application to run.
- If, when you try to print, you see a message that your printing preferences are missing or damaged, open the Chooser and select a printer.
- Some versions of the LaserWriter driver (version 7.2 and earlier) and the QuickDraw GX printer drivers still have the problems that interfere with PCI-based computers trying to print on a busy printer or trying to print large documents. If you experience these problems, select the LaserWriter 8.3.2 driver from the Chooser.
- Two different control panels are named "Energy Saver." The older version worked by dimming the external screens of certain computers. The newer Energy Saver, which works differently, works only on PowerPC computers with PCI slots.

The universal System Folder (created by choosing Any Macintosh in the Custom Install option) that can be created by this system software version contains only the newer Energy Saver. If your universal System Folder requires both versions of the Energy Saver, do the following:

1. Rename the newer Energy Saver.
 2. Use the Custom Install option to install the older Energy Saver.
- The new minimum RAM disk size is 416K. If a smaller RAM disk exists during the installation of this software, it will be turned off and its contents lost when the computer is restarted. Therefore, before installing this software on a computer with a RAM disk smaller than 416K, move all the contents of the RAM disk to another disk.
 - Digital audio recording and playback can occasionally "skip" if virtual memory

is turned on. To reduce this skipping, turn off virtual memory.

- HyperCard version 2.3.3 or earlier does not record sound properly on computers with PCI slots. Other sound-recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

- When used with SerialDMA, DOS Compatibility software will not be able to use hardware handshaking on the PC serial port.

- There is an incompatibility between AppleShare Workstation software version 3.6.1 and Connectix Speed Copy (part of Speed Doubler version 1.1 or earlier). Use the Extensions Manager to turn off Speed Copy before you install this software, and contact Connectix to get the latest version of Speed Doubler. (You can contact Connectix at <http://www.connectix.com>, 415-571-5100, or 800-950-5880.)

- If you are using the IR port and Open Transport on a PowerBook 190, and networking doesn't work after you restart the computer, try putting the computer to sleep and waking it up, or choose the printer/modem port and then switch back to the IR port.

- The Ethernet Compatiblity extension version 1.0.3 fixes a problem in the Macintosh system shutdown code for PCI-based PowerPC computers running some network software, including Novell Netware. The side effect of this fix is a two-minute delay in shutting down the computer.

- When using Drive Setup (version 1.0.4 or earlier) on some IDE hard drives, the "Update driver," "Customize volume," and "Test disk" options are dimmed. To use these options, back up all data from the IDE disk onto another disk, and use Drive Setup to reinitialize the IDE disk.

- If you have a Macintosh Centris 660AV, Quadra 660AV, or Quadra 840AV, some system alert sounds may not play correctly with the alert volume turned down. To avoid the problem, keep the alert volume turned all the way up and adjust the Built-In system volume:

1. Open the Sound control panel.
2. Choose Volumes from the pop-up menu.
3. Adjust the volume.

- Speech version 1.4.1 can cause a Macintosh Plus (a model which does not support speech) to hang during startup. If your Macintosh Plus hangs during startup, do the following:

1. Restart the computer while holding down the Space bar.
2. When the Extensions Manager dialog box appears, turn off Speech.

- If your computer has a 68000 processor and the computer won't start up, try pressing the Shift key (to turn off extensions) while you restart. If there is a "Color StyleWriter 2000 CMM" file in your Extensions folder (inside the System Folder), take this file out of the Extensions folder and restart your computer. (To use the Color StyleWriter 2000 series printer, you need a 68020 or higher

processor.)

Tips

- Many LaserWriter LS users are unaware that this printer is supported by the LaserWriter 300 driver. To make this clear, future system releases will rename this driver to LaserWriter 300/LS. For now, you can either rename this driver or wait for a future release to do it for you. If you rename it, you must select the new name from the Chooser before you can print using this renamed driver.

- Recent-documents tracking (in Apple Menu Options) tracks all files that are opened -- even those opened by an application as part of its launch sequence (such as drop-in filters used by desktop publishing packages). This tracking can significantly slow down the launching of these applications. To reduce this overhead you can:

- turn off "recent documents" tracking in the Apple Menu Options control panel
- turn off Apple Menu Options in the Extensions Manager

- This update resets all settings in the Apple Menu Options control panel to their default values. If you have made changes to Apple Menu Options, you will need to select them again after installing this update. If you have set Apple Menu Options to track more than ten items in any category, you may want to move some of those aliases out of their folders before you install the update, which deletes all but the ten most recent items in each category.

Article Change History:

05 Aug 1996 - Added keyword.

28 Jun 1996 - Change status at product release.

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Tech Info Library Article Number:20094



Tech Info Library

MacDNS: Number of Domains Supported (6/96)

Revised: 6/24/96
Security: Everyone

MacDNS: Number of Domains Supported (6/96)

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Article Created: 24 June 1996

TOPIC -----

I am setting up a WWW server on my Macintosh. I want to use MacDNS for all of my DNS services, which needs to serve 20 domains. Can MacDNS handle this?

DISCUSSION -----

There is no limit set in MacDNS, however, there is a limitation in the Mac OS file system of 346 open files. Each zone file counts towards this limit. Each zone file will also increase the application's RAM requirement by about 2 KB.

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Tech Info Library Article Number:20095



Tech Info Library

DOS Compatibility Card Software Version 1.5 & Mac OS (6/96)

Revised: 6/24/96
Security: Everyone

DOS Compatibility Card Software Version 1.5 & Mac OS (6/96)

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Article Created: 24 June 1996

TOPIC -----

What version of the Mac OS is recommended for use with PC Setup Version 1.5 and a DOS Compatibility card?

DISCUSSION -----

PC Setup 1.5 is supported on System 7.1.2 or System 7.5.3 (with either System 7.5 Update 2.0, or pre-installed System 7.5.3). Other versions of the Mac OS may cause unpredictable results. Note that System 7.1.2 is only supported on the Power Macintosh 6100 DOS Compatible. System 7.5.3 can be installed on any Macintosh that supports a DOS Compatibility Card.

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Tech Info Library Article Number:20096



Tech Info Library

RealAudio and the Number of Simultaneous Streams (6/96)

Revised: 6/24/96
Security: Everyone

RealAudio and the Number of Simultaneous Streams (6/96)

Article Created: 24 June 1996

TOPIC -----

This article describes the number of simultaneous streams RealAudio supports on Apple Internet Software Solution server computers.

DISCUSSION -----

The RealAudio software which shipped with the Apple Internet Software Solution has a 5 user license. The following are excerpts from the Administration Guide that come with the product:

Streams

The RealAudio Server and the accompanying encoding application enable you to create and deliver RealAudio content. The number of simultaneous users who can listen to content sent from your server at any given time is referred to as the "number of streams." The number of streams a server can deliver depends upon three factors: the type of RealAudio Server you have, the power of your Server computer, and the bandwidth between your Server and the Internet (each audio stream requires 10 KB per second of network bandwidth).

Maximum Audio Connections

The maximum number of simultaneous audio connections your server can support is five. This entry allows you to set a limit less than or equal to this number. To specify a different value, enter it into the Audio field. The maximum number of connections cannot usefully exceed the maximum number that the bandwidth of your Internet connection will support.

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Tech Info Library Article Number:20097



Tech Info Library

Newton Internet Enabler: MP130 update 2.0 (526167) (6/96)

Revised: 6/25/96
Security: Everyone

Newton Internet Enabler: MP130 update 2.0 (526167) (6/96)

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Article Created: 25 June 1996

TOPIC -----

I came across this new system update (526167) while downloading the newest version of the Newton Internet Enabler. I checked my Newton 130 and it is 2.0 (526060). Is this update newer than the one which shipped with the 130 and what is it for?

DISCUSSION -----

The newest Newton system update for the MessagePad 130 (version 526167) is used to correct problems with applications that allocate large chunks of store memory, such as the Newton Internet Enabler (NIE).

Developers of products which use the NIE may also be distributing this update. This update will not be part of any official system update offered to MessagePad owners at this time.

This update is designed for the NIE developers and for customers who purchase a product that uses the NIE software. The update can be found on the Apple Developer Services web site.

For developers, questions on NIE v1.0 will be addressed through the usual channel of support (for US and Canada, DEVSUPPORT@applelink.apple.com). Other users can send mail to NEWTONDEV@applelink.apple.com.

Any particular NIE connectivity issues must be addressed with your Internet Service Provider.

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Tech Info Library Article Number:20098



Tech Info Library

Apple Remote Access 2.1 and Powertalk (6/96)

Revised: 6/25/96
Security: Everyone

Apple Remote Access 2.1 and Powertalk (6/96)

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Article Created: 21 June 1996

TOPIC -----

I just installed Apple Remote Access (ARA) 2.1 and the Remote Access Setup Control panel will not open. When launching the Control Panel, I get a dialog box that says something about files not being found and then it exits back to Finder when I click OK. What is wrong?

DISCUSSION -----

Overview

An incompatibility between ARA 2.1 and PowerTalk has been discovered. The incompatibility prevents ARA 2.1 Client and the ARA 2.1 Personal Server from working. This issue does not occur with System 7.5.3.

The CCL scripts for ARA 2.1 are no longer in the Extensions folder. They have been placed into the Modem Scripts folder within the Extensions folder. As a result of this change ARA loads its own Alias Manager, which is shared with the Folder Manager.

Unfortunately, PowerTalk, which loads later than ARA, seems to completely replace the ARA version of the Alias Manager. This renders ARA unusable since neither the Remote Access Setup control panel, nor the underlying ARA driver can locate the Modem Scripts folder.

Workaround

Upgrade to System 7.5.3 which has a new Folder Manager. Both ARA and PowerTalk recognize the Alias Manager they need is already present and do not install their own.

Renaming ARA's extensions in attempt to modify load order will not work because ARA loads code before normal extensions/control panels load.

..TIL20099-Apple_Remote_Access_2-1_and_Powertalk_6-96_(TA35744).pdf

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Tech Info Library Article Number:20099



Tech Info Library

Toner Cartridge & Recycling Instructions (6/96)

Revised: 4/21/97
Security: Everyone

Toner Cartridge & Recycling Instructions (6/96)

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Article Created: 24 June 1996

TOPIC -----

The toner recycling instructions included with my toner cartridge suggest that Alaska and Hawaii residents call 800-776-2333 to obtain alternative transportation information. I live in one of these locations, what should I do?

DISCUSSION -----

The UPS shipping label included with the toner cartridge should be used, there is no need to use an alternate carrier.

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Tech Info Library Article Number:20100



Tech Info Library

Power Macintosh 7200: EDO Memory Can Damage Logic Board (6/96)

Revised: 6/24/96
Security: Everyone

Power Macintosh 7200: EDO Memory Can Damage Logic Board (6/96)

Article Created: 18 June 1996

TOPIC -----

I have a Power Macintosh 7200 series computer, and I would like to use EDO (Extended Data-Out) memory in my computer because I have heard that it will provide me with increased performance. Are there any issues I should be aware of before doing this?

DISCUSSION -----

You cannot use EDO memory in the Power Macintosh 7200 computer. Using EDO memory in the Power Macintosh 7200 computer can cause damage to the logic board and to the memory. Because of this, Apple does not support using EDO memory in the Power Macintosh 7200 computer. Any damage incurred from using EDO memory in the Power Macintosh 7200 computer may not be covered under Apple Computer's limited hardware warranty.

The Tech Info Library article, "Macintosh Computers: Using EDO Memory" provides you with additional information about using EDO memory with other Power Macintosh computers.

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Tech Info Library Article Number:20101



Tech Info Library

LaserWriter 12/640 PS: Paper Sizes & Imageable Area (6/96)

Revised: 6/25/96
Security: Everyone

LaserWriter 12/640 PS: Paper Sizes & Imageable Area (6/96)

Article Created: 24 June 1996

TOPIC -----

What is the imageable area for the LaserWriter 12/640 PS printer?

DISCUSSION -----

The LaserWriter 12/640 PS printer supports the following page sizes and imageable areas:

Begin_Table

Paper Type	Physical Page Size (points)	Imageable Area (points)
Letter	612 x 792	587.52 x 767.88
Lettersmall	612 x 792	562 x 742
Legal	612 x 1008	587.52 x 983.88
Legalsmall	612 x 1008	562 x 958
A4	595 x 842	572.16 x 817.8
A4small	595 x 842	545 x 792
A5	420 x 595	399.36 x 570.84
B5 (JIS)	516 x 729	491.52 x 704.88
Executive	522 x 756	499.2 x 732.48
EuroPostCard	284 x 420	272.64 x 391.50

+=====+			
+=====+			
Envelope Type	Physical Size	Imageable Area	
	(points)	(points)	
+=====+			
COM-10	297 x 684	272.64 x 656	
+-----+			
Monarch	279 x 540	257.28 x 512	
+-----+			
C5	459 x 649	433.92 x 621	
+-----+			
DL	312 x 624	288 x 596	
+=====+			

Note:

- The fractions are due to conversion from pixels to points.
- To convert from points to inches divide the number by 72.
(1-in. = 72 points)

End_Table

LaserWriter Printable Area Margins

=====

Left = 4.0 mm (0.157 in or 11.34 points)
Right = 4.0 mm (0.157 in or 11.34 points)
Top = 4.0 mm (0.157 in or 11.34 points)
Bottom = 4.0 mm (0.157 in or 11.34 points)

For heavy paper (Postcard and Envelopes) the top margin is 6.00 mm.

Maximum printable line: 208 mm (8.19 in) standard mode

The default paper size is lettersmall.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20102



Tech Info Library

Apple Remote Access and Meeting Maker 3.5 (6/96)

Revised: 6/26/96
Security: Everyone

Apple Remote Access and Meeting Maker 3.5 (6/96)

=====

Article Created: 26 June 1996

TOPIC -----

I'm experiencing a problem with Apple Remote Access (ARA) 2.0.1. My connection works fine until the point I try to disconnect. ARA never hangs up the modem connection and then the system locks.

DISCUSSION -----

Meeting Maker XP 3.5 seems to have compatibility problems with Apple Remote Access 2.0.1.

ON Technology the vendor of Meeting Maker is aware of the problems with Meeting Maker 3.5 and ARA. They have addressed this issue in version 3.5.1.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20103



Tech Info Library

Color LaserWriter 12/600: White Areas on Legal Documents (7/96)

Revised: 7/13/96
Security: Everyone

Color LaserWriter 12/600: White Areas on Legal Documents (7/96)

Article Created: 9 July 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

Using a Color LaserWriter 12/600 PS, I am printing a color document on legal size paper. When the document prints, some areas of light color appear white, and some portions of the document disappear altogether. What could be causing this?

DISCUSSION -----

In the Color LaserWriter 12/600 PS, the Apple Contone Compression Technology is tuned to print a standard letter-size or A4 page using only 12 MB of RAM on the printer's I/O board. If you attempt to print a legal-size page on a Color LaserWriter 12/600 PS with 12 MB of RAM, some areas of light colors will appear white, and some portions of the document may disappear altogether. The name for this effect is "dropout".

Dropout occurs because the Apple Contone Compression Technology uses a higher compression technique which uses only the C,M, and Y color planes to fit a legal-sized image into the same amount of RAM as a letter-sized image.

To eliminate dropout, add more RAM to the printer's I/O board. Adding 4 MB of RAM (for a total of 16 MB) will allow legal-size pages to print without dropout.

This article was published in the Information Alley on 09 July 1996.

Article Change History:
13 Jul 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20105



Tech Info Library

Color LaserWriter 12/600: Error 0x3e7750 with AppleShare (1/97)

Revised: 1/24/97
Security: Everyone

Color LaserWriter 12/600: Error 0x3e7750 with AppleShare (1/97)

Article Created: 25 June 1996
Article Reviewed/Updated: 24 January 1997

TOPIC -----

When trying to capture a Color LaserWriter 12/600 PS printer with our AppleShare Print Server (v3.x or 4.x), the printer restarts and prints a page with the error, "Printer restarted due to error at address 0x3e7550." The printer was working properly with a LocalTalk connection.

I removed the logic board from the printer and let it sit for 10 minutes. Then I replaced the logic board into the printer and restored the printer defaults using the printer utility. This corrected the address problem, but is there any other way of correcting this?

DISCUSSION -----

When TCP/IP is turned off on the Color LaserWriter 12/600 PS or Color LaserWriter 12/660 PS with the Apple Printer Utility, this error occurs when any type of print server (AppleShare, NetWare, Windows NT) attempts to capture the printer by changing the AppleTalk type. You may also see one of the following errors: 0x3EA5B0 or 0x3E9428. You should turn TCP/IP on. The TCP/IP setting can be found under:

Apple Printer Utility
 Communication Configuration
 Port Configuration
 Ethernet Port

This explains why your workaround, of removing the logic board and letting it sit for 10 minutes resolves this issue. Basically, the board is reset to its default settings, where TCP/IP is on.

This issue has been reported, and Apple Engineering is investigating it. We have no information as to when a fix will be available.

Article Change History:

22 Jan 1997 - Added NetWare to the Article.

24 Oct 1996 - Added Color LaserWriter 12/660 and Windows NT information.

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Tech Info Library Article Number:20106



Tech Info Library

MAE: Only HFS CD-ROM Discs Supported (6/96)

Revised: 6/25/96
Security: Everyone

MAE: Only HFS CD-ROM Discs Supported (6/96)

=====

Article Created: 25 June 1996

TOPIC -----

When I try to mount Audio or Kodak Photo CD-ROM discs in the Macintosh Application Environment (MAE) version 2.0.2 and earlier, I get the message, "This is not a Macintosh disk. Do you want to initialize it?" What is wrong?

DISCUSSION -----

MAE supports HFS (Hierarchical File System) CD-ROM discs only. Audio and Kodak Photo CD-ROM discs do not use the HFS format, and at this time, cannot be used with MAE.

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Tech Info Library Article Number:20107



Tech Info Library

At Ease Updater (non-workgroups) 1.0 Read Me (6/96)

Revised: 6/26/96
Security: Everyone

At Ease Updater (non-workgroups) 1.0 Read Me (6/96)

=====

Article Created: 26 June 1996

TOPIC -----

The following article is the ReadMe document for the At Ease Updater (non-workgroups) 1.0.

DISCUSSION -----

This application is a utility that will modify the At Ease Startup system extension for At Ease 2.0 and 3.0, non-workgroup versions. Running this utility eliminates a potential startup hang problem with Mac-OS computers running Open Transport.

WARNING

This utility should be used only on a non-workgroup version of At Ease, (called "At Ease" rather than "At Ease for Workgroups"). If it is used on versions 2.0 or 3.0 of At Ease for Workgroups, network access problems may result and you will need to re-install At Ease for Workgroups on the computer. (Running the utility does nothing on versions 3.0.1 or later of At Ease for Workgroups.)

To use this utility, run it on a computer that has an installed version of At Ease 2.0 or 3.0 (non-workgroups).

If the update is successful, you should restart your machine. This utility will append a "+" character to the version string of the At Ease Startup extension file once it has been updated. You can use the Get Info command of the Finder if you want to know if the file has already been updated.

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Tech Info Library Article Number:20110



Tech Info Library

LaserWriter Toner Cartridges: Covered by Warranty? (7/96)

Revised: 7/16/96
Security: Everyone

LaserWriter Toner Cartridges: Covered by Warranty? (7/96)

=====

Article Created: 9 July 1996

TOPIC -----

Are Apple LaserWriter toner cartridges covered by any warranty?

DISCUSSION -----

As consumables, toner cartridges are not covered by Apple's warranty.

If the toner cartridge worked properly when first installed and developed image quality defects thereafter, the issues are usually caused by the media that was sent through the printer. To avoid potential issues with the toner cartridge, and use only approved paper types and weights for your printer. This information is available in your LaserWriter User's Guide, which was included with your LaserWriter.

Article Change History:
16 Jul 1996 - Minor typographical correction.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20112



Tech Info Library

Powerbook 500 Brightnss & Contrast Don't Work After Upgrd(10/96)

Revised: 10/8/96
Security: Everyone

Powerbook 500 Brightnss & Contrast Don't Work After Upgrd(10/96)

Article Created: 26 June 1996
Article Reviewed/Updated: 8 October 1996

TOPIC -----

After upgrading my Powerbook 500 series computer with the Power PC upgrade the brightness and contrast buttons no longer have any effect when it is starting up. This only happens when I start from the battery, not when it is plugged into the AC power.

DISCUSSION -----

Issue

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When using system software older than 7.5.5 on a Powerbook 500 series computer with the Power PC upgrade, the Display Brightness control push button does not work unless AC Power is connected.

If you adjust the brightness or contrast while the unit is starting up, and running from the battery, those controls will become locked in at the current brightness/contrast setting.

Workaround

=====

Do not adjust brightness or contrast until the unit fully comes up to the desktop. If you wait until the computer is finished starting up to make adjustments, the brightness and contrast buttons will work normally.

Resolution

=====

System Software 7.5.5

System Software 7.5.2 v 1.2 is the version of system software which originally shipped with the Powerbook 500 series computer Power PC upgrade. Installing System Software version 7.5.5 fixes display brightness issue.

Alternate Solution

Newer Technology has created a system extension that corrects this issue. It is called NUpowr Backlight Fix and can be found on the internet at www.newertech.com on the Free Software page.*

*NOTE:

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Newer Technology, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the Information Alley on 27 June 1996.

This article was published again in the Information Alley on 8 October 1996 with updated information.

Article Change History:

08 Oct 1996 - Added information about system software update.
26 Aug 1996 - Added information about Newer Technology's fix.
27 Jun 1996 - Reworded for clarity.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20113



Tech Info Library

PowerBook Duo: Difference In Volume Level After PPC Upgrd (6/96)

Revised: 6/27/96
Security: Everyone

PowerBook Duo: Difference In Volume Level After PPC Upgrd (6/96)

Article Created: 26 June 1996
Article Reviewed/Updated: 27 June 1996

TOPIC -----

I just had an authorized Apple service technician upgrade my PowerBook (Duo) 280c computer to the Power PC (PPC) 2300c logic board. Now my computer is much louder than it was before. Why? Can I reduce the volume to the way it was before the upgrade?

DISCUSSION -----

The sound output level on the PowerBook 2300c logic board is higher than on previous PowerBook 200 series (Duo) computers. The impedance on the PowerBook 270c and 280c computers' speakers is lower than on the speaker in the PowerBook 2300c. When you upgrade from a PowerBook 270c or 280c to the 2300c logic board, you may find that you PowerBook speaker is noticeably louder than it was before.

A PowerBook 270c or 280c computer which has been upgraded to the PPC logic board has the largest range in volume when compared to the PowerBook 200 or 2300 series computers. If it seems that your PPC upgraded PowerBook is too loud, it is possible that you have not adjusted the Sound control panel correctly. By adjusting the Volume and Alert Volume sliders in the Sound control panel, you should be able to match the overall volume level of your PowerBook computer before it was upgraded.

The following table shows the dB levels of the different PowerBook 200 and 2300 series computers using the Simple Beep sound in the Sound control panel. "Max" means the Volume and Alert Volume sliders were set to maximum. "Min" means the Volume and Alert Volume sliders were set to one. The dB meter was placed about one cm from the speaker.

Begin_Table

PowerBook 270c/280c upgraded

PowerBook 2300c	PowerBook 280c	to Power PC
-----	-----	-----
max - 110dB	max - 101dB	max - 116dB
min - 92dB	min - 85dB	min - 80dB

End_Table

This article was published in the Information Alley on 27 June 1996.

Article Change History:

27 Jun 1996 - Added Alley publication info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20114



Tech Info Library

QuickTake 150 Camera: 2.0.1 Installer Read Me File (6/96)

Revised: 6/27/96
Security: Everyone

QuickTake 150 Camera: 2.0.1 Installer Read Me File (6/96)

=====

Article Created: 26 June 1996

TOPIC -----

The following is the Installer ReadMe file for the QuickTake software version 2.0.1 for use with the QuickTake 150 digital camera.

DISCUSSION -----

Installation process

The software for the QuickTake 150 digital camera is compressed onto four disks. The process of reading, decompressing, and installing the software can take a while on some Macintosh computers.

Warning about extensions

Some extensions interfere with the QuickTake Installer. To avoid problems, press and hold down the Shift key while you start up your Macintosh. This turns off the extensions temporarily. When QuickTake installation is complete and you restart your Macintosh, the extensions start up as usual.

System 7.5 and Virtual Memory

If you are using System 7.5 or greater with 8 MB of RAM on your Macintosh, it is recommended that you turn on your Virtual Memory from the Control Panel.

Installing on a hard disk that is not currently running your system

You can install this software onto any hard disk that has a System Folder. If the hard disk on which you install the QuickTake software is not the one that is running your system, you will have to select it as your startup disk before you can use your QuickTake camera. To do that, open the Startup Disk control panel and select the hard disk where you have installed the QuickTake software, then restart your computer.

Special Instructions for:

Macintosh IIfx, Quadra 900, and Quadra 950 computers

To use your QuickTake camera with a Macintosh IIfx, a Macintosh Quadra 900, or a Macintosh Quadra 950, the computer's serial switch must be set to "Compatible" rather than "Faster." To set the serial switch, use the Serial Switch control panel.

If you have an old version of Now Utilities installed

If you have a version of Now Software's Now Utilities that is previous to version number 5.0, some of the extensions installed with the QuickTake software may not be loaded. After installing the QuickTake software, open the Now Utilities Startup Manager control panel and make sure that AppleScript and Macintosh Drag and Drop are selected. You may want to upgrade to the latest version of Now Utilities.

If You Use Custom Remove

Custom Remove is designed to delete software that is not needed and leave any software that might be needed by other applications. If you use Custom Remove, you may see a dialog box when your Macintosh starts up telling you that Foreign File Access was not loaded because there is no software that uses it. If you get this message, remove Foreign File Access by dragging its icon from the Extensions folder to the Trash.

Now Utilities is a trademark of Now Software. This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20115



Tech Info Library

Macintosh Tutorial: Read Me (6/96)

Revised: 6/28/96
Security: Everyone

Macintosh Tutorial: Read Me (6/96)

=====

Article Created: 28 June 1996

TOPIC -----

This article contains the ReadMe file for Macintosh Tutorial.

DISCUSSION -----

Macintosh Tutorial is a training program for new Macintosh users to learn how to use a Macintosh. It is the replacement for Macintosh Basics and requires System 7.5 and Apple Guide.

Installing and Configuring Macintosh Tutorial for 7.5
=====

Install Macintosh Tutorial following these steps:

- * Drag the Tutorial Items folder into the extensions folder of your 7.5 System Folder. (Do not rename the folder).
- * Drag the Macintosh Tutorial file into the extensions folder of your 7.5 System Folder. (Do not drag it into the Tutorial Items folder).
- * Restart your Macintosh.

To view the Tutorial, select Macintosh Tutorial from the Help menu.

Macintosh Tutorial is in two parts:

The first part teaches different pointing skills - mouse, trackball and trackpad - depending on the configuration that has been loaded in the Tutorial Items folder.

You can examine each pointing device path by moving the other pointing devices skills sections out of the Tutorial Items folder. For example, to show the Mouse Skills section, drag Trackpad Skill and Trackball skills out of the Tutorial Items folder. And if you'd like to view the Trackpad Skills, drag the other two out of the folder (replacing the Trackpad Skills section, of course) If you have a PowerBook Duo, leave both the Mouse and Trackball Skills sections in the

folder and when you're docked you will see Mouse Skills and undocked, Trackball Skills. If you leave all three Skills files in the folder, the tutorial will default to the Trackball Skills section.

The second part is an Apple Guide database and leads you through several tasks while you are in the Finder.

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Tech Info Library Article Number:20116



Tech Info Library

Newton Backup Utility With Newton Package Installer Open (6/96)

Revised: 6/28/96
Security: Everyone

Newton Backup Utility With Newton Package Installer Open (6/96)

=====

Article Created: 28 June 1996

TOPIC -----

Every time I try to load my backup file, created with Newton Backup Utility, from my Macintosh, I get this message "Could not download the package because none of the selected files were Newton packages."

DISCUSSION -----

This will happen when another Newton Connection utility, like the Newton Package Installer, is open in the background. Quit the other application and double click on your backup file again.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20117



Tech Info Library

Network Assistant: Sys Information Report Maximum Width (7/96)

Revised: 7/11/96
Security: Everyone

Network Assistant: Sys Information Report Maximum Width (7/96)

Article Created: 28 June 1996
Article Reviewed/Updated: 11 July 1996

TOPIC -----

I am using Network Assistant to create a System Information report for the Macintosh computers on my network. I have a maximum of 630 pixels that can be used for the report. How can I efficiently predetermine the items I want to select for a report and stay within the 630 pixel maximum?

DISCUSSION -----

The maximum width of the System Information report is determined by the resolution of your monitor. When the screen resolution is 640 X 480 the maximum width of the report is 630 pixels. If the screen resolution is set to 1024 X 768 the maximum width of the report is 1,014 pixels.

The workstation is always the first field in the report. When you generate a new report, this field along with the report window require 167 pixels. When the monitor resolution is set to 640 x 480, you have 463 Pixels for the remaining fields.

Since you are not going to be able to get all the fields into one report, a good strategy would be to generate reports with like fields. Multiple reports can be left open for on screen viewing.

You can also print or export the report to a text file. If you want to know more about printing or exporting a report please refer to Part 3 in the Apple Network Administrator Toolkit manual page 55 "Printing and Exporting to a text file ".

The table below shows the number of pixels each field uses:

Begin_Table

System SW Version	75	Mouse Connected	75
Built-In Memory	65	Keyboard Connected	75

Virtual Memory	65	Printer Type	130
System SW Memory	75	Printer Version	65
RAM Disk Size	75	Printer Name	130
Free Disk Space	75	Network Type	75
Total Disk Space	75	Appletalk Version	75
File Sharing	60	Appletalk Zone	130
Processor	85	Appletalk Network #	75
Monitor Size	85	Appletalk Node #	75
Monitor Setting	110	TCP/IP Address	110
2nd Monitor Size	85		
2nd Monitor Setting	110		

End_Table

This article was published in the Information Alley on 08 July 1996.

Article Change History:

11 Jul 1996 - Added keyword

08 Jul 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20118



Tech Info Library

Apple Media Tool: Making a Compatible ISO 9600 Disc (6/96)

Revised: 7/11/96
Security: Everyone

Apple Media Tool: Making a Compatible ISO 9600 Disc (6/96)

Article Created: 1 July 1996

TOPIC -----

I am using the Apple Media Tool to create Microsoft Windows ISO-9660 formatted CD-ROM discs. However, when I use the media tool converters, I get an error message stating that some of my files have invalid ISO characters. What are the invalid ISO characters?

DISCUSSION -----

In order for your project to run correctly on an ISO 9660 formatted CD-ROM disc, you need to make sure you do the following:

- File names and extensions should be in all capitals.
- File name should not exceed eight characters, and extensions three characters.
- Numbers in file names should be separated from the alpha characters by an underscore. For example MOVIE_1.MOV

Characters Not Allowed include:

- Hypens
- Spaces
- Colons
- Slash
- Backslash

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20119



Tech Info Library

Network Administrator Toolkit: Default Password (7/96)

Revised: 7/15/96
Security: Everyone

Network Administrator Toolkit: Default Password (7/96)

=====

Article Created: 1 July 1996
Article Reviewed/Updated: 11 July 1996

TOPIC -----

I installed the Network Administrator Toolkit, and the first time I tried to launch Network Assistant Security and Network Assistant, each application asks for a password. What is the password?

DISCUSSION -----

The default password is "xyzzy" for both Network Assistant Security and Network Assistant. Apple Computer strongly recommends that you change these passwords in order to ensure complete security.

Article Change History:
11 Jul 1996 - Added keyword

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Tech Info Library Article Number:20120



Tech Info Library

Color OneScanner 600/27: Troubleshooting error messages (7/96)

Revised: 7/3/96
Security: Everyone

Color OneScanner 600/27: Troubleshooting error messages (7/96)

=====

Article Created: 1 July 1996

TOPIC -----

When I open the Apple Color OneScanner 600/27 Dispatcher software, and click SCAN, an error appears on my screen. The error message states "A scanner error occurred. Please ensure that the scanner is turned on and the carriage is unlocked, then try again. If the feeder is attached, clear the paper jam by following the instructions in the User's Guide." What steps should I follow to correct this problem?

DISCUSSION -----

Here are the steps you should follow to troubleshoot your scanner.

Step 1

Verify that the Scanner extension loads properly.

If an 'X' appears on the scanner icon during startup of your Macintosh, then the Scanner extension did not load properly. The Tech Info Library article titled "Color OneScanner 600/27: ScannerDriver isn't Initializing" provides information on troubleshooting this problem.

Step 2

Verify that the scanner is turned on and the SCSI connections are secure. You should power on the scanner before powering on your Macintosh computer.

Step 3

Verify the proper SCSI ID and termination.

The red ID numbers on the right side of the dial are to be used when termination

is not provided externally--typically when the OneScanner is the only SCSI device. The Tech Info Library article "Apple Color OneScanner 600/27: Terminator isn't required" contains additional information on termination, and how to properly set it.

Note:

Sometimes it is difficult to determine visually which SCSI ID is selected. The Tech Info Library article titled "Color OneScanner 600/27: "SCSI Selector Has Wrong SCSI ID" contains additional information on how to determine the SCSI selection.

Step 4

Verify that the carriage, which is locked during shipment, is unlocked.

The Tech Info Library article "Color OneScanner 600/27: Chattering Sound due to Lock", and page 11 of the Apple OneScanner 600/27 User's Guide contains instructions for unlocking the Scanner.

Step 5

If you have a Feeder attached, check for paper jams. The Apple OneScanner 600/27 User's Guide contains instructions for doing this.

Step 6

Verify the cable on the back of the sheet feeder is securely connected to the serial port (DIN-8 connector) on the OneScanner.

Step 7

Try a different SCSI cable.

Having a faulty SCSI cable does not necessarily produce the same symptoms as having NO SCSI cable. So, the Scanner extension may load without having an 'X' on it when your Macintosh is starting up. When your SCSI cable is faulty, the software may load. However, when you do not have a SCSI cable attached, the Scanner Icon always has an 'X' through it at startup.

Step 8

Use standard software troubleshooting procedures in case the error message is itself erroneous.

Standard Software Troubleshooting Procedures

=====

Step 1

Scan with other applications (For example, TextBridge; Ofoto; or PhotoShop).

Step 2

Disable all non-essential extensions except for system software and the Scanner extension

Step 3

Reset the Parameter RAM (PRAM).

Step 4

Remove and reinstall the Scanner software.

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Tech Info Library Article Number:20121



Tech Info Library

Powerbook 5300 & 190 Series Repair Extension Program (7/96)

Revised: 7/3/96
Security: Everyone

Powerbook 5300 & 190 Series Repair Extension Program (7/96)

=====

Article Created: 2 July 1996

TOPIC -----

Apple Computer, Inc. has announced a Repair Extension Program for PowerBook 5300 and PowerBook 190 computers to address specific quality issues documented below. The program will remain in effect for seven years after manufacturing stops. The computer need not be showing any of the symptoms to be eligible for this program.

The following Program Notice applies to Apple Authorized Service Providers in the United States only.

DISCUSSION -----

MODELS INCLUDED

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Apple PowerBook 5300, 5300c, 5300ce, 5300cs
Apple PowerBook 190, 190cs

ISSUES ADDRESSED

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PowerBook 5300 and PowerBook 190

- The AC power connector on some systems can become loose or inoperative.
- The display bezel and housing on some systems can crack at the hinge.
- Some systems may freeze when accessing a device in the media bay while using certain PC cards that draw higher levels of power.

PowerBook 5300 only

- Some systems may take twice as long as normal to boot when plugged into AC power.
- Some computers on larger LocalTalk networks may experience devices

dropping off the network.

REPAIRS

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The Repair Extension Program includes some or all of the following, as appropriate, for a particular PowerBook 5300 and/or PowerBook 190 system:

- As appropriate, update the logic board to include engineering changes implemented as of April 22, 1996.
- As appropriate, replace display housing to correct cracks in plastic.
- As appropriate, add shielding to improve boot time while connected to AC power.

How to tell if your PowerBook needs the update or has been updated

Any PowerBook 5300 or 190 computer that was in Apple finished goods inventory as of mid-April, 1996 has been updated. These updated computers, and all future 5300 and 190 series computers, can be identified by a "/B" in the finished goods part number and having the letters "AA" appended to the bottom right corner of the serial number label on the PowerBook itself.

After completion of the specific updates mentioned in this Program Notice, a similar sticker will be applied by Apple or an Apple Authorized Service Provider indicating the PowerBook has received the updates associated with this program.

Where to get the repair and how to arrange for it

In the United States, repairs will only be performed at Apple's central repair facility through late summer 1996 due to parts constraints.

To arrange for service related to this program, call 1-800-801-6024 after June 24, 1996. Due to parts constraints, Apple may schedule repair center dispatches out into the future.

By late summer 1996, we expect to have sufficient parts inventory for your local Apple Authorized Service Provider (AASP) to perform the repairs.

IMPORTANT NOTES

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Unrelated issues not covered

It is possible some customers may experience issues with PowerBook 5300 or PowerBook 190 computers that may be unrelated to the issues and repairs described above. Any such issues would not be covered by this Repair Extension Program.

System software version will be updated

Apple will update system software on PowerBook 5300 and 190 series computers

that are sent in for the repair program to Mac OS version 7.5.2 with Enabler 1.2.1 if they are running an earlier version. Apple believes this update will enhance the performance and reliability of your PowerBook computer.

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Tech Info Library Article Number:20122



Tech Info Library

PowerBook 5300 & 190 Series Repair Extension Program Q&A (7/96)

Revised: 7/3/96
Security: Everyone

PowerBook 5300 & 190 Series Repair Extension Program Q&A (7/96)

=====

Article Created: 2 July 1996
Article Reviewed/Updated: 3 July 1996

TOPIC -----

This article contains Frequently Asked Questions (FAQ) and Answers concerning the PowerBook 190 and 5300 series Repair Extension Program.

The following questions are answered in this article:

- 1) What is a Repair Extension Program?
- 2) Which PowerBook models are included in this Repair Extension Program?
- 3) Is this repair program different from the product recall I heard about recently?
- 4) Are other computers (Performas, Power Macs) included in this program?
- 5) What is the Repair Extension Program for the Apple PowerBook 5300 and 190 computers?
- 6) What are the details of the repair?
- 7) How is Apple notifying customers who may be affected by these quality issues?
- 8) What is the turnaround time on getting my PowerBook repaired?
- 9) If I have to send my PowerBook in to get fixed, is there a chance that I will lose my data, either in the repair or OS upgrade?
- 10) I have already called 1-800-SOS-APPL about getting my computer system repaired under this program. Do I need to call Apple again?
- 11) Are there any known safety issues with these products?

12) Is there a cost to customers to participate in this program?

13) Are these worldwide programs?

14) What if my computer exhibits problems not caused by the components that Apple has identified?

15) Is Apple extending the warranty on my computer?

DISCUSSION -----

1) Question: What is a Repair Extension Program?

Answer: A repair Extension Program is one mechanism Apple uses to correct specific known quality issues exhibited during or after the warranty period. Quality is a top priority at Apple, and this repair program addresses certain specific quality issues that have surfaced with these products. Apple is implementing this repair program as part of the company's goal to provide a high level of customer satisfaction to its customers.

2) Question: Which PowerBook models are included in this Repair Extension Program?

Answer: The models included in this program are Apple PowerBook 5300, 5300c, 5300ce, 5300cs, 190, 190cs.

3) Question: Is this repair program different from the product recall I heard about recently?

Answer: This is the same program. In early May, we alerted Apple resellers about these Repair Extension Programs so that they would have time to prepare for customer calls and questions. Our communications to our resellers received widespread media coverage, which characterized these programs as a recall. But it's the same program; we are in the process now of letting customers know that we're ready to begin repairing affected PowerBook computers. This is a repair extension program, not a product recall.

4) Question: Are other computers (Performas, Power Macs) included in this program?

Answer: We are activating the PowerBook 5300/190 Repair Extension Program this week. In early June, we launched a separate Repair Extension Program for certain Performa and Power Macintosh computers.

5) Question: What is the Repair Extension Program for the Apple PowerBook 5300 and 190 computers?

Answer: The Repair Extension Program for the Apple PowerBook 5300 and PowerBook

190 computers addresses the following potential quality issues:

PowerBook 5300 and PowerBook 190

- * The AC power connector on some systems can become loose or inoperative.
- * The display bezel and housing on some systems can crack at the hinge.
- * Some systems may exhibit problems when accessing a device in the media bay while using certain PC cards that draw higher levels of power.

PowerBook 5300 only

- * Some systems may take twice as long as normal to boot when plugged into AC power.
- * Some computers on larger LocalTalk networks may experience devices dropping off the network.

With this Repair Extension Program, Apple has identified known hardware issues the company will repair * at its cost * for as long as Apple services these products. In the United States, that is seven years after the company stops manufacturing the products. In other countries, the time period is different.

6) Question: What are the details of the repair?

Answer: The following issues will be addressed by this program:

PowerBook 5300 and PowerBook 190 computers

Symptom: The AC power connector on the logic board can become loose or inoperative.

Affected serial numbers: xx605xxxxx and below

Solution: Replace logic board.

Symptom: Using a device in the media bay in combination with certain PC cards that draw higher levels of power can cause the system to freeze at the time the devices are used. When the computer experiences a freeze, you are able to move the pointer on screen, but clicking the mouse button has no effect.

Affected serial numbers: xx605xxxxx and below

Solution: Replace logic board.

Symptom: The display bezel and housing can crack and separate at the hinge.

Affected serial numbers: xx622xxxxx and below.

Solution: Replace display bezel, housing, and screws.

PowerBook 5300 Only

Symptom: Some computers may take twice as long to boot when plugged into AC power as compared to booting from battery only.

Affected serial numbers: xx605xxxxx and below

Solution: Install the power supply shield.

Symptom: Some computers on larger LocalTalk networks may experience devices dropping off the network.

Affected serial numbers: xx622xxxxx and below
Solution: Replace the logic board

7) Question: How is Apple notifying customers who may be affected by these quality issues?

Answer: Many customers heard about this program through media coverage and have already contacted Apple. Apple has begun to contact these customers through phone calls or letters to provide specific details on program participation and/or to schedule a repair. In addition, customers who have mailed in their product registration cards will receive a letter from Apple. Information on the Repair Extension Program is also available on Apple's Web site:
www.info.apple.com.

8) Question: What is the turnaround time on getting my PowerBook repaired?

Answer: It's important to note that because of constrained parts availability, scheduling repairs may be delayed by several weeks. That means that we may have to schedule pickup of a customer's PowerBook several weeks in advance. Once we have picked up a customer's PowerBook, it will take only 5 to 7 days to repair and return the system. For this reason, we are requesting PowerBook customers to wait a couple weeks to schedule a repair if their computer is functioning adequately.

9) Question: If I have to send my PowerBook in to get fixed, is there a chance that I will lose my data, either in the repair or OS upgrade?

Answer: Apple recommends that you backup your hard disk before sending your system in. Under usual circumstances, there should be no problem with the information stored on your PowerBook. But be sure to back up your hard disk before sending your PowerBook in for repair.

10) Question: I have already called 1-800-SOS-APPL about getting my computer system repaired under this program. Do I need to call Apple again?

Answer: No. Apple will be contacting (via phone and/or letter) all customers who have previously expressed interest in participating in this program.

11) Question: Are there any known safety issues with these products?

Answer: No.

12) Question: Is there a cost to customers to participate in this program?

Answer: The specific repairs outlined in this program will be at Apple's cost.

13) Question: Are these worldwide programs?

Answer: These are worldwide programs, but it is important to note that these identified quality issues and their solutions may differ country to country.

14) Question: What if my computer exhibits problems not caused by the components that Apple has identified?

Answer: If a customer is experiencing an issue that has not been identified by Apple as part of this program, the service provider or Apple phone-support representative (1-800-SOS-APPL) will work with the customer to determine an appropriate course of action.

15) Question: Is Apple extending the warranty on my computer?

Answer: Under this Repair Extension Program, Apple, at its option, will repair or replace the specific components the company has identified. This program does not extend the repair of any other systems, parts, or components beyond the warranty period.

Article Change History:

03 Jul 1996 - Changed format.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20123



Tech Info Library

Apple Remote Access Client and Internet Access (1/97)

Revised: 1/25/97
Security: Everyone

Apple Remote Access Client and Internet Access (1/97)

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Article Created: 2 July 1996
Article Reviewed/Updated: 25 January 1997

TOPIC -----

My computer at work has access the Internet through an Ethernet LAN. Can I call into my computer with Apple Remote Access (ARA) and get on the Internet?

DISCUSSION -----

Yes, you can access the Internet with ARA. Here is a brief explanation of how it can be done.

ARA uses the AppleTalk protocol to communicate with other network resources like file servers, printers, and so on. To obtain Internet access, which uses the TCP/IP protocol, you will need to have a DDP/IP (Datagram Delivery Protocol/Internet Protocol) gateway, for example the Apple IP Gateway, somewhere on your Ethernet LAN.

A DDP/IP gateway is a node that sits on both an AppleTalk and an IP network and translates packets between them. The basic purpose of the DDP/IP gateway is to let Macintosh clients on an AppleTalk only network, like ARA, have access to TCP/IP hosts on an IP network.

NOTE: To connect to the internet, your ARA client computer must have either MacTCP if you are using the Classic AppleTalk networking, or TCP/IP if you are using Open Transport.

Article Change History:
25 Jan 1997 - Revised article.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:20125



Tech Info Library

PowerBook 5300 & 190 Repair Extension Customer Letter (7/96)

Revised: 7/2/96
Security: Everyone

PowerBook 5300 & 190 Repair Extension Customer Letter (7/96)

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Article Created: 2 July 1996

TOPIC -----

The following article contains the letter that was sent out by Apple to owners of Macintosh PowerBook 190 or 5300 series computers.

DISCUSSION -----

An Important Apple Service Notification

Dear Valued Apple Customer,

Apple is committed to providing very high-quality products to our customers. Our commitment to quality is essential for maintaining the loyalty of valued customers like you. Please review this notice concerning quality issues with some PowerBook 5300 and PowerBook 190 models.

The Apple PowerBook Repair Extension Program

(Models 5300, 5300c, 5300ce, and 5300cs; 190 and 190cs)

Apple has identified certain quality issues with PowerBook 5300 and PowerBook 190 computers about which we wish to inform you. Apple has instituted a Repair Extension Program. Under the Repair Extension Program, Apple or an Apple Authorized Service Provider will inspect and, if appropriate, repair any of the specific issues Apple has identified. This will be done at no expense to you for as long as Apple services these products, which in the United States is seven years after we stop manufacturing the product.

Repair Extension Program Quality Issues

To determine whether your PowerBook computer may be affected, please review these questions:

PowerBook 5300 and PowerBook 190 computers:

- Is the plastic housing that holds your video display starting to separate at the seams, most likely in the lower left or lower right corners?
- Is the AC power connector on your PowerBook computer loose or inoperative?
- While using PC cards that may draw higher levels of power, does your system seem to "hang" so that the cursor moves but the mouse button has no effect?

PowerBook 5300 computers only:

- Does your PowerBook computer take almost twice as long to boot when plugged into AC power than when running off the battery alone?
- When connected to large LocalTalk networks does your PowerBook drop off the network?

If any of these conditions apply to your system, Apple encourages you to participate in the Repair Extension Program. If there is an "AA" in the lower right corner of the serial number label on the underside of your PowerBook, you should not be experiencing the issues described in this specific Repair Extension Program.

Repair Process

All you need to do is call 1-800-801-6024. An Apple customer service representative will work with you to schedule an inspection and, if needed, repair for your system. Apple will send you a freight-paid shipping box for your PowerBook computer and inform you of the pick-up time and expected return date. (We will be shipping your PowerBook computer via next-day air to minimize the amount of time you will be without your computer.) Before shipping your PowerBook computer to the Repair Extension Program center, please remember to back up all data on your hard disk drive.

Because of repair center capacity, Apple may be required to schedule repairs several weeks in advance. If your system is functioning adequately, you may wish to wait a few weeks before calling to schedule a repair. The 1 800-801-6024 number provides information on how far in advance we are currently scheduling repairs.

If you believe you are experiencing problems with your PowerBook computer that are unrelated to this special program, please call 1 800-SOS-APPL for assistance.

NOTE: Mac OS UPDATE

If your PowerBook computer is running an earlier version of Mac OS, Apple will automatically update your system software to Mac OS 7.5.2 with Enabler 1.2.1. We believe this update will enhance the performance and reliability of your PowerBook computer.

We regret any inconvenience these quality issues may have caused you and we are dedicated to getting your PowerBook computer repaired and returned to you as quickly as possible.

Thank you for your patience.

Sincerely,

Jackie Whiting
Vice President, Apple Customer Service
Apple Computer, Inc.

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Tech Info Library Article Number:20126



Tech Info Library

LaserWriter Bridge and Setting Ethernet Zone (7/96)

Revised: 7/2/96
Security: Everyone

LaserWriter Bridge and Setting Ethernet Zone (7/96)

=====

Article Created: 2 July 1996

TOPIC -----

How do I change the Ethernet zone my LaserWriter Select 360 is in when using Apple's LaserWriter Bridge? When I use the LaserWriter Utility to change zones, the configuration reads "LocalTalk", and if I use the Apple Printer Utility, the configuration reads "Fixed Settings".

DISCUSSION -----

A LaserWriter Select 360 will appear in the same Ethernet zone as the computer to which it is attached, in other words, only one zone can be assigned to a LocalTalk device. The LaserWriter Bridge software will register LocalTalk devices on the default zone of the EtherTalk segment the bridge device is attached to.

To our knowledge, there is no "printer bridge" hardware or software which lets you register a LocalTalk device on a different zone of an EtherTalk segment. If you desire this level of functionality, you may wish to investigate obtaining a router.

Apple's LaserWriter Bridge shipped with the LaserWriter Select 360 and LaserWriter 4/600 PS printers. The LaserWriter Bridge is available on-line from Apple's software updates locations with the Network Software Installer.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20127



Tech Info Library

Apple Network Administrator Toolkit & AWS 95 (7/96)

Revised: 7/13/96
Security: Everyone

Apple Network Administrator Toolkit & AWS 95 (7/96)

=====

Article Created: 3 July 1996
Article Reviewed/Updated: 13 July 1996

TOPIC -----

Will the At Ease for Workgroups 4.0 package of the Apple Network Administrator Toolkit work on the Apple Workgroup Server (AWS) 95?

DISCUSSION -----

No, the At Ease for Workgroups 4.0 package of the Apple Network Administrator Toolkit is only supported on a Mac OS-based computer that functions as an AppleShare file server.

The At Ease for Workgroups 4.0 package will not work on an A/UX system such as the Workgroup Server 95. It will not work on Windows NT, NetWare or any other AFP compliant server. However, these AFP compliant servers may be used as Document Servers for At Ease for Workgroups.

This article was published in the Information Alley on 11 July 1996.

Article Change History:
13 Jul 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20128



Tech Info Library

AICK 1.1: Apple Internet Dialer Configuration Q&A (7/96)

Revised: 7/15/96
Security: Everyone

AICK 1.1: Apple Internet Dialer Configuration Q&A (7/96)

=====

Article Created: 15 July 1996

TOPIC -----

This article is the Apple Internet Connection Kit (AICK) 1.1 Apple Internet Dialer Configuration Q&A.

DISCUSSION -----

Apple Internet Dialer

Question: What is the Apple Internet Dialer?

Answer: The Apple Internet Dialer is an application that uses a suite of helper applications and extensions to enable the user to go online with minimum set-up time or technical knowledge.

Question: What information do AICK users need in order to use the Apple Internet Connection Kit successfully?

Answer: The AICK user will need the following information from the Internet Service Provider (ISP). This information is entered in three different screens within the Apple Internet Dialer. The screens are labeled "Service Provider Account Information", "Server Information", and "Connection Script". In order, the screens require:

"Service Provider Account Information":

- The ISP's name
- The AICK user's login name
- The AICK user's password
- The ISP's modem pool phone number
- The AICK user's e-mail password (if different from their login password)

"Server Information":

- The ISP's NNTP host address

- The ISP's SMTP host address
- The ISP's POP server address
- The AICK user's e-mail address
- The ISP's Domain name
- The ISP's primary DNS address
- The ISP's alternate DNS address

"Connection Script":

The AICK user will not need to enter anything in here if the ISP's service is PAP enabled and compliant. If the ISP's service does require a connection script that is less than eight lines long, the AICK user needs to have the remaining empty lines set to "Wait For" to prevent spurious returns from being sent. There is no facility within the Apple Internet Dialer for entering connection scripts longer than eight lines.

Question: Is there anything else that the ISP needs to know about the requirements for the Apple Internet Dialer?

Answer: Only that the AICK was designed to work with a Dynamic Addressing System as opposed to a Static IP system. If the ISP's system is Static IP only, please contact the Apple Assistance Center's Apple Internet Connection Kit support group at 800-767-2775 for further information.

Question: Do AICK users need to enter data into the ConfigPPP Control Panel?

Answer: No. The Apple Internet Dialer is designed to automatically enter the connection information for the AICK user into the PPP Extension preferences. Also note that with AICK 1.1.x the PPP Extension has been upgraded to version 2.5

Question: Do AICK users need to enter data into the MacTCP or TCP/IP Control Panel?

Answer: No. The Dialer is designed to automatically enter the configuration information into the MacTCP or TCP/IP Control Panel's preferences. Simply fill out the information in the Apple Internet Dialer, and it will atomically configure the MacTCP or TCP/IP Control Panel.

Internet Status

Question: What is the Internet Status application?

Answer: Internet Status is an application that is launched after the Apple Internet Dialer establishes a connection with the ISP. Internet Status is used to hang up after a session complete and can also be used dial a connection after the Apple Internet Dialer has been configured correctly.

Modem configuration

Question: The AICK user's modem does not show up in the modem selections listed in the Apple Internet Dialer. Can the AICK user setup in their own modem description?

Answer: Yes, they can enter the modem information by scrolling all the way to the top of the modem listing to the "Add/Modify modem" selection.

Question: What information does the AICK user need to enter in the Add/Modify modem selection?

Answer: They will need an initialization string for a PPP connection on a Macintosh. They will also need the flow control settings and the preferred modem speed. All of this information they will need to get from the modem manufacturer.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:
15 Jul 1996 - Added keyword and Fax Info.

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Tech Info Library Article Number:20129



Tech Info Library

AICK 1.1: Modem Initialization String Q&A (7/96)

Revised: 7/15/96
Security: Everyone

AICK 1.1: Modem Initialization String Q&A (7/96)

=====

Article Created: 15 July 1996

TOPIC -----

This article is the Apple Internet Connection Kit (AICK) 1.1 Modem Initialization String Q&A.

DISCUSSION -----

Question: What is a modem initialization string?

Answer: A modem initialization string is used to set up your modem to properly communicate with another modem.

Question: Where do you change a modem string in the Apple Internet Dialer?

Answer: Click on the modem pop up menu in the front screen of the Apple Internet Dialer. Then scroll to the top of the list until you see the screen that says add/modify modem. The screen will then change to Modem Options screen and you will be asked to name the modem. Name it "My (modem type) Modem". After you've named your new modem, hit the tab key and the cursor will move down to the field labeled "init string:". Type in the init string you desire to enter. Then select the flow control pop-out menu and set the flow control, then enter the recommended modem speed.

Question: What do I try if it doesn't work with this method?

Answer: You can get a new init string from the following sources:

- The manufacturer of your modem
- The support center for the product you are using
- The Internet service provider
- Your manual that came with your modem

Question: What do I ask for when asking about an init string for my modem?

Answer: If asking for an init string, then it would be helpful if you could ask the following question of your modem manufacturer:

- 1) Could you please give me two init strings you would recommend for making a PPP connection to the Internet on a Macintosh computer?
- 2) I would also like to know what hardware flow control settings you recommend for this modem, and what should I set my modem port speed at in my application?
- 3) Are there any hardware or software upgrades for this modem I need to be aware of? If yes, then how do I get them?

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

15 Jul 1996 - Added keyword and Fax Info.

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Tech Info Library Article Number:20130



Tech Info Library

AICK 1.1: Q&A For Internet Service Providers (7/96)

Revised: 7/15/96
Security: Everyone

AICK 1.1: Q&A For Internet Service Providers (7/96)

Article Created: 15 July 1996

TOPIC -----

This article is the Apple Internet Connection Kit (AICK) 1.1 Q&A For Internet Service Providers (ISP).

DISCUSSION -----

Question: What is the Apple Internet Connection Kit?

Answer: The Apple Internet Connection Kit is a collection of commercial and shareware programs compiled into a complete and easy to use package.

Question: What is included in the AICK?

Answer: The major parts of the package include the Apple Internet Dialer, Netscape, Claris EMailer Lite, Fetch, Gopher and Telnet. These programs are linked behind the scenes by the Internet Config application. Also included are a number of common utilities as well as Netscape helper applications.

Question: How do I configure the Apple Internet Connection Kit for my clients who are dialing in to my server using the AICK?

Answer: Configuration that normally takes place in ConfigPPP, MacTCP (or TCP/IP) now takes place entirely in the Apple Internet Dialer. When first launched, the Apple Internet Dialer is ready to connect to a "Registration Server". This server advertises a number of national Internet Service Providers for AICK owners to use if they desire. To configure the AICK to work with an Internet Service Provider not on this Registration Server, the user must select "Define Provider Information" from the "Provider" menu of the Apple Internet Dialer.

This action opens up the first of a number of screens prompting the user for his or her Internet Service Provider's connection information. The first screen is

just an instruction screen.

When the user clicks the "Next" button, a Service Provider Account Information screen appears prompting the user to enter the provider name and phone number along with the user's login name and passwords.

The following Server Information screen prompts the user for server addresses. Each of these items must be filled out in full.

The final Connect Script screen prompts the user for a connection script. This screen only needs to be used if your server requires a connection script, otherwise PAP and CHAP protocol calls are active in the kit and will establish the connection. In this screen, the "send" buttons may be pulled down to select "wait for." It is also noteworthy that a "send" line in the script is automatically followed by a carriage return. Once each of these screens is filled out, the user is brought back to the main screen of the Apple Internet Dialer.

From the main screen of the Apple Internet Dialer, the user may select the proper modem from an extensive Modem pop-up list. If the modem is not on the list, the user may select "Generic High Speed," or "Default Modem," or "Add/Modify Modem." The "Add/Modify" selection (found at the very top of the list) brings up a dialog box prompting the user for the modem name, init string, flow control and port speed.

When all is configured, the user needs to press the "Dial" button to dial out and connect to the Internet Service Provider.

If modifications need to be made to the provider file, the user must pull down the Provider menu and select "Modify Current Provider."

NOTE: The Apple Internet Dialer was designed to work with dynamically addressed servers. If your server is not dynamically addressed, the Apple Internet Dialer will not work correctly and the user may need to continue using ConfigPPP to connect.

Question: Why does the connection drop the line at the "Establishing communications phase"

Answer: This usually signals the need for a connection script.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

15 Jul 1996 - Added keyword and Fax Info.

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Tech Info Library Article Number:20131



Tech Info Library

Fax Terminal Will Not Launch with Type 1 Error (12/96)

Revised: 12/3/96
Security: Everyone

Fax Terminal Will Not Launch with Type 1 Error (12/96)

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Article Created: 3 July 1996
Article Reviewed/Update: 3 December 1996

TOPIC -----

When I launch Fax Terminal, my computer crashes with a Type 1 error, and I cannot receive faxes, the modem never answers on the incoming calls. I am able to send faxes by selecting Fax Sender from the Chooser, and printing from within applications.

I have already re-installed the Telecom software, reset PRAM, thrown away all of the associated preference files, thrown away and re-installed the Fax Terminal software.

DISCUSSION -----

Here are some troubleshooting tips to try:

- There is an issue with the Fax Terminal quitting with a Type 1 error when using System 7.5 Update 2.0 and Apple Guide 2.0.2. Allegedly, Apple Guide 2.0.2 can be installed on a computer with System 7.1 which may be distributed with some software packages like Newton Press and Quicken. Also, the Apple Internet Connection Kit (AICK) 1.1.1 comes with Apple Guide 2.0.2. If the user has this extension installed, try removing it from the Extensions folder.
 - If the above is not affecting the users computer, try performing a clean system installation since the user has already threw away the preferences files. We have find corrupt preference files may also cause this.
 - Try removing previously sent or received faxes from the folder. A corrupted file in the files sent or received folders may be causing this.
 - Try using only Apple extensions in the Extensions Manager control panel.
- NOTE: Were any software or hardware changes made just before the issue started.

Article Change History:

03 Dec 1996 - Changed title and added AICK 1.1.1 information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20134



Tech Info Library

Grand Junction Networks, Inc. (7/96)

Revised: 7/5/96
Security: Everyone

Grand Junction Networks, Inc. (7/96)

=====

Article Created: 5 July 1996

Grand Junction Networks, Inc.

47281 Bayside Parkway
Fremont CA 94538

800-747-3278

510-252-0726

510-252-0915 FAX

Internet:
Main: garyp@grandjunction.com

Company Profile:
Makes hardware which supports IEEE 802.1h.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20136



Tech Info Library

Kalpana Inc. (7/96)

Revised: 7/5/96
Security: Everyone

Kalpana Inc. (7/96)

=====

Article Created: 5 July 1996

Kalpana Inc. (Kalpana has been acquired by Cisco Systems)

1154 E. Arques Ave.
Sunnyvale CA 94086

800-525-7262

408-749-1600

408-749-1690 FAX

Internet:
Main: info@kalpana.com
Technical Support: tech_support@kalpana.com
Home Page: <http://www.kalpana.com/kalpana/>

Company Profile:
Kalpana EtherSwitch EPS-500, EPS-1500, EPS-2015 RS, EPS-2115M, SwitchVision
Network Management Software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20137



Tech Info Library

UB Networks, Inc. (7/96)

Revised: 7/5/96
Security: Everyone

UB Networks, Inc. (7/96)

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Article Created: 5 July 1996

UB Networks, Inc. (subsidiary of Tandem Computers, Inc.)

PO Box 58030
3900 Freedom Circle
Santa Clara, CA 95052-8030

800-777-4526

408-496-0111

408-970-7300 FAX

800-325-5511 Tech Support

Company Profile:

Makers of hardware that supports the IEEE 802.1h standard, supporting AppleTalk Phase 2 and FDDI.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20138



Tech Info Library

PC Exchange: Max of All Partition Names is 32 Characters (7/96)

Revised: 7/8/96
Security: Everyone

PC Exchange: Max of All Partition Names is 32 Characters (7/96)

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Article Created: 8 July 1996

TOPIC -----

I partitioned my hard drive, and now when I open PC Exchange and select the Option button, a system error occurs. What is wrong?

DISCUSSION -----

If the number of characters in the names of all the partitions is greater than 32, PC Exchange will crash when the Option button is selected.

The workaround is to either use fewer partitions or rename the partitions with smaller names.

This issue will be corrected in a future version of PC Exchange.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20141



Tech Info Library

LW 16/600 PS: Setting Subnet Mask & Gateway Remotely (7/96)

Revised: 7/8/96
Security: Everyone

LW 16/600 PS: Setting Subnet Mask & Gateway Remotely (7/96)

Article Created: 2 July 1996

TOPIC -----

I have a LaserWriter 16/600 PS Printer. I can configure the IP address using the Apple Printer Utility, but not the subnet mask or gateway.

This means that if I am on another part of my TCP/IP intranet, I can configure the IP address using AppleTalk, but cannot complete the configuration unless I telnet from a computer that is physically on the local TCP/IP subnet.

Is there any way I can complete this configuration without having to go on site to each printer?

DISCUSSION -----

The LaserWriter 16/600 PS subnet mask and gateway are Configurable only using the telnet facility. Newer versions of Apple Printer Utility support configuration of these values in the Apple Color LaserWriter 12/600 PS and LaserWriter 12/640 PS printers. However, with the LaserWriter 16/600 PS printer, you can configure only the IP address.

If you have a UNIX workstation in the local IP subnet or the local router supports telnet, you can use a two-step process to remotely configure the printer.

Step 1

Configure TCP/IP using AppleTalk

Use any version of Apple Printer Utility to set the IP address, and restart the printer.

At this point, the printer can accept telnet connections from local hosts only.

Step 2

Configure subnet mask and gateway address

Telnet to a UNIX workstation or router. Telnet back out from the UNIX workstation or router to the printer. The second telnet session goes from the local device to the LaserWriter 16/600 PS printer, so it should be accepted.

Configure the subnet mask and gateway address as described in the LaserWriter 16/600 PS User's Guide.

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Tech Info Library Article Number:20142



Tech Info Library

PC Compatibility Card: MS Office Pro 95 CD (7/96)

Revised: 7/9/96
Security: Everyone

PC Compatibility Card: MS Office Pro 95 CD (7/96)

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Article Created: 9 July 1996

TOPIC -----

When I insert the Microsoft Office 95 Professional Edition CD-ROM in the CD-ROM drive, I get an error that says, "The disk <volume name> cannot be used, because it cannot be found." However, other CD-ROMs can be read fine, including the Microsoft Office 95 Standard Edition. What's wrong?

DISCUSSION -----

This CD-ROM disc cannot be mounted on the Macintosh desktop. It is not designed for use in the Macintosh environment. However, if you have a PC Compatibility Card, this CD-ROM is readable in the PC environment. You will have to switch to the PC environment to use this CD-ROM disc.

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Tech Info Library Article Number:20143



Tech Info Library

PowerBook Duo Computers: Battery Reconditioner Compat (7/96)

Revised: 7/11/96
Security: Everyone

PowerBook Duo Computers: Battery Reconditioner Compat (7/96)

=====

Article Created: 9 July 1996

TOPIC -----

I am trying to use the battery reconditioner utility for the PowerBook Duo and I get the message:

"There is something wrong with the application file. Please replace it from the original disk."

DISCUSSION -----

There are two versions of the Battery Reconditioner program, 1.1 and 1.3. To use the Battery Reconditioner program on a PowerBook (Duo) 2300c you must have version 1.3. This version came pre-installed in the Utilities folder on PowerBook Duo 2300c computers. Version 1.3 is backward compatible with previous PowerBook Duo computers, thus it can be used on any PowerBook (Duo) computer even though it was specifically created for the PowerBook 2300c.

Battery Reconditioner version 1.1 shipped with the PowerBook (Duo) 280c and is backward compatible with PowerBook (Duo) computers that were released before the 280c (210, 230, 270c). It is not compatible with the PowerBook 2300c or any PowerBook Duo computer that has been upgraded with a Power PC logic board.

This article was published in the Information Alley on 09 July 1996.

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Tech Info Library Article Number:20144



Tech Info Library

Macintosh Performa 6400/180 & 6400/200: Description (9/96)

Revised: 9/23/96
Security: Everyone

Macintosh Performa 6400/180 & 6400/200: Description (9/96)

=====

Article Created: 9 July 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

This article contains a description of the Macintosh Performa 6400/180 and 6400/200 computers.

DISCUSSION -----

The Apple Macintosh Performa 6400/180 and 6400/200 computers are two of the most powerful, expandable, and easy-to-use multimedia computers you can get for your home. Continuing Apple's multimedia leadership, their robust features and high-quality pre-installed software make them an ideal system on which your whole family can learn, create, and communicate.

A state-of-the-art RISC-based PowerPC 603e processor running at up to 180 or 200 megahertz delivers the performance you need to run an abundance of powerful multimedia applications.

The Performa 6400/180 and 6400/200 computers also include a host of features. A built-in 8x-speed CD-ROM drive delivers smooth video and audio. A 64-bit video architecture and 1 megabyte of video memory provide high-quality video and realistic graphics on monitors up to 17 inches (diagonal measurement) in size. The systems also feature 16-bit CD-quality stereo input and output, SRS surround sound, and a subwoofer speaker--a combination that will add a whole new audio dimension to your multimedia experience.

With 16 megabytes of RAM (expandable to 136 megabytes), the Macintosh Performa 6400/180 and 6400/200 have the memory to run powerful multimedia applications. And their 1.6 gigabyte and 2.4 gigabyte hard drives give you all the storage you'll need for a long time to come.

For connecting to the Internet, the Performa 6400/180 and 6400/200 offer easy access either through America Online (in the United States) or directly through the Apple Internet Connection Kit, which features Netscape Navigator software.

And with the built-in 28.8-kilobit-per-second modem*, exchanging e-mail and browsing the World Wide Web can be fast.

If you need compatibility with MS-DOS or Windows software-based computers, the Performa 6400/180 and 6400/200 systems give you several choices. You can share floppy disks and files by using Macintosh PC Exchange and Macintosh Easy Open software (both included). SoftWindows from Insignia Solutions (available separately) lets you run Windows applications right on your Performa system. For the ultimate in compatibility, Apple's optional PC Compatibility Card puts a 100-mega-hertz 586-class processor right in your computer.

The Macintosh Performa 6400/180 and 6400/200 computers: High-performance multimedia for your home.

* Fax speeds up to 14.4 Kbit/s, data speeds up to 28.8 Kbit/s

Features

=====

High performance

- * 180-MHz PowerPC 603e processor (Macintosh Performa 6400/180)
- * 200-MHz PowerPC 603e processor (Macintosh Performa 6400/200)
- * Internal fax modem supports speeds up to 28.8-Kbit/s data and 14.4-Kbit/s electronic fax send/receive as well as speakerphone and digital answering machine capabilities
- * Built-in 8x-speed, tray-loading CD-ROM drive

Rich multimedia

- * Support for up to 32,768 colors and moni-tors up to 17 inches (diagonal measurement)
- * 16-bit CD-quality stereo sound with SRS surround sound and integrated subwoofer

Expandability and flexibility

- * Two industry-standard PCI expansion slots for 6.88-inch cards
- * Support for up to five external SCSI devices, such as hard disk drives and scanners
- * SCSI expansion bay for additional internal storage device
- * Optional Apple TV/FM Radio System, Avid Cinema, and PC Compatibility Card

Ease of use

- * Macintosh System 7.5 software, including Apple Guide software for step-by-step help with basic system operation
- * Apple Internet Connection Kit software for quick, easy access to global resources, including the World Wide Web
- * Plug-and-play installation of expansion cards, storage devices, scanners, printers, digital cameras, and other accessories

Preinstalled software

=====

- * Macintosh System 7.5
- * ClarisWorks
- * Apple Internet Connection Kit
- * America Online
- * Adobe Photo Deluxe
- * Web Workshop
- * At Ease
- * MacLinkPlus and Easy Open Translators
- * Quicken Special Edition
- * MegaPhone for Performa
- * NOW TouchBase and DateBook Pro
- * The American Heritage Dictionary
- * Click Art Performa Collection
- * MacGALLERY Clip Art Treasure Pak
- * SurfWatch
- * DOGZ Adoption Kit

CD-ROM titles

=====

- * Descent
- * The Grolier Multimedia Encyclopedia
- * Our Times
- * 3D Atlas
- * Mayo Clinic Family Health
- * Amazing Writing Machine
- * The American Heritage Children's Dictionary
- * Club KidSoft CD
- * Blockbuster Guide to Movies and Videos
- * Thinkin' Things Collection 2

Software titles may vary and may be modified versions of commercially available products.

Ordering Information

=====

Macintosh Performa 6400/180

Order No. M5167LL/A

Computer with 180-MHz PowerPC 603e processor, 28.8-Kbit/s modem, 1.6 GB hard disk drive, 8x-speed CD-ROM drive, and 1.4 MB floppy disk drive. Mouse, keyboard, and cables also included.

Macintosh Performa 6400/200

Order No. M5168LL/A

Computer with 200-MHz PowerPC 603e processor, 28.8-Kbit/s modem, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, and 1.4 MB floppy disk drive. Mouse, keyboard, and cables also included.

Optional Enhancements

* High Performance Module

(256K level 2 cache)

Order No. M4505LL/A

(Note: The 256K Level 2 cache is included with the Macintosh Performa 6400/200, but is available as a separate enhancement for the Macintosh Performa 6400/180.)

* Apple Video System

Order No. M2894LL/D

* Apple TV/FM Radio System

Order No. M4586LL/A

(Requires the Apple Video System)

* Apple Presentation System

Order No. M2895LL/A

* PC Compatibility Card

(with 586-class processor)

Order No. M4091LL/C

* Avid Cinema

Order No. M4561LL/A

(Requires the Apple Video System)

Part numbers and specifications mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

This article was published in the Information Alley on 5 August 1996.

Article Change History:

19 Sep 1996 - Added Keyword.

10 Sep 1996 - Corrected part number errors.

05 Aug 1996 - Added alley info.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20145



Tech Info Library

Macintosh Performa 6400/180 & 6400/200: Specifications (11/96)

Revised: 4/21/97
Security: Everyone

Macintosh Performa 6400/180 & 6400/200: Specifications (11/96)

=====

Article Created: 9 July 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 6400/180 and 6400/200 computers.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 180 MHz (Macintosh Performa 6400/180)
- * PowerPC 603e processor running at 200 MHz (Macintosh Performa 6400/200)
- * Integrated floating-point unit
- * 40-MHz, 64-bit bus
- * 32K internal cache
- * 256K level 2 cache (included with Macintosh Performa 6400/200; optional enhancement available separately for use with the Macintosh Performa 6400/180)

Memory

=====

- * Two DIMM expansion slots
- * Comes with 16 MB of RAM (8 MB on logic board and 8 MB in one DIMM socket)
- * Can be expanded to 136 MB
- * Uses 64-bit-wide, 168-pin, noncomposite, 70-nanosecond or faster DIMMs (1K or 2K refresh)

Disk drives

=====

- * Internal 1.6 GB IDE hard disk drive (Macintosh Performa 6400/180)
- * Internal 2.4 GB IDE hard disk drive (Macintosh Performa 6400/200)
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks

- * Internal AppleCD 8x drive

Modem

=====

- * 28.8-Kbit/s data/voice/fax modem*
- * Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- * Stereo 16-bit sound
- * SRS surround-sound enhancement
- * Subwoofer speaker
- * Sound-input port (for an Apple PlainTalk microphone, other microphone, or standard mini-plug audio cable)
- * Sound-output port
- * Front headphone jack and volume control

Interfaces

=====

- * SCSI interface port for connecting as many as five external SCSI devices, such as disk drives, CD-ROM drives, and scanners (multiple devices can be connected to each other from one port)
- * Pre-cabled SCSI expansion bay for additional 5.25-inch internal SCSI device
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * Two serial ports (RS-232/RS-422) for an AppleTalk network connection, other network connections, communications equipment (including GeoPort compatible devices), or a printer
- * Video-output port
- * Two PCI expansion slots (require PCI cards that come with a Macintosh driver and are PCI 2.0-compliant; NuBus cards cannot be used in these slots)
- * Communications (Comm II) slot for a 28.8-Kbit/s modem (used by built-in modem*)
- * Video input slot for optional Apple Video System (supports NTSC, PAL, and SECAM video formats)
- * Expansion bay for optional Apple TV/FM Radio System
- * Infrared receiver for remote control (provided with Apple TV/FM Radio System)

Display support

=====

- * 1 MB of video RAM
- * 16-bit color for display of up to 32,768 colors on monitors using 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors on monitors using 832- by 624-pixel or 1,024- by 768-pixel resolution

Electrical requirements and compliance

=====

- * Line voltage: 100 to 125/200 to 240 V AC, RMS, single phase
- * Frequency: 47 to 63 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * Energy saving in sleep mode.

Size and weight

=====

- * Height: 16 in. (40.6 cm)
- * Width: 7.8 in. (19.8 cm)
- * Depth: 16.9 in. (42.8 cm)
- * Weight: 44.5 lb. (20.18 kg)

Operating environment

=====

- * Operating temperature: 50 to 97 degrees F (10 to 35 degrees C)
- * Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * Visual beep replaces audible system alerts

Article Change History:

- 15 Nov 1996 - Clarified number of DIMM expansion slots.
- 19 Sep 1996 - Added Keyword.
- 10 Sep 1996 - Updated information.

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Tech Info Library Article Number:20146



Tech Info Library

LaserWriter Printers: TCP/IP Solutions Guide (3/97)

Revised: 3/20/97
Security: Everyone

LaserWriter Printers: TCP/IP Solutions Guide (3/97)

Article Created: 9 July 1996
Article Reviewed/Updated: 20 March 1997

TOPIC -----

This article provides solutions for printing to an Apple LaserWriter printer using TCP/IP.

DISCUSSION -----

Although UNIX workstations are the traditional source of LPR printing, LPR is defined in Internet RFC 1179, and can be implemented on any computer using TCP/IP networking. The growth of Internet, intranet and Open Systems environments means Apple customers will see increasing need to support TCP/IP printing from all computer systems, including mainframes, mini computers, DOS/Windows, and Mac OS systems.

Since most Apple LaserWriter printers accept print jobs transmitted only by AppleTalk, customers often need solutions for getting their print job from a TCP/IP based computer to an AppleTalk-only printer.

There are three possible solutions for printing to an Apple LaserWriter printer using TCP/IP:

- 1 - Configure the LaserWriter for TCP/IP printing (LPR)
- 2 - TCP/IP - AppleTalk conversion (LPR-PAP)
- 3 - Direct Serial or parallel connections

This article also contains a list of LaserWriter printers which cannot be used with a TCP/IP connection.

Solution: Configure the LaserWriter for TCP/IP Printing (LPR)

Apple has provided TCP/IP support in recent, high-end printers. The following

models are designed to support TCP/IP printing:

LaserWriter Pro 810
LaserWriter 16/600 PS
Color LaserWriter 12/600 PS
LaserWriter 12/640 PS

TCP/IP jobs are received through the Ethernet port. These printers support PostScript, PCL and/or text. Your LaserWriter User's Guide contains complete configuration information.

Some TCP/IP software requires you to enter a socket number. Apple LaserWriters use 515, which is the default number specified by RFC 1179.

The LaserWriter Pro 810 also accepts jobs to arbitrarily defined port numbers.

Solution: TCP/IP - AppleTalk Conversion (LPR-PAP)

=====

If you have a non-TCP/IP LaserWriter, you can translate LPR print jobs to PAP sessions in AppleTalk. This allows you to print with a TCP/IP based system and the printer to receive an AppleTalk print job.

Translation of TCP/IP to AppleTalk is available in several types of products:

Network Hardware

Several vendors have made network hardware products that accept LPR jobs using TCP/IP and forward them as PAP jobs using AppleTalk. Most of these products are no longer manufactured, although you may find them installed in established sites. The only shipping product that Apple is aware of is GatorPrint by Cayman Systems. This package is software that is installed on Cayman routers.

AppleTalk for UNIX Systems

Most AppleTalk software for UNIX systems include print spooling and conversion utilities. Here is a partial list of products:

- Helios Ethershare
- K-Spool from Mt. Xinu.
- uShare from Information Presentation Technologies, Inc.
- CAP (Columbia AppleTalk Package) from Columbia University.
- netatalk from the University of Michigan

AppleTalk on Other Advanced Server Operating Systems

In theory, multi-protocol operating systems such as Novell NetWare, Windows NT, and OS/2 can receive jobs with a TCP/IP spooler and forward them to an AppleTalk based print spooler. We have seen few customers sites with this configuration.

This solution works for the following LaserWriter models:

Begin_Table

LaserWriter Model	Port	Notes
LaserWriter (original)	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter Plus	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter IINT	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter IINTX	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter IIIf	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter IIg	Ethernet	
Personal LaserWriter NT	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
Personal LaserWriter NTR	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
Personal LaserWriter 320	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter Select 360	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet bridge
LaserWriter Pro 600	LocalTalk	
LaserWriter Pro 630	Ethernet	
LaserWriter 4/600	LocalTalk	Must be connected to Ethernet using a LocalTalk-Ethernet

		bridge
+	+	+

End_Table

Note:

AppleTalk printing is traditionally define as PostScript only, Apple recommends sending only PostScript over AppleTalk to printers.

Solution: Direct Serial or Parallel Connections

=====

Most Apple LaserWriter models have serial and parallel ports for Windows printing. UNIX (and to a lesser degree Windows NT and Novell NetWare) servers can be configured to receive TCP/IP jobs and spool using a direct connection to the printer.

Connection configuration (serial and parallel) and page description language (text, PostScript, and PCL) vary by LaserWriter model.

Although Apple serial and parallel ports conform to industry standards, these configurations are not supported by Apple Computer, Inc. Apple Technical support may include articles that describe sample configurations for illustrative purposes only.

This class of solutions applies to all the LaserWriters listed in the previous table, as well as the LaserWriter Select 310 printer.

No Solution Available

=====

The following Apple LaserWriter printers do not have a TCP/IP printing solution, due to lack of PostScript and/PCL support.

LaserWriter IISC

Personal LaserWriter LS

Personal LaserWriter SC

Personal LaserWriter 300

LaserWriter Select 300

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

20 Mar 1997 - Corrected the port on the LaserWriter Pro 600.

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Tech Info Library Article Number:20148



Tech Info Library

Color OneScanner Dispatcher Software: Image Cropping (7/96)

Revised: 7/9/96
Security: Everyone

Color OneScanner Dispatcher Software: Image Cropping (7/96)

=====

Article Created: 9 July 1996

TOPIC -----

With both v1.0 and v1.0.2 of the Apple Color OneScanner Dispatcher Software, When I select Preview after selecting Straighten Automatically, the automatic option Suggest Crop is also selected. Why?

DISCUSSION -----

You are seeing the normal operation of the OneScanner Dispatcher Software. If you do not want to use the suggested crop, you should use the selection marquee prior to crop your image prior to selecting Scan.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20149



Tech Info Library

Color OneScanner Dispatcher Software: Auto Straighten Issue 7/96

Revised: 7/9/96
Security: Everyone

Color OneScanner Dispatcher Software: Auto Straighten Issue 7/96

=====

Article Created: 9 July 1996

TOPIC -----

Scanning with Automatic Straighten feature does not always give good results. The scanned image is sometimes rotated 30-45% or more, and the scaling may be incorrect.

DISCUSSION -----

Both the v1.0 and v1.0.2 versions of the Apple Color OneScanner Dispatcher Software sometimes do not perform the Automatic Straighten function correctly. One workaround that sometimes helps is not to place the original image adjacent to the alignment mark and rulers. The other workaround is not to use the Automatic Straighten feature if you encounter this problem.

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Tech Info Library Article Number:20150



Tech Info Library

Integral Peripherals (7/96)

Revised: 7/10/96
Security: Everyone

Integral Peripherals (7/96)

=====

Article Created: 10 July 1996

Intégral Peripherals

5775 Flatiron Parkway
Suite 100
Boulder, CO 80301-5730

303-449-8009
800-995-1999 (Bell Micro Products)

Company Profile:
Provides PCMCIA hard disk cards for Macintosh computers.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20151



Tech Info Library

Color STW 2200 & 2400: Differences in v.2.1.1 vs 2.1.2 (7/96)

Revised: 7/10/96
Security: Everyone

Color STW 2200 & 2400: Differences in v.2.1.1 vs 2.1.2 (7/96)

=====

Article Created: 10 July 1996

TOPIC -----

What differences between the Color StyleWriter v2.1.1 on the System Update 2.0 CD and v2.1.2 posted to Apple Software Updates?

DISCUSSION -----

The only differences between the Color StyleWriter 2200 and Color StyleWriter 2400 v2.1.1 and v2.1.2 are:

Begin_Table

+=====+			
	Version 2.1.1		Version 2.1.2
+=====+			
Desktop Printing	v1.0.1		v1.0.3
+-----+			
ColorSync	v2.0		v2.0.1
+-----+			

End_Table

There were also some changes in the Watermark file sizes and modification dates.

All other files on the disks are the same, including the Printer drivers and PrinterShare.

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Tech Info Library Article Number:20152



Tech Info Library

ARA 2.0 compatible with Power Macintosh (7/96)

Revised: 7/10/96
Security: Everyone

ARA 2.0 compatible with Power Macintosh (7/96)

=====

Article Created: 10 July 1996

TOPIC -----

Is Apple Remote Access (ARA) Personal Server 2.0 compatible with PowerPC or must a user upgrade to 2.0.1?

DISCUSSION -----

Both the Personal Server and Client versions of ARA 2.0 are PowerPC compatible. Although we recommend updating to the latest version, to take advantage of new features, it was not necessary to do so for PowerPC compatibility.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20153



Tech Info Library

MacDNS and AIMS setup (7/96)

Revised: 7/15/96
Security: Everyone

MacDNS and AIMS setup (7/96)

Article Created: 10 July 1996

TOPIC -----

I am setting up Apple Internet Mail Server (AIMS) and MacDNS on the same machine for my domain, company.com. I have given the server itself the name 'mail.company.com', but I would like my users to be able to receive email '@company.com' instead of '@mail.company.com'. How can I achieve this?

DISCUSSION -----

Because 'company.com' represents the whole domain, not a single machine in that domain, you do not need to enter it as a permanent host with a unique IP address. You just want to assign a mail exchanger to it. When e-mail is to be delivered to 'user@company.com', the sending mailserver will query for the mail exchanger of 'company.com' and get the address of 'mail.company.com'.

Here is how to accomplish this:

Step 1

In MacDNS, create a permanent host for the server itself (if you have not already done so), giving it whatever name you like, such as "mail.company.com". You may want to make some aliases to it, if it runs other services as well, such as "ftp.company.com" and/or "www.company.com". Also add a mail exchanger for the server, which would just point back to itself (example: 10 mail.company.com)

Step 2

In MacDNS, create an 'MX-only host' record, for host 'company.com'. Type in the appropriate numeric preference and hostname in Mail Exchanger field, such as "10 mail.company.com".

Step 3

In AIMS, under 'Server:Preferences' menu in "Server names", add both of these domains (for example, 'company.com' <default> and 'mail.company.com').

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Tech Info Library Article Number:20154



Tech Info Library

Apple Printers: lpi for QuickDraw Printers (7/96)

Revised: 7/23/96
Security: Everyone

Apple Printers: lpi for QuickDraw Printers (7/96)

Article Created: 10 July 1996
Article Reviewed/Updated: 23 July 1996

TOPIC -----

PostScript LaserWriter printers have lpi (lines per inch) values. However, I would like this information for the Color StyleWriter printers, and non-PostScript LaserWriter printers. In particular, I would like to get the Color StyleWriter 2400 lpi value.

DISCUSSION -----

The lpi for the Color StyleWriter 2400 in Pattern mode is 64 lpi, and allows for approximately 160 levels of gray/colors. The best output from that printer can actually be obtained from using the Scatter mode as a different rendering technique is used (instead of a line screen) that allows for the highest resolution of the image to be utilized -- up to 360 dpi.

Q&A for lpi using QuickDraw Printers
=====

Question: Is lpi a valid measurement/specification for Ink Jet printers?

Answer: Yes it is. Inkjet printer drivers also use halftoning.

Question: How does lpi specifications differ from a laser printer?

Answer: The halftoning concept is the same, however, it generally is not "adjustable" on the fly like PostScript laser printers. To adjust lpi on a PostScript laser printer, all you do is to change the parameters provided with the halftone PostScript commands. For QuickDraw printers, the lpi is a set value determined by the driver engineer. Although the lpi value can be changed, this requires recompilation of the driver source code.

Question: Is there a comprehensive list of all Apple printers and related specifications such as lpi, shades of gray, and number of colors?

Answer: There is not a comprehensive list available, and creating one is not possible since some of these printers are quite old and the original engineers and/or documentation is not available. Here is some information on some Apple Printers, which should help you.

Begin_Table

Printer	Technique	lpi	Levels of Gray/Color	Notes
StyleWriter I	Pattern	64	approx 160	1
StyleWriter II	Pattern	64	approx 160	1
StyleWriter 1200	Pattern	64	approx 160	
	Scatter	*	*	2
StyleWriter 1500	Pattern	64	approx 160	
	Scatter	*	*	2
Apple Color Printer	Pattern	64	approx 160	1
Color StyleWriter Pro	Pattern	64	approx 160	
	Scatter	*	*	2
Color StyleWriter 2200	Pattern	64	approx 160	
	Scatter	*	*	2
Color StyleWriter 2400	Pattern	64	approx 160	
	Scatter	*	*	2
Color StyleWriter 2500	Pattern	64	approx 160	
	Scatter	*	*	2
Personal LaserWriter LS	Pattern	64	approx 160	1
LaserWriter Select 300	Pattern	64	approx 160	1
Personal LaserWriter 300	Pattern	64	approx 160	1

+=====+		
	Notes	
+=====+		
1	Use a different pattern technique than the current implementation	
	used in the Color StyleWriter Printers such as the Color	
	StyleWriter 1200 and the Color StyleWriter 1500 Printers.	
+-----+		
2	The Scatter technique (recommended for best output) does not use	
	halftoning techniques and allows for use of the highest	
	resolution of an image, up to the 360 dpi of the printer.	
+=====+		

End_Table

Article Change History:

23 Jul 1996 - Changed distribution status.

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Tech Info Library Article Number:20155



Tech Info Library

LaserWriter Pro 810: Common RCF Errors (7/96)

Revised: 7/11/96
Security: Everyone

LaserWriter Pro 810: Common RCF Errors (7/96)

Article Created: 11 July 1996

TOPIC -----

This article describes the most common errors that can appear on the Remote Control Facility (RCF) when the LaserWriter Pro 810 printer is powered on.

DISCUSSION -----

The following error appears when the LaserWriter Pro 810 printer has a thinnet Ethernet connector, and is not connected to a properly terminated thinnet network:

LAN XLP FAIL Error Level = 03

Server -910- Ethernet cable possibly open at 0 ns (0 ft thin, 0 ft thick)
Server -922- Non-fatal error detected by selftest, code = ++++2

This error does not affect other forms of networking or printing.

The following error appears when the LaserWriter Pro 810 printer has a twisted pair Ethernet connector, and is not connected to a properly terminated twisted pair network:

LAN XLP FAIL Error Level = 08
Server -922- Non-fatal error detected by selftest, code = ++++2

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20160



Tech Info Library

LaserWriter Driver: PPD file Determines Imageable Area (7/96)

Revised: 7/11/96
Security: Everyone

LaserWriter Driver: PPD file Determines Imageable Area (7/96)

=====

Article Created: 11 July 1996

TOPIC -----

I am using an Hewlett-Packard (HP) 4M printer with my Macintosh computer. I have connected them using an Ethernet connection, and I am using the Apple LaserWriter 8.3.4 printer driver. When I set the margin to 0 and click Larger Print Area in the Print Setup dialog, I still get a large margin. Also, the text on the edges is being cut off, so it is trying to print to the edges of the paper.

Using this printer with UNIX workstations, or MS-Windows computers, I can printer almost edge-to-edge. Is there something in the Macintosh LaserWriter driver that is not allowing me to print to the edge?

DISCUSSION -----

The maximum printable area is defined in the PPD supplied by the printer manufacturer. If you are not using the correct HP PPD file or the PPD does not accurately represents the printer engines maximum print area, then the print job could request the PostScript interpreter to create a raster image that extends beyond the engines physical margins and ability to print it. This could result in the symptoms you are describing, in that the image area is getting clipped.

You should contact Hewlett-Packard Tech Support to obtain the appropriate PPD file.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20162



Tech Info Library

Network Assistant: Talk - Requires Dual Channel Sound (8/96)

Revised: 8/22/96
Security: Everyone

Network Assistant: Talk - Requires Dual Channel Sound (8/96)

Article Created: 12 July 1996
Article Reviewed/Updated: 22 August 1996

TOPIC -----

Will the "Talk" feature in the Network Assistant work with all Macintosh computers?

DISCUSSION -----

The "Talk" feature in the Apple Network Administrator Toolkit requires a Macintosh with dual channel sound capabilities. In other words, a computer that can record and playthrough sound at the same time.

The "Talk" feature will not work with the systems listed below :

Macintosh Classic
Macintosh Classic II
Macintosh Color Classic
Macintosh Color Classic II
Macintosh SE/30
Macintosh IIfx
Macintosh IIfx
Macintosh IIfx
Macintosh LC
Macintosh LC II
Macintosh LC III
Macintosh LC 475
Macintosh LC 520
Macintosh LC 550
Macintosh LC 575
Macintosh Quadra 605

Macintosh Performa 200
Macintosh Performa 250
Macintosh Performa 275

Macintosh Performa 400
Macintosh Performa 405
Macintosh Performa 410
Macintosh Performa 430
Macintosh Performa 450
Macintosh Performa 460 Series
Macintosh Performa 475
Macintosh Performa 476
Macintosh Performa 520
Macintosh Performa 550
Macintosh Performa 560
Macintosh Performa 570 Series
Macintosh Performa 600 Series

Macintosh PowerBook Duo 200 Series
Macintosh PowerBook Duo 2300*
Macintosh Duo MiniDock
Macintosh Duo Dock
Macintosh Duo Dock II
PowerBook Duo Dock Plus

* Although the Macintosh PowerBook Duo 2300 is able to record and playthrough sound simultaneously, the Talk feature is disabled on this system due to a software issue discovered late in the process.

Article Change History:

22 Aug 1996 - Added two Macintosh computers to list.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20163



Tech Info Library

TCP/IP Architecture Includes Well Known Port Numbers (7/96)

Revised: 7/12/96
Security: Everyone

TCP/IP Architecture Includes Well Known Port Numbers (7/96)

=====

Article Created: 12 July 1996

TOPIC -----

How can I determine which port numbers are used for IP communications with Apple devices?

DISCUSSION -----

The TCP/IP architecture includes Well Known Ports which are controlled and assigned by committee. Apple adheres to this standard which is documented in RFC 1340.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20164



Tech Info Library

Color StyleWriter 2500: Premium Coated Paper Available (7/96)

Revised: 7/12/96
Security: Everyone

Color StyleWriter 2500: Premium Coated Paper Available (7/96)

=====

Article Created: 12 July 1996

TOPIC -----

The Apple finished goods price list states that the Apple Color Ink-Jet Premium Plus Coated Paper (M4792G/A) is only compatible with the Color StyleWriter 2500 printer. Will it harm my other StyleWriter printers if I try to use it?

DISCUSSION -----

The Apple Color Ink-Jet Premium Plus Coated Paper is optimized for use only on the higher-resolution 720 DPI Color Ink-Jet printers. The Color StyleWriter 2500 is the only Apple color ink-jet printer currently available that can take advantage of the paper's special coated surface which controls ink flow and maximizes print quality. The Premium Plus paper will not harm other ink-jet printers if it is used, however, there is no advantage to upgrading to the more expensive Premium Plus paper stock unless it is used with the Color StyleWriter 2500.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20166



Tech Info Library

Apple Remote Access and System 7.5.3 (7/96)

Revised: 7/15/96
Security: Everyone

Apple Remote Access and System 7.5.3 (7/96)

=====

Article Created: 15 July 1996

TOPIC -----

Should Apple Remote Access (ARA) 2.1 be installed before or after System 7.5 Update 2.0?

DISCUSSION -----

The Read Me documents for System 7.5.3 and System Update 2.0 suggest that Apple Remote Access should be installed before System 7.5.3. This is not necessary. Beginning with version 2.1, Apple Remote Access should be installed after System 7.5.3.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20167



Tech Info Library

Apple Remote Access Personal Server For Macintosh ReadMe (7/96)

Revised: 7/15/96
Security: Everyone

Apple Remote Access Personal Server For Macintosh ReadMe (7/96)

=====

Article Created: 15 July 1996

TOPIC -----

The following article is the Read Me document for the Apple Remote Access (ARA) Personal Server version 2.1.

DISCUSSION -----

APPLE REMOTE ACCESS PERSONAL SERVER FOR MACINTOSH READ ME

=====

This document provides late-breaking news about the Apple Remote Access Personal Server that is not covered in the "Apple Remote Access Personal Server User's Guide." You may need to refer to that guide to understand the use of several terms in this document, and you may want to print this document to keep with your user's guide.

Modems Supported by the Apple Remote Access Personal Server

=====

Scripts that support most popular modems are provided on the Remote Access Personal Server installation disks. The scripts include:

- 3Com Impact Analog 14.4
- 3Com Impact ISDN 56K
- 3Com Impact ISDN 64K
- Apple Modem 2400
- AT&T Dataport 288
- AT&T KeepInTouch
- Dayna CommuniCard 28800
- Farallon Netopia 56K
- Farallon Netopia 64K
- GeoPort/Express Modem
- GeoPort/Express Modem CNG
- Global Village Gold/Silver/Mercury

Global Village Platinum
Hayes Accura 288
Hayes Optima 14.4
Hayes Optima 288
Megahertz CruiseCard 14.4
Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom MicroPorte 4232bis
Microcom QX/4232bis
Motorola 326xV34
Motorola BitSURFR 56K
Motorola BitSURFR 64K
Motorola Power/Lifestyle 28.8
Practical Peripherals V.34
Prometheus ProModem 144e
Prometheus ProModem 96
PSI PowerModem II
PSI PowerModem III/IV
Supra 144
Supra 288
TDK DF2814
Telebit QBlazer
Telebit T3000
Telebit Worldblazer
US Robotics Universal
Zoom V-series

Beginning with version 2.1 of the Apple Remote Access Personal Server and the companion Client product, modem scripts are no longer stored in the Extensions Folder. A new folder called "Modem Scripts" within the Extensions Folder is created by Apple Remote Access to hold modem scripts.

The Apple Remote Access Installer will move any existing scripts you may already have in your Extensions Folder to the new Modem Scripts folder in addition to placing scripts for all the modems listed above into the Modem Scripts folder.

Future remote access products from Apple will also use the Modem Scripts folder. However, there will be a transition period before other products are updated to use the new folder. Some existing products may install modem scripts into the Extensions Folder. If such a product is installed after Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the script.

You can use modem scripts included with the Apple Remote Access MultiPort Server (any version) with version 2.1 of Apple Remote Access Personal Server. You can also use AppleTalk Remote Access version 1.0 modem scripts with version 2.1 of the Personal Server, but certain new features, such as Ignore Dial Tone, Manual Dialing, and MNP 10 support, will not be available. Additionally, you will be able to use scripts from future Apple dial-up products with version 2.1 of Apple Remote Access. But, see the note below on some issues related to manual dialing.

Apple Remote Access and System 7.5.3

=====

The Read Me documents for System 7.5.3 and System Update 2.0 suggest that Apple Remote Access should be installed before System 7.5.3. This is not necessary. Beginning with version 2.1, Apple Remote Access should be installed after System 7.5.3.

Installing ARA X.25 Client over Apple Remote Access 2.1

=====

The Apple Remote Access X.25 Client installer places X.25 scripts into the Extensions folder. If you install the X.25 additions after installing Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the X.25 scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the scripts.

If you use the Apple Remote Access 2.1 installer to upgrade your existing Remote Access 2.0.1 and X.25 Client, the installer will move the scripts for you.

Compatibility with AppleTalk Remote Access 1.0

=====

Version 2.1 of the Apple Remote Access Personal Server will successfully connect to both AppleTalk Remote Access 1.0 compatible servers and Apple Remote Access 2.x compatible servers. The compatibility setting in the connection document of earlier version 2.0 and 2.0.1 has been removed. Since connection to either style server is automatic, the setting is no longer necessary.

The next major upgrade to Apple Remote Access will no longer support ARA 1.0 clients or servers.

Using an MNP 10 Modem

=====

MNP 10 is an error-correction protocol that allows for more reliable data connections over cellular modems. Clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window puts MNP 10 modems into cellular mode. Do not click the "Use MNP 10 error correction in modem" checkbox to use MNP 10 over land lines.

To establish an MNP 10 connection, both your modem and the modem you are calling must support MNP 10; clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window is not by itself sufficient to establish an MNP 10 connection.

Manual Dialing

=====

The method used to do manual dialing in Apple Remote Access 2.0/2.0.1 has not worked well. Apple Remote Access presents a dialog asking you to dial, wait for the phone to ring, and then press OK. Often the user has to experiment to determine exactly when to press OK to dismiss the dialog.

To improve manual dialing, a new dialog has been incorporated into the modem scripts installed along with version 2.1 of Apple Remote Access. Two dialogs are now displayed when doing manual dialing. This first dialog is still present to provide backwards compatibility with the wide variety of existing modem scripts. When using newer scripts, the first dialog box should be dismissed before dialing, and you will be prompted by the modem script when to actually dial the phone. If you are using a modem script not included with this product, you may have to experiment to determine if the first dialog box should be ignored.

Future remote access and dial-up products from Apple will require the new style scripts and will not present two dialog boxes.

Using the Redialing Feature

=====

If the redialing option is selected, the Remote Access Personal Server attempts redialing only when the phone number that has been dialed is busy. If the connection attempt fails for any other reason including a failed callback attempt, Remote Access stops redialing so that you can correct any problems.

If you use the Redialing option, set the "Time between retries" number to five seconds or greater. Anything less than five seconds may not give your modem sufficient time to reset.

When using the Redialing Alternate Number option, the main number is dialed once and then redialing sequence alternates between the alternate and main numbers.

Using DialAssist

=====

If you are calling within a country with no city or area codes, and you encounter problems using DialAssist, try entering a space in the "Connect To City/Area Code" box in your connection document.

Serial Port Arbitration

=====

When a Remote Access connection is established, Remote Access prevents other application programs from using the serial port selected in the Remote Access Setup control panel. Most programs will inform you that the port is in use.

Apple Remote Access Personal Server provides this port arbitration through a system extension called the Serial Port Arbitrator located in the Extensions folder. Some programs that use the serial port may not be compatible with this extension. If you suspect that a program is not compatible with the Serial Port Arbitrator:

1. Remove the Serial Port Arbitrator file from the Extensions folder.
2. Restart your Macintosh.
3. Try the program again.

NOTE: The Serial Port Arbitrator will not work on a Macintosh if Remote Access Personal Server has not been installed.

High Speed Serial Connections

=====

Both Apple Remote Access Personal Server 2.1 and Client 2.1 support specifying a serial connection speed of 115200 bps in a modem script. Not all Macintosh built-in serial ports support connection speed of 115200 bps. Here is a list of Macintoshes that do.

Centris/Quadra 660AV, Quadra 840AV

Macintosh Performa 61xx

Power Macintosh 61xx, 71xx, 72xx, 75xx, 76xx, 81xx, 85xx, 95xx

Workgroup Server 6150, 7250, 8150, 8550, 9150

In order to use the serial port at 115200 bps on one of these computers, you need a new serial extension called SerialDMA. System 7.5.3 or later incorporates this driver into the operating system.

If you use a modem script that specifies 115200 bps, and your computer does not support this data rate, Apple Remote Access will automatically fall back to 57600 bps.

Using a Local Printer

=====

If you are using a non-networked printer connected to the printer port of your Macintosh, you may get an error dialog when trying to initiate a connection or when trying to print while connected saying that one of your serial ports is already in use. You may need to select Remote Only in the Network Control Panel (AppleTalk Control panel for Open Transport-based machines).

Apple Remote Access Personal Server and the Apple Internet Router

=====

Apple Remote Access Personal Server should not be installed on the same Macintosh as the Apple Internet Router.

Using ARA Security Modules (like SecurID) with Virtual Memory

=====

There is an incompatibility between some ARA security modules (like SecurID) and Virtual Memory. This bug has been fixed in the latest system release (7.5.3).

Changes in version 2.1 of the Apple Remote Access Personal Server

=====

Modem scripts have been moved to a new Modem Scripts folder within the Extensions Folder.

The compatibility option in the connection document is no longer necessary and has been removed.

The method of manual dialing has been changed. See the section above.

Interoperability with some non-Apple Remote Access Servers has been improved.

The installer has been upgraded from version 3.4 to version 4.0.3.

There is no longer a separate Remote Access Aliases extension.

The installer is now on a single high-density diskette.

A bug that caused machines with certain extensions to crash during boot has been fixed in the Serial Port Arbitrator.

Serial port rates of up to 115,200 bps are now supported in modem scripts. If the computer doesn't support 115,200, Apple Remote Access will use 57,600 bps instead.

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Tech Info Library Article Number:20168



Tech Info Library

Apple Remote Access 2.1 Client For Macintosh Read Me (7/96)

Revised: 7/15/96
Security: Everyone

Apple Remote Access 2.1 Client For Macintosh Read Me (7/96)

Article Created: 15 July 1996

TOPIC -----

The following article is the ReadMe document for the Apple Remote Access (ARA) Client version 2.1.

DISCUSSION -----

APPLE REMOTE ACCESS CLIENT FOR MACINTOSH READ ME

=====

This document provides late-breaking news about the Apple Remote Access Client that is not covered in the "Apple Remote Access Client User's Guide." You may need to refer to that guide to understand the use of several terms in this document, and you may want to print this document to keep with your user's guide.

Modems Supported by the Apple Remote Access Client

=====

Scripts that support most popular modems are provided on the Remote Access Client installation disks. The scripts include:

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- 3Com Impact ISDN 56K
- 3Com Impact ISDN 64K
- Apple Modem 2400
- AT&T Dataport 288
- AT&T KeepInTouch
- Dayna CommuniCard 28800
- Farallon Netopia 56K
- Farallon Netopia 64K
- GeoPort/Express Modem
- GeoPort/Express Modem CNG
- Global Village Gold/Silver/Mercury

Global Village Platinum
Hayes Accura 288
Hayes Optima 14.4
Hayes Optima 288
Megahertz CruiseCard 14.4
Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom MicroPorte 4232bis
Microcom QX/4232bis
Motorola 326xV34
Motorola BitSURFR 56K
Motorola BitSURFR 64K
Motorola Power/Lifestyle 28.8
Practical Peripherals V.34
Prometheus ProModem 144e
Prometheus ProModem 96
PSI PowerModem II
PSI PowerModem III/IV
Supra 144
Supra 288
TDK DF2814
Telebit QBlazer
Telebit T3000
Telebit Worldblazer
US Robotics Universal
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Version 2.1 of the Apple Remote Access Client will successfully connect to both AppleTalk Remote Access 1.0 compatible servers and Apple Remote Access 2.x compatible servers. The compatibility setting in the connection document of earlier version 2.0 and 2.0.1 has been removed. Since connection to either style server is automatic, the setting is no longer necessary.

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Future remote access and dial-up products from Apple will require the new style scripts and will not present two dialog boxes.

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If the redialing option is selected, the Remote Access Client attempts redialing only when the phone number that has been dialed is busy. If the connection attempt fails for any other reason including a failed callback attempt, Remote Access stops redialing so that you can correct any problems.

If you use the Redialing option, set the "Time between retries" number to five seconds or greater. Anything less than five seconds may not give your modem sufficient time to reset.

When using the Redialing Alternate Number option, the main number is dialed once and then redialing sequence alternates between the alternate and main numbers.

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If you are calling within a country with no city or area codes, and you encounter problems using DialAssist, try entering a space in the "Connect To City/Area Code" box in your connection document.

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When a Remote Access connection is established, Remote Access prevents other application programs from using the serial port selected in the Remote Access Setup control panel. Most programs will inform you that the port is in use.

Remote Access Client provides this port arbitration through a system extension called the Serial Port Arbitrator located in the Extensions folder. Some programs that use the serial port may not be compatible with this extension. If you suspect that a program is not compatible with the Serial Port Arbitrator:

1. Remove the Serial Port Arbitrator file from the Extensions folder.
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NOTE: The Serial Port Arbitrator will not work on a Macintosh if Remote Access Client has not been installed.

High Speed Serial Connections

=====

Both Apple Remote Access Personal Server 2.1 and Client 2.1 support specifying a serial connection speed of 115200 bps in a modem script. Not all Macintosh built-in serial ports support connection speed of 115200 bps. Here is a list of Macintoshes that do.

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Macintosh Performa 61xx
Power Macintosh 61xx, 71xx, 72xx, 75xx, 76xx, 81xx, 85xx, 95xx
Workgroup Server 6150, 7250, 8150, 8550, 9150

In order to use the serial port at 115200 bps on one of these computers, you need a new serial extension called SerialDMA. System 7.5.3 or later incorporates this driver into the operating system.

If you use a modem script that specifies 115200 bps, and your computer does not support this data rate, Apple Remote Access will automatically fall back to 57600 bps.

Using a Local Printer

=====

If you are using a non-networked printer connected to the printer port of your Macintosh, you may get an error dialog when trying to initiate a connection or when trying to print while connected saying that one of your serial ports is already in use. You may need to select Remote Only in the Network Control Panel (AppleTalk Control panel for Open Transport-based machines).

Apple Remote Access Client and the Apple Internet Router

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Apple Remote Access Client should not be installed on the same Macintosh as the Apple Internet Router.

Using ARA Security Modules (like SecurID) with Virtual Memory

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There is an incompatibility between some ARA security modules (like SecurID) and Virtual Memory. This bug has been fixed in the latest system release (7.5.3).

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The compatibility option in the connection document is no longer necessary and has been removed.

The method of manual dialing has been changed. See the section above.

Interoperability with some non-Apple Remote Access Servers has been improved.

The installer has been upgraded from version 3.4 to version 4.0.3.

There is no longer a separate Remote Access Aliases extension.

The installer is now on a single high-density diskette.

A bug that caused machines with certain extensions to crash during boot has been fixed in the Serial Port Arbitrator.

Serial port rates of up to 115,200 bps are now supported in modem scripts. If the computer does not support 115,200, Apple Remote Access will use 57,600 bps instead.

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Tech Info Library Article Number:20169



Tech Info Library

Text Clippings and Screen Redraw (7/96)

Revised: 7/15/96
Security: Everyone

Text Clippings and Screen Redraw (7/96)

=====

Article Created: 15 July 1996

TOPIC -----

Sometimes I see an open text clipping window that does not redraw correctly. It appears that some text is missing or partially cropped from the window. However, the missing text is redrawn in a separate window smaller window in the upper left corner of the desktop. Why is this happening?

DISCUSSION -----

This is a known issue that is purely cosmetic. Apple is currently investigating the problem. There is a rare circumstance in which an open text clipping window will not redraw correctly, such that the included text will be absent or partially cropped, but redrawn in a separate window fragment in the upper left corner of the desktop.

Steps To Reproduce
=====

Step 1

Open SimpleText or any other drag and drop capable application.

Step 2

Drag a text selection to the desktop to create a clipping file, then open that file.

Step 3

Bring SimpleText, or anything but the Finder, to the front.

Step 4

If you then double-click on the clipping file again (even though its window is already open), whatever portion of the CONTENTS of that window

that was obscured by another window (even a Finder window) will be cropped out. However, the complete contents of that clipping file window WILL be displayed in another separate white box in the upper left corner of the desktop, below the menu bar. This box will have no borders or scroll bars, and will not be redrawn if another window is moved over it then moved away.

- This will not occur if, in the previous step, the Finder was allowed to come completely to the front and finish its redraws before double-clicking on the clipping file.

- Even if the clipping window is NOT obscured by any other window in step 4, if you simply move the clipping window anywhere after double-clicking its icon, the effect will be reproduced.

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Tech Info Library Article Number:20170



Tech Info Library

Macintosh Computers: Options for lpr Printing Available (7/95)

Revised: 7/15/96
Security: Everyone

Macintosh Computers: Options for lpr Printing Available (7/95)

=====

Article Created: 15 July 1996

TOPIC -----

How can I print from my Macintosh computer to a printer connected to the Ethernet using lpr/lpd?

DISCUSSION -----

There are several third-party products that can help you print using Berkeley Line Printer Protocols (lpr/lpd) as described in RFC1179.

Public Domain/ShareWare
=====

lpDaemon (description from lpDaemon readme file)

LPR is an lpDaemon client that submits jobs to a printer queue. Typically a text file is sent to a unix print queue. If the file is of type TEXT the end of lines are converted to unix style end of lines before sending, otherwise files are sent as is and marked with the 'literal' flag.

lpr (description from lpr1.2 readme file)

lpr is used to print Macintosh files by sending them to a remote lpd daemon. The files may be preformatted, formatted on the Macintosh, or formatted by lpd.

Public Domain and Shareware applications can be found on various online services, and the Internet.

Commercial Product
=====

InterPrint by Intercon (description from www.intercon.com web page)

InterPrint is the industry's first commercial implementation of an LPR client for the Apple Macintosh, and the only bi-directional printing software package that allows TCP/IP users to print cross-platform. It operates as a Chooser-selectable printer driver and runs transparently in the background. InterPrint can be used as an LPR client and/or an LPR server. Once installed, the server portion of the software operates as an extension. InterPrint Monitor mimics the UNIX LPQ command and allows users to easily check the status of print jobs. Users can print documents to a UNIX- or LPR-based printer without giving up the familiar Macintosh interface.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article appeared in the 16 July 1996 issue of the Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20171



Tech Info Library

QuickTake Cameras: Aren't Supported Using Windows 95 (7/95)

Revised: 7/15/96
Security: Everyone

QuickTake Cameras: Aren't Supported Using Windows 95 (7/95)

=====

Article Created: 15 July 1996

TOPIC -----

Are either of the QuickTake digital cameras (QuickTake 100, QuickTake 150) compatible with Microsoft Windows 95?

DISCUSSION -----

Windows 95 has not been officially tested using the Apple QuickTake Camera software, so it is not supported by Apple Computer, Inc. When Apple has completed testing and has finished qualifying products for Windows 95, there will be an announcement from Apple.

Unofficial testing with the QuickTake Software and Windows 95 did not present any problems on the computers we used. The QuickTake 150 software and QuickTake 100 software installed easily and functioned correctly. However, each system that you install the QuickTake software on may have different issues to deal with depending on the number of communication ports in use.

This article was published in the Information Alley on 15 July 1996.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20172



Tech Info Library

Power Macintosh 7600: Power Supply Fan Speed Fluctuations (7/96)

Revised: 7/16/96
Security: Everyone

Power Macintosh 7600: Power Supply Fan Speed Fluctuations (7/96)

=====

Article Created: 16 July 1996

TOPIC -----

I have noticed that the speed of the fan used in the power supply of my Power Macintosh 7600 series computer seems to change as the temperature in my office fluctuates. Is this considered normal?

DISCUSSION -----

The change in the speed of the fan that you are noticing is normal. The power supply used in the Power Macintosh 7200/7500/7600 series computers' enclosures contains a fan speed control circuit. The circuit is designed to monitor the temperature inside of the power supply and adjust the speed of the fan as the temperature of rises and lowers to compensate for the temperature change.

This fan speed control feature is not unique to this particular power supply. A similar fan speed control circuit is used in other desktop Macintosh computers as well.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20173



Tech Info Library

ADDmotion Technical Support (7/96)

Revised: 7/16/96
Security: Everyone

ADDmotion Technical Support (7/96)

=====

Article Created: 16 July 1996

TOPIC -----

ADDmotion II is bundled with HyperCard 2.3. When you call the technical support number listed in the manual you are referred to another phone number.

DISCUSSION -----

Motion Works Group provides technical support for the product that ships with HyperCard. The number on the sticker of the ADDmotion manual, 415-541-9333 is no longer valid.

If customers dial 800-541-9333 they will reach an entirely different company.

To find the current phone number for the vendor use the search string "Motion Works Group".

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20174



Tech Info Library

MacIPX and Comm Slot II Ethernet Errors (4/97)

Revised: 4/23/97
Security: Everyone

MacIPX and Comm Slot II Ethernet Errors (4/97)

Article Created: 16 July 1996
Article Reviewed/Updated: 23 April 1997

TOPIC -----

The following two errors may be encountered when using version 5.11 of Novell's NetWare Client for Mac OS with Macintoshes that utilize the Apple Comm Slot II Ethernet adapter.

1) When attempting to configure MacIPX on a Power Macintosh 5400, 6400 or 6360, the following error is reported:

"Network interface Ethernet could not be selected due to error: -43 (0xffd5) please configure the Ethernet interface to ensure that the network driver can open properly."

2) When attempting to log in to the NetWare file server via the Novell Login Menu or mount a volume through the NetWare Directory Browser the following error is reported:

"There may be a problem with your network connection or MacIPX may not be configured properly. Use the MacIPX control panel to configure MacIPX."

DISCUSSION -----

Apple has developed the Power Macintosh or Performa 6360/64xx/54xx Update disk which will install the necessary "Ethernet shim" support to use MacIPX and DEC's LAT tool as a solution to problem #1 (above). This update is available for users to download from Apple's Software Update sites. Users should be sure they are running the latest versions of MacIPX or LAT Tool before installing the this update.

The 6360/64xx/54xx Update fixes have been rolled into Mac OS 7.6. If you have installed Mac OS 7.6, you do not need the 6360/64xx/54xx Update.

The error message returned in problem #2 (above) indicates that the MacIPX driver has not been opened. If you open the MacIPX control panel, you will see the Network Number and Node Number displayed as "N/A (driver not open)", which is normal after a restart.

Novell has updated the MacIPX Ethernet extension to allow MacIPX to initialize normally when attempting to log in to the the NetWare file server via the Novell Login Menu or mounting a volume through the NetWare Directory Browser. Be sure to read the "Update.TXT" text file that is included with the update for other fixes to the Mac Client Update.

This update can be downloaded from Novell's FTP site. The path is:

```
pub
  updates
    mac
      nwcmc511
      mclupd.bin
```

The update is also available from Novell's WWW site at the following URL's:

```
ftp://ftp.novell.com/pub/updates/nwos/iwsb411/mclupd.bin
ftp://137.65.2.100/pub/updates/nwos/iwsb411/mclupd.bin
```

Here are the installation steps for the MacIPX Ethernet Extension:

- 1) Delete old MacIPX Ethernet extension from Extensions folder.
- 2) Delete MacIPX Preferences in the Preferences folder, if it exists.
- 3) Copy new MacIPX Ethernet extension (1.3.1 (970404) PTF) into Extensions folder.
- 4) Restart Macintosh.

Note: The updated MacIPX Ethernet extension should be used with all Comm Slot II equipped Macintoshes.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

23 Apr 1997 - Updated with new information.
08 Apr 1997 - Article available to all.
25 Feb 1997 - Added Mac OS 7.6 information.

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Tech Info Library Article Number:20175



Tech Info Library

AppleShare 4.2.1 and ARA Multiport Server (7/96)

Revised: 7/18/96
Security: Everyone

AppleShare 4.2.1 and ARA Multiport Server (7/96)

=====

Article Created: 17 July 1996

TOPIC -----

I recently obtained the AppleShare 4.2.1 upgrade, which includes Apple Remote Access (ARA) Multiport Server 2.1. I cannot find the ARA Client software nor the four port serial card, both of which are mentioned in the ARA Multiport Server manual included with the upgrade. Where are those items?

DISCUSSION -----

The version of ARA Multiport server that is included with AppleShare 4.2.1 is a special version that does not contain the card or any client software. Those items need to be purchased separately.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20176



Tech Info Library

StyleWriter EtherTalk Adapter: Troubleshooting Steps (8/96)

Revised: 8/8/96
Security: Everyone

StyleWriter EtherTalk Adapter: Troubleshooting Steps (8/96)

Article Created: 17 July 1996
Article Reviewed/Updated: 8 August 1996

TOPIC -----

This article contains several steps to help you troubleshoot issues you may be having with your StyleWriter EtherTalk Adapter.

The StyleWriter EtherTalk Adapter allows many Apple inkjet printers to be used over an EtherTalk based network, including as of the date this article was written: Color StyleWriter 1200, 1500, 2200, 2400, and 2500.

The StyleWriter EtherTalk Adapter requires the StyleWriter 2.2 driver, which shipped with the StyleWriter 1500. This software, for owners of other StyleWriter printers using the EtherTalk Adapter, is available electronically at Apple Software Update locations.

DISCUSSION -----

This article contains the following issues:

- No EtherTalk Adapter in Chooser
- Color StyleWriter Stops Printing in Mid-Job
- Desktop Print Monitor Status Reports Incorrect Information
- Macintosh "Crashed" or "Hung" During Print Job
- Ethernet Activity LED Blinks, But Not Printer Activity LED
- General Information About Using the StyleWriter EtherTalk Adapter
- StyleWriter EtherTalk Adapter LED Locations

No EtherTalk Adapter in Chooser
=====

PROBLEM:
Cannot see StyleWriter EtherTalk Adapter in the Chooser.

SOLUTION:

Check the following:

Ensure the Proper Printer is Being Accessed

The default name for the adapter is StyleWriter EtherTalk Adapter; however, you should determine whether the adapter was renamed. The easiest way to do this is to send a print job to a printer then verify the printer used to print the document.

You can also note what printer names appear in the Chooser, close the Chooser, and unplug the power cord from the EtherTalk Adapter connected to your printer, then check the Chooser again to see which printer is no longer listed. Restore power to the adapter once you identify the missing printer. After power is restored, verify in the Chooser that the printer reappears.

Rename Printer if Default Printer has Number Appended to It

The default name may have a number appended to it; that is, one may be named StyleWriter EtherTalk Adapter 1, another might read StyleWriter EtherTalk Adapter 2, if more than one unit with the default name resides in the same Ethernet zone. Each may be given unique names to work around this.

Use the Correct Ethernet Zone

Make sure that you are checking the proper zone for the printer in the Chooser.

Apply Power to Printer Before EtherTalk Adapter

Make sure the printer is powered on and is connected to the EtherTalk Adapter prior to supplying power to the EtherTalk Adapter.

Check the LED Lights on the EtherTalk Adapter

Check the LED lights on the EtherTalk Adapter after it is connected and powered on:

Begin_Table

+=====+			
LED		Normal Color	Notes
+=====+			
Test/Power		Green	
+-----+			
Printer Activity		Yellow	May blink if an incoming job is
			received.
+-----+			
Link		Green	Green if Ethernet is used.
+-----+			
Ethernet activity		Yellow	Blinks rapidly processing a job.
+=====+			

End_Table

Restart Ethernet Adapter if Test/Power LED is RED

If the Test/Power LED is red (the normal state is green), attempt to restart the adapter by unplugging then replugging the power to the unit. If this does not work, check with your service provider as there is likely a hardware failure.

Verify You Are Using the Correct Printer Driver

Verify you are using the proper driver for the printer. You should be using the driver that came on your Color StyleWriter software disks when you purchased your printer, or an updated version of that printer driver found at Apple Software Update sites.

Verify the Link LED is on when using 10Base-T

When you are using 10Base-T, make sure the Link indicator LED is on. If it is not, there is a problem with the 10Base-T line. Perhaps the network is not properly set up or terminated: check with your network support provider.

Restart the StyleWriter EtherTalk Adapter

Restart the StyleWriter EtherTalk Adapter.

- 1) Unplug the StyleWriter EtherTalk adapter from the power source.
- 2) Reconnect the StyleWriter EtherTalk adapter to the power source.

Make sure the Test/Power led is green, the Printer activity LED is yellow, and if 10Base-T is used, that the Link LED is green

Note:

It takes 20 or more seconds after power-on to go from red to green.

Color StyleWriter Stops Printing in Mid-Job

=====

PROBLEM:

The printer attached to the StyleWriter EtherTalk Adapter has stopped printing, in mid-job.

SOLUTION:

Check the LED Status on the StyleWriter EtherTalk Adapter

Under normal operation, the Test/Power LED is green, the Printer activity LED should be yellow, or blinking if it is processing a job, and if connected to 10Base-T, the Link light should be green. If data is being sent to the adapter, the yellow Ethernet activity LED will blink rapidly.

Check the Activity of the Printer and Ethernet LEDs

The yellow Printer activity LED should blink slowly. The yellow Ethernet activity LED should blink rapidly. If no printer activity is indicated, check if the device appears in the Chooser. If the device is not present in the Chooser, restart the StyleWriter EtherTalk Adapter.

Verify the StyleWriter EtherTalk Adapter Appears in the Chooser

If the StyleWriter EtherTalk Adapter is not in the Chooser, restart the StyleWriter EtherTalk Adapter by unplugging then replugging the power supply to the StyleWriter EtherTalk Adapter.

Verify That There Are No Macintosh System Dialogs

Check for error messages displayed on the Macintosh sending the print job, including paper out, door open, or other similar types of messages.

Desktop Print Monitor Status Reports Incorrect Information

PROBLEM:

The Desktop Print Monitor's status display reports incorrect information after the StylWriter EtherTalk Adapter is restarted.

SOLUTION:

Wait 2 minutes for the problem to clear. If it does not, restart your Macintosh. Prior to restarting, place the print job on hold. Once the Macintosh is restarted, take the job off of hold and printing will resume normally.

Macintosh "Crashed" or "Hung" During Print Job

PROBLEM:

The Macintosh "crashed" or "hung" during the print job. After restarting the Macintosh, the Macintosh is "frozen" and the print job is not completed but the Ethernet activity LED is blinking, indicating that data is being received.

SOLUTIONS:

Restart the StyleWriter EtherTalk Adapter by unplugging then replugging the power supply to the StyleWriter EtherTalk Adapter. Printing will resume normally.

Ethernet Activity LED Blinks, But Not Printer Activity LED

PROBLEM:

The Ethernet activity LED on the StyleWriter EtherTalk Adapter blinks but the Printer activity LED does not.

SOLUTION:

Restart the StyleWriter EtherTalk Adapter by unplugging then replugging the power supply to the StyleWriter EtherTalk Adapter.

General Information About Using the StyleWriter EtherTalk Adapter

=====

Names of the Color StyleWriter Printers

When using the CSW 2500 or CSW 1500 drivers with StyleWriter EtherTalk Adapter, the print dialog box indicates the driver name of either "Color StyleWriter 2500" or "Color StyleWriter 1500" followed by the name StyleWriter EtherTalk Adapter is currently assigned.

Rename the StyleWriter EtherTalk Adapter if you wish to reflect the type of printer connected it. For example, a StyleWriter EtherTalk Adapter connected to a Color StyleWriter 2500 could be named "StyleWriter EtherTalk 2500". In the Chooser you would see "StyleWriter EtherTalk 2500". When printing to the chosen printer the dialog would read Color StyleWriter 2500 "StyleWriter EtherTalk...".

Using QuickDraw GX version of Color StyleWriter Drivers

When using the CSW 2500 GX v1.0 or CSW 1500 GX v1.0 drivers, the CSW 2400 GX and the CSW 2200 GX drivers must be removed or disabled using the Extensions Manager Control Panel. You must restart your Macintosh after removing or disabling the old drivers.

LED Information in StyleWriter EtherTalk Adapter User's Guide

Refer to the StyleWriter EtherTalk Adapter user guide for additional information regarding the function of the LED's.

StyleWriter EtherTalk Adapter LED Locations

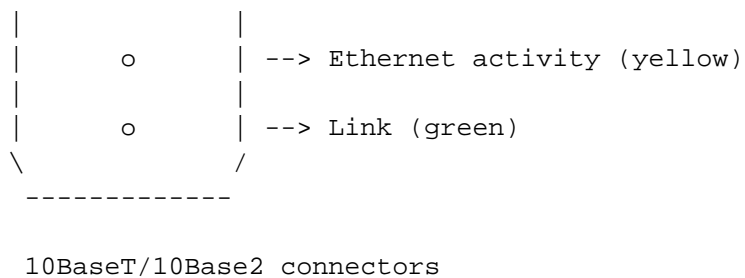
=====

LED are located on the top of the StyleWriter EtherTalk Adapter, and indicate:

Begin_Graphic

Power connetor, serial port

/		\	
	o		--> Test/Power (orange/green)
	o		--> Printer activity (yellow)
	o		--> Collision (orange)



End_Graphic

Article Change History:

08 Aug 1996 - Added information on proper printer driver.

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Tech Info Library Article Number:20178



Tech Info Library

Energy Saver Control Panel: Preferences Aren't in PRAM (7/96)

Revised: 7/18/96
Security: Everyone

Energy Saver Control Panel: Preferences Aren't in PRAM (7/96)

=====

Article Created: 18 July 1996

TOPIC -----

When I reset the Parameter RAM (PRAM) on a Macintosh computer that supports the Energy Saver control panel, what is the default sleep state? It is reset to shutdown in 25 minutes?

DISCUSSION -----

The Energy Saver sleep settings are not stored in PRAM, they are stored in the Energy Saver Preferences file, located in the Preferences folder within the System Folder. Moving or throwing the Energy Saver Preferences file away, and restarting your Macintosh resets the Energy Saver control panel back to the default sleep time of 30 minutes.

When the Macintosh restarts, if there is no preference file found, the control panel creates an alias to itself in the startup items folder so that each time you power on your Macintosh, the initial Energy Saver welcome screen displays. This screen explains the function of the Energy Saver control panel and provides you with an opportunity to modify the control panel default settings. Once you open the control panel, the alias is removed from the startup items folder and a preference file is created.

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Tech Info Library Article Number:20179



Tech Info Library

PowerBook 5300 Series: Determining Logic Board (7/96)

Revised: 7/18/96
Security: Everyone

PowerBook 5300 Series: Determining Logic Board (7/96)

Article Created: 18 July 1996

TOPIC -----

How can I tell determine which PowerBook 5300 Logic Board I have?

DISCUSSION -----

Look at the serial number on the PowerBook 5300 logic board and use the chart below to determine which version of the logic board you have.

Begin_Table

Apple Svc. Part Number	RAM	VRAM	Description	Clock Speed	Logic Board Serial Number
661-0989	8 MB	512K	No chip on top, just sockets	100 MHz	FCXXXXXX55Y
661-0990	16 MB	512K	4 RAM chips on top, one VRAM socket	100 MHz	FCXXXXXX4VX
661-0991	16 MB	1 MB	No sockets	100 MHz	FCXXXXXX68J
661-0992	16 MB	1 MB	No sockets	117 MHz	FCXXXXXX55S

End_Table

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Tech Info Library Article Number:20180



Tech Info Library

Energy Saver Modes: Different Sleep Modes Explained (7/96)

Revised: 7/18/96
Security: Everyone

Energy Saver Modes: Different Sleep Modes Explained (7/96)

Article Created: 18 July 1996

TOPIC -----

If I select Sleep from the Special Menu on my Power Macintosh 7200, it powers down my monitor and the monitor cools down. However, if I used the timed delay sleep mode in the Energy Saver control panel, the video signal disappears, but the monitor never cools. Why?

DISCUSSION -----

There is a difference in the way the two sleep functions work. Using the Sleep mode from the Special menu puts the monitor into a low-power state, but using the Energy Saver software just blanks the video with composite and vertical sync. still present.

The Energy Saver Control Panel was designed this way so that customers would not have to wait a long time for the display to warm-up from a cold start if the Display sleep was set separately at under 30 minutes.

Below is a table showing the video signals in the various modes.

Begin_Table

Pin	Signal	Description	W/Video	Sleep Menu	Energy Saver
1	RED.GND	Red vid. ground	GND	GND	GND
2	RED.VID	Red vid. signal	Video	No video	No video
3	/CSYNC	Comp. sync. signal	•Sync.	No sync.	Sync.
4	SENSE0	Monitor sense 0	--	--	--

5	GRN.VID	Green vid. signal	Video	No video	No video	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
6	GRN.GND	Green vid. ground	GND	GND	GND	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
7	SENSE1	Monitor sense 1	--	--	--	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
8	+12V	12-volt from computer	Sync.	No sync.	No sync.	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
9	BLU.VID	Blue vid. signal	Video	No video	No video	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
10	SENSE2	Monitor sense 2	--	--	--	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
11	GND	CSYNC & VSYNC ground	GND	GND	GND	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
12	/VSYNC	Vertical sync.	•Sync.	No sync	Sync.	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
13	BLU.GND	Blue video ground	GND	GND	GND	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
14	HSYNC.GND	HSYNC ground	GND	GND	GND	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
15	/HSYNC	Horizontal sync.	Sync.	No sync.	No Sync.	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+

Note:

Bullets (•) indicate where the differences are in the two sleep functions.

End_Table

Going Into a True Sleep Mode (No Power)

=====

Here is one method you can use to have the display go into a true sleep mode (no power).

Step 1

Open the Energy Saver control panel

Step 2

Set the System sleep option to the minimum value (30 minutes).

Step 3

If you want the display to go into a low-power sleep mode (loss of video only) then select display sleep and set the time for under 30 minutes. If you want the display to go into a true sleep mode (loss of power), deselect display sleep and have the system sleep set at 30 minutes or greater. If you have an option for never, all three options for sleep including the display are set for never.

Step 4

Close the Energy Saver control panel

The CPU sleep blanks all Video, Horizontal and Vertical Sync, and Composite Sync. With the display sleep function selected and set at under 30 minutes, you only loose video and Composite sync. Until the CPU goes to sleep the display will not loose power.

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Tech Info Library Article Number:20181



Tech Info Library

Apple Printer Utility 2.0: Isn't Compat W/ Telecom 2.3.3 (7/96)

Revised: 7/18/96
Security: Everyone

Apple Printer Utility 2.0: Isn't Compat W/ Telecom 2.3.3 (7/96)

=====

Article Created: 18 July 1996

TOPIC -----

When I try using the Apple Printer Utility 2.0 with my LaserWriter printer from my Power Macintosh Computer, my system "freezes" upon shut down, or restart.

I have narrowed this down to the Telecom 2.3.3 software. If I do not install this software after reinstalling System 7.5.3, then everything works as it should.

DISCUSSION -----

We duplicated the problem using the Apple Telephone Tool v2.3.3 with Apple Printer Utility v2.0 under Mac OS 7.5.3, when the Macintosh was connected to the network using LocalTalk. When we tested the software using EtherTalk, we did not encounter any difficulties.

After sending or receiving a fax with the Apple Telephone Tool using a GeoPort Adapter, you may encounter system hangs when using the Apple Printer Utility, or after using the Apple Printer Utility when you Restart or Shut Down. Even if you disable the Apple Telephone Tool and fax extensions using the Extensions Manager, and restart your Macintosh, you may still encounter hangs after using Apple Printer Utility.

Until this problem is isolated and fixed, when you are using a LocalTalk network connection, you should refrain from using the Apple Printer Utility and the Apple Telephone tool when using LocalTalk on the same Macintosh computers using Mac OS 7.5.2 or 7.5.3.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20182



Tech Info Library

PC Compatibility Card: Create New Drive Containers (7/96)

Revised: 7/19/96
Security: Everyone

PC Compatibility Card: Create New Drive Containers (7/96)

=====

Article Created: 19 July 1996

TOPIC -----

I have a PCI-based PC Compatibility Card, and I am having trouble trying to use the drive container from one of the earlier DOS Compatibility Card I had installed in my Power Macintosh 6100 computer. Can I use my previous drive containers?

DISCUSSION -----

The PCI-based PC Compatibility Cards have significant hardware differences from the earlier DOS Compatibility Cards. Although the drive containers have not changed, many of the previous drivers, including video drivers and sound drivers, will not work correctly on the PCI-based PC Compatibility Cards.

To ensure proper operation of the PCI-based PC Compatibility Cards, you should create a new drive container and install the drivers that come with the PC Compatibility Card.

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Tech Info Library Article Number:20183



Tech Info Library

AppleCD Audio Player: Volume Setting Aren't Retained (7/96)

Revised: 7/19/96
Security: Everyone

AppleCD Audio Player: Volume Setting Aren't Retained (7/96)

=====

Article Created: 19 July 1996

TOPIC -----

I am using the AppleCD Audio Player v2.1, which came with System 7.5.3 Update 2.0, and cannot find a way to make the AppleCD Audio Player retain the volume settings after I restart my Macintosh computer.

DISCUSSION -----

This issue has been reported to Apple Engineering and they are investigating a solution. Currently the only solution is to reset the volume slider to the desired position.

When you restart your Macintosh the AppleCD Audio Player v2.1 slider defaults to the middle position, so you must manually change the volume each time you use the AppleCD Audio Player.

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Tech Info Library Article Number:20184



Tech Info Library

Power Mac 5200 & 6300: PrinterShare Fails From Remote (11/96)

Revised: 11/22/96
Security: Everyone

Power Mac 5200 & 6300: PrinterShare Fails From Remote (11/96)

=====

Article Created: 19 July 1996
Article Reviewed/Updated: 22 November 1996

TOPIC -----

I have two Power Macintosh 5200 computers and a Color StyleWriter 2500 printer. I am trying to share the printer, but when I print from the remote computer, I get a Resource not Found error message. I am using System 7.5.3 on both computers.

DISCUSSION -----

You can perform any of the workarounds listed below in order to print correctly. This problem is NOT specific to the Color StyleWriter 2500, and occurs with any QuickDraw printer that uses Printer Share 1.1.3.

Workarounds
=====

Upgrade to System 7.5.5

You can successfully use PrintShare on Power Macintosh 5200 and Power Macintosh 6300 series computers if you install the System 7.5.5 update.

Fill Out Information in Sharing Setup Control Panel

If you fill out the information in the Sharing Setup control panel, the necessary resources are installed, so PrintShare functions properly with System 7.5.3. Be sure to fill out the information in the Sharing Setup control panel of the remote computer also.

This article appeared in the 15 October 1996 issue of the Information Alley.

Article Change History:

22 Nov 1996 - Added Sharing Setup control panel on the remote computer.

15 Oct 1996 - Added current workarounds.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20185



Tech Info Library

StyleWriter GX Drivers: Don't Support Scatter Feature (7/96)

Revised: 7/19/96
Security: Everyone

StyleWriter GX Drivers: Don't Support Scatter Feature (7/96)

=====

Article Created: 19 July 1996

TOPIC -----

I am using QuickDraw GX and a Color StyleWriter 1500 printer. I am trying to use the Scatter mode, but that button is not active. How can I use this color mode with QuickDraw GX?

DISCUSSION -----

The StyleWriter GX drivers do not support the scatter feature, with the exception of the StyleWriter Pro GX driver. Since most StyleWriter customers do not need the higher end printing architecture of QuickDraw GX, many of the features of GX, such as DeskTop printing, N-Up and Watermarks, have been incorporated into the standard QuickDraw drivers.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20186



Tech Info Library

User & Group Manager: Thread Manager Missing (8/96)

Revised: 8/1/96
Security: Everyone

User & Group Manager: Thread Manager Missing (8/96)

=====

Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

I installed the FirstClass, AppleShare, and AtEase Agent software on one server. I then moved the FirstClass Agent extension to my FirstClass server so I could access the server with the User & Group Manager. I now get a message upon restart of the server that I need to "install the Thread Manager extension".

DISCUSSION -----

You will get this message if you drag copy the FirstClass Agent extension into your server's system folder. In the first chapter of the Network Administrator Toolkit (ANAT) manual it states:

WARNING: Do not install the Network Administrator Toolkit software by dragging the files onto the startup disk. You must use the Installer programs that are on the Apple Network Administrator Toolkit CD-ROM disc. These programs place the files in the correct location on the startup disk.

You will need to install the Apple Network Administrator Toolkit Server software for the type of server you are running. The Installer will install the Thread Manager into the server's system folder.

Article Change History:
01 Aug 1996 - Updated for search ability.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20187



Tech Info Library

Network Assistant: Control Window Behavior (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Control Window Behavior (8/96)

=====

Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

- 1) Should the user be getting a full screen view when trying to control a single workstation from the multiple view observation window, or is this an error in the documentation?
- 2) When you can see a partial desktop is there a way to scroll around to observe or control the entire desktop?
- 3) Can I use other applications on my computer while I am controlling another computer?
- 4) What are the requirements for the administrators monitor?
- 5) Are there any restrictions for the workstation monitor?

DISCUSSION -----

1) Question: Should the user be getting a full screen view when trying to control a single workstation from the multiple view observation window, or is this an error in the documentation?

Answer: This is not exactly wrong but rather unclear. The screen you will be controlling will fill up the 640x480 "observing" window, not the whole screen unless of course your administrators station has only a 640x480 screen. Then the statement in the manual would be true.

2) Question: When you can see a partial desktop is there a way to scroll around to observe or control the entire desktop?

Answer: No. They wanted to change this but there wasn't time to implement it. It requires a major design change. Hopefully in the next release things will be different.

So, number 4 in the Network Administrator Toolkit (ANAT) ReadMe says that if you view a workstation with a smaller monitor, you will see only part of the shared screen. Although the ReadMe doesn't say it, the opposite is true too. If you share, control or observe a workstation that has a larger screen (or bit depth greater than administrator screen) then you will see only part of the shared screen. This can be a problem in that you may not see the Hard Disk of the remote Macintosh. A possible workaround would be to type the name of the hard disk and use the Finders "open" command. This may allow you to see the contents of the window if the window is not off the viewable screen.

3) Question: Can I use other applications on my computer while I am controlling another computer?

Answer: No. The documentation states in Section 3 page 84, "You cannot use other applications on your workstation while using the control feature."

4) Question: What are the requirements for the administrators workstation monitor?

Answer: If you share, control or observe a workstation, the administrators workstation monitor should have an equal or higher resolution than the remote workstation.

5) Question: Are there any restrictions for the workstation monitor?

Answer: You cannot observe, control or share a screen that is displaying millions of colors. If the colors on the workstation monitor are set to millions you can use the "Change System Settings" feature to adjust the number of colors below millions.

Article Change History:

01 Aug 1996 - Updated for search ability.

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Tech Info Library Article Number:20188



Tech Info Library

HyperCard 2.3 Description (7/96)

Revised: 7/23/96
Security: Everyone

HyperCard 2.3 Description (7/96)

Article Created: 23 July 1996

TOPIC -----

This article contains a description of HyperCard 2.3.

DISCUSSION -----

Overview

HyperCard software is Apple's premier tool for creating custom software solutions for business, education, and multimedia. Commercial developers, consultants, in-house programmers, and end users can use HyperCard to acquire, manage, and display information any way they need to.

HyperCard organizes information into easy-to-use "stacks" of cards through which users can navigate and search for the information they need. Simply by clicking on a button, they can view related text, see a graphic, hear a sound, watch a QuickTime movie, or listen to text spoken out loud.

HyperCard is an ideal development tool for a wide range of applications, including multimedia presentations, front ends to host data, courseware, and computer-based training materials.

Beginners can start creating stacks right away; no scripting experience is required. The new Button Tasks feature lets you automatically integrate text, graphics, video, sound, spoken text, and links to other applications into your stacks without writing a single script. HyperCard also offers extensive on-line help, as well as ready-to-use stacks, templates, and elements.

At the same time, HyperCard provides a robust prototyping and development environment for professional developers. It comes with powerful scripting tools, a modeless script editor, hypertext support, debugging tools, external commands, and many other features to help you create powerful custom software. Use HyperTalk software—HyperCard's powerful, English-like scripting language—to add power and versatility to your stacks. HyperCard also comes with the AppleScript

scripting language. You can write AppleScript scripts that attach to HyperCard buttons to launch, control, and exchange data with other off-the-shelf scriptable applications, either locally or over a network.

HyperCard provides an easy mechanism for distributing your stacks. You can save any stack as a stand-alone, double-clickable Macintosh application that can be distributed without software royalty fees.

Features

Easy to use

- Organize information into convenient "stacks" of electronic cards
- Create applications quickly using ready-made buttons and text fields
- Integrate QuickTime movies, graphics, sounds, and spoken text into a HyperCard stack—no scripting experience required

Color and multimedia support

- Assign colors to HyperCard elements such as buttons, fields, and backgrounds
- Use 24-bit color painting tools to create color images and to import and resize color PICT graphics
- Have HyperCard text read aloud by your computer*
- Add QuickTime movies, sounds, and graphics to your stacks

Powerful development features

- Take full advantage of Power Macintosh systems with an accelerated version of HyperCard
- Use AppleScript from within HyperCard to launch, control, and exchange data with over 100 scriptable Macintosh applications
- Create and customize your own menus and tool palettes
- Extend HyperCard's functionality with commercially available add-on products, including third-party external command (XCMD) software

Support for global solutions

- Use WorldScript system extensions* to create multilingual HyperCard solutions
- Mix different character sets (including single-byte and double-byte characters) in a single field
- Script in French, Japanese, or other languages using international dialects of AppleScript software*

Stand-alone application capability

- Create double-clickable applications for customers, colleagues, or students who do not have HyperCard software
- Distribute HyperCard applications freely, without software royalty fees

* Requires additional software; see system requirements

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Tech Info Library Article Number:20189



Tech Info Library

HyperCard 2.3: Technical Specifications (7/96)

Revised: 7/23/96
Security: Everyone

HyperCard 2.3: Technical Specifications (7/96)

=====

Article Created: 23 July 1996

TOPIC -----

The following article contains a list of technical specifications and order information for HyperCard 2.3.

DISCUSSION -----

Technical Specifications
=====

Complete support for scripting languages

- Add power and versatility to HyperCard applications using HyperTalk—HyperCard's scripting language— or any scripting language compatible with the Open Scripting Architecture (OSA), such as AppleScript
- Attach AppleScript scripts to HyperCard objects such as buttons to launch and control other applications, exchange data with them, and so on— even over a network
- Link HyperCard stacks with any of more than 100 script-able applications, such as Claris FileMaker Pro 2.0 and Microsoft Excel 4.0 (applications must be running under System 7)
- Use localized versions of AppleScript system extensions to script in Japanese, French, or other languages (requires additional software)

Multimedia features

- Add QuickTime movies to stacks using the QuickTime Tools stack
- Include sound, animation, and graphics in your stacks
- Have HyperCard text read aloud by your computer

Color drawing and painting tools

-
- Choose from 256 colors to apply to buttons, fields, backgrounds, and cards
 - Import 24-bit color or grayscale PICT graphics
 - Resize, reposition, and edit graphics on the card
 - Create PICT images with 24-bit color painting tools

Automated Button Tasks

- Automatically assign tasks to buttons without writing a single script
- Go to another destination (first card, previous card, home, or others)
- Play a QuickTime movie
- Play a sound
- Have text read aloud (using PlainTalk software)
- Launch another application
- Apply visual effects for transitions between cards

Powerful development features

- Third-party external commands (XCMDs) let you control a wide variety of systems and equipment, including mainframe computers, networks, videodisc players, and CD-ROM drives.
- Hypertext applications can be created by linking a word or group of words.
- Modeless script editor lets you view several scripts and stacks at once and quickly copy and paste HyperTalk or AppleScript code between them.
- Debugging menu lets you set checkpoints in, and step and trace through, a HyperTalk script while it's running, for fast and easy troubleshooting.
- Background processing lets you continue working in other applications while complex scripts are running or while you compact or sort a stack.
- Variable Watcher shows how variables are used and changed and lets you edit variables while debugging your script.
- Message Watcher lets you view HyperTalk messages as they're sent, so you can see how your program's logic really works.
- "Save as" options let you create stand-alone applications or ones that can run using HyperCard Player (widely available on Macintosh systems).

Flexible formatting and reporting

- Design multiple report layouts for each stack—and copy and paste report formats between stacks
- Control the content, appearance (including font, size, and style), and placement of text elements in report formats
- Create card sizes ranging from 1 by 1 inch to 18 by 18 inches
- Print individual fields, selected parts of a card, a single card, selected

cards (containing a certain word, button, or background), or an entire stack

System requirements

- An Apple Macintosh, Power Macintosh, or PowerBook computer; QuickTime Tools requires a 68020 or later processor; text-to-speech function requires a 68040 or later processor
- A hard disk drive
- At least 2MB of RAM required for HyperCard 2.3; 4MB of RAM required for system software version 7.0 or later, QuickTime Tools, and AppleScript; at least 5MB of RAM is recommended when using Color Tools
- Macintosh system software version 6.0.5 or later; Version 7.0 or later required for Color Paint Tools; Version 7.1 or later required for AppleScript, HyperCard button tasks, and the stand-alone application builder
- QuickTime Tools requires the QuickTime system extension; text-to-speech function requires PlainTalk software (included) Button Tasks requires AppleScript system extension
- Multilingual HyperCard applications may require WorldScript software and/or international versions of AppleScript software

Ordering Information

HyperCard 2.3

Order No. M2365Z/B

- HyperCard version 2.3 software for 680x0-based Macintosh systems
- HyperCard version 2.3 software for Power Macintosh systems
- HyperCard reference manuals and example stacks
- AppleScript RunTime Edition software
- AppleScript Reference and sample stacks

Product specifications are subject to change. Check with your authorized Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20190



Tech Info Library

Network Assistant: Workstation Access Denied (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Workstation Access Denied (8/96)

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Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

I configured a group of workstations to administer with Network Assistant. Today the status of one of the workstations shows "Access Denied". What can cause this?

DISCUSSION -----

You will get this status displayed if you change the workstation's Network Assistant password after you have added it to a workstation list. You must remove the workstation from any list it is on and add it to the list again to access it from Network Assistant.

Article Change History:
01 Aug 1996 - Updated for search ability.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20191



Tech Info Library

Network Assistant: Using the Network Performance Report (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Using the Network Performance Report (8/96)

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Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article comes from the Apple Network Administrator Toolkit (ANAT) manual and describes how the information from the Network Performance Report can be used.

DISCUSSION -----

The Network Performance Report includes information that you can use to evaluate the performance of your network. Here are some suggestions for using the Network Performance Report:

- The number of routers between your workstation and another workstation can affect the time the packets take to return. When you evaluate the times for a workstation, you should compare them to the times for a workstation in the same area of the network or with the same number of intervening routers.
- If the number of routers is not what you expect, there may be a problem with your network.
- If the maximum time for a packet to return from a workstation is significantly greater than the times for other workstations in the same area of your network, there may be a problem with the workstation.
- If a single workstation has a large number of lost packets, there may be a problem with the network connection to that workstation.
- If several workstations in the same area of the network have a large number of lost packets, there may be a network connection problem or a problem with an intervening router or bridge.

Article Change History:

01 Aug 1996 - Updated for search ability.

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Tech Info Library Article Number:20193



Tech Info Library

Network Assistant: Interpreting Status Messages (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Interpreting Status Messages (8/96)

Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article describes what the Network Assistant, part of the Apple Network Administrator Toolkit (ANAT) workstation status messages mean and how to respond to them.

DISCUSSION -----

The Workstation Status window shows you the name and the status of each workstation in a list of workstations. Usually the status is the name of the application program running on each workstation, but other messages may appear in the Status column.

If a message appears in red, the last command you tried to execute on a particular workstation failed. These messages remain in the Status column for about 30 seconds, or until you perform another command on the workstation.

Access denied

The password for this workstation is no longer valid. If you know the new password for the workstation, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list then add it to the list again, entering the new password when requested.

Applications are open

You tried to replace the System Folder or delete all of the other items on a workstation's hard disk when an application was open on the workstation. You must first quit all of the open applications on the workstation. Ask the user to quit all of the applications, or choose Quit Applications from the Manage menu to quit the applications. You can also choose Control from the Interact menu, then quit any open applications.

Application not found

You tried to open an application or a document of an application that is not installed on the workstation. Use the Copy Items command to copy the application to the workstation. (Make sure that your licensing agreement allows you to copy the application.)

AVP: Channel XX

The workstation is displaying TV channel XX using the Apple Video Player.

Command failed

The last command failed to execute on the workstation. This may be because of the applications that are open on the workstation. Ask the user to quit all of the applications, or choose Quit Applications from the Manage menu to quit the applications. You can also choose Control from the Interact menu, then quit any open applications. After you quit the applications, try the command again. If the command still fails, try restarting the workstation.

Command not authorized

You do not have permission to perform the command you tried on the workstation. Before you can use the command, either you or the user must change your access privileges on the workstation using Network Assistant Security. You may have permission to perform other commands on the workstation.

Communication error

Network Assistant was unable to send the last command to the workstation because the workstation is not operating properly or there was a high level of network activity. Create a Network Performance Report for this workstation and several workstations near it to determine whether there are problems communicating with this particular workstation. If the report indicates that all the workstations are performing at the same level, try the command again. If the command continues to fail, try restarting the workstation. If this problem occurs often, there may be a problem with your network.

Copying Items

This message appears when items are being copied to a workstation using Network Assistant. If the message is dimmed, the Copy Items or Copy Hard Disk command is being executed from another administrator's workstation.

Deleting Items

This message appears when items are being deleted from a workstation using Network Assistant. If the message is dimmed, the Delete Disk or Delete Selected Items command is being executed from another administrator's workstation. The workstation will not be available for other commands until it has finished deleting the items.

Disk Full

You tried to copy items to the workstation, using the Copy Items or Copy Hard Disk command, and it doesn't have enough free disk space for the new items. To determine how much free disk space is available on the workstation, create a System Information Report. If you want to delete items from the workstation, you can create a Software Search Report and delete any unnecessary items. You can also choose Control from the Interact menu, then delete items from the workstation's hard disk.

File transfer error

An error prevented you from copying items to this workstation. Restart the workstation and try the command again. If this problem continues, use the Disk First Aid application (available on the Disk Tools disk or the system software CD-ROM that came with your computer) to check the workstation's hard disk.

Generating Report

This message appears when Network Assistant is creating a report that includes the workstation. If this message is dimmed, the report is being created from another administrator's workstation. The workstation will not be available for other commands until the report is complete.

Incompatible hardware

You tried to copy system software to a workstation that cannot support this software. You can copy the System Folder from a 680XX workstation only to other 680XX workstations. You can copy the System Folder from a Power Macintosh only to other Power Macintosh computers.

Incompatible printer

You tried to update printer settings on a workstation that has printing software different from that on your workstation. You can update the printer settings only on workstations that have the same printing software as your workstation. For example, if your workstation has QuickDraw GX installed, the other workstation must have QuickDraw GX installed.

Item exists

You tried to copy an item to a location on the workstation that has an item with the same name. After you cancel the copy command, this message indicates which workstations already have the item. Create a Software Search Report to find out more information about the item. You can then delete or replace it.

Item not found

You tried to open or delete an item that could not be found on the workstation. If you want to open the item on the workstation, choose Copy Items from the Manage menu to copy the item to the workstation.

Item in use

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You tried to delete or replace an item on the workstation when the item is open or in use by an application. Ask the user to close the item or quit the application, or choose Quit Applications from the Manage menu to quit the application. You can also choose Control from the Interact menu, then close the item or quit the application. After you have closed the item or quit the application, try the command again. If the command continues to fail, try restarting the workstation.

Locked Screen

This message appears when a workstation's screen is locked using Network Assistant. Choose Lock Screen to unlock the screen. If the message is dimmed, the screen was locked from another administrator's workstation.

Modal dialog on screen

A dialog box appears on the workstation's screen and must be closed before the command can be performed on the workstation. Ask the user to close the dialog box. You can also choose Control from the Interact menu, then close the dialog box. Once the dialog box is closed, try the command again.

Monitor setting invalid

You tried to change the monitor settings for a workstation (using the Change System Settings command) to a number of colors that is not supported by that workstation.

Network Assistant open

Certain commands, such as Restart, Control, and Share Screen, cannot be executed on a workstation where Network Assistant is open. Ask the user to quit Network Assistant.

Not enough memory

There is not enough free random-access memory (RAM) on the workstation to execute the last command. Many of the commands you can perform on another workstation using Network Assistant require some memory on the other workstation. For example, sharing a screen can require several hundred kilobytes of free memory. To free memory on the workstation, ask the user to quit all open applications, or choose Quit Applications from the Manage menu to quit the applications. You may be able to choose Control from the Interact menu, then quit open applications. After you have quit the applications, try the command again.

Old Assistant software

This message appears when a workstation has a version of the Network Assistant workstation software that is older than the version of Network Assistant you are using. You must install the new version of the workstation software on the workstation before you can administer it.

Rebuilding Desktop

This message appears when the workstation's desktop database is being rebuilt using Network Assistant. If the message is dimmed, the Rebuild Desktop command was executed from another administrator's workstation. The workstation will not be available for other commands until rebuilding the desktop database is finished.

Screen: name

This message appears when the screen of workstation name is being displayed on this workstation's screen. Choose Share Screen to stop sharing the screen on the workstation. If the message is dimmed, the Share Screen command was executed from another administrator's workstation.

Screen sharing active

Certain Network Assistant commands cannot be executed on a workstation that is currently using screen sharing. Before you can use this command, you must choose Share Screen from the Interact menu to stop screen sharing on the workstation.

Slow network connection

Your network connection does not support screen sharing, controlling, or observing. To use these features of Network Assistant, the workstations must be connected to Ethernet or another network of similar performance.

Sound hardware in use

You tried to talk to a workstation where an application is recording a sound using the computer's sound input hardware. Ask the user to stop recording sound on the workstation, then choose Talk from the Interact menu again.

Talk not supported

You tried to talk to a workstation that does not have a built-in microphone or does not allow you to play a sound while it is recording a sound. You can still use the announce feature of Network Assistant with the workstation.

Unable to delete item

The command to delete an item failed for an unknown reason. You may be able to choose Control from the Interact menu, then delete the item. If this fails, use the Disk First Aid application (available on the Disk Tools disk or the system software CD-ROM that came with your computer) to check the workstation's hard disk for problems.

Unavailable

This message appears when Network Assistant is unable to communicate with a workstation; for example, if the workstation is turned off. The message also appears in these cases:

- if the Network Assistant software has been removed from the workstation
- if there is a problem with the workstation's network connection

- if the workstation has moved to a different zone on the network
- if the workstation's Macintosh name has been changed

To fix these problems, perform the following procedures:

- Open Network Assistant Security on the workstation to determine whether the Network Assistant software is installed correctly. If the software is not installed correctly, a message appears when you open the program telling you that there is a problem.
- Open the Chooser on the workstation to see if the workstation is connected to the network and to verify that the workstation is in the zone it was in when you added it to the workstation list. If the workstation is in a different zone, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list then add it to the list again.
- Open the Sharing Setup control panel on the workstation to verify that the Macintosh name has not changed since you added it to the workstation list. If the workstation's Macintosh name has changed, choose Workstations from the Setup menu and use the Workstations dialog box to remove the workstation from the list, then add it to the list again. If you cannot identify the problem or the workstation continues to be unavailable, try restarting the workstation.

Article Change History:

01 Aug 1996 - Updated for search ability.

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Tech Info Library Article Number:20194



Tech Info Library

Apple Network Administrator Toolkit: System Requirements (8/96)

Revised: 8/1/96
Security: Everyone

Apple Network Administrator Toolkit: System Requirements (8/96)

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Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

This article describes the system requirements for the Apple Network Administrator Toolkit (ANAT).

DISCUSSION -----

System requirements
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The Network Administrator Toolkit requires the following hardware, system software, and peripheral devices.

Servers

- The At Ease for Workgroups server software requires a Mac OS based computer with AppleShare file server software (version 3.0 or later) installed on it.

IMPORTANT: At Ease for Workgroups 4.0 requires an AppleShare file server; you cannot use personal file sharing instead.

- The Network Assistant software can be installed on any Mac OS based computer used as a server, including At Ease for Workgroups servers, AppleShare file servers, or FirstClass servers.

IMPORTANT: You cannot use Network Assistant on a Macintosh Plus computer.

- The User and Group Manager server software requires an AppleShare file server (version 3.0 or later) or FirstClass server (version 2.5 or later).

NOTE: To use User and Group Manager with a FirstClass server, you must set up the server as described in Appendix B, "Setting Up a FirstClass Server", in Part 4 of the manual.

To use the Network Administrator Toolkit software components on a server computer, the computer may need additional random-access memory (RAM).

Network

- An AppleTalk network is required. Ethernet or another network of similar performance is recommended.

Most features of the Network Administrator Toolkit will work with LocalTalk, but the Share Screen, Observe, and Control features of Apple Network Assistant require Ethernet or another network of similar performance.

Administrator workstations

- A Mac OS based computer with a minimum of 8 MB of RAM

If you plan to use more than one Network Administrator Toolkit application at a time, the computer may need additional RAM.

IMPORTANT: You cannot use Network Assistant on a Macintosh Plus computer.

- Macintosh system software version 7.1 or later

To use the drag-and-drop feature of Network Assistant to copy files from the Finder to other workstations, you need system software version 7.1.2 or later.

- A monitor with a minimum resolution of 640 by 480
- Desktop printer software (optional)

NOTE: You need this software to use the At Ease printer page quota feature.

Depending on the version of the system software installed on the workstation, the Network Administrator Toolkit software may require additional system software. The Installer will install this software automatically if necessary.

User workstations

- A Mac OS based computer with a minimum of 4 MB of RAM

IMPORTANT: You cannot use Network Assistant on a Macintosh Plus computer.

- Macintosh system software version 7.1 or later
- Desktop printer software (optional)

NOTE: You need this software to use the At Ease printer page quota feature.

- If using At Ease or other file services, the AppleShare workstation software, which is normally installed with your system software.

Depending on the version of the system software installed on the user workstation, the Network Administrator Toolkit software may require additional system software. The Installer will install this software automatically if necessary.

Article Change History:

01 Aug 1996 - Updated for search ability.

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Tech Info Library Article Number:20195



Tech Info Library

Network Assistant: Workstation Status Unavailable (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Workstation Status Unavailable (8/96)

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Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

I have a computer lab administered by the Apple Network Assistant Toolkit (ANAT). At times, Network Assistant will report a workstation's status as "unavailable." When I check the workstation, the screen saver is activated. Is there any relationship? Under what conditions can a workstation become unavailable?

DISCUSSION -----

Every 30 seconds, the Macintosh running the Network Assistant application will poll the network to verify the availability of workstations configured under Network Assistant. Any workstations that fail to answer this "are you there" request will be marked unavailable. As the request is continually delivered, correcting for the workstation's inability to respond will automatically make it available again after a subsequent status request is answered.

Typically, failure to answer these status requests can be attributed to common network connectivity issues: a break in the cabling or connections, a frozen or powered-down CPU, a bad network card or transceiver, and so forth.

As in the case of your screen saver, it is possible (though uncommon) that an application may delay, prohibit, or otherwise interfere with other background processes, such as the process that allows the workstation to respond to this status request. Some applications preempt these background processes in order to allow the application to perform optimally for the user, though in such cases they will USUALLY provide user-definable options to "allow background processes" or "monitor system activity," and the like. Check with the manufacturer of your software to confirm this possibility. Finally, it could certainly also be the case that your screen saver allows background processes, but is simply in outright conflict with the system or network software.

Article Change History:

01 Aug 1996 - Updated for search ability.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20196



Tech Info Library

Network Assistant: Monty Python's Pythonizer Screen Saver (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant: Monty Python's Pythonizer Screen Saver (8/96)

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Article Created: 23 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

The Network Assistant, part of the Apple Network Administrator Toolkit (ANAT), seems to have a problem with Monty Python's Pythonizer Screen Saver. If a workstation is setup to be administered by Network Assistant, the workstation's status will show as 'Unavailable' when the screen saver is activated.

DISCUSSION -----

Every 30 seconds, the Macintosh running the Network Assistant application will poll the network to verify the availability of workstations configured under Network Assistant. Any workstations that fail to answer this "are you there" request will be marked unavailable. As the request is continually delivered, correcting for the workstation's inability to respond will automatically make it available again after a subsequent status request is answered.

It is possible (though uncommon) that an application may delay, prohibit, or otherwise interfere with other background processes, such as the process that allows the workstation to respond to this status request. Some applications preempt these background processes in order to allow the application to perform optimally for the user, though in such cases they will USUALLY provide user-definable options to "allow background processes" or "monitor system activity," and the like. Check with the manufacturer of your software to confirm this possibility. Finally, it could certainly also be the case that the software allows background processes, but is simply conflicts with the Network Assistant.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

01 Aug 1996 - Hpdated for search ability.

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Tech Info Library Article Number:20197



Tech Info Library

Multiprocessing Software: Read Me (8/96)

Revised: 8/2/96
Security: Everyone

Multiprocessing Software: Read Me (8/96)

Article Created: 23 July 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

This article contains the ReadMe file for the Multiprocessing Software included with the Power Macintosh 9500/180 MP.

DISCUSSION -----

Important Information About the Multiprocessing Software

Contents

- Introduction
- Installing Multiprocessing Software
- Turn off virtual memory and do not install RAM Doubler
- Turn off hard disk sleep
- Important Information About Document Auto-Save

Introduction

This document provides information about the multiprocessing software that is included with your multiprocessor Power Macintosh computer, and how to configure your computer properly to take advantage of multiprocessor performance.

Installing Multiprocessing Software

Your multiprocessor Power Macintosh computer comes with Apple Multiprocessing software already installed, but doing a "clean" installation of system software will remove the multiprocessing software, and may also turn on virtual memory. (See the "Troubleshooting" chapter of your Power Macintosh User's Manual for more information about clean installation of system software.)

After doing a clean installation of system software, be sure to reinstall the multiprocessing software on this disk. Also, follow the instructions in the next section to turn off virtual memory if necessary. Otherwise, your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To reinstall the multiprocessing software, double-click the Installer icon on the disk, and follow the instructions on the screen.

Turn off virtual memory and do not install RAM Doubler

Turn off virtual memory in the Memory control panel, and do not install Connectix RAM Doubler software. If virtual memory is turned on or RAM Doubler is installed, then your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To turn off virtual memory, open the Memory control panel and in the Virtual Memory section, click the Off button. Then restart your computer. For more detailed information about virtual memory, see the "Memory" topic area in Macintosh Guide, available in the Guide menu.

Turn off hard disk sleep

Make sure that the hard disk sleep interval is set to "Never" in the Energy Saver control panel. Otherwise, software applications designed to work with your multiprocessor Power Macintosh may not work properly.

To set your hard disk sleep interval, do the following:

1. Open the Energy Saver control panel.
2. If necessary, click Show Details to make the additional options available.
3. Drag the top and bottom sliders as shown below.

If you wish, you can set a display sleep interval by dragging the middle slider. Display sleep works properly with multiprocessor-compatible software applications.

Important Information About Document Auto-Save

The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active, and choose the Energy Saving topic area.

Article Change History:

02 Aug 1996 - Changed distribution status.

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Tech Info Library

HyperCard 2.3.5 Update: Read Me (7/96)

Revised: 7/24/96
Security: Everyone

HyperCard 2.3.5 Update: Read Me (7/96)

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Article Created: 24 July 1996

TOPIC -----

This article contains the ReadMe file for the HyperCard 2.3.5 Update Installer.

DISCUSSION -----

Overview

=====

This program updates your copy of HyperCard 2.3 and the StackToApp stack translator to version 2.3.5 and installs updated versions of four HyperCard stacks. From time to time, Apple produces maintenance releases of software to add minor functionality, fix defects or respond to customer requests. Our goal with this updater is to make it as convenient as possible for you to obtain the enhanced functionality in HyperCard 2.3.5.

This document tells you how to install the HyperCard 2.3.5 update to HyperCard 2.3, and describes what benefits it offers. Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with HyperCard 2.3.5. We recommend that you print a copy for reference.

This updater will NOT work on versions 2.2 or earlier of HyperCard. It will also not work with the HyperCard Player application. If you need to upgrade your copy of HyperCard call (800) 950-2442 for the Apple Reseller nearest you. To order HyperCard directly from APDA, if you are in the United States, call (800) 282-2732.

It is recommend that you update to system software version 7.5.3 or later in order take advantage of improvements to the latest versions of PlainTalk, the Sound Manager, and Macintosh Easy Open.

It is recommended that you make a backup copy of your HyperCard folder before installing this update.

..TIL20202-HyperCard_2-3-5_Update-Read_Me_7-96_(TA35821).pdf

You'll need enough room for both the original application and the new version (approximately 2.6 MB of disk space for both).

To install the HyperCard 2.3.5 update follow these steps:

Easy Install

=====

- * Double-click on the "Install HC 2.3.5 Update" application to open it.

- * Make sure that "Easy Install" is selected in the pop-up menu in the upper left-hand corner of the window.

- * Select the folder where HyperCard 2.3 resides using a button labeled "Select Folder" or by choosing "Select Folder" in a pop-up menu that appears toward the bottom of the window (this will be the case if you have more than one disk mounted). When the folder containing HyperCard 2.3 is highlighted in the standard file dialog, click the "Select" button to select it.

- * Click the "Install" button to install the new software and perform the update of your HyperCard application.

- * During the installation, you will be asked if you wish to replace copies of the Power Tools and Readymade Buttons stacks if they are present. If you have made changes to these stacks that you'd like to preserve, click the "Skip" button to skip replacing each of these. If you wish to replace the stack, click the "Replace" button. If you wish to replace both of these stacks, click the "Replace All" button in the dialog that appears. You can install any of these stacks later using the Custom Install feature of the Installer (see below).

- * After the installation has completed you will be asked if you wish to quit the installer or continue. If you wish to install the update into any other folders containing HyperCard 2.3, click "Continue."

- * After the installation completes, you will now have version 2.3.5 of the StackToApp translator, 2.3.5 versions of the Audio Help, Color Tools, Power Tools, and Readymade Buttons stacks, a Read Me document, HyperCard updated to version 2.3.5, your old version of HyperCard renamed HyperCard.old, and an application for updating other copies of the HyperCard 2.3 application to version 2.3.5. Please see the instructions below for using this updater application.

Note: If the copy of HyperCard in the folder you selected is not version 2.3, you will get an error message at the end of the installation indicating that an invalid file was selected for updating.

Custom Install

=====

- * Double-click on the "Install HC 2.3.5 Update" application to open it if necessary.

- * Make sure that "Custom Install" is selected in the pop-up menu that appears in the upper left-hand corner of the window.

..TIL20202-HyperCard_2-3-5_Update-Read_Me_7-96_(TA35821).pdf

* Select the folder where HyperCard resides using a button labeled "Select Folder" or by choosing "Select Folder" in a pop-up menu (this is the case if you have more than one disk mounted). When the folder containing HyperCard appears in the standard file dialog, click the "Select" button to select it.

* Select the software you wish to install by clicking the checkbox next to its name. You can click the triangle next to the HyperCard Stacks items to see more choices.

* Click the "Install" button to install the new software into the folder you selected.

How to use the HyperCard 2.3.5 Updater Application

=====

* Double-click on the "HyperCard 2.3.5 Updater" application to open it.

* You will be shown a Read Me document which you may print or save. After you've read the Read Me document. Click the "Continue" button.

* The updater will search for copies of HyperCard 2.3 on any mounted disk to update.

* Select a copy of HyperCard.

* Click the "Update" button.

* You may continue updating as many copies of HyperCard 2.3 that are present, as you wish.

Note: Any copies of the 2.3 version of the HyperCard Player that are present will be shown. The HyperCard Player cannot be updated to version 2.3.5. If you'd like to obtain a copy of the 2.3.5 version of the HyperCard Player from an Apple FTP site you may use the following Internet address:

ftp://ftp.info.apple.com/Apple_Support_Area/Apple.Software.Updates/
US/Macintosh/Utilities/HyperCard_Player_2.3.5.sea.hqx

HyperCard 2.3.5 Update Release Notes

=====

Changes in HyperCard

- HyperCard's performance on machines with large numbers of fonts installed has been vastly improved, particularly on Macintosh computers with PowerPC microprocessors.

- A problem that caused the text of fields to be printed at the resolution of the screen instead of the resolution of the printer has been fixed.

- Problems that caused selections within list fields to be displayed incorrectly have been fixed.

..TIL20202-HyperCard_2-3-5_Update-Read_Me_7-96_(TA35821).pdf

- The "Link To" button in the Button Info dialog once again appears on all systems.

Changes in StackToApp

- A problem that caused standalones to be created with a corrupted version of the AddColor external has been fixed.

Changes in the Color Tools Stack

- A problem was fixed that prevented stacks colorized with Color Tools 2.3 on a Macintosh computer with a PowerPC microprocessor from being used on a different Macintosh computer with a PowerPC microprocessor.
- The Color Tools now work more reliably on Macintosh systems that have the Japanese Language Kit or the Chinese Language Kit installed.
- The "Redraw Screen" command now works properly with stacks that have been colorized with other versions of the Color Tools.
- The "Compact Color Database" command now works properly with colorized cards and backgrounds whose IDs are greater than 32767.

Changes in the Audio Help Stack

The following changes were made to the Audio Palette to make it work properly on newer Macintosh models, including the Power Macintosh 7200, 7500, 8500, and 9500.

- The Audio Palette now records at the following qualities: Good (22 kHz, 6-to-1 compression), Better (22 kHz, 3-to-1 compression), and Best (22 kHz, no compression). This is a change from older versions of the Audio Palette, which recorded at Good and Best qualities and had a different idea of Good quality (11 kHz, no compression).
- There is now a one-to-one correspondence between compression and quality settings. "No compression" is synonymous with "Best quality," "3-to-1 compression" with "Better quality," and "6-to-1 compression" with "Good quality."
- You can still open and edit sounds recorded with the old Audio Palette at its "Good" quality. When you do this, the new Audio Palette displays the quality as "Other".
- From a script, you can still set the "speed" property of the Audio Palette to "11k". This will allow you to use the old "Good" quality. When you do this, the new Audio Palette displays the quality as "Other".
- The Audio Palette has a new property, "quality". From a script, you can set this property to "Good", "Better", or "Best".
- The documentation in the Audio Help stack has been updated to reflect the changes in the Audio Palette.

Changes in the Power Tools Stack

- The Super Grouper tool now works more reliably with a wider range of stacks.
- Starting with HyperCard 2.3, the option that allows the Picture XCMD to display a picture from the clipboard requires that the word "clipboard" be quoted, as follows:

Picture "From The Clipboard", "clipboard"

The documentation in the Power Tools stack has been updated to reflect this change.

Changes in the Readymade Buttons Stack

- The "Show Clipboard Picture" button on the card that demonstrates how to hide and show pictures now works properly.

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Tech Info Library Article Number:20202



Tech Info Library

Speech Recognition Extension 1.5: Read Me (1/97)

Revised: 1/20/97
Security: Everyone

Speech Recognition Extension 1.5: Read Me (1/97)

=====

Article Created: 24 July 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article contains the ReadMe file for version 1.5 of the Speech Recognition extension.

DISCUSSION -----

Version 1.5 of the Speech Recognition extension fixes a few bugs that prevented version 1.4.1 of Apple's English Speech Recognition software from running on some PowerPC-based Performas and PowerBooks*. (see "Bugs fixed..." below.) To install the latest configuration of Apple's speech recognition software on your computer, follow these steps:

1. Install version 1.4.1 of "English Speech Recognition."

This installer installs version 1.4.1 of the Speech Recognition extension as well as the utility 'Speakable Items' which allows you to open any file in the Speakable Items folder (which is installed in your Apple Menu Items folder) just by speaking its name.

2. Replace version 1.4.1 of the Speech Recognition extension with version 1.5 of the extension.

Replace version 1.4.1 of the Speech Recognition extension with version 1.5. First turn Speakable Items off and close the Speech control panel if it is open. Then simply drag version 1.5 of the Speech Recognition extension onto your system folder. Reply "OK" to the alert that asks you if you're sure you want to replace the existing Speech Recognition extension file with the newer one. (If the system will not let you replace the existing Speech Recognition extension with the new one, try restarting the computer with extensions off -- by holding the Shift key down during startup -- and then replace the extension.) Finally, restart your computer. That's it!

We will soon release (at <http://speech.apple.com/>) version 1.5 of the "English Speech Recognition" installer, which will install the new extension along with the rest of the English Speech Recognition software in one step, rather than these two steps.

If you do not have 'English Text-To-Speech (TTS)' installed (5225K), you may wish to install it first. English TTS allows your Macintosh to synthesize speech. You can verify that English TTS is already installed by finding and opening the Speech control panel, then selecting 'Voice' from the Options pop-up menu. If you are able to choose a voice, the TTS software is already installed. If English TTS is not installed, we recommend you install it first since it is used by the English Speech Recognition software.

Bugs fixed by Speech Recognition version 1.5

=====

- Now works on PowerPC based PowerBooks* when used with the built-in microphone.
- Now works on all Performa 52xx, 53xx, 62xx and 63xx models without muting sound output.
- ...and many other minor fixes designed to let other developers create applications that use Apple's speech recognition technology.

* The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

Article Change History:

20 Jan 1997 - Added details about PPC-based PowerBook computers.

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Tech Info Library Article Number:20203



Tech Info Library

Language Kits: What Files Are Installed? (7/96)

Revised: 7/25/96
Security: Everyone

Language Kits: What Files Are Installed? (7/96)

=====

Article Created: 25 July 1996

TOPIC -----

When installing one of the Apple Language Kits what files are installed into the System Folder?

DISCUSSION -----

A listing of the files installed into the System Folder during installation of each of Apple's Language Kits is available below:

Arabic Language Kit
=====

Control Panels

Arabic Setting

Extensions

- * Arabic Support
- * Language Kit Extension
- * Roman Support
- * Worldscript 1

Fonts

- * AB AlBayan
- * AB Baghdad
- * AB Cairo
- * AB Geeza
- * AB Kufi
- * AB Nadeem
- * ABThuluth
- * AlbayanBol

- * AlbayanPl
- * Amir
- * Asfha
- * Baghd
- * Geeza
- * Kamra
- * KamraBol
- * KufiStaGK
- * Masha
- * Nadee
- * NadeeP
- * NadeePBol
- * PS Amir
- * PS Asfahan
- * PS Kamran
- * PS Mashad
- * PS NadeemFarsi
- * PS Tehran
- * ThuluBol
- * ThuluLig

Chinese Language Kit (Simplified installation)
=====

System Folder

- * Beijing 16L1
- * Beijing 16L2
- * Simplified Chinese Fonts
- * Song16,
- * Song24

Extensions

- * Far East addition
- * InputBackSupport
- * Language Kit Extension
- * Roman Support
- * Simplified Chinese Input Method
- * Simplified Chinese Support
- * WorldScript II
- * An application that uses Chinese characters, which appear as garbage characters

Fonts

- * Beijing
- * Song

Cyrillic Language Kit

=====

Extensions

- * Cyrillic Support
- * Language Kit Extension
- * Worldscript 1

Fonts

- * APCCouBol
- * APCCouBolObl
- * APCCouReg
- * BastiBol
- * BastiBolObl
- * BastiObl
- * BastiPl
- * CY APC Courier
- * CY Bastion
- * CY Latinski
- * CY Pryamoy
- * CY Pryamoy Prop
- * CY Sistemny
- * LatinBol
- * LatinBolIta
- * LatinBoo
- * LatinIta

Hebrew Language Kit

=====

Control Panels

- * Hebrew Setting

Extensions

- * Hebrew Support
- * Language Kit Extension
- * Roman Support
- * Worldscript 1

Fonts

- * HB Arial
- * HB Corsiva
- * HB Eilat
- * HB Hermon
- * HB New Peninim
- * HB Raanana

Japanese Language Kit (v 1.2)

=====

System Folder

- * HonMincho GX
- * Kanji Fonts
- * MaruGothic GX
- * Osaka GX
- * Osaka
- * Tohaba GX

Extensions

- * Font Extension
- * Font Extension 3
- * Inline Filter
- * Inline Support
- * InputBackSupport
- * Japanese Support
- * Language Kit Extension
- * Roman Support
- * WorldScript II
- * Seven (7) other extensions that use Japanese characters, so the names appear as garbage characters

Fonts

- * HonMincho
- * MaruGothic
- * Osaka
- * Osaka Tohaba

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Tech Info Library Article Number:20204



Tech Info Library

Arabic Language Kit: Character Encoding Type (7/96)

Revised: 7/25/96
Security: Everyone

Arabic Language Kit: Character Encoding Type (7/96)

=====

Article Created: 25 July 1996

TOPIC -----

I am using the Arabic Language Kit (ALK), and I am trying to import Arabic text from a non-Macintosh computer. What type of character encoding does ALK use?

DISCUSSION -----

The character encoding table used in the Arabic Language Kit is shown on page A-21 of the Installation and User's Manual for the ALK. This encoding method is essentially ISO 8859-6 plus a set of punctuation for Arabic and Arabic digits. OSMO 449 is based on ISO 8859-6.

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Tech Info Library Article Number:20205



Tech Info Library

Performa 5200 & 6200: Upgrade for 14.4 Internal Modem ? (9/96)

Revised: 9/24/96
Security: Everyone

Performa 5200 & 6200: Upgrade for 14.4 Internal Modem ? (9/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 24 September 1996

TOPIC -----

Is it possible to upgrade the Global Village Gold IIv 14.4 Kbps internal modem, which is included with certain Macintosh Performa 5200 and 6200 series computers, to 28.8 Kbps?

DISCUSSION -----

Apple does not offer an upgrade for your modem. However, Global Village has recently released an upgrade path for your modem. This upgraded internal modem would replace the modem already installed in your computer.

Contact Global Village Communications directly (800-469-3764) to order this modem or to obtain additional information, including compatibility with specific computer systems and pricing.

Note that support for this modem, once installed on a Performa computer, will be provided by Global Village directly. Apple only supports Global Village modems which are bundled with specific systems.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
24 Sep 1996 - Clarified the modem name.

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Tech Info Library Article Number:20206



Tech Info Library

OpenDoc: Latest Version & Release History (7/96)

Revised: 7/25/96
Security: Everyone

OpenDoc: Latest Version & Release History (7/96)

Article Created: 25 July 1996

TOPIC -----

What is the latest version and release history of OpenDoc?

DISCUSSION -----

The latest release of OpenDoc is 1.0.4, also known as Developer Release 5 (DR5). This is the fifth release of OpenDoc and new releases have been coming about every four months. The first three releases were primarily intended for developers, and of little interest to the general public. Developer Release 4 corresponded to the first version 1.0 public release.

Here is a summary of dates of the DR releases

OpenDoc with SOM (DR1) - December, 1994

OpenDoc with SOM (DR2) - April, 1995

OpenDoc (DR3) - August, 1995

OpenDoc 1.0 (DR4) - December, 1995

Highlights: CFM-68K and CyberDog A3c1, bug fixes & performance optimizations, consolidation of CFM extension library files from 13 down to 3.

OpenDoc 1.0.4 (DR5) - April, 1996

Highlights: OpenDoc source code, ODF Release 1, third party components, Apple "Kickstart Components"

At the World Wide Developers Conference in May, 1996, CyberDog version 1.0 became available which requires OpenDoc 1.0.4.

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Tech Info Library Article Number:20207



Tech Info Library

Power Macintosh 9500/180MP & 9500/200: Description (8/96)

Revised: 8/5/96
Security: Everyone

Power Macintosh 9500/180MP & 9500/200: Description (8/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 5 August 1996

TOPIC -----

This article contains a description of the Power Macintosh 9500/180MP and 9500/200 computers.

DISCUSSION -----

Apple Power Macintosh 9500/180MP and 9500/200 computers are the top of the line in speed, performance, expandability, and upgradability, which is tremendous news for publishers, engineers, and multimedia professionals.

The Power Macintosh 9500/180MP computer represents a new arena for Apple; a multiprocessor system with two 180-megahertz PowerPC 604e chips, which provides simple, but powerful performance improvements for applications that take advantage of its multiprocessing capabilities. And the Power Macintosh 9500/200 is simply our fastest Apple Macintosh computer, featuring a 200-megahertz PowerPC 604e processor. With six expansion slots that support the industry-standard, high-performance Peripheral Component Interconnect (PCI) architecture, these two systems are also the most customizable, expandable Macintosh computers in history. PCI technology offers low-cost cards for such uses as videoconferencing, video production, and high-speed networking.

Power Macintosh 9500/180MP and 9500/200 systems feature an 8x-speed CD-ROM drive for easy, fast access to CD-ROM-based materials. They run all applications written for 680x0-based Macintosh computers, as well as applications for the Mac OS that have been accelerated to take advantage of PowerPC processor technology. In addition, a number of noted developers of graphics, video, and scientific/technical applications for the Mac OS are revamping their products specifically to take advantage of the multiprocessing capabilities of the Power Macintosh 9500/180MP. These capabilities can provide significant performance improvements in processor-intensive applications such as video-editing and 3D modeling. And if you want to run MS-DOS and Windows applications, you can install a PC Compatibility Card from Apple in one of the

system's many PCI slots--and switch instantly between the computing environments.

On the communications front, these computers support both 10BASE-T and AAUI Ethernet connection. And they include all of the software you need for easy Internet access.

So whether you're involved in publishing, engineering, or multimedia--or simply want the most powerful, expandable Macintosh computer ever--one of the Power Macintosh 9500 systems is sure to meet your needs.

Features

=====

High performance

- * One 200-MHz PowerPC 604e processor or two 180-MHz PowerPC 604e processors
- * Built-in floating-point processor and 64K cache
- * 512K level 2 cache

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 8x-speed CD-ROM drive
- * 16-bit stereo audio input and output
- * Support for speech-recognition and text-to-speech capabilities

Expandability

- * Six industry-standard PCI expansion slots
- * Dual-channel SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Two internal expansion bays for additional hard disk drives

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide
- * Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

Power Macintosh 9500/180MP

Order No. M5399LL/A

Power Macintosh 9500/180MP computer with 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 9500/200

Order No. M5397LL/A

Power Macintosh 9500/200 computer with 32MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 9500/200

Order No. M5389LL/A

Power Macintosh 9500/200 computer same as above (order no. M5397LL/A) except with 16 MB of RAM.

Optional Enhancements

* PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

* PC Compatibility Card with 586 100-MHz processor

Order No. M4091LL/A

* Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

This article was published in the Information Alley on 5 August 1996.

Article Change History:

05 Aug 1996 - Added alley info.

02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20208



Tech Info Library

Power Macintosh 9500/180MP and 9500/200: Specifications (9/96)

Revised: 9/11/96
Security: Everyone

Power Macintosh 9500/180MP and 9500/200: Specifications (9/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 11 August 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 9500/180MP and 9500/200.

DISCUSSION -----

Upgradable microprocessor

- * One 200-MHz PowerPC 604e processor or two 180-MHz PowerPC 604e processors
- * Integrated floating-point unit and 64K cache
- * High-speed system bus (up to 50 MHz)
- * Upgradability (up to 250 MHz)

Memory

- * 16 MB or 32 MB of RAM, expandable to 768 MB via 12 DIMM sockets
- * 4 MB of ROM
- * 512K level 2 cache

Disk drives

- * Internal 2GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4 MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 8x-speed CD-ROM drive
- * Two expansion bays for additional 3.5-inch hard disks

Interfaces

- * Six PCI expansion slots compatible with PCI 2.0-compliant cards

- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10MB/s)
- * External SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
- * 16-bit stereo sound input and output ports
- * DB-15 connector for monitor (on accelerated graphics card)

Graphics support

=====

(configured through accelerated graphics card)

- * 2 MB of VRAM, expandable to 4 MB
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony

=====

- * 14.4-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Supports ADB keyboards with numeric keypads
- * Comes with an ADB Mouse II

Electrical requirements

=====

- * Line voltage: 100 to 125 and 200 to 240 V AC, RMS single phase, automatically configured
- * Frequency: 50 to 60 Hz, single phase
- * Power: 225 W maximum, not including display

ADB power requirements

=====

- * Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- * Height: 16.9 in. (43.0 cm)
- * Width: 7.7 in. (19.6 cm)

- * Depth: 15.75 in. (40.0 cm)
- * Weight: 28 lb. (12.7 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 11 Sep 1996 - Updated information.
- 02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20209



Tech Info Library

AppleCD 1200i CD-ROM Drive: Specifications (9/96)

Revised: 11/14/96
Security: Everyone

AppleCD 1200i CD-ROM Drive: Specifications (9/96)

=====
Article Created: 25 July 1996
Article Reviewed/Updated: 20 September 1996

TOPIC -----

This article contains the specifications for the AppleCD 1200i, an internal 8x-speed CD-ROM drive included with some Macintosh computers.

DISCUSSION -----

Disc diameter
=====
120 millimeters (5.25 inches) and 80 mm

Scanning velocity
=====
1.2-1.4 meters per second (normal speed)

Rotation speed (varies over radius)
=====
Normal speed

approximately 530 to 230 rpm

Double speed

approximately 1060 to 460 rpm

Eight-times speed

approximately 4240 to 1840 rpm

Latency (average) (varies over radius)
=====

Normal speed

approximately 55 to 130 milliseconds (ms)

Double speed

approximately 27.5 to 65 ms

Eight-times speed

approximately 6.88 to 16.25 ms

Blocks per rotation

=====

approximately 8.4 to 19.5 variable

Average access time (typical)

=====

Normal speed

380 ms

Double speed

270 ms

Eight-times speed

160 ms

Data

====

Data capacity

* 656 MB, Mode 1

* 748 MB, Mode 2

Number of blocks per disc

336,150

Data per block

* 2048 bytes, Mode 1

* 2336 bytes, Mode 2

Address description

Minutes, seconds, blocks

Audio capacity

=====

Playing time

74 minutes, 42 seconds

Modes supported

=====

Audio CD

CD-ROM

Modes 1 and 2

CD-ROM XA

Mode 2, Forms 1 and 2

CD-I

Mode 2, Forms 1 and 2

Photo CD

Single session and multisession

Video CD

Data streaming and transfer rates

=====

Blocks per second

* Normal speed 75

* Double speed 150

* Eight-times speed 600

User kilobytes (K) per second

* Normal speed

- 150K, Mode 1

- 171.1K, Mode 2

* Double speed

- 300K, Mode 1

- 342.2K, Mode 2

* Eight-times speed

- 1200K, Mode 1

- 1368.8K, Mode 2

SCSI bus burst rate (typical)

* Asynchronous: 5.0 MB per second

* Synchronous: 5.0 MB per second

Power consumption (typical)

=====

* +5 V DC: 350 milliamperes (mA)

* +12 V DC: 300 mA

Laser

=====

Type

Semiconductor GaAlAs laser

Wavelength

770 to 795 nanometers

Output power

0.2 to 0.6 milliwatts

Beam divergence

55 deg.

Article Change History:

20 Sep 1996 - Added product name and keyword.

02 Aug 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20210



Tech Info Library

AppleCD 1200i CD-ROM Drive: Specifications (9/96)

Revised: 11/15/96
Security: Everyone

AppleCD 1200i CD-ROM Drive: Specifications (9/96)

=====
Article Created: 25 July 1996
Article Reviewed/Updated: 20 September 1996

TOPIC -----

This article contains the specifications for the AppleCD 1200i, an internal 8x-speed CD-ROM drive included with some Macintosh computers.

DISCUSSION -----

Disc diameter
=====
120 millimeters (5.25 inches) and 80 mm

Scanning velocity
=====
1.2-1.4 meters per second (normal speed)

Rotation speed (varies over radius)
=====
Normal speed

approximately 530 to 230 rpm

Double speed

approximately 1060 to 460 rpm

Eight-times speed

approximately 4240 to 1840 rpm

Latency (average) (varies over radius)
=====

Normal speed

approximately 55 to 130 milliseconds (ms)

Double speed

approximately 27.5 to 65 ms

Eight-times speed

approximately 6.88 to 16.25 ms

Blocks per rotation

=====

approximately 8.4 to 19.5 variable

Average access time (typical)

=====

Normal speed

380 ms

Double speed

270 ms

Eight-times speed

160 ms

Data

====

Data capacity

* 656 MB, Mode 1

* 748 MB, Mode 2

Number of blocks per disc

336,150

Data per block

* 2048 bytes, Mode 1

* 2336 bytes, Mode 2

Address description

Minutes, seconds, blocks

Audio capacity

=====

Playing time

74 minutes, 42 seconds

Modes supported

=====

Audio CD

CD-ROM

Modes 1 and 2

CD-ROM XA

Mode 2, Forms 1 and 2

CD-I

Mode 2, Forms 1 and 2

Photo CD

Single session and multisession

Video CD

Data streaming and transfer rates

=====

Blocks per second

* Normal speed 75

* Double speed 150

* Eight-times speed 600

User kilobytes (K) per second

* Normal speed

- 150K, Mode 1

- 171.1K, Mode 2

* Double speed

- 300K, Mode 1

- 342.2K, Mode 2

* Eight-times speed

- 1200K, Mode 1

- 1368.8K, Mode 2

SCSI bus burst rate (typical)

* Asynchronous: 5.0 MB per second

* Synchronous: 5.0 MB per second

Power consumption (typical)

=====

* +5 V DC: 350 milliamperes (mA)

* +12 V DC: 300 mA

Laser

=====

Type

Semiconductor GaAlAs laser

Wavelength

770 to 795 nanometers

Output power

0.2 to 0.6 milliwatts

Beam divergence

55 deg.

Article Change History:

20 Sep 1996 - Added product name and keyword.

02 Aug 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20210



Tech Info Library

Macintosh Performa 6400: Voltage Settings (8/96)

Revised: 8/5/96
Security: Everyone

Macintosh Performa 6400: Voltage Settings (8/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 5 August 1996

TOPIC -----

What is the purpose of the small switch located on the back of the Macintosh Performa 6400 computer to the left of the power plugs?

DISCUSSION -----

That switch is the voltage switch, which is used to set the voltage level appropriate for the country where you are using the Macintosh Performa 6400 computer. This voltage switch MUST be set correctly to avoid damaging the computer.

The voltage switch can be set to 115 or 230 voltages. Use 115 for voltages between 100 and 130. Set the switch to show 230 for voltages between 200 and 270. Insert a screw driver in the slot to set the switch to the appropriate setting.

IMPORTANT:

Below is a listing of the voltage requirements for some countries. Some countries use two standardized voltages (for example, either 100 or 220). If you are not sure which voltage you have, check with the electricity supply company before plugging in the Performa 6400.

Begin_Table

Country	Single Voltage
-----	-----
Japan	100
Algeria, Indonesia, Lebanon, Libya, Peru, S. Korea, Vietnam	100 or 220
Ecuador, Jamaica, Philipines, Taiwan	110

Bermuda, Canada, Puerto Rico, United States, Venezuela	120
Colombia, Mexico, Saudi Arabia	127
Brazil	127 or 220
Hong Kong	200
India, South Africa	220-250
Israel, Pakistan, Singapore	230
Australia, Kuwait, Malta, New Zealand, Northern Ireland, Papua New Guinea, Oman, Qatar, United Kingdom	240
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland	220-230
Bahrain, Chile, China (People's Republic), Czechoslovakia, Egypt, Greenland, Hungary, Iceland, Iran, Jordan, Liechtenstein, Nepal, Paraguay, Poland, Romania, United Arab Emirates, Russia and the Commonwealth of Independent States, Yemen, Yugoslavia	220

End_Table

This article was published in the Information Alley on 5 August 1996.

Article Change History:

05 Aug 1996 - Added alley information.

02 Aug 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20211



Tech Info Library

Macintosh Performa 6400: Sound FAQ (12/96)

Revised: 1/21/97
Security: Everyone

Macintosh Performa 6400: Sound FAQ (12/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 12 December 1996

TOPIC -----

This article contains frequently asked questions (FAQ) about the sound capabilities of the Macintosh Performa 6400/180 and 6400/200 computers.

Questions Answered in this FAQ:

- =====
- 1) Does the Macintosh Performa 6400 series have 8-bit or 16-bit sound?
 - 2) What is the purpose of the subwoofer on the Macintosh Performa 6400 series?
 - 3) What happens when I turn the subwoofer balance control, which is located on the back of the computer?
 - 4) Why are there two sound output jacks--one in front and one in back?
 - 5) What is SRS Sound?
 - 6) I have headphones plugged into my monitor, but I still hear sound coming out of your computer. Why?
 - 7) I am using the headphones plugged into the front of the computer, but the sound appears distorted. What could be causing this?
 - 8) Why do I not hear any sound emitting from the computer?
 - 9) What is the speaker size and frequency range of the subwoofer?
 - 10) What effect does the subwoofer have on the SRS technology?

DISCUSSION -----

- 1) Question: Does the Macintosh Performa 6400 have 8-bit or 16-bit sound?

Answer: The Macintosh Performa 6400 series has 16-bit stereo sound input and output.

2) Question: What is the purpose of the subwoofer on the Macintosh Performa 6400?

Answer: The subwoofer, which is built into your computer, functions as a full-range, monophonic speaker. However, when you attach external speakers to the sound output port on your computer (or if your monitor has built-in speakers) the subwoofer functions only as a bass speaker, to augment and complement the stereo sound coming from the speakers.

3) What happens when I turn the subwoofer balance control, which is located on the back of the computer?

Answer: If you want to increase or decrease the bass coming from the subwoofer in relation to the sound coming from the external speakers, adjust the subwoofer balance control. The subwoofer balance control only works when external speakers are attached.

4) Question: Why are there two sound output jacks--one in front and one in back?

Answer: The Macintosh Performa 6400 has two sound output jacks, one on the front and one on the back. Both output jacks are connected to the sound amplifier. Inserting a plug into either jack disconnects the internal speakers. The jack on the front is intended for headphones, and the jack on the back is intended for external speakers. The rear jack is muted when headphones are plugged in the front jack.

5) Question: What is SRS Sound?

Answer: SRS (Sound Retrieval System) is proprietary technology from SRS Labs, which Apple has licensed and implemented on the Power Macintosh 5400/120 computer in order to enhance the sound field of the computer.

The useability, compatibility, and performance of the computer is not affected if SRS sound is enabled or disabled. However, enabling SRS yields a more spacious stereo sound from the computer. You can try it both ways to determine which you prefer.

For additional information about SRS, use the search string "SRS" to locate the Tech Info Library article, "Macintosh Computers: What is SRS Sound?"

6) Question: I have headphones plugged into my monitor, but I still hear sound coming out of the computer. Why?

Answer: When you plug headphones into the headphone jack on your monitor, you hear the sound through the headphones but the subwoofer sound also continues to come out of the subwoofer in your computer. To avoid this, plug your headphones into the headphone jack on the front of the computer, not the monitor.

If you want to keep the headphones connected to the monitor, manually turn down the subwoofer. Turn the knob in the subwoofer balance control port all the way to the left to turn off the subwoofer volume. Remember to turn it back up the next time you want to hear the subwoofer.

7) Question: I am using the headphones plugged into the front of the computer, but the sound appears distorted. What could be causing this?

Answer: You may have SRS turned on, which does not work through headphones. To turn it off, open the Monitors & Sound control panel, which can be found in the Apple menu, and click the Sound icon. Then click to remove the check mark next to SRS.

8) Question: Why do I not hear any sound emitting from the computer?

Answer: Turn up the subwoofer balance control on the back of your computer. It may have been turned down too far.

The subwoofer balance control affects the subwoofer volume only in relation to external speakers, if you've attached external speakers or if your monitor has built-in speakers. Otherwise, it has no affect on your computer's overall volume. Adjust your computer's overall volume by using the sound controls on the front of the computer or monitor, by using the volume control sliders in the Monitors & Sound control panel, or by using the volume controls in AppleCD Audio Player (if you're listening to a CD).

9) Question: What is the speaker size and frequency range of the subwoofer?

Answer:

The speaker on the subwoofer is called a "74mm square-frame device", which means it is a 3-inch round speaker. The frequency range is approximately 70 Hz to 10 kHz.

10) Question: What effect does the subwoofer have on the SRS technology?

Answer: The subwoofer has no effect on the SRS technology since SRS does not need a subwoofer to perform. Essentially, the subwoofer makes the resulting sound much fuller. For additional information about SRS, use the search string "SRS" to locate the Tech Info Library article, "Macintosh Computers: What is SRS Sound?"

Article Change History:

12 Dec 1996 - Added additional information about the subwoofer.
02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20213



Tech Info Library

PowerBook 5300: Focus Enhancements Video Card Sound Issue (9/96)

Revised: 9/5/96
Security: Everyone

PowerBook 5300: Focus Enhancements Video Card Sound Issue (9/96)

Article Created: 25 July 1996
Article Reviewed/Updated: 5 September 1996

TOPIC -----

I have a Focus Enhancements MV16 video card installed in my PowerBook 5300 computer, and I have an external monitor connected to the Focus card. Whenever, a sound plays, the system locks up. This started happening after I installed additional memory in my computer. What could be causing this?

DISCUSSION -----

This issue only occurs with the MV16-EN and MV16 Focus Enhancement cards when more than 32 MB of system memory is installed in the PowerBook 5300 series computers and an external monitor is connected. Focus Enhancements has been able to reproduce this issue consistently when memory cards that increase the total memory in the system to over 32 MB are installed along with the Focus MV-16 or MV16-EN card.

Apple Computer, Inc. is in the process of resolving this issue by changing a resistor value on the logic board of the PowerBook. If you are experiencing this issue, contact Apple or an Apple Authorized Service Provider to have your logic board replaced.

In the interim, you can use these workarounds:

- * Reduce the sound level to minimum in the Sound control panel.
- * Temporarily remove the RAM expansion card, reducing the actual RAM to 32 MB or lower when needing to play a sound with an external monitor attached.

Article Change History:
05 Sep 1996 - Updated technical information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20214



Tech Info Library

MacX 1.5: Open Transport and MacTCP Tool (7/96)

Revised: 7/26/96
Security: Everyone

MacX 1.5: Open Transport and MacTCP Tool (7/96)

=====

Article Created: 26 July 1996

TOPIC -----

I am installing MacX 1.5 on a Power Macintosh running Open Transport. When I launch MacX and try to remotely connect to an X system, I get this message, "The remote command 'x' attempted to use connection tool 'MacTCP Tool', which does not exist."

The MacX Read Me file says MacTCP Tool is not needed when using Open Transport. What do I do?

DISCUSSION -----

The MacX Read Me file is not correct. When using Open Transport, MacX does require the MacTCP Tool. You need to perform a MacX custom installation and select the MacTCP Tool.

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Tech Info Library Article Number:20215



Tech Info Library

Power Macintosh 5400: Flashing Mark at Startup (7/96)

Revised: 7/29/96
Security: Everyone

Power Macintosh 5400: Flashing Mark at Startup (7/96)

=====

Article Created: 24 July 1996

TOPIC -----

Sometimes when I attempt to start up my Power Macintosh 5400/120 computer, a flashing question mark appears on the screen. What could be causing this?

DISCUSSION -----

It is likely that you are holding down the button on the mouse while starting up the computer. Holding down the mouse button at startup causes the computer to attempt to eject a floppy disk. However, if you do not have a floppy disk installed, the flashing question mark appears. If you release the mouse button, the startup process will continue normally.

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Tech Info Library Article Number:20216



Tech Info Library

LaserWriter Bridge: How To Find (7/96)

Revised: 7/29/96
Security: Everyone

LaserWriter Bridge: How To Find (7/96)

Article Created: 29 July 1996

TOPIC -----

I have a Macintosh Centris 660AV and a Power Macintosh 8500 sharing a LaserWriter Select 360f with Phone Net. We got an AAUI transceiver for the Centris, some 10Base-T and got the two machines to share files, but we cannot see the LaserWriter in the chooser anymore.

I understand there is an Apple product available (which does not run on PCI Power Macintosh computers) called the LaserWriter Bridge, that will let a LaserWriter be shared on the network even though the two computers are connected via Ethernet. I've been snooping all over, however, I have only able to find AppleShare 4.2.1 updater which contains a LaserWriter Bridge patcher.

Am I missing something, should I be using PrinterShare or something?

DISCUSSION -----

You should use the LaserWriter Bridge which is available as part of the NSI 1.5.1 disk that can be found using the following path on our ftp sites:

US/Macintosh/Network&Communications/Network SW Installer/

You should use this software on the Centris 660AV since, as you correctly pointed out, the LaserWriter Bridge is not compatible with Open Transport.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20218



Tech Info Library

Powerbook 190 & 5300: Why Is Ethernet Not An Option? (7/96)

Revised: 7/29/96
Security: Everyone

Powerbook 190 & 5300: Why Is Ethernet Not An Option? (7/96)

=====

Article Created: 29 July 1996

TOPIC -----

I have a Macintosh Powerbook 5300 series computer. When I open either the Network or AppleTalk control panel, I only have the choice for LocalTalk Built In. I checked the Extensions folder and all Ethernet components appear to be installed. What am I doing wrong? Why is LocalTalk my only choice? Doesn't this computer work with Ethernet?

DISCUSSION -----

When a Macintosh PowerBook 190 or 5300 series computer starts up, it checks for the presence of Ethernet hardware driver software. If it does not find hardware driver software which supports Ethernet (in this case, usually an Ethernet PC Card), the only choice available in the network setting control panels is LocalTalk. Of course, if the PC Card is not in the PC Card slot, Alternate Ethernet is a pop-up menu option, but you cannot connect to Ethernet network without first inserting the card.

When the Ethernet card's driver software is installed you can select Ethernet in either the Network or AppleTalk control panel, depending on whether you are using classic networking or Open Transport, respectively.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20219



Tech Info Library

Japanese Language Kit 1.2:WorldScript Update & Sys 7.5.2 (7/96)

Revised: 7/29/96
Security: Everyone

Japanese Language Kit 1.2:WorldScript Update & Sys 7.5.2 (7/96)

=====

Article Created: 29 July 1996

TOPIC -----

I am using Japanese Language Kit 1.2 on a Power Macintosh 7500. I noticed that the WorldScript Update is in the Apple Extras folder on the system software CD-ROM disc. Do I need to install this update?

DISCUSSION -----

No, you should not install the WorldScript Update (version 1.0) contained in the Apple Extras folder. That update installs older versions of WorldScript software than are installed by the Japanese Language Kit 1.2.

The WorldScript Update v1.0 installs version 7.5.1 of WorldScript I, WorldScript II, and InputBackSupport. The Japanese Language Kit 1.2 installs version 7.5.1 of WorldScript II and version 7.5.2 of InputBackSupport.

If you have installed WorldScript Update 1.0 after installing the Japanese Language Kit 1.2, you should reinstall the Japanese Language Kit 1.2.

Note: System 7.5 Update 2.0, which updates the system to System 7.5.3, includes version 7.5.3 of InputBackSupport. If you install System 7.5 Update 2.0, you should not install WorldScript Update v1.0 on the Power Macintosh 7500 or 9500 computers because it will overwrite the newer InputBackSupport.

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Tech Info Library Article Number:20220



Tech Info Library

PC Compatibility Card: PC CD-ROM Discs Aren't Recognized (12/96)

Revised: 12/9/96
Security: Everyone

PC Compatibility Card: PC CD-ROM Discs Aren't Recognized (12/96)

Article Created: 29 July 1996
Article Reviewed/Updated: 9 December 1996

TOPIC -----

I installed a PC Compatibility card into a Power Macintosh 5400/120 computer. However, when I attempt to use a CD-ROM disc in the PC environment, the CD-ROM drive is not recognized. How can I resolve this?

DISCUSSION -----

If you are running Macintosh System Software 7.5.3 or newer you must have Apple CD-ROM software version 5.1.7 (or newer) and PC Compatibility software version 1.5 installed before following the procedure described in this article.

It is likely that you do not have the driver for the Apple CD-ROM drive installed in the PC environment. This driver is not installed during the default installation of the PC Compatibility Card software.

To verify that the driver is not installed, first switch to the PC environment. At the DOS prompt, type EDIT CONFIG.SYS. The CONFIG.SYS editor appears on the screen showing the loading order for items on the DOS side. If the CD-ROM driver is installed, the last line of the CONFIG.SYS should read "DEVICEHIGH=C:\APPLE\CDROM.SYS/D:CDDRVR".

If this line does not appear, you need to install the CD-ROM driver, and you should also install QuickTime if you plan on using multimedia CD-ROM discs. Instructions for installing this software are included on page 74 of the PC Compatibility Card User's Manual (For 7-inch card).

Additionally, for the CD-ROM software to function, the AUTOEXEC.BAT file must have the line: LOADHIGH C:\DOS\MSCDEX.EXE /S /D:CDDRVR /L:E

MSCDEX.EXE is documented in the MS-DOS online help feature and not either of the user's manuals.

Type "Help MSCDEX" at the DOS prompt for more information.

This article was published in the Information Alley on 9 December 1996.

Article Change History:

09 Dec 1996 - Added info about version of CD software needed.

07 Nov 1996 - Added info about autoexec.bat file.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20222



Tech Info Library

MacTCP: That pesky MacTCP is acting up again Message (7/96)

Revised: 7/29/96
Security: Everyone

MacTCP: "That pesky MacTCP is acting up again" Message (7/96)

=====

Article Created: 29 July 1996

TOPIC -----

I am trying to launch Netscape or any TCP/IP application on my computer and I get this message, "That pesky MacTCP is acting up again." What does this mean?

DISCUSSION -----

What does "That pesky MacTCP is acting up again." Message Mean?

=====

- The PPP/SLIP software is not successfully connecting to your Internet Service Provider (ISP).

The PPP extension and ConfigPPP control panel have to be installed, or the appropriate SLIP software. You need to verify that a modem connection is made to your ISP before launching a TCP/IP application. You should launch ConfigPPP or ConfigSLIP and dial out through that software.

- Confirmation messages from the connection software will show when a successful connection is made,
- Or error messages will indicate what is wrong.

- The MacTCP or TCP/IP control panel is not configured correctly.

See the "Correct MacTCP or TCP/IP Configuration Setup" section below for more information

- The MacIP server is down or does not have an available IP address.

You should select a different zone that also has a MacIP server on the network. This is selected under the EtherTalk or LocalTalk icon's pop-up menu in the MacTCP control panel.

- The Internet Gateway or Router is down or the address is entered

incorrectly (this usually applies in manual IP configurations).

You have to ask your network administrator for a list of valid Internet Gateway or Router IP addresses.

- The MacTCP or TCP/IP files are corrupt.

If you are using MacTCP, throw the MacTCP control panel, MacTCP DNR, and MacTCP Prep files into the trash.

- Reinstall MacTCP with a custom installation from the Mac OS 7.5 installer, or drag-copy from previous system versions. You will have to enter all necessary information in the control panel.

If you are using Open Transport and TCP/IP, throw the TCP/IP control panel and TCP/IP Preference files into the trash.

- Reinstall the TCP/IP control panel with a custom installation from the Mac OS 7.5.2 or higher installer. Once at the Custom Install choices, extend Networking, extend Open Transport, and choose TCP/IP. You will have to enter all necessary information in the control panel.

Correct MacTCP or TCP/IP Configuration Setup

=====

MacPPP or FreePPP connection

Classic AppleTalk

- 1) Open the MacTCP control panel
- 2) Highlight the PPP icon and click More
- 3) In the More section, Obtain Address: Server
- 4) In the More section, Select the correct IP Address Class: the ISP will provide this info.
- 5) In the More section, Fill in the Domain Name Server Information: the ISP will provide this info.

Open Transport in Basic User Mode

- 1) Open the TCP/IP control panel
- 2) Choose Connect via: MacPPP
- 3) Choose Configure via: Using PPP Server
- 4) Fill in the Name Server address and domain names: the ISP will provide this info.

NOTE: When connected to the ISP, the PPP server will fill in the blanks in this TCP/IP control panel

MacSLIP or other SLIP software connection

The procedures are the same as for MacPPP or FreePPP.

MacIP Server connection

Classic AppleTalk

- 1) Open the MacTCP control panel

- 2) Select EtherTalk (on an Ethernet network) or LocalTalk (on a LocalTalk network or ARA (Apple Remote Access) connection) icon.
- 3) From the pop up menu below the correct icon, select the zone that has a MacIP server, the network administrator will provide this information.

Open Transport in Basic User Mode

- 1) Open the TCP/IP control panel
- 2) Select Connect via: AppleTalk (MacIP)
- 3) Select Configure via:
 - a) Using MacIP Server, when using server assigned address
 - Select MacIP Server Zone: the network administrator will provide this information.
 - Enter Search domains: the network administrator will provide this information.
 - b) Using MacIP Manually - when using manually assigned address that the server manages Select MacIP Server Zone: the Net Admin will provide this info. The Net Admin will provide and the customer will enter: IP Address, Router address, Name server addr., and Search domains.

Manual IP Address connection

Classic AppleTalk

- 1) Open the MacTCP control panel
- 2) Select the Ethernet icon.
- 3) In the More section, Obtain Address: Manually.
- 4) In the More section, The Net Admin will provide and the customer will enter: Gateway Address, IP Address Class (A, B, or C), Subnet Mask, and Domain Name Server(s)
- 5) Okay out of this window.
- 6) In the MacTCP window, type in the assigned IP address in its box.

Open Transport in Basic User Mode

- 1) Open the TCP/IP control panel
- 2) Select Connect via: Ethernet
- 3) Select Configure via: Manually
- 4) The Net Admin will provide and the customer will enter: IP Address, Subnet Mask, Router Address, Name Server addr:, and Search Domains.

For more information on connecting with Open Transport 1.1 and PPP or SLIP software, refer to the Technical Information Library article, "Open Transport 1.1 Read Me" for version numbers, and where to obtain the software.

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Tech Info Library Article Number:20223



Tech Info Library

LocalTalk/LaserWriter Bridge 2.1f2 Beta Read Me (7/96)

Revised: 7/29/96
Security: Everyone

LocalTalk/LaserWriter Bridge 2.1f2 Beta Read Me (7/96)

Article Created: 29 July 1996

TOPIC -----

This article is the LocalTalk/LaserWriter Bridge 2.1f2 Beta Read Me file.

DISCUSSION -----

Thank you for your interest in the LocalTalk/LaserWriter Bridge. As a final step before general release of the LocalTalk/LaserBridge 2.1, Apple is making version ZM-2.1f2 available to customers. We are working hard at providing a bridge solution for our CPU products that require Open Transport.

Warnings and Information About Beta Software

LocalTalk Bridge and LaserWriter Bridge 2.1f2 is "beta software" -- that is, it is not the finished version of LocalTalk Bridge/ LaserWriter Bridge 2.1.

This software is being provided for test purposes and does not come with Apple technical support. Do not call Apple technical support or the Apple Assistance Center with questions, comments, or problem reports about LocalTalk Bridge or LaserWriter Bridge 2.1f2.

LocalTalk Bridge and LaserWriter Bridge 2.1f2 is provided on as-is basis. It is not warranted to be complete or free from bugs or errors. LocalTalk Bridge 2.1f2 or LaserWriter Bridge 2.1f2 may cause problems with your Mac OS computer and with other software you have installed. These problems may require you to reinstall the Mac OS System Software from your original floppy disks or CD-ROM disc.

If you want to provide Apple with feedback about LocalTalk Bridge/LaserWriter Bridge 2.1f2, send electronic mail to: bridge-seed@support.apple.com. Apple does not guarantee any response to messages you send to this address, and does not provide technical support for LocalTalk Bridge/LaserWriter Bridge 2.1f2 through this or any other medium or channel.

System Requirements

System 7.1 or later

Classical AppleTalk or Open Transport

System 7.5.3 requires a minimum of 4MB (680x0) or 8MB (PowerPC) total memory.

Open Transport requires a minimum of 5MB (680x0) or 8MB (PowerPC). Open Transport memory requirements are based on total system memory including Virtual Memory, minus the size of any RAM disk and disk cache you choose.

Installation

If you are using the LocalTalk Bridge software, run the LocalTalk Bridge ZM-2.1f2 patch application. This will patch the installed LocalTalk Bridge control panel to be compatible with Open Transport.

If you are using the LaserWriter Bridge software, simply replace your installed version with the enclosed 2.1f2 version. The 2.1f2 version is compatible with Open Transport.

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Tech Info Library Article Number:20224



Tech Info Library

ARA 2.1 Personal Server For Macintosh: Read Me (7/96)

Revised: 7/30/96
Security: Everyone

ARA 2.1 Personal Server For Macintosh: Read Me (7/96)

=====

Article Created: 30 July 1996

TOPIC -----

This article is the Apple Remote Access (ARA) 2.1 Personal Server For Macintosh ReadMe file.

DISCUSSION -----

APPLE REMOTE ACCESS PERSONAL SERVER FOR MACINTOSH READ ME

=====

This document provides late-breaking news about the Apple Remote Access Personal Server that is not covered in the "Apple Remote Access Personal Server User's Guide." You may need to refer to that guide to understand the use of several terms in this document, and you may want to print this document to keep with your user's guide.

Modems Supported by the Apple Remote Access Personal Server

=====

Scripts that support most popular modems are provided on the Remote Access Personal Server installation disks. The scripts include:

3Com Impact Analog 14.4
3Com Impact ISDN 56K
3Com Impact ISDN 64K
Apple Modem 2400
AT&T Dataport 288
AT&T KeepInTouch
Dayna CommuniCard 28800
Farallon Netopia 56K
Farallon Netopia 64K
GeoPort/Express Modem
GeoPort/Express Modem CNG
Global Village Gold/Silver/Mercury

Global Village Platinum
Hayes Accura 288
Hayes Optima 14.4
Hayes Optima 288
Megahertz CruiseCard 14.4
Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom MicroPorte 4232bis
Microcom QX/4232bis
Motorola 326xV34
Motorola BitSURFR 56K
Motorola BitSURFR 64K
Motorola Power/Lifestyle 28.8
Practical Peripherals V.34
Prometheus ProModem 144e
Prometheus ProModem 96
PSI PowerModem II
PSI PowerModem III/IV
Supra 144
Supra 288
TDK DF2814
Telebit QBlazer
Telebit T3000
Telebit Worldblazer
US Robotics Universal
Zoom V-series

Beginning with version 2.1 of the Apple Remote Access Personal Server and the companion Client product, modem scripts are no longer stored in the Extensions Folder. A new folder called "Modem Scripts" within the Extensions Folder is created by Apple Remote Access to hold modem scripts.

The Apple Remote Access Installer will move any existing scripts you may already have in your Extensions Folder to the new Modem Scripts folder in addition to placing scripts for all the modems listed above into the Modem Scripts folder.

Future remote access products from Apple will also use the Modem Scripts folder. However, there will be a transition period before other products are updated to use the new folder. Some existing products may install modem scripts into the Extensions Folder. If such a product is installed after Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the script.

You can use modem scripts included with the Apple Remote Access MultiPort Server (any version) with version 2.1 of Apple Remote Access Personal Server. You can also use AppleTalk Remote Access version 1.0 modem scripts with version 2.1 of the Personal Server, but certain new features, such as Ignore Dial Tone, Manual Dialing, and MNP 10 support, won't be available. Additionally, you will be able to use scripts from future Apple dial-up products with version 2.1 of Apple Remote Access. But, see the note below on some issues related to manual dialing.

Apple Remote Access and System 7.5.3

=====

The Read Me documents for System 7.5.3 and System Update 2.0 suggest that Apple Remote Access should be installed before System 7.5.3. This is not necessary. Beginning with version 2.1, Apple Remote Access should be installed after System 7.5.3.

Installing ARA X.25 Client over Apple Remote Access 2.1

=====

The Apple Remote Access X.25 Client installer places X.25 scripts into the Extensions folder. If you install the X.25 additions after installing Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the X.25 scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the scripts.

If you use the Apple Remote Access 2.1 installer to upgrade your existing Remote Access 2.0.1 and X.25 Client, the installer will move the scripts for you.

Compatibility with AppleTalk Remote Access 1.0

=====

Version 2.1 of the Apple Remote Access Personal Server will successfully connect to both AppleTalk Remote Access 1.0 compatible servers and Apple Remote Access 2.x compatible servers. The compatibility setting in the connection document of earlier version 2.0 and 2.0.1 has been removed. Since connection to either style server is automatic, the setting is no longer necessary.

The next major upgrade to Apple Remote Access will no longer support ARA 1.0 clients or servers.

Using an MNP 10 Modem

=====

MNP 10 is an error-correction protocol that allows for more reliable data connections over cellular modems. Clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window puts MNP 10 modems into cellular mode. Do not click the "Use MNP 10 error correction in modem" checkbox to use MNP 10 over land lines.

To establish an MNP 10 connection, both your modem and the modem you're calling must support MNP 10; clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window is not by itself sufficient to establish an MNP 10 connection.

Manual Dialing

=====

The method used to do manual dialing in Apple Remote Access 2.0/2.0.1 has not worked well. Apple Remote Access presents a dialog asking you to dial, wait for the phone to ring, and then press OK. Often the user has to experiment to determine exactly when to press OK to dismiss the dialog.

To improve manual dialing, a new dialog has been incorporated into the modem scripts installed along with version 2.1 of Apple Remote Access. Two dialogs are now displayed when doing manual dialing. This first dialog is still present to provide backwards compatibility with the wide variety of existing modem scripts. When using newer scripts, the first dialog box should be dismissed before dialing, and you will be prompted by the modem script when to actually dial the phone. If you are using a modem script not included with this product, you may have to experiment to determine if the first dialog box should be ignored.

Future remote access and dial-up products from Apple will require the new style scripts and will not present two dialog boxes.

Using the Redialing Feature

=====

If the redialing option is selected, the Remote Access Personal Server attempts redialing only when the phone number that has been dialed is busy. If the connection attempt fails for any other reason including a failed call back attempt, Remote Access stops redialing so that you can correct any problems.

If you use the Redialing option, set the "Time between retries" number to five seconds or greater. Anything less than five seconds may not give your modem sufficient time to reset.

When using the Redialing Alternate Number option, the main number is dialed once and then redialing sequence alternates between the alternate and main numbers.

Using DialAssist

=====

If you are calling within a country with no city or area codes, and you encounter problems using DialAssist, try entering a space in the "Connect To City/Area Code" box in your connection document.

Serial Port Arbitration

=====

When a Remote Access connection is established, Remote Access prevents other application programs from using the serial port selected in the Remote Access Setup control panel. Most programs will inform you that the port is in use.

Apple Remote Access Personal Server provides this port arbitration through a system extension called the Serial Port Arbitrator located in the Extensions folder. Some programs that use the serial port may not be compatible with this extension. If you suspect that a program is not compatible with the Serial Port Arbitrator:

- 1) Remove the Serial Port Arbitrator file from the Extensions folder.
- 2) Restart your Macintosh.
- 3) Try the program again.

NOTE: The Serial Port Arbitrator will not work on a Macintosh if Remote Access Personal Server has not been installed.

High Speed Serial Connections

=====

Both Apple Remote Access Personal Server 2.1 and Client 2.1 support specifying a serial connection speed of 115200 bps in a modem script. Not all Macintosh built-in serial ports support connection speed of 115200 bps. Here is a list of Macintosh computers that do:

Centris/Quadra 660AV, Quadra 840AV
Macintosh Performa 61xx
Power Macintosh 61xx, 71xx, 72xx, 75xx, 76xx, 81xx, 85xx, 95xx
Workgroup Server 6150, 7250, 8150, 8550, 9150

In order to use the serial port at 115200 bps on one of these computers, you need a new serial extension called SerialDMA. System 7.5.3 or later incorporates this driver into the operating system.

If you use a modem script that specifies 115200 bps, and your computer does not support this data rate, Apple Remote Access will automatically fall back to 57600 bps.

Using a Local Printer

=====

If you are using a non-networked printer connected to the printer port of your Macintosh, you may get an error dialog when trying to initiate a connection or when trying to print while connected saying that one of your serial ports is already in use. You may need to select Remote Only in the Network Control Panel (AppleTalk Control panel for Open Transport-based machines).

Apple Remote Access Personal Server and the Apple Internet Router

=====

Apple Remote Access Personal Server should not be installed on the same Macintosh as the Apple Internet Router.

Using ARA Security Modules (like SecurID) with Virtual Memory

=====

There is an incompatibility between some ARA security modules (like SecurID) and Virtual Memory. This bug has been fixed in the latest system release (7.5.3).

Changes in version 2.1 of the Apple Remote Access Personal Server

=====

Modem scripts have been moved to a new Modem Scripts folder within the Extensions Folder.

The compatibility option in the connection document is no longer necessary and has been removed.

The method of manual dialing has been changed. See the section above.

Interoperability with some non-Apple Remote Access Servers has been improved.

The installer has been upgraded from version 3.4 to version 4.0.3.

There is no longer a separate Remote Access Aliases extension.

The installer is now on a single high-density diskette.

A bug that caused machines with certain extensions to crash during boot has been fixed in the Serial Port Arbitrator.

Serial port rates of up to 115,200 bps are now supported in modem scripts. If the computer doesn't support 115,200, Apple Remote Access will use 57,600 bps instead.

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Tech Info Library Article Number:20226



Tech Info Library

Apple Remote Access Client Updater: ReadMe (7/96)

Revised: 7/30/96
Security: Everyone

Apple Remote Access Client Updater: ReadMe (7/96)

=====

Article Created: 30 July 1996

TOPIC -----

This article is the Apple Remote Access (ARA) Client Updater Read Me file.

DISCUSSION -----

Name: Apple Remote Access Client Updater
Version: 2.1
Released: July 8, 1996
Description: The updater on this disk allows you to update ARA Personal Server 2.0, 2.0.1, 2.0.1 RevB or 2.0.1 RevC to ARA Personal Server 2.1.

From the Read Me included with this software:

Apple Remote Access Personal Server 2.1 Updater Read Me

The updater on this folder allows you to update ARA Personal Server 2.0, 2.0.1, 2.0.1 RevB or 2.0.1 RevC to ARA Personal Server 2.1. Before you run the updater, make sure that you have one of the previous version of ARA Personal Server installed in your Macintosh. If you have ARA Client installed, please download and run the updater for Apple Remote Access Client.

ARA Personal Server 2.1 supports serial port rates of up to 115,200 bps, provides better compatibility with ARA 1.0, and comes with modem scripts for most popular modems and ISDN terminal adapters. For more information, please refer to the 'Read Me' in 'Remote Access Files' folder.

To run the updater, simply launch the Installer application and follow the instructions.

NOTE: Previous version of ARA Personal Server installs the application program 'Remote Access Personal' in 'Remote Access Personal Folder' at the root of your hard disk. The updater will install ARA Personal Server 2.1's 'Remote Access

Personal' at the same location. If you moved the old 'Remote Access Personal' to other location in your hard disk, please delete it and remember to use the new application after the update.

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Tech Info Library Article Number:20227



Tech Info Library

Network Assistant and Copying Hard Disk (8/96)

Revised: 8/1/96
Security: Everyone

Network Assistant and Copying Hard Disk (8/96)

Article Created: 30 July 1996
Article Reviewed/Updated: 1 August 1996

TOPIC -----

I have a two identical computers, and I am trying to copy the hard disk from one computer to another using the Apple Network Assistant, part of the Apple Network Administrator Toolkit (ANAT). I'm choosing All other items in the Copy Hard Disk dialog box. The target computer has a 400 MB hard disk; the information I am trying to copy is 390 MB.

When I try to copy, I get a message that there is not enough space on the target drive to copy. What is wrong?

DISCUSSION -----

Make sure your target computer does not have virtual memory turned on. Virtual memory allocates space, for its use, on the hard disk in the amount set in the Memory control panel. Turn off virtual memory and restart, this should let you copy to the target computer.

Article Change History:
01 Aug 1996 - Updated for search ability.

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Tech Info Library Article Number:20228



Tech Info Library

QuickTime 2.5: Read Me (7/96)

Revised: 12/20/96
Security: Everyone

QuickTime 2.5: Read Me (7/96)

Article Created: 30 July 1996

TOPIC -----

This article is the QuickTime 2.5 ReadMe file.

DISCUSSION -----

Welcome to QuickTime 2.5

What is QuickTime?

The QuickTime system software extension enables you to create, edit, and play video, graphics, sound, sprites, text, music, 3D and animation in documents, CD-ROM titles, and over the internet. While you do not use QuickTime directly, it is the enabling technology behind your Macintosh multimedia experience.

Installing QuickTime 2.5

Before installing make sure you have Macintosh System Software version 6.0.7 or higher installed on your computer.

The QuickTime installer will place QuickTime extensions into your system folder. It will also install the MoviePlayer application into a new "QuickTime folder" on your hard disk drive. The MoviePlayer application can be used to play QuickTime content such as movies, animations, sounds, and music.

- 1) Double-click the installer icon to open it.
- 2) Read the first screen and click CONTINUE.
- 3) Read the Software License and click AGREE.
- 4) At the next screen, do one of the following:
 - To allow the installer to automatically install the correct components ensure the Easy Install is displayed in the pop-up menu.
 - To select specific items to install, open the pop-up menu and choose Custom Install.
 - To remove specific files that have been installed, select Custom

Remove.

5) Click the INSTALL button.

6) When you see the message that the installation was successful, click the RESTART button.

What's new in QuickTime v 2.5

- For music and karaoke fans

QuickTime 2.5 plays MIDI files back with CD quality sound on Power Macintosh systems (44.1 KHz, 16 bit, stereo).

QuickTime 2.5 allows you to play back karaoke files commonly found on the Internet. Try importing an Internet karaoke file using MoviePlayer.

In addition to playing music through the computer's built-in speaker, QuickTime 2.5 for Macintosh can route MIDI to external devices, using Apple's MIDI Manager, Opcode's Open Music System, or Mark Of The Unicorn's FreeMIDI system. Use the QuickTime Control Panel to route musical information.

- Graphic Importers

QuickTime 2.5 for Macintosh includes a new graphic importer component allowing for import of a variety of diverse file formats. With this feature, any application that is QuickTime aware is able to import file formats such as GIF, MacPaint, Silicon Graphics, and Photoshop directly into their application. Try importing graphics into SimpleText or any of your favorite applications.

- AutoPlay CD-ROM and audio CD's

QuickTime 2.5 for Macintosh allows you to automatically start playing a CD-ROM or audio CD when inserted or on when your Macintosh is powered up. Use the QuickTime Control Panel to turn this feature on or off.

Things You Should Know

If you experience sound problems with Sound Manager 3.2.x or above on a Quadra with a PowerPC card and System Software 7.5.1, you need to update your System Software to 7.5.3.

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Tech Info Library Article Number:20229



Tech Info Library

Power Macintosh 6400/6500: Connecting Multiple Monitors (4/97)

Revised: 4/30/97
Security: Everyone

Power Macintosh 6400/6500: Connecting Multiple Monitors (4/97)

=====

Article Created: 31 July 1996
Article Reviewed/Updated: 30 April 1997

TOPIC -----

Since a Power Macintosh 6400 series computer (or Power Macintosh 6500) has a video port and two PCI slots, if I install two PCI video cards, can I attach three monitors to my computer?

DISCUSSION -----

No, although there are enough slots in these computers--through the monitor port and two PCI slots--to connect three monitors, due to the way the built-in video's brightness driver loads, it is possible for this driver to conflict with one of the PCI video card drivers. With only one PCI video card installed, this issue does not occur.

When two PCI video cards are installed, the computer can freeze or lose video on one of the monitors. This configuration is not recommended by Apple for Power Macintosh 6400 or Power Macintosh 6500 computers.

This article was published in the Information Alley on 6 January 1997.

Article Change History:
30 Apr 1997 - Added 6500 to article.
06 Jan 1997 - Added additional explanation of the issue.
02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20230



Tech Info Library

Macintosh Performa 6400: Modem Documentation? (12/96)

Revised: 12/10/96
Security: Everyone

Macintosh Performa 6400: Modem Documentation? (12/96)

=====

Article Created: 30 July 1996
Article Reviewed/Updated: 10 December 1996

TOPIC -----

I am attempting to use the modem that came installed in my Macintosh Performa 6400 computer. However, I am confused about some of the documentation that was included with the computer.

For example, the Apple Fax User's Guide and the Apple Address Book User's Guide refer to an application called, Apple Phone, that I should use to make phone calls through the modem. However, I cannot find this application on the hard disk or CD-ROM drive. Should I have this application on my computer? If not, which application should I use to make telephone calls?

Also, the Global Village Teleport User's Guide mentions GlobalFax software that I can use to send and receive faxes. However, I do not have this application either.

DISCUSSION -----

Apple Phone is not included with your computer; it has been replaced by the MegaPhone software program, which is documented in the MegaPhone User Guide. You can ignore all mention of Apple Phone in the documentation.

Also, you can ignore any references to the GlobalFax software in the Global Village Telport User's Guide because that software has been replaced by the Apple Fax software. Use the Apple Fax User's Guide for information on sending and receiving faxes.

You can use the TelePort User's Guide as a basic hardware guide. However, there are some sections which are not relevant to your computer setup, including:

- * Preface

Page xii: Disregard the referral to the GlobalFax User's Guide.

* Chapter 1: Introduction to Modem Commands

Page 3: Disregard the comment to the Global Village Scripts folder.

Page 4: Disregard the comment on how to adjust the card's volume.

Page 5: Disregard page 5.

* Disregard Chapter 2, Preparing for Basic Modem Use.

* Chapter 3: Communicating with Another Modem

Page 11: Disregard the reference to eWorld.

Page 12: The modem script referred to is not bundled with your computer. You can get a suitable script by downloading the Apple Remote Access 2.1 updater from the Apple Software Updates.

* Chapter 4: Using Error Correction and Data Compression

Page 24: Disregard the section starting with "Selecting an Error-Correction/Data-Compression..."

Page 25-28. Disregard all. Note that the AT command equivalents of the specific menu commands in the Global Village software are provided. These AT commands are also summarized in Chapter 5. You enter AT commands by using a terminal emulator, such as ClarisWorks.

* Chapter 5: Using TelePort Platinum V AT Commands

This entire chapter is generally relevant to your computer.

* Appendix A: Troubleshooting

Page 95: Ignore the section titled "Startup Problems."

* Appendix B: Product Specifications

This entire section is generally relevant to your computer.

* Appendix C: FCC and Industry Canada Information

This entire section is generally relevant to your computer.

* Appendix D: Warranty and Copyright

Article Change History:

10 Dec 1996 - Added additional information about specific chapters.

02 Aug 1996 - Changed distribution status.

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Tech Info Library

Macintosh Performa 6400:Restoring Cover Pages in Apple Fax(8/96)

Revised: 8/1/96
Security: Everyone

Macintosh Performa 6400:Restoring Cover Pages in Apple Fax(8/96)

Article Created: 31 July 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

I recently resotred all the software to my Macintosh Performa 6400 series computer using the instructions in Chapter 7 of my Macintosh Performa User's Manual. However, now when I choose Quick Fax from the Windows menu in the Apple Fax program, an error appears stating that all of the cover pages were "moved or deleted." How can I restore the cover pages?

DISCUSSION -----

The information that follows applies only if you use the Restore All Software program and then want to use the Apple Fax program. You do not need this information if you use the Restore System Software program or if you initialize your hard disk and then use the Restore All Software program before using Apple Fax.

Note that you only need to follow these steps the first time you attempt to send a Quick Fax after each time you use the Restore All Software Program.

To resolve this error message, follow these steps:

Step 1

Click OK in the error message box that appears.

* A cover page appears.

Step 2

From the File menu, choose Open.

* The Open dialog box appears.

Step 3

In the Open dialog box, choose Desktop from the pop-up menu at the top.

Step 4

In the list that appears, double-click the hard disk to open it.

Step 5

In the same list, double-click the following folders as they appears: the Telecom Applications folder, the Fax Folder, and the Cover Pages folder.

* You will see two documents listed in the Cover Pages folder--Sample Cover Page and Standard Cover Page.

Step 6

Double-click the Sample Cover Page to open it.

* The Sample Cover Page appears.

Step 7

From the Cover Page menu, choose Install Cover Page.

Step 8

Go back to the File menu and choose Open again.

* The Open dialog box reappears, and again you see the Sample Cover Page and Standard Cover Page.

Step 9

Double-click the Standard Cover Page to open it.

* The Standard Cover Page appears.

Step 10

From the Cover Page menu, choose Install Cover Page.

Step 11

Close both cover pages by clicking each of their close boxes (located at the top left corner of each page).

Step 12

In the Quick Fax dialog box, click Cancel.

* The dialog box disappears.

Step 13

From the Windows menu, choose Quick Fax again.

* In the Cover Page pop-up menu in the Quick Fax dialog box, you see the Sample Cover Page and Standard Cover Page listed.

Article Change History:

02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20232



Tech Info Library

Macintosh Computers: 8x-Speed CD-ROM Drive & Vibration (8/96)

Revised: 8/1/96
Security: Everyone

Macintosh Computers: 8x-Speed CD-ROM Drive & Vibration (8/96)

=====

Article Created: 31 July 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

Sometime when I play a CD-ROM disc in my 8x-speed CD-ROM drive that was included with my Macintosh computer, the computer appears to vibrate. What could be causing this?

DISCUSSION -----

The 8x CD-ROM drive reads CD-ROM discs very quickly, but because of the high rotation speed of the drive, some CD-ROM disc can wobble in the drive and cause the computer to vibrate. Some CD-ROM disc labels have artwork on them that can cause the CD-ROM's disc's weight to be slightly off-center. For example, the label on the CD-ROM disc may be noticeably thicker on one side than the other. A slightly off-centered CD-ROM disc can wobble in the drive and cause your computer to vibrate.

This vibration affects very few CD-ROM discs and does not damage your computer or the CD-ROM disc itself, but you should be aware of the vibration in case it occurs.

Article Change History:
02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20233



Tech Info Library

Power Macintosh 5400/Macintosh Performa 6400: Comparison (8/96)

Revised: 8/1/96
Security: Everyone

Power Macintosh 5400/Macintosh Performa 6400: Comparison (8/96)

Article Created: 31 Jul 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

What are the hardware differences between the Power Macintosh 5400/120 and Macintposh Performa 6400/180 and 6400/200 computers?

DISCUSSION -----

The following table compares the Power Macintosh 5400/120 and Macintosh Performa 6400/180 and 6400/200 computers:

Begin_Table

Features =====	Power Macintosh 5400 =====	Performa 6400/180 & 6400/200 =====
Processor Type	PowerPC 603e	PowerPC 603e
Processor Speed	120 MHz	180 MHz or 200 MHz
Cache	256K L2 cache Optional DIMM	256K L2 cache Optional DIMM
RAM	8 MB-136 MB	8 MB-136 MB
RAM Expansion	2 168-pin DIMMs	2 168-pin DIMMs
Memory Bus	64 bits, 40 MHz	64 bits, 40 MHz
Video RAM	1 MB DRAM	1 MB DRAM
Video Input	Optional card for video input	Optional card for video input

	capture	capture
Video Output	Optional mirror connector supports external monitor operating in mirror mode; built-in video supports up to 832-by-624 pixel resolution at 8-bits per pixel, VGA and SVGA	Built-in video supports up to 1024-by-768 pixel resolution at 8-bits per pixel, VGA and SVGA.
Sound	8 and 16 bits/channel; stereo SRS surround sound mode	8 or 16 bits/channel; stereo in, stereo record, stereo out; SRS sound surround sound mode. Built-in subwoofer with volume control.
Remote Control	Built-in infrared (IR) receiver	Built-in infrared (IR) receiver
Floppy Drive	1 internal	1 internal
ADB Ports	1	1
Hard Drive	1 (IDE)	1 (IDE)
CD-ROM Drive	AppleCD 600i (quadruple speed)	8x-speed CD-ROM drive
Internal SCSI Expansion Bay	None	1, for one 5.25-inch SCSI CD-ROM or other SCSI device
External SCSI Ports	1	1
Communications Slot	1, for optional modem or Ethernet interface PCI bus configuration	1, for optional modem or Ethernet interface
Expansion slot	1 PCI I/O slot for 7-inch card	2 PCI I/O slot for 32-bit 7-inch card
DMA I/O	10 DMA channels	10 DMA channels
Serial Ports	2, LocalTalk and GeoPort supported	2, LocalTalk and GeoPort supported
End_Table		

Article Change History:

02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20234



Tech Info Library

Reinstalling System 7.5.3 Revision 2 Issue (7/96)

Revised: 7/31/96
Security: Everyone

Reinstalling System 7.5.3 Revision 2 Issue (7/96)

=====

Article Created: 31 July 1996

TOPIC -----

I have already updated my system software to System 7.5.3 Revision 2 with the Revision 2 installer. Now I need to reinstall System 7.5.3 Revision 2, but I get this prompt when trying, "This system can not be updated. The system you want to update might be on a different disk. If you think this might be the case then click the 'Switch Disk' button below." How do I reinstall Revision 2?

DISCUSSION -----

This will happen with any Mac OS compatible computer having had System 7.5.3 Revision 2 installed on it.

Workaround

Use the System 7.5 Update 2.0 installer, and preform a custom installation of System 7.5.2 Update (under the System option). Then use the System 7.5.3 Revision 2 installer.

On computers which came with System 7.5.3 preinstalled (PCI Power Macintosh 7200/120, 7600/120, 8500/132/150, 9500/132/150) the System suitcase must be reinstalled before Revision 2 will reinstall. Therefore reinstall the original System software which came with the computer.

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Tech Info Library Article Number:20235



Tech Info Library

HyperCard 2.3.5 Read Me (7/96)

Revised: 7/31/96
Security: Everyone

HyperCard 2.3.5 Read Me (7/96)

=====

Article Created: 31 July 1996

TOPIC -----

This article is the HyperCard 2.3.5 ReadMe file.

DISCUSSION -----

Welcome to HyperCard 2.3.5

Please read this entire "Read Me" file. It contains important information and tips that will enhance your experience with HyperCard 2.3.5. We recommend that you print a copy.

INSTALLING HYPERCARD

To install HyperCard 2.3.5 on your hard drive, insert the disk called "HyperCard Installer," double-click the file called "Installer" and then follow the instructions on your screen.

The "Easy Install" option of the HyperCard Installer installs the version of HyperCard 2.3.5 that's optimized for your Macintosh computer.

If you have a Macintosh computer with a PowerPC upgrade card and the card is enabled, the "Easy Install" option will install the version of HyperCard that's optimized for any Macintosh. If the PowerPC upgrade card is disabled, the Installer will install the version of HyperCard that's optimized for a Macintosh computer with a 680x0 microprocessor.

You can choose which version of HyperCard to install by using the "Custom Install" option of the HyperCard Installer. This option gives you three choices: 1) HyperCard optimized for Macintosh computers with PowerPC microprocessors, 2) HyperCard optimized for Macintosh computers with 680x0 microprocessors, and 3) HyperCard optimized for any Macintosh. If you install one of these versions and

then change your mind, delete the version that you installed and run the Installer again.

SYSTEM AND MEMORY REQUIREMENTS

HyperCard 2.3.5 requires:

An Apple Macintosh, Power Macintosh, or PowerBook computer; QuickTime Tools require a 68020 or later microprocessor; text-to-speech function requires a 68040 or later microprocessor.

A hard disk drive.

At least 2MB of RAM; 4MB of RAM required for system software version 7.0 or later; 5MB of RAM recommended when using Color Tools; 8MB of RAM required for Macintosh Computers with PowerPC microprocessors.

HyperCard's memory partition should be set to at least 2200K to use the Color Tools (5120K on Macintosh Computers with PowerPC microprocessors with virtual memory off). HyperCard's memory partition should be set to 3072K, or more, to use the Color Painting Tools (5120K on Macintosh Computers with PowerPC microprocessors with virtual memory off).

SOFTWARE REQUIREMENTS

HyperCard 2.3.5 requires system software version 6.0.5 or later. System software 7.0 or later is required for AppleScript and the Color Paint Tools. The HyperCard Button Tasks and the stand alone application builder require system software 7.0 together with either the AppleScript or the QuickTime system extension. The Button Tasks will also work with system software 7.1 or later with or without the QuickTime or AppleScript system extensions. On Macintosh computers with PowerPC, the HyperCard Button Tasks and the stand alone application builder require the ObjectSupportLib file. This item will automatically be installed in your system extensions folder when you choose easy install or when you choose custom install and install AppleScript.

QuickTime Tools requires the QuickTime system extension.

Text-to-speech requires the Speech Manager system extension (included) or the PlainTalk software package.

Multilingual HyperCard applications may require WorldScript software and/or international versions of AppleScript software.

WorldScript software requires system software 7.1 or later.

BUTTON TASK REQUIREMENTS

On Macintosh computers with PowerPC microprocessors, the Button Tasks require the ObjectSupportLib file. This item will automatically be installed in your

system extensions folder when you choose easy install or when you choose custom install and install AppleScript.

On Macintosh computers with 680x0 microprocessors, the Button Tasks require system software 7.0 together with either the AppleScript or the QuickTime system extension. The Button Tasks will also work on Macintosh computers with 680x0 microprocessors running system software 7.1 or later with or without the QuickTime or AppleScript system extensions.

The Movie Button Task requires the QuickTime system extension. The task will not appear if the QuickTime system extension is not present.

The Speech Button Task requires the Speech Manager system extension (included) or the PlainTalk software package. The task will not appear if the Speech Manager system extension or the PlainTalk software package is not present.

The Sound Task requires sound input hardware in order to record.

NOTES ON USING HYPERCARD 2.3.5 FOR THE FIRST TIME AFTER INSTALLATION

The first time you use HyperCard 2.3.5, it is possible that double-clicking a stack that you already have on your machine will fail to launch HyperCard, or will launch an earlier version of HyperCard. If this happens to you, simply open the HyperCard 2.3.5 folder. Once you have done this, double-clicking a stack will launch HyperCard 2.3.5.

It is also possible that you will not see stack icons on the stacks on your system after you install HyperCard 2.3.5 for the first time. If this happens to you, simply open the HyperCard 2.3.5 program folder and restart your Macintosh computer. After you have restarted, the stack icons will appear correctly.

NEW HYPERCARD FEATURES

HyperCard 2.3.5 contains some new and exciting features. For this release of HyperCard we have added:

- Support for Macintoshes with PowerPC microprocessors. This includes the ability to generate stand alone applications which are optimized for Macintoshes with PowerPC microprocessors.
- New Button Tasks which allow you to generate HyperTalk scripts without scripting.

We have included tasks for:

- playing movies
- playing and recording sounds
- moving from card to card
- using text-to-speech
- adding visual effects
- opening applications

We expect third-party developers to develop additional button tasks.

- Text-to-Speech capabilities. (only for Macintoshes with 68040 or better microprocessors)
- Enhancements to the Color Tools including a new color painting environment.

NOTES ON HYPERCARD

Users with 9-inch screens may have problems viewing the task window associated with the new Button Tasks. When editing a stack with standard size cards, if you open the task window by choosing the "Tasks..." button in the Button Info dialog, and then bring another window forward, the tasks window will go behind the card window. It will look as though the task window has disappeared even though it is still present. Select "Next Window" to bring the task window forward.

The tilde key "~" no longer takes you back in HyperCard. Command-tilde will still take you back.

HyperCard 2.3.5 includes the necessary system extension for performing text-to-speech. The Installer will only install this software on Macintoshes with 68040 or better microprocessors. Text-to-speech is restricted to Macintoshes with 68040 or better microprocessors.

In low memory situations, stacks with card sizes larger than 512 by 342 pixels will not open to their full size. Additionally, you will not be able to use HyperCard's Color Paint Tools or the Color Tools, and you will not be able to print cards.

External commands may cause HyperCard to think that it is in a low memory state. If you are using system 7.5 and your stacks are not opening to full size after increasing HyperCard's memory partition, try disabling the Macintosh Easy Open extension.

NOTES ON COLOR TOOLS

The Color Paint Tools require system software 7.0 or greater.

The Color Paint Tools can require large amounts of memory depending on the size and bit depth of the pictures that you are editing or creating. We recommend against using the Color Paint Tools on a Macintosh computer with less than 5MB of RAM or when HyperCard has a partition smaller than 3072K. Many of the Color Paint operations will not work properly in low memory. If you are seeing frequent messages about low memory while using the Color Paint Tools, exit HyperCard and increase its memory allocation. We recommend increases of at least 300K. Continue increasing the allocation until you no longer see the out of memory messages or until you have exceeded the available memory on your machine.

For instructions on how to increase HyperCard's memory allocation, see "Preparing a Color Standalone Application" in Chapter 3 of the "Getting Started" guide.

The Color Tools Demo in the Color Tools Stack does not work when the stack has been locked with the Finder.

The Color Tools stack requires a monitor with at least 256 colors or shades of gray.

We recommend against coloring your Home stack. If not scripted correctly, a colored Home stack will cause HyperCard to run slower than it would with a non-colored Home stack.

When using the Color Paint Tools, operations that cause the picture to extend beyond the bounds of the window may cause parts of the image to be lost. This happens when rotating and scaling. You can prevent this problem by expanding the size of the window before performing the operation. Note that expanding the window will increase the memory needed to display the picture.

After editing a picture that has been placed on a card, the picture may be displayed in a different scale. If you want the picture to be displayed at a 1-1 scale, double-click the picture and select "Original Size."

With the "Rotate by degree" feature of the Color Paint Tools, rotations are measured from the orientation of a graphic at the time it was selected. If you rotate a selection and then rotate it again, the rotations do not accumulate. If you want cumulative rotations, deselect the graphic after rotating it the first time, re-select it and rotate it again.

If you place pictures onto cards and subsequently delete the picture resource from the stack, you must ensure that each instance of the picture in the stack is also deleted. Otherwise you will see the following message at the location of each instance of the deleted picture in the stack: "Cannot display this image. There may not be enough memory or the image could not be found."

The AddColor XCMD has an undocumented selector, "Depth," which returns the current bit depth of the color buffers in the result.

When a stack colored with Color Tools 1.0 is opened for the first time with Color Tools 2.0, the color will disappear momentarily. The disappearance occurs during the conversion of your stack from AddColor 1.0 to AddColor 2.0. Thereafter the color will be displayed normally.

BUILDING STANDALONE APPLICATIONS WITH COLOR

When color is first applied to a HyperCard stack using Color Tools, a set of resources are copied into the stack. The copying of resources is not actually complete until the stack is closed. If a stand alone application is built from the colored stack before the resources have been copied, the stand alone application will not work correctly. To avoid this problem, be sure that you

have closed and reopened your colored stack at least once before turning it into a stand alone application. You should also be certain that the default partition of your stand alone application is set to at least 2048K in order for it to display color properly.

CHANGES TO THE GETTING STARTED GUIDE

On page 54 the manual states that images you create or edit in the PICT editor are automatically saved as resources in the current stack. This is true unless you are editing a PICT file which has been placed on a card. Changes made to PICT files which have been placed on a card will be reflected in the file itself and will not be saved as resources in the stack.

On page 57 the manual states that double-clicking the current color indicator in the Color Paint Tools palette will launch the color picker. Actually, it will allow you to edit patterns or gradients.

On page 67 the manual refers to the Paint menu. There is no Paint menu, the specified items are in the Options menu.

On page 71 the picture of the palette is slightly different from the one you will see in the software. The functionality is the same. Additionally, the manual states that you can import MacPaint images with the PICT editor. This is not true. Only PICT files can be imported into the PICT editor. If you wish to use and color a MacPaint file, you can Cut/Paste it into an edit window and then color it.

On page 76 the instructions for quitting the Color Paint Tools are incorrect. To exit the Color Paint Tools, close all paint windows, or choose "Close Paint Tools" from the "File" menu. Closing the Color Paint Tools will return you to the color editor environment.

CHANGES TO THE HYPERCARD REFERENCE MANUAL

On page 3-22 the Reference Manual describes using "Effects" as follows:

1. Choose the Button Tool and double-click the Next button.

The Button Info dialog box appears

2. Click the Effect button.

While the Button Info dialog box does appear, the Button Info dialog box does not display the "Effect..." button unless the option key is held down while double-clicking the button.

On page 6-37 the Reference Manual describes using "Effects" as follows:

2. Double click the Button

The Button Info dialog box appears

3. In the Button Info dialog box, click Effect.

While the Button Info dialog box does appear, the Button Info dialog box does not display the "Effect..." button unless the option key is held down while double-clicking the button.

Pages 2-29, 4-20, 6-3, 6-17 of the HyperCard Reference Manual shows an incorrect depiction of the Button Info dialog box when a button is Option-Double Clicked. On these pages, the position of the "LinkTo..." and "Effect..." buttons are transposed with the "Icon..." and "Contents..." buttons in the Button Info dialog box.

NOTE: Appendix B, page 141 of the Getting Started Guide documents the replacement of the "LinkTo..." and "Effect..." Buttons with the "Tasks..." button in HyperCard 2.3.5.

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Tech Info Library Article Number:20236



Tech Info Library

Avid Cinema: Description (8/96)

Revised: 8/1/96
Security: Everyone

Avid Cinema: Description (8/96)

Article Created: 31 July 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

This article contains a description of Avid Cinema, a digital video editing system for Macintosh Performa and Power Macintosh computers.

DISCUSSION -----

Discover how much fun movie making can be with Avid Cinema!

This complete hardware and software solution from Apple lets you create professional-looking movies right on your Macintosh computer - easily and inexpensively.

Avid Cinema is designed especially for people with no prior video editing experience. It guides you through making your own movies in four easy steps.

First, design your own movie by using the storyboard templates provided for home, school, and business projects. Each template suggests camera shots as well as filming and editing tips to help create an interesting and exciting movie.

Second, shoot your video and bring it into your Macintosh computer. Third, use Avid Cinema's editing features to combine your video clips, create interesting transitions between clips, and add titles and credits. Finally, record your finished movie on videotape, or save it as a QuickTime movie for use in multimedia presentations or on a World Wide Web site.

With Avid Cinema you can produce a high-quality videotape with the click of a button, then hand out copies to classmates, friends, or customers. Produce movies of birthday parties, weddings, graduations, reunions, recitals, sporting events, award ceremonies, and other important occasions. Or create video presentations for association or professional group meetings.

Schools can use Avid Cinema to publish video yearbooks or to capture highlights

of sports, music, and arts events. Students can use it to design attention-getting multimedia reports, and teachers to create virtual field trips.

Avid Cinema can help businesses produce sales presentations and training tapes quickly and easily. These important materials can be up to date at all times, because it's easy to make new tapes whenever information changes.

Avid Cinema: It's never been so easy - or so much fun - to edit and publish movies for home, school, or work.

What's In The Box?

=====

Avid Cinema ships with the following items in the box:

- * Avid Cinema card
- * Avid Cinema software [CD]
- * Two triple-head composite video cables
- * One S-Video cable
- * Y-adapter cable
- * Getting Started manual
- * User's Guide

Features

=====

Easy to use

- * Provides ready-to-use storyboard templates with suggested camera shots and editing tips
- * Requires no video editing experience
- * Lets you import video, add text, record live voice-over, and add transitions with a simple click of the mouse

Versatile

- * Includes more than 20 storyboards for home, school, and business projects
- * Allows you to incorporate video, QuickTime movies, digital images, sound, voice, and other media into your movies
- * Accepts input from a variety of sources, including a VCR, a camcorder, the Internet, audio and photo CDs, and a microphone
- * Lets you save movies to videotape or as QuickTime files optimized for presentations, World Wide Web sites, or Internet exchange

Sophisticated

- * Provides Motion JPEG compression and decompression, so you can view and edit movies frame by frame just as professionals do
- * Adds impact to your movies with more than two dozen special effects,

- including popular transitions such as gradual fade or clockwipe
- * Supports multiple audio tracks, so you can integrate music from audio CDs and add your own voice-overs
- * Lets you type in titles or scrolling credits

Ordering Information

=====

Avid Cinema

Order No. M4561LL/A

- * Avid Cinema card
- * Avid Cinema software
- * Two triple-head composite video cables
- * One S-video cable
- * Y-adapter cable for providing two-channel audio from your Macintosh Performa to a VCR
- * Getting Started manual
- * User's guide

Related Products

Apple Video System

Order No. M2894LL/D

Apple TV/FM Radio System

Order No. M4586LL/A

Apple Presentation System

Order No. M2895LL/A

Apple MPEG Media System

Order No. M4243LL/A

NOTE: Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Article Change History:

02 Aug 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20237



Tech Info Library

Avid Cinema: Technical Specifications (10/96)

Revised: 10/31/96
Security: Everyone

Avid Cinema: Technical Specifications (10/96)

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Article Created: 31 July 1996
Article Reviewed/Updated: 31 October 1996

TOPIC -----

This article contains the technical specifications for Avid Cinema, a digital video editing system for Macintosh Performa and Power Macintosh computers.

DISCUSSION -----

Avid Cinema Card Specifications
=====

Video specifications

- * 30-frames-per-second (fps) Motion JPEG compression/decompression at 320 by 240 pixels
- * 60 fields-per-second for interlaced video (television)
- * Vertical and horizontal interpolation and filtering for high-quality output of up to 640 by 480 pixels
- * NTSC output in composite or S-video format

Environmental requirements

- * Operating temperature: 50 degrees to 104 degrees F (10 degrees to 40 degrees C)
- * Storage temperature: *40 degrees to 116 degrees F (40 degrees to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Size and weight

- * Height: 7 in. (17.7 cm)
- * Width: 4 in. (10.1 cm)

* Weight: 0.3 lb. (0.14 kg)

System requirements

* One of the following systems:

- A PowerPC processor-based Apple Macintosh Performa or Power Macintosh computer with a PCI expansion slot (such as the 5400 or 6400 series) and the Apple Video System
- An Apple Power Macintosh computer with built-in composite or S-video input and a PCI expansion slot (such as the 7500, 7600, or 8500 series)

* 24 MB of RAM

* Macintosh system software version 7.5.3 or later (system software version 7.5.3 included)

* QuickTime 2.5 or later software (QuickTime 2.5 included)

* 1 GB hard disk

* One available PCI expansion slot

Avid Cinema Software Specifications/Description

=====

* Four integrated functions

- Storyboard
- Bring video in
- Edit movie
- Send movie out

* Storyboard-driven interface

* Multiple media input formats

- Camcorder
- VCR
- QuickTime movies
- Digital pictures (PICT files)
- Voice input from a microphone
- Audio CDs

* More than two dozen special effects

* Multiple movie output formats

- VHS tape
- QuickTime movie optimized to incorporate into presentation software programs
- QuickTime movie optimized to send across the Internet or publish on a World Wide Web site
- QuickTime movie optimized to save on a double-speed CD-ROM drive
- QuickTime movie optimized to save on a quadruple-speed CD-ROM drive
- Avid Cinema format optimized to export into a third-party application for continued editing

* Storage Requirements

Begin_Table

Disk space required to edit

Final movie (approximate)

-----	-----
5 min.	225 MB
10 min.	450 MB
15 min.	675 MB
20 min.	900 MB
25 min.	1.1 GB
30 min.	1.35 GB

End_Table

NOTE: Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

31 Oct 1996 - Added field rate info.

02 Aug 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20238



Tech Info Library

Macintosh Performa 6400: MegaDial Manual Won't Open (1/97)

Revised: 1/31/97
Security: Everyone

Macintosh Performa 6400: MegaDial Manual Won't Open (1/97)

=====

Article Created: 31 July 1996
Article Reviewed/Updated: 31 January 1997

TOPIC -----

I am attempting to open the MegaDial Manual that was included with my Macintosh Performa 6400 series computer. However, each time I do so, an error message appears stating: "This application has been damaged and should be replaced with a fresh copy from your locked master disk." The only options in this error dialog are Continue or Quit. If I click Continue, a Type 15 error occurs. I tried replacing the copy on the hard disk with the one on the Performa CD, but the error still occurs. How can I resolve this?

DISCUSSION -----

The MegaDial Manual is corrupted, so a new version of the file is required. Apple has released an updated version of the MegaDial manual which is available for download from Apple's software update locations.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:
31 Jan 1997 - Added information on where to find the manual.

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Tech Info Library Article Number:20239



Tech Info Library

Macintosh Performa 6400: Demo CD and Restore CD (8/96)

Revised: 8/1/96
Security: Everyone

Macintosh Performa 6400: Demo CD and Restore CD (8/96)

=====

Article Created: 31 July 1996
Article Reviewed/Updated: 2 August 1996

TOPIC -----

My Macintosh Performa 6400 included two CD-ROM discs labeled Macintosh Performa CD. Also, when I insert these discs into the computer, they both appear as "Performa CD". They do have slightly similar disk structures, but I am having difficulty determining the differences between these two discs.

DISCUSSION -----

Although the names of these CD-ROM discs appear to be the same, the discs do have some distinguishing characteristics and contain quite different information.

Demo CD

=====

The black-colored disc contains the restoration software for the demo and tutorials. It contains only those applications and files that assist you in learning about and using your computer. You only need to use this disc if you are using the Performa Demo or you need to re-install the Performa Demo or other tutorial programs.

The complete name on this disc is: Macintosh Performa 6400 Series Guided Tour, and it is part number 691-1105-A. Use this disc if you need to re-install or use the Performa Demo and tutorial applications. The primary contents of this disc are as follow**:

- * About the Guided Tour CD
- * Disk First Aid
- * Drive Setup
- * Restore Guided Tour (folder)
- * Performa Demo Extras (folder)
 - Hands on Activities
 - QTVR folder

- Surf the Internet folder
- Text to Speech folder
- Video Editing folder
- Software Overview
- * Disk Images
 - Disk Copy
 - Using Disk Copy Read Me
 - Disk Tools image
- * Hard Disk Files
 - System Folder Files
 - At Ease Items
 - Tutorial setups)
 - Extensions
 - Tutorial Guide
 - Launcher Items
 - •Learning
 - Startup Items
 - Launch Performa Demo

Restore CD

=====

The red-colored disc contains the restoration software for your hard disk and the individual files from your hard disk. It contains all the applications, documents, and system software that was installed on the computer when you first purchased it. Whenever you need to re-install an application, other than the Performa Demo or other tutorial programs, you should use this disc.

The complete name on this disc is: Macintosh Performa 6400 Series Performa Software, and it is part number 691-1019-A. Use this disc if you need to re-install or use the Performa Demo and tutorial applications. The primary contents of this disc are as follow**:

- * About This CD
- * Disk First Aid
- * Drive Setup
- * Restore All Software (folder)
- * Restore System Software (folder)
- * Disk Images
 - Disk Copy
 - Using Disk Copy Read Me
 - Disk Tools image
- * Hard Disk Files
 - Contains all of the files that were originally installed on the hard disk.

**Note: These listings do not reflect the complete contents of these two CD-ROM discs. They are meant to provide a general comparison between the contents of the two CD-ROM discs.

Article Change History:

02 Aug 1996 - Changed distribution status.

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Tech Info Library Article Number:20241



Tech Info Library

Macintosh System 7.5, version 7.5.3: Description (8/96)

Revised: 8/13/96
Security: Everyone

Macintosh System 7.5, version 7.5.3: Description (8/96)

Article Created: 1 August 1996
Article Reviewed/Updated: 13 August 1996

TOPIC -----

This article describes Macintosh System 7.5, version 7.5.3.

DISCUSSION -----

Macintosh System 7.5, version 7.5.3 is the latest release of the Mac OS. It includes more than 50 enhancements that make personal computing easier than ever, so you can be more productive than ever. System 7.5 is ideal for nearly every Mac OS user -- plus it offers software optimized for PowerPC-based systems.

Macintosh System 7.5 gives you a wealth of capabilities for general productivity, printing, collaboration, document appearance, and multimedia.

To boost productivity, an enhanced Apple menu accelerates the process of accessing menus, copying files, opening windows, and launching applications. Apple Guide provides easy-to-follow, step-by-step instructions for unfamiliar system tasks. Using AppleScript, you can automate routine or complex tasks, or combine functions from several applications to create custom solutions.

When it's time to print, you can simply drag any file onto a desktop printer icon. Check the status of jobs in the print queue -- or change their order -- by double-clicking on the same icon.

Macintosh System 7.5 gives you many ways to collaborate with others. You can work with DOS disks just as if they were Mac OS disks. Open and edit most Mac OS, DOS, and Windows documents even if you don't have their original applications. Or save a Mac OS file as a document that can be opened and printed by other System 7.5 users without requiring the same fonts or applications.

PowerTalk collaboration software provides built in electronic-mail services. And Open Transport software brings you enhanced network connectivity with built in

TCP/IP protocols and support for multiple network configurations.

In conjunction with new or updated applications, the sophisticated font and graphics capabilities of QuickDraw GX can make your documents look better than ever. And with QuickTime software, Apple's industry-leading multimedia technology, you can easily incorporate video, animation, images, and sound for more effective, attention-getting documents.

Macintosh System 7.5 version 7.5.3: It upgrades your computer to new levels of compatibility, productivity, and ease of use.

Features

Improved performance and efficiency

- Easily access recently used documents from the Apple menu
- Take advantage of enhanced Apple desk accessories and tools

Interactive assistance and customization

- Get step-by-step assistance with Apple Guide
- Use AppleScript application program to automate tasks and create custom multi-application solutions

DOS/Windows file compatibility

- Use Macintosh PC Exchange to work with DOS disks and files
- Open and edit Mac OS, DOS, and Windows documents using available applications

Advanced printing

- Check and modify print queues via desktop printer icons
- Share or restrict access to printers
- Save documents that other System 7.5 users can open and print without requiring the original fonts or applications

Collaborative technologies

- Receive electronic mail from many sources in a single desktop mailbox using PowerTalk software
- Sign documents electronically to streamline your approval process
- Connect to TCP/IP hosts -- including ones on the Internet
- Create and switch among multiple networking configurations quickly and easily with Apple Open Transport software

Multimedia capabilities

- Use QuickTime software to integrate video, animation, high-quality still images, and sound into all types of documents

Special features for PowerBook users

- Optimize battery life with intelligent energy management
- Synchronize files with other computers, hard disks, and servers
- Change frequently used Control Panel settings from one convenient Control Strip

Article Change History:

13 Aug 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20242



Tech Info Library

Macintosh System 7.5, version 7.5.3: Specifications (8/96)

Revised: 8/13/96
Security: Everyone

Macintosh System 7.5, version 7.5.3: Specifications (8/96)

Article Created: 1 August 1996
Article Reviewed/Updated: 13 August 1996

TOPIC -----

This article provides the technical specifications and order information for Macintosh System 7.5, version 7.5.3.

DISCUSSION -----

Technical Specifications

Enhanced Apple Menu

- Hierarchical Apple menu provides improved access to nested items and instant recall of recently used documents, applications, and servers
- Improved Find File command lets you open files from the Find File window
- The Sticky Memos feature (see screen shot) lets you create on-screen reminder messages
- System and application folder locking prevents accidental deletion of important files
- Scrapbook, Note Pad, and SimpleText applications let you move information between documents by simply selecting, dragging, and dropping
- WindowShade feature (see screen shot) reduces screen clutter by letting you collapse windows to access other windows behind them -- without closing documents
- Includes a menubar clock, automatic power off, and audio CD software

Apple Guide

- Interactive, step-by-step guidance for system and application tasks (applications must support Apple Guide)
- On-screen coachmarks for the next required action, skipping any unnecessary steps
- Customizable to meet the unique training and support needs of your organization (requires the Apple Guide Maker Authoring software, available separately)

AppleScript

- Create custom solutions by linking functions from different applications and from the Finder
- Use Script Editor to record your actions to automate tasks

Macintosh PC Exchange and Macintosh Easy Open

- Allow you to work with DOS-formatted disks as though they were Macintosh disks
- Let you open and edit Mac OS, DOS, and Windows files even when you don't have the original application (appropriate file translators required)

Open Transport

- Readies your Macintosh system to connect with other systems using industry-standard TCP/IP networking protocols
- Lets you create and switch between multiple networking configurations without rebooting your computer

PowerBook utilities

- Automatically switch your PowerBook to full performance when plugged in, and conserve energy when it isn't, to extend battery life
- Synchronize files, folders, or disks between PowerBook computers and other Mac OS-based systems -- locally, over a network, or using a floppy disk
- Provide a Control Strip for convenient access to AppleTalk Network system on/off, battery monitor, file sharing, hard disk spindown, power management, "Sleep Now," sound volume, and video mirroring functions (also available on some desktop computers)

QuickTime

- Enables you to integrate graphics, sound, video, and animation into documents (requires application software that supports QuickTime)

OpenDoc

- Lets you extend the functionality of OpenDoc-aware applications by adding new software components -- called "parts" -- that can be dragged-and-dropped into documents (requires application software or parts that support OpenDoc)

QuickDraw GX

- Lets you create portable "print and view" documents from any application (System 7.5 and QuickDraw GX also required on destination system)
- Displays desktop printer icons that allow you to quickly check the status of and change print queues
- Incorporates Apple's ColorSync technology for consistent colors from scanner to display to printer
- Supports Apple TrueType and Adobe Type Manager GX (ATM GX) font technologies
- Includes seven QuickDraw GX fonts

PowerTalk

- Provides a universal desktop mailbox for all electronic correspondence, whether it's being exchanged between other personal computers, the

Internet, on-line services, fax machines, or even voice-mail systems.

- Includes Personal Catalog, which allows you to store names and electronic addresses of the people you collaborate with regardless of the way you communicate.
- Includes Key Chain, which stores your login names and passwords for the network services you use the most and protects them under a single password

System requirements

- Apple Macintosh Plus or later, Power Macintosh, or PowerBook computer
 - 68020, 68030, 68040, or PowerPC microprocessor required for QuickTime, PowerTalk, and QuickDraw GX
 - 68030, 68040, or PowerPC microprocessor required for OpenDoc and Open Transport
- Minimum 8MB of RAM required for installation of full System 7.5 suite (16MB on Power Macintosh models)
 - 4MB of RAM permits minimum installation of System 7.5 features except OpenDoc, Open Transport, PowerTalk, and QuickDraw GX (8MB on Power Macintosh models)
- Hard disk with up to 40MB of available space (depending on your system and configuration) to install System 7.5
- One of the following installation media:
 - Apple SuperDrive 1.4MB floppy disk drive for installation from floppy disks
 - CD-ROM drive for installation from CD-ROM

Ordering Information

Macintosh System 7.5, version 7.5.3 on CD-ROM disc For one user

Order No. 504074U

- System software version 7.5.3 and utilities
- OpenDoc software
- Open Transport software
- PowerTalk software
- QuickTime software
- QuickDraw GX software
- Upgrade Guide

Included on the CD are Apple and third-party applications and utilities that enhance and complement Macintosh System 7.5 capabilities.

Macintosh System 7.5, version 7.5.3 on 1.4MB disks For one user

Order No. 401000U

Same contents as CD-ROM version.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Aug 1996 - Added keyword.

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Tech Info Library Article Number:20243



Tech Info Library

Color OneScanner 600/27: Requires Display of 640x480 (8/96)

Revised: 8/2/96
Security: Everyone

Color OneScanner 600/27: Requires Display of 640x480 (8/96)

Article Created: 1 August 1996

TOPIC -----

I am trying to use an Apple Color OneScanner 600/27 with a Macintosh 12-in. RGB Display. When I open the Dispatcher software, I am not able to scan an image because the controls are off the screen. How can I use the dispatcher software?

DISCUSSION -----

The Dispatcher software which comes with the Apple Color OneScanner 600/27 requires a minimum resolution of 640x480. Since the Macintosh 12-in. RGB Display only has a resolution of 512x384, you cannot use it with the Dispatcher software. You must use a display capable of 640x480 or greater (including PowerBook computers).

One other thing to keep in mind, is that ColorSync was designed to work with a resolution of 640x480 or greater. Since the Macintosh 12-in. RGB does not work at that resolution, even if you were able to scan images, the colors you get may not always be what you expected.

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Tech Info Library Article Number:20245



Tech Info Library

PC Compatibility Cards: DPMS Support (8/96)

Revised: 8/1/96
Security: Everyone

PC Compatibility Cards: DPMS Support (8/96)

Article Created: 1 August 1996

TOPIC -----

In Appendix C, pages 181-182 of the "PC Compatibility Card User's Manual for the 12-inch Card" it is stated that Display Power Management System (DPMS) is not supported with Apple's PC Compatibility Cards.

However, it appears to work fine on my Power Macintosh 8500/120 computer with a 12 Inch PC Compatibility Card and an Apple Multiple Scan 15 display under Windows 3.1 and Windows 95.

Is the manual wrong? After all, it does appear to work on my system.

DISCUSSION -----

DPMS or any kind of power management is not supported with Apple's PC Compatibility cards. Power management control of any kind is intentionally disabled in ROM.

When you set up and enable DPMS by using ATI Technologies' driver software, the energy saving features apply only to the monitor, not the PC Compatibility card. In other words, your monitor goes into energy saving mode (blank), but PC environment is still active.

Even if DPMS works on Apple's PC Compatibility cards while running Windows 3.1 and Windows 95, Apple does not support it. Apple can only recommend using any power-management features in Macintosh environment.

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Tech Info Library Article Number:20246



Tech Info Library

HyperCard 2.3.5 Updater: Updater on MacWorld CD Fails (8/96)

Revised: 8/2/96
Security: Everyone

HyperCard 2.3.5 Updater: Updater on MacWorld CD Fails (8/96)

=====

Article Created: 2 August 1996

TOPIC -----

I received a CD-ROM at the MacWorld Expo in Boston in August, 1996. I was using the HyperCard 2.3.5 Updater on the disc to update the Hypercard applications on all my computers. The updater has been failing to update the HyperCard application on several but not all of my Power Macintosh computers. When it fails, it gives the message, "An error prevented the update from completing. Invalid file selected for updating."

What could be causing this intermittent failure?

DISCUSSION -----

The problem you are experiencing occurs only with the HyperCard 2.3.5 Updater included on approximately 10,000 CD-ROMs distributed at MacWorld Boston in August 1996. The CD-ROM with the troublesome HyperCard updater is titled "The Apple Services CD - August 1996 Edition".

The issue only occurs on Power Macintosh or native or fat binary versions of the HyperCard 2.3 or 2.3.3 application. If you originally did an Easy Install of HyperCard 2.3 or 2.3.3 on your Power Macintosh, a few non-critical resources were left out of the HyperCard application. If you performed a custom install, these resources are included.

When you try to use the updater to update the HyperCard application that does not have these resources, the HyperCard 2.3.5 Updater will not recognize the application and will fail to update it returning the message "An error prevented the update from completing. Invalid file selected for updating."

To resolve this issue, you can re-install HyperCard 2.3 or 2.3.3 using the Custom Install option, and then use the HyperCard 2.3.5 Updater. Alternatively, you can download the corrected version of this updater from <http://www.info.apple.com/swupdates/>.

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Tech Info Library Article Number:20247



Tech Info Library

Macintosh Performa 6400: Non-Supported Video Resolutions (8/96)

Revised: 8/2/96
Security: Everyone

Macintosh Performa 6400: Non-Supported Video Resolutions (8/96)

=====

Article Created: 2 August 1996

TOPIC -----

I have a Macintosh Performa 6400 series computer and I am confused by the resolutions available to me using the AppleVision 1710AV Display. The Technical Information Guide provides a list to me, but there are more available to me. Why?

DISCUSSION -----

There are two supported resolutions using the Macintosh Performa 6400 series computer with the AppleVision 1710AV display; 832x624 75Hz, and 640x480 67Hz.

When you use the Display control panel other VGA/SVGA resolutions appear in *italics*.

When using the Macintosh Performa 6400 Series computer with most Apple displays, there will be more resolutions available than what the display supports. All non-supported resolutions appear in *italics*.

These multiple resolutions are available to support a larger number of Apple and non-Apple multiple scan displays. You should check the technical information for the display you have to confirm which resolutions are supported by your display. Although some Apple displays may also work with non-supported resolutions, their performance is not optimal.

The Macintosh Performa 6400 supports resolutions up to 1024x768 72Hz (maximum). Although some Apple Multiple Scan displays support higher resolutions, 832x624 or 1024x768 will be the highest resolution available depending on which multiple scan display is used.

Using Non-Macintosh Resolutions
=====

When you select a non-Macintosh resolution (VGA/SVGA resolution), a dialog

appears asking you to confirm the display image is OK. If you select OK, the new resolution is selected. If you do not select OK, the Mac OS reverts to previous resolution after a few seconds. This is done in case an incompatible video resolution is selected. The dialog does not appear if you select a standard Macintosh video resolution (640x480 67Hz or 832x624 75Hz).

Some resolutions will display "scrambled", distorted, large, small, or no image. This may happen when an unsupported resolution for a particular display is selected in the Displays control panel. If the image is stable but the performance of the image is not acceptable, one of the supported video resolutions should be used for the particular display connected to the Macintosh Performa 6400 computer.

If a resolution has been selected that produces an unusable image on the display and are not able to select another resolution in the control panel or control strip, you need to reset the Non-volatile RAM (NVRAM).

Resetting NVRAM =====

Turn off your Macintosh Performa 6400 or Choose Shut Down from the Special menu.

NVRAM can be cleared by holding down the Command-Option-P-R keys simultaneously as soon as possible after hitting the power-on key. It happens BEFORE you see the gray screen. Once the gray screen appears, the PRAM is cleared at the same point as it was in previous machines.

One very important difference is that NVRAM is not cleared during a warm or soft restart (by selecting Restart from the Special menu), whereas PRAM is cleared in that case.

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Tech Info Library Article Number:20248



Tech Info Library

System 7.5: Updates, Versions, & What's Installed (10/96)

Revised: 10/24/96
Security: Everyone

System 7.5: Updates, Versions, & What's Installed (10/96)

Article Created: 5 August 1996
Article Reviewed/Updated: 24 October 1996

TOPIC -----

This article provides a guideline for determining installation requirements for the various System 7.5 updates, and which System 7.5 version is installed.

DISCUSSION -----

There are now several Mac OS System 7.5 configurations available which a user may install. Each installer has unique requirements. In addition, the System 7.5 version that shipped on Macintosh computers varies.

The charts below provide a guideline to determine installation requirements for the various System 7.5 updates/versions, and what System 7.5 version is installed by choosing, About This Macintosh, under the Apple menu.

Begin_Table

Overview Of Requirements

=====

- All systems

+=====+		
Installer	Requires System SW for Installer	Updates To Version
+=====+		
System 7.5 Update 2.0	7.5, 7.5.1, or 7.5.2	System 7.5.3
+-----+		
System 7.5.3 Revision 2	7.5.3	System 7.5.3 Rev. 2
+-----+		
System 7.5 version 7.5.3	Full installer	System 7.5.3 Rev. 2
+-----+		
System 7.5.5 Update	7.5.3	System 7.5.5
+-----+		

- PowerBook 190, 2300, and 5300 systems

+=====+		
Installer	Requires System SW for Installer	Updates To Version
+=====+		
PB 5300 Sys. SW Update	7.5.2 enabler 1.1.1 or earlier	7.5.2 enabler 1.2.1
+-----+		
Sys. 7.5.3 Revision 2	7.5.2 enabler 1.2.1	7.5.2 enabler 1.2.4
+-----+		

About This Macintosh Window Overview

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+=====+	
In About This Macintosh Window	How To Get To This Level Of System Software
+=====+	
System 7.5	Retail product, shipped on Macintosh computers
+-----+	
System 7.5.1	System 7.5 plus System 7.5 Update 1.0
+-----+	
System 7.5.2	Shipped on first PCI desktop Macintosh computers and PowerBook 190, 5300, & Duo 2300 series
+-----+	
System 7.5.3	Shipped on some desktop Macintosh computers
+-----+	
System 7.5.3 System 7.5 Update 2.0	Upgrading any of the above using System 7.5 Update 2.0
+-----+	
System 7.5.3 Updated to Revision 2	Install System 7.5.3 Revision 2
+-----+	
System 7.5.3 Revision 2	System 7.5 version 7.5.3 (Finished Goods) or pre-installed on some Macintosh computers
+-----+	
System 7.5.5	Upgraded System 7.5.3 with System 7.5.5 Update
+-----+	

End_Table

Article Change History:

24 Oct 1996 - Added System 7.5.5 information.

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Tech Info Library Article Number:20249



Tech Info Library

Macintosh Performa 6400: System 7.5.3 Revision 2.1 (8/96)

Revised: 10/14/96
Security: Everyone

Macintosh Performa 6400: System 7.5.3 Revision 2.1 (8/96)

=====

Article Created: 5 August 1996
Article Reviewed/Updated: 6 August 1996

TOPIC -----

I have a Macintosh Performa 6400/200 computer, and I noticed that in About This Macintosh, the system software version is "System 7.5.3 Revision 2.1". What is the difference between System 7.5.3 Revision 2 and System 7.5.3 Revision 2.1?

DISCUSSION -----

There were two changes to System 7.5.3 Revision 2 for the Macintosh Performa 6400/200 and 6400/180, which resulted in System 7.5.3 Revision 2.1.

The first is LocalTalk DMA 1.0.1, which resolves an issue with transferring files over LocalTalk.

The second change for System 7.5.3 Revision 2.1 is a fix for the video driver. This was to correct an issue with remaining screen bitmap artifacts when the computer was put to sleep when connected to a 15-inch display.

System 7.5.3 Revision 2.1 should only be used on the Performa 6400/200 and 6400/180 computers.

Article Change History:
dd mmm yyyy - Corrected product names.

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Tech Info Library Article Number:20252



Tech Info Library

Power Macintosh 5200 & 5300: Installing TV/FM Tuner Card (8/96)

Revised: 8/5/96
Security: Everyone

Power Macintosh 5200 & 5300: Installing TV/FM Tuner Card (8/96)

=====

Article Created: 5 August 1996

TOPIC -----

I purchased an Apple TV/FM Tuner Card, and I want to install it into my Power Macintosh 5200 computer. However, the rear plastic bezel covering the logic board does not have holes for both antennas. Is it possible to use the TV/FM Tuner Card in the Power Macintosh 5200?

DISCUSSION -----

Yes, it is possible to use the Apple TV/FM Tuner Card in the Power Macintosh and Macintosh Performa 5200 and 5300 series computers. You need to ask an Apple-authorized service provider to order a new rear I/O Door for you which has the necessary access holes for both antennas.

The Apple service part number for the rear I/O Door is 922-2190.

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Tech Info Library Article Number:20253



Tech Info Library

DOS Compatible Card: Windows 95 and NetBEUI (8/96)

Revised: 8/5/96
Security: Everyone

DOS Compatible Card: Windows 95 and NetBEUI (8/96)

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Article Created: 5 August 1996

TOPIC -----

This article describes how to configure NetBEUI with Windows 95 for a DOS Compatibility Card.

DISCUSSION -----

NetBEUI is a simple and efficient protocol that is still well suited for use on work group size networks. It is not capable of routing (since it does not understand network numbers) so its use does have limits. It is often implemented along with TCP/IP on Windows clients, with NetBEUI used on the local network and TCP/IP used for the other side of routers.

Windows 95 manages all network configuration in the "Network" control panel. Locate the "My Computer" icon on the screen and double-click it to open.

- 1) Open the Control Panel folder to find the Network control panel, double-click the Network control panel to open it.
- 2) Windows 95 requires the installation of at least 3 elements to make a network connection, an Adapter, Client, and Protocol. Start the installation by choosing an adapter. Click the "Add..." button in the Network control panel.
- 3) Choose Adapter and click the "Add..." button. You will load the NDIS driver provided on the DOS Compatibility Installer disk by clicking the "Have Disk..." button, informing Windows 95 that the driver is on a separate disk.
- 4) Use the default location, "A:\", provided in the Install From Disk dialog box. Insert the "PC Software" floppy disk, part of the PC Compatibility Card installer software disk set. Click the OK button and Windows 95 will scan the floppy in drive A: for possible drivers.

- 5) When the scan has completed, you will be presented with a list of the drivers found on the floppy.
- 6) Choose the only option you should see, "PC Card Network Driver (NDIS2)", and click the OK button. Windows 95 will read the driver from the floppy disk and return to the Control Panel display, which should now contain entries for two Clients, the network adapter (you just loaded), IPX/SPX protocol, and the NetBEUI protocol.

NOTE: The IPX/SPX protocol stack is based on Novell's original implementation, however, it is not the same as Novell's original implementation. If you were loading IPX/SPX for NetWare connectivity, you would be selecting "Novell Compatible IPX Protocol"

- 7) Choose the IPX/SPX-compatible Protocol and click the Remove button. This removes the protocol and Client for NetWare Networks.

Now you have a working configuration. The final step is to verify the setup of the remaining components.

- 8) First, confirm the Identification information of the computer by selecting the "Identification" tab.

**** DO NOT CLICK OK AFTER THIS STEP! ****

Verify that the entries for Computer name, Workgroup, and Computer Description are satisfactory.

IMPORTANT: Be sure to check this information. It must be compatible with other computers on the network, therefore these values are often supplied by your network administrator.

**** DO NOT CLICK OK YET! ****

- 9) Next configure the Client component. Re-choose the Configuration tab to display the network configuration. Choose "Client for Microsoft Networks" and click the "Properties..." button.

Select the "Logon validation" checkbox which instructs the computer to Logon to a Windows NT domain and provide the domain name. You can choose either one of the "Network logon options" depending on your desired logon action.

- 10) This completes the configuration of the network. Close the control panel by clicking the "OK" button. Windows 95 will ask for various parts of the original Windows 95 installation media while it adds the new software components. It is possible you will get messages about an attempt to install older version of existing component software. Always choose to keep the newer versions installed in these cases.
- 11) Once all new software is read from the original Windows 95 installation media (in step 10) you will be asked to restart. Select the "continue" option instead and run the SETNET program located on

the DOS Compatibility Installer disk. Select the NDIS and NetBEUI options and click the "OK" button. This step will create the appropriate entries in the PROTOCOL.INI file for the NDIS driver to use.

- 12) Restart the Windows 95 environment by clicking the "start" button, selecting the "restart" option, and choosing "shutdown and restart".

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Tech Info Library Article Number:20254



Tech Info Library

DOS Compatible Card: Configuring Windows 95 for TCP/IP (8/96)

Revised: 8/6/96
Security: Everyone

DOS Compatible Card: Configuring Windows 95 for TCP/IP (8/96)

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Article Created: 6 August 1996

TOPIC -----

This article describes configuring Windows 95 for TCP/IP for a DOS Compatibility Card.

DISCUSSION -----

Windows 95 can be easily configured to use the TCP/IP protocol. You must use the TCP/IP protocol stack that is part of the Windows 95 installer disk(s) to ensure compatibility with the Operating System and applications.

Windows 95 manages all network configuration in the Networks control panel, so we will begin our installation there.

- 1) Double-click the My Computer icon on the desktop. The Control Panel folder is located in the window that opens.
- 2) Double-click the Control Panel folder.
- 3) Locate the Network control panel and double-click it to open and begin the configuration.

You will typically find previous network protocols loaded. For this example, the client is using NetBEUI to connect to a Windows NT servers.

- 4) To begin the installation, click the Add... button.
- 5) In the screen that follows, choose Protocol and click the Add... button.
- 6) Choose Microsoft in the Manufacturers: window on the left, and the TCP/IP option in the Network Protocols: window on the right.

The computer will return to the Network control panel after the loading process with an additional entry for TCP/IP now showing.

- 7) Choose the new TCP/IP entry and click the Properties button. The resultant dialog box is where all TCP/IP configuration is performed. Configurations can be made for a DHCP address server, manual address, DNS gateways, WINS name services, and so on.

CAUTION: You MUST include the TCP/IP address and Broadcast mask at minimum. Most installations will require DNS entries as well.

- 8) Fill out all entries needed for this installation with information provided by the network administrator.

NOTE: If your installation requires DNS, you may find the DNS configuration screen a little confusing. You must put the name of your computer in the Host field and the domain you wish to be a part of in the Domain field. After these value are entered you must add the address of the DNS server(s) to the list and the domain names you wish to be a part of to the other list.

- 9) Click the OK button to end the TCP/IP configuration. If TCP/IP is the only protocol installed, go to step 10.

If TCP/IP is not the only protocol installed on the computer you must tell Windows 95 which protocol is the default to use when connecting to servers. To do this,

- i) Select the desired protocol item (our example uses NetBEUI as the default) and click the Properties... button.
- ii) Choose the Advanced tab and you will find a check box on the page to set this protocol as the default.
- iii) Click the OK button when you have checked the box.

This completes this configuration of the network.

- 10) Close the control panel by click the OK button. Windows 95 will ask for various parts of the original Windows 95 installation media while it adds the new software components. It is possible you will get messages about an attempt to install an older version of existing components. Always choose to keep the newer versions installed in these cases.
- 11) Once all new software is read from the original Windows 95 installation media (in step 10) you will be asked to restart. Select the "continue" option instead and run the SETNET program located on the DOS Compatibility Installer disk. Select the NDIS and TCP/IP options (plus any other protocols you have loaded) and click the "OK" button. This step will create the appropriate entries in the PROTOCOL.INI file for the NDIS driver to use.

12) Restart the Windows 95 environment by clicking the "start" button,
selecting the "restart" option, and choosing "shutdown and restart".

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Tech Info Library Article Number:20255



Tech Info Library

Power Macintosh Multiprocessor FAQ (12/96)

Revised: 12/17/96
Security: Everyone

Power Macintosh Multiprocessor FAQ (12/96)

Article Created: 5 August 1996
Article Reviewed/Updated: 17 December 1996

TOPIC -----

This article includes Frequently Asked Questions (FAQ) about multiprocessing on Power Macintosh computers.

Questions in this FAQ:
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- 1) What is Multiprocessing (MP)?
- 2) How is multiprocessing accomplished on Power Macintosh computers?
- 3) Is Apple's implementation of multiprocessing asymmetric or symmetric?
- 4) What are the supported configurations for using MP on Macintosh computers?
- 5) How does the performance on computer intensive tasks compare to uniprocessor systems?
- 6) Can you run applications that are not MP-savvy on an MP system?
- 7) Can third-party companies license the Apple Multiprocessor API software?
- 8) How can you verify that the Multiprocessor card and software APIs are working properly?

DISCUSSION -----

- 1) Question: What is Multiprocessing (MP)?

Answer: Multiprocessing computer systems are based on more than one microprocessor to provide a performance edge in demanding, computer-intensive

situations.

2) Question: How is multiprocessing accomplished on Power Macintosh computers?

Answer: The Power Macintosh 9500/180MP is Apple's first multiprocessing system. It consists of a dual PowerPC 180 MHz 604e processor card combined with the Apple/DayStar Multiprocessor API, an extension to System 7.5.x which enables multiprocessing. The hardware and API enable increased performance when used with a multiprocessing-savvy application.

From a hardware perspective, both of the processors can be active at the same time. The first processor handles the Mac OS and I/O tasks and sends the multiprocessing tasks to the second processor to implement.

The software implementation is an extension to System 7.5 that enables multiprocessing. It consists of a two-part shared library: a highly leveraged API library that applications interface to and a low level engine that the kernel code controls, interrupts, and tasks in the different processors.

3) Question: Is Apple's implementation of multiprocessing asymmetric or symmetric?

Answer: The current system software release (System 7.5.x) and multiprocessing card provide asymmetric multiprocessing. Asymmetric multiprocessing means that the main processor runs the Mac OS and I/O interrupts, and the other processor runs the multiprocessing tasks. Symmetric multiprocessing means that any processor can handle any type of tasks. Future system software releases may support symmetric multiprocessing.

4) Question: What are the supported configurations for using MP on Macintosh computers?

Answer:

Supported Computers

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Currently, the only configuration available from Apple is the Power Macintosh 9500/180 MP. However, third-party companies, such as DayStar Digital, may make a multiprocessing card that will work in one of the other PCI-based Power Macintosh computers.

Memory Requirements

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Based on the types of applications that are becoming MP-aware (such as graphics, 3D, web authoring), you will need a minimum of 32 MB and could easily expand over 100 MB to support all of your applications.

IMPORTANT TIPS

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Disable Virtual Memory

When using the multiprocessing capabilities, you cannot depend on software solutions to low-memory situations, such as virtual memory or RAM Doubler, because the multiprocessing software is not compatible with virtual memory. Because of this, if virtual memory is turned on or RAM Doubler is installed, then your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

This is particularly important because PowerPC applications typically require more memory when run with virtual memory turned off.

Turn off hard disk sleep

Make sure that the hard disk sleep interval is set to "Never" in the Energy Saver control panel. Otherwise, software applications designed to work with your multiprocessor Power Macintosh may not work properly.

5) Question: How does the performance on computer intensive tasks compare to uniprocessor systems?

Answer: We have seen performance in the range of 1.5-2 times faster on computer intensive tasks such as 3D rendering.

6) Question: Can you run applications that are not MP-savvy on an MP system?

Answer: Yes, the computer will run the application as a single processor system offering the performance of the single processor.

7) Question: Can third-party companies license the Apple Multiprocessor API software?

Answer: The Apple Multiprocessor API is part of the Software Licensing distribution program and is available to any developer.

8) Question: How can you verify that the Multiprocessor card and software APIs are working properly?

Apple includes an application called PowerFraxx on multiprocessing-capable computers, such as the Power Macintosh 9500/180MP. PowerFraxx is a benchmarking application that generates fractals from the classic Mandelbrot set. This application uses the multiprocessor card if the card and multiprocessor API software are installed properly.

To test that the card and software are installed and working properly, follow these steps:

Step 1

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Locate and run the PowerFraxx application.

PowerFraxx is pre-installed in the Apple Extras folder on the hard disk and can also be reinstalled from the CD Extras Folder on the System Software CD-ROM disc.

Step 2

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A

If the multi-processor card and software API are installed properly, a Multiprocessing menu option will be present.

Choose "Use 2 Processors" from this menu. This verifies that the card and software are properly installed. You do not need to follow any of the remaining steps.

B

If the Multiprocessing menu option is not available, either the multiprocessing software or card are not installed properly. Continue with Step 3 to troubleshoot.

Step 3

=====

Verify that virtual memory or Ram Doubler are turned off because the multiprocessing software is not compatible with virtual memory.

Step 4

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Verify that the multiprocessing API software is properly installed. Within the Extensions folder, there should be a folder called "Multiprocessing", which should contain two files:

- Apple Dual Processor HAL
- Multiprocessor API Library

If these files are not installed, reinstall the multiprocessing software. The Multiprocessing Software folder is located in the Apple Extras folder on the hard disk or in the System Software folder on the System Software CD-ROM disc.

This article was published in the Information Alley on 6 August 1996.

Article Change History:

17 Dec 1996 - Added question #8.

09 Sep 1996 - Updated information. Added additional questions.

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Tech Info Library Article Number:20256



Tech Info Library

PowerPC Platform FAQ (5/97)

Revised: 5/5/97
Security: Everyone

PowerPC Platform FAQ (5/97)

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Article Created: 5 August 1996
Article Reviewed/Updated: 5 May 1997

TOPIC -----

This article includes Frequently Asked Questions (FAQ) about the PowerPC Platform (formerly known as the Common Hardware Reference Platform or CHRP).

Questions in this FAQ:
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- 1) What is the PowerPC Platform (formerly known as the Common Hardware Reference Platform or CHRP)?
- 2) Will using a computer based on the PowerPC Platform allow me to use more than one OS?
- 3) When are PowerPC Platform-based computers going to be introduced?

DISCUSSION -----

1) Question: What is the PowerPC Platform (formerly known as the Common Hardware Reference Platform or CHRP)?

Answer: PowerPC Platform is an open computing architecture, based on the RISC PowerPC microprocessor, and able to run multiple operating systems.

2) Question: Will using a computer based on the PowerPC Platform allow me to use more than one OS?

Answer: Yes, a PowerPC Platform-based computer allows users to run the various operating systems by simply re-booting from one OS to another. In this case, the different operating systems are located on different hard drives.

Operating systems and applications that previously didn't run under PowerPC processors will need to be recompiled. No modification will need to be made to Mac OS applications.

3) Question: When are PowerPC Platform-based computers going to be introduced?

Answer: There are no announcements at this time. Apple will issue press releases when PowerPC Platform-based computers are introduced.

Article Change History:

05 May 1997 - Reviewed for technical accuracy.

24 Mar 1997 - Reviewed for technical accuracy.

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Tech Info Library Article Number:20257



Tech Info Library

Macintosh Performa 6400: What is CMSCP Folder? (8/96)

Revised: 8/6/96
Security: Everyone

Macintosh Performa 6400: What is CMSCP Folder? (8/96)

=====

Article Created: 6 August 1996

TOPIC -----

In the System Folder of my Macintosh Performa 6400 series computer, there is a folder named CMSCP. Inside this folder are two folders that are called: "Kodak Color Management Files Used by Adobe Photoshop".

My computer does not appear to have Adobe Photoshop on it. Was it supposed to be included? If not, what is the purpose of this folder? Can I simply delete this folder?

DISCUSSION -----

The CMSCP folder contains color management files used by Adobe PhotoDeluxe in conjunction with the KODAK PRECISION color matching system. If you remove the folder, Adobe PhotoDeluxe will still run fine but the KODAK PRECISION color matching system will be useless.

The "Used by Adobe Photoshop" folder is an error and should say: "Used by Adobe PhotoDeluxe".

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Tech Info Library Article Number:20258



Tech Info Library

LaserWriter 12/640 PS: Cannot Insert 250 Sheet Cassette (8/96)

Revised: 8/6/96
Security: Everyone

LaserWriter 12/640 PS: Cannot Insert 250 Sheet Cassette (8/96)

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Article Created: 6 August 1996

TOPIC -----

I cannot insert the 250 sheet cassette in my LaserWriter 12/640 PS printer. What is wrong?

DISCUSSION -----

The problem may be the length guide on left side of the 250 sheet cassette has shifted backwards. This can occur if you load a full stack of paper and tilt the tray so the weight of paper forces the length guide backwards. Check that length guide is in proper position before insertion into the printer. There is an indent position for each paper length adjustment. When the length guide is between indent positions, the cassette cannot be inserted into the printer.

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Tech Info Library Article Number:20260



Tech Info Library

LaserWriter 12/640 PS: Paper Jam Light Remains On (8/96)

Revised: 8/6/96
Security: Everyone

LaserWriter 12/640 PS: Paper Jam Light Remains On (8/96)

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Article Created: 6 August 1996

TOPIC -----

I had a paper jam in my LaserWriter 12/640 PS printer, however, after clearing the jam by following instructions in the manual, the jam light remains on. What is wrong?

DISCUSSION -----

Check the following two places again because it is easy to miss jammed paper in these locations.

- Look carefully in the duplexer by removing the duplex tray and pivoting the vertical duplexer portion away, then look in the lower rear portion (removing the 250 cassette will also help in improving visibility).
- Remove the black diverter (it has two white clothes pin type clips on it) and look into the exit of the fuser region (WARNING: it may be hot in this region) for a potential accordion style paper jam. After removing the jammed paper from the fuser region, put the black diverter back into position with the two white clothes pin type clips.

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Tech Info Library Article Number:20261



Tech Info Library

DOS Compatibility Cards and Supported Protocols (8/96)

Revised: 8/7/96
Security: Everyone

DOS Compatibility Cards and Supported Protocols (8/96)

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Article Created: 7 August 1996

TOPIC -----

Which non-AppleTalk protocols, such as IP, IPX, and DECNet, work with the DOS Compatibility Card through the following network interfaces:

Built-in Ethernet
PCI Ethernet cards
PCI Token Ring cards
Communications Slot (Power Macintosh 5400) Ethernet cards

DISCUSSION -----

The DOS Compatibility cards do not support Token Ring in any form, and the software on the DOS Compatibility Installer disk can only use the built-in Ethernet Interface when one is present (Communication Slot Ethernet cards can be used on computers without built-in Ethernet interfaces), it also cannot use cards in the PCI slots for I/O.

Apple's software requires that any packet coming into a Macintosh be delivered to either the Macintosh, or DOS environments (packets cannot go to both at the same time) depending on the frame type of the received packet. These destinations are determined by each OS as they register their protocol and frame types within the Macintosh computer at startup. Once a particular frame type is registered all packets of that frame type addressed to the computer are delivered to the associated environment.

This element of our architecture has been responsible for the historical limitation of running TCP/IP only in one environment at a time. TCP/IP is practically implemented only with Ethernet_II frame types, since all packets of one frame type go to only one environment..

With the introduction of the Power Macintosh 7200/90 (in Europe ONLY), 7200/120, 7600/120, 8500/132, 8500/150, and 9500/150 a new Ethernet controller ASIC called Curio Prime is used. This chip implements two hardware Ethernet addresses for

the single built-in Ethernet interface. One is used by the Mac OS and the other is for DOS Compatible use only. Since these computers have two hardware addresses the DOS compatible architecture can now deliver a particular frame type to different addresses which removes the limitation of each frame type going to only one environment.

The presence of this Curio Prime ASIC is the biggest factor in determining a particular Macintosh computer's networking capability with DOS compatible cards.

AppleTalk, IPX, TCP/IP and DECNet can be used in either OS. They can all be used by both environments if the Curio Prime ASIC is present, except for the following:

- DECNet/DOS will not run on any Macintosh computers.
- DECNet will not run on a Power Macintosh 5400 Mac OS environment.
- IPX will not run on a Power Macintosh 5400 Mac OS environment, but will run on a Power Macintosh 5400 DOS environment.

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Tech Info Library Article Number:20262



Tech Info Library

DOS Compatibility Card: Config Novell 32-bit Client (8/96)

Revised: 8/7/96
Security: Everyone

DOS Compatibility Card: Config Novell 32-bit Client (8/96)

=====

Article Created: 7 August 1996

TOPIC -----

This article outlines the steps needed to configure Apple's DOS Compatibility Card to use Novell's 32-bit client software to attach to a NetWare server.

DISCUSSION -----

Step 1

Start Windows 95. Restart in MS-DOS mode.

Step 2

Run the NetWare 16-bit installer to install the ODI driver.

- a) At the install screen choose no for #3 (do not install Windows support).
- b) Choose #5, press enter and select OTHER DRIVERS.
- c) Eject the Novell installer floppy disk and insert the "PC Compatibility Installer" floppy disk and press Return.
- d) Choose the PC Compatibility Ethernet Adapter.
- e) Press return to select the frame type.
IMPORTANT: Press the F10 key to save your settings.
- f) Press enter to begin the installation. Insert disks as required
- g) When the installation is done, exit to DOS and type "EXIT" to restart Windows.

This completes the ODI driver installation.

Step 3

Verify that the ODI driver is working by performing the following:

- a) Restart Windows 95 and press F8 when you see the "Starting

Windows 95..." message on the screen.

b) Choose the "Step-by-Step Confirmation" option.

1) Answer "Y" to all questions. When you reach the
"C:\NWCLIENT\STARTNET" command you have reached the driver loading
section.

2) Answer "Y" to "NWLLANGUAGE".

3) Answer "Y" to "LSL.COM".

4) Answer "Y" to "MACODI.COM".

5) Answer "Y" to "IPXODI.COM".

If you have the right frame type selected you should get a message
that reads "You are attached to server...".

6) This completes the verification of the drivers. Answer "Y" to all
remaining questions until Windows 95 starts.

Step 4

Now install the 32-bit client from Windows 95.

a) Insert disk 1 of the 32-bit installer set and run the "setup" program,
click Start and choose the "Run..." option, then type "a:\setup" into
the dialog box that follows.

b) Close the license box by pressing the "y" key.

c) Click the setup program's Start button.

d) After files have been copied you will be presented with a "Select
Device" dialog box asking for the network driver to install. Choose the
"Existing ODI Driver" option and click OK.

e) You may be asked to provide some computer identification information.
See your network administrator for the required information, and type
it into the proper fields, then click Close.

f) You will be asked if you wish to set any special properties. Click NO,
there will be a chance later to provide any information we might want.

g) You will be asked to insert disks as files are copied to the hard
drive. You may also be asked for the original Windows 95 media.

h) When the installation is complete you will be asked to restart. Eject
the floppy and restart the computer.

The installation may not be complete at this point. To finish the installation
open and close the Network control panel in Windows 95.

Step 5

Open the Network control panel.

Step 6

Choose "IPX/SPX-compatible Protocol" and click Properties.

Step 7

Choose the Advanced tab.

Step 8

Choose "Frame Type" and enter the correct frame type on the right.

Step 9

Click OK to close the dialog box.

Step 10

Choose "IPX 32-bit protocol..." and click Properties.

Step 11

Choose the Advanced IPX tab.

Step 12

Select the "Primary Logical Board" check box and fill in the correct frame type.

Step 13

Click the "Use only the following frame types" radio button and select the frame type.

Step 14

Click OK to close the dialog box.

Step 15

Choose "Novell NetWare Client 32" and click Properties.

Step 16

The "Client 32" page should be visible. Enter a preferred tree or server name.

Step 17

Click OK to close the dialog box.

Step 18

Click OK in the Network control panel.

Step 19

You may be requested to provide various installation media. If you are asked for the Novell NetWare DOS driver disk insert the "PC Compatibility Installer" floppy disk. If you are asked for the location of "lsl.com" type "c:\nwclient".

Step 20

When you are asked to restart choose "continue" instead.

Step 21

Copy the "MACODI.COM" file from the c:\nwclient directory to c:\windows.

Step 22

Now restart the computer to complete the installation.

If your configuration is accurate you will be presented with a Novell Logon dialog box during the startup process. To confirm your connection you can open the "Network Neighborhood" icon and look for your Netware server and/or tree name.

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Tech Info Library Article Number:20263



Tech Info Library

Macintosh Performa 6400: System 7.5 v7.5.3 Compatibility (8/96)

Revised: 8/21/96
Security: Everyone

Macintosh Performa 6400: System 7.5 v7.5.3 Compatibility (8/96)

=====

Article Created: 7 August 1996
Article Reviewed/Updated: 21 August 1996

TOPIC -----

I just purchased a Macintosh Performa 6400 series computer, and I want to install System 7.5 Version 7.5.3 on it. However, whenever I attempt to start up from the System 7.5 Version 7.5.3 CD-ROM disc or Disk Tools disk, the computer will not start up. How can I install this system software on my computer?

DISCUSSION -----

The Macintosh Performa 6400/180 and 6400/200 computers currently ship with System 7.5 Revision 2.1. The development cycles of the Macintosh Performa 6400 series computer and System 7.5 Version 7.5.3 made it impossible for System 7.5 Version 7.5.3 to be supported on these Macintosh Performa computers.

However, Macintosh Performa 6400 series computers running System 7.5 Revision 2.1 have all the applicable system software fixes contained in System 7.5 Version 7.5.3. As such, at this time you would not benefit from installing System 7.5 Version 7.5.3.

Apple releases system software updates on a quarterly basis. The Macintosh Performa 6400 series computers will be included in a future system release if and when there are identified fixes for that computer.

This article was published in the Information Alley on 21 August 1996.

Article Change History:
21 Aug 1996 - Added alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20264



Tech Info Library

Apple TV/FM Radio System: Which Video-in Card to Use? (8/96)

Revised: 8/8/96
Security: Everyone

Apple TV/FM Radio System: Which Video-in Card to Use? (8/96)

=====

Article Created: 8 August 1996
Article Reviewed/Updated: 9 August 1996

TOPIC -----

I want to install the Apple TV/FM Radio Tuner System (M4586LL/A) in my computer but I have an earlier version of the Apple Video System (video-input card). Do I need to upgrade to the latest Apple Video System, part number M2894LL/D?

DISCUSSION -----

The Apple TV/FM Radio Tuner System (M4586LL/A) was tested with all previous revisions of the Apple Video System and is backwards compatible with them.

Depending on your computer, you may need a new rear I/O Door which has the necessary access holes for both antennas. You need to ask an Apple-authorized service provider to order this for you. The Apple service part number for the rear I/O Door is 922-2190.

This article was published in the Information Alley on 8 August 1996.

Article Change History:
09 Aug 1996 - Added alley information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20265



Tech Info Library

Color OneScanner 600/27: 60 DPI Software Limitation (8/96)

Revised: 8/8/96
Security: Everyone

Color OneScanner 600/27: 60 DPI Software Limitation (8/96)

=====

Article Created: 8 August 1996

TOPIC -----

The User's Guide for the Apple Color OneScanner 600/27 states that you can scan at 12 Dots Per Inch (DPI), however the Dispatcher software only gives the option of 60 or 75 DPI. How can I select 12 DPI?

DISCUSSION -----

The 12 DPI is the hardware limit of the scanner. The software lower limit, as you noticed, is 60 DPI. The Preview uses a 75 DPI scan and the thumbnails are interpolated in the software. The 12 DPI is not used with the Apple software. There may be other third-party software, such as plug-ins, that take advantage of the 12 DPI, but Apple is not aware of any.

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Tech Info Library Article Number:20266



Tech Info Library

Desktop Printing 2.0: Menu Visible but Isn't Functional (1/97)

Revised: 1/7/97
Security: Everyone

Desktop Printing 2.0: Menu Visible but Isn't Functional (1/97)

=====

Article Created: 8 August 1996
Article Reviewed/Updated: 7 January 1997

TOPIC -----

After moving a desktop printer into a closed folder, the Printing menu stays active, yet none of the functions in the menu work. All of the options remain bold in the menu, yet if you select any of them, nothing happens. I then opened the folder that contains the desktop printer. The icon for the desktop printer is still highlighted. I tried selecting the options in the printing menu and they still would not do anything. I clicked on another icon in the folder the same folder. That icon became highlighted, but the desktop printer icon also remained highlighted as if the shift key were down. When I clicked on a third icon, it became highlighted and the other two went back to normal. At this time, I could click on the desktop printer and all of the functions in the printing menu worked as expected.

DISCUSSION -----

This has been reproduced and reported to the engineering team. The quick workaround as you outlined is to make certain that if a desktop printer (or printers) is placed into a folder, you must open that folder and select the desktop printer you want to use in order for the Printing menu to work correctly.

Article Change History:
07 Jan 1997 - Corrected typographical error.

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Tech Info Library Article Number:20267



Tech Info Library

Apple Internet Connection Kit: How & What to Remove (11/96)

Revised: 11/5/96
Security: Everyone

Apple Internet Connection Kit: How & What to Remove (11/96)

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Article Created: 8 August 1996
Article Reviewed/Updated: 5 November 1996

TOPIC -----

I used the Custom Remove feature of the Apple Internet Connection Kit (AICK) installer to remove AICK, however, it did not work. What files do I have to put into the Trash to remove AICK?

DISCUSSION -----

Here is what AICK installs that you will have to drag to the Trash.

Begin_Table

Internet Connection Kit Folder:

- Apple Internet Connection Kit Guide
- Apple Internet Dialer
- Internet Applications
 - Claris EMailer Lite
 - Fetch
 - NCSA Telnet
 - Netscape
 - NewsWatcher
- Internet Utilities
 - Apple Internet Status
 - Internet Config
 - MacPing
 - QuickTime/QTVR
 - RealAudio
 - Sparkle
 - Stuffit Expander
 - Config PPP Folder
 - Config PPP control panel *

Read Me

System Folder Items:

Control Panels:

Config PPP

~ATM

Extensions:

Internet Config Extension

MacTCP Token Ring Extension

ObjectSupportLib ***

PPP

Hosts

Preferences **

Internet Dialer Folder

Internet Dialer Prefs

Modem Information

reg server

Internet Prefs

End_Table

* Installed by the AICK installer in this location. Placed in control panels on first successful connection made by the Internet Dialer.

** The Preferences folder items, which could be used by other applications, may not need to be removed. This is especially true if you plan on reinstalling AICK.

*** This is a shared library file and may provide additional AppleScript support for other installed PowerPC applications. Removing it could result in an error dialog and the need to reinstall the application which needs this shared library.

Article Change History:

05 Nov 1996 - Added an additional notation.

21 Oct 1996 - Made changes for technical accuracy.

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Tech Info Library Article Number:20268



Tech Info Library

Physical Layer Ethernet Errors (8/96)

Revised: 8/8/96
Security: Everyone

Physical Layer Ethernet Errors (8/96)

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Article Created: 8 August 1996

TOPIC -----

This article describes physical layer Ethernet errors and some of their common causes.

DISCUSSION -----

Integrity of the physical layer of an Ethernet network is required for upper layer protocols like TCP/IP and AppleTalk to function effectively. Errors at the physical layer generally result from faulty wiring, defective transceivers, network interface cards, or hub ports. Apple products adhere to industry standards for Ethernet and troubleshooting methods generic to the industry can be used to recognize physical layer issues.

Protocol analysis can be used to monitor physical layer health. While physical errors are a normal occurrence, they should not exceed two percent of available bandwidth as a general rule of thumb.

Common physical layer errors include collisions, cyclic redundancy check/alignment errors, and frame length errors.

Collisions

Collisions on an network are normal due to the collision detect (CSMA/CD) nature of the Ethernet access method. If no problems exist on the network, but there are slow file transfers, a minor collision rate from a workstation does not indicate a problem. Collisions above one percent of overall network traffic should be taken seriously and normally indicate either a faulty cable, transceiver, or network interface.

CRC/ Alignment Errors

Cyclic redundancy check (CRC)/ alignment errors generally indicate improper byte-alignment for Ethernet packets. CRC errors greater than two percent of

overall traffic require attention. Most commonly CRC errors can be isolated to a particular workstation with a faulty network interface card. Alternatively, a faulty transceiver, cable, or hub port can be responsible for CRC errors.

If CRC errors cannot be isolated to a unique workstation address, cabling is the likely cause. Faulty connectors, improper grounding of thin coax wiring, or defective wiring concentrators could be the root problem.

Frame Length Errors

Standard Ethernet packets vary in length from 64 to 1,518 bytes. Any packet with a length outside of the standard range constitutes an error. Packets shorter than 64 bytes are often referred to as "runts" or "short frames". "Long packets" exceed 1,518 bytes. Troubleshooting frame length errors can be troublesome since the packets generally do not contain reliable address fields. Fault isolation usually requires removal of physical devices until the symptom is removed, with the last device removed then labeled as suspect. The root cause of the errors could be a defective network interface, transceiver, or a corrupt network interface driver.

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Tech Info Library Article Number:20269



Tech Info Library

AppleSearch Still Available? (8/96)

Revised: 8/9/96
Security: Everyone

AppleSearch Still Available? (8/96)

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Article Created: 9 August 1996

TOPIC -----

Is AppleSearch still available as a stand alone product?

DISCUSSION -----

AppleSearch is only available as a component of the Apple Internet Server Solution. It is not available as a stand alone product.

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Tech Info Library Article Number:20270



Tech Info Library

System 7.5.3: Out of Memory Error After Fax (8/96)

Revised: 10/17/96
Security: Everyone

System 7.5.3: Out of Memory Error After Fax (8/96)

Article Created: 9 August 1996
Article Reviewed/Updated: 19 August 1996

TOPIC -----

I get out of memory errors after sending a fax on my Performa 6320. If I try to run any program after Faxing or during Faxing the out of memory error occurs. If I force quit the Finder after Faxing I do not get out of memory errors, but I do not think this is a solution because I again get out of memory errors the next time I send a fax. I tried to clean install software, but this did not resolve the issue. What is wrong, and what can I do to resolve this?

DISCUSSION -----

After testing we believe the issue results from an interaction between System 7.5 Update 2.0 (System 7.5.3) and the Global Fax software. If System 7.5 Update 2.0 or System 7.5.3 Revision 2 is installed, out of memory errors occurred after Faxing from the Finder, in other words choosing Fax Window from the File menu. Testing shows this issue on the following Macintosh computers: Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300 series.

As a workaround faxing from within an application seemed to work properly in all cases. For example, if you want to fax a window or desktop, take a picture of it (the Command-Shift-3 feature), and then from within Simple Text fax the picture. We tested Global Fax 2.5.4P with a TelePort Gold IIv modem, and Global Fax 2.5.5P and 2.5.6P with a TelePort Platinum V modem.

As you point out, a simple workaround is to force quit the Finder, and of course, restarting the computer would also work.

Global Village has also reproduced this issue. Apple and Global Village are now looking into it to determine the best method for a fixing. Because of the uncertainty of what the nature of this issue is, it is impossible to give a time frame for a fix, or how the fix will be distributed.

Article Change History:

19 Aug 1996 - Updated article for clarity.

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Tech Info Library Article Number:20271



Tech Info Library

WorldScript Updater 1.1: Read Me (8/96)

Revised: 8/9/96
Security: Everyone

WorldScript Updater 1.1: Read Me (8/96)

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Article Created: 9 August 1996

TOPIC -----

This article contains the ReadMe file for the WorldScript Update v1.1.

DISCUSSION -----

Who Should Install WorldScript?

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This installer will install files needed by WorldScript technology for users running Mac OS 7.5 and above. Users of the Japanese and Chinese Language Kits or applications which depend on WorldScript technology should install these pieces as they improve the stability and performance of your system.

QuickDraw GX and Power Macintosh users should upgrade to these pieces as they provide important improvements over previous versions.

The files in this WorldScript updater are taken from the Arabic Language Kit 1.0.1, Hebrew Language Kit 1.0.1 and the Cyrillic Language Kit 1.0. You do not need this if you are running one of these kits and do not simultaneously have Japanese or Chinese installed.

Using the WorldScript Updater

=====

The Easy Install option of the WorldScript Updater 1.1 updates your existing WorldScript and/or Language Kit Extension files. If you want to install additional files, you can use the Custom Install option of the Installer. The Language Kit Extension will only be available as an update. In other words, you cannot install this unless you have purchased an Apple Language Kit and have it installed in your active system.

1. To open the WorldScript Updater, double-click the Installer icon on the disk you received with your WorldScript Updater package.

2. To update existing WorldScript and Language Kit Extension files on your startup hard disk, click Install.

To install additional files, choose Custom Install from the pop-up menu, then click to put an X in the box next to each item you want to install. When you're finished choosing items, click Install.

The files are installed on your hard disk. You may be prompted to restart your computer after installation.

About the WorldScript Updater

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The WorldScript Installer installs the following files:

- * WorldScript I (version 7.5.3) used for complex one-byte processing of languages such as Arabic and Hebrew,
- * WorldScript II (version 7.5.1) used for two-byte processing of languages such as Chinese, Japanese, and Korean,
- * InputBackSupport (version 7.5.3) provides support for two-byte fonts; automatically installed with WorldScript II,
- * Language Kit Extension (version 7.5.2) provides essential support for all Language Kit products. This extension cannot be custom installed. It will be automatically installed on all systems where it is necessary.

What's new the WorldScript Updater 1.1 over WorldScript Updater 1.0.1?

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1. It updates the Language Kit Extension to 7.5.2 when it is present and not otherwise. In previous versions of the WorldScript Updaters, the Language Kit Extension was left untouched.
2. WorldScript I is version 7.5.3. Improvements since 7.5.1 include fixing a conflict with ATM, fixing a crash with LC 475, Performa 57x, and Duo 280c CPUs, allowing Setting control panels (Arabic, Hebrew, Persian) to work better as secondary scripts and some minor improvements to WorldScript I script resources.
3. The WorldScript Updater 1.1 installer script recognizes name differences by doing a more intelligent search and thus will now work with localized file names.
4. It recognizes the difference between WorldScript Power Adapter and WorldScript II which at one point had the same type and creator.
5. It prevents installation of the Language Kit Extension on systems where it does not already exist.
6. It updates InputBackSupport even when WorldScript II doesn't need to be updated.

7. Naming is now more consistent. "WorldScript Pieces", "WorldScript Pieces Installer", "WorldScript Updater", "WorldScript Installer", 7.5.1, 1.0, have all been changed so that it is consistently called "WorldScript Updater 1.1."

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Tech Info Library Article Number:20272



Tech Info Library

Clean System Install on an PCI-based Workgroup Server (8/96)

Revised: 8/13/96
Security: Everyone

Clean System Install on an PCI-based Workgroup Server (8/96)

Article Created: 9 August 1996
Article Reviewed/Updated: 13 August 1996

TOPIC -----

This article describes how to do a clean system install of the Mac OS on an AppleShare server and preserve privileges. This procedure will work on Workgroup Server and other Macintosh computers.

NOTE: This will not cure problems due to corrupted Users & Groups Data File or AppleShare PDS file.

This is the procedure to use if your system software on a Mac OS AppleShare server has become damaged, and you want to replace it while preserving privileges and sharing information.

DISCUSSION -----

First, Restart with either a Disk Tools floppy, or the Workgroup Server CD-ROM and run Disk First Aid and allow any fixes. If Disk First Aid cannot repair the drive, you should back up your data, format the drive, and then restore the data.

WARNING: Be sure to back up data BEFORE formatting a drive because all data will be lost during the formatting process.

If your problem was starting the file server software itself, or in any way involved with privileges, you will want to attempt to compact volume access privileges with the AppleShare Admin software prior to resorting to the clean install. This will frequently fix privilege problems. If the server still will not start, follow these steps:

Clean Server Install

Step 1

Startup with the "Workgroup Server Software" CD-ROM disc that came with your Workgroup Server by pressing and holding the "c" key after restarting until you see the "Welcome To Macintosh" screen.

At the desktop, the "Workgroup Server Software" CD disc's icon should be in the upper-right corner of your screen with your hard drive's icon below it. If another hard drives appear above the "Workgroup Server Software" CD, open the Startup Disk control panel, and select the "Workgroup Server Software" CD. Close all open windows and restart the computer. The "Workgroup Server Software" CD should now appear in the upper-right corner above the hard disk.

Step 2

Open the "Install System Software" folder and double click on "Install System Software."

Step 3

When the "Welcome to System 7.5" message appears, click Continue.

Step 4

When the installer window appears, press the Command-Shift-K keys simultaneously (the Command key is the key with the Apple and Clover leaf). You will be presented with a small dialog box with two selections:

- Update Existing System Folder
- Install New System Folder

For a clean install, select Install New System Folder and click "OK." Make sure the Destination Disk on the bottom left is the hard disk you want to install onto, then click Clean Install on the bottom right. This will install a new system folder and rename you current folder "Previous System Folder."

Step 5

After the system software has been installed, restart and install AppleShare Software.

NOTE: Be careful not to launch AppleShare until you are instructed to do so.

Step 6

After the computer has restarted, open the System Folder, and the Preferences folder. Drag the Users & Groups Data File to the trash. Close the Preferences folder.

Step 7

Locate the folder named Previous System Folder and open it, then open the Preferences folder. While pressing and holding the Option key on your keyboard, drag the Users & Groups Data File to the desktop. (Holding down the option key will let you copy the Users & Groups Data File instead of moving it.) Close the Preferences folder and the Previous System Folder.

Step 8

The System Folder should still be open (if it's not, open it). Drag the Users & Groups Data File on the desktop to the Preferences folder of the open System Folder.

Step 9

Restart the computer and open the Sharing Setup control panel. Enter the Macintosh name, it does not have to be the same name as it was before, but if possible, it should be the same to keep from confusing users. Then choose AppleShare Admin in the Apple menu. (You may be prompted for server name and admin key.) Verify that users & groups are intact. If they are, now run the AppleShare File Server program.

NOTE: This methodology will preserve the original System Folder's hierarchy in the Previous System Folder. At this point you can transfer any items from your Previous System Folder to your new one if necessary. BE CAREFUL NOT TO REPLACE ANY EXISTING ITEMS. Those items which were either installed during the install process, or are unnecessary may be placed in the Trash.

Article Change History:

13 Aug 1996 - Made minor technical correction.

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Tech Info Library Article Number:20273



Tech Info Library

PC Compatibility Cards: Errors Installing Video Software (8/96)

Revised: 8/26/96
Security: Everyone

PC Compatibility Cards: Errors Installing Video Software (8/96)

Article Created: 12 August 1996
Article Reviewed/Updated: 26 August 1996

TOPIC -----

If I follow the Quick Setup instructions on pages 174-175 in the PC Compatibility Card User's manual (either 7-inch or 12-inch), I get an error message that says, "Can't open file E:\VIDEO\DRIVER\EEDATA.EE_".

When I try to install using the "Factory Default" settings I get a different error message.

What do these messages mean? How can I work around them?

DISCUSSION -----

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Can't Open File Error Message
=====

Issue
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When you get the error message that says, "Can't open file E:\VIDEO\DRIVER\EEDATA.EE_", the installer is trying to create a file on the CD-ROM disc which it cannot do. Also, the installer will modify AUTOEXEC.BAT so it will try to load E:\VIDEO\DRIVER\CUSTOM, which will generate one of several error messages each time the computer is started:

1. Invalid drive specification - if CUSTOM loads before MSCDEX
2. Bad command or file name - if CUSTOM loads after MSCDEX and some CD-ROM disc other than PC Utilities is in the drive
3. CDR101: Not ready reading drive E - if there is no CD-ROM disc in the drive

Workaround

=====

The workaround is as follows:

Step 1

Run E:\VIDEO\DRIVER\INSTALL and go through the Utilities Installation to install the files into C:\MACH64.

Step 2

Switch to C:\MACH64, run INSTALL, and do the Quick Setup. As long as you do not select the factory default setting it creates EEDATA.EE_ in the C:\MACH64 directory.

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Error Installing "Factory Default"

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Issue

=====

If you use Quick Setup to configure DOS video and choose the "Factory Default" selection, the installer will not create the EEDATA.EE_ file. However, CUSTOM.COM is still loaded in AUTOEXEC.BAT, and on every restart you get an error which says, "Problem opening file "EEDATA.EE_". CUSTOM is not installed."

Resolution

=====

The way to resolve this issue is to:

Step 1

Remove the CUSTOM line in AUTOEXEC.BAT

Step 2

Select a different monitor in Quick Setup, then go back and select 'Factory Default'.

This article was published in the Information Alley on 26 August 1996.

Article Change History:

26 Aug 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20274



Tech Info Library

Color StyleWriter 2500: Read Me Document (8/96)

Revised: 8/12/96
Security: Everyone

Color StyleWriter 2500: Read Me Document (8/96)

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Article Created: 12 August 1996

TOPIC -----

This article contains the Color StyleWriter 250 Readme document.

DISCUSSION -----

Information About Your Color StyleWriter 2500 Printer

This document contains important reminders and some information that's not in the user manual.

Contents

- Installation Alert
- Apple Color Printing CD
- Low-memory Troubleshooting
- Color Printing
- Other Printing Tips
- Desktop Printing
- Watermarks
- Printing With QuickDraw GX
- Using the Color StyleWriter 2500 With Application Programs

Installation Alert

Because of data compression, it may take installer Disk 1 up to 12 minutes to install its contents onto your hard disk. The other disks will work much more quickly.

Apple Color Printing CD

If you have problems with the software on the Apple Color Printing CD, contact

the appropriate manufacturer:

- for Personal Publishing Toolkit, contact GDT, 604-473-3678
- for StickerShop Plus!, CardShop Plus! or Calendars and More, contact Mindscape, 415-898-5157
- for help with the fonts, contact Bitstream, 617-497-7514

Low-Memory Troubleshooting

If you notice any of these symptoms, your Macintosh may be running out of memory.

- The Macintosh displays "out of memory" warning messages.
- Some portions of a document don't print.
- Printing is very slow.

To make more memory available, try these suggestions:

- Have only one program open at a time.
- Increase the amount of memory you give to the program you're printing from by using the Get Info command (as explained in the documentation that came with your Macintosh).
- Use the Chooser to turn off background printing, as explained in Chapter 2 of the user manual.
- Choose Normal in the Print dialog box.
- In the Page Setup dialog box, choose Portrait (normal) orientation instead of Landscape (sideways) orientation.
- Remove any watermarks from your document.
- Desktop printing requires more memory to print than PrintMonitor 7.1.2. You can remove desktop printing by using the custom remove option called "Desktop Printing Software."
- When you print in the background, if you often get a message that there is not enough memory to print on a certain desktop printer, you can give that desktop printer more memory by selecting its icon and choosing the Get Info command. Then increase the number in the Preferred Size box. (For more information on increasing a program's memory, see the documentation that came with your Macintosh.)
- Use the Memory control panel to turn on virtual memory, as explained in the documentation that came with your Macintosh.

Color Printing

- When printing very light colors in grayscale mode, you may see thin lines fade

or break up. If this happens, pick a darker color for the affected object, or try printing with the Pattern halftoning option selected. (In the Print dialog box, click the Color button, then select the Pattern option.)

- If you print a document that should have a smooth gradient from one color or shade to another and notice an unexpected color change, it may be that one of the colors in the gradient cannot be reproduced by the printer. Try using a different matching method in the Color Options dialog box, or try turning off ColorSync.
- If the color blue on your printout appears purple, turn on ColorSync in the Color dialog box.
- In some programs, colors on the screen may look solid but contain tiny black dots when printed. To print solid blocks of color without these black dots, use the Business Graphics color-matching method. In the Print dialog box, click the Color button. In the Color Options dialog box that appears, make sure there is an X in the ColorSync box, and then select Business Graphics from the Matching Method pop-up menu.

If your colors still have too many black dots, create the document in a program that allows you to define each color, then make the color fully saturated. For example, to print yellow without any black dots in it, use your application program to define the yellow you are using as 100% red, 100% green, and 0% blue.

Other Printing Tips

- If you see random fine lines within a landscape printout, change the orientation to portrait if possible.
- If you see very thin stripes near the bottom of your printout, use your application program to make your bottom margin larger. A bottom margin of 0.8 inches or greater is best.
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.
- If you get the message, "Serial port in use by another application, please quit the application and try again," restart your Macintosh before trying to print again.
- Close the Chooser after making any changes to it.
- To avoid confusion when sharing your printer, be sure to give each shared Color StyleWriter 2500 printer a unique name. If you have more than one printer with the same name in a single AppleTalk zone, the Chooser will display only one of them.

Desktop Printing

- If no desktop printer icons appear after you follow the instructions in Chapter 1, it may mean the Installer program installed PrintMonitor 7.1.2 instead of the desktop printing software. This can happen if you are running system software version 7.5 or earlier in a language other than English. You have three choices:

- Use the PrintMonitor 7.1.2 that was installed.
- Upgrade to System 7.5.1, and then install the Color StyleWriter 2500 software again.
- Use the Installer program's Custom Install feature to install the desktop printing software. This option, however, also installs an English-language version of the Finder.

- When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

- If you want to have more than 3 desktop printers, you must increase the Desktop PrintMonitor memory allocation by 10K for each additional desktop printer you want. To do so, select the Desktop PrintMonitor icon—it's in the Extensions folder inside the System Folder—choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

Watermarks

- When using a watermark, make sure the font that is in the watermark file is also in the Fonts folder inside your System Folder. If you give the watermark file to someone, they also need any fonts that it uses in order to use the watermark in their own documents.

- If you are printing a diagonal watermark such as Draft or Final on A4 or Legal size paper, for best results use Centered or Align Top Left orientations.

Printing With QuickDraw GX

- If you have QuickDraw GX on your system, the Color StyleWriter 2500 Installer will automatically install everything you need for printing with QuickDraw GX. If you have the Color StyleWriter 2400 GX driver in your Extensions folder, remove it and restart the computer before using the Color StyleWriter 2500 GX driver.

- If you installed QuickDraw GX after you set up your Color StyleWriter 2500, you must reinstall the Color StyleWriter 2500 software.

- After you click the Print button to print a complex document, you may notice a delay before you see printer activity.

- If printing with QuickDraw GX doesn't produce satisfactory results, you can use the GX Helper utility to turn off QuickDraw GX and use the regular QuickDraw

printing software. For more information, see Appendix E of your user manual.

Using the Color StyleWriter 2500 With Application Programs

If you have problems printing from a specific program, it may be a problem in that program. If you have problems, contact the publisher of the program. In some cases a newer, more compatible version of the software may be available.

- In some programs—such as Microsoft Word 5.1, WordPerfect 3.5 and ClarisWorks 4.0—rotated text created within the program may print with jagged edges. For best results, create the rotated text in another program and paste it in.

Notes About Specific Programs

The following list describes some special situations that you should be aware of when working with specific programs. (There may be other problems with these programs or with other programs not mentioned in this document.)

Adobe Type Manager

- When you install version 3.8.1 or later of Adobe Type Manager, some system fonts are removed from your system and placed in a folder called "De-installed Fonts1." If you later turn off ATM, drag all the fonts in the "De-installed Fonts1" folder back into the Fonts folder inside the System Folder to prevent characters with jagged edges.
- If you get incorrect output when you try to print rotated and flipped Adobe Type 1 fonts, try using a TrueType font instead.

Adobe Illustrator 5.0

- Unless you have at least 15–20 MB of free disk space on your startup disk, you will see a "disk is full" error message when you try to print. The more complex the document, the more space you need.

Adobe Persuasion 3.0

- If you are having difficulty canceling printing from Persuasion, try turning off ATM.

Adobe PageMaker 5.0

- To see the Color StyleWriter 2500 Page Setup and Print dialog boxes, click the Setup button in PageMaker's Print dialog box.
- When printing rotated PICT or EPS images, be sure background printing is turned on in the Chooser. If you must print in the foreground, rotate the image in another program, then import it into PageMaker in the orientation in which you plan to print it.
- PageMaker 5.0 prints pages in reverse order on the Color StyleWriter 2500, which may be particularly confusing if you are using 2-up or 4-up printing. To

print the first page first, turn on the Reverse Order option in the Print dialog box.

- Try changing the monitor depth from thousands or millions to 256 if you are having difficulty printing a particular document.

CardShop Plus! 1.0, Calendars and More 1.0, StickerShop Plus! 1.0

- If you are using QuickDraw GX, do not use GX Helper with these applications.

ClarisDraw 1.0v2

- If you have problems printing in the background, you may want to increase the Desktop PrintMonitor extension's preferred size to 300K (by using the Get Info command, as explained in the instructions that came with your Macintosh). The extension is located in the Extensions folder inside your System Folder.

Common Ground MiniViewer 1.1.3

- For best results print in Normal mode.

DeltaGraph Pro 3.0.4

- When printing charts, always click the QuickDraw button in the Print dialog box.

FrameMaker 5.0

- If you import text as a graphic, you can crop it on the screen but it will print uncropped.
- Rotated text in large point sizes will print as a gray box. For best results, break up the text blocks into smaller pieces or individual characters.
- For best results, use TrueType fonts when printing rotated text.
- Do not mix portrait and landscape pages in the same document.

MacDraw II 1.1 v2

- To print in color, be sure to turn on the Print Color Patterns in the Print Options dialog box and select Color in the Image pop-up menu in the Print dialog box.
- If you experience problems when printing your MacDraw II document with layout of 2-Up or 4-Up, try using a different program, like ClarisDraw.

Microsoft Excel 4.0 and Lotus 1-2-3

- To print in color, be sure to check the Print Using Color option in the Print dialog box and select Color in the Image pop-up menu.

Microsoft Excel 5.0

- If colored cell borders drop out when printing, try using yellow or brown or you can use the line tool in the Drawing tools palatte.
- When you choose the Page Setup command, you get Excel's own version of the Page Setup dialog box. Click the Options button to see the version of the dialog box with the special Color StyleWriter 2500 options.

Microsoft Word 6.0

- When you cancel a print request from Microsoft Word 6.0, part of the document will still print. If you are using desktop printing, try stopping the print queue on your desktop printer and then removing the print request instead of canceling. To do this, click your desktop printer icon and select Stop Print Queue from the Printing menu.
- For best results when printing envelopes, choose Envelopes and Labels from the Tools menu. Then click the Feed icon. In the Envelope Options dialog box that appears, click the second icon from the left, and make sure that Face Up is selected.

ModelShop II 1.2

- For best results, print in Normal mode.

Ofoto 2.0.2

- For best results, make a custom calibration for the Color StyleWriter 2500 and click the Custom Profile button.

Print Shop Deluxe 1.1.1

- If you are getting off-center and incomplete printouts of cards, try restarting your Mac.

QuickMail 3.5 and earlier versions

- If you are getting rectangles instead of characters in your QuickMail printout, try selecting Text Only in the Print Dialog box.

Studio/8 v 2.0 and Studio/32 v 1.2

- Always click the QuickDraw button in the Print dialog box.

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Tech Info Library Article Number:20275



Tech Info Library

Newton Press 1.0: ReadME First File (8/96)

Revised: 8/12/96
Security: Everyone

Newton Press 1.0: ReadME First File (8/96)

=====

Article Created: 12 August 1996

TOPIC -----

This article contains the Newton Press 1.0 Read Me First file.

DISCUSSION -----

About Newton Press 1.0

Congratulations on purchasing Newton Press. The Newton Press application enables you to quickly and easily transfer information from your desktop computer to your Newton personal digital assistant (PDA). Newton Press provides a fast, convenient means of producing electronic documents that anyone with a Newton PDA can read.

This Read Me contains important late-breaking information about using the Newton Press application on computers running the MacOS. This document presents information about:

- Installing Newton Press
- Obtaining a serial cable or LocalTalk connector box
- Using Newton Press Guide
- Setting up Newton Press
- Increasing the amount of memory available to Newton Press
- Using sample Newton books and templates
- Formatting a document before adding it to a Newton book
- Using translators
- Adding a spreadsheet to a Newton book
- Troubleshooting

If you have access to the World Wide Web, you can provide feedback and obtain the latest information about Newton Press and other Newton products from:

<http://newton.info.apple.com/newton/>

Installing Newton Press

Follow the instructions for installing the application provided in Chapter 1, "Getting Started" in the Newton Press User's Guide. Be sure to turn off any virus-detection software and system extensions before installing the software, as explained in the instructions. If you experience problems installing, see the Newton Press User's Guide in Chapter 9, "Troubleshooting," or the troubleshooting section at the end of this document.

Obtaining a serial cable or LocalTalk connector box

You can connect a Newton PDA directly to your computer using a serial cable, or you can connect it to your AppleTalk network using a LocalTalk connection box. If you already have a serial cable that you use to connect your Newton PDA and computer, you can continue to use that cable.

If you do not have a cable or adapter, you can purchase one from your local dealer or from Apple. Call 1-800-211-1537 (US and Canadian customers only) or contact your dealer for more information. In Australia, call Apple Software Upgrades at 1-800-631-125 or send a fax to 02-452-8204.

Using Newton Press Guide

To easily familiarize yourself with Newton Press, be sure to use the Newton Press Guide. The Newton Press Guide provides on-line help that can answer most common questions about the application.

With Newton Press running, press Command-Shift-? or choose Newton Press Guide from the Help menu. The Newton Press Guide lists topics you can choose. These topics provide step-by-step instructions for completing many Newton Press tasks.

Setting up Newton Press

Before you can install a Newton book created on your computer to a Newton PDA, you must set preferences that indicate how you have connected your Newton PDA to your computer. You can not transfer information to the Newton PDA unless you indicate how the computer and Newton PDA are connected.

- If you are using a LocalTalk connection, choose Preferences from the Edit menu and select Connect via Network.
- If you are using a serial cable connected to your computer's printer or modem port, choose Preferences from the Edit menu, choose Connect via Serial, and choose the port to which you have connected your serial cable.

These connection instructions are included in the installation procedure in the Newton Press User's Guide in Chapter 1, "Getting Started."

Increasing the amount of memory available to Newton Press

The Newton Press application is preset to create documents up to 500K in size. If you need to create larger documents, you can increase the amount of memory allocated to the application.

1. Choose Quit from the File menu to close Newton Press, if it is open.
2. In the Finder, click the Newton Press application icon.
3. Choose Get Info from the File menu. The Get Info window appears.
4. Type a larger number in the "Preferred size" box.
5. Click the close box to close the window.
6. Double-click the Newton Press icon to open the application.

Using sample Newton books and templates

When you install the Newton Press software, you'll find a Samples folder on your desktop. This folder contains samples of Newton books for you to try.

Stationary documents for several word processors are also provided for you to use as templates. These templates are documents formatted to approximate the margins of Newton Press books. You can open a template and then add and format information before adding it to Newton Press. This allows you to take advantage of the word-processing application's advanced features for editing, formatting, spell-checking, etc.

Note: Some template formatting does not match the format of a Newton book exactly because of the unique text handling characteristics used by Newton PDAs. These templates do not provide a good formatting guideline when you use a header in your Newton book.

You can erase the sample Newton books and template files from your hard disk when you no longer want them.

Formatting a document before adding it to Newton Press

Sometimes it is easier to format a document in the application that originally created it, before adding it to a Newton book. For example, you may want to change tables or graphics to suit the size of a Newton PDA screen. Although Newton PDAs may have screens of differing sizes, most screens are approximately 3.25 inches high by 2.75 inches wide. Try setting up your documents to fit within these dimensions.

Using translators

When you add documents to Newton Press, Newton Press uses XTND translators to read different file formats. The Newton Press software includes translators to read the following file formats:

- ASCII
- Claris XTND Bridge

- EPSF
- MacPaint 2.0 Deluxe
- MacWrite 5.0
- MacWrite II
- Microsoft Word 4-5
- Microsoft Word 6.0
- Microsoft Works 2.0
- PICT
- RTF
- Text
- TIFF
- WordPerfect 3.1
- WriteNow 2.0

The translators are in the Claris folder in the System Folder. Other translators are available from Claris or third parties.

At the time of this release, there is no translator for ClarisWorks. To import a ClarisWorks file, use ClarisWorks to save the document in a file format that Newton Press can read.

If you do not have a translator for a specific file format, you will see an error message when you try to add the file to Newton Press or when you drag and drop a file on Newton Press to create a book automatically. If you see an error message, check the original application to see whether you can save your document in a file format that Newton Press can read.

Newton Press can read Microsoft Word files that have an OLE component only if you have the OLE extension installed on your computer. The OLE extension is automatically installed by the latest version of Microsoft Word.

If a particular translator does not seem to be translating information correctly, try saving your document in a different file format.

Adding a spreadsheet to a Newton book

You cannot add spreadsheets directly to Newton Press. However, you can add spreadsheet information in either of two ways:

- Convert the spreadsheet to a tab-delimited text format that Newton Press can read. Converting a spreadsheet this way works best for small spreadsheets that do not have more than several columns of information.
- Convert the spreadsheet to a picture and import the picture into Newton Press. For example, capture an image of the spreadsheet using a screen-capture application, or transfer the spreadsheet into a graphics application and save it as a graphic. Converting a spreadsheet into a graphic enables you to add images of larger spreadsheets to Newton Press which can then be scrolled on a Newton PDA screen. However, this graphic method of conversion may create large files.

Tip: If you use Microsoft Excel, you can use a shortcut to copy spreadsheet information as a picture. Select the information you want in your spreadsheet,

then hold down Shift as you open the Edit menu. Choose Copy Picture from the Edit menu. A picture of your information is placed on the Clipboard, and you can then paste it into Newton Press.

Troubleshooting

When I try to use the Redo command under the Edit menu, it is always grayed out.

- This feature has not been implemented in this version of Newton Press.

When I try to install Newton Press, the installer reports a disk error and refuses to proceed.

- You may have a damaged file on your hard disk that the installer can not overwrite. Choose the Custom Install option and install each component separately. This will help you to isolate the damaged file. Change the file name to a different file name and install Newton Press again.

I have connected my cable to the printer port and selected my printer port as my connection type in Preferences, but I can't install packages on my Newton PDA.

- If you select the printer port for a serial connection in your Newton Press preferences, you cannot use LocalTalk and must turn it off in the Chooser by making AppleTalk inactive. Note that this does not apply if you are using EtherTalk for your network.

I copied a graphic to my Clipboard, but I do not see it.

- If you open the Clipboard window and copy a graphic, the graphic may not immediately appear on the Clipboard. To see the graphic, close the window and reopen it. The graphic will appear.

When I switch computers and use Newton Press, the drag and drop features seem to work differently.

- Different versions of the MacOS support the drag and drop feature differently. You can drag and drop one or more files directly onto the application icon using any version of the MacOS. On computers running MacOS version 7.5 or later, you can also drag and drop files onto the open Newton Press window. With versions of the MacOS before 7.5, you cannot drag and drop files onto the Newton Press window.

On computers with MacOS version 7.5 or later, you can drag and drop text or graphic images onto your desktop from desk accessories or applications like the Scrapbook or Notepad. Such files are called clippings. You cannot add clippings to Newton Press by dragging and dropping them on the Newton Press icon or Newton Press window.

I have a Newton PDA that has the Newton Operating System 1.x, and my package icons don't look like packages on my computer desktop.

- Your packages appear as generic documents, instead of package icons. The appearance of your package icons makes no difference in the way Newton Press works. You can perform all Newton Press functions.

I added pictures to my Newton Press document, but they don't appear when I view the book on my Newton PDA.

- If there is not enough system memory available in your Newton PDA, large pictures may not appear in your Newton book. You may need to reduce the size of the picture for it to appear on all Newton PDAs.

I'm running both Newton Press and Newton Backup Utility and I can't install packages from Newton Press.

- While Newton Backup Utility is running, Newton Press will not be able to install packages. Quit Newton Backup Utility or use it to install your package.

I clicked STOP while a file was being added but the file was added anyway.

- There may be times when clicking on the STOP button does not stop the file from being added. This may happen either at the very beginning of the add or at the very end.

When I try to add a border around a group of text, multiple borders appear around the selected text.

- This may happen when editing around a graphic on a page. To fix this, select all the text and turn the border off. Join the text into one paragraph, turn a border on for the paragraph and then break up the individual lines.

My graphic is inverted but I can't turn it back to normal. Also, the graphic isn't inverted when it gets to my Newton PDA.

- Newton PDAs cannot currently display inverted graphics. It is possible to invert a graphic in Newton Press by selecting some text and a graphic and choosing "Invert" from the menu. Selecting a graphic by itself will not enable the invert function. Likewise, selecting an inverted graphic by itself will not allow you to disable the invert function. To turn the graphic back, you must select some text in front of the graphic along with the graphic, invert the text and graphic and repeat the process one more time.

When I tap the overview button on my Newton PDA, it freezes and I have to reset my Newton.

- It is possible to make a Table of Content entry that is a second level entry without a first level entry. The way to do this is to make the second entry a sub-topic and then delete the text associated with the first topic. A book with this type of Table of Contents will not function properly on a Newton PDA with Newton 2.0 OS. The way to fix this is to make the first entry a level-1 topic before you create the book.



Tech Info Library

Clean System Install: Workgroup Server 6150, 8150, 9150 (8/96)

Revised: 8/13/96
Security: Everyone

Clean System Install: Workgroup Server 6150, 8150, 9150 (8/96)

Article Created: 12 August 1996
Article Reviewed/Updated: 13 August 1996

TOPIC -----

This article describes how to do a clean system install of the Mac OS on an AppleShare server and preserve privileges. This procedure will work on Workgroup Server and other Macintosh computers.

NOTE: This will not cure problems due to corrupted Users & Groups Data File or AppleShare PDS file.

This is the procedure to use if your system software on a Mac OS AppleShare server has become damaged, and you want to replace it while preserving privileges and sharing information.

DISCUSSION -----

First, Restart with either a Disk Tools floppy, or the Workgroup Server CD-ROM and run Disk First Aid and allow any fixes. If Disk First Aid cannot repair the drive, you should back up your data, format the drive, and then restore the data.

WARNING: Be sure to back up data BEFORE formatting a drive because all data will be lost during the formatting process.

If your problem was starting the file server software itself, or in any way involved with privileges, you will want to attempt to compact volume access privileges with the AppleShare Admin software prior to resorting to the clean install. This will frequently fix privilege problems. If the server still will not start, follow these steps:

Clean Server Install

Step 1

Startup with the "Workgroup Server Software" CD-ROM disc that came with your Workgroup Server by pressing and holding the "c" key after restarting until seeing the "Welcome To Macintosh" screen.

At the desktop, the "Workgroup Server Software" CD disc's icon should be in the upper-right corner of your screen with your hard drive's icon below it. If another hard drives appear above the "Workgroup Server Software" CD, open the Startup Disk control panel, and select the "Workgroup Server Software" CD. Close all open windows and restart the computer. The "Workgroup Server Software" CD should now appear in the upper-right corner above the hard disk.

Step 2

Open the "System Software Installers" folder and double click on "System 7.5.1 Installer."

Step 3

When the "Welcome to System 7.5" message appears, click Continue.

Step 4

When the installer window appears, press the Command-Shift-K keys simultaneously (the Command key is the key with the Apple and Clover leaf). You will be presented with a small dialog box with two selections:

- Update Existing System Folder
- Install New System Folder

For a clean install, select Install New System Folder and click "OK." Make sure the Destination Disk on the bottom left is the disk you want to install onto, then click Clean Install on the bottom right. This will install a new system folder and rename you current folder "Previous System Folder."

Step 5

After the system software has been installed, restart and install AppleShare Software.

NOTE: Be careful not to launch AppleShare until you are instructed to do so.

Step 6

After the computer has restarted, open the System Folder, and the Preferences folder. Drag the Users & Groups Data File to the trash. Close the Preferences folder.

Step 7

Locate the folder named Previous System Folder and open it, then open the Preferences folder. While pressing and holding the Option key on your keyboard, drag the Users & Groups Data File to the desktop. (Holding down the option key will let you copy the Users & Groups Data File instead of moving it.) Close the Preferences folder and the Previous System Folder.

Step 8

The System Folder should still be open (if it's not, open it). Drag the Users & Groups Data File on the desktop to the Preferences folder of the open System Folder.

Step 9

Restart the computer and open the Sharing Setup control panel. Enter the Macintosh name, it does not have to be the same name it was before, but if possible, it should be the same to keep from confusing users. Then choose AppleShare Admin in the Apple menu. (You may be prompted for server name and admin key.) Verify that users & groups are intact. If they are, now run the AppleShare File Server program.

NOTE: This methodology will preserve the original System Folder's hierarchy in the Previous System Folder. At this point you can transfer any items from your Previous System Folder to your new one if necessary. BE CAREFUL NOT TO REPLACE ANY EXISTING ITEMS. Those items which were either installed during the install process, or are unnecessary may be placed in the Trash.

Article Change History:

13 Aug 1996 - Made minor technical correction.

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Tech Info Library Article Number:20278



Tech Info Library

AppleVision 1710 Display: Using Two Displays Together (1/97)

Revised: 2/3/97
Security: Everyone

AppleVision 1710 Display: Using Two Displays Together (1/97)

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Article Created: 12 August 1996
Article Reviewed/Updated: 31 January 1997

TOPIC -----

I have two AppleVision 1710AV displays and want to use them on my Power Macintosh 9500 computer. Is this supported? If so, how can I get this configuration to work?

DISCUSSION -----

Yes, connecting two AppleVision 1710 Displays is a supported configuration. Connect the two displays (in Series) with an ADB Cable and they both show up as AppleVision Displays.

Note:

In this article there are references to the AppleVision 1710AV Display. However, this article also includes the AppleVision 1710 Display.

When you open the AppleVision Setup control panel, a dialog window appears on AppleVision Display #1. This is the display designated through the Monitors control panel as the startup display.

You are also able to adjust the bit depth and resolutions for both displays separately through the control strip at the bottom of the display. The displays appears as two separate sections with the name of the display, AppleVision 1710/AV Display 1 and AppleVision 1710/AV Display 2, at the top of these sections.

If two AppleVision 1710AV Displays are used you will only have microphone and speaker capabilities through one of these displays by connecting the sound and microphone connections to your Macintosh computer. There may be third-party solutions allowing you to connect two connections to both ports on the back of the computer.

When the calibrate message appears, it appears on the display that is being

recalibrated. This message appears every two weeks unless you change it in the AppleVision Setup control panel.

The only problems that may be encountered with using this display, or any Multiple Scan Display, with a NuBus or PCI video card would be that some video cards may only support one resolution; 640x480.

Article Change History:

31 Jan 1997 - Added note about AppleVision 1710 Display.

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Tech Info Library Article Number:20279



Tech Info Library

PC Compatibility Card: Configuring SoundBlaster in DOS (8/96)

Revised: 8/13/96
Security: Everyone

PC Compatibility Card: Configuring SoundBlaster in DOS (8/96)

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Article Created: 13 August 1996

TOPIC -----

I'm trying to install the DOS SoundBlaster driver that came on the PC Utilities CD of my PC Compatibility Card, but I can't find any setup files.

DISCUSSION -----

The Sound directory on the Utilities CD has two setup files:

- W31SETUP.BAT
- W95SETUP.BAT

These setup files infer that a version of Windows is required. The manual does not explicitly explain why there is no DOS Setup.

The DOS driver can be installed and configured by running the W31SETUP.BAT from the DOS prompt. This setup file may also attempt to install some Windows files. If Windows is not installed, the Windows applications can be bypassed by performing a custom installation.

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Tech Info Library Article Number:20281



Tech Info Library

Performa 6400: ANSI C++ PPC Lib and MWRuntimeLib Files (8/96)

Revised: 8/13/96
Security: Everyone

Performa 6400: ANSI C++ PPC Lib and MWRuntimeLib Files (8/96)

=====

Article Created: 13 August 1996

TOPIC -----

On my Performa 6400 in the Extensions folder are two files, "ANSI C++ PPC Lib" and "MWRunTime.lib", neither of which have version, or copyright information. These files are also on the Macintosh Performa CD. I have not been able to locate these files on any other Macintosh computer, so I assume they are specific to the Performa 6400.

Which applications require these files?

DISCUSSION -----

The "ANSI C++ PPC Lib" and "MWRuntimeLib" are required Shared Libraries for the Apple Telecom and MegaPhone applications.

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Tech Info Library Article Number:20282



Tech Info Library

Open Transport 1.1.1b6 Read Me (8/96)

Revised: 8/13/96
Security: Everyone

Open Transport 1.1.1b6 Read Me (8/96)

=====

Article Created: 13 August 1996

TOPIC -----

This article is the Open Transport 1.1.1b6 ReadMe file.

DISCUSSION -----

Name: Open Transport
Version: 1.1.1b6
Released: August 5, 1996

Description: Unsupported beta release of Open Transport 1.1.1. For complete information, please see the Read Me included with this software.

Begin_Table

OT 1.1.1b6 consists of 4 disks:

Name as Posted	Actual Disk Name
OT 1.1.1b6-01of4.sea	Install 1
OT 1.1.1b6-02of4.sea	Install 2
OT 1.1.1b6-03of4.sea	Install 3
OT 1.1.1b6-04of4.sea	Install 4

End_Table

This software is available in two formats (disk images and "Net Install"):

1) Four self-extracting archives of Disk Copy 1440K disk images. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disks. Disk Copy can be found in the Utilities folder posted here.

2) A complete OT 1.1.1b6 "Net Install". It includes all software from all four

..TIL20283-Open_Transport_1-1-1b6_Read_Me_8-96_(TA35891).pdf

OT 1.1.1b6 disk images plus the contents of OT 1.1.1b6-Extras.sea. This posting is provided as a convenience for those customers who:

- want to download just one file.
- want a pre-configured "Net Install" to place on their hard drive or on a server.

PLEASE NOTE:

You do not need to download the "Net Install" if you have already downloaded the four separate disk images of OT 1.1.1b6.

Taken from the Read Me included with this software:

Introduction

You can use this pre-release version of Open Transport 1.1.1 to preview its features, enhancements, and updates. Pre-release versions of Open Transport 1.1.1 have been tested by progressively larger audiences and are now being used by hundreds of customers and Mac OS developers.

License agreement

This release of Open Transport is subject to the terms and conditions of the license agreement that accompanies the software in the file "LICENSE." By downloading the software you agree to abide by the terms and conditions of the license agreement.

Warnings and information about beta software

Open Transport 1.1.1b6 is "beta software"; it is not the finished version of Open Transport 1.1.1.

This software is being provided for test purposes and does not come with Apple technical support. Do not call Apple technical support or the Apple Assistance Center with questions, comments, or problem reports about Open Transport 1.1.1b6.

Open Transport 1.1.1b6 is provided on an as-is basis. It is not warranted to be complete or free from errors. Open Transport 1.1.1b6 may cause problems with your Mac OS computer and with other software you have installed. These problems may require you to reinstall the Mac OS System Software from your original floppy disks or CD-ROM disc.

If you want to provide Apple with feedback about Open Transport 1.1.1b6, send electronic mail to the following address: OTBeta@seeding.apple.com. Apple does not guarantee any response to messages you send, and does not provide technical support for Open Transport 1.1.1b6 through this or any other medium.

System requirements

Open Transport is designed to work on Mac OS-compatible computers with a Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603(e), or 604 microprocessor. You should use system software version 7.5.3 with Open Transport, although the earlier system software versions 7.1, 7.1.1 and 7.1.2 releases are also compatible.

Open Transport 1.1.1b6 can be used on the Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx product lines. When you install OT1.1.1 on a 52xx, 53xx, 62xx and 63xx machine you may get a dialog box indicating a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed or loaded until the Cache/ROM DIMM is replaced. Your machine will continue to run classic networking. The required repairs are covered under the Apple repair extension program. Please contact an Apple Service Provider to have your machine repaired.

Open Transport requires a minimum of 5 MB of RAM (68030 or 68040 computers) or 8 MB of RAM (PowerPC-based computers). Open Transport memory requirements are based on total system memory including virtual memory, minus the size of any RAM disk and disk cache you're using.

Network interface options

Open Transport 1.1.1b6 supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For computers without expansion options, Open Transport 1.1.1b6 also supports a SCSI-attached network adapter. Third party network interface options available for Open Transport include Fast Ethernet, ATM, and FDDI.

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Tech Info Library Article Number:20283



Tech Info Library

Network Server: Apple's Version of AppleTalk Running? (8/96)

Revised: 8/14/96
Security: Everyone

Network Server: Apple's Version of AppleTalk Running? (8/96)

=====

Article Created: 14 August 1996

TOPIC -----

I have a Network Server 500 and Network Server 700, how can I determine if Apple's version of AppleTalk is running?

DISCUSSION -----

To determine whether the Apple's AppleTalk stack is running, at the AIX command prompt, type the following command:

```
# atconfig -q
```

If the message "The AppleTalk stack does not appear to be loaded" appears, then Apple's AppleTalk stack is not running, or the Helios' stack is running instead.

Another way to determine if Apple's version of AppleTalk is running, is use the 'ps -ef' command to list the processes that are running. Look for either the process named 'appletalk', or 'router'. If neither is present then the Apple's AppleTalk stack is not running.

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Tech Info Library Article Number:20284



Tech Info Library

Open Transport/PPP 1.0f1c6: Internet Beta Seed Read Me (8/96)

Revised: 8/14/96
Security: Everyone

Open Transport/PPP 1.0f1c6: Internet Beta Seed Read Me (8/96)

=====

Article Created: 14 August 1996

TOPIC -----

This article is the Open Transport/PPP 1.0f1c6, the first Internet Beta Seed ReadMe file.

DISCUSSION -----

OT PPP 1.0f1c6 consists of 4 disks:

Name as Posted	Actual Disk Name
OT PPP 1.0f1c6-disk 1of3.sea	OT PPP Install 1.image
OT PPP 1.0f1c6-disk 2of3.sea	OT PPP Install 2.image
OT PPP 1.0f1c6-disk 3of3.sea	OT PPP Install 3.image

This software is available in two formats (disk images and "Net Install"):

1) Three self-extracting archives of Disk Copy 1440K disk images. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disks. Disk Copy can be found in the Utilities folder posted here.

2) A complete OT PPP 1.0f1c6 "Net Install." It includes all software from all three OT PPP 1.0f1c6 disk images plus the contents of OT PPP 1.0f1c6-Extras.sea. This posting is provided as a convenience for those customers who:

- Want to download just one file.
- Want a pre-configured "Net Install" to place on their hard drive or on a server.

PLEASE NOTE:

You do not need to download the "Net Install" if you have already downloaded the

three separate disk images of OT PPP 1.0f1c6.

Taken from the Read Me included with this software:

Open Transport/PPP 1.0f1c6
first Internet Beta Seed
Read Me

Introduction

This is the first public beta release of Open Transport/PPP. You can use this pre-release version of Open Transport/PPP preview its features.

License Agreement

This release of Open Transport/PPP is subject to the terms and conditions of the License Agreement that accompanies the software in the file "LICENSE." By using the software you agree to abide by the terms and conditions of the License Agreement.

Warnings and information about beta software

Open Transport/PPP 1.0f1c6 is "beta software"; it is not the finished version of Open Transport/PPP.

This software is being provided for test purposes and does not come with Apple technical support. Do not call Apple technical support or the Apple Assistance Center with questions, comments, or problem reports about Open Transport/PPP 1.0f1c6.

Open Transport/PPP 1.0f1c6 is provided on an as-is basis. It is not warranted to be complete or free from errors. Open Transport/PPP 1.0f1c6 may cause problems with your Mac OS computer and with other software you have installed. These problems may require you to reinstall the Mac OS System Software from your original floppy disks or CD-ROM disc.

If you want to provide Apple with feedback or report bugs about Open Transport/PPP 1.0f1c6, send electronic mail to the following address: ppp-beta@seeding.apple.com. Apple does not guarantee any response to messages you send, and does not provide technical support for Open Transport/PPP 1.0f1c6 through this or any other medium.

If you are part of a formal Apple seeding program please continue to send your feedback and bugs through your existing Apple contacts.

System requirements

Open Transport/PPP is designed to work on Mac OS-compatible computers with a

Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603(e), or 604 microprocessor. You should use system software version 7.5.3 updated with Open Transport 1.1.1b6c3 or later, although the earlier system software versions 7.1, 7.1.1 and 7.1.2 releases are also compatible.

Before you install Open Transport 1.1.1b6

- Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.
- Your computer must be running Open Transport 1.1.1 b6c3 or later and system software version 7.1, 7.1.1, 7.1.2 or 7.5.3 before you can install OT/PPP 1.0f1c3.
- If you already use SLIP or PPP software to access the Internet, note down the configuration parameters that you entered into your previous SLIP or PPP software. Configurations are not automatically converted from 3rd party SLIP or PPP software.

How to turn off or remove Open Transport/PPP

Removing Open Transport /PPP with the Installer

You can remove Open Transport/PPP software with the Custom Remove option in the Installer.

To remove Open Transport/PPP using the Installer, follow these steps:

- 1) Open the Installer application included with Open Transport/PPP 1.0f1c6. The "Welcome to the Apple Installer" screen appears.
- 2) Click the Continue button.
- 3) This is the "Open Transport PPP Installation" window. Choose "Custom Remove" from the pop-up menu in the upper-left corner.
- 4) In the list that appears, select the files you would like to remove. This is done by clicking the box next to each file so that an 'X' appears in it. To completely remove OT/PPP you should select all the files listed.
- 5) Click the "Remove" button. If a window appears asking you whether to quit any open applications, click Continue. A window will appear telling you to restart your computer.
- 6) Click the "Restart" button.
- 7) Re-install and configure your previous SLIP/PPP software as required.

Tips for reporting OT/PPP beta problems

An OT Bug Report Template is included. Should you discover problems, please complete the template and forward it via electronic mail to OTBeta@seeding.apple.com.

Major Changes Since 1.0f1c2

- Improved performance of the OT/PPP serial link. You must have Open Transport 1.1.1b6c3 or later installed to see the speed increases.
- A verbose logging mode has been added. To enable it for a connection, put the PPP control panel into Admin mode. This can be done with the User Mode item in the Edit menu. Verbose logging will occur only while you're in this mode. Look for further improvements to the log in future releases.
- Many improvements were made to the Open Transport Apple Guide for OT/PPP.
- Improved connection behavior when selected serial port is in use by another application.
- A number of redialing bugs have been fixed.
- Improved the behavior of the activity indicators in the PPP control panel. The indicators reflect all PPP packet activity, including network and control packets.
- Improved keystroke handling and connect script recording the PPP terminal window.
- Fixed incompatibilities with CyberFinder and StuffIt Deluxe 4.0 which resulted in crashes at system startup time.
- Fixed incompatibility with Conflict Catcher 3.0.4.
- Fixed a problem with script for US Robotics modems.
- Fixed connect script recording for TIA (or SLIRP) accounts.

Known Incompatibilities and Limitations

-
- This release requires Open Transport 1.1.1b5c2 or later. You should not use it with Open Transport 1.1.
 - ARA 2.x modem CCL scripts may be used with OT/PPP; however, some 2.x scripts do not support modem-based error correction and data compression, so the performance may not be optimal. You should try to use one of the modem scripts provided with OT/PPP. If you can't find one that matches your modem, you may modify an existing script to suit your needs.
 - If you are using both ARA 2.1 and OT/PPP, be sure to install OT/PPP after ARA 2.1 to get the correct set of modem scripts for both products.
 - If you have a copy of Open Transport/PPP older than 1.0f1c2 installed, you must discard your old OT/PPP preferences files. To do so, throw away the folder "Remote Access" within the active Preferences folder. After deleting the old preferences, restart your computer and then use the Modem & PPP control panels to customize your configuration.
 - OT/PPP version 1.0 f1c6 has some incompatibilities with the Apple Express

Modem. If the "Internal Modem" choice does not appear in the Modem control panel port pop-up menu, uncheck the "Use internal modem instead of Modem/Printer port" checkbox in the Express Modem control panel. Also, make sure to disconnect OT/PPP connections using the Express Modem before shutting down or restarting your computer.

- You may experience some difficulty with older programs that do not use Open Transport and try to use the serial port while PPP is active. The workaround is to disconnect PPP using the PPP control panel before starting up the serial application.
- A problem in the Quit command of Claris EMailer sometimes causes a crash with Open Transport 1.1.1 (with or without OT/PPP). This problem is being investigated.
- OT/PPP is currently incompatible with PortShare Pro 2.6.
- OT/PPP may unexpectedly drop a connection when the remote server is busy and doesn't reply to echo requests within 10 seconds. This timeout interval will be lengthened in the next version of OT/PPP.

Interactions with 3rd party software

- NetScape 2.x will not work reliably with pre-7.5.3 Mac OS or pre-1.1 Open Transport software. If you would like to use NetScape 2.0.1, you should make sure that System 7.5.3 and OT 1.1 are also used. Failure to follow this recommendation may result in system crashes.

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Tech Info Library Article Number:20286



Tech Info Library

Energy Saver: Causes CD-ROM Discs To Stop Playing (8/96)

Revised: 8/14/96
Security: Everyone

Energy Saver: Causes CD-ROM Discs To Stop Playing (8/96)

=====

Article Created: 14 August 1996

TOPIC -----

When I play an audio CD-ROM disc on my Power Macintosh 9500 computer, they play for a while then stop. Then the AppleCD Audio Player resets to track 1, time 0:00. Why?

DISCUSSION -----

This is being caused by the Energy Saver control panel and will be fixed in a future system update.

Note:
This affects all PCI-based Power Macintosh computers, not just the Power Macintosh 9500 computer.

Workaround
=====

Step 1

Open the Energy Saver control panel.

Step 2

Deselect "Shutdown instead of Sleep".

Step 3

Close the Energy Saver control panel.

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Tech Info Library Article Number:20287



Tech Info Library

LaserWriter 12/640 PS: Communication Switch Settings (8/96)

Revised: 8/14/96
Security: Everyone

LaserWriter 12/640 PS: Communication Switch Settings (8/96)

Article Created: 14 August 1996

TOPIC -----

This article contains the settings for the communication switch on the back of the LaserWriter 12/640 PS printer.

DISCUSSION -----

The following table shows the default communication settings.

Normal (in) Switch Position
=====

Begin_Table

PORT	Network PROTOCOL	MODE	DEFAULT
LocalTalk	LocalTalk	PostScript	PostScript
Ethernet	EtherTalk	PostScript,off	PostScript
	NetWare	PostScript,PCL5, Auto,off	Auto
	TCP/IP	PostScript,PCL5, Auto,off	Auto
Parallel	TBCP	PostScript,PCL5, Auto,off	Auto
	Normal	PostScript, Off	PostScript
	Raw	PostScript, PCL5, Auto,Off	Auto

+=====+

End_Table

Reset (out) Switch Position
=====

Begin_Table

+=====+			
PORT	Network PROTOCOL	MODE	
+=====+			
LocalTalk	LocalTalk	PostScript	
+-----+			
Ethernet	EtherTalk	PostScript	
	+-----+		
	NetWare	Auto Select	
	+-----+		
	TCP/IP	Auto Select	
+-----+			
Parallel	Parallel	Auto Select	
+=====+			

End_Table

Note:

When the communication switch is set in the Reset position, a startup page is printed each time the printer is turned on and the Extended Job Status settings are removed.

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Tech Info Library Article Number:20288



Tech Info Library

Installing DOS Compatibility 1.5 Software Update (8/96)

Revised: 8/14/96
Security: Everyone

Installing DOS Compatibility 1.5 Software Update (8/96)

=====

Article Created: 14 August 1996

TOPIC -----

This article covers how to install the DOS Compatibility 1.5 software update. There are several steps to installing your DOS Compatibility 1.5 software update:

- installing the Macintosh software
- installing support software for DOS
- installing support software for Windows (only if you are using Windows)

DISCUSSION -----

Before you install

Before you install the DOS Compatibility Software Update, check the version of your system software by opening the Apple menu and choosing About This Macintosh while the Finder is active. You can use either System 7.1.2 or System 7.5.3 with the DOS Compatibility Software Update.

If you are currently using System 7.5, you can install the System 7.5 Update 2.0 to update to System 7.5.3. You can order System 7.5 Update 2.0 on a CD or a high-density floppy disk set from the Apple Order Center.

Creating installation disks from disk images

Before you can install the DOS Compatibility Software Update, you need to use the Disk Copy program to create two installation disks from two disk image files. You will use these disks in the following sections to install the DOS Compatibility Software Update.

Follow the following steps to create the installation disks:

- 1) Obtain two blank, high-density floppy disks.
- 2) Double-click the APPLE_PC.image disk image file to open it in the Disk

Copy program.

- 3) Click the Make a Copy button, and insert one of your floppy disks. The Disk Copy program will create a DOS disk named APPLE_PC, and eject the disk.
- 4) Click the Quit button in the Disk Copy window.
- 5) Double-click the PC Compatibility Software.image disk image file to open it in the Disk Copy program.
- 6) Click the Make a Copy button, and insert the other floppy disk. The Disk Copy program will create a Macintosh disk named PC Compatibility Software and eject the disk.
- 7) Click the Quit button in the Disk Copy window. You have now created the disks you will need to install the DOS Compatibility Software Update.

Installing the Macintosh DOS Compatibility software

To install the Macintosh DOS Compatibility software, follow these steps:

- 1) Insert the PC Compatibility Software disk into the disk drive.
- 2) Double-click the Installer icon. A message may appear describing the Installer software. Click OK. The Installer window appears.
- 3) Make sure the disk named in the box is the one on which you want to install software. If not, click Switch Disk until the correct disk name appears.
NOTE: If you want to install only specific components, choose Custom Install from the Easy Install menu. In the Custom Install window, click to place an X in the boxes next to the components you want to install. Click the information symbol for more information about a component.
- 4) Click Install. The software is automatically installed onto your hard disk.
- 5) When the installation is complete, follow the instructions on the screen to quit the Installer and restart your Macintosh. The following Mac OS software is now installed:

Name	Location
-----	-----
Macintosh Easy Open	Control Panels folder
PC Exchange	Control Panels folder
PC Setup	Control Panels folder
Apple CD-ROM	Extensions folder
Ethernet (built-in)	Extensions folder
PC Compatibility Guide	Extensions folder
PC Clipboard	Extensions folder
PC Clipboard Translators	Extensions folder
PC Net Exchange	Extensions folder
PC Network Extension	Extensions folder
PC Print Spooler	Extensions folder

Installing support software for DOS

Installing the software on the APPLE_PC floppy disk updates the DOS Compatibility software in the PC environment. If you are using Windows, follow the steps in the next section, "Installing Support Software for Windows."

To install the software, follow these steps:

- 1) In the PC environment, insert the APPLE_PC floppy disk. To switch to the PC environment from the Mac OS, press Cmd-Return, or open the PC Setup control panel and click Switch to PC.
- 2) Type A:\SETUP; then press Return.
- 3) You may see a message asking if you want to install support for DOS or Windows. Press D for DOS.
- 4) You're asked to choose a drive for the files. Choose the C drive.
- 5) You're asked to choose a directory. It's best to accept the suggested directory, C:\APPLE.
- 6) Choose Yes to continue installation. If you're asked whether you want to overwrite files, choose Yes.
- 7) You're asked whether you want the program to modify your system files. Choose "Apply changes directly to system files." If you choose to apply the changes to copies of the system files, the copies are called filename.number.
- 8) When installation is complete, restart the PC by switching to the Mac OS (by pressing Cmd-Return), opening the PC Setup control panel, and clicking Restart PC. You can also restart the PC by pressing the Control-Alt-del keys.

Installing support software for Windows

Installing the software on the APPLE_PC floppy disk updates the DOS Compatibility software in the PC environment. If you are using DOS, follow the steps in the previous section, "Installing Support Software for DOS."

To install the software, follow these steps:

- 1) If necessary, switch to the PC environment. To switch to the PC environment from the Mac OS, press Cmd-Return, or open the PC Setup control panel and click Switch to PC.
- 2) Insert the APPLE_PC floppy disk.
- 3) In Windows, choose Run from the File menu. In Windows 95, click Start; then choose Run from the menu that appears.
- 4) Type A:\SETUP; then press Return.
- 5) Follow the instructions that appear on the screen. The recommended directory to install files is C:\APPLE. To change this location, click Set Location. By default, all options will be installed. You may choose not to install specific options. The installation options are:
 - Install Macintosh/Windows Copy and Paste: allows you to transfer Clipboard information between the Macintosh and PC environments.
 - Install Macintosh/PC Folder Sharing: allows you to share a Macintosh folder as a shared drive.
 - Install CD-ROM Support: allows you to use the CD-ROM discs in the PC environment.
- 6) When installation is complete, shut down Windows or Windows 95. To shut down Windows, choose Exit Windows from the File menu in the Program Manager. To shut down Windows 95, click the Start button and choose Shut Down from the menu that appears.
- 7) Press Cmd-Return to switch to the Mac OS environment.
- 8) Open the PC Setup control panel and click Restart PC.

IMPORTANT: If you are using Windows 95, refer to the "DOS Compatibility Software Update" User's Manual for "Sound Problems" in Chapter 4, "Troubleshooting in the PC Environment." This section contains important information about configuring Sound Blaster so that it works properly with Windows 95.

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Tech Info Library Article Number:20289



Tech Info Library

Newton Internet Enabler: Requires Modem Connection (8/96)

Revised: 8/15/96
Security: Everyone

Newton Internet Enabler: Requires Modem Connection (8/96)

=====

Article Created: 15 August 1996

TOPIC -----

I want to connect my Apple MessagePad 130 to an AppleTalk network, so I can use the Internet. Is this possible?

DISCUSSION -----

The current version of Newton Internet Enabler (NIE) does not support TCP/IP over an AppleTalk network. You must use NIE in conjunction with an Internet Service Provider (ISP) to actually connect and use the Internet.

The software required after connecting to an ISP is dependent upon what Internet services you want to access. To browse the World Wide Web, a WEB browser such as NetHopper is required. Other services such as network mail offer more software choices such as GoFetch, Eudora for Newton, Mail on the Run!, LunaMail, EnRoute.

No additional information on when TCP/IP over AppleTalk will be enabled in the Newton Operating System is currently available.

Note:

The Newton Internet Enabler works with any Apple MessagePad 120 or Apple MessagePad 130 with at least 2Mb of RAM and the Newton 2.0 OS.

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Tech Info Library Article Number:20290



Tech Info Library

QuickTake 150: Image Quality Differences (8/96)

Revised: 8/15/96
Security: Everyone

QuickTake 150: Image Quality Differences (8/96)

=====

Article Created: 15 August 1996

TOPIC -----

The QuickTake 150 high quality and standard quality pictures are both listed as 640x480 pixels. If they are both the same size what is the difference between the high quality and standard quality pictures?

DISCUSSION -----

Unlike the QuickTake 100, which had two different resolutions, the QuickTake 150 uses the same resolution for both high and standard resolution images. The difference is in the compression ratio.

Compression Ratios
=====

High resolution images: 1.5 bits per pixel
Standard resolution images: .75 bits per pixel

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Tech Info Library Article Number:20291



Tech Info Library

Open Transport 1.1 and Intranet Access Issue (8/96)

Revised: 8/19/96
Security: Everyone

Open Transport 1.1 and Intranet Access Issue (8/96)

=====

Article Created: 19 August 1996

TOPIC -----

I am using an 10Base-T Ethernet C1 Router connected to a T1 line. I have setup a Power Macintosh using Open Transport on the same network as classic network based Macintosh computers. The Open Transport-based computer is able to connect to outside sites on the Internet using Netscape, but this computer is unable to get internal sites on our Intranet. Netscape returns an error something like, the server does not have a DNS Entry, when trying to access an intranet web site. The MacTCP based computers do not have a problem with either intranet, or Internet addresses. What is wrong?

DISCUSSION -----

A possible solution is to check to see if you have selected 802.3 Framing in the TCP/IP control panel. With the TCP/IP control panel open, choose User Mode in the Edit menu. If the checkbox next to "Use 802.3" is selected, deselect it by removing the "X".

It is very rare for 802.3 style addressing to be used for the Ethernet frame type. The Use 802.3 option should only be selected for a 802.3 CSMA/CD Access Method and Physical Layer Specification. IEEE 802.3, 802.4, and 802.5 define different network topologies and media access methods, or the ability of a node to physically send and receive data on a LAN.

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Tech Info Library Article Number:20293



Tech Info Library

Macintosh Performa 6400: Third-party Support Numbers (8/96)

Revised: 8/19/96
Security: Everyone

Macintosh Performa 6400: Third-party Support Numbers (8/96)

Article Created: 19 August 1996

TOPIC -----

This article contains the support numbers for the third-party products included with the Macintosh Performa 6400/180 and 6400/200 computers.

DISCUSSION -----

This information was derived from the Phone Numbers application included on the Power Macintosh 6400 series computers.

Begin_Table

Application	Support Company	Phone Number	Included On:
3-D Atlas	Creative Wonders	415-573-7111	CD-ROM disc
Adobe Acrobat Reader	Adobe Systems, Inc.	206-628-5726	Hard drive
Adobe PhotoDeluxe	Adobe Systems, Inc.	206-628-5726	CD-ROM disc
Apple Internet Connection Kit	Apple Computer, Inc.	US:800-500-7078 Canada: 800-263-3394	Hard drive
The Amazing Writing Machine	Broderbund Software Inc.	415-382-4700	CD-ROM disc
American Heritage Children's Dictionary	Houghton Mifflin Interactive	800-210-0241	CD-ROM disc
American Heritage	Softkey	423-670-2020	Hard drive

Dictionary	International			
+-----+	+-----+	+-----+	+-----+	+-----+
America Online	America Online, Inc.	800-827-3338	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
At Ease	Apple Computer, Inc.	US:800-500-7078	Hard drive	
		Canada:		
		800-263-3394		
+-----+	+-----+	+-----+	+-----+	+-----+
Blockbuster	Creative MultiMedia	900-438-8324	CD-ROM disc	
+-----+	+-----+	+-----+	+-----+	+-----+
ClarisWorks	Claris Corporation	408-727-9054	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
Club KidSoft	KidSoft, Inc.	408-255-9777	CD-ROM disc	
+-----+	+-----+	+-----+	+-----+	+-----+
Descent	Parallax Software	714-553-3530	CD-ROM disc	
+-----+	+-----+	+-----+	+-----+	+-----+
DOGZ Adoption Kit	PF Magic	714-833-1999	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
Eric's Solitaire	Delta Tao Software	408-730-9336	Hard drive	
Sampler				
+-----+	+-----+	+-----+	+-----+	+-----+
Grolier's New	Mindscape	415-898-5157	CD-ROM disc	
Multimedia				
Encyclopedia				
+-----+	+-----+	+-----+	+-----+	+-----+
MacGallery Clip Art	Dream Maker Software	303-762-1001x4	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
MacLinkPlus	Dataviz, Inc.	203-268-0030	Hard drive	
Translators				
+-----+	+-----+	+-----+	+-----+	+-----+
Mayo Clinic Family	IVI Publishing	612-996-6300	CD-ROM disc	
Health				
+-----+	+-----+	+-----+	+-----+	+-----+
Megaphone II	Apple Computer, Inc.	US:800-500-7078	Hard drive	
		Canada:		
		800-263-3394		
+-----+	+-----+	+-----+	+-----+	+-----+
Now TouchBase &	Now Software	206-654-7929	Hard drive	
DateBook				
+-----+	+-----+	+-----+	+-----+	+-----+
Our Times	Vicarious, Inc.	214-389-3637	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
Quicken	Intuit	505-896-7275	CD-ROM disc	
+-----+	+-----+	+-----+	+-----+	+-----+
SurfWatch	SurfWatch	415-948-9505	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
Thinkin' Things	Edmark Corp.	206-556-8480	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+
Web Workshop	Vivitus Corp.	415-321-2221	Hard drive	
+-----+	+-----+	+-----+	+-----+	+-----+

End_Table

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Tech Info Library Article Number:20294



Tech Info Library

Macintosh Performa 6400: Monitors & Sound Control Panels? (8/96)

Revised: 8/19/96
Security: Everyone

Macintosh Performa 6400: Monitors & Sound Control Panels? (8/96)

=====

Article Created: 19 August 1996

TOPIC -----

On page 7 of the Megaphone for Performa User Guide, the instructions state to "...double click the Sound control panel..." However, I cannot find the Monitors or Sound control panels on my Macintosh Performa 6400/180 computer. I have attempted to restore the system software using the Macintosh Performa CD, but I still do not have these control panels.

DISCUSSION -----

Your computer does not have separate Sound or Monitors control panels because the functionality of these two control panels has been integrated into one control panel: Monitors & Sounds. Use the Monitors & Sounds control panel to adjust the video or sound settings on your computer. For assistance using this control panel, refer to the Sound and Monitors topics of Macintosh Guide, available in the Guide menu.

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Tech Info Library Article Number:20295



Tech Info Library

Macintosh Performa 6400: Stopping Intro at Startup (8/96)

Revised: 8/19/96
Security: Everyone

Macintosh Performa 6400: Stopping Intro at Startup (8/96)

=====

Article Created: 20 August 1996

TOPIC -----

How can I stop the Performa Intro from appearing when I start up my Macintosh Performa 6400 series computer?

DISCUSSION -----

There is an alias called "Launch Performa Intro" in the Startup Items folder, which is in the System Folder. To prevent the intro from playing at startup, remove this alias from the Startup Items folder.

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Tech Info Library Article Number:20296



Tech Info Library

Power Macintosh 9500/180 & 9500/200: Memory Configuration (8/96)

Revised: 8/19/96
Security: Everyone

Power Macintosh 9500/180 & 9500/200: Memory Configuration (8/96)

=====

Article Created: 19 August 1996

TOPIC -----

What DIMM configurations will be included in the Power Macintosh 9500/180MP and 9500/200 that ship with 32 MB of memory?

DISCUSSION -----

Currently, Apple plans to install two 16 MB DIMMs in the Power Macintosh 9500/180MP and 9500/200 computers that ship with a total of 32 MB of memory. However, this configuration could change depending on memory availability and market conditions.

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Tech Info Library Article Number:20297



Tech Info Library

External CD-ROM Drive: No Sound From Audio CD's (8/96)

Revised: 8/19/96
Security: Everyone

External CD-ROM Drive: No Sound From Audio CD's (8/96)

=====

Article Created: 19 August 1996

TOPIC -----

I have an external CD-ROM drive and when I play audio CD-ROM discs I get no sound. Sound from data CD-ROM discs work fine.

DISCUSSION -----

With any external CD-ROM drive (like the Apple CD 600e, 300e, 150) you have to attach external speakers or headphones to the RCA jacks on the back or the headphone jack on the front of the drive to get sound from an audio CD-ROM disc.

There is no path for audio CD data to be transmitted over the SCSI chain. With an internal CD-ROM drive for example, there is an actual separate physical audio connection from the CD-ROM drive to the Macintosh logic board. Data CD sound is actually synthesized by the computer itself and as such needs no audio connection.

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Tech Info Library Article Number:20298



Tech Info Library

LaserWriter 12/640 PS: Erroneous Out Of Paper Message (8/96)

Revised: 8/20/96
Security: Everyone

LaserWriter 12/640 PS: Erroneous Out Of Paper Message (8/96)

=====

Article Created: 20 August 1996

TOPIC -----

I have a LaserWriter 12/640 PS printer and every time I try to print a message indicates it's out of paper, however, there is paper in the paper cassette. If I put paper in the multipurpose tray, the printer prints from there, even though I selected AutoSelect in the print dialog box. Also my test page is coming out with part of the image clipped off when I turn on the printer.

DISCUSSION -----

The LaserWriter 12/640 PS printer includes a universal cassette which lets you place a variety of paper sizes in the printer by adjusting the cassette for the paper size used. In order to adjust the cassette, the user must extend or retract the length guide on the left side of the tray to meet up with the top of the paper. When adjusted properly this guide will click into place by a marking on the tray that specifically indicates the paper size.

There is some confusion because the 8 1/2 x 11 length guide setting is not completely at the back of the cassette. In fact, when the length guide is at the back of the cassette, the cassette is actually set for A4 paper. This is probably why your test page is clipped and print jobs are being sent to the multipurpose tray instead of the cassette. Move the length guide, located on the rear left side of the cassette, one notch to meet the top of the 8 1/2 x 11 paper.

When choosing AutoSelect in the print dialog box, the Macintosh will check the printer to see what paper sizes are installed and compare it to what is selected in page setup. If the printer senses A4 size paper in the cassette, the printer will look for 8 1/2 x 11 paper in the multipurpose tray to print with. If there is nothing in the multipurpose tray, you will get an out of paper message.

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Tech Info Library Article Number:20299



Tech Info Library

Power Macintosh 7500: Cache Issue (11/96)

Revised: 2/17/97
Security: Everyone

Power Macintosh 7500: Cache Issue (11/96)

=====

Article Created: 20 August 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

I have a Power Macintosh 7500/100 computer, and I recently installed an L2 Cache DIMM into it. However, now the computer will not start up. What could be causing this?

DISCUSSION -----

Apple has become aware of an issue affecting some (but not all) customers who install the Power Macintosh 256K L2 Cache DIMM (M3808LL/A or 661-1035)* in their Power Macintosh 7500 computers. Some customers report that their computer will not start up as long as the Cache DIMM is installed. Other customers have also reported similar symptoms when using third-party cache DIMMs.

Apple has determined that a limited number of Power Macintosh 256K L2 cache DIMMs sold by Apple may not be compatible when installed into a Power Macintosh 7500/100 computer. To resolve this issue, Apple has established a Repair Program to replace the Apple-branded cache in affected Power Macintosh 7500/100 computers.

If your Power Macintosh 7500/100 computer does not start up after installing the Power Macintosh 256K L2 Cache DIMM, contact an Apple-authorized service provider or (800) SOS-APPL to set up the repair.

If your Power Macintosh 7500/100 computer experiences similar symptoms with L2 cache from a third-party company, contact the vendor for assistance. Apple has contacted developers regarding this potential issue and has recommended a solution.

The Repair Program is effective immediately and is scheduled to run for approximately six months, ending on May 31, 1997.

* Note: There are two part numbers associated with the Power Macintosh 256K L2 Cache DIMM. M3808LL/A is the part number for the L2 Cache DIMM that customers have purchased. 661-1035 is the service part number for the L2 Cache DIMM that Apple-authorized service providers can order. Both part numbers refer to the same product.

Article Change History:

12 Nov 1996 - Updated information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20302



Tech Info Library

LaserWriter 4/600 PS: Using A4 Paper In Cassette Tray (8/96)

Revised: 8/21/96
Security: Everyone

LaserWriter 4/600 PS: Using A4 Paper In Cassette Tray (8/96)

=====

Article Created: 21 August 1996

TOPIC -----

I am trying to use A4 paper in the cassette tray of my LaserWriter 4/600 PS, but after several pages have printed the paper out LED turns on even though there is plenty of paper in the cassette tray. When I pull out the cassette tray and reinsert it the paper out LED turns off and the printing resumes. How can I correct this problem?

DISCUSSION -----

The LaserWriter 4/600 PS ships with a default configuration that sets the cassette tray paper size to US Letter. Customers in European and Pacific countries that use the A4 paper size need to change the default paper size from US Letter to A4 using the Apple Printer Utility paper handling configuration option. Paper sizes such as legal can also be set using the same procedures.

Most Apple LaserWriters use a series of microswitches and actuators to detect the paper size installed in the cassette tray. The universal cassette tray designed to support a variety of paper sizes automatically reconfigures the actuators for the appropriate paper size. The LaserWriter 4/600 PS does not have the capability to detect the paper size and therefore relies on the information stored in the printer's controller circuitry.

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Tech Info Library Article Number:20303



Tech Info Library

LaserWriter 16/600 PS: IOP 3.0 Release Notes (2/97)

Revised: 2/19/97
Security: Everyone

LaserWriter 16/600 PS: IOP 3.0 Release Notes (2/97)

=====

Article Created: 21 August 1996
Article Reviewed/Updated: 19 February 1997

TOPIC -----

The IOP (Input-Output-Processor) ROM on the LaserWriter 16/600 PS has been revised to version 3.0. This article includes information on how to identify the IOP ROM version, and a change history listing many of the changes made since IOP v2.0.

DISCUSSION -----

The 3.0 version IOP ROM (922-2458) is now available from Service. Should a LaserWriter 16/600 PS printer experience a network-related printing problem, the IOP ROM should be checked and upgraded to version 3.0 if necessary.

The IOP ROM can be checked by inspecting a startup test page. On a startup test page, the version number of the IOP ROM will be listed along the right edge of the page. Alternatively, the IOP ROM version number can be checked with the Apple Printer Utility software program.

Numerous improvements were rolled into v3.0 IOP ROMs. The issues addressed are listed below.

Ethernet
=====

Issue: Lock-ups (the printer stops responding to network traffic).

Resolution: Fixed. One such fix was the Ethernet driver receive routines were modified to handle reception of packets greater than the maximum legal size (1518 bytes including the 4 byte CRC). Previously, reception of an illegal sized packet greater than 1518 bytes caused the IOP to "crash".

AppleTalk
=====

Issue: Printer's EtherTalk stack stops responding during or after a broadcast storm: the printer disappears from the EtherTalk network even though TCP/IP and IPX continues to function.

Resolution: Fixed. The EtherTalk stack will now reregister after a long broadcast storm that caused it to lose contact with its router.

Issue: Unexplained, random PostScript errors.

Resolution: Fixed. This is a very rare problem that if encountered, is only likely to be observed on very busy networks or during broadcast storms, or even less likely, when the printer is receiving a lot of data very quickly.

Issue: Helios EtherShare Print Server doesn't successfully print to a LaserWriter 16/600 with the EtherShare Accounting feature on.

Resolution: Fixed. The LaserWriter 16/600 now works with EtherShare whether Accounting is enabled or disabled.

Issue: The LW 16/600 registers on the network with an enumerated name even if there were no other printers in that zone with the same name.

Resolution: Fixed. Previously at startup the printer temporarily registers in the default zone prior to registering in its proper zone. If there were other printers with the same name in the default zone, it would register with an enumerated name.

Issue: The printer appears in different zone than was set with the Apple Printer Utility.

Resolution: Fixed. Previously the printer would accept then store in NVRAM an invalid ZIP GetNetInfo response. It no longer stores this value in NVRAM. Now if the connection with that router is lost and the current zone is default, the printer will return to the zone stored in NVRAM set by the Apple Printer Utility.

Issue: EtherTalk now stores its current network number in NVRAM and uses this number as its first guess on startup.

Issue: On very slow WAN network links, connections may have timed out.

Resolution: Fixed. The AARP Request interval and maximum retry count were increased.

Issue: Enhanced the error recovery algorithm for Open Connection transactions. Previously a lost TREL from the host to the LW 16/600 would confuse the LW 16/600.

TCP/IP

=====

Issue: The LW 16/600 previously accepted BOOTP (and DHCP) response packets intended for a different host and would assume that host's IP address.

Resolution: Fixed.

Issue: The printer would accept IP packets with the correct hardware address but wrong IP address.

Resolution: Fixed.

Issue: The TCP/IP stack could acknowledge a FIN request from the other node before all of the data was received.

Resolution: Fixed.

Issue: Entering an IP password longer than 10 characters could cause a telnet connection to lock up.

Resolution: Fixed.

Issue: Trying to change the password from telnet under Open Windows would cause the telnet port to lock up.

Resolution: Fixed.

Issue: The LW 16/600 prints an old TCP/IP address at boot up when using RARP.

Resolution: Fixed. The printer will now either print the new address if it has been received, or 0.0.0.0 if it is still waiting for a RARP reply.

Issue: The printer now uses the Subnet Mask and Default obtained from BOOTP, RARP or Gleaning.

Issue: Some IP addresses, Subnet Mask or Default Gateway values were not set properly with the LaserWriter utilities.

Resolution: Fixed.

NetWare/IPX

=====

Issue: To avoid unnecessary IPX network traffic when NetWare is enabled (the factory default), the LW 16/600 stops looking for NetWare servers five minutes after startup provided the printer has not been configured for NetWare via LWPMAN. If the printer was configured for Netware via LWPMAN, it will advertise every 60 seconds to allow LWPMAN to be able to reset or configure the protocol.

Issue: Printer appeared to a Netware spooler running in Rprinter mode to be rebooting or locked up when it wasn't.

Resolution: Fixed.

Issue: NetWare 4.xx jobs with a banner did not print when the job was submitted to an aliased queue when the user submitting the job was logged in under a different context than the queue was created in.

Resolution: Fixed. The NetWare 4.xx banner printing problem when using NDS aliased queues was corrected.

Article Change History:

19 Feb 1997 - Information on identification & availability of 3.0 ROMs.

27 Sep 1996 - Corrected ship date of v3.0 ROMs.

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Tech Info Library Article Number:20305



Tech Info Library

Where to Get Technical Support in Europe (8/96)

Revised: 8/21/96
Security: Everyone

Where to Get Technical Support in Europe (8/96)

Article Created: 21 August 1996

TOPIC -----

This article describes where to get technical support for Apple products in Europe.

DISCUSSION -----

For technical support on Apple products in Europe, you have a number of options:

- Contact the supplier of your local Apple Product - Ask your Apple dealer or retailer for advice on solving your technical question.
- Help Line (Telephone) Support - The European Apple Assistance Centers provide telephone support in the local language to Apple customers in Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Norway, Sweden, Switzerland, and the U.K. There are also Support Centers in Italy and Spain.

Generally, there is free "up-and-running" support for customers of Apple products for a fixed period after purchase, and fee-based support thereafter or as a premium service. Contact your local center for details:

Begin_Table

Austria	Tel: 0660 / 6764	Fax: 0660 / 6765
Belgium(Flemish)	Tel: 0800-713.94	
Belgium(French)	Tel: 0800-713.95	
Denmark	Tel: 800 172 91	Fax: 800 172 90
Finland	Tel: 0800 118 083	Fax: 0800 118 085
France	Tel: (1) 69 29 29 29	
Germany	Tel: 0180/35018	
Ireland	Tel: (01) 6761650	
Italy	Tel: 39-2-27326292/3/4/5/6	Fax: 39-2-27326518

Luxembourg	Tel: 0800-2069	
Netherlands	Tel: 06-022.1517	
Norway	Tel: 800 110 06	Fax: 800 118 01
Spain	Tel: 902 100 088	
Sweden	Tel: 020-793 016	Fax: 020-793 019
Switzerland	Tel: 0800/833 310	Fax: 0800/822 210
U.K.	Tel: 0990 127753 (1-APPLE)	

End_Table

Some Assistance Centers also operate a 24 hour Fax-on-Demand service, normally available as an option from the main help-line number. Apple France offers a Minitel service on "3615 APPLE".

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Tech Info Library Article Number:20307



Tech Info Library

Protect Applications Folder Error Messages (8/96)

Revised: 8/21/96
Security: Everyone

Protect Applications Folder Error Messages (8/96)

=====

Article Created: 21 August 1996

TOPIC -----

With the Protect Applications folder option selected in the General Controls control panel, two different error messages appear depending on what I try to remove from the Applications folder:

- If I try to move a folder from the Application folder to the startup drive icon, I get "You cannot move 'folder name' to the disk 'disk name', because it is locked."
- If I move a file, I get the correct message indicating that folder protection is turned on.

DISCUSSION -----

This is an issue with file protection and should be addressed in a future release of system software. Both error messages indicate that folder protection is on.

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Tech Info Library Article Number:20308



Tech Info Library

Color StyleWriter 1500: Version 2.2 Read Me (8/96)

Revised: 8/22/96
Security: Everyone

Color StyleWriter 1500: Version 2.2 Read Me (8/96)

=====

Article Created: 22 August 1996

TOPIC -----

This article contains the Color StyleWriter 1500 v2.2 ReadMe file.

DISCUSSION -----

Information About Your Color StyleWriter 1500 Printer

This document contains important reminders and some information that's not in the user manual.

IMPORTANT:

Because of data compression, it may take Disk 1 up to 12 minutes to install its contents onto your hard disk. The other disks will work much more quickly.

Contents

=====

- Installation Alert
- Apple Color Printing CD
- Low-memory Troubleshooting
- Color Printing
- Other Printing Tips
- Desktop Printing
- Watermarks
- Printing With QuickDraw GX
- Using the Color StyleWriter 1500 With Application Programs

Installation Alert

Because of data compression, it may take installer Disk 1 up to 12 minutes to install its contents onto your hard disk. The other disks will work much more quickly.

Apple Color Printing CD

If you have problems with the software on the Apple Color Printing CD, contact the appropriate manufacturer:

- for Personal Publishing Toolkit, contact GDT, 604-473-3678
- for StickerShop Plus!, CardShop Plus! or Calendars and More, contact Mindscape, 415-898-5157
- for help with the fonts, contact Bitstream, 617-497-7514

Low-Memory Troubleshooting

If you notice any of these symptoms, your Macintosh may be running out of memory.

- The Macintosh displays "out of memory" warning messages.
- Some portions of a document don't print.
- Printing is very slow.

To make more memory available, try these suggestions:

- Have only one program open at a time.
- Increase the amount of memory you give to the program you're printing from by using the Get Info command (as explained in the documentation that came with your Macintosh).
- Use the Chooser to turn off background printing, as explained in Chapter 2 of the user manual.
- In the Page Setup dialog box, choose Portrait (normal) orientation instead of Landscape (sideways) orientation.
- Remove any watermarks from your document.
- Desktop printing requires more memory to print than PrintMonitor 7.1.2. You can remove desktop printing by using the custom remove option called "Desktop Printing Software."
- When you print in the background, if you often get a message that there is not enough memory to print on a certain desktop printer, you can give that desktop printer more memory by selecting its icon and choosing the Get Info command. Then increase the number in the Preferred Size box. (For more information on increasing a program's memory, see the documentation that came with your Macintosh.)
- Use the Memory control panel to turn on virtual memory, as explained in the documentation that came with your Macintosh.

Color Printing

- When printing very light colors in grayscale mode, you may see thin lines fade or break up. If this happens, pick a darker color for the affected object, or try printing with the Pattern halftoning option selected. (In the Print dialog box, click the Color button, then select the Pattern option.)
- If you print a document that should have a smooth gradient from one color or shade to another and notice an unexpected color change, it may be that one of the colors in the gradient cannot be reproduced by the printer. Try using a different matching method in the Color Options dialog box, or try turning off ColorSync.
- If the color blue on your printout appears purple, turn on ColorSync in the Color dialog box.
- In some programs, colors on the screen may look solid but contain tiny dots when printed. To print solid blocks of color without these dots, use the Business Graphics color-matching method. In the Print dialog box, click the Color button. In the Color Options dialog box that appears, make sure there is an X in the ColorSync box, and then select Business Graphics from the Matching Method pop-up menu.

If your colors still have too many dots, create the document in a program that allows you to define each color, then make the color fully saturated. For example, to print yellow without any dots in it, use your application program to define the yellow you are using as 100% red, 100% green, and 0% blue.

Other Printing Tips

- For faster printing of black and white pages, use the black cartridge instead of the color cartridge.
- If you see random fine lines within a landscape printout, change the orientation to portrait if possible.
- If you see very thin stripes near the bottom of your printout, use your application program to make your bottom margin larger. A bottom margin of 0.5 inches or greater is best.
- For best results when printing envelopes, do not put images or text along the bottom edge of the envelope.
- If you get the message, "Serial port in use by another application, please quit the application and try again," restart your Macintosh before trying to print again.
- Close the Chooser after making any changes to it.
- To avoid confusion when sharing your printer, be sure to give each shared Color StyleWriter 1500 printer a unique name. If you have more than one printer with the same name in a single AppleTalk zone, the Chooser will display only one of them.

Desktop Printing

- If no desktop printer icons appear after you follow the instructions in Chapter 1, it may mean the Installer program installed PrintMonitor 7.1.2 instead of the desktop printing software. This can happen if you are running system software version 7.5 or earlier in a language other than English. You have three choices:
 - Use the PrintMonitor 7.1.2 that was installed.
 - Upgrade to System 7.5.1, and then install the Color StyleWriter 1500 software again.
 - Use the Installer program's Custom Install feature to install the desktop printing software. This option, however, also installs an English-language version of the Finder.
- When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.
- If you want to have more than 3 desktop printers, you must increase the Desktop PrintMonitor memory allocation by 10K for each additional desktop printer you want. To do so, select the Desktop PrintMonitor icon--it's in the Extensions folder inside the System Folder--choose Get Info, type a larger number in the Preferred Size box, then close the Get Info window.

Watermarks

- When using a watermark, make sure the font that is in the watermark file is also in the Fonts folder inside your System Folder. If you give the watermark file to someone, they also need any fonts that it uses in order to use the watermark in their own documents.
- If you are printing a diagonal watermark such as Draft or Final on A4 or Legal size paper, for best results use Centered or Align Top Left orientations.

Printing With QuickDraw GX

- If you have QuickDraw GX on your system, the Color StyleWriter 1500 Installer will automatically install everything you need for printing with QuickDraw GX.
- If you installed QuickDraw GX after you set up your Color StyleWriter 1500, you must reinstall the Color StyleWriter 1500 software.
- After you click the Print button to print a complex document, you may notice a delay before you see printer activity.
- If printing with QuickDraw GX doesn't produce satisfactory results, you can use the GX Helper utility to turn off QuickDraw GX and use the regular QuickDraw

printing software. For more information, see Appendix E of your user manual.

Using the Color StyleWriter 1500 With Application Programs

If you have problems printing from a specific program, it may be a problem in that program. If you have problems, contact the publisher of the program. In some cases a newer, more compatible version of the software may be available.

- In some programs—such as Microsoft Word 5.1, WordPerfect 3.5 and ClarisWorks 4.0—rotated text created within the program may print with jagged edges. For best results, create the rotated text in another program and paste it in.

Notes About Specific Programs

The following list describes some special situations that you should be aware of when working with specific programs. (There may be other problems with these programs or with other programs not mentioned in this document).

Adobe Type Manager

- When you install version 3.8.1 or later of Adobe Type Manager, some system fonts are removed from your system and placed in a folder called "De-installed Fonts1". If you later turn off ATM, drag all the fonts in the "De-installed Fonts1" folder back into the Fonts folder inside the System folder to prevent characters with jagged edges.
- If you get incorrect output when you try to print rotated and flipped Adobe Type 1 fonts, try using a TrueType font instead.

Adobe Illustrator 5.0

- Unless you have at least 15-20 MB of free disk space on your startup disk, you will see a "disk is full" error message when you try to print. The more complex the document, the more space you need.

Adobe Persuasion 3.0

- If you are having difficulty cancelling printing from Persuasion try turning off ATM.

Adobe PageMaker 5.0

- To see the Color StyleWriter 1500 Page Setup and Print dialog boxes, click the Setup button in PageMaker's Print dialog box.
- When printing rotated PICT or EPS images, be sure background printing is turned on in the Chooser. If you must print in the foreground, rotate the image in another program, then import it into PageMaker in the orientation in which you plan to print it.
- PageMaker 5.0 prints pages in reverse order on the Color StyleWriter 1500, which may be particularly confusing if you are using 2-up or 4-up printing. To

print the first page first, turn on the Reverse Order option in the Print dialog box.

- Try changing the monitor depth from thousands or millions to 256 if you are having difficulty printing a particular document.

CardShop Plus! 1.0, Calendars and More 1.0, StickerShop Plus! 1.0

- If you are using QuickDraw GX, do not use GX Helper with these applications.

ClarisDraw 1.0v2

- If you have problems printing in the background, you may want to increase the Desktop PrintMonitor extension's preferred size to 300K (by using the Get Info command, as explained in the instructions that came with your Macintosh). The extension is located in the Extensions folder inside your System Folder.

DeltaGraph Pro 3.0.4

- When printing charts, always click the QuickDraw button in the Print dialog box.

FrameMaker 5.0

- If you import text as a graphic, you can crop it on the screen but it will print uncropped.
- Rotated text in large point sizes will print as a gray box. For best results, break up the text blocks into smaller pieces or individual characters.
- For best results use TrueType fonts when printing rotated text.
- Do not mix portrait and landscape pages in the same document.

MacDraw II 1.1 v2

- To print in color, be sure to turn on the Print Color Patterns in the Print Options dialog box and select Color in the Image pop-up menu in the Print dialog box.
- If you experience problems when printing your MacDraw II document with layout of 2-Up or 4-Up, try using a different program, like ClarisDraw.

Microsoft Excel 4.0 and Lotus 1-2-3

- To print in color, be sure to check the Print Using Color option in the Print dialog box and select Color in the Image pop-up menu.

Microsoft Excel 5.0

- If colored cell borders drop out when printing, try using yellow or brown or you can use the line tool in the Drawing tools palette.

- When you choose the Page Setup command, you get Excel's own version of the Page Setup dialog box. Click the Options button to see the version of the dialog box with the special Color StyleWriter 1500 options.

Microsoft Word 6.0

- When you cancel a print request from MicroSoft Word 6.0, some of the document will still print. If you are using desktop printing, try stopping the print queue on your desktop printer and then removing the print request instead of cancelling. To do this, click on you desktop printer icon and select Stop Print Queue from the Printing menu.

- For best results when printing envelopes, choose Envelopes and Labels from the Tools menu. Then click the Feed icon. In the Envelope Options dialog box that appears, click the second icon from the left, and make sure that Face Up is selected.

Ofoto 2.0.2

- For best results, make a custom calibration for the Color StyleWriter 1500 and click the Custom Profile button.

Print Shop Deluxe 1.1.1

- If you are getting off-center and incomplete printouts of cards, try restarting your Mac.

QuickMail 3.5 and earlier versions

- If you are getting rectangles instead of characters in your QuickMail printout, try selecting Text Only in the Print Dialog box.

Studio/8 v 2.0 and Studio/32 v 1.2

- Always click the QuickDraw button in the Print dialog box.

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Tech Info Library Article Number:20309



Tech Info Library

Desktop PrintMonitor 2.0: Read Me File (8/96)

Revised: 8/22/96
Security: Everyone

Desktop PrintMonitor 2.0: Read Me File (8/96)

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Article Created: 22 August 1996

TOPIC -----

This article contains the ReadMe file for the Desktop PrintMonitor 2.0 software.

DISCUSSION -----

Desktop PrintMonitor 2.0

This document contains some late-breaking information and tips not included in the manual that came with your printer. You may want to print this document and keep it for future reference.

The topics are:

- System Recommendations
- New Features in Version 2.0
- Hints and Shortcuts
- How to Use Desktop PrintMonitor
- Support and Compatibility Information
- Troubleshooting Tips
- Software Components Installed With Desktop PrintMonitor

System Recommendations

- An Apple Macintosh or PowerBook personal computer with a 68020 or later processor, a Power Macintosh, or another Mac OS-based personal computer
- 5 megabytes (MB) of RAM
- Macintosh Operating System (Mac OS) version 7.1 or later

New Features in Version 2.0

- Desktop printer icons can be moved off the desktop and into folders.
- A printer menu located on the right-hand side of the menu bar provides a

convenient means to switch the user's default printer.

- A control strip module with functionality identical to the printer menu is provided for PowerBook systems and other systems employing the Control Strip software.

Hints and Shortcuts

- The Desktop Printers folder in the Apple Menu provides a convenient shortcut to desktop printers. This is especially helpful if you have moved your desktop printer icons off the desktop.
- Command-L key combination is a shortcut equivalent to the Set Default Printer command in the Printing menu.
- Holding down the Option and Shift keys makes the Hold and Resume buttons function as Stop Print Queue and Start Print Queue.
- To print additional copies of a file, you can select the spool file waiting in the print queue and choose Duplicate from the File menu.

How to Use Desktop PrintMonitor

Creating Desktop Printers

You create desktop printers by selecting a printer in the Chooser. A desktop printer icon appears on your desktop when you close the Chooser.

The printer icon is initially placed on the desktop. After the icon is created, you can move it to any location on your startup drive.

If you wish to create other desktop printers, you must open the Chooser and select the desired printers one at a time. You must close the Chooser each time to create a desktop printer.

The last desktop printer created becomes the default printer. Your documents will automatically be printed on the default printer.

Printing With Desktop Printers

You can print documents within your applications as you normally do. You can also print documents without leaving the Finder, using one of the two methods described here. These methods are particularly efficient when you have a number of documents you want to print at once.

- Drag the icons of the documents you want to print to the desktop icon of the printer you want to use.
- Select the icons of the documents you want to print and choose the Print command from the File menu.

The Print dialog box appears. Make your choices, then click the Print button.

After a few moments, the document starts to print. If background printing is turned on, you can continue working while the document is printing.

Selecting a Default Printer

If you have more than one printer available, you can select which you want to use. The printer you select is called the default printer. All your documents will be printed on the default printer until you select a new one.

To change the default printer, use one of these five methods:

- Drag the document you want to print to a desktop printer icon, and it will automatically become the default printer.
- Select the desktop printer icon and use the Printing menu to set the printer as the default.
- Select a new printer using the Chooser.
- Select the printer name in the System Printer Menu.
- Select the printer name from the Control Strip.

Note: Switching between printers may change how much information you can fit on a page. It's best to choose a printer before you spend much time formatting the document.

Working With Desktop Printer Icons

Desktop printer icons change to indicate printing status:

[Graphics Not Available in Tech Info Library Article]

You can do the following with desktop printer icons:

- Throw away the icon. Drag the icon to the Trash. You can't throw away a desktop printer icon while the printer is printing a document. (You can create another desktop printer icon for that printer whenever you like.)

Note: You must always have at least one printer icon on your desktop. If you throw away the last icon, it will immediately be created again.

- Rename the icon. Rename the icon as you would any other Finder icon. Click the name to highlight it, then type the new name. This changes the name of the icon, not the name of the printer.
- Create an alias for the icon. You may create an alias for the icon as you would any Finder icon, by selecting the icon and choosing the Make Alias command from the File menu.

Monitoring Printing

If you are using background printing, you can use the desktop printer features to monitor and control the documents that are waiting to print. To learn how to turn background printing on and off, see your printer manual.

To monitor the printing of documents:

1. Double-click the desktop printer icon you're interested in.

A window opens listing the documents that are printing or waiting to print.

Watching the status messages can be helpful when troubleshooting printing problems. When more than one job is waiting to be printed, a list of print jobs appears in the waiting list, showing the order in which they will be printed (when sorted by print time.)

2. Choose what you'd like to do:

- To cancel a print request, select it by clicking its title or icon and click the Trash icon button

You can also drag the icon for the print request to the Trash. Note that these methods delete only the print request (also referred to as a spool file), not the document itself.

- To put a print request on hold, select it and click the Hold button.

The print request will stay on hold until you select it again and click the Resume button. You can also put the document that's currently printing on hold by dragging it to the list of documents waiting to print (lower part of the window).

- To indicate that a print request is urgent, select it and put it on hold. Next, click the Set Print Time icon button. In the dialog box that opens, click Urgent. Another way to make a job urgent is to drag the job from the waiting area of the print queue to the top of the queue or to the area reserved for the currently printing job.

- To indicate that a print request should not print until a future time, select it and click the Set Print Time icon button. In the dialog box that opens, click At Time, then set the time you want.

- To change the order of the items waiting to print, drag their titles up or down in the list.

- To sort the list of documents waiting to print, click the title of the column you want to sort by.

For example, to sort by the name of the document, click Document Name (you can also sort by choosing the commands in the View menu). The column title you sorted by is underlined. Sorting the items does not change the order in which they will print. To see that order, sort by Print Time.

- To temporarily stop all documents from printing on this printer, choose Stop Print Queue from the Printing menu.

To resume using the printer, choose Start Print Queue from the Printing menu.

Shortcut: The Printing menu for starting and stopping the print queue is available without opening the window for the printer, as long as the printer's icon is selected.

- To move a print request from one printer to another printer of the same type (for example, from a LaserWriter 4/600 PS to a LaserWriter 16/600 PS), drag the

icon for the print request to the icon of the printer where you want to move it.

You can only move a print request from a PostScript printer to another PostScript printer. The printing software won't let you move a print request to an incompatible printer. For example, you can't move a request from a LaserWriter printer to a StyleWriter printer.

Turning Off or Removing the Desktop Printing Software

Removing a Desktop Printer Icon

You can remove an individual desktop printer icon by dragging it into the Trash. If you have only one desktop printer, you can't get rid of the icon by dragging it to the Trash (the icon will reappear if you do). To get rid of the desktop printer, you must first select a different desktop printer as the default printer and then drag the desktop printer icon to the Trash. If you don't want to use desktop printer icons, see "Turning Off the Desktop PrintMonitor" or "Removing Desktop Printing Software" for information about how to remove the desktop printer software.

Turning Off the Desktop PrintMonitor

If you don't want to use desktop printers, you can turn off the Desktop PrintMonitor using the Extensions Manager (available with version System 7.5 of the Mac OS).

To turn off the Desktop PrintMonitor:

1. Open the Extensions Manager control panel in the Control Panels folder.
2. Click to deselect (uncheck) the Desktop PrintMonitor, Desktop Printer Extension, Desktop Printer Spooler, and Desktop Printer Menu extensions in the panel.
3. Click the close box to close the control panel.
4. Restart your computer.

Removing the Desktop Printing Software

The desktop printing software uses both the Desktop PrintMonitor and the PrintMonitor software. The Desktop PrintMonitor requires 200-400K bytes more free system memory in addition to the memory required by the PrintMonitor. If you don't want to use the desktop printing software, you can remove it.

To remove desktop printing software:

1. Drag any print spool files found in the PrintMonitor Documents folder (in the System Folder) to the Trash.

WARNING: These jobs will not be printed.

2. Restart your computer with the extensions off by holding down the Shift key and choosing Restart from the Special menu. Hold the Shift key down until the message "Extensions Off" appears or until your normal desktop appears.

3. Drag the following files from the Extensions folder to the Trash:

Desktop PrintMonitor
Desktop Printer Spooler
Desktop Printer Extension
Desktop Printer Menu

4. Restart your computer.

Support and Compatibility Information

- Some third-party printers do not support desktop printing. If your printer is not an Apple product, and no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the driver that is compatible with Desktop PrintMonitor.

- When you choose Save or Open in your application programs, you will see your desktop printers listed as if they were folders, but you should not save or open any documents in them. If you do, you will not be able to access your documents.

- Desktop PrintMontitor supports drag-and-drop printing for all files that cause the Print Command in the File menu to become enabled. Since clipping files do not enable the Print command, drag and drop is not supported for them.

- Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax Sender is fully functional when Desktop PrintMonitor is installed; however, it does not get the benefit of Desktop PrintMonitor's features. When you select Fax Sender in the Chooser, you will not have a default desktop printer until you choose a printer icon and choose Set Default Printer from the Printing menu.

Troubleshooting Tips

Error message "-192" or "15"

Problem: After installing Desktop PrintMonitor and restarting your Mac OS-based computer, you see error message "-192" or "15" when you try opening files or folders in the Finder. This may occur when Now Startup Manager's preferences file has become corrupted.

Solution: Restart your computer with extensions disabled (hold down the Shift key while restarting), delete Now Startup Manager's preferences file, and restart the computer again with extensions enabled. Important: Before deleting your Now Norton Startup preferences, you may want to record them or write them down before you delete this file.

Desktop printer cannot be found

Problem: When you try to print, your spool files are moved to the Trash and an alert message is displayed saying that the desktop printer could not be found.

Solution: There are two likely solutions to this problem. First, it is possible that your desktop printer has somehow become damaged. To fix this, drag the desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Second, your printer software may not be using a file format that is completely compatible with Desktop PrintMonitor. If your printer software is not published by either Apple Computer or Adobe Systems, it is possible that it is not making proper and legitimate use of PrintMonitor. If this is the case, your printer software will not work properly with Desktop PrintMonitor. The only resolution to this problem is to disable Desktop PrintMonitor and use old PrintMonitor. To print the documents you were working on follow these steps:

1. Empty the Trash.
2. Go to the Chooser and turn off background printing.
3. Print documents again.

To correct desktop printing:

4. Drag the desktop printer to the Trash.
5. Go to the Chooser and turn background printing back on.
6. Create a new desktop printer.

Not enough memory message when dragging files to desktop printer

Problem: When you drag documents created by different software applications to your desktop printer icon, a message is displayed indicating that there is not enough memory to continue.

Solution: The application used to create a document will launch when the document is printed. You may not have enough memory available to launch all of the software applications corresponding to the documents you have selected. You can resolve this situation by printing your documents individually or in smaller groups.

Options dimmed in Printing menu

Problem: Get Printer Info and Change Setup commands appear in your Printing menu, but can't be selected.

Solution: These are two new functions supported by LaserWriter v8.4. If these or other items in the menu appear dimmed and cannot be selected, it is because you are using a version of the printing software that doesn't support their respective functions.

"Out of Paper" message remains

Problem: The LaserWriter 300 "Out of Paper" message doesn't automatically go away when paper is added to the printer.

Solution: This feature does not work with Desktop PrintMonitor and LaserWriter 300 driver. The only way to work around this problem is to disable Desktop PrintMonitor and use old PrintMonitor.

Documents printed to Color StyleWriter vary in appearance

Problem: Documents printed to your Color StyleWriter look different if their printing is resumed on page two (or any later page).

Solution: With the current version of Desktop PrintMonitor and the Color StyleWriter, it is possible to lose color-matching information if a print job is put on hold and then resumed on a later page. The best way to address this problem is to resume printing on page one.

Software Components Installed With Desktop PrintMonitor

The Desktop PrintMonitor Installer places the following files in your System Folder:

- Desktop Printer Extension (in Extensions folder)
- Desktop PrintMonitor (in Extensions folder)
- Desktop Printer Spooler (in Extensions folder)
- Desktop Printer Menu (in Extensions folder)
- Printer Selector (in Control Strip Modules folder, if it exists)

If you are using a version of the Mac OS earlier than System 7.5.1, you also get:

- Finder 7.5.1 (in System Folder) provides improved compatibility
- Finder Help and Network Extension (in Extensions folder) to support Finder 7.5.1
- Clipping Extension, Dragging Enabler, Macintosh Drag and Drop, and Thread Manager (in Extensions folder) to support the interface and messages within Desktop PrintMonitor

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Tech Info Library Article Number:20310



Tech Info Library

MessagePad 120: System Update 2.0 (516205)US Read Me (4/97)

Revised: 5/1/97
Security: Everyone

MessagePad 120: System Update 2.0 (516205)US Read Me (4/97)

Article Created: 22 August 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains the Apple MessagePad 120 System Update 2.0 (516205)US ReadMe document.

DISCUSSION -----

This document describes the product enhancements included in the system update file named 'MessagePad 120 2.0 (516205)US'.

System Update 2.0 (516205)US is for Apple MessagePad 120 customers in the United States. This version will install over the following system software versions for MessagePad 120:

version 2.0 (515264)
version 2.0 (515299)

If this system update is already installed on your MessagePad, you will not damage your MessagePad by reinstalling the update. Also, you will not damage an original MessagePad, MessagePad 100, MessagePad110, MessagePad 130 or other Newton PDA if you attempt to install this system update by mistake.

Before you install any system update, you should backup your MessagePad 120 with the Newton Backup Utility or to a storage PC card (PCMCIA card).

New changes in System Update 2.0 (516205):

Multi-page documents or faxes now print all pages correctly in landscape orientation.

Fixed a problem with NBU Restore that would cause error -28207 and the unit to restart.

Fixed a problem identifying some new PCMCIA modems, including the Megahertz CruiseCard XJ3288 28.8 LandLine/Cellular modems.

Fixed a problem with changing sorting orders which could occur when switching between Swedish and English.

Fixed a problem with applications that allocate large chunks of store memory. (This is particularly prevalent with applications that use the Newton Internet Enabler.)

Tapping stop during installation with NBU of a package file or a System Update now works.

The " MessagePad" text has been removed from the reset and sleep screens.

The Stylewriter 1500 and 2500 have been added to the printer list.

Pending alarms no longer trigger immediately after setting the clock to the day of the alarm.

Deleting found ToDo's from the Find overview no longer causes a -48809 error.

Fixes in System Update 2.0 (515299) REMOVED in System Update 2.0 (516205): (In order to provide enough memory space for fixes of the above serious problems, the following fixes from the earlier patch have been removed.)

Removed a fix that allowed items located with Find in the I/O Boxes to be filed to new folders.

The "annotation button" in the Bookplayer toolbar will not be underlined when annotations exist on the current book page until the Annotation button is tapped.

Creating a new meeting/event by dragging text via the clipboard (eg from the Notepad) will create a alarm time that is random if you set the default alarm time(s) to something besides 'none'. You will have to correct the alarm time after closing and re-opening the new meeting.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:20311



Tech Info Library

Apple MessagePad 120: System Update 2.0 Instructions (8/96)

Revised: 8/22/96
Security: Everyone

Apple MessagePad 120: System Update 2.0 Instructions (8/96)

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Article Created: 22 August 1996

TOPIC -----

This article contains the Installation Instructions for System Update MessagePad 120 2.0 (516205)US document. This version of the instructions is for Macintosh owners.

DISCUSSION -----

Q. How do I install System Update 2.0 (516205)US?

A. BEFORE installing a MessagePad System Update, as precautionary measure you should backup your information. You can do this using your computer and the Newton Backup Utility, or a PCMCIA card. Installing a MessagePad System Update will not normally erase any information in your MessagePad.

Once you've backed up your information, install the MessagePad System Update following the instructions below.

WARNING: YOU SHOULD READ THE '2.0 (516205) Read Me' FILE BEFORE YOU FOLLOW THESE INSTRUCTIONS: Due to size limitation in the memory used by the System Update, some fixes in the previous System Update 2.0 (515299) were removed from System Update 2.0 (526205).

Before you install the System Update (516205), check to see what system version you currently using. Follow these steps:

1. Connect your MessagePad to your Macintosh.
2. Turn on your computer and your MessagePad 120.
3. On your computer, double-click the Newton Backup Utility icon to launch the application.
4. On your MessagePad 120, tap Extras to open the Extras Drawer.

5. Tap the Information button ("i") near the bottom of the screen.

6. Tap "Memory Info".

* If the ROM version number at the middle of the screen is not 2.0 (516205)-1 or a higher number you need to install system update MessagePad 120 2.0(516205)US. Go to step 7.

* If the ROM version number at the middle of the screen is 2.0 (516205)-1, you already have the current system software version and you can stop.

7. On your MessagePad 120 tap on Connect.

8. On your computer, choose Install Package.

9. Select the file "MessagePad 120 2.0 (516205)US". A message appears saying "New system software is about to be installed. Please tap Restart."

10. Tap Restart.

11. Wait for your MessagePad 120 to restart (about 3 seconds).

12. Tap Extras to open the Extras Drawer.

13. Tap the Information button ("i") near the bottom of the screen.

14. Tap Memory info. If the software was installed correctly, the ROM version number at the middle of the screen should be 2.0 (516205)-1

If you have questions about installing the software, please see the manual that came with your MessagePad, call (800) SOS-APPL in the US, or call the Apple Support Center in your country.

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Tech Info Library Article Number:20312



Tech Info Library

Apple MessagePad 120: System Update 2.0 PC Instructions (8/96)

Revised: 8/22/96
Security: Everyone

Apple MessagePad 120: System Update 2.0 PC Instructions (8/96)

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Article Created: 22 August 1996

TOPIC -----

This article contains the Installation Instructions for System Update MessagePad 120 2.0 (516205)US document. This version of the instructions is for PC/Windows owners.

DISCUSSION -----

Q. How do I install System Update 2.0 (516205)US?

A. BEFORE installing a MessagePad System Update, as precautionary measure you should backup your information. You can do this using your computer and the Newton Backup Utility, or a PCMCIA card. Installing a MessagePad System Update will not normally erase any information in your MessagePad.

Once you've backed up your information, install the MessagePad System Update following the instructions below.

WARNING: YOU SHOULD READ THE README.TXT FILE BEFORE YOU FOLLOW THESE INSTRUCTIONS Due to size limitation in the memory used by the System Update, some fixes in the previous System Update 2.0 (515299) were removed from System Update 2.0 (526205).

Before you install the System Update (516205), check to see what system version you currently using.

Follow these steps:

1. Connect your MessagePad to your PC. Use a cable that has a 9-pin serial connector at one end and a mini DIN-8 connector at the other. (If you have a 25-pin serial port, use a 9-pin to 25-pin adapter, along with the above cable.) Choose an available serial port on your PC and connect the end of the cable with 9 pins to the appropriate port. Plug the other end of the cable into the MessagePad's communication port.

2. Turn on your computer and your MessagePad 120.
 3. On your computer, double-click the NBU icon or use File/Run on execute NBU.EXE.
 4. On your MessagePad 120, tap Extras to open the Extras Drawer.
 5. Tap the Information button ("i") near the bottom of the screen.
 6. Tap "Memory Info".
- * If the ROM version number at the middle of the screen is not 2.0 (516205)-1 or a higher number you need to install System Update MessagePad 120 2.0(516205)US. Go to step 7.
- * If the ROM version number at the middle of the screen is 2.0 (516205)-1, you already have the current system software version and you can stop.
7. On your MessagePad 120 tap on Connect.
 8. On your computer, choose Install Package.
 9. Select the file "MessagePad 120 2.0 (516205)US". A message appears saying "New system software is about to be installed. Please tap Restart."
 10. Tap Restart.
 11. Wait for your MessagePad 120 to restart (about 3 seconds).
 12. Tap Extras to open the Extras Drawer.
 13. Tap the Information button ("i") near the bottom of the screen.
 14. Tap Memory info. If the software was installed correctly, the ROM version number at the middle of the screen should be 2.0 (516205)-1

If you have questions about installing the software, please see the manual that came with your MessagePad, call (800) SOS-APPL in the US, or call the Apple Support Center in your country.

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Tech Info Library Article Number:20313



Tech Info Library

IDE Hard Disk Computers: Freeze After Install System SW (8/96)

Revised: 8/22/96
Security: Everyone

IDE Hard Disk Computers: Freeze After Install System SW (8/96)

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Article Created: 22 August 1996

TOPIC -----

This article describes a possible issue on some IDE hard disks with ATA Driver 1.11 after installing newer system software.

DISCUSSION -----

We have seen computers with ATA Driver 1.11 on the IDE Hard Disk which may eventually cause the computer to freeze, if the computer is upgraded with a newer version of system software. Try updating the ATA Driver by using Drive Setup 1.0.4 or later.

To determine which ATA Driver your computer is using, click the hard disk icon, and choose Get Info from the File menu.

NOTE: Before installing newer system software, you should run Disk First Aid and then update the hard disk drivers.

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Tech Info Library Article Number:20314



Tech Info Library

COPS, Inc. (8/96)

Revised: 8/23/96
Security: Everyone

COPS, Inc. (8/96)

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Article Created: 23 August 1996

COPS, Inc.

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Company Profile:

COPS, Inc. makes server and client products for Macintosh computers such as COPSTalk for Windows and PrintDesk.

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Tech Info Library Article Number:20315



Tech Info Library

LaserWriter 12/640 PS: Paper Weight for Duplexer (8/96)

Revised: 8/23/96
Security: Everyone

LaserWriter 12/640 PS: Paper Weight for Duplexer (8/96)

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Article Created: 23 August 1996

TOPIC -----

The specifications in the LaserWriter 12/640 PS User's Guide for paper weight are confusing. The User's Guide, in a section about the duplexer, mentions 16-24lb paper is supported from the cassette and 16-32lb from the manual feed slot. The page listing the specifications of the LaserWriter lists 50lb paper through the manual feed slot.

Does the LaserWriter 12/640 PS printer support a different range of paper depending on where the paper is feed from? Also, does the duplexer support irregular paper sizes if my application does?

DISCUSSION -----

The LaserWriter 12/640 PS User's Guide is a little confusing. Here are the correct specifications for paper used with this printer.

Printer from paper cassette (either 250 or 500 sheet feeder):
16lb to 28lb

Printing Duplex
16lb to 28lb

Printing from Multipurpose Try to optional Face Up Tray:
16lb to 50lb

Printing from Multipurpose Try to Face Down Tray:
16lb to 28lb

Duplexer Paper Size Support

The duplexer supports letter, legal and A4 paper sizes. These sizes are supported by the engine and LaserWriter driver software. Any other sizes will

likely cause jamming due to timeouts and handling problems.

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Tech Info Library Article Number:20316



Tech Info Library

Disk Image Files & PowerBook 190, 5300, 2300 Series (8/96)

Revised: 8/26/96
Security: Everyone

Disk Image Files & PowerBook 190, 5300, 2300 Series (8/96)

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Article Created: 23 August 1996
Article Reviewed/Updated: 26 August 1996

TOPIC -----

This article describes how to use Disk Image files on the PowerBook 190, 5300, and 2300 series computers without having the Disk Copy application.

DISCUSSION -----

Disk Image files, like those found on Apple Computer's Software Update areas on the Internet and some commercial online services, can be opened with Disk Image Mounter, and copied to floppy disk using Floppy Disk Maker.

Disk Image Mounter and Floppy Disk Maker come with the PowerBook 190, 5300, and 2300 series computers. This helps customers by not requiring them to download Disk Copy from those services.

Article Change History:
26 Aug 1996 - Added keyword.

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Tech Info Library Article Number:20317



Tech Info Library

Apple MessagePad: PC Modem Cards Don't Use Audio Feedback (8/96)

Revised: 8/23/96
Security: Everyone

Apple MessagePad: PC Modem Cards Don't Use Audio Feedback (8/96)

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Article Created: 23 August 1996

TOPIC -----

I am using a Megahertz XJ14.4 PCMCIA fax modem card and an Apple MessagePad 120 with the Newton 2.0 OS. The modem appears to work fine, but I cannot hear the dialing tones when dialing, or when the connection is made.

The modem settings are correct and the MessagePad sound volume is set to maximum. I have seen other PC Modem cards in other Apple MessagePad devices, which had sound when the modem dialed and connected. Why is there no audible feedback with my PC Modem card?

DISCUSSION -----

Some PC fax modem cards do not provide audio feedback.

The standard PC card modems have a "speaker out" pin. This is a modulated square wave, which is the standard PC sound output. When you use the modem in a laptop computer, you are actually hearing the speaker in the laptop.

In Apple MessagePad devices, Apple uses true digitized sound, similar to the SoundBlaster card, used in most PC/Window computers. The Apple MessagePad hardware can not make use of the square wave signal, so it cannot route that signal to the Apple MessagePad speaker.

The original Newton PC modem card had a speaker in it, and it is the only PC card made with a built-in speaker.

Apple Computer has no current plans to change the Apple MessagePad design to accomodate PC Modem square wave signal.

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Tech Info Library Article Number:20318



Tech Info Library

Drive Setup: What Is The Patch Partition? (8/96)

Revised: 8/23/96
Security: Everyone

Drive Setup: What Is The Patch Partition? (8/96)

=====

Article Created: 23 August 1996

TOPIC -----

When I formatted my hard drive with Apple's Drive Setup utility, the partition list shows something called a patch partition. What is it?

DISCUSSION -----

Drive Setup 1.0 was introduced with the Power Macintosh 9500/120 and 9500/132. These computers were the first Macintosh computers to support disk volume sizes larger than 4 GB. The "Apple_Patches" partition is required to provide this support.

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Tech Info Library Article Number:20319



Tech Info Library

ISDN and Video Conferencing Products for Macintosh (8/96)

Revised: 8/23/96
Security: Everyone

ISDN and Video Conferencing Products for Macintosh (8/96)

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Article Created: 23 August 1996

TOPIC -----

This article discusses some ISDN and video conferencing software and hardware sold by SAGEM for Macintosh computers.

DISCUSSION -----

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Software

- Easy Transfer for Macintosh - High-speed compressible (loss-less), easy to use file transfer application. For modems, ISDN equipment, and other communication devices.

- Meet-Me Light VideoConferencing for the Power Macintosh - The first "Software Only" H.320 video conferencing solution for your Power Macintosh.H.320

COMPLIANT!

Hardware

- Planet ISDN GeoPort Adapter - GeoPort is an external ISDN Terminal Adapter for any 68020 Macintosh or Better.

- Planet ISDN Board - ISDN Terminal Adapter for the NuBus and PCI Macintoshes.

- Meet-Me VideoConferencing for the Power Macintosh - Your complete ISDN Desktop VideoConferencing Solution. For NuBus and PCI Power Macintosh AVs. H.320

COMPLIANT!

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Tech Info Library Article Number:20320



Tech Info Library

SAGEM (8/96)

Revised: 8/23/96
Security: Everyone

SAGEM (8/96)

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Article Created: 23 August 1996

SAGEM

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Internet: satinfo@satusa.com
<http://www.satusa.com>

Company Profile:
Makers of hardware and software for ISDN and video conferencing.

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Tech Info Library Article Number:20322



Tech Info Library

Macintosh Performa 6400: Unable to Disable Fax Answering (8/96)

Revised: 8/23/96
Security: Everyone

Macintosh Performa 6400: Unable to Disable Fax Answering (8/96)

=====

Article Created: 23 August 1996

TOPIC -----

I have a Macintosh Performa 6400 series computer, and I use the included AppleFax software with the internal Global Village modem to receive faxes. When I am not expecting a fax, I have attempted to disable this feature by setting the Fax Answering feature to OFF in the AppleFax application. However, after I turned it off, the computer still attempted to answer the telephone.

I also deselected the "Auto-answer incoming calls" option in the Telephone Setup control panel, but the computer still attempted to answer the telephone.

Why does the computer continue to answer the telephone even though I have disabled all of these features? How can I stop the computer from answering the telephone when I do not want it to?

DISCUSSION -----

It appears that AppleFax is not resetting the modem after completing its tasks. Apple is aware of this and is looking into the cause.

As a workaround, you should restart the computer after disabling the Fax Answering feature in the AppleFax application. After the computer has been restarted, it will no longer attempt to answer the telephone until you enable the Fax Answering feature again.

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Tech Info Library Article Number:20323



Tech Info Library

Color StyleWriter Pro: Print Head Life (8/96)

Revised: 8/23/96
Security: Everyone

Color StyleWriter Pro: Print Head Life (8/96)

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Article Created: 23 August 1996

TOPIC -----

How many pages should I get from the Color StyleWriter Pro print head? The manual states the Color StyleWriter Pro can print "thousands and thousands" of pages. How many is that?

DISCUSSION -----

The print head on the Color StyleWriter Pro has a life of 5,000 pages.

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Tech Info Library Article Number:20325



Tech Info Library

Performa 5200: Touch Screens & Display Dimensions (8/96)

Revised: 8/26/96
Security: Everyone

Performa 5200: Touch Screens & Display Dimensions (8/96)

=====

Article Created: 26 August 1996

TOPIC -----

I need to adapt touch screens for use with my Macintosh Performa 5200 computers. I contacted a vendor who manufactures touch screens and they need to know the tube dimensions and the degree of curvature of the front/face of the display in order for me to use a touch screen. What are these dimensions?

DISCUSSION -----

The radius of the curvature for the display (CRT - cathode ray tube) used in the Macintosh 5200CD family* of computers is 3.94 feet. The dimensions are as follows:

Screen Height: 213.0 mm
Screen Width: 284.0 mm
Screen Diagonal: 351.0 mm

*The following computers are in the Macintosh 5200CD family: Macintosh 5200/75 LC, Performa 5200, Performa 5210, Performa 5215, and Performa 5220.

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Tech Info Library Article Number:20326



Tech Info Library

Macintosh Computers: Low Battery Can Cause No Video (8/96)

Revised: 8/26/96
Security: Everyone

Macintosh Computers: Low Battery Can Cause No Video (8/96)

=====

Article Created: 26 August 1996

TOPIC -----

I have a Macintosh 475 computer that recently stopped displaying any video. The computer appears to start up normally, but nothing appears on the monitor. What could be causing this?

DISCUSSION -----

The loss of video signal on some Macintosh computers can be caused by the lithium battery, on the logic board, having a low voltage. If you are experiencing a loss of video, you should follow these troubleshooting steps to determine the cause.

Macintosh models which can be affected: Quadra 605, Performa 475, Performa 476, LC 475, Centris 660AV, Quadra 660AV, Power Macintosh 6100, and the Performa 61XX computers.

Step 1

If possible, swap the monitor with a known-good monitor and video cable to isolate the issue to the computer.

Step 2

Reset the Parameter RAM (PRAM) by restarting the computer while holding down the Command-Option-P-R keys. Continue holding down the keys until you hear three startup chimes, then release the keys to allow the computer to boot up normally.

Step 3

If the computer still does not display video, restart the computer off a known good startup disk or CD-ROM disc. If video returns, reinstall your system

software.

If you still do not have video, your computer should be brought to an Apple authorized service provider to have the lithium battery voltage checked. If the voltage is below 3.0 volts DC, the battery should be replaced. If the battery voltage is above 3.0 volts DC, the logic board is likely the cause of the no video condition and should be replaced.

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Tech Info Library Article Number:20328



Tech Info Library

Apple Software Updates: Issues With Downloaded Files (2/97)

Revised: 2/12/97
Security: Everyone

Apple Software Updates: Issues With Downloaded Files (2/97)

Article Created: 26 August 1996
Article Reviewed/Updated: 12 February 1997

TOPIC -----

I recently downloaded a system software update from Apple Software Updates. After running the installer, strange things are happening. I think the software I downloaded may be corrupted. How likely is this, and what should I do about it?

DISCUSSION -----

First, make sure you're downloading from an official Apple SW Updates location:

- * America Online - keyword: applecomputer
- * CompuServe - GO APLSUP
- * Internet -
 - Worldwide Web: <http://www.info.apple.com/swupdates>
 - ftp: <ftp://ftp.info.apple.com>

It is extremely unlikely that software updates from the Apple Software Updates are corrupted. A bad download could be detected one of several ways:

The Download Process

Most download processes involve a constant checksumming. This is a process in which the essence (a checksum) of small packets of downloaded data are generated on the sending side. Once the packet is received, a receive checksum is generated. The checksum from the sender is then compared to the receiver. If they do not match, the packet is resent.

A large number of bad packets would typically result from noisy phone lines, service provider problems (such as heavy machine loads, such as when many people are calling the same system), or software or machine issues on the caller's

side. Such downloads would either take forever, and would usually be terminated by the user; or would be terminated as the result of some other variable (such as communications loss, or a time-out due to excessive delays).

The De-binxhexing Process

Software on the Apple Software Updates is stored in Binhex format on most sites. This is a text representation of binary data. Binhex data can usually be identified by a '.hqx' appended to the file name. When a file is downloaded, it must be converted to a binary format. Binhex has its own checksums: when a download is "bad," an error message is generated.

This process has, in fact, helped recipients detect problems with the original archive as it is stored on the Apple Software Updates site: the original data may be corrupted, for example, but when it is being converted into a usable state, an error occurs. In such a case, if multiple downloads fail, the site should be independently checked, and the Apple Software Updates maintainers notified of a potential archive issue.

The Decompression Process

Most software on Apple Software Updates is compressed, and, in addition, is a self-extracting archive. This practice is used to cut down on both storage space and transmission time. The compression algorithms are rigorously defined and are completely inflexible. Any error in the data stream would tend to render the resulting application unusable.

Disk Copy

Once the final product is extracted, it may have to be converted to a useful format. For example, many files on Apple Software Updates are Disk Images. Disk images are designed for use with Apple's Disk Copy (version 4.2 or higher) utility. In the process of creating a floppy disk, checksum tags on the image file are, again, used, and errors may show up.

For further information on Disk Copy, refer to the Apple Tech Info Library article # 9384: Disk Copy 4.2: How to Install and Use (2/97)

The Installer - The Final Product

Computer software does not suffer faults well. Any corrupted data in an application's code will typically cause the microprocessor to fail when it receives either an illegal or inappropriate instruction or when an instruction refers to memory in an improper manner (this accounts for the majority of type 1, 2, 10, and 11 errors). For the installer to succeed without producing an error message is unlikely.

Discussion

From the above information, one can see that the download process involves several steps, each of which has its own checks and balances. It is highly unlikely that an installer would successfully install, yet quietly install corrupted data. A significant error would happen earlier in the process, and

would alert the user of possible issues with the software.

This is not to say that variables on the customer's side are not relevant. If the final installer is run from an external hard disk on an improperly configured (dirty) SCSI chain, random errors may occur. In addition, if the user did not disable his virus detectors or low-level performance or disk-enhancing software prior to running the installer, unusual things could happen without providing immediate feedback.

The best recommendation is to determine at what stage the failure occurs.

To reiterate, if the difficulty happens at the Binhex or uncompress stage, and the user cannot proceed, communications failures are the most likely cause of failure. If communications can be ruled out, the quality of the online archive is suspect.

If a final operational installer can be produced from the above steps, and trouble occurs, other factors are likely at hand, and normal troubleshooting should be vigorously applied: isolate the computer from any external SCSI devices, check for the presence of NuBus, PCI, or PDS cards, and vigorously scrutinize the pre-existing system software situation.

Article Change History:

12 Feb 1997 - Added reference to DiskCopy 4.2 article.

06 Feb 1997 - Updated URLs

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Tech Info Library Article Number:20329



Tech Info Library

Apple Multiple Scan Display Software 2.0.2: Read Me (8/96)

Revised: 8/26/96
Security: Everyone

Apple Multiple Scan Display Software 2.0.2: Read Me (8/96)

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Article Created: 26 August 1996

TOPIC -----

This article contains the ReadMe file for the Apple Multiple Scan Display software 2.0.2.

DISCUSSION -----

The Display Software 2.0.2 package includes the following features:

- Display Enabler 2.0.3
- ColorSync 2.0 and ColorSync profiles
- Control Strip 1.3 with Monitor Resolution, BitDepth, and Sound Volume features
- Energy Saver 1.1

You can use this software to change the resolution of your monitor, adjust the number of colors it can display, and control your monitor's energy-saving features.

System Requirements

To use Display Software 2.0.2, you need:

- A computer with version 7.1 or later of the Mac OS software
- Any Apple Multiple Scan Display

Display Software 2.0.2 does not work with PowerBook 100 series computers or with PowerBook Duo computers other than the 280 and 280c. To use Display Software 2.0.2 with the PowerBook Duo 280 and 280c, you must connect the PowerBook to a Duo Dock.

What's New in Display Software Version 2.0.2

The Display Enabler was updated to version 2.0.3 to resolve a conflict with NOW

Utilities version 6.0.

How to Install Display Software 2.0.2

To install Display Software 2.0.2, follow these steps:

1. Insert the Display Software disk into a disk drive.
2. Double-click the Installer icon to open it. A welcome message appears.
3. Click OK.
4. Make sure the disk named in the Installer window is the disk on which you want to install the software. If not, click Switch Disk until the correct name appears.
5. Click Install to begin installation.
6. When installation is finished, follow the instructions on the screen to begin using your new software.
7. Be sure to read the file About Control Strip to learn about your new software.

Using ColorSync System Profiles

With ColorSync, different Apple monitors can display colors in a consistent way. You can also fine-tune the way your monitor displays color.

To set a ColorSync profile for your monitor, follow these steps:

1. Open the ColorSync System Profile control panel.
2. Click Set Profile.
3. In the dialog box that appears, locate the files that have the name of your monitor. Click the profile you want.

Note: If you have an Apple Multiple Scan 14 Display, you were previously instructed to use the profile for the Apple Multiple Scan 15 Display. You now have choices specifically for your monitor.

About the ColorSync choices

The ColorSync choices let you choose from several white point settings for your monitor. White point is a measure of the color content of light.

- 9300 is the standard for most computer monitors and high-definition television (HDTV).
- D50 is the standard for most graphic art work.
- D65 approximates the color of light from the midday sun.

Configuring Your Monitors

The features of the Monitors control panel have not changed. To learn more about the Monitors control panel, see the documentation or online help that came with your computer or your system software. (Some models come with a different control panel for configuring monitors.)

Tip: To set the screen resolution and configure your video card, you click the Options button in the Monitors control panel. To see more choices, hold down the Option key on your keyboard as you click the Options button.

At the bottom of the control panel, you can choose whether to change the settings when you close the control panel or when you restart your computer.

Saving Energy

Your Multiple Scan Display is designed to save energy by putting itself to sleep when you are away from the computer for a while. You can control this feature using the Energy Saver control panel.

Using the Control Strip

The Control Strip is a new way of changing certain settings from your desktop without opening control panels. With the Control Strip, you can change the number of colors on your screen, the resolution (size) of the screen, and the volume of the system sound.

To learn more about the Control Strip, read the file About Control Strip included in this package.

Troubleshooting

This section lists solutions to potential problems with your new display software.

I'm trying to change the monitor resolution, and I don't see the resolution I want.

You can see additional resolution choices in the Monitors control panel if you hold down the Option key on your keyboard while you click the Options button in the control panel. In the list that appears, click the resolution you want. (Some models come with a different control panel for configuring monitors. See the onscreen help that came with your computer.)

Note: Some of the items in this list will not work properly with your monitor. If you choose a resolution that doesn't work with your monitor, you may see a message, or your monitor may go blank or show static. After approximately 15 seconds, your monitor should revert to a usable resolution. If it does not, restart your computer.

After I change the screen resolution, a window is stuck, halfway off the screen, or missing.

Try one of the following:

- If you changed the resolution in the Monitors control panel, make sure the control panel is closed before trying to use another window.
- Quit the program whose window is missing and then open it again.
- If the program has a Windows menu, use it to hide the problem window and then show it again.
- Go back to the resolution you were using, close the window, change the resolution, and then reopen the window.
- If you have problems with a particular program, contact the publisher of that program. Not all programs take advantage of the Multiple Scan Display's new features.

If you choose the 800 x 600 (72 Hz) resolution on a Multiple Scan 14 Display, a software problem may prevent you from seeing the whole screen. Use the 60 Hz setting instead.

I install both Display Software 2.0.2 and AppleVision Software 1.0.2 and the Display Enabler version is 2.0.2 instead of 2.0.3.

If you are using both Display Software 2.0.2 and AppleVision Software 1.0.2, you must install Display Software 2.0.1 after you install AppleVision Software 1.0.2. This will ensure you get the correct version of Display Enabler.

The Mac OS splash screen and progress bar do not redraw correctly.

On some configurations, after installing Display Software 2.0.2 the Mac OS splash screen and progress bar may not redraw correctly. This will not adversely affect the performance of your Macintosh.

I installed Display Software 2.0.2 but the Sound Control Strip Module did not get installed.

If your system software uses Monitors & Sound Control Panel or Sound & Displays Control Panel, the Sound Control Strip Module will not get installed. The Sound Control Strip Module was designed to work only with the Sound Control Panel.

After I change the number of colors displayed on the screen, the colors don't look right.

Try one of the following:

- Quit the program you're running and start it again.
- Go back to the number of colors you were using.

After I change the screen resolution, icons move.

Changing the screen resolution affects how information can be displayed on your screen. The display software may automatically reposition icons after you change the screen resolution.

After I attached a new monitor to my computer, the new monitor's screen is blank or shows "garbage" or "snow."

The computer may not have recognized the monitor. Try the following: Turn off the computer and disconnect the new monitor. Start the computer with no monitor attached. Wait a minute or so for the computer to finish turning itself on. Turn off the computer again and reattach the new monitor.

My monitor does not go to sleep.

Some monitors, computers, and video cards do not support the Energy Saver feature. See the documentation that came with your monitor and video card for more information.

If you have a Power Macintosh 9500, you can get an upgrade to your software that allows your monitor to work with Energy Saver. Call the Apple Service and Support number found in the service and support information that came with your computer.

When I use both Energy Saver and a screen saver program, the screen freezes.

The screen saver program may be conflicting with Energy Saver. Turn off either the screen saver program or the Energy Saver control panel.

My monitor starts up in black and white.

If you've just installed a new video card such as the Macintosh 24AC, the monitor will start up in black and white the first time you start the computer. Switch it to color after startup.

If your Multiple Scan 15 Display is connected to a Macintosh Quadra 610, 650, 700, or 950, a Macintosh LC 475 or a Power Macintosh 6100, the monitor may start up in black and white. Switch it to color after startup.

I see two resolution options labeled 640x870 (75 Hz).

If you're using the Macintosh 24AC video card, you may see two apparently identical resolution selections. The first option sets your monitor to display millions of colors, and the second option sets your monitor to display 256 colors.

When I change resolutions, the monitor goes blank.

If your monitor is connected to the Macintosh 24AC video card, the monitor may go blank for 15 seconds when you select a resolution that does not work with your monitor. Try selecting another resolution.

The image is too small.

If you're using a Multiple Scan 1705 connected to the Macintosh 24AC video card, the image may appear too small at the resolution 1024 x 768 (60 Hz). Try a different resolution.

IMPORTANT:

Some programs and video cards do not take advantage of the Multiple Scan

Display's new features. If you experience problems with your application programs or video cards, contact the publisher or manufacturer.

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Tech Info Library Article Number:20330



Tech Info Library

Desktop Printing: Directories Created & Used (8/96)

Revised: 9/30/96
Security: Everyone

Desktop Printing: Directories Created & Used (8/96)

Article Created: 26 August 1996

TOPIC -----

What directories are used and created by Desktop Printing? It looks as if some temporary subdirectories are created that are not visible. Are these temporary directories created for each Desktop Printer icon?

DISCUSSION -----

Here is a list that summarizes how Desktop Printing uses directories:

- A directory is created for each Desktop Printer. These directories are normal HFS directories with the exception of the icon and window in the Finder, and the items stored within it.
- DTP directories show up in the sfgetfile (File-Open dialog) and sfputfile (File-Save) dialogs.
- Any non-spool files placed into these directories WILL NOT be accessible in the Finder until Desktop Printing is disabled. This is because DTP is able to tell the Finder what to show and what not to show.
- Any non-spool files placed into these directories ARE accessible through sfgetfile/sfputfile. However, Apple recommends not using these directories to store non-spool files since files will not show up in the Finder.
- If DTP is disabled, the desktop printer directories will show up with an "X" through them, though will behave exactly like a folder (subdirectory).
- Future versions of Desktop Printing will place any unrecognized files on the desktop and alert you accordingly, as well as hide these DTP directories better, even from within sfgetfile/sfputfile.

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Tech Info Library Article Number:20331



Tech Info Library

Energy Saver v2.0.1: Server Restart Option (9/96)

Revised: 9/3/96
Security: Everyone

Energy Saver v2.0.1: Server Restart Option (9/96)

Article Created: 27 August 1996
Article Reviewed/Updated: 3 September 1996

TOPIC -----

I have two Workgroup Servers, and we just had a power outage. One server automatically restarted and the other server did not. Why is that?

DISCUSSION -----

The Energy Saver control panel v2.0.1 has a Server Setting option in the Preferences menu. The "Restart automatically after a power failure." option is not selected. If this option is selected and the server still does not restart, throw out the Energy Saver Preferences in Preferences Folder and reset preferred Energy Saver options.

Article Change History:
03 Sep 1996 - Added keyword.

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Tech Info Library Article Number:20332



Tech Info Library

Macintosh Performa 6200: Using 28.8 GVC Modem (8/96)

Revised: 8/27/96
Security: Everyone

Macintosh Performa 6200: Using 28.8 GVC Modem (8/96)

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Article Created: 27 August 1996

TOPIC -----

Will the Global Village internal 28.8 modem which ships with the Macintosh Performa 6300 series work in a Macintosh Performa 6200 series computer? If so, what special steps are necessary?

DISCUSSION -----

Yes, the the Global Village internal 28.8 modem is compatible with the Macintosh Performa 5200, 5300, 6200, and 6300 series computers. However, the software included with the Global Village Gold IIv internal 14.4 modem is NOT compatible with the higher speed modem. You need to use update the software using the GlobalFax 2.5.6 installer.

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Tech Info Library Article Number:20333



Tech Info Library

Power Mac Format Patch: Read Me (8/96)

Revised: 8/27/96
Security: Everyone

Power Mac Format Patch: Read Me (8/96)

Article Created: 27 August 1996

TOPIC -----

This article contains the ReadMe file for the Power Mac Format Patch.

DISCUSSION -----

Important Information About the Power Mac Format Patch

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The Power Mac Format Patch corrects problems that may occur with initializing or erasing 3.5-inch floppy disks. You should install this patch if:

* Your computer is a Power Macintosh 8500/180, 9500/200, or 9500/180MP, and you have replaced your existing System Folder by performing a "clean" installation of system software. The new System Folder created during the "clean" installation process does not contain the patch, and needs it to function properly. (For more information about doing a "clean" installation of system software, see the manual that came with your computer.)

* You just installed a 180 megahertz (MHz) or faster PowerPC processor upgrade card in a Power Macintosh 7500, 7600, 8500, or 9500 computer.

To install the Power Mac Format Patch, you copy the patch into your Extensions folder inside your System Folder. See "Installing the Patch" below for detailed instructions.

Problems Fixed by this Patch

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The Power Mac Format Patch corrects the following problems that can occur while initializing or erasing a floppy disk on any Power Macintosh 7500, 7600, 8500, or 9500 computer with a 180 MHz or faster PowerPC processor.

* False warnings that your disk is defective: When initializing or erasing a floppy disk, an alert box like the one shown below usually indicates that the

disk is physically defective or damaged and should be discarded. However, the disk may actually be OK; with the patch installed, the disk may initialize or erase properly.

* Less disk space available than normal: A newly initialized floppy disk may have substantially less disk space free than what should be available. For example, a 1.4-megabyte high-density floppy disk may have only 1 megabyte of space available.

Installing the Patch

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To install the Power Mac Format Patch, do the following:

1. While holding down the Option key on your keyboard, drag the Power Mac Format Patch icon onto the System Folder's icon.

(If you are dragging the icon from the Apple Extras folder on your hard disk, holding down the Option key causes the icon to be copied instead of moved, which leaves a copy of the icon in the Apple Extras folder in case you need to copy it again later.)

You see the following dialog box.

2. Click OK to automatically place the patch in the Extensions folder.

3. Restart your computer by choosing Restart from the Special menu.

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Tech Info Library Article Number:20335



Tech Info Library

12 Inch PC Compat Card: Freezes With 32 MB & 64 MB DIMMs (3/97)

Revised: 3/10/97
Security: Everyone

12 Inch PC Compat Card: Freezes With 32 MB & 64 MB DIMMs (3/97)

Article Created: 27 August 1996

TOPIC -----

I have a 12 Inch PC Compatibility card installed into my PCI Macintosh. If I install either a 32 MB or 64 MB Dual Inline Memory Module (DIMM) into this card my card will lock up when it runs the HIMEM.SYS extended memory testing. Should I replace my DIMMs?

DISCUSSION -----

Issue

Apple is aware of an issue that affects the 12 Inch PC Compatibility card that may prevent certain 32 MB and 64 MB DIMMs from working properly when installed into this card. Generally the symptoms associated with this issue are as follows:

- 1) Card locks up during the HIMEM.SYS extended memory tests only after installing a 32 MB or 64 MB DIMM.
- 2) Frequent crashes while running under Windows 95 only after installing a 32 MB or 64 MB DIMM.

If your 32 MB and 64 MB DIMMs meet the memory specifications for the 12 Inch PC Compatibility card and you are experiencing either of the symptoms listed above then you probably need to update your "PC Setup" control panel.

Resolution

Use the "PC Setup DIMM patch" software to update your "PC Setup" control panel. The patch file can be found in several different locations including the "Apple Support and Information Web" (www.info.Apple.com) or one of its mirror sites, AOL, or Compuserve in the Apple Software Updates folder.

Apple Software Updates

Macintosh *f*
Unsupported *f*
"PC Setup DIMM Patch"

Follow the instructions in the "Read Me" file included with the PC Setup DIMM Patch software.

How To Tell If the Patch Has Already Been Installed

There is a way to tell if the patch(version 4.0.4) has been applied over an existing PC Setup 1.5 control panel.

Check the version number of the PC Setup 1.5 control panel by clicking on the Control Panel icon and then choosing Get Info from the File menu. The version number should say Version: 1.5, w/12" Card large DIMM patch.

Also, you cannot to patch the control panel a second time. If a second attempt is made, you will get a halt message which says,

"An unrecoverable error occurred while verifying resource vers 1 in the file PC Setup on Hard Drive. This resource needs to be patched, but its attributes aren't what was expected. Please make sure that you are patching the correct file and version."

Additional Information

Please see the following Technical Information Library articles for related 12 Inch PC Compatibility card memory and Software Update information:

"PC Compatibility Card (12-inch): Adding Memory"

"Apple ftp Sites Frequently Asked Questions"

"Where To Find Apple Software Updates" - Lists locations on online services where you can find free Apple software updates.

"Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 27 August 1996.

Article Change History:
10 Mar 1997 - Made minor typographical correction.

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Tech Info Library Article Number:20336



Tech Info Library

StyleWriter EtherTalk Adapter: Cannot Turn Off Printer (8/96)

Revised: 8/28/96
Security: Everyone

StyleWriter EtherTalk Adapter: Cannot Turn Off Printer (8/96)

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Article Created: 28 August 1996

TOPIC -----

I am using a StyleWriter printer with the StyleWriter EtherTalk Adapter. When the EtherTalk Adapter is connected, the StyleWriter continually cycles the power, the rollers continually spin, and the StyleWriter will not turn off.

DISCUSSION -----

The most common cause of this problem is the lack of a cartridge in the StyleWriter printer. If the adapter is connected without a cartridge in the printer, or if a print job is sent to the printer without a cartridge, the printer runs a self-test that does not complete.

To correct this problem, disconnect the power cord from the StyleWriter EtherTalk Adapter. Install a cartridge in the printer, and turn the printer off. Reconnect power to the StyleWriter EtherTalk Adapter. The printer will power up and go through a test cycle. After the self-test, you will be able to print and power off the printer properly.

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Tech Info Library Article Number:20338



Tech Info Library

System 7.5.3, Telecom 2.3.2, Quadra 840AV & Type 1 Error (8/96)

Revised: 8/28/96
Security: Everyone

System 7.5.3, Telecom 2.3.2, Quadra 840AV & Type 1 Error (8/96)

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Article Created: 28 August 1996

TOPIC -----

After installing System 7.5 Update 2.0 on my Macintosh Quadra 840AV with Apple Telecom 2.3.2, I now get Type 1 errors when opening Fax Terminal and Fax Viewer. This error only happens if AppleGuide 2.0.2 is active. If AppleGuide is disabled with the Extensions Manager control panel, Fax Terminal and Fax Viewer work properly. MegaPhone, however, continues to produce Type 1 errors with AppleGuide on or off.

DISCUSSION -----

The issue you describe, which occurs only on the Centris/Quadra 660AV and Quadra 840AV, has been fixed with Apple Telecom 2.3.3. You should upgrade to Apple Telecom 2.3.3. This software can be found at Apple's online software update locations.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20339



Tech Info Library

System 7.5.5 Update: Overview and Installation (10/96)

Revised: 11/12/96
Security: Everyone

System 7.5.5 Update: Overview and Installation (10/96)

Article Created: 19 September 1996
Article Reviewed/Updated: 4 October 1996

TOPIC -----

This article is the "Macintosh System 7.5.5 Update: Overview and Installation" Read Me file.

DISCUSSION -----

What is the System 7.5.5 Update?

The System 7.5.5 Update is a set of system software enhancements that improves the reliability and performance of all Macintosh and Mac OS-compatible computers running system software version 7.5.3. The System 7.5.5 Update also includes all of the improvements delivered with System 7.5.3 Revision 2. Therefore, it is not necessary to install System 7.5.3 Revision 2 before installing System 7.5.5 Update.

Who should install the System 7.5.5 Update?

Apple recommends that all customers who are currently using System 7.5.3 should install the System 7.5.5 Update. If you are using a system software version prior to System 7.5.3, you must upgrade to System 7.5.3 before you install this update. (If you are using System 7.5, 7.5.1, or 7.5.2, you can use System 7.5 Update 2.0 to upgrade to System 7.5.3.).

To find out what system software version your computer is using, follow these steps:

- 1) Make sure you are in the Finder. You can do this by selecting the Finder item from the application menu in the upper right corner of your desktop.
- 2) Choose About This Macintosh from the Apple menu. The system software information is in the About This Macintosh window. Make sure "System Software 7.5.3" is in the upper-right corner of the window.

What does installing the System 7.5.5 Update do?

After you install the System 7.5.5 Update, you should notice improved performance and stability, specifically:

- Significant performance improvements when using virtual memory

If you use virtual memory, this software improves the time it takes to:

- launch a large application program that requires a significant amount of RAM
- switch between large application programs
- switch between large documents within an application
- access SCSI devices

- Improved memory management on PowerPC computers

If you could not launch an application program because you did not have enough RAM to open it, you may be able to use the application after you install this update.

This update also eliminates the cause of one Type 11 error.

- Improved reliability when using floppy disks in a computer equipped with a DOS Compatibility Card

If you have a computer with a DOS compatibility card installed, you may have experienced problems inserting floppy disks while Windows is launching. This software fixes this problem.

- Improved reliability on PowerPC PowerBook computers (PowerBook 5300 and 2300 series computers) and PCI-based computers (Macintosh 5400, 6400, 7200, 7500, 7600, 8500, and 9500 series computers)

If you have a PowerPC PowerBook or a PCI-based computer, your computer may have "frozen" from time to time while accessing a hard disk. This update fixes one cause of this problem.

- Improved reliability when using Ethernet and virtual memory

If you use Ethernet and have virtual memory turned on, you may have experienced problems transferring large files over Ethernet. This update fixes this problem.

- Better reliability when using the Apple TV Tuner or Macintosh TV Remote Control

When using the remote control for the Apple Video Player, the channel and volume buttons may have stopped working when you press them rapidly. This software fixes this problem.

- Improvements in LocalTalk

This update includes improvements in LocalTalk that provide:

- better reliability on Macintosh 5400 series computers
- better performance when using some third-party infrared software products

- Improved stability when using multiple background application programs

If your computer crashed when using more than one background program, this update fixes the problem. A background program is one that works behind the

scenes, so you don't see it in the Application menu. Some e-mail programs have this background feature.

- Improved stability when using a shared printer on a network

If your computer crashed when you were trying to use a shared printer on a network, this update fixes the problem.

- Improved reliability on high performance (180MHz or greater) Macintosh and Mac OS-compatible computers that have the PowerPC 604 or 604e processors

If you have experienced system freezes during startup or difficulties when formatting floppy disks, this update fixes these problems.

- Improved reliability when using Ethernet on the Macintosh 5400 and 6400 series computers

- Improved reliability when using sound intensive applications on Macintosh Quadra and Centris computers that contain the PowerPC upgrade card

- The "System 7.5.5" extension set in Extensions Manager now includes all of the QuickTime 2.5 extensions.

With this update, you also get the following enhancements, which were available with System 7.5.3 Revision 2:

- Better reliability for PowerBooks using RAM Doubler

If you have a PowerBook using system software 7.5.3 and you use RAM Doubler (version 1.6.1 or earlier), you may have experienced a problem when waking your PowerBook from sleep. This software fixes this problem.

- Overall performance enhancements for PowerBook 2300 series and PowerBook 500 series computers with the PowerPC Upgrade Card installed

- Improved reliability when using PC-formatted floppy disks with PowerBook 500 series computers with the PowerPC Upgrade Card installed

If you have a PowerBook 500 series computer with the PowerPC Upgrade Card installed, PC-formatted floppy disks that were formatted on your computer may be unreadable in DOS or Windows computers. This software fixes this problem.

- Improved reliability on PCI-based computers and PowerBook 5300 computers, PowerBook 2300 computers, and PowerBook 500 series computers with the PowerPC Upgrade Card installed

- Improved reliability when copying files to some 1 gigabyte hard disks

If you have a PCI-based computer with a 1 gigabyte hard disk, this software helps avoid problems when copying files to the hard disk.

- Improved reliability when using the Startup Disk control panel

In rare instances, when you turn on a PCI-based Power Macintosh computer it may not start up from the disk selected in the Startup Disk control panel. This software fixes this problem.

Known problems

- Using Express Modem 3.0 (delivered by Apple Telecom 3.0) software with the System 7.5.5 Update

If you install Apple Telecom 3.0 or Express Modem 3.0 after installing the System 7.5.5 Update you will not be able to switch on your Express Modem. To fix this incompatibility, run the System 7.5.5 Update again. The System 7.5.5 Update updates your Express Modem 3.0 to Express Modem 3.0.1. (Note: Apple Telecom 3.0 shipped on some new Macintosh systems and is not presently available from Apple for download or purchase.)

- Using the volume buttons on 5200, 5300, 6200, 6300, and 630 series computers
There is a known problem that if you rapidly press the volume buttons on the front of your computer, the computer may crash. This software does not fix this problem. Apple is working on a solution to this problem.

- Using Assistant Toolbox with desktop computers

If you use the Assistant Toolbox extension (meant to be used on PowerBook computers) on a desktop computer, you will not be warned that the contents of your RAM disk will be lost when you shut down your computer. Apple is working on a solution to this problem.

- Using the Motorola Math Library and Connectix Speed Copy 1.3.1 (part of Speed Doubler) 1.3.1

There is a known incompatibility with the System 7.5.5 Update when used with two specific products at the same time: the Motorola Math Library and Connectix Speed Copy 1.3.1 (part of Speed Doubler 1.3.1). If you have both of these items in the System Folder when you use the System 7.5.5 Update, Speed Copy 1.3.1 cannot be used. In order to use Speed Copy, remove the Motorola Math Library from the Extensions folder and restart your computer.

- Programs use slightly more memory

If you are having new problems with programs reporting that they do not have enough memory, System 7.5.5 Update may require programs to use an additional 23K of memory. To fix the problem:

- 1) Quit the program if it is open.
- 2) Click the program's icon to select it.
- 3) Open the File menu and choose Get Info.
- 4) In the Info window, increase the value in the "Preferred size" box by 23.
- 5) Close the window.

- Using Energy Saver and Audio CDs on PCI-based desktop computers

On PCI-based desktop computers, Energy Saver is known to interrupt the play of Audio CDs if "Shutdown instead of sleep" is selected. This update does not fix this problem. To avoid this problem, uncheck "Shutdown instead of sleep" in the Energy Saver control panel.

- Using Desktop Shortcut feature of Aladdin DesktopTools with System 7.5.5 Update

One feature of Desktop Shortcut, a component of the Aladdin DesktopTools by Aladdin Systems, Inc. is known to fail under System 7.5.5 Update. If Shortcut is installed, when you are in an Open or Save dialog box, normally you can click in any window in the Finder. The files/folders in that window will then appear in the Standard File Dialog box's scrolling list. This feature does not work with

System 7.5.5 Update. To work around this problem, navigate using the Shortcut Menu icon. Aladdin Systems has been contacted about this problem and expects to release an update in the future to address the issue.

- Using Sagem GeoPort ISDN Adapter 1.0 with System 7.5.5 Update

There is a known incompatibility with the Sagem GeoPort ISDN Adapter 1.0 and System 7.5.5 Update, resulting in the inability to use the GeoPort ISDN Adapter. Sagem has been contacted about this problem and is working on a solution. If you have a Sagem GeoPort ISDN Adapter, you should not install the System 7.5.5 Update until Sagem resolves the conflict. For more information, visit the Sagem web site at <http://www.satusa.com> or e-mail sathelp@satusa.com.

For advanced users who need additional technical information, please see the System 7.5.5 Update Tech note. It can be located at the Apple Developer World Internet site at <http://devworld.apple.com/dev/technotes.shtml>.

Before You Install

You should use the Disk First Aid application program before you install the System 7.5.5 Update to check your hard disk for problems. Disk First Aid comes on the System 7.5.5 Update, Disk 1 disk and on the Disk Tools disk that came with your computer. Follow these steps:

- 1) Insert the System 7.5.5 Update, Disk 1 disk into the floppy disk drive and double-click its icon to open it.
- 2) Double-click the Disk First Aid icon to open it.
- 3) Click the icon for the disk you are installing software on.
- 4) Click Verify.
- 5) If Disk First Aid tells you your disk appears to be OK, choose Quit from the File menu. If Disk First Aid reports problems with your hard disk, see the manual that came with your computer.

NOTE: If you have a problem using Disk First Aid, see the manual that came with your computer.

Installing the System 7.5.5 Update

Before you install the System 7.5.5 Update, your computer must have System 7.5.3 or System 7.5.4 installed. You should also have at least 10 MB of disk space temporarily available on your hard disk. To find out what system software version your computer is using, follow the steps in "Who Should Install the System 7.5.5 Update?" above.

It is very important that you follow these steps in the order listed below to install the System 7.5.5 Update:

- 1) Open the Extensions Manager control panel.
- 2) Choose "System 7.5.3" from the Sets pop-up menu. (This choice will appear if

you are using system software version 7.5.3. If this does not appear, you need to upgrade to System 7.5.3 before installing this update.)

3) If you have third-party peripheral devices that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, alternative input devices, network card drivers, and removable media.)

4) Restart your computer.

5) Insert the System 7.5.5 Update, Disk 1 disk into the floppy disk drive and double-click its icon to open it.

6) Double-click the Installer icon to open it.

7) After you read the licensing agreement, click Agree to continue with the installation.

8) Make sure that the destination disk indicated on the screen is the one on which you want to install system software. If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

9) Click Install.

10) Follow the instructions on the screen. On-screen messages tell you when you need to insert the other disks.

11) When the installation is complete, click Restart to restart your computer.

12) Use the Extensions Manager to turn on additional extensions (you'll need to restart your computer for the extensions to work). If you encounter problems, choose "System 7.5.5" from the Sets pop-up menu, restart your computer, then turn on other extensions one at a time to determine if one of them is incompatible.

IF YOU CANNOT INSTALL THIS UPDATE SUCCESSFULLY: If you have trouble installing this update, try choosing "All Off" from the pop-up menu in Step 2. If you are installing from a CD, turn all the extensions off, and then check the "Apple CD-ROM" extension so you can access your CD-ROM drive.

Updating a "universal" System Folder

This section describes how to update a single System Folder that can start up any Mac OS computer introduced since the Macintosh Plus. This update will allow the universal system folder to also support the 5400 and 6400 series systems.

Overview

Only some users need a universal System Folder. You might want to create a universal System Folder if you

- start up different Macintosh models using removable media or an external startup disk
- want to simplify support of multiple users by giving all users the same

System Folder

If you are responsible for only one computer, you shouldn't need to create a universal System Folder.

Instructions

- 1) You must start with a universal System 7.5.3 folder with either System 7.5 Update 2.0 or System 7.5 Version 7.5.3.
- 2) Update your universal system folder by installing System 7.5.5 Update.

Important information regarding System 7.5.4 Update

System 7.5.4 Update was released by Apple Computer to a limited distribution, prior to an anticipated general release. Shortly after this limited distribution, an issue with the software was found which required a revision. This revision was named System 7.5.5 Update. It replaces System 7.5.4 Update and will install on computers which have System 7.5.4 Update installed.

Article Change History:

- 04 Oct 1996 - Added keyword.
- 23 Sep 1996 - Made correction for better search ability.

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Tech Info Library Article Number:20340



Tech Info Library

Power Macintosh: Difficulty Using Floppy Disks (9/96)

Revised: 9/19/96
Security: Everyone

Power Macintosh: Difficulty Using Floppy Disks (9/96)

=====

Article Created: 29 August 1996
Article Reviewed/Updated: 19 September 1996

TOPIC -----

I have a Power Macintosh 8500/180 computer, and recently I have been having some difficulty using floppy disks. For example, when initializing or erasing floppy disks, an error message occurs stating that the disk is damaged. Also, some of the high-density floppy disks have only 1 MB of available space after being initialized rather than the normal 1.4 MB that should be available.

What could be causing these floppy disk errors?

DISCUSSION -----

You likely need to reinstall the Power Mac Format Patch, which corrects the problems that you are experiencing with floppy disks. The Power Mac Format Patch is required on any Power Macintosh 7500, 7600, 8500, or 9500 computer with a 180 MHz or faster PowerPC processor. This Patch is also required if you have a Mac OS-compatible PowerPC-based computer operating at 180 MHz or faster.

If these errors just started occurring, then you have probably recently performed a clean installation of system software. The new System Folder created during the "clean" installation process does not contain the patch, and needs it to function properly.

Or, you may have just installed a 180 megahertz (MHz) PowerPC processor upgrade card into your computer.

The Power Mac Format Patch is included with computers that include a 180 MHz or faster processor card. This patch is also included in System 7.5.5 Update. If you have System 7.5.5 Update installed on your computer, you do NOT need to install the Power Mac Format Patch.

To install the Power Mac Format Patch, do the following:

Step 1

While holding down the Option key on your keyboard, drag the Power Mac Format Patch icon onto the System Folder's icon.

(If you are dragging the icon from the Apple Extras folder on your hard disk, holding down the Option key causes the icon to be copied instead of moved, which leaves a copy of the icon in the Apple Extras folder in case you need to copy it again later.)

Step 2

Click OK to automatically place the patch in the Extensions folder.

Step 3

Restart your computer by choosing Restart from the Special menu.

Article Change History:

19 Sep 1996 - Added where to find this patch.

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Tech Info Library Article Number:20342



Tech Info Library

Macintosh Performa 6400: Tutorial 2 Runs in Endless Loop (8/96)

Revised: 8/29/96
Security: Everyone

Macintosh Performa 6400: Tutorial 2 Runs in Endless Loop (8/96)

=====

Article Created: 29 August 1996

TOPIC -----

I am trying to run the Tutorial Part 2 on my Macintosh Performa 6400 series computer. However, I noticed that the Tutorial appears to run in an endless loop. For example:

Step 1

Open Tutorial Part 2 from the Launcher.

Step 2

Choose the Getting Started item (#1) from the list of nine (9) menu options. The Tutorial: 1. Getting Started slide (1) appears.

Step 3

Click the right arrow. The Tutorial: 1. Getting Started slide (2) appears.

Step 4

Click the right arrow. A slide appears telling you to click Continue when the Launcher is the active window.

Step 5

Click Continue. The Tutorial: 1. Getting Started slide (2) appears again, which is the same as Step 3.

Another example is:

Step 1

Open Tutorial Part 2 from the Launcher.

Step 2

Choose the Creating a Document (#4) item from the list of (9) nine menu options. A slide appears telling you to click Continue to go to section 4.

Step 3

Click Continue. The Tutorial: 4. Creating a Document slide (1) appears.

Step 4

Click the right arrow. A slide appears telling you to click Continue when the Launcher is the active window.

Step 5

Click the Continue button. The Tutorial: 4. Creating a Document slide (1) appears again, which is the same as Step 3.

DISCUSSION -----

Apple is aware of this issue, which appears to be caused by a conflict between the Tutorial and the DateBook Pro extension. However, until the exact cause is verified, when you want to use the Tutorial Part 2, disable the DateBook Pro extension in the Extensions Manager and then restart the computer.

The DateBook Pro Extension controls the alarms for DateBook Pro. Disabling this extension will prevent any DateBook Pro alarm notifications from appearing while you are running applications besides DateBook Pro.

The DateBook Pro Extension also facilitates access to Mini DateBook Pro, which allows you to perform DateBook Pro tasks without having the application running. Thus, disabling the DateBook Pro Extension will disable access to Mini DateBook Pro.

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Tech Info Library Article Number:20344



Tech Info Library

Apple Spec Database: Read Me (9/96)

Revised: 9/27/96
Security: Everyone

Apple Spec Database: Read Me (9/96)

=====
Article Created: 30 August 1996
Article Reviewed/Updated: 27 September 1996

TOPIC -----

This article is the Apple Spec Database ReadMe file.

DISCUSSION -----

Name: Apple Spec Database

Version: 9/96

Released: September 16, 1996

Description: Apple Spec Database files contain detailed technical specifications on a variety of Apple computers, displays, and printers introduced since 1984. These specifications include information about memory configurations, power requirements, video capabilities, built-in ports, software, sound capabilities, and logic board components.

NOTE: Apple Spec Database requires FileMaker Pro version 3.0. Users who do not have FileMaker Pro 3.0 will also want to download the runtime application, "Apple Spec 9-96 app.sea".

The Read Me

Apple Spec Database files contain detailed technical specifications on a variety of Apple computers, displays, and printers introduced since 1984. These specifications include information about memory configurations, power requirements, video capabilities, built-in ports, software, sound capabilities, and logic board components.

The database was originally designed for those who had a regular need for this kind of information, such as sales and support professionals. It also became an

..TIL20347-Apple_Spec_Database-Read_Me_9-96.pdf

easy way for others to learn more about some of the products Apple has introduced over the years. The information is delivered in a cross-referenced database format for easy search and retrieval. It will look best when viewed on a monitor set to 16 or more colors.

Apple Spec Database was created in FileMaker Pro 3.0. To use the database:

Step 1

Open the self-extracting archive which contains the Apple Spec Database files to decompress them. The self-extracting archive is named "Apple Spec 9-96.sea".

Step 2

Open the file named "Apple Spec" using FileMaker Pro 3.0. If you do not have FileMaker Pro 3.0, you can use the Apple Spec Database "runtime" application.

Article Change History:

27 Sep 1996 - Updated to version 9/96.

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Tech Info Library Article Number:20347



Tech Info Library

Speech Recognition: Speakable Items Won't Run (9/96)

Revised: 9/3/96
Security: Everyone

Speech Recognition: Speakable Items Won't Run (9/96)

=====

Article Created: 3 September 1996

TOPIC -----

Whenever I attempt to use the English Speech Recognition capabilities of PlainTalk 1.4.x, an error occurs stating: "Speakable items could not run because an unexpected error occurred. Restarting your computer or reinstalling the Speech Recognition software may correct this problem."

I have attempted to resolve this error by reinstalling the Speech Recognition software, but it still occurs.

DISCUSSION -----

Several things could be causing the error message to occur. Check the following:

- * Verify that there is not a folder in the Speakable Items folder.
- * Verify that you have enough memory available
- * Verify that the following items are installed and enabled in the System Folder:
 - Speech control panel
 - Finder Scripting extension
 - AppleScript extension
 - Speech Recognition extension
 - Speech Manager extension
 - MacinTalk 3 extension
 - Speakable Items extension
- * Verify that the Voice folder is in the Extensions folder and that it contains several voice files (including "Fred")

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Tech Info Library Article Number:20348



Tech Info Library

MAE 2.0.2: Home Directory Space and MS Office Issue (9/96)

Revised: 9/3/96
Security: Everyone

MAE 2.0.2: Home Directory Space and MS Office Issue (9/96)

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Article Created: 3 September 1996

TOPIC -----

This article describes an installation issue with MAE 2.0.2 and Microsoft Office.

DISCUSSION -----

If the users Home directory has less than 80 MB available, a Microsoft Office installation may fail. This will happen even though the installation is going to a different directory which has enough space, and a New Folder is selected.

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Tech Info Library Article Number:20349



Tech Info Library

PowerBook 2300: Amperage Comparison of Duo & Mini Dock (9/96)

Revised: 9/10/96
Security: Everyone

PowerBook 2300: Amperage Comparison of Duo & Mini Dock (9/96)

Article Created: 3 September 1996
Article Reviewed/Updated: 10 September 1996

TOPIC -----

I have noticed that the Macintosh PowerBook Duo 2300 series computers are rated at 24V and 1.5A. I found this information on its FCC ID label. I also noticed that the Apple Mini Dock is rated at 24V, but only 1.0A. Could this cause any operational difficulties or damage the Apple Mini Dock?

DISCUSSION -----

Apple engineering has stated that there is no problem running the Macintosh PowerBook (Duo) 2300 series computers with the Apple Mini Dock. The Apple Mini Dock was "over-engineered" (that is, designed to handle more power than it needs be able to handle). Therefore, it can support the 1.5 amps the Macintosh PowerBook 2300 series computers draw through it with no adverse effects.

This article was published in the Information Alley on 10 September 1996.

Article Change History:
10 Sep 1996 - Added keyword.

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Tech Info Library Article Number:20350



Tech Info Library

Visioneer, Inc. (11/96)

Revised: 11/27/96
Security: Everyone

Visioneer, Inc. (11/96)

=====

Article Created: 3 September 1996
Article Reviewed/Updated: 27 November 1996

Visioneer, Inc.

2860 West Bayshore Rd.
Palo Alto, CA 94303

800-787-7007

415-812-6400

541-884-5548 Technical Support

415-855-9750 FAX

Internet:
<http://www.visioneer.com>

e-mail:
4info@visioneer.com

Company Profile:
Offers scanner hardware and software products such as PaperPort scanner and SCSI accessories.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20351



Tech Info Library

PowerBook 500 or 5300: Freezes When Exiting HD Target Mode(9/96)

Revised: 9/3/96
Security: Everyone

PowerBook 500 or 5300: Freezes When Exiting HD Target Mode(9/96)

=====

Article Created: 3 September 1996

TOPIC -----

I have a Macintosh PowerBook 5300 series computer which "hangs/freezes" up when I shut it down after it has been functioning in HD Target Mode connected to my Macintosh Performa 6200 computer.

The PowerBook computer's hard disk drive appears on the desktop of the Performa computer and it seems to operate normally in HD Target Mode. However, when I shutdown the Performa computer, following the procedures in the PowerBook User's manual, the PowerBook hangs up. The arrows in the SCSI icon indicate activity but the PowerBook computer cannot be powered off except by the power/reset switch on the back.

Am I doing something wrong or are the directions in the PowerBook manual wrong?

DISCUSSION -----

The issue you have encountered is an operational anomaly which may occur with both the Macintosh PowerBook 500 and 5300 series computers. Also, it should be noted that this same scenario can happen when one of these PowerBook computer models is connected to ANY desktop Macintosh computer, not just the Macintosh Performa 6200 series computers.

If you follow the directions in the PowerBook user's guide, which instructs the you to power down the desktop Macintosh computer before powering down the PowerBook, the PowerBook computer may lock up. This forces you to use the power/reset switch on the back of the PowerBook computer to shut it down. This shutdown method is not advised because it may corrupt the power manager of the PowerBook computer.*

Workaround
=====

Step 1

Highlight the PowerBook computer's hard drive in the Finder on the desktop of the desktop Macintosh computer by clicking on its icon.

Step 2

Select "Put Away" (Command Y) from the File menu to unmount the PowerBook computer's hard drive. (It should disappear from the desktop.)

Step 3

Press and hold the power key (upper right corner of the keyboard) on the PowerBook computer's keyboard for approximately three seconds, then release it. This will shut down the PowerBook safely.

* For more information about resetting the power manager on Macintosh PowerBook computers please see the TIL article titled, " PowerBook: Resetting Power Manager."

This article was published in the Information Alley on 3 September 1996.

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Tech Info Library Article Number:20353



Tech Info Library

PowerBook 5300: What Is The Slow SCSI Extension? (9/96)

Revised: 9/4/96
Security: Everyone

PowerBook 5300: What Is The Slow SCSI Extension? (9/96)

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Article Created: 3 September 1996

TOPIC-----

Several PowerBook owners I know told me that I need to install something called the Slow SCSI Extension on my PowerBook 5300. What is it? How do I know if I really need it? Where can I get it?

DISCUSSION-----

The Slow SCSI Extension is an INIT for PowerBook 5300 series computers that addresses a potential conflict with slow SCSI devices such as 1x CD-ROM drives (like the Apple CD150), Zip drives, and PowerBooks in SCSI disk mode. Not all PowerBooks will experience the problem and a PowerBook that does may not experience the problem all the time (even with different units of the same make and model).

Do I Really Need This Extension?

It is important to note that you should only install this extension if you are experiencing constant freezes or crashes when transferring files with a particular slow SCSI device.

Installing this extension will impact (slow down) performance with ALL SCSI devices by 10 to 50 percent, so you should only install it if it is absolutely needed. You can use the Extensions Manager control panel to disable Slow SCSI Extension when it is not needed .

Installation

To install Slow SCSI Extension, put it in the Extensions folder and restart your computer.

Where To Find The Software

This software is posted to the "Unsupported" section of Apple Software Updates.

It is provided "as is" and is not supported by Apple technical support.

Begin_Table

For reference, the path to the software is as follows -

Apple SW Updates

US

Macintosh

Unsupported

Slow SCSI Extension

Slow SCSI Extension.sea

End_Table

This article was published in the Information Alley on 4 September 1996.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20354



Tech Info Library

CompuServe Mail for Newton 2.0: Large E-mail Issue (4/97)

Revised: 4/21/97
Security: Everyone

CompuServe Mail for Newton 2.0: Large E-mail Issue (4/97)

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Article Created: 3 September 1996
Article Reviewed/Updated: 21 April 1997

TOPIC -----

When I receive a large e-mail with my MessagePad 130, the e-mail is split into 5 KB segments by CompuServe Mail Software for Newton 2.0, but a lot of the text is lost in the process. To test, I sent myself a 38 KB message and found that about 1000 bytes were missing between parts 1 and 2, and about 1500 bytes were lost between each of the other parts.

DISCUSSION -----

Based on your description, you are likely using version 1.0.1 of CISmail. Version 1.0.2 of the software remedies the situation.

There is one way to tell which version of the software you have. Look at the "text stationery". If its size is 4 kilobytes, you have version 1.0.1. If its size is 5 kilobytes, you have version 1.0.2.

CISmail 1.0.1 sometimes miscalculates the vertical size of a message displayed with a large point font. Long sections of text may become cut off because the vertical arrows will not scroll far enough to display the bottom of the message.

While using version 1.0.1 of the software, here is a workaround:

Workaround

-
- 1) Open the In Box
 - 2) Select CompuServe Prefs (from the "I" button).
 - 3) Click on mail font button.
 - 4) Choose either a 9 point, or 10 point font size.

Article Change History:
21 Apr 1997 - Updated with CIS Mail 2.0 v1.0.2 information.

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Tech Info Library

Companies That Sell & Service Discontinued Apple Products (9/96)

Revised: 9/5/96
Security: Everyone

Companies That Sell & Service Discontinued Apple Products (9/96)

=====

Article Created: 5 September 1996

TOPIC -----

Do you have any information on any third-party companies who sell, service, and support discontinued Apple products?

DISCUSSION -----

The following companies have advertised their ability to sell, service, provide technical support, or repair selected discontinued products. Software may also be available through these companies. This list does not constitute an endorsement by Apple Computer, Inc. of the companies. Please ensure that the products and services they offer fit your needs, and that they offer return or repair policies that are acceptable to you.

NOTE: This addresses and phone numbers on this list were accurate as of the creation of this article. Apple does not take responsibility for tracking and updating these addresses. This list is provided for your convenience only.

Alltech
Sales, Service, Repairs
Phone: 619/724-2404
Fax: 619/724-8808

William K. Bradford
Education Software
Phone: 508/263-6996

Misty City Software
Education Software
13625 NE 126th Place, Suite 430

Kirkland, WA 98034
Sales: 800/795-0049
Fax: 206/820-4298
Technical Support: 206/820-5559
E-mail address: grademachine@mistycity.com

Softdisk, Inc.
Software subscriptions & online software stores;
publishes/markets other products & services
606 Common Street
Shreveport, LA 71101
Phone: 318/221-8718
Toll Free 800/831-2694
Fax: 318/221-8870

Kitchen Sink Software, Inc.
Educational software and internet related applications
903 Knebworth Ct.
Westerville, OH 43081
Phone: 800/235-5502
Fax: 614/891-4545
E-mail address: eric@kitchen-sink.com

Sun Remarketing
Sales and support
PO Box 4059
Logan, UT 84321
Phone: 800/821-3221
Technical Support: 900/786-7782

B&R Computers
Sales and support
PO Box 7195
San Diego, CA 92167
Phone: 619/225-8281

Boston Computer Society
Largest user group in the world
For membership information:
101A First AvPite 2
Waltham, MA 02154
Phone: 617/290-5700
Fax: 617/290-5744

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Tech Info Library Article Number:20359



Tech Info Library

Why Does The Trash Empty Automatically? (9/96)

Revised: 9/5/96
Security: Everyone

Why Does The Trash Empty Automatically? (9/96)

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Article Created: 5 September 1996

TOPIC -----

I have a Performa 6400/200 computer. Whenever I put anything in the Trash and Restart the computer, the trash can automatically empties itself. I have reset the Parameter RAM (PRAM) and I started up with extensions off, but it makes no difference.

I checked the "Get Info" window on Trash and it IS marked to WARN BEFORE EMPTYING. I started from the disk and ran Disk First Aid which says everything is fine.

What is wrong?

DISCUSSION -----

There is an application called At Ease that ships on Performa 6400/180 and 6400/200 computers. At Ease has a feature that will empty the trash after each user logs out or restarts/shuts down, to prevent the next user from accessing the previous user's documents.

It is possible that you may have turned on At Ease 3.0. If there is only one user assigned to At Ease (you have not created any others), then the initial login screen will not appear, so you may not realize that At Ease is running. The computer just goes ahead and selects the only user there is and proceeds. At Ease ignores the Trash's Warn Before Emptying option.

To stop the Trash from automatically emptying itself after a restart, turn off At Ease.

Tech.db: 11601
Submitted by: Dorsett, Robert
Date Received: 9/4/96
Assigned to:

TIL#

Action:

Date Closed:

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Tech Info Library Article Number:20360



Tech Info Library

Electrical Specifications: Apple Peripherals (2 of 2) (9/96)

Revised: 9/5/96
Security: Everyone

Electrical Specifications: Apple Peripherals (2 of 2) (9/96)

=====

Article Created: 05 September 1996

TOPIC -----

This article provides the electrical specifications for Apple peripherals, including printers, monitors, scanners, drives, modems, and so on. For information about other Apple hardware, see the Tech Info Library article, "Electrical Specifications: Apple Computers (1 of 2)".

DISCUSSION -----

The following Apple products are manufactured for use in the USA. In determining whether a particular product can be used internationally, there are three classes, depending on whether a product accepts a range in voltage, frequency or both (for more specific information, see the article, "Using U.S. Apple Equipment Internationally"):

1) Universal

These products can be used internationally out of the box. Some of Apple's products are self-configuring devices or "universal" within a certain range. They can accept a range in both voltage and frequency, and only require a plug adapter for the specific locale.

Example: The Quadra 800 accepts between 100-125 and 200-240 volts, 47-63 Hz.

2) Frequency Independent

These products can be used internationally with a voltage transformer. Generally they are geared for U.S. 120 volt current, but are flexible as to the frequency they accept (for example, 47-63 Hz), and are known as "frequency independent." These products need a stepdown isolation transformer to adapt the voltage, and will handle the different frequency on their own.

Example: The U.S. Performa 200 accepts 120 volts, 47-63 Hz.

3) Frequency Dependent

These products generally cannot be used internationally. These are products that can work only within a narrow range in frequency; they are "frequency dependent." Transformers only transform voltage, so if the product requires a certain frequency, there's no practical way to convert both voltage and frequency.

These products can ONLY be used internationally in countries with the same frequency as the country for which the product was manufactured. Further, a voltage transformer will be required if the destination country has a voltage different from the home country.

Example: The U.S. Apple Color OneScanner accepts 108-132 volts, 58-62 Hz.

NOTE:

Computers with power outlets for peripherals do not condition the current as it passes through. So, for example, a monitor requiring 120v-60Hz current could not be used in a 220v-50Hz environment even if the computer from which it gets its power is able to accept the local current.

The AC output of a Macintosh II is as follows: the monitor receptacle is rated for 3 amps steady state, 40 amps peak power. The power supply is fused for 6 amps to include the Macintosh II and monitor.

The amperage on the back of the computer is what should be used to calculate load on a circuit. Typical circuits in businesses and houses are 15 Amps (some are 20, but rarer, and an electric dryer is usually 30, an electric range may have DUAL 30 Amp circuits wired together). With that capacity, you could have the following configuration (from the back of the CPU):

CPU	5 Amps
Monitor	3 Amps
LaserWriter	7 Amps
Total:	15 Amps

Most of the time, the CPU will draw only 1-1.5 Amps, the Monitor about .5-1 Amp, and the LaserWriter about 2 Amps. The difference is sometimes referred to as Nominal (high) versus Actual draw.

These following values are accurate regardless of peripherals used with each device. For example, a Macintosh II with an EtherTalk NB Card, an 8-bit video card, and HD40 SC draws a maximum of 230 watts and 6 amps from the power outlet it is plugged into.

Begin_Table

```
+=====+
|PRINTERS|
+=====+
```

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=====+=====+=====+=====+=====+=====
LaserWriter Printers      | Watts*| Amps** |BTU/hr**| Volts   |Hertz
```

LaserWriter	760	6.3	2599.2	115	60
LaserWriter II	900	7.5	3078	90-126	50-60
LaserWriter IISC	900	7.5	3078	90-126	50-60
LaserWriter IINT/NTX	900	7.5	3078	90-126	50-60
LaserWriter IIg/IIif	900	7.5	3078	90-126	50-60
Personal LaserWriter SC	600	5	2052	110-115	50-60
Personal LaserWriter LS	600	5	2052	110-115	50-60
Personal LaserWriter NT	600	5	2052	110-115	50-60
Personal LaserWriter NTR	600	5	2052	110-115	50-60
Personal LaserWriter 300	360	3.00	1231	100-115	50-60
Personal LaserWriter 320	120	1.0	410.4	100-115	50-60
LaserWriter Pro 600	560	4.67	1915	90-110	58-62
LaserWriter Pro 630	560	4.67	1915	90-110	58-62
LaserWriter Pro 810	560	4.67	1915	90-110	58-62
LaserWriter Select 300	450	3.75	1539	110-115	50-60
LaserWriter Select 310	450	3.75	1539	110-115	50-60
LaserWriter Select 360	450	3.75	1539	110-115	50-60
LaserWriter 4/600	450	3.75	1539	110-115	50-60
LaserWriter 16/600 PS	790	6.8	2701	100-120	58-62
Clr LaserWriter 12/600 PS	1100	9.2	3762	100-120	50-60
Other Printers	Watts*	Amps**	BTU/hr**	Volts	Hertz
Dot Matrix Printer	180	1.5	615.6	100-115	60
Daisy Wheel Printer	150	1.25	513	120	60
Color Plotter	33	.28	112.9	120	48-63
Scribe	60	.5	205.2	120	60
ImageWriter	180	1.5	615.6	120	60

ImageWriter II	180	1.5	615.6	120	60
ImageWriter LQ	180	1.5	615.6	120	60
StyleWriter	23	.19	78.7	110-120	48-62
StyleWriter II	19.5	.16	67	100-120	48-62
StyleWriter 1200	19.5	.16	67	100-120	48-62
StyleWriter 1500	19.5	.16	67	100-120	48-62
Portable StyleWriter	23	0.19	79	100-115	50-60
Color StyleWriter 2200	31.5	1.0	107	120	60
Color StyleWriter 2400	45	.38	154	100-120	50-60
Color StyleWriter 2500	45	.38	154	100-120	50-60
Color StyleWriter Pro	28	.23	95.8	90-132	50-60
Apple Color Printer	30	.25	103	120	60

+=====+
|OTHER PERIPHERALS|
+=====+

Disk Drives	Watts*	Amps**	BTU/hr**	Volts	Hertz
ProFile	120	1	410.4	110	50-60
Hard Disk 20	30	.25	102.6	85-125/ 200-240	47-64
Apple HD20/40/80/160 SC	30	.25	102.6	85-125/ 200-240	47-64
Apple External160/230/500	40	.33	136.8	85-125/ 200-240	47-64
HD40 SC Tape Backup	15	.125	51.3	85-125/ 200-240	47-64
AppleCD SC	40	.33	136.8	120	47-64
AppleCD SC Plus	40	.33	136.8	100-125/ 200-240	50-60
AppleCD 150	30	.25	102.6	100-125/ 200-240	50-60

AppleCD 300	33	.28	112.9	100-125/ 200-240	50-60
AppleCD 600e	33	.28	112.9	100-125/ 200-240	50/60
Apple PowerCD	15	.125	51.3	100-125/ 200-240	50-60

Scanners	Watts*	Amps**	BTU/hr**	Volts	Hertz
Apple Scanner	65	.54	222.3	120	58-62
Apple OneScanner	45	.38	153.9	120	58-62
Apple Color OneScanner	45	.38	153.9	120	58-62

Modems	Watts*	Amps**	BTU/hr**	Volts	Hertz
AppleFax Modem	10	.08	34.2	120	60
Apple DataModem 2400	7	.06	23.9	110	60

+=====+
| MONITORS |
+=====+

Apple II Monitors	Watts*	Amps**	BTU/hr**	Volts	Hertz
Color Monitor 100	70	.58	239.4	117	50-60
Color Monitor IIe	48	.4	164.2	108-132	50-60
Color Monitor IIc	48	.4	164.2	108-132	50-60
Monitor II	45	.38	153.9	115	50-60
Monitor IIc	35	.29	119.7	115	50-60
Monitor III	30	.25	102.6	115	50-60
AppleColor RGB	90	.75	307.8	108-132	50-60
AppleColor Monitor	75	.6	256.5	108-132	50-60

Macintosh Monitors	Watts*	Amps**	BTU/hr**	Volts	Hertz
12-Inch Monochrome Display	30	.25	102.6	90-125/	47-63

				200-240	
-----	+	+	+	+	+
12-Inch RGB Display	90	.75	307.8	110	50-60
-----	+	+	+	+	+
Performa Display	85	.71	290.7	100-125	57-63
-----	+	+	+	+	+
Performa Plus Display	85	.71	290.7	100-125	57-63
-----	+	+	+	+	+
Apple Hi-Res Monochrome	40	.33	136.8	100-125/	50-60
				200-240	
-----	+	+	+	+	+
AppleColor Hi-Res RGB	160	1.3	547.2	85-125/	47-63
				200-240	
-----	+	+	+	+	+
14-Inch Color Display	55	.46	188.1	90-125/	47-63
				200-240	
-----	+	+	+	+	+
Portrait Display	75	.6	256.5	90-125/	47-63
				200-240	
-----	+	+	+	+	+
16-Inch Color Display	130	1.18	445	90-125/	47-63
				200-240	
-----	+	+	+	+	+
Two-Page Mono. Monitor	95	.8	324.9	90-125/	47-63
				200-240	
-----	+	+	+	+	+
21-Inch Color Display	165	1.38	564.3	120	47-63
-----	+	+	+	+	+
Apple Basic Color Monitor	70	.58	240	100-125	50-60
-----	+	+	+	+	+
AudioVision 14 Display (US)	55	.46	188.1	100-125	47-63
-----	+	+	+	+	+
AudioVision 14 Display (INT)	101	.46	350.1	200-240	50
-----	+	+	+	+	+
Apple Color Plus Display	70	.58	240	100-125	50-60
-----	+	+	+	+	+
Multiple Scan 14 Dis. (US)	80	.66	273.6	100-125	57-63
-----	+	+	+	+	+
Multiple Scan 14 Dis. (INT)	80	.33	1.14	200-240	43-53
-----	+	+	+	+	+
Multiple Scan 15 Display	90	.75	307.8	100-125/	47-63
				200-240	
-----	+	+	+	+	+
Multiple Scan 17 Display	150	1.25	513	100-125/	47-63
				200-240	
-----	+	+	+	+	+
Multiple Scan 20 Display (Rev A)	180	1.38	615.6	100-125/	47-63
				200-240	
-----	+	+	+	+	+
Multiple Scan 20 Display (Rev B)	165	1.38	564.3	100-125/	47-63
				200-240	
-----	+	+	+	+	+
AppleVision 1710AV	130	1.8/	445	100-120/	50-60

				200-240	
-----	+	+	+	+	+
AppleVision 1710	130	1.8/	445	100-120/	50-60
				200-240	
-----	+	+	+	+	+
Multiple Scan 1705 Display	100	n/a	342	100-125/	47-63
				200-240	

End_Table

Additional Information

"Current leakage" is the amount of current that is passed to earth ground. The current leakage of all Apple equipment meets the following specifications:

- As specified by the UL standard for Apple equipment distributed in the United States, the current leakage will be less than 5.0 milliamperes.

- As specified by the IEC 380 & 950 standards for Apple equipment distributed in France and most of Europe, the current leakage will be less than 3.5 milliamperes.

† The PowerBook 500 series AC adapter has two separate outputs, VBatt and Vmain. The VBatt supply is used for charging the batteries while the VMain supply provides power for the PowerBook. Power from VBatt is automatically diverted to power the PowerBook if additional power is needed.

* Amps calculated based on efficiency of power supply, except for Macintosh PowerBooks (amps calculated at 7.5 volts) and Macintosh Duos (amps calculated at 24 volts).

** The BTU calculation is Watts X 3.42 = BTU/hour.

The BTU ratings for the Macintosh systems take into account any hard disk or expansion card(s) that may be installed internally.

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Tech Info Library Article Number:20361



Tech Info Library

Performa Computers: Apple Remote Access Not Installed (9/96)

Revised: 9/6/96
Security: Everyone

Performa Computers: Apple Remote Access Not Installed (9/96)

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Article Created: 6 September 1996

TOPIC -----

I have a Macintosh Performa computer, and I'm following the instructions in the Global Village manual to set up my modem. I'm at the part which refers to setting up Apple Remote Access (ARA). The instructions say to double click the Remote Access application icon. I cannot find this application. All I can find with "ARA" on it is a file called "GV High Speed for ARA 2.0". When I double click on this, I can get an error message. What is wrong?

DISCUSSION -----

The Global Village manual also states their instructions assume that you have already installed ARA software on your computer. It also explains that the file "GV High Speed for ARA 2.0" is a modem script, not an application.

Apple Remote Access is a separate application which does not come with a Performa computer, and must be purchased separately and then installed.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20362



Tech Info Library

AppleShare 4.2.1 Upgrade CD & Santorini Server Manager (9/96)

Revised: 9/6/96
Security: Everyone

AppleShare 4.2.1 Upgrade CD & Santorini Server Manager (9/96)

=====

Article Created: 6 September 1996

TOPIC -----

My AppleShare 4.2.1 Upgrade CD came with Santorini's Server Manager software, but not a serial number. Where do I get the serial number?

DISCUSSION -----

Like AppleShare on the AppleShare 4.2.1 Upgrade CD, Santorini's Server Manager software is an upgrade only. You need to use the serial number from your previous version of Server Manager software.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20363



Tech Info Library

Apple OneScanner 600/27: TextBridge Scan Option Dimmed (9/96)

Revised: 9/6/96
Security: Everyone

Apple OneScanner 600/27: TextBridge Scan Option Dimmed (9/96)

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Article Created: 6 September 1996

TOPIC -----

The first time I tried to use the Apple OneScanner TextBridge software, the scanner option is dimmed. The only option available is to translate an existing scanned document. How can scan a new document?

DISCUSSION -----

First, check the hardware connections. If you can scan using the Apple OneScanner Dispatcher software, then the scanner and software are configured properly.

If the hardware operates properly, The Apple OneScanner settings and TextBridge Preferences need to be deleted, so new preferences can be built.

Step 1

Open the System Folder.

Step 2

Drag the Scanner Settings file to the Trash.

Step 3

Open the Preferences Folder.

Step 4

Drag the TextBridge Preferences file to the Trash.

Step 5

Close both the Preferences and System folders.

Step 6

Empty the Trash.

Step 7

Verify the Apple OneScanner is powered on.

Step 8

Open the Chooser and Select the "One Scanner".

Step 9

Close the Chooser.

Step 10

Launch the TextBridge software.

You should now be able to select the Scanner option.

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Tech Info Library Article Number:20364



Tech Info Library

LaserWriter 8.4: Corrupt Prefs Can Cause Errors (9/96)

Revised: 9/9/96
Security: Everyone

LaserWriter 8.4: Corrupt Prefs Can Cause Errors (9/96)

=====

Article Created: 9 September 1996

TOPIC -----

I am using the LaserWriter 8.4 printer software, which worked properly when I first installed it. But, now I am getting errors stating that the paper size is wrong, or it times out, or sometimes I just get PostScript errors.

DISCUSSION -----

Many times, those errors can be caused by a corrupted preference file. Deleting the preference file can help resolve the problem. This preference files are automatically rebuilt. The preferences for LaserWriter 8.4 software are organized differently than previous versions.

There are two parts of the LaserWriter 8.4 software, the LaserWriter 8.4 Prefs file, and a Parsed PPD folder. You must remove both of the LaserWriter 8.4 Prefs file and the Parsed PPD folder.

LaserWriter 8.4 File Locations

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System Folder

- Preferences Folder
 - LaserWriter 8 Prefs <-- This is from previous LW software
 - Printing Prefs folder
 - LaserWriter 8.4 prefs
 - Parsed PPDs folder
 - Parsed PPDs for printers selected.
 - Watermark files for StyleWriter Printers

Removal Steps

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Step 1

Open the Preferences folder, inside the System folder.

Step 2

Open the Printing Prefs folder.

Step 3

Move the Parsed PPD folder to the Trash.

The Parsed PPD folder contains the PostScript Printer Description information as well as printer configuration.

Step 4

Move the LaserWriter 8.4 Prefs to the Trash.

Just removing the LaserWriter 8.4 Prefs file will usually not correct any printing trouble you are having. You must also remove the Parsed PPD folder.

LaserWriter 8.4 Notes

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If you already have a Desktop printer created by a previous LaserWriter version, a new Desktop printer is created when you install the LaserWriter 8.4 software.

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Tech Info Library Article Number:20365



Tech Info Library

Sound Manager 3.2.1: Minor Fixes for QuickTime 2.5 (9/96)

Revised: 9/9/96
Security: Everyone

Sound Manager 3.2.1: Minor Fixes for QuickTime 2.5 (9/96)

=====

Article Created: 9 September 1996

TOPIC -----

When I installed QuickTime 2.5, Sound Manager 3.2.1 was also installed. Sound Manager was integrated into the Mac OS, so why is there a new version of Sound Manager?

DISCUSSION -----

During the development of QuickTime 2.5, the QuickTime engineering team uncovered a few minor problems in Sound Manager 3.2 (which is integrated into System 7.5.3) that could affect QuickTime. So, a new version of Sound Manager, Sound Manager 3.2.1 was created and shipped with QuickTime 2.5.

If you are using QuickTime 2.5, you should have Sound Manager 3.2.1 installed. If you are running versions of QuickTime prior to 2.5, it shouldn't make a difference which version of Sound Manager is used since the problems only appear when QuickTime 2.5 are used.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20366



Tech Info Library

PowerPC 603e and 604e: Performance Comparison (9/96)

Revised: 9/9/96
Security: Everyone

PowerPC 603e and 604e: Performance Comparison (9/96)

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Article Created: 9 September 1996

TOPIC -----

What is the performance difference between the PowerPC 603e processor and the PowerPC 604e processor used in Performa and Power Macintosh computers.

DISCUSSION -----

A PowerPC 604e processor provides 1/3 (33%) greater performance than the PowerPC 603e at the same clock speed. For example, in Macintosh computers, this suggests that the Power Macintosh 8500/180 computer will be approximately 33% faster than the Macintosh Performa 6400/180.

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Tech Info Library Article Number:20368



Tech Info Library

PowerPC 604 and 604e: Comparison (10/96)

Revised: 10/17/96
Security: Everyone

PowerPC 604 and 604e: Comparison (10/96)

Article Created: 9 September 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

What features does the PowerPC 604e processor provide over the PowerPC 604 processor?

DISCUSSION -----

The 604e is a second version of the 604 with double the internal L1 cache sizes that total 64K (32K for the instruction cache and 32K for the data cache). The 604 has a total of 32K L1 caches (16K instruction and 16K data). Additionally, the 604e shrinks the 5.6 million transistors to 148 sq mm (from 196 sq mm). The smaller die also provides a lower power requirement and can use up to a 5:1 bus multiplier (604 has 3:1). With the 5:1 multipliers, these cards can support 250 MHz.

This article was published in the Information Alley on 10 September 1996.

Article Change History:
17 Oct 1996 - Added alley info.

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Tech Info Library Article Number:20369



Tech Info Library

QuickTime 2.5: Software MPEG Available (2/97)

Revised: 2/26/97
Security: Everyone

QuickTime 2.5: Software MPEG Available (2/97)

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Article Created: 9 September 1996
Article Reviewed/Updated: 26 February 1997

TOPIC -----

A few reviews of QuickTime 2.5 mention software MPEG playback is included. When I downloaded the software, I tried playing a MPEG video I downloaded, and it would not open or play.

DISCUSSION -----

QuickTime 2.5 as it shipped in August 1996, does not have the ability to decode, playback, MPEG encoded files. A separate software MPEG extension was released later that added the ability to decode MPEG files. QuickTime MPEG Extension requires a Mac OS computer with a PowerPC processor, 16MB of RAM, and QuickTime 2.5.

Article Change History:
26 Feb 1997 - Updated the status of the MPEG extension.

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Tech Info Library Article Number:20370



Tech Info Library

Workgroup Server 8550/200: Description (3/97)

Revised: 3/3/97
Security: Everyone

Workgroup Server 8550/200: Description (3/97)

Article Created: 9 September 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article describes the Workgroup Server 8550/200.

DISCUSSION -----

The Workgroup Server 8550/200 is the most powerful member of the PowerPC processor-based Workgroup Server family from Apple. It delivers file and print, database, Internet, and communications capabilities that meet the needs of growing workgroups in education, business, and publishing. And it's ideal for workgroups that use both Macintosh and Windows software-based computers.

Apple Workgroup Servers are highly reliable, high-performance systems with large storage capacity that provide organizations with faster, more efficient shared network services and secure centralized storage. And the Workgroup Server 8550/200 not only meets these criteria, but also runs the familiar graphical interface of the Mac OS, making all of its capabilities incredibly easy to use.

Featuring a 200-megahertz PowerPC 604e processor with 64K on-chip cache and 512K level 2 memory cache, the Workgroup Server 8550/200 delivers all the performance benefits of state-of-the-art RISC technology. And for easy, flexible expansion, the Workgroup Server 8550/200 features three PCI slots that let you add capabilities by installing any of a variety of cards.

To make sure that network administrators can work as efficiently as possible, and that users get the most out of all that power and capacity, the Workgroup Server 8550/200 offers a choice of three software bundle solutions. The Applications Server Solution provides a variety of useful Apple and third-party software for administration, reliability, productivity, and performance. The AppleShare Server Solution includes all of the software that comes with the Applications Server, plus AppleShare file and print server software, remote administration software from Santorini, and Apple Remote Access MultiPort Server software. These two Workgroup Server 8550/200 solutions also include AppleShare

Client for Windows software, so Windows users on the network can access networked printers and files stored on a Workgroup Server running AppleShare file and print server software. The Apple Internet Server Solution comes with all the software you need to create a presence on the World Wide Web—quickly, easily, and affordably.

So if you need a high-performance server for a demanding workgroup, we have the solution—the powerful and expandable Workgroup Server 8550/200.

Features

=====

Expansion and storage

- Three PCI (Peripheral Component Interconnect) slots for expansion cards
- Internal 2GB, 7200-rpm hard disk drive, with bracket and cable for a second drive
- Internal 8x-speed CD-ROM drive
- Internal DDS-2 digital audio tape (DAT) drive (some configurations)
- Two SCSI DMA buses to support up to eight devices and transfers up to 10MB/s (internal only)
- Eight ports to support a wide range of peripherals

Networking

- Built-in Ethernet and LocalTalk capabilities
- Support for AppleTalk and TCP/IP networking protocols
- Token Ring support optional (with PCI card)

Power, speed, and memory

- 200-MHz PowerPC 604e RISC processor with floating-point processor and 64K on-chip cache on an upgradable CPU card
- 512K level 2 cache
- 32MB of RAM, expandable to 512MB

Fast, easy setup

- Comes with System 7.5.3 software installed
- Includes AppleShare 4.2.1 file and print server software (some configurations)

Compatibility

- Comes with AppleShare Client for Windows (some configurations)

Bundled software

- Includes a variety of software for administration, reliability, productivity, and performance

Service and support

- Hardware troubleshooting for the life of the server; 90 days of assistance for

Apple-branded software (phone support)

- One-year, on-site hardware warranty providing two-business-day response
- Additional service and support available

Ordering Information

=====

Workgroup Server 8550/200 (Applications Server Solution)

(32MB/2GB/CD/DAT)

Order No. M5488LL/A

- 512K level 2 cache, 1.4MB Apple

SuperDrive floppy disk drive, and mouse

- System software version 7.5.3
- Server Solutions CD and other bundled software

Workgroup Server 8550/200 (AppleShare Server Solution)

(32MB/2GB/CD/DAT)

Order No. M5489LL/A

• Identical to Order No. M5488LL/A, plus AppleShare 4.2.1, Apple Remote Access MultiPort Server software, and Server Manager from Santorini

Workgroup Server 8550/200

(32MB/2GB/CD)

Order No. M5486LL/A

- AppleShare Server Solution without a DAT drive or Retrospect Remote software

Workgroup Server 8550/200

(Internet Server Solution for the World Wide Web)

(32MB/2GB/CD)

Order No. M5487LL/A

- 512K level 2 cache, 1.4MB Apple SuperDrive floppy disk drive, and mouse
- System software version 7.5.3

• Apple Internet Server Solution CD (WebSTAR; PageMill; MacDNS; HomeDoor; NetCloak; ServerStat; RealAudio; Acrobat Pro; HyperCard; Web connectivity software for your existing EveryWare Butler SQL and FileMaker Pro databases; Navigator; BBEdit; clickable maps, e-mail, and database AppleSearch CGIs; cus-tomizable WWW pages and forms; AppleScript and scripting additions; AppleSearch; Apple RAID). Does not include Workgroup Server Solutions CD, AppleShare 4.2.1, or Server Manager.

- Includes WebMaster Macintosh by Bob LeVitus and Jeff Evans

Included with all Workgroup Servers:

- Complete setup, learning, and reference documentation
- Limited one-year hardware warranty

Macintosh Memory Expansion Kits

A variety of memory expansion kits are available. 168-pin DIMMs are required. Check with your Apple reseller for details.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

03 Mar 1997 - Added keyword.

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Tech Info Library Article Number:20371



Tech Info Library

Workgroup Server 8550/200: Technical Specifications (3/97)

Revised: 3/3/97
Security: Everyone

Workgroup Server 8550/200: Technical Specifications (3/97)

Article Created: 9 September 1996
Article Reviewed/Updated: 3 March 1997

TOPIC -----

This article lists the technical specifications for the Workgroup Server 8550/200.

DISCUSSION -----

Microprocessor
=====

- PowerPC 604e RISC processor running at 200 MHz, located on upgradable CPU card
- Integrated floating-point unit and 64K on-chip cache
- 512K level 2 cache

Memory
=====

- 32 MB of RAM, expandable to 512 MB

Storage
=====

- Internal 2 GB, 7200-rpm hard disk drive, with bracket and cable for a second drive
- One DDS-2 DAT drive—4 GB uncompressed, 14 GB compressed (some configurations)
- One 8x-speed CD-ROM drive (up to 1.2 MB/s data-transfer rate)
- One Apple SuperDrive 1.4 MB floppy disk drive that reads, writes, and formats Mac OS, Windows, MS-DOS, and OS/2 disks

Bundled software/Server Solutions CD
=====

Administrative software

- Server Manager—remote AppleShare server management tools (with AppleShare Solution only)
- FileWave—automated software and data distribution
- netOctopus—setup assessment and configuration file editing
- Adobe Acrobat Reader—viewing application for portable document format (PDF) files

Reliability software

- Apple RAID Software—data mirroring to protect against drive failures (RAID 1)
- Retrospect Remote—automated backup software (DAT configurations only)
- Virex—automated virus screening and virus check

Productivity software

- AppleShare Client for Windows—enables Windows clients to connect to an AppleShare server (some configurations)
- 4-Sight FAX—lets you send and receive faxes from your desktop
- Now Contact—provides contact management tools
- Now Up•to•Date—handles group scheduling
- Viper Instant-Access—provides a cross-platform information retrieval system

Performance software

- Apple RAID Software—optimizes performance of multiple hard disks through disk striping (RAID 0)
- Skyline/Satellite—enables monitoring of the network and server traffic over time

Note: Software bundled with the 8550/200 Apple Internet Server Solution for the World Wide Web includes Apple RAID Software and the Internet Server Solution CD.

Networking

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- Built-in Ethernet with 10BASE-T and AAUI
- Two serial ports for LocalTalk
- Support of TCP/IP networking software with Apple Open Transport

Displays

=====

- Supports up to 14-inch Apple displays at millions of colors; 16- and 17-inch Apple displays at up to millions of colors
- Supports most third-party displays as well as VGA and SVGA monitors

Video support

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- Built-in 2 MB VRAM display support

Interfaces

=====

- Three PCI expansion slots
- One Apple Desktop Bus (ADB) port for a keyboard, mouse, and other devices
- On-board Ethernet using either AAUI-15 or RJ-45
- Two DMA serial (RS-232/RS-422) ports compatible with LocalTalk
- Two SCSI DMA buses supporting up to eight SCSI devices and transfers up to 10 MB/s (internal bus only)
- 16-bit stereo sound input and output ports
- DB-15 video port for display support

Clock/calendar

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- Custom integrated circuit with long-life lithium battery

Disability access

=====

- System software includes CloseView and Easy Access, and can substitute visual cue for beep. Built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Keyboard and mouse

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- Supports ADB keyboards with numeric keypads
- ADB Mouse II included

Electrical requirements

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- Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- Frequency: 50 to 60 Hz, single phase
- Power: 225 W maximum, not including display

ADB power requirements

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- Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- Mouse draws 10 mA; keyboard draws 25 to 80 mA (varies with keyboard model used)

Operating environment

=====

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 116.6 degrees F
(-40 degrees to 47 degrees C)
- Relative humidity: 5 percent to 95 percent noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and weight

=====

- Height: 14 in. (35.6 cm)
- Width: 7.7 in. (19.6 cm)
- Depth: 15.75 in. (40.0 cm)
- Weight: 25 lb. (11.3 kg)—varies based on internal devices installed

Regulatory approval

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- FCC Class A

Article Change History:

03 Mar 1997 - Added keyword.

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Tech Info Library Article Number:20372



Tech Info Library

Macintosh Computers: Average Static Propensity Values (9/96)

Revised: 9/16/96
Security: Everyone

Macintosh Computers: Average Static Propensity Values (9/96)

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Article Created: 10 September 1996
Article Reviewed/Updated: 16 September 1996

TOPIC -----

A Customer is having carpet installed in their Macintosh computer lab room. The carpet company that will be installing the anti-static carpet wants to know what the average Static Propensity level Macintosh computers have as to not harm the computers in the case of static build up. Knowing this value would allow them to put in carpeting with sufficient anti-static capabilities.

Can you tell me what the average static Propensity level is for most Macintosh computers?

DISCUSSION -----

All Apple products are tested to comply with standard EC 55101-2. This ensures that Apple products are tested to withstand static electricity levels up to 15kv without permanent damage.

The level that is practical would be between 2kv to 4kv if the static is "directly" discharged to the product or 4kv to 8kv if "air" discharged (that is like a spark from your finger just before you touch something).

After researching the World Wide Web for "Static Propensity" we found that most carpet manufacturers list a level for Static Propensity in their carpet specifications. For example a specification for Mannington Commercial Carpet list the following: Static Propensity 3.0 kilovolts (kv) or Less as Tested in Accordance with AATCC-134, tested at 70 degrees Fahrenheit and 20 percent Relative Humidity. It is important to remember that static electricity increases in lower humidity environments.

While Apple cannot make a recommendation as to what static propensity level to look for when purchasing carpet, we can say that based on the static electric testing that Apple does, and the numbers specified that when looking for average values for most carpeting, it seems that 3kv would be an acceptable level.

This article was published in the Information Alley on 16 September 1996.

Article Change History:

16 Sep 1996 - Added Info Alley publication information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20375



Tech Info Library

Cyrillic Language Kit: Incorrect Keyboard Layouts (10/96)

Revised: 10/17/96
Security: Everyone

Cyrillic Language Kit: Incorrect Keyboard Layouts (10/96)

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Article Created: 10 September 1996

TOPIC -----

I have the Cyrillic Language Kit installed on my computer, and I think that that the keyboard layout cards (which were included with this Language Kit) may have an error on them. Instead of the typical 10 keys located between the two Shift keys, these layout cards display 11 keys. It appears that there is an extra key located between the Z key and the left Shift key. Because of this confusion, I am not sure which key the corresponding character is actually mapped to.

DISCUSSION -----

The character on this key (which varies with each layout) is actually mapped to the key to the left of the numeral 1 key in the top row of the keyboard. The keyboard layout cards incorrectly list this key as having no character mapped to it.

This article was published in the Information Alley on 17 October 1996.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20376



Tech Info Library

Apple Products: Multihoming and Multinode Support (10/96)

Revised: 10/30/96
Security: Everyone

Apple Products: Multihoming and Multinode Support (10/96)

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Article Created: 11 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains questions about the implementation of multihoming and multinode support in Apple products. Note that this is intended to be an advanced technical article provided for informational purposes only. Apple will not provide assistance with interpreting or understanding this information.

Questions Answered in this Article:

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- 1) What is meant by the terms multihoming and multinode support?
- 2) Which Apple products include multihoming or multinode support?
- 3) How does the network connectivity for the DOS and Mac OS environments on the enhanced PCI-based Power Macintosh computers differ from previous Macintosh computers using DOS or PC Compatibility Cards?
- 4) If I have a PC Compatibility card installed in an enhanced Power Macintosh**, can I install an additional network adapter card for use in the DOS environment?

DISCUSSION -----

- 1) Question: What is meant by the terms multihoming and multinode support?

Answer: Multihoming is the term applied to the capability to communicate using more than one network interface (card) at a time using the same protocol. In such a situation, the different network cards can each be connected to different zones and have different addresses, but each must be using the same protocol, such as TCP/IP, AppleTalk, and so on.

Multinode support, however, is the term applied to the capability to communicate

using multiple network protocol addresses through a single network interface (with different datalink addresses) using a single protocol.

+=====+=====+=====+=====+				
	Network Interface	Hardware	Protocol	Protocols
	Cards	Addresses	Addresses	
+-----+-----+-----+-----+				
Multihoming	Multiple	Different	Different	Same
+-----+-----+-----+-----+				
Multinode	Single	Different	Different	Same
+-----+-----+-----+-----+				

2) Question: Which Apple products include multihoming or multinode support?

Answer:

Multihoming Support

* Open Transport 1.1 provides AppleTalk multihoming support to developers at the API level.

* Currently, AppleShare 4.2.1 is the only Apple product that incorporates the multihoming support functionality of Open Transport 1.1. With AppleShare 4.2.1, you can install multiple network interface cards into the server allowing users to connect to volumes and servers with the same name in different zones, allowing multiple network interfaces to be active simultaneously.

By supporting multiple network connections, multihoming support in AppleShare 4.2.1 provides additional "pipelines" to the server, which increases the amount of network traffic that can reach the server. This enables servers to support more clients, to offer greater total performance, and to increase the reliability of mission critical applications.

* The Apple Internet Router v3.0 modifies the Classic AppleTalk stack to allow multihoming. A re-write of the router is required to use the built-in AppleTalk multihoming capabilities of version 1.1 of the Open Transport/AppleTalk stack.

* The ARA Client supports AppleTalk multihoming for a single limited case: two ports only--one LAN and one serial, in both Classic and Open Transport network configurations.

Multinode Support

* The ARA Personal Server uses AppleTalk multinode capability in both the Classic and Open Transport/AppleTalk protocol stacks and is compatible with both network systems.

* The ARA Multiport Server uses AppleTalk multinode capability in both the Classic and Open Transport/AppleTalk protocol stacks and is compatible with both network systems.

* The Apple IP Gateway modifies MacTCP to allow TCP/IP multinode capability

using Classic networking. A re-write of the IP Gateway is required to use the TCP/IP built-in multihoming capabilities that are planned for future Open Transport releases. Open Transport 1.1 does not include TCP/IP multinode support.

* With the Enhanced PCI-based Power Macintosh computers**, there is specific hardware support that allows PC Compatible cards and the Mac OS environment to share the built-in Ethernet interface, allowing simultaneous network connections in both environments. Each environment uses a separate physical layer address. Depending upon the capabilities of each protocol stack being used in a given environment, multinode support may or may not be available. For example, you can connect the DOS and Macintosh environments to the same network using the same protocol (such as TCP/IP).

This configuration could also be loosely defined as multihoming because even though the Mac OS and DOS environments use the same network controller protocols, they appear as separate hardware addresses on the network. Essentially, one physical network interface appears as two.

To further describe the full capabilities of these advanced Apple systems, the implementation of a protocol stack in the Mac OS or DOS environment may itself include multinode support. For example, the TCP/IP protocol stack installed in the DOS environment may support assigning multiple IP addresses to a physical interface using the primary hardware address. Open Transport 1.1 might use an additional IP address using the secondary hardware address. In this type of configuration, a Macintosh computer with the enhanced Ethernet controller and a PC Compatibility Card can accept connection to three or more IP addresses.

3) Question: How does the network connectivity for the DOS and Mac OS environments on the enhanced PCI-based Power Macintosh computers differ from previous Macintosh computers using DOS or PC Compatibility Cards?

Answer: In other Macintosh computers that use DOS or PC Compatibility Cards, you do not have multinode or multihoming support. Instead, you only have one effective instance of an TCP/IP protocol stack. You can be connected using either the Mac OS or DOS environment, but you cannot be connected using both environments simultaneously.

4) Question: If I have a PC Compatibility card installed in an enhanced Power Macintosh**, can I install an additional network adapter card for use in the DOS environment?

Answer: No. The installed PC Compatibility Cards are hard-coded to use the built-in Ethernet interfaces. However, you can add an additional network card to provide additional network services, such as AppleTalk for the Mac OS. The Mac OS and DOS environments would then use the built-in Ethernet for TCP/IP, and the Mac OS could use the Ethernet card for AppleTalk.

Even though you are providing another network interface for the computer to use, you do not get any network performance advantage by doing this. However, this is

a viable solution if the DOS and Mac OS environments need to be physically located on different networks.

****Note:** Following are the Enhanced Power Macintosh computers:

- Power Macintosh 7200/90 (Europe ONLY)
- Power Macintosh 7200/120
- Power Macintosh 7600/120
- Power Macintosh 7600/132
- Power Macintosh 8500/132
- Power Macintosh 8500/150
- Power Macintosh 8500/180
- Power Macintosh 9500/150
- Power Macintosh 9500/180MP
- Power Macintosh 9500/200

Article Change History:

30 Oct 1996 - Made corrections to answer of question 1.

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Tech Info Library Article Number:20378



Tech Info Library

Item Text Copied In The Finder (9/96)

Revised: 9/11/96
Security: Everyone

Item Text Copied In The Finder (9/96)

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Article Created: 11 September 1996

TOPIC -----

The clipboard seems to be unusually limited in its capacity to hold text when it comes to copying the contents of a Finder window.

I opened a Finder window which contained many files and select them all. I then chose the Show Clipboard command under the Edit menu and only 10 to 15 items typically appeared. I was able to reproduce this with either 680x0-based, or PowerPC-based computers running System 7.5.3.

Chalk this a clipboard peculiarity?

DISCUSSION -----

There is a 256 byte limit for item text copied in the Finder. This means the number of characters you would be able to copy from a set of items is 256 minus the number of items, and the Finder will not copy partial names. The number of items enters into it because a carriage return character (0x0D) is copied along with every item. This limit does not apply to icons.

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Tech Info Library Article Number:20379



Tech Info Library

At Ease Admin: Access Information No Longer Valid (10/96)

Revised: 10/30/96
Security: Everyone

At Ease Admin: Access Information No Longer Valid (10/96)

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Article Created: 12 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

I have the Apple Network Administrator Toolkit (ANAT), and when I launch the At Ease Administration application, to administer our At Ease 4.0 computers, I get this error message, "User's access information is no longer valid." I keep getting this message, no matter what workstation I launch the program from. How do I fix this?

DISCUSSION -----

Below are four items to check which should resolve this issue:

- Make sure you are entering the proper name and password.
- Make sure the owner of the At Ease volume on the server has not changed.
- On the server, throw the At Ease Server preferences file in the trash. (The At Ease Server preferences file is in the preferences folder which is in the System Folder.) Then restart the server. When you launch the At Ease Administration application, you will be prompted to enter the volume name and the name and password of the owner of the At Ease volume.
- If you have mounted any volume of the server on your desktop, unmount it first before trying to open the At Ease Administration Application. If you are using At Ease Administration Application which is signed on to an active workgroup, that auto-mounts a volume from the same server using a different user name and password, you may need to quit from that workgroup.

Article Change History:
30 Oct 1996 - Added a fourth item to check.

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Tech Info Library

LaserWriter 12/640 PS: Printing 2-sided Letterhead Paper (9/96)

Revised: 9/13/96
Security: Everyone

LaserWriter 12/640 PS: Printing 2-sided Letterhead Paper (9/96)

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Article Created: 13 September 1996

TOPIC -----

I am using letterhead stationary with a LaserWriter 12/640 PS printer. I have the duplexer installed, and sometimes need to print on both sides of the letterhead stationary. When I do, the letterhead ends up at the top of page 2 instead of page one. How can I get the letterhead on page one?

DISCUSSION -----

When printing using the Duplex Printing Unit to print on both sides of the page, the printer is designed to print in the reverse order. For example, a two page document prints page 2, then page 1. Four page documents print in the following order; page 2, page 1, page 4, then page 3.

When printing letterhead, position the paper so the letterhead is facing down and towards the back of the printer. This makes the letterhead appears on the top of the first page, instead of page two.

If you print both single-sided and double-sided documents, you can use the built-in multipurpose tray, you should use the 250-sheet cassette for single-sided paper, and the Multipurpose tray for double-sided.

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Tech Info Library Article Number:20382



Tech Info Library

LaserWriter Printers: PostScript for Configuration Page (9/96)

Revised: 9/13/96
Security: Everyone

LaserWriter Printers: PostScript for Configuration Page (9/96)

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Article Created: 13 September 1996

TOPIC -----

I am using a UNIX workstation to print to an Apple LaserWriter printer. Is there some way to use PostScript to generate a configuration page?

DISCUSSION -----

You can use the following PostScript code fragment to generate a LaserWriter configuration page. This only works on PostScript LaserWriter printers. Printers such as the Personal LaserWriter LS, or Personal LaserWriter SC, which use QuickDraw instead of PostScript do not work with this PostScript code fragment.

```
%=====
% Begin PostScript code
%
/SamplePages/ProcSet findresource/TestPage get cvx exec
%
% End PostScript code
%=====
```

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20384



Tech Info Library

Korean Language Kit: Read Me (10/96)

Revised: 10/17/96
Security: Everyone

Korean Language Kit: Read Me (10/96)

Article Created: 13 September 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

This article contains the ReadMe file for the Korean Language Kit 1.0.

DISCUSSION -----

Thank you for choosing the Korean Language Kit. This document provides specific information and tips for using the Korean Language Kit, including important information on installation and compatibility

Sample Software Folder

The floppy disk set and the CD-ROM both contain the software needed to install the Korean Language Kit. The CD-ROM includes demo applications you can use with your Korean Language Kit.

Installation

* Refer to the Macintosh Korean Language Kit Installation and User's Guide for installation and setup information.

* If you are installing the Korean Language Kit on the Arabic or Hebrew version of the Mac OS, you may want to choose the left-to-right setting in the "Text" control panel for proper justification of Roman text during installation.

* Installing over a pre-System 7.5.1 system
We recommend that you use system 7.5.1 or newer for best results.

Compatible Apple WorldScript and QuickDraw GX Application Programs

Apple makes no warranties or representations regarding the quality or compatibility of third party products. Warranties, if any, relating to such third-party products are between the software vendors and their customers.

The Korean Language Kit can be used with many non-Korean application programs that use the Apple WorldScript and/or QuickDraw GX software technology. Programs that use one or both of these technologies include:

- * HyperCard, from Apple Computer, Inc.

Note: The above list is not intended to be comprehensive. Many non-Korean application that do not employ WorldScript software technology may provide limited functionality and allow input of Korean characters. Please check with application vendors for more information about their product's support for multilingual systems available on the Mac OS.

- * ClarisWorks

If you are using the Korean version of ClarisWorks 2.0 or 3.0, with the Korean Language Kit, you will need to update to a later version to achieve ompatibility. Please contact your distributor for the update.

Article Change History:

17 Oct 1996 - Changed distribution.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20385



Tech Info Library

Korean Language Kit: Specifications & Description (10/96)

Revised: 10/17/96
Security: Everyone

Korean Language Kit: Specifications & Description (10/96)

Article Created: 13 September 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

This article contains the description and technical specifications for the Korean Language Kit 1.0.

DISCUSSION -----

Apple's Korean Language Kit is an easy, affordable way to add Korean text to your documents.

After the simple installation process, you can switch effortlessly between the computer's main language and Korean. The kit lets you enter, edit, and print Korean, and mix Korean with other languages in the same document--even in the same sentence. You can also use it to view Korean-language World Wide Web sites with the addition of Internet browsing software.

The Korean Language Kit comes with the Power Input Method, a feature-rich input method that allows conversion from hangul to hanja, can display the command menu in English or Korean, and provides an easy-to-use interface. The kit also includes two keyboard layouts for native speakers and two romaja modes for easy Korean input by non-native speakers. Also included is a set of transparent labels for customizing your keyboard.

The kit includes five QuickDraw GX-compatible TrueType fonts that produce high-quality on-screen and printed characters at many sizes. Unlike most other Korean language solutions, the Korean Language Kit offers full hanja support, including the hanja Dictionary Utility that allows a user to create a personal hanja dictionary.

The Korean Language Kit is based on Apple's WorldScript technology, which simplifies the way in which a single operating system can support multiple languages. It works with world-ready applications that take advantage of WorldScript, such as ClarisWorks 4.0, WordPerfect, Nisus Writer, and WorldWrite.

It can also be used with Korean localized applications.

This product is part of a family of Apple language solutions, which offer an affordable way to internationalize your Macintosh system. In addition to the Korean Language Kit, Apple's multilingual product offerings include the Japanese Language Kit, the Chinese Language Kit, the Chinese Dictation Kit, the Hebrew Language Kit, the Arabic Language Kit, the Cyrillic Language Kit, and others.

Features

=====

Ease of use

- * Power Input Method with support for hanja conversion
- * Simple, customizable installation process
- * Documentation in both English and Korean
- * Transparent labels for a popular Korean keyboard layout

Comprehensive, high-quality fonts

- * Five Korean fonts that include over 2,000 symbols and 4,888 hanja characters
- * Extended symbol character set and support for hiragana and katakana characters
- * Apple TrueType format for high-quality on-screen and printed characters * Full compatibility with QuickDraw GX

Versatile multilingual capabilities

- * Switch between languages easily
- * Combine Korean and other languages in the same document
- * Install as many language kits as needed on a single Macintosh system

Compatibility

- * Works with System 7.1 and all subsequent versions of the Mac OS
- * Is compatible with any localized version of the Mac OS and with other Apple Language Kits
- * Runs in native mode on Power Macintosh computers

Technical Specifications

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Included fonts

- * AppleMyungjo (TrueType, serif font)
- * AppleGothic (TrueType, sans-serif font)
- * Gungseoche (TrueType, calligraphy font)
- * Pilgiche (TrueType, cursive font)
- * Seoul (TrueType, system font)

Application compatibility

The Korean Language Kit is based on Apple's WorldScript technology, and is compatible with all applications that take advantage of WorldScript. These programs include:

- * ClarisWorks from Claris Corporation

- * HyperCard from Apple Computer, Inc.
- * WordPerfect from Novell, Inc.
- * Nisus Writer from Nisus Software, Inc.
- * WorldWrite from World Software Corporation
- * WinText from WinSoft S.A.
- * LightningDraw GX from Lari Software, Inc.
- * Ready, Set, Go! GX from Modular Software, Ltd.
- * Eudora from QUALCOM, Inc.

The Korean Language Kit can be used with a variety of applications localized for Korean. They include:

- * ClarisWorks K from Claris Corporation
- * Claris Organizer K from Claris Corporation
- * HyperCard K from Apple Computer, Inc.
- * Photoshop K from Adobe Systems Incorporated
- * Adobe Illustrator K from Adobe Systems Incorporated
- * PageMaker K from Adobe Systems Incorporated

Note: Apple has tested only a limited number of applications, therefore these lists are not intended to be comprehensive. Many nonlocalized applications that do not employ WorldScript software technology may provide limited functionality and allow input of Korean characters. Many Japanese localized applications will also work with the Korean Language Kit.

System requirements

- * One of the following Macintosh or other Mac OS-compatible computers:
 - An Apple Macintosh or PowerBook computer with a 68020 or later processor and 5 MB of RAM
 - A Power Macintosh computer with 8 MB of RAM
- * Macintosh System 7.1 or later
- * An Apple SuperDrive floppy disk drive or a CD-ROM drive
- * An application that supports WorldScript or has been localized for Korean

Ordering Information

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Korean Language Kit Order No. 400000Z

- * 1.4MB floppy disks and one CD-ROM containing:
 - Korean Language Kit
 - SimpleText Korean, a basic text-processing application
 - Demonstration versions of compatible applications and utilities
- * Transparent keyboard labels with Korean characters
- * Korean Language Kit Installing and getting started (in English and Korean)
- * Macintosh Korean Input Method Guide (in English and Korean)

Article Change History:

17 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20386



Tech Info Library

Korean Language Kit: Troubleshooting (11/96)

Revised: 11/18/96
Security: Everyone

Korean Language Kit: Troubleshooting (11/96)

Article Created: 13 September 1996
Article Reviewed/Updated: 18 November 1996

TOPIC -----

This article contains troubleshooting solutions for the Korean Language Kit 1.0.

Questions Answered
=====

- 1) I see odd characters that I cannot read in some of my file and folder names.
- 2) I changed my Views control panel to the Seoul font, but I still see odd characters in my Korean application program.
- 3) I changed my Views control panel to the Seoul font, and now I cannot read all my non-Korean file and folder names.
- 4) I changed my Views control panel to the Seoul font, but I still see odd characters in my Application menu.
- 5) After setting the font in the Views control panel to Seoul, I cannot edit a Korean file or folder name.
- 6) I cannot open a file in SimpleText Korean.
- 7) My Korean dates and times are not displayed correctly.
- 8) I re-installed one of my Korean application programs. Do I need to re-register it in Korean?

DISCUSSION -----

- 1) Question: I see odd characters that I cannot read in some of my file and folder names.

Answer: The font your system is using for file and folder names does not contain any Korean characters. Korean names cannot be properly displayed unless your system uses a font that contains Korean characters.

Choose Control Panels from the Apple menu and open the Views control panel. Change the font for views to Seoul.

The Seoul font contains Korean characters as well as the most commonly used Roman characters. If you are using a Roman-based primary script, you can usually view all your file and folder names correctly by setting the font for views in the Views control panel to the Seoul font. If your primary script is non-Roman (such as Japanese or Chinese), the Seoul font will not display your file and folder names correctly, and we recommend that you continue using a font from your primary script to display file and folder names.

2) Question: I changed my Views control panel to the Seoul font, but I still see odd characters in my Korean application program.

Answer: Your system may not recognize your Korean application as Korean.

Step 1

Open the Korean Language Register, which is in the Apple Extras folder on the disk where you installed the Korean Language Kit.

Step 2

Click the Register Application button.

A list of application programs appears.

Step 3

Click the application program you want to register as Korean.

Step 4

Click the Register button.

Now you can open your program and begin working in Korean.

3) Question: I changed my Views control panel to the Seoul font, and now I cannot read all my non-Korean file and folder names.

Answer: If you have file or folder names that contain non-English Roman characters, they will not be correctly displayed after you change the Views control panel to the Seoul font. The Seoul font does not contain these other characters.

In the Views control panel, choose a font that will correctly display your non-Korean file and folder names. Then use non-Korean names for all your files and folders, even those that contain Korean.

The Seoul font is only necessary to read Korean file and folder names. If you do not set the Views control panel to Seoul, you will still see Korean correctly displayed within your Korean or WorldScript-savvy application programs. You can write and print in Korean; just remember to give your files non-Korean names.

4) Question: I changed my Views control panel to the Seoul font, but I still see odd characters in my Application menu.

The Application menu cannot display Korean names, even after you set your Views control panel to the Seoul font. The names of your Korean application programs will not be correctly displayed in the Application menu and in certain dialog boxes.

The icons that appear in the Application menu next to each program's name may help you identify your Korean programs.

5) Question: After setting the font in the Views control panel to Seoul, I cannot edit a Korean file or folder name.

You may have a non-Korean keyboard selected in the Keyboards menu.

Choose the Power Input Method from the Keyboards menu.

6) Question: I cannot open a file in SimpleText Korean.

Answer: If you have more than one version of SimpleText on your computer, such as the Korean and English versions, the wrong version may start when you try to open a SimpleText Korean file.

Start SimpleText Korean, then choose Open from the File menu to open your SimpleText Korean file.

7) Question: My Korean dates and times are not displayed correctly.

If you are used to working on a Korean Macintosh, you may expect to see dates and times displayed according to the Korean format. But the Korean Language Kit does not change your whole system to Korean. Your primary system language is still the same, so your dates and times are displayed according to the original format.

8) Question: I re-installed one of my Korean application programs. Do I need to re-register it in Korean?

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Answer: If the name of your program changes, you must re-register it. See instructions on registering a program in Korean.

9) Question: I have been using another Korean product on my Macintosh computer, but I cannot read the documents I created with it.

Answer: The Korean Language Kit fonts are based on the standard Korean encoding as defined by the Korean information technology standards committee. The product you have been using may be based on another character encoding; therefore the documents will not be compatible. Please check with the developer of the other Korean product.

Article Change History:

18 Nov 1996 - removed keyword.

17 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20387



Tech Info Library

Megaphone: Sound Input Device Already in Use (9/96)

Revised: 9/13/96
Security: Everyone

Megaphone: Sound Input Device Already in Use (9/96)

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Article Created: 13 September 1996

TOPIC -----

When I attempt to open MegaPhone, an error message occurs stating that the sound input device is already in use. What causes this error message?

DISCUSSION -----

Step 1

From the Apple menu, open the Extensions Manager control panel.

Step 2

* Global Village Telport Gold IIv modems:

Verify that the the following extensions are on (checked):

- Internal Modem Sounds
- Serial Update 406
- Telephone Manager Extension

* Global Village Telport Platinum V modems:

Verify that the the following extensions are on (checked):

- Audio Volume Extension
- Processor Info Extension
- Serial Update 406
- Telephone Manager Extension

Step 3

Close the Extensions Manager window and restart your computer. MegaPhone should run correctly.

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This article was published in the Information Alley on 13 September 1996.

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Tech Info Library Article Number:20388



Tech Info Library

Korean Language Kit: Requirements for Installation (10/96)

Revised: 10/17/96
Security: Everyone

Korean Language Kit: Requirements for Installation (10/96)

Article Created: 13 September 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

What are the system requirements for the Korean Language Kit 1.0?

DISCUSSION -----

Computer & Memory

=====

- * One of the following Macintosh or other Mac OS-compatible computers:
 - An Apple Macintosh or PowerBook computer with a 68020 or later processor and 5 MB of RAM (8 MB if you are using System 7.5 and QuickDraw GX installed).
 - A Power Macintosh computer with 8 MB of RAM (16 MB if you are using System 7.5 and QuickDraw GX installed).

System software

=====

- * Macintosh System 7.1 or later. System 7.5 is recommended.

Storage capacity

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- * Full installation--approximately 30 MB.
- * An Apple SuperDrive floppy disk drive or a CD-ROM drive

Other

=====

- * An application that supports WorldScript or has been localized for Korean

Article Change History:
17 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20389



Tech Info Library

Kaidan

Revised: 9/16/96
Security: Everyone

Kaidan

=====

Kaidan

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Feasterville, PA 19053

Phone: (215) 364-1778 [information and orders]
FAX: (215) 322-4186 [order and info - 24hrs]

Internet: feedback@kaidan.com
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Company Profile:

Makers of the lenses and accessories for the QuickTake Digital Camera (for Macintosh and Windows) including:

CloseTake Lens System, Filters and lenses allowing close-ups from 2-in to 4-ft.

CloseFlash system for adapting the built in flash for close-up work.

WideTake Lens System, wide angle lens and mount adapter.

QuickPan Panaramic Tripod Systems for Quicktime VR.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20391



Tech Info Library

Control Panels: Obtaining Version Information (9/96)

Revised: 9/16/96
Security: Everyone

Control Panels: Obtaining Version Information (9/96)

Article Created: 16 September 1996

TOPIC -----

I am trying to obtain the version of the Launcher control panel. To do this, I have selected Get Info from the File menu in the Finder. However, the version is displayed as "n/a" in the Get Info window. How can I determine which version of the Launcher I have?

DISCUSSION -----

The Launcher is a control panel. When a control panel is open, its resources are in use. Since the version information is kept in a version ('vers') resource in the control panel's resource fork, the Finder is unable to access this information. This why "n/a" (not available) is displayed in the version section of the Get Info window.

If you want to obtain the version of a control panel, close the control panel and then close and re-open the folder that contains the control panel, which is typically the Control Panels folder within the System Folder.

By closing and re-opening that folder, the cached Finder information is updated. The Finder caches many resources that are displayed in Get Info window such as custom icons and 'vers' resources to increase performance.

This article was published in the Information Alley on 16 September 1996.

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Tech Info Library Article Number:20392



Tech Info Library

Macintosh 5200 w/8-bit Sound: Clicks in Sound Cntrl Pnl (11/96)

Revised: 11/12/96
Security: Everyone

Macintosh 5200 w/8-bit Sound: Clicks in Sound Cntrl Pnl (11/96)

Article Created: 16 September 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

I have a Macintosh Performa 5200 computer that included System 7.5.1. After updating to System Software 7.5.3 using System 7.5 Update 2.0, I hear clicking sounds before the Alert sound is played in the Sound control panel. This seems to occur only in the Sound control panel. What is causing these clicking sounds?

DISCUSSION -----

These clicking sounds appear to be related to the interaction between the version of Sound Manager that is installed with System 7.5 Update 2.0 and the sound chip in some Power Macintosh and Macintosh Performa 5200 series computers. The computers that may be affected have 8-bit, 22.254 sound output. To determine whether your computer has 8-bit sound follow these steps:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is grayed out, you have 8-bit sound.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

System 7.5.1, which was included on your computer, has Sound Manager version 3.0.2 built into it. After updating with System 7.5 Update 2.0, Sound Manager 3.2 is installed. The clicking sound occurs only on Power Macintosh and Performa 5200 series computers which have 8-bit sound and which have Sound Manager 3.2 installed.

To resolve this issue, you should install QuickTime 2.5, which installs Sound Manager 3.2.1. After upgrading the Sound Manager to 3.2.1, the clicking sound no longer occurs in the Sound control panel. QuickTime 2.5 is available on the online services.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 27 September 1996.

Article Change History:

12 Nov 1996 - Added alley blurb.

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Tech Info Library Article Number:20393



Tech Info Library

Macintosh Performa 6400: Difficulty Connecting to AOL (9/96)

Revised: 9/16/96
Security: Everyone

Macintosh Performa 6400: Difficulty Connecting to AOL (9/96)

=====

Article Created: 16 September 1996

TOPIC -----

I am having difficulty connecting to America Online using the Global Village Platinum V modem that was included with my Macintosh Performa 6400 computer. Are there any special configurations that I need to set?

DISCUSSION -----

The instructions for properly setting up America Online for use with your Global Village Platinum V modem are included in the On-line Settings Read Me file which is located: Applications -> Global Village TelePort Extras -> On-line Service Settings.

Following are the steps included in that Read Me file:

Step 1

Install America Online according to the installation instructions supplied with the application.

Step 2

Copy the "GV TelePort Platinum" modem script to the Online Files folder in the America Online folder.

The America Online modem script is located in the America Online subfolder of the On-line Service Settings folder in the Global Village TelePort Extras folder (Global Village TelePort Extras:On-line Service Settings:America Online:GV TelePort Platinum).

Step 3

Launch the America Online application.

If this is the first time you are using America Online, you may need to personalize and set up the application.

Step 4

When the Welcome to America Online! screen appears, click the Setup button.

The Connection Settings dialog box appears. You will specify the settings in the First Try section of the dialog box first.

Step 5

Choose the GV TelePort Platinum modem script from the Modem Type pop-up menu.

Step 6

Click the Hardware Handshaking check box.

Step 7

Set the Connection Speed to 38,400.

Step 8

Enter your access number and dialing options (if they are not already entered).

For more information about specifying an access number and dialing options, refer to the America Online documentation.

Step 9

Repeat steps 5-8 for the Second Try section.

Step 10

Click the Save button to save your configuration.

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Tech Info Library Article Number:20394



Tech Info Library

Bundled Performa Modems: Factory Reset Commands (12/96)

Revised: 12/10/96
Security: Everyone

Bundled Performa Modems: Factory Reset Commands (12/96)

Article Created: 16 September 1996
Article Reviewed/Updated: 10 December 1996

TOPIC -----

What are the factory reset commands, default flow control settings, and initialization strings (for high-speed access) for each of the modems bundled with Macintosh Performa computers?

DISCUSSION -----

Modem	Factory Reset Command	Setting for High Speed Access	Sets Flow Control
=====	=====	=====	=====
Bronze, Bronze II	AT&F	AT&F	N/A
Gold II (external)	AT&F1*	AT&F1&K3**	CTS Only
Gold IIv	AT&F1	AT&F1	CTS Only
Platinum V	AT&F1	AT&F1	CTS Only
Platinum external	AT&F1	AT&F1	CTS Only
GeoPort Internal	AT&F	AT&F	Not applicable; bus modem.
GeoPort External	AT&F	AT&F	Not applicable; bus modem.

NOTES

* AT&F and AT&F0 is discouraged on the TelePort Gold II for Performa. If they are used, the connection light will not function properly: it may indicate a connection even if none is present. (This information is taken from page 166 of the Global Village Gold II User's Guide.)

** The AT&F1 command invokes both CTS flow control and Xon/Xoff flow control. Using the AT&F3 forces the modem to use just CTS flow control.

1) Each of the above commands (except for the Bronze) also enable V.42bis and MNP5 data compression/error correction, and enable the modem to automatically determine what the service provider is using.

2) Note that the Gold II for Performa only supports error correction and data compression with the Global Village 2.5P or later software.

3) Note that not all modems are identical. Therefore, if the above commands invoke modes which are not supported by the modem on the other side, other AT commands may need to be used to modify modem behavior. See your modem user's guide and consult with the service provider for additional information.

4) The connection dialog used should have a section to select the flow control option. If the flow control option is not the same as what the modem is configured to use, you may lose characters when receiving (or, in some cases, transmitting) data. Whenever you use hardware-based flow control, such as CTS Only, always turn off Xon/Xoff if the software provides you with such an option.

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Article Change History:

10 Dec 1996 - Added information for all modems.

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Tech Info Library Article Number:20395



Tech Info Library

Macintosh Performa 6400: Reset Button for Modem? (10/96)

Revised: 10/17/96
Security: Everyone

Macintosh Performa 6400: Reset Button for Modem? (10/96)

=====

Article Created: 16 September 1996
Article Reviewed/Updated: 17 October 1996

TOPIC -----

The online documentation for the Macintosh Performa 6400 indicates that there is a reset button for the Global Village modem in the TelePort control panel. However, there is no TelePort control panel. How do I reset the modem?

DISCUSSION -----

Although the computer includes a Global Village modem, it has been bundled with Apple Telecom 3.0 software. The documentation refers to the Global Village software bundled with this modem on other computers.

To reset the modem, follow these steps:

Step 1

Open ClarisWorks and open a new Communications document.

Step 2

From the Settings menu, choose Connection. A dialog box appears.

Step 3

Choose Serial Tool from the Method pop-up menu, and confirm that the Modem Port icon at the bottom of the dialog is selected.

Note: The Method pop-up menu is at the top of the dialog box and by default it is normally set to Apple Mode.

Step 4

From the Sessions menu, choose Open Connection.

Step 5

Type AT and press the Return key. If an OK appears, you are ready to proceed. If not, review the steps listed above.

Step 6

Type AT&F1 and then press the Return key. You should get an OK in response.

You may wish to save the current configuration as a document by using the Save command from the File menu. If you subsequently need to issue a factory reset or otherwise test the modem with AT commands, you can open that saved document, then use Open Connection from the Sessions menu to use such commands.

This article was published in the Information Alley on 17 October 1996.

Article Change History:

17 October 1996 - Added info alley information.

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Tech Info Library Article Number:20396



Tech Info Library

Macintosh 5xxx/6xxx: Wrong Sound Capabilities Reported (9/96)

Revised: 9/16/96
Security: Everyone

Macintosh 5xxx/6xxx: Wrong Sound Capabilities Reported (9/96)

Article Created: 16 September 1996

TOPIC -----

I have a Macintosh Performa 5300 series computer, and I am attempting to use a program that requires 16-bit sound. Although I think my computer has 16-bit sound, the program is reporting that the computer is only capable of 8-bit audio. Does this computer have 16-bit sound? If so, why am I unable to use this program?

DISCUSSION -----

When System 7.5.1 is running on Power Macintosh and Performa 5200, 5300, 6200, or 6300 series computers capable of 16-bit audio input*, programs that use a Gestalt call to determine the audio input capabilities of the computer may report that the computer is only capable of 8-bit audio input. This is incorrect. The computer will correctly record 16-bit audio data unless the program disables 16-bit sound recording based on the incorrect report from the computer.

This is resolved in System 7.5.3. You can upgrade from System 7.5.1 to System 7.5.3 by installing System 7.5 Update 2.0 (available on the Internet and online services) or by installing System 7.5 version 7.5.3 (available for purchase).

* Note: All Power Macintosh and Performa 5300, 6200, and 6300 series computers support 16-bit audio input. Some Macintosh 5200 series computers support 16-bit audio and some do not. The following models only support 8-bit audio input:

Order no.	Product Name	Sound
M3947LL/A	Power Macintosh 5200 LC 8/500/CD	8-bit
M3917LL/A	Power Macintosh 5200 LC 8/500/CD/VI/TV	8-bit
M3947LL/B	Power Macintosh 5200 LC 8/500/4XCD	8-bit
M3940LL/A	Macintosh Performa 5200CD 8/500	8-bit
M3941LL/A	Macintosh Performa 5200CD 8/500/TV/VI	8-bit

If your computer is not listed and you would like to verify whether your computer has 8-bit or 16-bit sound, follow these steps:

Step 1

Choose Control Panels from your Apple menu.

Step 2

Open the Sound control panel.

Step 3

Choose "Sound Out" from the "Alert Sounds" pull down menu. If the 16-bit sound input radio button is grayed out, you only have 8-bit input.

If 16-bit is not grayed out, make sure there is a dot in the radio button next to it.

Step 4

Use the close box in the upper left corner to close the Sound control panel.

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Tech Info Library Article Number:20397



Tech Info Library

At Ease 3.0.x, Restricted Finder, and Installer Issue (9/96)

Revised: 9/17/96
Security: Everyone

At Ease 3.0.x, Restricted Finder, and Installer Issue (9/96)

=====

Article Created: 17 September 1996

TOPIC -----

I'm using At Ease 3.0.1 on the workstations in my workgroup, and I have set the users to have a Restricted Finder. I have deselected items users are not allowed to access on a CD-ROM disc, however, users are able to access these deselected items, like an application installer. What am I doing wrong?

DISCUSSION -----

This issue happens with all versions of At Ease for Workgroups 3.0, including the latest version 3.0.2. The Restricted Finder, in At Ease for Workgroups 3.0.x, does not handle removable media properly. In fact, when a user goes into the Settings... option, to specify which files can or cannot be seen on a particular CD, the instructions at the top of the window states, these settings are for the Panels. Below that it says, everything will be visible in the Finder. What is not specifically stated is, what is true for the Finder is also true for the Restricted Finder.

This issue has been resolved in At Ease 4.0 which is part of the Apple Network Administrator Toolkit. The feature works properly both in Panels and Restricted Finder.

You should do one of the following:

- Not use the Restricted Finder with At Ease 3.0.x version
- Upgrade to At Ease 4.0 if you need this control in the Restricted Finder

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Tech Info Library Article Number:20400



Tech Info Library

Global Village Modems: Smeared Status Bar in PPP Sessions (9/96)

Revised: 9/17/96
Security: Everyone

Global Village Modems: Smeared Status Bar in PPP Sessions (9/96)

=====

Article Created: 17 September 1996

TOPIC -----

When using FreePPP, the Global Village status bar appears to be multi-colored or smeared. What is causing this?

DISCUSSION -----

According to Global Village, version 2.5.2v2 of FreePPP resolves this issue.

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Tech Info Library Article Number:20401



Tech Info Library

Global Village Modems:Faxing from MS Apps & Type 3 Error (9/96)

Revised: 9/17/96
Security: Everyone

Global Village Modems:Faxing from MS Apps & Type 3 Error (9/96)

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Article Created: 17 September 1996

TOPIC -----

I have a Macintosh Performa computer that included a Global Village modem. I am attempting to fax a Microsoft Word document by holding down the Option key and selecting Fax from the File menu. However, I get a Type 3 error whenever I try this.

DISCUSSION -----

According to Global Village, this issue occurs in Microsoft Word or Excel, which are included with Microsoft Office, when using version 1.0 of the Office 4.2.x Update for Power Macintosh. Version 1.0.1 resolves the issue, and is available on the Microsoft web site.

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Tech Info Library Article Number:20402



Tech Info Library

Performa 6400: Installing Macintosh Tutorial Part II (9/96)

Revised: 9/17/96
Security: Everyone

Performa 6400: Installing Macintosh Tutorial Part II (9/96)

=====

Article Created: 17 September 1996

TOPIC -----

How can I reinstall the Macintosh Tutorial Part II on my Macintosh Performa 6400 series computer?

DISCUSSION -----

Macintosh Tutorial Part II is available on the Macintosh Performa 6400 Guided Tour CD-ROM disc. Follow these steps to reinstall it:

Step 1

Open the Macintosh Performa 6400 Series Guided Tour CD-ROM disc.

Step 2

Locate and open the Hard Disk Files folder.

Step 3

Locate and open the System Folder Files folder.

Step 4

Locate and open the Extensions folder.

Step 5

Locate the file, Macintosh Tutorial Part II, and drag it to the Extensions folder located in your System Folder on your hard drive.

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Tech Info Library Article Number:20404



Tech Info Library

Network Server 500 or 700: Creating a Logical Volume (10/96)

Revised: 10/21/96
Security: Everyone

Network Server 500 or 700: Creating a Logical Volume (10/96)

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Article Created: 17 September 1996
Article Reviewed/Updated: 21 October 1996

TOPIC -----

How do I create a Logical Volume on my Apple Network Server 500 or 700 running AIX?

DISCUSSION -----

There are four methods for adding a logical volume to the Network Server: command line, SMIT, visual Storage Manager, or the AppleTalk Disk Management Utility. Also, a logical volume will be created when a file system is created not using an existing logical volume. A logical volume is made up of a number of logical partitions. There are various options available when creating a logical volume, from as simple as just specifying size, to specifying mirror or stripe, to specifying the exact physical volume and physical partition mapping.

- Command line: Command line options are not recommended for novice users unfamiliar with Unix commands; for more information see `mklv` and `chlv`. Below is an example of how to create a logical volume on the root volume group with a name of `workvg` and having a size of 12 logical partitions:

```
mklv -y'workvg' rootvg 12
```

- SMIT: This is the recommended method for Unix novices, enter `'smit mklv'`, then enter or select the volume group where the logical volume will be created. The only required field is for the number of logical partitions that will be used to create the logical volume. Additional fields can be completed to customize the logical volume.

- Visual Storage Manager: Open the Volume Manager from the Application Manager - System_Admin on the tool bar or execute the `'/usr/bin/X11/xlvm'` command. Select the logical volume template type and drag the appropriate logical volume template using the middle mouse button to a volume group or in a logical volume pane expanded from a volume group.

- AppleTalk Disk Management Utility, AppleTalk and ppcd services must be configured on the server. Launch the Disk Management Utility on a Macintosh and connect to the server as root. Select a volume group and select the 'New File System...' command under the Configuration menu. Set the size and type of logical volume or file system.

Useful Commands

The 'lsvg' command can be used to gather information about a volume group and the physical volumes in a volume group.

lsvg	:lists all volume groups
lsvg -p <volume group>	:lists physical volumes in a volume group
lsvg -n <physical volume>	:lists information about the volume group, such as size, free space, and physical partition size
lsvg -M <volume group>	:lists allocation of each physical partition in a volume group
lsvg -l <volume group>	:lists each logical volume in a volume group and some of the logical volume characteristics

For more information see Info Explorer

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- Topics & Task Index, Managing Physical and Logical Storage, Logical Volumes
 - List of Books, System Management Guide: Operating System and Devices, Chapter 5. Logical Volumes

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Tech Info Library Article Number:20405



Tech Info Library

Information Sources for AIX (9/96)

Revised: 9/17/96
Security: Everyone

Information Sources for AIX (9/96)

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Article Created: 17 September 1996

TOPIC -----

I have purchased an Apple Network Server 500 and Apple Network Server 700, where can I find additional information on AIX?

DISCUSSION -----

You can find training and other information on these IBM published Internet web sites:

- IBM AIX Support Site: <http://service.boulder.ibm.com/aixsupport/>
Links to conferences, training, information sources, hints, and tips.
- Another good IBM AIX Site: <http://www.austin.ibm.com/services/>

For specific information on ordering classes and documentation, call:

- IBM Direct Order: 800-IBM-CALL (426-2255)
- IBM Software Registration: 800-446-8989
- IBM FaxBack Server: 1-800-IBM-4FAX
- IBM Customer Publication Support: 1-800-879-2755
 - to order documentation

Other information can be found on these Internet resources:

- AIX Public Domain/Shareware Site: <http://aixpdslib.seas.ucla.edu/>
- AIX FAQ's: <http://www.emerson.emory.edu/services/aix-faq/>
- UUSENET: comp.unix.aix

For compilers, order the Software Development Solutions for AIX 4.1 CD and appropriate licenses from IBM Direct. Also the gcc compiler for AIX is available

on the Internet.

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Tech Info Library Article Number:20406



Tech Info Library

System 7.5.5 Update: Frequently Asked Questions (2/97)

Revised: 2/7/97
Security: Everyone

System 7.5.5 Update: Frequently Asked Questions (2/97)

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Article Created: 18 September 1996
Article Reviewed/Updated: 7 February 1997

TOPIC -----

This article contains the answers to frequently asked questions (FAQ) about System 7.5.5 Update.

Questions in this FAQ

- 1) What is System 7.5.5 Update?
- 2) Who should install System 7.5.5 Update?
- 3) Should I install System 7.5.5 Update if I do not have System 7.5.3?
- 4) What improvements does System 7.5.5 Update deliver?
- 5) Why can't I see performance improvements when I run MacBench with the new Virtual Memory?
- 6) I sometimes have problems playing Audio CDs with Energy Saver installed. Does the updated Energy Saver control panel fix this?
- 7) The "About System 7.5.5 Update" document says that I may have to increase the preferred memory size of some applications by 23K. Why?
- 8) What is different about this new math library?
- 9) What tips are there to ensure I have a more trouble-free installation of System 7.5.5 Update?
- 10) Can I install the U.S. version of System 7.5.5 Update on a system which has a non-U.S. version of the system software?
- 11) Why is there no "custom install" and "custom remove" option for the installer?
- 12) The installer says "optimizing system for speed" during the installation. What does this mean?
- 13) When will System 7.5.5 Update be available in other languages beside U.S. English?
- 14) If I have any system running System 7.5.3, will I have all of the latest system software improvements after installing System 7.5.5 Update?
- 15) How can I tell if my system has been updated with System 7.5.5 Update?
- 16) How can I tell if a product which I purchased from Apple has the

enhancements provided by System 7.5.5?

- 17) Along with the announcement of System 7.5.5 Update, it has been stated that this is the last system software release for the Macintosh Plus, SE, Classic, Portable, PowerBook 100, SE FDHD, SE/30, LC, II, IIX, and IICX systems. Why are future versions of the Macintosh system software not supporting these systems?
- 18) If I have installed MODE32 on a Macintosh II, IIX, IICX, or SE/30, does this mean my system will be supported by future releases of the Macintosh system software?
- 19) Are there any known problems with installing this update which I should be aware of?
- 20) What happened to System 7.5.4?
- 21) Where can I get System 7.5.5 Update?
- 22) What are the system requirements for System 7.5.5 Update?
- 23) Where can I get more information about the Mac OS?

DISCUSSION -----

- 1) Question: What is System 7.5.5 Update?

Answer: This is a three-disk set of system software enhancements that delivers improvements in stability and performance improvements for Macintosh and Mac OS-compatible computers. This important update is for all Macintosh and Mac OS-compatible computers running System 7.5.3, and will update a system to System 7.5.5.

- 2) Question: Who should install System 7.5.5 Update?

Answer: Apple is recommending that any Macintosh or Mac OS-compatible computer with System 7.5.3 install this update.

IMPORTANT: System 7.5.5 Update will not install on PowerBook 1400 computers. The System 7.5.5 Software Installer will not let the upgrade take place. However, PowerBook 1400 owners can install Mac OS 7.6.

- 3) Question: Should I install System 7.5.5 Update if I do not have System 7.5.3?

Answer: You must have System 7.5.3 in order to install this software. You can tell if you are currently using System 7.5.3 on your system by choosing "About This Macintosh" from the Apple menu. In the top right-hand side of this window will be the system software information. Your system has System 7.5.3 installed if it reads:

System Software 7.5.3

If you have System 7.5, 7.5.1, or 7.5.2, you can update to System 7.5.3 by obtaining System 7.5 Update 2.0. If you have a version earlier than System 7.5, you will need to purchase it from an Apple reseller, or by calling the Apple Order Center. In the U.S. call 800-293-6617.

4) Question: What improvements does System 7.5.5 Update deliver?

Answer: System 7.5.5 Update provides reliability improvements for all systems by eliminating some causes of system freezes and improves the reliability of sharing a printer over the network. In addition, there are a number of improvements which only affect certain models, including:

- More reliable use of the floppy drive on DOS-compatible systems
- Improved floppy formatting and better reliability during system startup for high performance (180MHz or higher) 604 or 604e microprocessor-based systems
- Improvements in the reliability of the remote control included with the Apple TV tuner and Macintosh TV
- The elimination of a cause of Type 11 errors on PowerPC-based systems
- More trouble-free networking with the 5400 and 6400 series systems
- Improvements in data integrity when accessing a 5400 series system over the network
- More reliable use of sound-intensive applications for Macintosh Quadra and Centris systems which have been updated with the Apple Power Macintosh Upgrade Card.
- A revised Energy Saver control panel which removes references to the EnergyStar program.

The performance improvements provided in System 7.5.5 Update are primarily for people who use Virtual Memory (VM). The VM offered in System 7.5.5 Update will deliver significantly better performance when performing specific tasks than the VM provided in earlier versions of the system software. Areas where you may see performance include launching large applications, switching between large applications, switching between large documents in applications, and accessing SCSI devices. However this improvement will vary greatly depending on the amount of RAM installed in the system, the amount of virtual memory allocated, and the applications being used. A revised Code Fragment Manager enables some large PowerPC-native applications to launch faster, while enabling some applications to be launched in low-memory situations. The Universal System Folder, which let customers with System 7.5.3 create a single system folder on an external hard disk or removable-media drive and use it to boot up everything from Macintosh Plus to a Power Macintosh 9500, has been enhanced to support the latest Apple computers, including the Apple Macintosh 5400 and 6400 series.

5) Question: Why can't I see performance improvements when I run MacBench with the new Virtual Memory?

Answer: The performance measurements made in MacBench do not measure the particular type of performance improvements delivered with System 7.5.5 Update. Other benchmarking programs also may not measure these particular performance improvements.

6) Question: I sometimes have problems playing Audio CDs with Energy Saver installed. Does the updated Energy Saver control panel fix this?

Answer: On some occasions when playing an Audio CD on a Macintosh with Energy Saver installed, the CD will play for a while and then stop, resetting to track 1 and time 0:00. This problem is caused by the Energy Saver control panel and will be fixed in a future system update. This can affect all PCI-based Power Macintosh computers. The problem can be avoided by opening the Energy Saver control panel, deselecting "Shutdown instead of Sleep", and then closing the Energy Saver control panel.

7) Question: The "About System 7.5.5 Update" document says that I may have to increase the preferred memory size of some applications by 23K. Why?

Answer: System 7.5.5 Update includes a new library of mathematical routines. Certain applications which use this library may require 23K additional memory in order to run. You do not need to change the preferred memory size of every application you use. Only change the preferred memory size for applications which report an insufficient memory message when you try to launch them.

8) Question: What is different about this new math library?

Answer: This library includes more efficient routines for calculating certain mathematical functions. You may see a slight performance increase when using applications that use these improved mathematical routines.

9) Question: What tips are there to ensure I have a more trouble-free installation of System 7.5.5 Update?

Answer: It is very important to read the "About System 7.5.5 Update" document which comes with the update, and follow the directions on installing System 7.5.5 Update.

In general, it is best to not to rename or move files around within your System Folder. The System 7.5.5 Update Installer makes some assumptions that certain files will be in certain places, and if these files are moved or renamed, files that System 7.5.5 Update installs could be placed in the wrong place, or not installed at all.

10) Question: Can I install the U.S. version of System 7.5.5 Update on a system which has a non-U.S. version of the system software?

Answer: No.

11) Question: Why is there no "custom install" and "custom remove" option for the installer?

Answer: System 7.5.5 Update only updates the existing installed components on your computer. It does not add functionality. These updates are necessary to ensure your computer is operating optimally based on your installed configuration. A custom install option is only available when an installation

provides new features that you may not wish to install, such as those found in System 7.5.3. Because System 7.5.5 Update adds no new features to your computer, the custom install and custom remove options are not provided.

12) Question: The installer says "optimizing system for speed" during the installation. What does this mean?

Answer: Some resources installed in your System file by System 7.5.5 Update are compressed. The installer expands these resources to increase system performance.

13) Question: When will System 7.5.5 Update be available in other languages beside U.S. English?

Answer: Apple expects localized versions of System 7.5.5 Update to be available in many countries within 90 days after the U.S. introduction. Please contact your local Apple support center for local availability.

14) Question: If I have any system running System 7.5.3, will I have all of the latest system software improvements after installing System 7.5.5 Update?

Answer: Yes.

15) Question: How can I tell if my system has been updated with System 7.5.5 Update?

Answer: If you have installed System 7.5.5 Update on to your system, there is a very easy way to verify that it has been installed. Choose "About This Macintosh" from the Apple menu. In the top right-hand side of this window will be the system software information. Your system has System 7.5.5 Update installed if it reads:

System Software 7.5.5

16) Question: How can I tell if a product which I purchased from Apple has the enhancements provided by System 7.5.5?

Answer: If you purchased a system from Apple which has the System 7.5..4 Update enhancements already included, the "About This Macintosh" window will read:

System Software 7.5.5

17) Question: Along with the announcement of System 7.5.5 Update, it has been stated that this is the last system software release for the Macintosh Plus, SE, Classic, Portable, PowerBook 100, SE FDHD, SE/30, LC, II, IIX, and IICX systems. Why are future versions of the Macintosh system software not supporting these systems?

Answer: Future Mac OS releases will require a 68030, 63040, or PowerPC-based system which support 32-bit memory addressing, this includes all other Macintosh models. However, while future system software releases will not install on these older systems, Apple will still fully support customers with these systems by providing telephone assistance.

18) Question: If I have installed MODE32 on a Macintosh II, IIx, IICx, or SE/30, does this mean my system will be supported by future releases of the Macintosh system software?

Answer: No. System 7.5.5 Update is the last release which will support these hardware systems, regardless if MODE32 is installed.

19) Question: Are there any known problems with installing this update which I should be aware of?

Answer: Customers are encouraged to read the document which accompanies the update, titled "About System 7.5.5 Update". It has a "known problems section" which documents issues which Apple wants to make sure are brought to our customers' attention.

20) Question: What happened to System 7.5.4?

Answer: System 7.5.4 Update, which delivers System 7.5.4, was released by Apple Computer to a limited distribution, prior to an anticipated general release. Shortly after this limited distribution, a bug in the software was found which required a revision. This revision was named System 7.5.5 and replaces System 7.5.4. System 7.5.5 Update will install on computers which have System 7.5.4 installed.

Since System 7.5.4 was released to a limited audience, there needs to be a way to easily identify this release in the event one of our customers installed it and are having specific problems. In order to make identification of 7.5.4 easy, the version number was incremented to System 7.5.5.

21) Question: Where can I get System 7.5.5 Update?

Answer: System 7.5.5 Update is available electronically via:

- Apple ftp and World Wide Web sites
 - [ftp.info.apple.com](ftp://ftp.info.apple.com)
 - <http://www.info.apple.com>
- Most on-line services, including America Online, CompuServe, and AppleLink.

In the U.S. customers also may order the update on three floppies for \$13 by calling 1-800-293-6617, ext. 1322. Outside the U.S. contact your local Apple support center for further information.

22) Question: What are the system requirements for System 7.5.5 Update?

Answer: In order to install the update, you must have System 7.5.3. System 7.5.5 Update cannot be installed on earlier versions of System 7.5.

23) Question: Where can I get more information about the Mac OS?

Answer: More information can be obtained about the Mac OS on the Internet at:
<http://www.macos.apple.com/macos/siteindex.html>

Article Change History:

07 Feb 1997 - Added note to question 2 on the PowerBook 1400 computer.

16 Jan 1997 - Made correction for technical accuracy.

04 Oct 1996 - Added keyword.

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Tech Info Library Article Number:20408



Tech Info Library

AICK and Previously Installed Netscape Navigator (9/96)

Revised: 9/18/96
Security: Everyone

AICK and Previously Installed Netscape Navigator (9/96)

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Article Created: 18 September 1996

TOPIC -----

I just installed the Apple Internet Connection Kit (AICK) on my Macintosh which is connected to a local area network (LAN). Netscape was already installed and was working correctly. However, after installing AICK I get this message when I launch Netscape, "There is an error in the PPP preferences file." I removed the PPP preference and Netscape preference files and I still get this message, what is wrong?

DISCUSSION -----

The TCP/IP or MacTCP control panel has become configured for a PPP connection. You need to switch it to either a EtherTalk, Ethernet, or LocalTalk connection as is appropriate.

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Tech Info Library Article Number:20409



Tech Info Library

ARA MultiPort Server 2.1 and Serial PCI Card Issue (9/96)

Revised: 9/18/96
Security: Everyone

ARA MultiPort Server 2.1 and Serial PCI Card Issue (9/96)

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Article Created: 18 September 1996

TOPIC -----

I received Apple Remote Access MultiPort (ARA MP) Server 2.1 with my Workgroup Server, but I cannot get ARA to recognize the Serial PCI card I purchased separately for the computer. Why will this not work?

DISCUSSION -----

The ARA MP Server v2.1 that ships with the Workgroup Server 7250 and 8550 works only with the built-in enabler on those computers. Only ARA MP Server v2.1.1 supports PCI cards. There is no upgrade from the bundled version (2.1) of ARA MP Server to 2.1.1. If you wish to use ARA MP Server with a PCI card, you should purchase version 2.1.1.

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Tech Info Library Article Number:20410



Tech Info Library

ClarisWorks 4.0-4.0v4: 32 MB RAM Causes Crash (9/96)

Revised: 9/18/96
Security: Everyone

ClarisWorks 4.0-4.0v4: 32 MB RAM Causes Crash (9/96)

Article Created: 18 September 1996

TOPIC -----

I have ClarisWorks installed on my Macintosh computer (v4.0). I just upgraded my computer's memory to 32 MB. Since this upgrade, I no longer have to use Virtual Memory, but my computer crashes a lot in ClarisWorks. Do you have any idea what is wrong?

DISCUSSION -----

Issue

If you 32 MB or more of *physical* RAM (not Virtual Memory) installed in your computer, ClarisWorks 4.0 (all versions including 4.0v4) will randomly crash when the you click on the close box to close a ClarisWorks document. Additionally, this problem will sometimes manifest itself when you select Save or Save As from the File menu.

Workaround

There are two workarounds. One workaround is to open SimpleText and keep it open in the background while you work in ClarisWorks. The second workaround is to open another application and increase its memory partition to about 10,000K to reduce the amount of free RAM.

Resolution

Claris Technical Support has confirmed the issue and the workarounds. Claris plans to address this issue in the next release of ClarisWorks.

NOTE:

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Tech Info Library Article Number:20411



Tech Info Library

Apple Ethernet Card: Requires Network SW Installation (9/96)

Revised: 9/30/96
Security: Everyone

Apple Ethernet Card: Requires Network SW Installation (9/96)

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Article Created: 18 September 1996
Article Reviewed/Updated: 30 September 1996

TOPIC -----

I work for a school district that has several Power Macintosh 5260/100 computers. We had an Apple Ethernet Comm Slot card installed in each of the computers. However, I cannot get any of them to switch over to EtherTalk using the Network control panel.

DISCUSSION -----

Once the Apple Ethernet Comm Slot cards are installed, you must install the networking software. You can install the network software by using the Network Software Installer (NSI) 1.5.1 or later disk which came with the Ethernet Comm Slot card. If you cannot locate the NSI installer disk, you can install the network software by performing a Custom Install of the Networking software from the System Software CD-ROM disc.

Once the networking software is installed, you can use EtherTalk by selecting EtherTalk in the Network control panel, or AppleTalk control panel if Open Transport is being used.

Article Change History:
30 Sep 1996 - Added NSI to install network software.

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Tech Info Library Article Number:20412



Tech Info Library

Power Macintosh 5260/120: Description (10/96)

Revised: 1/9/97
Security: Everyone

Power Macintosh 5260/120: Description (10/96)

Article Created: 19 September 1996
Article Reviewed/Updated: 9 January 1997

TOPIC -----

This article contains the description for the Power Macintosh 5260/120 computer.

DISCUSSION -----

The Power Macintosh 5260/120 computer brings 120-megahertz PowerPC processor performance to a new low cost. And this is a system that can grow as your needs change, with such options as 256K of Level 2 cache memory to further boost processor performance, and a wide variety of multimedia, networking, and communications expansion cards.

The Power Macintosh 5260/120 is an all-in-one system, so it's economical, easy to set up, and easy to start using. And it's optimized for multimedia, with built-in features and expansion slots that let you enjoy stunning graphics, video, and audio now--and add advanced features later.

Already included in the main unit are a 14-inch color display (diagonal viewable image size 12.3 inches), a 1.2-gigabyte hard disk, a 1.4-mega-byte floppy disk drive, an 8x-speed CD-ROM drive, a microphone, and stereo speakers. The whole system is on a tilt-and-swivel base that lets you position it precisely for the most comfortable viewing. A keyboard and mouse are also provided, as are more than a dozen home, education, and home-business programs, and a collection of multimedia reference CDs.

The 16-bit sound provides high-quality audio playback through the built-in stereo speakers or external speakers (not included). You can record voice, music, and other audio of your own choosing through the front microphone or the rear audio-input port.

Multimedia expansion is easy on the Performa 5260/120 computer. Your computer comes with special slots for video-input, TV tuner, and communications or

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networking cards. A general-purpose slot supports a variety of expansion options, such as an MPEG card for viewing CD-ROM-based movies and interactive "edutainment" programs. You can also add video-output capability to display your Macintosh screen on a TV or a projection system, or to record your work on a VCR.

Features

=====

Complete, ready-to-use system

- * Computer, 14-inch color display (12.3-inch diagonal viewable image size), 8x-speed CD-ROM drive, floppy disk drive, hard disk, microphone, and speakers built into one unit
- * Matching keyboard, mouse, and all necessary cables
- * Apple System 7.5 software, including Apple Guide software for step-by-step help with basic system operation, and QuickTime multimedia software
- * Built-in 8x-speed CD-ROM drive
- * Front-panel volume control and headphone/speaker jack
- * CD-quality digital sound

Ordering Information

=====

Power Macintosh 5260/120

Power Macintosh 5260/120 Computer with built-in 14-inch display (12.3-inch diagonal viewable image size), 1.2GB hard disk, 8x-speed CD-ROM drive, and Apple SuperDrive floppy disk drive. Mouse, keyboard, and cables also included.

Check with your Apple reseller for specific configuration information and ordering numbers.

Optional Enhancements

* High Performance Module
(256K level 2 cache)
Order No. M4849LL/A

* Apple MPEG Media System
Order No. M4243LL/A

* Apple Video System
Order No. M2894LL/C

* Apple TV/FM Radio System
Order No. M4586LL/A

* Apple TV/Video System
Order No. M2896LL/C

* Apple External Video Connector

Order No. M4099LL/A

* Apple Presentation System

Order No. M2895LL/A

vApple Ethernet CS Twisted-Pair Card

Order No. M3065Z/A

* Apple Ethernet CS AAUI Card

Order No. M3066Z/A

* Apple Ethernet CS Thin Coax Card

Order No. M2708Z/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

09 Jan 1997 - Corrected the product name.

31 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20413



Tech Info Library

Power Macintosh 5260/120: Specifications (10/96)

Revised: 10/31/96
Security: Everyone

Power Macintosh 5260/120: Specifications (10/96)

Article Created: 18 September 1996
Article Reviewed/Updated: 31 October 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 5260/120.

DISCUSSION -----

Microprocessor

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- * PowerPC 603e processor running at 120 MHz
- * 32K internal cache
- * Integrated floating-point unit
- * 40-MHz, 64-bit bus
- * Optional 256K level 2 cache

Memory

=====

- * Comes with 16 MB of RAM
- * Can be expanded to 64 MB
- * Uses 72-pin, noncomposite, 70-nanosecond or faster SIMMs

Disk drives

=====

- * Internal 1.2GB IDE hard disk drive
- * Internal Apple SuperDrive floppy disk drive
- Uses high-density, 1.4MB floppy disks
- Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 8x-speed CD-ROM drive

Display

=====

Built-in display

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- * 14-in. (12.3-in. diagonal viewable image size) shadow-mask color display
- * 16-bit-per-pixel RGB color
- * 640- by 480-pixel resolution
- * 0.28-mm dot pitch
- * 66.67-Hz refresh rate
- * Tilts from -5° to +15°, swivels a full 360°
- * Front-panel controls for adjusting screen brightness
- * Very low ELF/VLF emissions

Display support

-----s

- * 16-bit color for display of up to 32,768 colors at 640- by 480-pixel resolution
- * 1MB video frame buffer (independent of system RAM)

Sound

=====

- * Stereo 16-bit sound
- * Built-in stereo speakers
- * Sound-output port
- * Sound-input port
- * Front headphone jack and volume control
- * Built-in monophonic microphone

Expansion interfaces

=====

- * LC processor-direct slot for networking, communications, and multimedia expansion, such as a modem, Ethernet card, or MPEG video card
 - Compatible with most Macintosh Performa 400 and 500 series; Macintosh Quadra 605; Macintosh LC II, LC III, LC 475, LC 550, LC 575, and LC 630; Performa 630; and Performa and Power Macintosh 5200, 5300, 6200, and 6300 series
- processor-direct cards
 - * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
 - * Two RS-232/RS-422 serial ports for an AppleTalk network connection, other networking connections, communications equipment, or a printer (some models include built-in modem that uses one serial port)
 - * SCSI interface port for as many as five external SCSI devices, such as disk drives or CD-ROM drives
 - * Communications slot for Ethernet card or fax/data modem card
 - * Video slot for video-input card (such as the Apple Video System)
 - * TV tuner connector and infrared control sensor for TV tuner card (such as the Apple TV/FM Radio System or the Apple TV/Video System)

Electrical requirements

=====

- * Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- * Frequency: 50 to 60 Hz
- * Power: 240 W maximum
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 17.5 in. (44.5 cm)
- * Width: 15.1 in. (38.3 cm)
- * Depth: 16 in. (40.6 cm)
- * Weight: 45 lb. (20.5 kg)

Operating environment

=====

- * Operating temperature: 50° to 104° F (10° to 40° C)
- * Storage temperature: -40° to 116° F (-40° to 47° C)
- * Relative humidity: 20% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

Article Change History:

31 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20414



Tech Info Library

Global Village Platinum V Modem: Settings for PPP (9/96)

Revised: 4/21/97
Security: Everyone

Global Village Platinum V Modem: Settings for PPP (9/96)

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Article Created: 19 September 1996

TOPIC -----

What are the recommended configuration settings for maintaining a reliable internet connection with my Global Village Platinum V modem that was included with my Macintosh Performa 6400 series computer?

DISCUSSION -----

According to Global Village the steps are as follow:

Step 1

Set the port speed to 57600 bps.

Step 2

Set the Flow Control to CTS + RTS (DTR).

Step 3

Set the Init string to:

AT&F1W1S95=44

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Tech Info Library Article Number:20415



Tech Info Library

Global Village Modem: Isolating Voice/Data Integrity (9/96)

Revised: 9/19/96
Security: Everyone

Global Village Modem: Isolating Voice/Data Integrity (9/96)

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Article Created: 18 September 1996

TOPIC -----

Is there a way to rapidly isolate an internal Global Village voice-capable modem failure on a Performa computer?

DISCUSSION -----

The following information will help isolate both data and voice integrity. However, keep in mind that these steps are guidelines used in troubleshooting the Global Village modems. A failure of these diagnostics means there is a problem with the modem. However, success simply suggests that the voice and data capabilities of the modem are intact, but there still may be an additional failure symptom with the modem.

Step 1

=====

Open and configure a ClarisWorks serial session. Verify that it is set as follows:

Data Rate: 57600
Parity: None
Data Bits: 8
Stop Bits: 1

Step 2

=====

To test for voice issues, type the following commands, which should elicit the corresponding responses:

Command	Response
-----	-----
AT	OK
AT#CLS=8	OK

```
AT#VRN=0      OK
ATDTn         VCON (n = phone number, e.g. 555-5555)
ATH           OK (hangs up)
```

If all four tests pass, the voice component of the modem is probably functioning correctly.

Step 3

=====

To test for data issues, type the following commands, which should elicit the corresponding responses:

Command	Response
-----	-----
AT	OK
AT&F0	OK
ATZ	OK
ATDT	Dialtone. Press Space to get a NO CARRIER message.

If all four tests pass, the data component of the modem is probably functioning correctly.

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Tech Info Library Article Number:20416



Tech Info Library

Apple Color OneScanner 1200/30: Description (9/96)

Revised: 9/19/96
Security: Everyone

Apple Color OneScanner 1200/30: Description (9/96)

Article Created: 18 September 1996

TOPIC -----

This article contains the Apple Color OneScanner 1200/30 product description.

DISCUSSION -----

The Apple Color OneScanner 1200/30 is a high-quality, multifunction scanner that seamlessly integrates your document processing needs to enhance your productivity. It even includes software that provides quick, easy conversion of optical character recognition (OCR) documents into Hypertext Markup Language (HTML) format for streamlined web authoring.

With its 30-bit, 600 by 1,200-dot-per-inch optical resolution, the Apple Color OneScanner 1200/30 combines superior-quality images with impressive flexibility in manipulating them. For example, you can scan in very small areas at a high resolution and enlarge them for output, without loss of fine details. This scanner's color capabilities are also ideal for capturing details with extreme accuracy; it recognizes more than 1 billion colors and supports ColorSync 2.1 color matching, so the image you see on the display or on printed output accurately and vividly reproduces the quality of the original scan.

But high-quality images are only part of the Color OneScanner 1200/30 story. OneScanner Dispatcher software is included to make it simple to use the Apple Color OneScanner 1200/30 in conjunction with your computer, fax modem, and printer to enhance your productivity. The included Xerox TextBridge 3.0h OCR software provides OCR-to-HTML conversion of text documents, making the process of creating a World Wide Web page (or other materials for posting on the web) faster and easier than ever before. In addition, the Color OneScanner 1200/30 comes with special versions of two powerful image-enhancement plug-in filters: Kai's Power Tools 3.0 SE and KPT Convolver 1.0 SE.

Combining superior image quality with unmatched integration for enhanced productivity, the Apple Color OneScanner 1200/30 is an outstanding, yet economical, scanning solution. It's the perfect choice if you're looking for a

high-performance, high-value scanner to streamline your work-flow while increasing the impact of your communications—in print or online.

Features

=====

Superior Image Quality

- Offers 30-bit, 600- by 1,200-dot-per-inch resolution (4,800- by 4,800-dpi interpolated)
- Recognizes more than 1 billion colors
- Supports ColorSync 2.1 color matching, for excellent color fidelity from scanned image to screen image to printed image

Easy, Integrated Document Processing Capabilities

- Provides automated, single-pass scanning
- Comes with OneScanner Dispatcher 2.0 soft-ware, a powerful, easy-to-use application that helps you take advantage of the scanner's many functions—including scanning, OCR, editing, printing, faxing, copying, archiving, and retrieving images—and provides several enhancements over the original OneScanner Dispatcher software

Flexible Functionality Through Value-added Software and Optional Accessories

- Includes a version of industry-leading Xerox TextBridge OCR software produced exclusively for Apple's OneScanner products that lets you scan printed pages directly into your computer as digital files, eliminating the need for time-consuming, error-prone rekeying
- Provides OCR-to-HTML conversion using Xerox TextBridge software in conjunction with OneScanner Dispatcher software's scanning, archiving, and image-editing capabilities, so you can seamlessly place your text documents into web-authoring applications
- Comes with Kai's Power Tools 3.0 SE and KPT Convolver 1.0 SE, powerful image-enhancement plug-in filters that support your creative efforts by letting you manipulate images
- Supports an Automatic Document Feeder that can handle up to 20 pages at up to legal size, as well as a Transparent Media Adapter that lets you scan transparent 35mm film to 8- by 11-in. printed output and produce true negative-to-positive conversions

Compatibility

- Supports GIF, PICT, TIFF, JPEG, EPS, BMP, and Photoshop formats; the scan plug-in module is compatible with Photoshop plug-in architecture applications
- Integrates with most popular word processing, presentation, image-editing, page-layout, and web-authoring software for the Macintosh

System Requirements

=====

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- System software version 7.5 or later
- At least 8MB of RAM (12MB required to use OneScanner Dispatcher and TextBridge OCR software simultaneously)
- Requires at least 640 by 480 resolution for monitors or PowerBook displays

Ordering Information

=====

Apple Color OneScanner 1200/30 Order No. M4495LL/A

- Apple Color OneScanner 1200/30
- OneScanner Dispatcher 2.0 software
- Xerox TextBridge 3.0h OCR software with OCR-to-HTML conversion and user's guide
- Kai's Power Tools 3.0 SE and KPT Convolver 1.0 SE image-editing filters
- User's guide
- Limited warranty

Optional Accessories

Apple Color OneScanner Automatic Document Feeder Order No. M4526G/A

Apple Color OneScanner Transparent Media Adapter Order No. M4527G/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20419



Tech Info Library

Apple Color OneScanner 1200/30: Technical Specifications (9/96)

Revised: 9/19/96
Security: Everyone

Apple Color OneScanner 1200/30: Technical Specifications (9/96)

Article Created: 18 September 1996

TOPIC -----

This article contains the Apple Color OneScanner 1200/30 technical specifications.

DISCUSSION -----

Technical Specifications

General

- Scanner type: Single pass, 30-bit scanning
- Color capabilities: Recognizes up to 1 billion colors
- Optical scanning resolution: 600 by 1,200 dots per inch
- Interpolated scanning resolution: 4,800 by 4,800 dots per inch
- Scan area: letter size (21.6 by 29.2 cm); up to legal size (21.6 by 35.6 cm) with Automatic Document Feeder
- Scanning engine speed: Full-page scan, less than 20 seconds; preview scan, less than 6 seconds
- Interface: SCSI-2
- File formats: Supports PICT, TIFF, GIF, JPEG, EPS, BMP, and Photoshop; compatible with most popular word processing, presentation, image-editing, page-layout, and web-authoring software for the Macintosh
- Bulb: Cool-scanning Xenon bulb

Optional Accessories

- Transparent Media Adapter for scanning transparent film and producing true negative-to-positive conversions
- Automatic Document Feeder with 20-page, legal-size capacity OneScanner Dispatcher software
- Controls scanning, OCR, OCR to HTML conversion, editing, printing, faxing, copying, archiving, and retrieving images and provides

integration with popular applications

- Supports Drag and Drop

Additional Software

- Xerox TextBridge 3.0h OCR software with OCR-to-HTML conversion capability
- Kai's Power Tools 3.0 SE and KPT Convolver 1.0 SE image-editing plug-in filters ColorSync 2.1 architecture
- Matches colors from scanned input to display to printed output
- Provides automatic behind-the-scenes color matching
- Works with color-capable Macintosh computers and color input and output devices that take advantage of ColorSync

Electrical Requirements

- Line voltage: 100-240 V AC +/-10%
- Frequency: 50 to 60 Hz, single phase
- Power: 35 W (maximum)

Environmental requirements

- Temperature: 41 to 95 deg. F (5 to 35 deg. C)
- Humidity: 15% to 85%, noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and Weight

- Height: 3.1 in. (7.9 cm)
- Width: 11.3 in. (28.7 cm)
- Depth: 16.3 in. (41.4 cm)
- Weight: 12.1 lb. (5.5 kg)

System Requirements

- System software version 7.5 or later
- At least 8MB of RAM (12MB required to use OneScanner Dispatcher and TextBridge OCR software simultaneously)
- Requires at least 640 by 480 resolution for monitors or PowerBook displays

Ordering Information

Apple Color OneScanner 1200/30 Order No. M4495LL/A

- Apple Color OneScanner 1200/30
- OneScanner Dispatcher 2.0 software
- Xerox TextBridge 3.0h OCR software with OCR-to-HTML conversion and user's guide
- Kai's Power Tools 3.0 SE and KPT Convolver 1.0 SE image-editing filters

- User's guide
- Limited warranty

Optional Accessories

Apple Color OneScanner Automatic Document Feeder Order No. M4526G/A
Apple Color OneScanner Transparent Media Adapter Order No. M4527G/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20420



Tech Info Library

Macintosh Performa: Global Village Toolbox Won't Load (9/96)

Revised: 9/19/96
Security: Everyone

Macintosh Performa: Global Village Toolbox Won't Load (9/96)

=====

Article Created: 16 September 1996

TOPIC -----

I have a Macintosh Performa computer that included a Global Village modem. I am getting an error message on the computer that states that the Global Village Toolbox will not load. What is the most likely cause of this?

DISCUSSION -----

According to Global Village, this may occur if you perform a Custom Install of ONLY Open Transport 1.1 using System 7.5 Update 2.0.

The workaround is to either install the entire System 7.5 Update 2.0 (which will automatically include Open Transport 1.1) or make the Global Village Toolbox extension load first by renaming it (such as by putting a space at the beginning of the file name).

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20421



Tech Info Library

Power Macintosh 8500/150 & 8500/180: Description (9/96)

Revised: 3/19/97
Security: Everyone

Power Macintosh 8500/150 & 8500/180: Description (9/96)

Article Created: 19 September 1996

TOPIC -----

This article contains the description for the Power Macintosh 8500/150 and 8500/180 series computers.

IMPORTANT: Another article in the Tech Info Library title, "Power Macintosh 8500/132 & 8500/150: Description" contains information about the previous 8500/150 configuration.

DISCUSSION -----

If your profession demands a high-performance, expandable computer that can handle any media as easily as text, opt for a Power Macintosh 8500 system. Depending on your needs and cost considerations, you can choose the Power Macintosh 8500/150 or the 8500/180, featuring a 150-MHz PowerPC 604 processor, or a 180-MHz PowerPC 604e processor, respectively. Both high-performance systems make an ideal choice for in-house publishing, media authoring, and technical applications--and because they're processor-upgradable, they protect your investment for the future.

Built-in near-broadcast-quality video-input/output capabilities, high-resolution graphics, an 8x-speed CD-ROM drive, and CD-quality stereo sound add vitality to professional projects and--with Apple's QuickTime software--make media authoring easy.

The three industry-standard Peripheral Component Interconnect (PCI) high-performance expansion slots on these systems let you customize them easily to meet your needs more precisely. You can find PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 8500/150 or 8500/180 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install a PC Compatibility Card from Apple in one of the PCI slots--and switch instantly between computing environments.

Connecting your Power Macintosh 8500/150 or 8500/180 computer to an Ethernet network is easy because it includes both AAUI and 10BASE-T connectors. If you install an optional PC Compatibility Card, you can connect from both the card and the Macintosh logic board simultaneously, for incredibly versatile networking capabilities.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The Power Macintosh 8500/150 and 8500/180 make it easy to get involved in this rapidly expanding community, because they come with all of the software you need for easy Internet access.

The Power Macintosh 8500/150 and 8500/180: Exceptional performance for handling any media as easily as text, to enhance your creativity.

Features

=====

High performance

- * 150-MHz PowerPC 604 processor or 180-MHz PowerPC 604e processor, user-upgradable to faster processor when available (up to 250 MHz)
- * Built-in floating-point processor and 32K cache for 8500/150 and 64K cache for 8500/180
- * 256K level 2 cache on a DIMM
- * Built-in graphics acceleration

Communications and multimedia

- * 64-bit VRAM graphics subsystem
- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 8x-speed CD-ROM drive
- * 16-bit stereo audio input and output
- * 24-bit composite and S-video input and output
- * Support for speech-recognition and text-to-speech capabilities
- * Optimized for QuickTime Conferencing software

Expandability

- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional hard disk drive

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide
- * Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

Power Macintosh 8500/150

Order No. M5347LL/A

* Power Macintosh 8500/150 computer with 16MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 1.2GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone

Power Macintosh 8500/180

Order No. M5348LL/A

* Power Macintosh 8500/180 computer with 16MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 2GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone

Power Macintosh 8500/180

Order No. M5349LL/A

* Power Macintosh 8500/180 computer with 32MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 2GB hard disk drive, an internal 8x-speed CD-ROM drive, and a PlainTalk microphone.

All configurations include mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

PC Compatibility Card Solutions

- * PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

- * PC Compatibility Card with 586 100-MHz processor

Order No. M4091LL/A

- * Power Macintosh Processor Card Upgrade Kit

Order No. M5458LL/A (180 MHz)

- * Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20422



Tech Info Library

Cyberdog 1.1: Readme File (9/96)

Revised: 2/17/97
Security: Everyone

Cyberdog 1.1: Readme File (9/96)

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Article Created: 19 September 1996
Article Reviewed/Updated: 23 September 1996

TOPIC -----

This article contains the Cyberdog v1.1 Read Me file.

DISCUSSION -----

Using the Mail System

To use the Cyberdog mail system you will need an SMTP/POP3 account on a UNIX machine or other system or a Macintosh server running software such as MailShare or the Apple Internet Mail Server. See your system administrator to acquire an account. Once Cyberdog has been installed, to set up a connection to your server select the Connect To item from the Cyberdog menu, then click on the Mail icon. Mail and other preferences are stored in the "Internet Preferences" file in the Preferences folder, created by the Internet Config extension. If you have currently been using Internet Config and have set up another POP3 mail server your Cyberdog mail connection will already be set up.

Quicktime Version 2.1

To play movies and sounds you find on the network in Cyberdog you will need to have QuickTime version 2.1 or later installed. In previous Cyberdog installers this was installed automatically, but to save space this is no longer included in the Cyberdog installation package.

Reporting Problems

Please use our bug reporting Web page (<http://cyberdog.apple.com/>) to report any bugs or problems you may encounter in using Cyberdog.

Known Incompatibilities

Cyberdog is incompatible with Adobe Type Reunion. If you have this installed in your System, please remove it prior to running Cyberdog.

Known Problems

There is a known problem in Cyberdog when you drag text or picture clippings from the text, picture, web viewer, message editor or the URL field in any Navigator window to the Finder. The document that is created will not open in OpenDoc unless you have previously set your OpenDoc Default memory to 1,400 K or greater. To make this change, do the following:

1. Launch any OpenDoc or Cyberdog document.
2. In the Document menu, select the Document Info menu item.
3. When that dialog opens, click the Size button at the bottom of the dialog.
4. This opens the OpenDoc Memory Requirements dialog.
5. Set the radio button for the OpenDoc Default Size.
6. Increase the memory size to 1,400 K or greater.
7. Close the dialogs by clicking OK.
8. Then close all Cyberdog and OpenDoc documents.

Article Change History:

23 Sep 1996 - Updated title.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20423



Tech Info Library

Power Macintosh 8500/150 & 8500/180: Specifications (12/96)

Revised: 12/10/96
Security: Everyone

Power Macintosh 8500/150 & 8500/180: Specifications (12/96)

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Article Created: 19 September 1996
Article Reviewed/Updated: 10 December 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 8500/150 and 8500/180 series computers.

IMPORTANT: Another article in the Tech Info Library title, "Power Macintosh 8500/132 & 8500/150: Specifications" contains information about the previous 8500/150 configuration.

DISCUSSION -----

Upgradable microprocessor

=====

- * 150-MHz PowerPC 604 or 180-MHz PowerPC 604e microprocessor, upgradable to a higher-speed processor when available (up to 250 MHz)
- * Integrated floating-point unit, 32K cache for 8500/150 and 64K cache for 8500/180, and three integer units
- * High-speed system bus (up to 50 MHz)
- * Upgradability (up to 250 MHz)

Memory

=====

- * 16 MB or 32 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- * 4 MB of ROM
- * 256K level 2 cache

Disk drives

=====

- * Internal 1.2 GB or 2 GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
- Accepts high-density 1.4MB disks and 800K disks
- Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks

..TIL20424-Power_Macintosh_8500-150_and_8500-180-Specifications_12-96.pdf

- * Internal 8x-speed CD-ROM drive
- * Expansion bay for additional 3.5-inch hard disk

Interfaces

=====

- * Three PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10MB/s)
- * External SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * RCA phono jacks for line-level stereo audio input and output
- * Mini jacks for stereo audio input and output
- * All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- * DB-15 connector for monitor
- * Composite connectors (RCA phono jacks) for composite video input and output
- * S-video input and output connectors
- * Internal digital audio/video (DAV) connector for video compression/decompression cards

Video input/output subsystem

=====

- * 24-bit video input
 - Real-time video playthrough of up to 640 by 480 pixels with NTSC; 768 by 576 pixels with PAL and SECAM
 - Up to 320- by 240-pixel capture at 25 frames per second with NTSC (with 2GB drive)
 - Maximum capture size of 640 by 480 pixels with NTSC
- * 24-bit video output
 - Support for NTSC and PAL
 - Convolution for flicker reduction at all bit depths

Graphics support

=====

- * 2 MB of VRAM, expandable to 4 MB
- * Fast 64-bit data path to VRAM
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony (Requires GeoPort Telecom Adapter)

=====

- * 14.4-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Supports ADB keyboards with numeric keypads
- * Comes with an ADB Mouse II

Electrical requirements

=====

- * Line voltage: 100 to 125/200 to 240 V AC, RMS single phase, automatically configured
- * Frequency: 50 to 60 Hz, single phase
- * Power: 225 W maximum, not including display

ADB power requirements

=====

- * Maximum current draw for all devices: 500 mA
(a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- * Height: 14 in. (35.6 cm)
- * Width: 7.7 in. (19.6 cm)
- * Depth: 15.75 in. (40.0 cm)
- * Weight: 25 lb. (11.3 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

10 Dec 1996 - Corrected information about 150 MHz 604 processor.

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Tech Info Library Article Number:20424



Tech Info Library

QuickTime 2.5: Using the MIDI Instrument Picker (9/96)

Revised: 9/19/96
Security: Everyone

QuickTime 2.5: Using the MIDI Instrument Picker (9/96)

Article Created: 19 September 1996

TOPIC -----

I installed QuickTime 2.5, and now I cannot find the Instrument Picker that I use to be in QuickTime 2.1.

DISCUSSION -----

The Instrument Picker functions differently than in previous version of QuickTime.

In previous version you were able to access the MIDI Picker function by clicking on the Options button in the Import dialog. Under QuickTime 2.5, you access the MIDI Picker from the Get Info in MoviePlayer after the MIDI file has been converted to a QuickTime file.

After the MIDI file has been converted and the Movie window strip appears, choose Get Info from the Movie menu. From the left side of this dialog box choose Music Track from the pop-up menu and from the right side choose Instruments from the pop-up menu. The Get Info window then displays the MIDI Instrument tracks that were imported. Double-clicking any instrument line item will bring up the instrument selection dialog for that track. This dialog is the same dialog that was reached through a different sequence for QuickTime 2.1.

You can also drag Macintosh sound files onto an Instrument line in the Get Info windows to add custom sounds to your MIDI files.

The Authoring Extras file must be present in the MoviePlayer folder for this to work. MoviePlayer Plug-ins are considered content developer tools and are not supported for general use. The plug-ins can be found at the World Wide Web site:

<http://www.QuickTimeFAQ.org>

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Tech Info Library

Display Enabler 2.0.2: Now Utilities 6.0 has Conflict (9/96)

Revised: 9/25/96
Security: Everyone

Display Enabler 2.0.2: Now Utilities 6.0 has Conflict (9/96)

Article Created: 20 September 1996
Article Reviewed/Updated: 25 September 1996

TOPIC -----

I just installed Now Utilities 6.0. When I restarted, I got an error message from Now Startup Manager stating that the Display Enabler crashed my system. Why is this happening?

DISCUSSION -----

The Now Utilities 6.x Toolbox extension is not compatible with Display Enabler 2.0.2. The table below gives you a list of options available depending on what display and version of the Mac OS you have.

Begin_Table

Monitor	Mac OS Version	Display Enabler	Fix
AppleVision 1710AV Display & AppleVision 1710 Display	7.5, 7.5.1, 7.5.2, 7.5.3, 7.5.5	2.0.2*	Use Display Enabler 2.0.2 until the next AppleVision Display software is released, and use the Extensions Manager, not Now Startup Manager.
Other Multiple Scan Display	7.5, 7.5.1, 7.5.2	2.0.2	Upgrade to System 7.3 or later, OR upgrade to Display Enabler version 2.0.3
Other Multiple	7.5.3, 7.5.5	NONE	None. There are no

Scan Display			known conflicts with	
			built-in Display	
			Enabler.	
+=====+=====+=====+=====+				

End_Table

* You must use Display Enabler 2.0.2 with the AppleVision Displays. Display Enabler 2.0.3 is not compatible with the ApppleVision software.

This article appeared in the 20 September 1996 issue of the Information Alley.

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Tech Info Library Article Number:20428



Tech Info Library

No Modem Services On NuBus MultiPort Server Card (9/96)

Revised: 9/20/96
Security: Everyone

No Modem Services On NuBus MultiPort Server Card (9/96)

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Article Created: 20 September 1996

TOPIC -----

I have just installed a MultiPort Server card into my NuBus-based Macintosh computer. When I load up the MultiPort server software and configure the ports I have no modem access. Why?

DISCUSSION -----

In order for the software to see all of the four ports on the card, you must have the CSI server extension loaded at startup. When this software loads it initializes the card. Even though this is non-Apple software, it is necessary.

Open the Remote Access Manager Application that is installed on the hard drive in the Remote Access MP folder. Under the Server Menu, there is an option for Configure Ports. This opens the port information window.

Look in the port information window to see how many ports are available (with one card, it will say, "4 out of 4." If the card is not initialized or loaded properly, it will say "0 out of 4." The extension to initialize the card is included on the CSI disk.

The Remote Access MultiPort software will not allow you to "serve out" the built-in serial ports on a Nubus-based Macintosh computer.

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Tech Info Library Article Number:20429



Tech Info Library

Eric's Solitaire: Corrupt Prefs Cause Crash (9/96)

Revised: 9/20/96
Security: Everyone

Eric's Solitaire: Corrupt Prefs Cause Crash (9/96)

=====

Article Created: 20 September 1996

TOPIC -----

I have a copy of Eric's Solitaire Sample that was included on the CD-ROM disc, which came with my Power Macintosh computer. It worked properly at first, but now whenever I try using the application, it just quits after I launch it. I have reinstalled the software, but that has not helped. How can I fix this?

DISCUSSION -----

Eric's Solitaire Sample has a preference file which can get corrupted. When this happens, the application quits, or crashes after it is launched. To use the application again, open the Preference folder in your System folder, and throw away the file called Eric's Solitaire Sampler Prefs. The next time you launch Eric's Solitaire Sampler, a new copy of the prefs are created.

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Tech Info Library Article Number:20431



Tech Info Library

Color OneScanner Dispatcher: Window Doesn't Auto Appear (9/96)

Revised: 9/20/96
Security: Everyone

Color OneScanner Dispatcher: Window Doesn't Auto Appear (9/96)

=====

Article Created: 20 September 1996

TOPIC -----

The Dispatcher window does not necessarily automatically display when OneScanner Dispatcher v2.0 launches. This is different than earlier versions of the Dispatcher. With v2.0 if the Dispatcher window was closed at the time you quit the program, then the Dispatcher window will be closed the next time you launch the application.

DISCUSSION -----

To display this window, from the Window menu choose Dispatcher or press the command key and 0 (zero -- not 'oh, this opens the Open File dialog) simultaneously.

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Tech Info Library Article Number:20432



Tech Info Library

Apple Media Tool: Can't Set Dissolve Duration (9/96)

Revised: 9/20/96
Security: Everyone

Apple Media Tool: Can't Set Dissolve Duration (9/96)

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Article Created: 20 September 1996

TOPIC -----

I am using Apple Media Tool to create presentations. I have selected the "dissolve" effect to transition between pictures and would like to slow down the time it takes to change. Is there a way to do this? I have also discovered that the dissolve effect does not look the same on computers using Microsoft Windows. Why?

DISCUSSION -----

There is no way to set the number of "ticks" for the "dissolve" effect. The faster your machine, the faster the dissolve functions. The other transitions in Media Tool do let you change the duration, but not dissolve.

On Windows platforms, the dissolve feature may often appear blocky or not show a transition at all. If your video card supports it, try setting the colors to thousands, or 16-bit color. This allows more colors and creates smoother transitions.

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Tech Info Library Article Number:20433



Tech Info Library

Memory Configurations: Power Macintosh (1 of 4) (2/97)

Revised: 2/24/97
Security: Everyone

Memory Configurations: Power Macintosh (1 of 4) (2/97)

Article Created: 23 September 1996
Article Reviewed/Updated: 24 February 1997

TOPIC -----

What are the memory configurations for desktop Power Macintosh computers?

DISCUSSION -----

The following table includes the memory configurations for desktop Power Macintosh computers.

For information about upgrading the memory in another Macintosh computer, use the search string "memory configurations" to locate the following articles:

"Memory Configurations: Servers (2 of 4)"
"Memory Configurations: Portables & PowerBook (3 of 4)"
"Memory Configurations: Other Desktop Macintosh (4 of 4)"

Notes:

* The Power Macintosh 7500, 7600, 8500, and 9500 series computers support memory interleaving. Although you can install DIMMs one at a time, you can get increased performance by installing them in pairs.

* 128 MB DIMMs are available and can fit into the memory slots on the Power Macintosh 7200, 7500, 7600, 8500, and 9500 computers. However, these DIMMs have not been tested with these computers and are therefore not supported by Apple.

Begin_Table

Macintosh RAM Configurations

Power Macintosh Computers (Including Performa and LC)									
								In-	
Sold-	# of							stall	

Computer	Number of RAM (MB)	SIMM/ DIMM Slots	Supported SIMM/DIMM Sizes (MB)	DRAM Configs (MB)	RAM Speed (ns)	RAM Type	Max. RAM (MB)	in Groups of
Power Macintosh 4400	0	3	8, 16, 32, 64 DIMM slot 1 supports single bank DIMMs ONLY	Too many to list. Check with RAM vendor for specifics	60	168- pin DIMM 3.3 V EDO	160	1
Power Macintosh 5200/75 LC 5260/100 Performa 5200, 5210, 5215, 5220, 5260 5300/100LC Performa 5300	0	2	4, 8, 16, 32	8, 12, 16, 20, 24, 32, 36, 40, 48, 64	80	72-pin SIMM	64	1
Power Macintosh 5400 Macintosh Performa 6400, 6360	8	2	4, 8, 16, 32, 64	8, 12, 16, 20, 24, 28, 32, 40, 44, 48, 56, 72, 76, 80, 88, 104 136	70	168- pin DIMM	136	1
Power Macintosh 5500, 6500	0	2	4, 8, 16, 32 64	Too many to list. Check with RAM vendor for specifics	60	168- pin DIMM 5 V EDO	128	1
Performa 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290, 6300, 6320	0	2	4, 8, 16, 32	4, 8, 12, 16, 20 24, 32, 36, 40, 48, 64	80	72-pin SIMM	64	1
Power Macintosh 6100 Performa 6110, 6112, 6115, 6116, 6117, 6118	8	2	4, 8, 16, 32	8, 16, 24, 40, 72	80	72-pin SIMM	72	2
Power Macintosh	8	4	4, 8, 16, 32	8, 16, 24, 32, 40, 48, 56, 72,	80	72-pin SIMM	136	2

7100 Series				80,104,136				
Power Macintosh 7200 Series	0	4	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	256	1,2
Power Macintosh 7500 Series	0	8	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	512	1,2
Power Macintosh 7300,7600 Series	0	8	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	512	1,2
Power Macintosh 8100 Series	8	8	4,8,16,32	Too many to list. Check with RAM vendor for specifics.	80	72-pin SIMM	256	2
Power Macintosh 8500,8600 Series	0	8	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	512	1,2
Power Macintosh 9500,9600 Series	0	12	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	768	1,2

End_Table

Article Change History:

24 Feb 1997 - Added 4400,7300,8600,9600,5500,6500.

12 Nov 1996 - Added 6360.

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Tech Info Library Article Number:20434



Revised: 9/23/96
Security: Everyone

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TOPIC -----

DISCUSSION -----

For information about upgrading the memory in another Macintosh computer, use the search string "memory configurations" to locate the following articles:

```
"Memory Configurations: Other Desktop Macintosh (4 of 4)"
```

* 128 MB DIMMs are available and can fit into the memory slots on the Workgroup Server 7250 and 8500 computers. However, these DIMMs have not be tested with these computers and are therefore not supported by Apple.

* The Network Server 500 and 700 ship with and support parity DIMMs for error checking. Although parity DIMMs are not required, they are recommended.

Macintosh RAM Configurations

Apple Workgroup Servers									
	Sold- ered RAM	# of SIMM/ DIMM	Supported SIMM/DIMM	DRAM Configs	RAM Speed	RAM	Max. RAM	In- stall in Groups	

Computer	(MB)	Slots	Sizes (MB)	(MB)	(ns)	Type	(MB)	of	
+=====+=====+=====+=====+=====+=====+=====+=====+=====+									
Apple Workgroup Server 60	8	2	4,8,16,32	8,12,16,20,24,28,32,36,40,44,48,56,68	80	72-pin SIMM	72	1	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 80	8	4	4,8,16,32	Too many to list. Check with RAM vendor for specifics.	60	72-pin SIMM	136	1	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 95	0	16	1,4,16	Too many to list. Check with RAM vendor for specifics	80	30-pin SIMM	256	4	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 6150	8	2	4,8,16,32	8,16,24,40,72	80	72-pin SIMM	72	2	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 7250	0	4	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	256	1,2	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 8150	8 or 16	8	4,8,16,32	Too many to list. Check with RAM vendor for specifics.	80	72-pin SIMM	256	2	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 8550	0	8	4,8,16,32,64	Too many to list. Check with RAM vendor for specifics.	70	168-pin DIMM	512	1,2	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
Apple Workgroup Server 9150	8	8	4,8,16,32	Too many to list. Check with RAM vendor for specifics.	80	72-pin SIMM	264	2	
-----+-----+-----+-----+-----+-----+-----+-----+-----+									
+=====+=====+=====+=====+=====+=====+=====+=====+=====+									
Apple Network Servers									

Computer	Sold- RAM (MB)	# of SIMM/ DIMM Slots	Supported SIMM/DIMM Sizes (MB)	DRAM Configs (MB)	RAM Speed (ns)	RAM Type	Max. RAM (MB)	In- stall in Groups of
Network Server 500	0	8	4,8,16,32 64	Too many to list. Check with RAM vendor for specifics.	60	168- pin DIMM	512	2
Network Server 700	0	8	4,8,16,32 64	Too many to list. Check with RAM vendor for specifics.	60	168- pin DIMM	512	2

End_Table

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Tech Info Library Article Number:20435



Tech Info Library

PC Compatibility Card: Some Shipped With Bad Floppy Disks (9/96)

Revised: 9/23/96
Security: Everyone

PC Compatibility Card: Some Shipped With Bad Floppy Disks (9/96)

Article Created: 23 September 1996

TOPIC -----

I am trying to install the software for the PC Compatibility Card in my PCI-based Power Macintosh computer. If I insert the PC Compatibility Card PC Software floppy disk in the PC environment, the computer ejects the floppy disk. If I insert the floppy on the Macintosh environment, it shows up on the desktop, but it shows up as a Macintosh-formatted floppy disk.

The floppy disks appear to be labelled correctly (sticker says PC Compatibility Card PC Software), but they are apparently empty Macintosh-formatted floppy disks with the name "pc comp.sw [pc disk] label." Can I somehow make these disks work?

DISCUSSION -----

This floppy disk includes PC files that are necessary for certain features of the PC Compatibility Card. Unfortunately, some of these floppy disks were not formatted and created properly at Apple. Follow these steps to recreate this floppy disk:

Step 1

Unlock the floppy disk.

Step 2

Switch to the Macintosh environment.

Step 3

Insert the floppy disk.

Step 4

Pull down the File menu and select 'Erase Disk...'.

Step 5

Change the name to 'APPLE_PC'.

Step 6

Change format to 'DOS 1.4 MB'.

Step 7

Click 'Erase'.

Step 8

Insert the CD-ROM disc labeled 'PC Utilities'.

Step 9

Open the folder named 'Apple'.

Step 10

Copy the contents of this folder to the floppy disk.

Step 11

Eject the floppy disk.

Step 12

Lock the floppy disk.

After the floppy has been formatted for DOS and the files have been copied onto the floppy, you can install the software by running A:SETUP.

This article was published in the Information Alley on 23 September 1996.

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Tech Info Library Article Number:20438



Tech Info Library

Issue With Stickies & LaserWriter Driver Version 8.4 (9/96)

Revised: 9/23/96
Security: Everyone

Issue With Stickies & LaserWriter Driver Version 8.4 (9/96)

=====

Article Created: 23 September 1996

DISCUSSION -----

I have seen four different Macintosh computers (two of my own) that appear to cause Stickies to unexpectedly quit when trying to print a note. This started to happen on all of these computers after installing LaserWriter v8.4 printer drivers (desktop printing included). What is wrong?

DISCUSSION -----

Workaround

Apple Engineering is aware of this issue. This is not a printer driver-related issue. This issue is related to Stickies running out of memory. The easiest way to resolve this issue is to increase the "Minimum" and "Preferred" sizes of Stickies by 20K to 140K. This should resolve the problem. Stickies is normally set to 120K for all three settings: Suggested, Minimum, and Preferred.

Resolution

Future versions of the Stickies application will have the memory requirements in "Suggested," "Minimum," and "Preferred" sizes set to be 20K greater (at least 140K).

This article was published in the Information Alley on 23 September 1996.

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Tech Info Library Article Number:20439



Tech Info Library

OpenDoc 1.1: ReadMe File (9/96)

Revised: 9/23/96
Security: Everyone

OpenDoc 1.1: ReadMe File (9/96)

Article Created: 23 September 1996

TOPIC -----

This article is from the Read Me file included with the OpenDoc 1.1 software.

DISCUSSION -----

What is OpenDoc?

OpenDoc is a new plug-in software architecture that lets you extend the usefulness of your applications by easily adding new functionality. OpenDoc uses software components called parts that can be dragged-and-dropped into documents created by any OpenDoc-aware application. You can combine parts from different Mac OS software developers to add tables, graphs, outlines, and even live Internet resources into your documents. Since OpenDoc is a cross-platform technology, documents created with OpenDoc can work across different computer platforms, including Mac OS, Windows, UNIX, and OS/2.

What does OpenDoc install?

Installing OpenDoc adds the following items to your computer:

- OpenDoc system software (in the Extensions folder)
- the Editors folder (in the System Folder)
- the Stationery folder (at the root level of your hard disk)

OpenDoc system software

After you install OpenDoc system software, your computer is ready to use OpenDoc parts and OpenDoc-aware applications from popular Mac OS software developers.

The Editors folder

When you install OpenDoc parts, the part editors are placed in the Editors folder. Editors are like mini-applications that handle different types of data, such as text, graphics, or Internet information. Once an editor is installed, it works something like a system extension, its functionality is available but you do not open or use the editor itself. To use an editor, you need to locate the editors stationery (in the Stationery folder on the root level of your hard drive).

IMPORTANT NOTE:

All of your OpenDoc editors should be located in the Editors folder (inside the System Folder). Otherwise, OpenDoc will not be able to locate the editors.

The Stationery folder

When you install an OpenDoc part, part stationery is placed in the Stationery folder. You can either double-click an editors stationery to create a new document with the editor or drag the stationery into another document to add the editors functionality to any OpenDoc-aware application or document. OpenDoc stationery can be placed anywhere in your system. You do not have to leave it in the Stationery folder.

Where can I get more information?

For more information about OpenDoc and developers who are producing OpenDoc-aware software, look on the World Wide Web at <http://opendoc.apple.com>.

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Tech Info Library Article Number:20442



Tech Info Library

Pwr Mac 9500/200: Where's Drive Setup Read Me (9/96)

Revised: 2/17/97
Security: Everyone

Pwr Mac 9500/200: Where's Drive Setup Read Me (9/96)

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Article Created: 23 September 1996

TOPIC -----

This article contains the Read Me file for Drive Setup included with the Power Macintosh 9500/200 computer.

DISCUSSION -----

Important Information About Possible Problems Initializing Your Hard Disk

=====

Read this information carefully before you initialize (or erase) the factory-installed hard disk that came with your computer.

Contents

=====

- Introduction
- Symptoms of the Problem
- Correcting the Problem
- Initializing Your Hard Disk Properly

Introduction

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Apple supplies a hard disk utility program called Drive Setup that you can use to initialize, test, and set other options for the factory-installed hard disk inside your computer. The hard disk was initialized and set up properly at the factory, so you shouldn't need to initialize it unless your hard disk is damaged and cannot be repaired by the Disk First Aid program. (See your user's manual for more information about Disk First Aid.)

If you need to initialize your factory-installed hard disk, you should use Drive Setup instead of a third-party hard disk utility program. Your computer will only start up properly if you use Drive Setup and then run the Drive Setup Updater utility program, which corrects a problem that could prevent your computer from starting up properly.

Note the following:

- The Drive Setup Updater utility is only compatible with hard disks that have been initialized with Drive Setup; the Drive Setup Updater will not work properly with other hard disk utility programs. Therefore, until third-party manufacturers upgrade their hard disk utility programs, you must use Drive Setup and the Drive Setup Updater to properly initialize your factory-installed hard disk.
- If you connect one or more additional hard disks to your Macintosh, you can initialize them with a hard disk utility program other than Drive Setup, and you do not need to run the Drive Setup Updater. However, you should only use your factory-installed hard disk as your startup disk. (The startup disk is the disk that contains the System Folder.)
- Drive Setup only works with factory-installed hard disks. If you replace the factory-installed hard disk with a third-party drive, you must use a third-party hard disk utility program to initialize the drive. Before you replace the factory-installed hard disk with a third-party drive, make sure your hard disk utility program is compatible with your Power Macintosh model. You may need to contact the manufacturer of the hard disk utility program to obtain a more recent version.
- If you are using a Workgroup Server, you can also initialize your factory-installed hard disk with Apple RAID Software version 1.1.1.

Reminder: The factory-installed hard disk inside your computer was initialized and set up properly at the factory, so you shouldn't need to initialize it unless your hard disk is damaged and cannot be repaired by the Disk First Aid program. (See your user's manual for more information about Disk First Aid.)

Symptoms of the Problem

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If you recently initialized your factory-installed hard disk or you are attempting to use a different hard disk as your startup disk, you may be experiencing a problem starting your computer. When you turn on or restart your computer, the screen may remain blank; or your computer may play the startup "chime," but not show the "Welcome to Macintosh" dialog box or start up properly. This problem may be intermittent; if you restart the computer, it may start up correctly, or the problem may reoccur.

Note: There are other reasons why your computer may not start up properly. (For example, if you recently connected another hard disk, you could be having a SCSI ID conflict.) In addition to the suggestions below, see the troubleshooting chapter in your user's manual for additional information.

Correcting the Problem

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If you are experiencing the problem described above, you can correct it by following these suggestions.

Try running the Drive Setup Updater program

1. Start up your computer from the system software CD-ROM disc that came with your computer.

To start up from the CD, insert the CD into the computer, and turn it off by pressing the Power button on the front. (The CD remains in the drive.) Then hold down the C key on your keyboard while you press the Power key on the keyboard. Continue to hold down the C key until you see the "Welcome to Macintosh" message.

2. Insert the "Drive Setup Software" floppy disk, locate the "Drive Setup Updater" icon, and double-click it to open the program.

A dialog box appears that describes the updater.

3. Click Install.

You see a message that the installation was successful.

4. Click OK.

5. Restart your computer.

Your computer should now start up properly. If it still does not start up, follow the next suggestion.

Make sure your factory-installed hard disk is your startup disk

The startup disk is the disk that contains the System Folder. If you are using two or more hard disks with your computer, it may only start up properly if the factory-installed hard disk is the startup disk. Follow these steps to make sure your factory-installed hard disk is the startup disk.

1. Copy the System Folder from your current startup disk to the factory-installed hard disk.
2. Choose Control Panels from the Apple menu.
3. Double-click the "Startup Disk" icon.

The Startup Disk window appears.

4. Select the icon for the factory-installed hard disk.
5. Close the Startup Disk window and restart your computer.

Initializing Your Hard Disk Properly

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This section describes how to initialize your factory-installed hard disk using Drive Setup and the Drive Setup Updater. If you are having problems starting up your computer, see the previous sections, "Symptoms of the Problem" and "Correcting the Problem" before you reinitialize your hard disk.

WARNING Initializing a disk erases any information on it. Before you initialize

a disk, copy your important files to floppy disks or some other form of backup media.

1. Start up your computer from the system software CD-ROM disc that came with it.

To start up from the CD, insert the CD into the computer, and turn it off by pressing the Power button on the front. (The CD remains in the drive.) Then hold down the C key on your keyboard while you press the Power key on the keyboard. Continue to hold down the C key until you see the "Welcome to Macintosh" message.

2. Copy your important files from the disk you want to initialize to floppy disks or some other form of backup media.

3. Insert the "Drive Setup Software" floppy disk, locate the Drive Setup icon, and double-click it to open the Drive Setup program.

4. In the list of drives, click the name of the drive you want to initialize.

5. Click Initialize.

6. In the Initialize dialog box, click Custom Setup if you want to partition your drive. Otherwise, click Initialize.

For information about partitioning your drive, choose Drive Setup Guide from the Guide (?) menu.

7. Click Quit when you see a message reporting that the initialization was successful.

If a message reports that initialization failed, try again. If initialization fails a second time, take the disk to your Apple-authorized service provider for repairs.

8. Find the "Drive Setup Updater" icon on the "Drive Setup Software" floppy disk and double-click the icon to open it.

A dialog box appears that describes the updater.

9. Click Install.

You see a message that the installation was successful.

10. Click OK.

11. Install the Mac OS system software from the CD-ROM disk onto the hard disk you just initialized.

See your user's manual for detailed instructions on installing system software.

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Tech Info Library

Macintosh 630 & Apple Personal Modem: Can't Hear Messages(10/96)

Revised: 10/2/96
Security: Everyone

Macintosh 630 & Apple Personal Modem: Can't Hear Messages(10/96)

Article Created: 23 September 1996
Article Reviewed/Updated: 2 October 1996

TOPIC -----

I have a Macintosh 630 series computer with the Macintosh Processor Upgrade installed. When I am in PPC Mode, I am unable to hear voice message from my Apple Personal Modem. However, it works fine in 68K Mode. What could be causing this?

DISCUSSION -----

What is Apple Personal Modem?

- * The Apple Personal Modem you have is an international (Europe and Asia) product only. This modem does have some voice capabilities. There are two models: one is 14.4 kbps and the other is 28.8 kbps.
- * Apple Personal Modem is also the name of the software that comes with these modems.
- * There was also another modem (now discontinued) that was also named the Apple Personal Modem. It was a U.S. external modem that ran at 1200 kbps or 300 kbps.

Resolution

This issue you mentioned can resolved by installing Apple Personal Modem (APM) 2.1.6 in addition to System software 7.5.3 or later.

Article Change History:
02 Oct 1996 - Updated for clarity.

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Tech Info Library Article Number:20444



Tech Info Library

Global Village Gold II Modem: Unable to Redial (9/96)

Revised: 9/24/96
Security: Everyone

Global Village Gold II Modem: Unable to Redial (9/96)

=====

Article Created: 23 September 1996

TOPIC -----

My Global Village Teleport Gold II modem (which was included with my Macintosh Performa computer) connects reliably using PPP, included with the Apple Internet Connection Kit (AICK), but if I conclude that session by hanging up, and then attempt to redial, the connection is never established. What is causing this?

DISCUSSION -----

According to Global Village Communication (GVC), ALL settings in the Teleport control panel should be OFF (unchecked). Also, the radio buttons for error correction should be set to OFF.

The Apple Internet Dialer sets the modem initialization string to AT&F1&K3. According to Global Village, if you have difficulty using this string, change this to AT&F1 (which GVC's recommended default setting and is the same as a generic modem in the AICK Dialer).

You can change to this string either by selecting 'generic' as the Modem Type or by selecting and editing Add/Modify Modem Type in the Dialer's pop-up dialog box..

Global Village notes that it may also be necessary to append the string with &D2, a command which writes out all the buffered data and then hangs up at the end of the session. In this case, the edited string would be AT&F1&D2.

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Tech Info Library Article Number:20445



Tech Info Library

Apple MIDI Interface: Maximum Connected MIDI Devices (9/96)

Revised: 9/24/96
Security: Everyone

Apple MIDI Interface: Maximum Connected MIDI Devices (9/96)

=====

Article Created: 24 September 1996

TOPIC -----

What is the maximum number of MIDI (Musical Instrument Digital Interface) devices that can be connected to a Macintosh using the Apple MIDI interface?

DISCUSSION -----

The Apple MIDI Interface has one Output and one Input port. However, with these ports the interface can communicate with 16 different MIDI channels, which is the standard established by the MIDI Developers Association.

All 16 channels can be used by one MIDI device, such as a keyboard synthesizer, or the channels can be split up among several different MIDI devices. You could even have 16 different devices each playing one part of a song, each part being received on 1 channel. A common practice is for channel 10 to go to the device that is going to play the drum parts and then the other 15 channels are used to go to other MIDI devices. One MIDI device might play the Piano sounds while another one might have that awesome bass sound that you gotta have.

The Apple MIDI Interface only has one Input so it can only accept input from one MIDI device at a time. To receive input from two sources at the same time using the Apple MIDI Interface, you would need to add a MIDI merge box (from a third-party developer).

More complicated MIDI interfaces are available from third-party companies that offer multiple Input and Output ports. If you have a more involved setup that includes multiple input devices, such as keyboards, drum triggers, MIDI guitars, and so on, you should consider a more complicated MIDI interface. The multiple Outputs allows the musician to access 16 channels per output. If the MIDI interface has 8 outputs then data can be sent to $8 \times 16 = 128$ different MIDI channels.

This article was published in the Information Alley on 24 September 1996.

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Tech Info Library Article Number:20446



Tech Info Library

Global Village Modem: No Max Throughput Checkbox (11/96)

Revised: 11/12/96
Security: Everyone

Global Village Modem: No Max Throughput Checkbox (11/96)

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Article Created: 24 September 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

I have a Macintosh Performa computer with a Global Village modem. I do not see a "Max Throughput" check-box in the Teleport control panel. Why?

DISCUSSION -----

The "Max Throughput" checkbox is only available on computers that support Direct Memory Access (DMA). Currently, only the Macintosh Performa 6100 and 6400 series computers support this capability, and only the 6400 is bundled with a modem for which this is an option.

The feature requires that the functionality be installed in hardware; there is not a software-based patch to implement DMA. Without DMA support, Macintosh computers are limited to a 57.6 Kbaud throughput rate.

This article was published in the Information Alley on 26 September 1996.

Article Change History:
12 Nov 1996 - added alley info.

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Tech Info Library Article Number:20447



Tech Info Library

System 7.5.5 Update Installer & Energy Saver 1.x Issue (9/96)

Revised: 9/24/96
Security: Everyone

System 7.5.5 Update Installer & Energy Saver 1.x Issue (9/96)

Article Created: 24 September 1996

TOPIC -----

This article describes an issue with the System 7.5.5 Update installer and the Energy Saver 1.x control panel.

DISCUSSION -----

Apple has discovered an issue in the System 7.5.5 Update installer that affects users who are updating a system with the Energy Saver 1.x control panel installed.

Details

- If a user has Energy Saver 1.x installed in the control panels folder, the System 7.5.5 Updater installation will fail with an error message stating the Energy Saver control panel must be moved.
- If Energy Saver 1.x has been disabled with the Extensions Manager control panel (and is in the disabled control panels folder), the installer will update it to a corrupted version of Energy Saver control panel 2.0.2.
- Users will be unable to open the corrupt Energy Saver file, and an error message is displayed stating that the file contains the Energy Saver Preferences and should be in the Preferences Folder.

Workaround

- 1) The work around is to remove the Energy Saver 1.x control panel from the System Folder, such as placing the control panel on the desk top, before installing the System 7.5.5 Updater.
- 2) When this is done, System 7.5.5 Update will not install Energy Saver Control Panel 2.0.2.

3) Energy Saver 1.x should then be placed back into the Control Panels folder after the update is done.

NOTE: Important information about this workaround.

- Energy Saver 1.x is only needed for those computers that have energy saving monitors but not the ability to put the whole system to sleep. This includes the NuBus-based Power Macintosh, some Performa PowerPC-based, and Macintosh Quadra computers.
- Energy Saver 2.0.x only works on desktop systems that support putting the whole system to sleep and not just the monitor, such as the PCI Power Macintosh computers.

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Tech Info Library Article Number:20448



Tech Info Library

Japanese Language Kit: Document Error with WordPerfect (9/96)

Revised: 9/24/96
Security: Everyone

Japanese Language Kit: Document Error with WordPerfect (9/96)

=====

Article Created: 24 September 1996

TOPIC -----

I have System 7.5 on my Macintosh. I am using WordPerfect 3.1 and Japanese Language Kit (JLK) 1.x. Whenever I try to paste text from JLK into a WordPerfect document - I get a 'document error.'

DISCUSSION -----

Corel has a WordPerfect 3.1 Patch to correct this issue. From the WordPerfect Patch Read Me File:

"This updater fixes some problems with WordPerfect and the Japanese Language Kit, and adds some enhancements. Specifically:

- Problems with pasting formatted text from a third party application into WordPerfect
- Speed enhancements"

You can obtain the patch on the Internet at:

ftp://ftp.corel.com/pub/wordperfect/wordperfect/wpmac/updates/WordPerfect_3.1_Patch.hqx

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Tech Info Library Article Number:20450



Tech Info Library

Chinese Language Kit: Must Remove Launcher to Install (10/96)

Revised: 10/7/96
Security: Everyone

Chinese Language Kit: Must Remove Launcher to Install (10/96)

Article Created: 25 September 1996
Article Reviewed/Updated: 2 October 1996

TOPIC -----

I am attempting to install the Chinese Language Kit onto my computer, but an error message occurs stating that it "cannot install onto this version of _Performa_ software." However, I do not have a Macintosh Performa computer, so I do not understand why this error is occurring.

DISCUSSION -----

The error message is confusing, but the solution is the same whether or not you have a Macintosh Performa computer. To Install the Chinese Language Kit 1.0 under System 7.5.x, you must remove the Launcher from the Control Panels folder. This will then allow the installation to take place. However, you will also need to install the Chinese Language Kit Update 1.1.1, available online, to be compatible with System 7.5.x.

This article appeared in the 7 October 1996 issue of the Information Alley.

Article Change History:
02 Oct 1996 - Reworded for clarity.

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Tech Info Library Article Number:20454



Tech Info Library

System 7.5.5 Update & Express Modem 3.0 Issue (9/96)

Revised: 9/25/96
Security: Everyone

System 7.5.5 Update & Express Modem 3.0 Issue (9/96)

=====

Article Created: 25 September 1996

TOPIC -----

This article describes an issue when using Express Modem 3.0 (delivered by Apple Telecom 3.0) software with the System 7.5.5 Update.

DISCUSSION -----

If you install Apple Telecom 3.0 or Express Modem 3.0 after installing the System 7.5.5 Update you will not be able to switch on your Express Modem. To fix this incompatibility, run the System 7.5.5 Update again. The System 7.5.5 Update updates your Express Modem 3.0 to Express Modem 3.0.1.

NOTE: Apple Telecom 3.0 shipped on some new Macintosh systems and is not presently available from Apple for download or purchase.

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Tech Info Library Article Number:20455



Tech Info Library

Education Software Bundles: Included CDs Run Slowly (9/96)

Revised: 9/25/96
Security: Everyone

Education Software Bundles: Included CDs Run Slowly (9/96)

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Article Created: 25 September 1996

TOPIC -----

What can cause some of the CD-ROM discs included with the Education Software Bundles to run slowly?

DISCUSSION -----

If Virex is installed on the computer (from mixing and matching software bundles), turn off the "Scan When File Opened" preference in the Virex control panel.

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20456



Tech Info Library

Education Software Bundles: Spelling Coach Pro Error (9/96)

Revised: 9/25/96
Security: Everyone

Education Software Bundles: Spelling Coach Pro Error (9/96)

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Article Created: 25 September 1996

TOPIC -----

I have the Teacher Solution Education Bundle installed on my computer, and when I attempt to use Spelling Coach Pro with ClarisWork 4.0, an error occurs stating that Coach Pro is having a problem converting the clipboard in this application. How can I stop this error from occurring?

DISCUSSION -----

You need to update the version of Spelling Coach Pro to work properly with ClarisWorks 4.0. Contact Deneba Software for upgrade information.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20457



Tech Info Library

Education Software Bundles: Adobe Type Manager Error (9/96)

Revised: 9/25/96
Security: Everyone

Education Software Bundles: Adobe Type Manager Error (9/96)

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Article Created: 25 September 1996

TOPIC -----

I have both the Power Macintosh 5260 Bonus and the Multimedia Learning Tools Education Bundles installed on the computers, and I am getting Adobe Type Manager error messages when the computers are started up. What could be causing this?

DISCUSSION -----

This error is caused by a version conflict between two versions of the ~ATMcontrol panel installed by each bundle. Use the latest version of Adobe Acrobat, which is version 2.1 and remove the older version of the control panel.

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20458



Tech Info Library

ANAT: Unable to Initialize At Ease Server (9/96)

Revised: 9/25/96
Security: Everyone

ANAT: Unable to Initialize At Ease Server (9/96)

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Article Created: 25 September 1996

TOPIC -----

I have Apple Network Administrator Toolkit (ANAT), and I just installed At Ease 4.0 server software on my AppleShare server. When I restart the server, I get a message that states "Unable to Initialize At Ease Server."

DISCUSSION -----

You may receive this message if you did not setup the AppleShare server prior to installing At Ease server. You will need to go into AppleShare Admin and setup the Admin Key. Restart the server and At Ease server will load correctly.

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Tech Info Library Article Number:20459



Tech Info Library

Macintosh Performa 6360/160: Description (11/96)

Revised: 12/20/96
Security: Everyone

Macintosh Performa 6360/160: Description (11/96)

Article Created: 25 September 1996
Article Reviewed/Updated: 11 November 1996

TOPIC -----

This article contains the description for the Macintosh Performa 6360/160 computer.

DISCUSSION -----

With its powerful RISC processor and industry-standard PCI expansion slot, the Apple Macintosh Performa 6360 system combines performance for today with expandability for tomorrow.

As you'd expect from Macintosh systems, the Performa 6360 includes a host of features that bring multimedia to life. A RISC-based PowerPC 603e processor running at 160 megahertz delivers the performance you need to run advanced multimedia applications, while the built-in 8x-speed CD-ROM drive provides smooth video and audio.

A 64-bit video architecture and 1 megabyte of video memory display high-quality video and realistic graphics on monitors up to 17 inches (diagonal measurement) in size.

The system also features 16-bit CD-quality stereo input and output with SRS surround sound--a combination that will add a whole new audio dimension to your multimedia experience.

With 16 megabytes of RAM (expandable to 136 megabytes), the Macintosh Performa 6360 has the memory to run powerful multimedia applications. And its 1.2-gigabyte hard disk drive gives you the storage you'll need for a long time to come.

If you need to expand your system, the built-in PCI expansion slot is perfect for graphics acceleration, high-speed networking, or other high-performance capabilities.

For connecting to the Internet, the Performa 6360 offers easy access either through America Online (in the United States) or directly via the Apple Internet Connection Kit, which features Netscape Navigator software. Both America Online and Internet Connection Kit software are installed and ready to use on your new Performa system. And with the built-in 28.8-kilobit-per-second data/voice/fax modem (fax speeds up to 14.4 Kbit/s; data speeds up to 28.8 Kbit/s), exchanging e-mail and browsing the World Wide Web can be fast.

Also preinstalled on or packaged with the computer are more than a dozen other home, education, and home-business programs, plus a collection of multimedia reference CDs.

If you need compatibility with MS-DOS or Windows software-based computers, a Performa 6360 system gives you several choices. You can share floppy disks and files by using Macintosh PC Exchange and Macintosh Easy Open software (both included). For the ultimate in compatibility, Apple's optional PC Compatibility Card puts a 100-megahertz 586-class processor right in your computer.

The Macintosh Performa 6360 computer: The power and versatility of RISC, PCI, and the Mac OS in one affordable, easy-to-use system.

Features

=====

High performance

- * 160-MHz PowerPC 603e processor
- * Built-in 28.8-Kbit/s data/voice/fax modem*
- * Built-in 8x-speed, tray-loading CD-ROM drive
- * Optional 256K level 2 cache

Rich multimedia

- * Support for up to 32,768 colors (16-bit color up to 800- by 600-pixel resolution and 8-bit color up to 1,024- by 768-pixel resolution)
- * 16-bit CD-quality stereo sound with SRS surround sound

Expandability and flexibility

- * Industry-standard 6.88-inch PCI expansion slot
- * Support for up to six external SCSI devices, such as hard disk drives and scanners
- * Optional High Performance Module, Apple Video System, Apple TV/FM Radio System, Avid Cinema, and PC Compatibility Card

Ease of use

- * Macintosh System 7.5 software, including Apple Guide software for step-by-step help with basic system operation
- * Apple Internet Connection Kit featuring Netscape Navigator software for quick, easy access to global resources, including the World Wide Web
- * Plug-and-play installation of expansion cards, storage devices, scanners, printers, digital cameras, and other accessories

Preinstalled software

- * Macintosh System 7.5
- * ClarisWorks
- * Quicken Special Edition
- * America Online
- * Apple Internet Connection Kit
- * SurfWatch
- * Web Workshop
- * MegaPhone for Performa
- * Adobe PhotoDeluxe
- * Now TouchBase and Datebook Pro
- * MacLinkPlus/Easy Open Translators
- * At Ease
- * The American Heritage Dictionary
- * Click Art Performa Collection
- * MacGallery Clip Art Treasure Pak
- * DOGZ Adoption Kit

CD-ROM titles

- * The Grolier Multimedia Encyclopedia
- * Our Times
- * Mayo Clinic Family Health
- * Amazing Writing Machine
- * The American Heritage Children's Dictionary
- * Blockbuster Guide to Movies & Videos
- * Thinkin' Things Collection 2
- * Club KidSoft CD
- * 3D Atlas
- * Descent

Ordering Information

=====

Macintosh Performa 6360

Order No. M5319LL/A

Computer with 160-MHz PowerPC 603e processor, 28.8-Kbit/s internal Geoport modem, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, and 1.4MB floppy disk drive. Mouse, keyboard, and cables also included.

Optional Enhancements

* High Performance Module
(256K level 2 cache)
Order No. M4505LL/A

* Apple Video System
Order No. M2894LL/D

* Apple TV/FM Radio System
Order No. M4586LL/A

(Requires the Apple Video System)

* Avid Cinema

Order No. M4561LL/A

(Requires the Apple Video System)

* PC Compatibility Card

(with 586-class processor)

Order No. M4091LL/C

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

11 Nov 1996 - Clarified modem type.

21 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20460



Tech Info Library

Macintosh Performa 6360/160: Specifications (11/96)

Revised: 11/12/96
Security: Everyone

Macintosh Performa 6360/160: Specifications (11/96)

=====

Article Created: 25 September 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 6360/160 computer.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 160 MHz
- * Integrated floating-point unit
- * 40-MHz, 64-bit bus
- * Optional High Performance Module (256K level 2 cache; see ordering information)
- * 32K internal cache

Memory

=====

- * Two DIMM expansion slots
- * Comes with 16 MB of RAM (8 MB on logic board and 8 MB in one DIMM socket)
- * Can be expanded to 136 MB
- * Uses 64-bit-wide, 168-pin, noncomposite, 70-nanosecond or faster DIMMs (1K or 2K refresh)

Disk drives

=====

- * Internal 1.2GB IDE hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 8x-speed CD-ROM drive

Modem

=====

- * 28.8-Kbit/s internal Geoport data/voice/fax modem (fax speeds up to 14.4 Kbit/s; data speeds up to 28.8 Kbit/s)
- * Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- * Stereo 16-bit sound
- * SRS surround sound enhancement
- * Sound-input port (for an Apple PlainTalk microphone)
- * Sound-output port
- * Front headphone jack and volume control

Display support

=====

- * 1 MB of video RAM
- * 16-bit color for display of up to 32,768 colors on monitors using 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors on monitors using 832- by 624-pixel or 1,024- by 768-pixel resolution

Interfaces

=====

- * PCI expansion slot (requires PCI card that comes with a Macintosh driver and is PCI 2.0 compliant; a NuBus card cannot be used in this slot)
- * PCI-based communications (Comm II) slot for a 28.8-Kbit/s modem (used by the built-in data/voice/fax modem)
- * Two serial ports (RS-232/RS-422) for an AppleTalk network connection, other network connections, communications equipment (including GeoPort compatible devices), or a printer (one port used by the built-in modem)
- * SCSI interface port for connecting as many as six external SCSI devices, such as disk drives, CD-ROM drives, and scanners (multiple devices can be connected to each other from one port)
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * Video-output port
- * Video-input slot for optional Apple Video System (supports NTSC, PAL, and SECAM video formats)
- * Expansion bay for optional Apple TV/FM Radio System
- * Infrared receiver for remote control (provided with Apple TV/FM Radio System and certain other accessories)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

Electrical requirements and compliance

=====

- * Line voltage: 90 to 270 V AC, RMS, single phase

- * Frequency: 47 to 63 Hz
- * Power: 150 W maximum (continuous)
- * Includes low-power sleep mode
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 4.3 in. (11.0 cm)
- * Width: 12.6 in. (32.0 cm)
- * Depth: 16.5 in. (42.0 cm)
- * Weight: 17 lb. (7.7 kg)

Operating environment

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 12 Nov 1996 - Clarified number of DIMM slots.
- 11 Nov 1996 - Clarified modem type.
- 21 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20461



Tech Info Library

Power Macintosh 6400/180 & 6400/200: Description (11/96)

Revised: 11/1/96
Security: Everyone

Power Macintosh 6400/180 & 6400/200: Description (11/96)

=====

Article Created: 25 September 1996
Article Reviewed/Updated: 1 November 1996

TOPIC -----

This article contains the description for the Power Macintosh 6400/180 and 6400/200 computers.

DISCUSSION -----

The Apple Power Macintosh 6400/180 and 6400/200 are among the most powerful, expandable, easy-to-use multimedia computers you can get. Continuing Apple's multimedia leadership, their robust features make them ideal systems on which to learn, create, and communicate.

A state-of-the-art RISC-based PowerPC 603e processor running at 200 megahertz or 180 megahertz (depending on the system configuration) delivers the performance you need to run an abundance of powerful multimedia applications.

As you'd expect from Macintosh systems, the Power Macintosh 6400/180 and 6400/200 computers include a host of features that will bring your multimedia applications to life. A built-in 8x-speed CD-ROM drive delivers smooth video and audio. A 64-bit video architecture and 1 mega-byte of video memory provide high-quality video and realistic graphics on monitors up to 17 inches (diagonal measurement) in size. These systems also feature 16-bit CD-quality stereo input and output, SRS surround sound, and a subwoofer speaker--a combination that will add a whole new audio dimension to your multimedia experience.

With 16 megabytes of RAM (expandable to 136 megabytes), the Power Macintosh 6400/180 and 6400/200 computers have the memory to run powerful multimedia applications. And the 1.6-gigabyte or 2.4-gigabyte hard drive gives you all the storage you'll need for a long time to come.

For connecting to the Internet, the Power Macintosh 6400/180 and 6400/200 offer easy access through the Apple Internet Connection Kit, which features Netscape Navigator software. And with built-in Ethernet, exchanging e-mail and browsing

the World Wide Web through your network are a snap.

If you need compatibility with MS-DOS or Windows software-based computers, a Power Macintosh 6400/180 or 6400/200 gives you several choices. You can share floppy disks and files by using Macintosh PC Exchange and Macintosh Easy Open software (both included). SoftWindows from Insignia Solutions (available separately) lets you run Windows applications right on your Power Macintosh system. For the ultimate in compatibility, Apple's optional PC Compatibility Card puts a 100-megahertz 586-class processor right in your computer.

The Power Macintosh 6400/180 and 6400/200: High-performance multimedia systems for learning, creating, and communicating.

Features

=====

High performance

- * 180-MHz or 200-MHz PowerPC 603e processor
- * 256K level 2 cache (standard with 200-MHz configuration only)
- * Built-in 8x-speed, tray-loading CD-ROM drive

Rich multimedia

- * Support for up to 32,768 colors and monitors up to 17 inches (diagonal measurement)
- * 16-bit CD-quality stereo sound with SRS surround sound and integrated subwoofer

Expandability and flexibility

- * Two industry-standard PCI expansion slots for 6.88-inch cards
- * Support for up to six external SCSI devices, such as hard disk drives and scanners
- * SCSI expansion bay for additional internal storage device
- * Optional Apple TV/FM Radio System, Avid Cinema, and PC Compatibility Card

Ease of use

- * Apple System 7.5 software, including Apple Guide software for step-by-step help with basic system operation
- * Apple Internet Connection Kit software for quick, easy access to global resources, including the World Wide Web
- * Plug-and-play installation of expansion cards, storage devices, scanners, printers, digital cameras, and other accessories

Ordering Information

=====

Power Macintosh 6400/180

Order No. M5426LL/A

Computer with 180-MHz PowerPC 603e processor, built-in Ethernet, 1.6 GB hard disk drive, 8x-speed CD-ROM drive, and 1.4 MB floppy disk drive. Mouse, keyboard, and cables also included.

Power Macintosh 6400/200

Order No. M5427LL/A

Computer with 200-MHz PowerPC 603e processor, 256K level 2 cache, built-in Ethernet, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, and 1.4 MB floppy disk drive. Mouse, keyboard, and cables also included.

Optional Enhancements

* High Performance Module

(256K level 2 cache)

Order No. M4505LL/A

(Included with the 200-MHz model of Power Macintosh)

* Apple Video System

Order No. M2894LL/D

* Apple TV/FM Radio System

Order No. M4586LL/A

(Requires the Apple Video System)

* PC Compatibility Card

(with 586-class processor)

Order No. M4091LL/C

* Avid Cinema

Order No. M4561LL/A

(Requires the Apple Video System)

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

01 Nov 1996 - Made minor correction.

31 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20462



Tech Info Library

Power Macintosh 6400/180 & 6400/200: Specifications (11/96)

Revised: 11/15/96
Security: Everyone

Power Macintosh 6400/180 & 6400/200: Specifications (11/96)

=====

Article Created: 25 September 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 6400/180 and 6400/200 computers.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 180 or 200 MHz
- * Integrated floating-point unit
- * 40-MHz, 64-bit bus
- * 256K level 2 cache (standard with 200-MHz configuration; optional with 180-MHz configuration)
- * 32K internal cache

Memory

=====

- * Two DIMM expansion slots
- * Comes with 16 MB of RAM (8 MB on logic board and 8 MB in one DIMM socket)
- * Can be expanded to 136 MB
- * Uses 64-bit-wide, 168-pin, noncomposite, 70-nanosecond or faster DIMMs (1K or 2K refresh)

Disk drives

=====

- * Internal 1.6GB or 2.4GB IDE hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal AppleCD 8x drive

Sound

=====

- * Stereo 16-bit sound
- * SRS surround sound enhancement
- * Subwoofer speaker
- * Sound-input port (for an Apple PlainTalk microphone, other microphone, or standard mini-plug audio cable)
- * Sound-output port
- * Front headphone jack and volume control

Interfaces

=====

- * 10BASE-T Ethernet Card included in Communications Slot
- * SCSI interface port for connecting as many as six external SCSI devices, such as disk drives, CD-ROM drives, and scanners (multiple devices can be connected to each other from one port)
- * Pre-cabled SCSI expansion bay for additional 5.25-inch internal SCSI device
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * Two serial ports (RS-232/RS-422) for an AppleTalk network connection, other network connections, communications equipment (including GeoPort compatible devices), or a printer
- * Video-output port
- * Two PCI expansion slots (require PCI cards that come with a Macintosh driver and are PCI 2.0 compliant; NuBus cards cannot be used in these slots)
- * Video input slot for optional Apple Video System (supports NTSC, PAL, and SECAM video formats)
- * Expansion bay for optional Apple TV/FM Radio System
- * Infrared receiver for remote control (provided with Apple TV/FM Radio System and certain other accessories)

Display support

=====

- * 1 MB of video RAM
- * 16-bit color for display of up to 32,768 colors on monitors using 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors on monitors using 832- by 624-pixel or 1,024- by 768-pixel resolution

Electrical requirements and compliance

=====

- * Line voltage: 100 to 125/200 to 240 V AC, RMS, single phase
- * Frequency: 47 to 63 Hz
- * Power: 220 W maximum (continuous)
- * Energy-saving sleep mode

Size and weight

=====

- * Height: 16.0 in. (40.6 cm)
- * Width: 7.8 in. (19.8 cm)
- * Depth: 16.9 in. (42.8 cm)
- * Weight: 44.5 lb. (20.18 kg)

Operating environment

=====

- * Operating temperature: 50 to 97 degrees F (10 to 35 degrees C)
- * Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

Article Change History:

- 11 Nov 1996 - Removed reference to built-in Ethernet.
- 31 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20464



Tech Info Library

Power Macintosh 5400/180: Specifications (11/96)

Revised: 11/15/96
Security: Everyone

Power Macintosh 5400/180: Specifications (11/96)

Article Created: 25 September 1996
Article Reviewed/Updated: 15 November 1996

TOPIC -----

This article contains the technical specifications for the Power Macintosh 5400/180 computer.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 180 MHz
- * 32K internal cache
- * Integrated floating-point unit
- * 64-bit memory bus
- * Optional High Performance Module (256K level 2 cache)

Memory

=====

- * Two DIMM expansion slots
- * Comes with 16 MB of RAM (uses one DIMM socket)
- * Can be expanded to 136 MB using two 64 MB DIMMs
- * Uses 64-bit-wide, 168-pin, 70-nanosecond or faster, fast-paged-mode DIMMs (1K or 2K refresh rate)

Disk drives

=====

- * Internal 1.6GB hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks

Display

=====

Built-in display

- * 15-in. RGB color display (12.8-in. diagonal viewable image size)
- * 0.28-mm dot pitch
- * Noninterlaced, flat, square cathode-ray tube (CRT)
- * User-adjustable resolutions from 640 by 480 pixels to 832 by 624 pixels
- * Resolution can be changed without restarting the computer
- * Refresh rate up to 75 Hz
- * Built-in base tilts from -5° to +15°, swivels a full 360°
- * Meets SWEDAC MPR2 international guidelines for magnetic-field emissions

Display support

- * 16-bit color for display of up to 32,768 colors at 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors at 832- by 624-pixel resolution
- * 1 MB video frame buffer (independent of system RAM)

Sound

=====

- * Stereo 16-bit sound
- * Apple sound enhancements, including SRS 3D surround sound
- * Built-in stereo speakers
- * Built-in microphone
- * Sound-output port
- * Sound-input port
- * Front headphone jack and volume control

Expansion interfaces

=====

- * 10BASE-T Ethernet connector
- * PCI expansion slot for industry-standard 6.88-in., 15-watt expansion cards
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * RS-232/RS-422 serial port for an AppleTalk network connection, other networking connections, communications equipment (including GeoPort-compatible devices), or a printer
- * SCSI interface port for as many as six external SCSI devices, such as disk drives and/or CD-ROM drives
- * Communications slot (used by the built-in Ethernet connector)
- * TV/FM radio expansion bay
- * Video-output port for connection to an external monitor for video mirroring (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- * Video-input connector (Apple Video System) for receiving video input from a VCR, video camera, or other video equipment; supports both composite and S-video input

Note: The Apple Video System is only included with some configurations of the Power Macintosh 5400/180 computer.

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

Electrical requirements and compliance

=====

- * Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- * Frequency: 50 to 60 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 17.5 in. (44.5 cm)
- * Width: 15.1 in. (38.3 cm)
- * Depth: 16 in. (40.6 cm)
- * Weight: 47 lb. (21 kg)

Operating environment

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 11 Nov 1996 - Clarified DIMM expansion slots.
- 31 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20465



Tech Info Library

Power Macintosh 5400/180: Description (10/96)

Revised: 10/31/96
Security: Everyone

Power Macintosh 5400/180: Description (10/96)

=====

Article Created: 25 September 1996
Article Reviewed/Updated: 31 October 1996

TOPIC -----

This article contains the description for the Power Macintosh 5400/180 computer.

DISCUSSION -----

With its state-of-the-art RISC-based processor and advanced multimedia capability, the Apple Power Macintosh 5400/180 computer is ready to help you learn, create, and communicate.

The computer's 180-megahertz PowerPC 603e processor and 16 megabytes of RAM let you easily run an abundance of Macintosh applications--and there's plenty of room to store them on the 1.6-gigabyte internal hard drive.

The Power Macintosh 5400/180 includes multimedia features that are expensive add-ons with other computers, including a CD-ROM drive for multimedia applications and a 15-inch monitor (12.8-inch diagonal viewable image size) to display vibrant colors.

Using the Apple Video System (which is included with some configurations), you can view and record video from VCRs and video cameras. There's also a built-in microphone to directly record your own sounds.

Multimedia audio is made lifelike through the built-in stereo speakers enhanced by SRS 3D surround sound and the Macintosh 16-bit stereo sound system.

Built-in Ethernet connectivity lets you access the Internet--including the World Wide Web--through your local Ethernet network.

Compatibility with MS-DOS or Windows software-based computers is provided in several ways. You can share floppy disks and files by using Macintosh PC Exchange and Macintosh Easy Open software (both included). For the ultimate in

compatibility, Apple's optional PC Compatibility Card puts a 100-megahertz 586-class processor right in your computer.

If you need more capabilities in the future, expansion is easy through the industry-standard Peripheral Component Interconnect (PCI) slot and built-in SCSI support.

The Power Macintosh 5400/180: Performance and convenience for learning, creating, and communicating.

Features

=====

High performance

- * PowerPC 603e processor running at 180 MHz
- * 16 MB of RAM
- * 1.6 GB hard disk drive

Multimedia

- * Multiple-scan 15-inch color display (12.8-inch diagonal viewable image size)
- * Built-in 8x-speed, tray-loading CD-ROM drive
- * CD-quality digital sound with SRS 3D surround sound
- * Front-panel volume control and headphone/speaker jack
- * Apple Video System for video input (included with some configurations)

Connectivity and expandability

- * Ethernet network connector
- * PCI expansion slot
- * SCSI interface
- * Serial port

Features Built Into Every Power Macintosh

=====

Fast, easy setup

- * Simple to set up and learn; your system is ready to go the first time you turn it on

System 7.5 software

- * Apple Guide software for step-by-step help with basic system operation
- * QuickTime multimedia software
- * Macintosh PC Exchange software

Communications

- * GeoPort- and LocalTalk-compatible serial ports
- * Built-in AppleTalk networking
- * File sharing without a dedicated server

Ordering Information

=====

Power Macintosh 5400/180

Order No. M5162LL/A

Computer with built-in multiple-scan 15-inch display (12.8-inch diagonal viewable image size), 1.6GB hard disk, 8x-speed CD-ROM drive, floppy disk drive, and Apple Video System. Mouse, keyboard, and cables also included.

Note: This configuration is available to K-12 educational institutions only.

Power Macintosh 5400/180

Order No. M5161LL/A

Computer with built-in multiple-scan 15-inch display (12.8-inch diagonal viewable image size), 1.6GB hard disk, 8x-speed CD-ROM drive, and floppy disk drive. Mouse, keyboard, and cables also included.

Note: This configuration is available through the Educator Advantage program.

Optional Enhancements

* High Performance Module
(256K level 2 cache)

Order No. M4505LL/A

* Apple Video System

Order No. M2894LL/D

* Apple TV/FM Radio System

Order No. M4586LL/A

(Requires the Apple Video System, which is included with M5162LL/A)

* PC Compatibility Card
(with 586-class processor)

Order No. M4091LL/B

* Avid Cinema

Order No. M4561LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

31 Oct 1996 - Changed distribution status.

09 Oct 1996 - Corrected PC Compatibility Card order number.

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Tech Info Library Article Number:20466



Tech Info Library

AppleCD Drives: Some Corel Titles Contain Old Drivers (9/96)

Revised: 9/27/96
Security: Everyone

AppleCD Drives: Some Corel Titles Contain Old Drivers (9/96)

=====

Article Created: 27 September 1996

TOPIC -----

I have some Corel software that is on a CD Plus format CD-ROM disc, and it will not read consistently. I have also tried two other CD+ CD-ROM discs, and they have not worked consistently either. I have talked to the technical support staff at Corel, and they claim this is a known issue with the Matsushita quad-speed CD drive that is in the newer Power Macintosh computers. Is this really the problem?

DISCUSSION -----

The Corel Drivers for Enhanced CD that come with the Bob Dylan's Greatest Hits Volume 3 are intended for non-Apple CD-ROM drives. The Corel CD contains a multimedia update, which is the Apple Multimedia Tuner used prior to QuickTime 2.1 to fix some older problems in QuickTime 2.0, and is unrelated to CD Plus discs. This should not be installed. The Corel CD also contains Apple's CD-ROM Setup 5.1.1. This driver should also not be used, and instead you should get CD-ROM Setup 5.1.2 from Apple SW Updates.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20467



Tech Info Library

PowerBook 1400 Series: Description (4/97)

Revised: 4/9/97
Security: Everyone

PowerBook 1400 Series: Description (4/97)

Article Created: 27 September 1996
Article Reviewed/Updated: 09 Apr 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 1400 family (1400c/117, 1400cs/117, and 1400c/133) computers.

DISCUSSION -----

Overview
=====

The Apple Macintosh PowerBook 1400cs/117 and 1400c/117 take Apple's traditional strengths - excellence in design and unparalleled ease of use - to a new level by incorporating the latest advances in portable computing technology. These powerful, innovative notebook computers are designed to suit your lifestyle and reflect your personality. They go beyond the expected, providing a variety of expansion capabilities and featuring a stylish new design.

Based on the PowerPC 603e processor (117- or 133-megahertz), the Apple Macintosh PowerBook 1400 computers can handle everything from complex spreadsheets to text- and graphics-intensive reports. They feature a removable, modular 6x-speed CD-ROM drive (standard on most configurations), giving you access to the wealth of resources available on CD, including the latest business productivity soft-ware and multimedia games. And their 11.3-inch color SVGA displays (dual-scan for the 1400cs/117; active-matrix for the 1400c/117, and 1400c/133) provide outstanding quality and bright, vivid colors, as well as ample room for viewing your work - or play.

Designed to be "portables with personality," these computers reflect the style and individuality that characterize users of PowerBook systems. They feature a clear exterior panel called a BookCover, which lets you personalize the appearance of your PowerBook with colorful, interchangeable inserts. They also sport a sleek new contoured design, including a flip-up keyboard that makes it easy to access the system's interior for upgrades or service. And all the

PowerBook 1400 systems support a variety of expansion options. For example, there's a memory expansion slot that allows you to "piggy-back" memory cards to protect your investment in additional RAM, as well as an internal expansion slot that you can use to add capabilities such as Ethernet networking or video out.

To get you started working right away, the PowerBook PowerBook 1400cs/117, 1400c/117, and 1400c/133 come bundled with ClarisWorks and Claris Organizer, as well as remote access and cross-platform compatibility software. They even include the Apple Internet Connection Kit.

So if you want an innovative design, unparalleled ease of use, and unmatched opportunities for customization, the Macintosh PowerBook 1400 family is bound to be the right choice for you.

Features

=====

Powerful technology

- * Uses the PowerPC 603e processor
- * Includes a 6x-speed CD-ROM drive (standard on most configurations)
- * Provides a large, 11.3-in. (diagonal) color SVGA display (dual-scan or active-matrix) supporting thousands of colors
- * Features an advanced Apple trackpad with tap, double-tap, and drag functionality
- * Comes with built-in infrared technology for easy, wireless file sharing with similarly equipped systems

Innovative design

- * Features a sleek, contoured shape, and a variety of BookCover inserts that let you personalize the appearance of your PowerBook computer
- * Lets you flip the keyboard forward for easy upgradability and service

Upgradability and expandability

- * Offers a memory expansion slot that allows "piggy-backing" of memory cards, so you can install one card initially and then install another later, thus protecting your investment
- * Includes PC Card slots for two Type II PC Cards or one Type III PC Card
- * Features an expansion bay for a floppy disk drive, CD-ROM drive, battery storage, or third-party solutions such as a second hard disk drive, magneto-optical drive, or Zip drive
- * Provides an internal expansion slot for built-in Ethernet or video-out cards

A complete solution

- * Includes everything you need to be productive right away, right out of the box
- * Comes with productivity software, including ClarisWorks and Claris Organizer
- * Comes with Apple Internet Connection Kit software, including Netscape Navigator, Claris EMailer Lite, Fetch, NCSA Telnet, and NewsWatcher

..TIL20468-PowerBook_1400_Series-Description_4-97.pdf

- * Includes software for remote access and cross-platform compatibility

Ordering Information

=====

Macintosh PowerBook 1400cs/117

Order No. M5287

- * PowerBook 1400cs/117 computer with 12 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 750 MB hard disk drive
- * 11.3-inch dual-scan display
- * NiMH battery and AC adapter
- * Mac OS system software
- * Complete setup, learning, and reference documentation
- * ClarisWorks and Claris Organizer software and documentation
- * Apple Internet Connection Kit software
- * Apple Remote Access and cross-platform compatibility software
- * Limited warranty

Macintosh PowerBook 1400cs/117

Order No. M5292

- * Same as Order No. M5287 but with 16 MB of RAM and a 6x-speed CD-ROM drive.

Macintosh PowerBook 1400c/117

Order No. M4856

- * PowerBook 1400c/117 computer with 16 MB of RAM, built-in 1.4 MB Apple SuperDrive, internal 1 GB hard disk drive, and 6x-speed CD-ROM drive (battery, adapter, system software, additional software, documentation, and warranty same as Order No. M5287)
- * 11.3-active-matrix display

Macintosh PowerBook 1400c/133

Order No. M5576

- * Same as Order No. M4586 but with 133-MHz PowerPC 603e with 128K level 2 cache

Macintosh PowerBook 6x-Speed CD-ROM Module

Order No. M4508

Macintosh PowerBook 8-bit Color Video-out Upgrade Kit

Order No. M4509

- * This upgrade has 512K VRAM and ships with the external video adapter cable.

Macintosh PowerBook AC Adapter

Order No. M4895

Macintosh PowerBook Rechargeable Battery

Order No. M4507

Macintosh PowerBook 8 MB Memory Expansion Card

Order No. M4506

Article Change History:

09 Apr 1997 - Revised UPdate info.

18 Oct 1996 - Changed article status.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:20468



Tech Info Library

PowerBook 1400 Series: Technical Specifications (4/97)

Revised: 4/9/97
Security: Everyone

PowerBook 1400 Series: Technical Specifications (4/97)

=====

Article Created: 27 September 1996
Article Reviewed/Updated: 09 April 97

TOPIC -----

This article contains a list of technical specifications for the Macintosh PowerBook 1400 family (1400c/117, 1400cs/117, and 1400c/133) computers.

DISCUSSION -----

Microprocessor

-
- * 117-MHz PowerPC 603e
or 133-MHz PowerPC 603e with 128K level 2 cache Memory

Memory

-
- * 12 MB or 16 MB of RAM, expandable to 64 MB (expansion via Customer RAM slot)
(12 MB = 8 MB soldered on logic board, 4 MB in Apple Factory RAM slot)
(16 MB = 8 MB soldered on logic board, 8 MB in Apple Factory RAM slot)

Storage

-
- * Built-in 1.4 MB Apple SuperDrive floppy disk drive uses high-density floppy disks and reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
 - * Internal 750 MB or 1 GB hard disk drive
 - * Sleep-swappable 6x-speed CD-ROM drive module (CD-ROM also available for separate purchase for M5287 model)

Display

-
- * 11.3-in. (diagonal) dual-scan (1400cs/117)
or active-matrix (1400c/117 and 1400c/133) color SVGA display,
thousands of colors
 - * Resolution: 800 by 600 pixels

Expansion capabilities

- * Memory expansion slot that allows "piggy-backing" of up to two memory cards
- * Expansion bay for Apple and third-party solutions such as an additional hard disk drive, magneto-optical drive, or Zip drive
- * Internal expansion slot for video-out or Ethernet cards

PC Card slots (PCMCIA)

- * Includes two PC Card slots that can accommodate two Type II PC Cards or one Type III PC Card
- * Support for industry-standard cards such as Ethernet networking, a wired or wireless modem, storage, or other capabilities

Battery

- * 30 watt-hour nickel-metal-hydride (NiMH)
- * Average life: 2 to 4 hours, depending on usage and configuration

Ports

- * Apple Desktop Bus (ADB) port
- * Serial (RS-422) port
- * SCSI port for connecting as many as six external devices
- * Power adapter port
- * Stereo sound-input port
- * Stereo sound-output port

Networking

- * Built-in LocalTalk port
- * Built-in infrared technology supports AppleTalk protocols

Built-in stereo sound

- * 16-bit, CD-quality stereo sound capable of driving headphones or external speakers
- * Built-in speaker and integrated microphone
- * Digital-to-analog conversion sampled at 44.1, 22.05, or 11.025 kHz
- * 16-bit audio line-in for recording

Security

- * Security slot for locking (requires third-party cable)
- * Password security software

Keyboard

- * Built-in full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys and an integrated palm rest

Apple trackpad

* Solid-state Apple trackpad provides precise cursor control in response to the movement of the user's fingertip over its surface; sensing of movement and acceleration can be easily adjusted through a control panel; supports tap, double-tap, and drag capabilities

Disability access

* System software includes Easy Access and ability to substitute visual cue for beep. These built-in solutions and third-party options provide alternative input and output solutions for people with disabilities.

Electrical requirements

- * Line voltage: 100 to 220 volts AC
- * Frequency: 50 to 60 Hz

Environmental requirements

- * Operating temperature: 41 degrees to 95 degrees F
(5 degrees to 35 degrees C)
- * Storage temperature: 14 degrees to 140 degrees F
(-10 degrees to 60 degrees C)
- * Relative humidity: 20% to 80% noncondensing
- * Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- * Maximum storage altitude: 15,000 ft. (4,722 m)

Size and weight

- * Height: 2.0 in. (5.2 cm)
- * Width: 11.5 in. (29.2 cm)
- * Depth: 9.0 in. (22.5 cm)
- * Weight:
 - * Macintosh PowerBook 1400cs/117:
 - 6.7 lb. (3.0 kg) (with floppy disk drive installed);
 - 7.07 lb. (3.17 kg) (with CD-ROM drive installed)
 - * Macintosh PowerBook 1400c/117 or 1400c/133:
 - 6.6 lb. (3.0 kg) (with floppy disk drive installed);
 - 6.97 lb. (3.17 kg)
(with CD-ROM drive installed)

Ordering Information

=====

Macintosh PowerBook 1400cs/117

Order No. M5287

- * PowerBook 1400cs/117 computer with 12 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 750 MB hard disk drive
- * 11.3-inch dual-scan display
- * NiMH battery and AC adapter
- * Mac OS system software

- * Complete setup, learning, and reference documentation
- * ClarisWorks and Claris Organizer software and documentation
- * Apple Internet Connection Kit software
- * Apple Remote Access and cross-platform compatibility software
- * Limited warranty

Macintosh PowerBook 1400cs/117

Order No. M5292

- * Same as Order No. M5287 but with 16 MB of RAM and a 6x-speed CD-ROM drive.

Macintosh PowerBook 1400c/117

Order No. M4856

- * PowerBook 1400c/117 computer with 16 MB of RAM, built-in 1.4 MB Apple SuperDrive, internal 1 GB hard disk drive, and 6x-speed CD-ROM drive (battery, adapter, system software, additional software, documentation, and warranty same as Order No. M5287)
- * 11.3-active-matrix display

Macintosh PowerBook 1400c/133

Order No. M5576

- * Same as Order No. M4586 but with 133-MHz PowerPC 603e with 128K level 2 cache

Macintosh PowerBook 6x-Speed CD-ROM Module

Order No. M4508

Macintosh PowerBook 8-bit Color Video-out Upgrade Kit

Order No. M4509

- * This upgrade has 512K VRAM and ships with the external video adapter cable.

Macintosh PowerBook Video Adapter Cable

Order No. M3927

Macintosh PowerBook AC Adapter

Order No. M4895

Apple HDI-30 SCSI Disk Adapter

M2539 - for SCSI disk mode

Apple SCSI Peripheral Interface Cable

M0207 - for SCSI to SCSI connection

Apple HDI-30 SCSI System Cable

M2538

Macintosh PowerBook Rechargeable Battery

Order No. M4507

Macintosh PowerBook 8 MB Memory Expansion Card

Order No. M4506

Article Change History:

09 Apr 1997 - Revised Video Out Upgrade section.

19 Nov 1996 - Added more details about RAM.

18 Oct 1996 - Changed article status.

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Tech Info Library Article Number:20469



Tech Info Library

Workgroup Servers: System 7.5.5 Isn't Supported (10/96)

Revised: 10/3/96
Security: Everyone

Workgroup Servers: System 7.5.5 Isn't Supported (10/96)

=====

Article Created: 27 September 1996
Article Reviewed/Updated: 3 October 1996

TOPIC -----

Is System 7.5.5 supported on Workgroup Servers?

DISCUSSION -----

As of September 1996, System 7.5.5 has not been qualified on any Workgroup Server and is not supported at this time.

Engineering is in the process of determining if the System 7.5.5 release will be supported and/or qualified with server products. Testing completion date is to be determined.

Article Change History:
03 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20470



Tech Info Library

Geoport Telecom Adapter Kit: Description (10/96)

Revised: 10/18/96
Security: Everyone

Geoport Telecom Adapter Kit: Description (10/96)

Article Created: 27 September 1996
Article Reviewed/Updated: 18 October 1996

TOPIC -----

This article contains a description of the Geoport Telecom Adapter Kit.

DISCUSSION -----

Overview
=====

Communications and collaboration are central to human interaction. Today, people rely on the telephone to talk to each other, to send faxes and electronic mail, and to access online information services. And the GeoPort Telecom Adapter II, Apple Telecom 3.0 software, and other software included in the GeoPort Telecom Adapter Kit – in conjunction with an analog telephone line – provide an all-in-one solution to handle all of these vital functions.

An inexpensive communications device, the GeoPort Telecom Adapter II takes advantage of Apple's GeoPort architecture and the Macintosh Telephony Architecture (MTA) to turn your Power Macintosh into a high-speed modem, intelligent telephone, digital answering machine, and fax. So you can handle all of your communications and collaboration needs right from your desktop—easily and intuitively.

The screen-based telephone application is even easier to use than your phone. As a full-duplex speakerphone, it allows you to have natural conversations—unlike conventional speakerphones that allow only one caller to speak at a time—and delivers high-quality sound. It comes with intelligent dialing and call logging to make dialing calls effortless and allow you to manage and streamline your communications. The digital answering machine software takes advantage of the intelligent answering capability of Apple Telecom 3.0, which allows a single line to support voice, fax, and modem use. And perhaps most important, the software supports telephony Apple events, so you can integrate off-the-shelf telephony-aware applications using AppleScript software to create your own

custom solutions.

The fax application includes OCR software, making it easy to convert faxed material into text, to be saved or pasted into any document and forwarded via any means. And the communications application lets you access information services such as commercial online bulletin boards or the Internet.

Speed, convenience, and integration—the GeoPort Telecom Adapter Kit brings it all to desktop communications and collaboration, making it easier than ever to stay informed and in touch.

Features

=====

Screen-based telephone

- Provides full-duplex speakerphone function
- Automates telephone dialing with Apple Phone software and Apple Address Book entries
- Supports character dialing, intelligent dialing, and call logging

Digital answering machine

- Supports high-quality sound
- Provides intelligent auto-answer that directs between voice, fax, and modem calls
- Allows you to record and store multiple greetings and create multiple mailboxes
- Provides remote access to voice mail and voice-mail navigation

Fax/Modem

- Offers full fax functionality at 14.4 Kbit/s (V.17)
- Supports high-speed modem functionality at up to 28.8 Kbit/s (V.34)
- Includes OCR capability, fast printing, and QuickDraw GX compatibility

Macintosh Telephony Architecture (MTA)

- Supports a single phone line for voice, fax, and data use
- Supports audio recording and playback through Telephone Manager 3.0 system software
- Supports AppleScript (including telephony Apple events) for the creation of customized solutions with many off-the-shelf applications

Ordering Information

=====

GeoPort Telecom Adapter Kit

Order No. M5438LL/A

- GeoPort Telecom Adapter II

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- Apple Telecom 3.0 software
- AppleCom Lite
- Limited warranty

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

18 Oct 1996 - Changed article status.

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Tech Info Library Article Number:20471



Tech Info Library

Geoport Telecom Adapter Kit: Technical Specifications (10/96)

Revised: 11/27/96
Security: Everyone

Geoport Telecom Adapter Kit: Technical Specifications (10/96)

Article Created: 27 September 1996
Article Reviewed/Updated: 27 November 1996

TOPIC -----

This article contains a list of technical specifications for the Geoport Telecom Adapter Kit.

DISCUSSION -----

Technical Specifications
=====

Power requirements

- The GeoPort Telecom Adapter II operates from the computer's power via an extra line on the cable that connects the adapter to the computer. A separate power supply or battery is not needed.

Environmental requirements

- Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- Storage temperature: -40 degrees to 149 degrees F
(-40 degrees to 65 degrees C)
- Relative humidity: 20 percent to 90 percent noncondensing
- Maximum altitude: 10,000 ft. (3,048 m)

Size and weight

- Height: 1.5 in. (3.8 cm)
- Width: 2.8 in. (7.1 cm)
- Depth: 5.7 in. (14.5 cm) for pod;
7.7 in. (19.6 cm) for pod and standoff
- Weight: 0.46 lb. (0.21 kg) for pod;
0.67 lb. (0.30 kg) for pod and cable

General telephone

- Single phone line for voice, fax, and data
- Dialing capability
 - Tone/pulse dialing
 - Auto or manual dialing and answering
- Voice features
 - Record from phone line
 - Play audio to phone line
 - Real-time audio supports full-duplex speakerphone

Fax

- Group 3 fax communication standards
 - CCITT V.27ter: 2400, 4800 bps
 - CCITT V.29: 7200, 9600 bps
 - CCITT V.17: 12,000; 14,400 bps
- Error control
 - Fax error correction mode (ECM)

Modem

- Data communication standards
 - CCITT V.34: 28,800; 26,400; 24,000; 21,600; 19,200; 14,400; 12,000; 9600; 7200; 4800 bps
 - V.32bis: 14,400; 12,000; 9600; 7200; 4800 bps
 - CCITT V.32: 9600; 4800 bps
 - CCITT V.22 bis: 2400 bps
 - Bell 212A: 1200 bps
 - CCITT V.22: 1200 bps
 - CCITT V.23: 1200/75 bps
 - CCITT V.23: 75/1200 bps
 - CCITT V.21: 300 bps
 - Bell 103: 300 bps
- Error correction and data compression
 - Full CCITT V.42/V.42bis compliance
 - MNP classes 2-5
- Data transmission and format
 - Full- or half-duplex operation
 - Asynchronous or framed modes
- Character formats
 - 5, 6, 7, 8 data bits
 - 1 or 2 stop bits
 - Odd, even, or no parity

System requirements

- Any Power Macintosh or PowerPC processor-based Macintosh Performa computer except for the 5200, 5300, 6200, and 6300 series.
- Macintosh system software version 7.1.2 or later (System 7.5 or later is recommended)

Ordering Information

=====

GeoPort Telecom Adapter Kit

Order No. M5438LL/A

- GeoPort Telecom Adapter II
- Apple Telecom 3.0 software
- AppleCom Lite
- Limited warranty

NOTE:

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

27 Nov 1996 - Removed Power Macintosh 5400 from unsupported computers.
18 Oct 1996 - Changed article status.

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Tech Info Library Article Number:20472



Tech Info Library

QuickTime For Windows 2.1.2: What It Fixes (9/96)

Revised: 9/27/96
Security: Everyone

QuickTime For Windows 2.1.2: What It Fixes (9/96)

=====

Article Created: 27 September 1996

TOPIC -----

This article lists changes that were implemented in version 2.1.2 of QuickTime for Windows.

DISCUSSION -----

The following changes are included in QuickTime for Windows 2.1.2. Additional information about QuickTime products for Macintosh and Windows can be found on the worldwide web at:

<http://quicktime.apple.com>

1. Cirrus component workaround for QTVRW bug that caused crashes.
2. Fixed DHIO_DH problem with multiple applications playing movies simultaneously.
3. Got rid of "Library not freed ... call Microsoft" error message. Problem remains.
4. Added GetMediaSampleReference API.
5. Fixed "MC paints once at (0,0), then correctly positions movie."
6. Fixed problem opening multiple movies via MCI.
7. Fixed confusing "Invalid Data Reference" message from Movie Player.
8. Several fixes to Player and Viewer command line parsing.
9. Fixed bug in Cinepak 0.5x blits to hard-banked displays.
10. Fixed longstanding bug in sound rate resampling to rates > 32767.

11. Replaced sample movie with calibration step in installer (32-bit now does it, too).
12. Updated disk space requirements in installer.
13. Fixed installer bug where it was deleting the installed copy of itself in some instances.
14. Installer no longer fails if temp directory already exists.
15. Control panel/installer updated for better control of automatic audio rate adjustment.
16. Fixed "intermittent garbage" bug in 32-bit QTW's IMA audio playback.
17. Fixed "non-1.0 rate playback plays audio at 1.0 rate" bug.
18. Fixed GetTrackEnabled (it was returning bogus values).
19. Rebased all 32-bit DLLs to speed up load time.
20. QTVHDW/DCI workaround for QTVRW bug that caused control panel crashes.
21. Fixed the infamous "DCIMAN.DLL" error message.
22. QTVHDW and DCI32 workarounds for 2 separate S3 Trio 64 DCI provider bugs.
23. Fixed automatic audio rate adjustment to deal with instability due to excessive interrupt activity.
24. Fixed a crash opening sprite movies (sprites are not yet supported in QTW).

This article was published in the Information Alley on 27 September 1996.

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Tech Info Library Article Number:20473



Tech Info Library

Multimedia Learning Tools Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Multimedia Learning Tools Bundle: Description (10/96)

Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains the description for the Apple Education Series: Multimedia Learning Tools Bundle.

DISCUSSION -----

Since the introduction of HyperCard in 1987, innovative educators nationwide have been pairing computers with multimedia resources to give their students new tools for collecting, synthesizing, and communicating information. Now Apple has made that easier to do.

Apple Education Series: Multimedia Learning Tools Bundle consists of a Macintosh computer and the Multimedia Learning Tools Kit--a collection of carefully selected authoring and design tools, multimedia resources, and guides for using these tools in teaching and learning. Especially useful are the multimedia project lessons--teacher-developed, interdisciplinary lessons designed to help students get started creating their own multimedia projects.

Teachers have always known that students learn best when they're actively engaged. And, aware that multimedia offers many such opportunities, teachers have been bringing an increasing number of multimedia-based educational resources into their classrooms.

But teachers also know that the connections students make on their own are the most meaningful and lasting. So, to take further advantage of the strengths of multimedia, many teachers are now providing multimedia authoring tools for their students--helping them to use these engaging resources for their own knowledge construction. The thousands of student multimedia projects already developed in classrooms--and the tens of thousands of learning connections they exemplify--testify to the importance of that effort.

Whether you're just getting started with integrating student-centered multimedia

projects into the curriculum or want to add resources to an existing multimedia environment, the Multimedia Learning Tools Kit is the perfect choice.

More Choices, More Flexibility

=====

Now, when you order a Macintosh computer with the Multimedia Learning Tools Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details.

2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.

3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet network-ing, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Multimedia Learning Tools Kit

=====

* Add Motion from Motion Works

* Apple Font Pack from Apple Computer, Inc.

* ClarisImpact from Claris Corporation

An integrated productivity application that provides tools for creating drawings, reports, and presentations. Students can use it to plan and manage the

development of multimedia projects, as well as to create presentations that include photos, movies, text, charts, and graphics.

* Color It! from MicroFrontier

A 32-bit color paint and image-editing program that allows students to create and enhance photographic and other images. Includes multiple Undos and tools for masking.

* Famous Faces from Jasmine Multimedia Publishing

QuickTime movies of 100 inventors, politicians, celebrities, artists, and business and religious leaders. Also includes text-based biographies and quotations.

* HyperCard from Apple Computer, Inc.

A flexible and powerful tool for creating multimedia projects that include text, sound, pictures, animations, and movie clips. HyperCard now has automated scripting as well as HyperTalk(r) and AppleScript(r) , powerful programming languages that students can use to augment the built-in HyperCard features. Includes Multimedia Utilities.

* HyperStudio from Roger Wagner Publishing, Inc.

An easy-to-use and powerful multimedia authoring tool. Students can easily import and integrate movies, sounds, text, and graphics to create multimedia projects. They can record and edit QuickTime(r) movies and connect to the Internet. Also includes more than 250 megabytes of pictures, animations, and sounds.

* Kid Pix Studio from Brøderbund Software, Inc.

A multimedia authoring tool designed especially for young children. With Kid Pix Studio, students can paint pictures, create animations, stage digital puppet shows, or record their voices--and then produce a multimedia slide show that integrates all of these elements.

* MacGALLERY from DreamMaker Software

A collection of more than 25,000 clip-art images that students can place in their projects.

* MediaClips from SoftKey Multimedia Inc.

Six collections--Animal Kingdom, Tropical Rain Forest, Deep Voyage, American View, and World View--consisting of hundreds of photographs, music clips, and movies, for students to save and include in their multimedia projects.

* MultiWare Multi-Media Collection from BeachWare

A collection of more than 250 megabytes of pictures, QuickTime movies, color buttons, music, and sound effects.

* QuickTime Extras from Apple Computer, Inc.

* Multimedia Utilities from Motion Tool Works (USA) Corporation

A collection of six utilities to record the computer screen as a movie, build an animation, construct an interactive QuickTime movie, edit a movie, transform one still image to another, and capture and edit a sound.

..TIL20474-Multimedia_Learning_Tools_Bundle-Description_10-96.pdf

* TIME Magazine Multimedia Almanac from SoftKey International, Inc.

Contains a selection of fully indexed Time magazine articles from the past 70 years with photos, videos, charts, maps, source materials, and directories that students can place in their projects.

* Videoshop from Strata

* Virtus VR from Virtus Corporation

An entry-level 3D virtual reality design tool. Students can use it to build 3D scenes that illustrate their multimedia projects. Then with an authoring tool they can connect the scenes to their projects. Also included are Virtus Player and Virtus Galleries: Archaeology

Curriculum and Other Materials

=====

Multimedia Learning Tools Teacher's Guide

A comprehensive guide that tells how to get started with the Macintosh, describes each of the software programs, and explains the value of multimedia in education. At the heart of the guide is a collection of 12 multimedia project lessons. These teacher-developed lessons are designed to help students in grades K-12 get started creating their own multimedia projects--using the specific tools and resources included in the bundle. Also includes 12 single-task activity cards to help with the technical aspects of multimedia authoring.

Multimedia Flying Solo

From Thomson Learning TOOLS. A step-by-step book that covers the basics of HyperCard 2.3. Includes the MultiWare Multi-Media Collection CD-ROM.

Multimedia and Learning: A School Leader's Guide

From the National School Boards Association. This book contains articles written by experts in the field of multimedia authoring for education. Software Documentation Guides and manuals for the software in the solution kit.

Ordering Information

=====

Multimedia Learning Tools Bundle (featured solution)

Includes Power Macintosh 5260/120 and Multimedia Learning Tools Kit--a convenient way to order a hardware/ software combination with a single part number.

Without CPU setup: B2813LL/C

With CPU setup: B2814LL/C

Multimedia Learning Tools Kit

Order No.: T1612LL/C May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Article Change History:

30 Oct 1996 - Added part numbers

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Tech Info Library Article Number:20474



Tech Info Library

Teacher Solution Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Teacher Solution Bundle: Description (10/96)

Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains a description of the Apple Education Series: Teacher Solution Bundle.

DISCUSSION -----

When schools put computers on their teachers' desktops, the teachers and students both benefit. Now Apple has made that easier to do.

With the Teacher Solution Bundle, teachers have access to a powerful Macintosh computer and the Teacher Solution Kit--some of the most useful software available, including a graphics and presentation package, a word processor, and a grading and attendance program.

Administrators in California's Corona-Norco Unified School District, not satisfied with anecdotal reports, conducted a nine-month research project to determine the impact of putting Macintosh computers on teachers' desktops. The result? They discovered that by adding technology, they dramatically increased the amount of time available for classroom instruction.

Focusing on tasks such as taking attendance, planning lessons, developing tests, and reporting grades, the researchers found that the 28 K-6 teachers in the study saved, on average, 36 minutes a day. According to Tom Wilson, the district's director of educational technology, "The research showed that an effective application of technological tools improves an educator's level of productivity, and consequently, increases his or her teaching time in class." Adds Wilson, "The kids are the ultimate beneficiaries."

More Choices, More Flexibility

Now, when you order a Macintosh computer with the Teacher Solution Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh® 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details. Refer to the computer data sheets for more details.
2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.
3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Teacher Solution Kit

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* ClarisWorks from Claris Corporation

Combines word processing, database, spreadsheet, graphics, presentation, and communications software in one familiar, efficient environment.

* ClarisWorks for Teachers from Claris Corporation

Offers a convenient collection of templates for the most commonly used reports, schedules, evaluations, lists, newsletters, and presentations.

* Classroom Clips from Creative Pursuits

Provides more than 850 color graphics for all school subjects in the K-12 curriculum. Includes categories such as endangered species, holidays, sports, history, literature, and musical instruments.

* Digital Chisel from Pierian Spring Software

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Enables teachers and students to create interactive multimedia presentations, storybooks, or reports. Supports QuickTime movies, sound, and animation as well as painting and drawing tools.

* Easy Grade Pro from Orbis Software

Provides grading, attendance, seating, analysis and reporting tools for teachers. Offers 18 different grading reports.

* Grolier Multimedia Encyclopedia from Mindscape, Inc.

Combines the resources of a 21-volume encyclopedia with the impact of video and animation. Includes sophisticated hypertext searching tools, allowing students to explore ideas by linking words across cultures and time. Contains pictures, video clips, sounds, maps, and speeches.

* MakeTest from Mountain Lake Software, Inc.

Makes it easy to create and print question files and tests. Files your test items for future use.

* Microsoft Bookshelf from Microsoft Corporation

Provides encyclopedias, a dictionary, a thesaurus, an almanac, quotations, and an atlas. Offers a wide variety of pictures and text that you can copy and paste into other documents.

* Orchestrator from Media Seek Technologies

Provides a personal information manager designed for teachers, a syllabus manager, and a lesson planner.

* Scholastic SuperPrint for the Macintosh from Scholastic Inc.

Enables teachers and students to create full-color posters, banners, big books, cards, and calendars combining text, graphics, and artwork. Its interface is easy to use, even for the youngest students.

* TIME Magazine Multimedia Almanac from SoftKey International, Inc.

Contains a selection of fully indexed Time magazine articles from the past 70 years. Includes photos, videos, charts, maps, source materials, and directories that students can place in their projects.

* TimeLiner from Tom Snyder Productions

Enables teachers and students to create time lines that represent sequences of events or relationships between items such as time, size, weight, speed, distance, and temperature. Includes formats for printing long banners, single sheets, or posters. Also includes two data disks: American History and Dinosaurs and Other Big Stuff.

Ordering Information

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Teacher Solution Bundle (Featured Solution)

Includes Power Macintosh 5260/120 and Teacher Solution Kit--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2805LL/C

With CPU setup: B2806LL/C

Teacher Solution Kit

Order No./Price: T1681LL/D

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Article Change History:

30 Oct 1996 - Added part numbers

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20475



Tech Info Library

Writing and Publishing Tools Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Writing and Publishing Tools Bundle: Description (10/96)

=====

Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains the description for the Apple Education Series: Elementary Curriculum Connections Bundle.

DISCUSSION -----

The Writing and Publishing Tools Bundle combines Power Macintosh 5260/120 or 5400/180 computers with the Writing and Publishing Tools Kit, a collection of writing and publishing software and teacher resources.

Teachers have always known that writing is central to students' efforts to organize and understand what they're learning. When students communicate what they know-- in written reports or presentations--they're reinforcing the knowledge they've gained. Because word processing has helped students produce better work, teachers are looking for more ways that computers can help develop communication skills. Now Apple has made that easier to do.

The Apple Education Series: Writing and Publishing Tools Bundle provides a Macintosh computer and the Writing and Publishing Tools Kit--a collection of software for facilitating writing, publishing, and presentation in any classroom. This software will help your students put their ideas into words--whether they're studying language and literature, science, mathematics, or history. A companion curriculum guide contains writing projects that can be tailored to a variety of curriculum areas.

This collection of resources provides tools for every stage of the writing process--from prewriting through publishing. And it encourages writers to go beyond traditional report writing by providing tools that facilitate collaborative writing, oral presentations, and multimedia-based projects.

Whether you're just getting started with computers for writing or are looking for new ways for your students to publish and present their work, the Writing

and Publishing Tools Kit is the perfect choice.

More Choices, More Flexibility

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Now, when you order a Macintosh computer with the Writing and Publishing Tools Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Refer to the computer data sheets for more details.
2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.
3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

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Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Writing and Publishing Tools Kit

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* American Heritage Dictionary from WordStar International

Combines the American Heritage Dictionary and Roget's II Thesaurus. Provides typical searching, anagrams, and alternate spellings.

* Aspects from Group Logic, Inc.

Facilitates collaborative writing, editing, and discussion--electronically.

Features a collaborative word processor that students on a classroom network can use to view and edit a document on a network. Requires LocalTalk Connector Kit.

* At Ease from Apple Computer, Inc.

Offers an easy-to-use alternative to the standard Macintosh security system and

..TIL20476-Writing_and_Publishing_Tools_Bundle-Description_10-96.pdf

user interface. Can assist with student portfolio management.

* Author's Toolkit from Sunburst Communications Inc.

Helps students learn to write well by guiding them through steps in the writing process. Useful for all types of writing--from letters and stories to plays and research reports. Uses PlainTalk for text-to-speech editing.

* ClarisImpact from Claris Corporation

Provides integrated and easy-to-use tools for creating drawings, reports, and presentations. Enables students and teachers to create outlines, tables, data charts, organization charts, time lines, calendars, and general graphics within any document.

* ClarisWorks from Claris Corporation

Combines word processing, database, spreadsheet, graphics, presentation, and communications software in one familiar, efficient environment. Provides drawing and painting tools, charts, and built-in calculations that students can use to create memos, newsletters, graphs, and reports. Uses PlainTalk for text-to-speech editing.

* The Copernicus Collection of Multimedia Images Volume 1 from Pierian Spring Software Provides more than 500 images that students can use when creating multimedia presentations.

* Correct Grammar from SoftKey International, Inc.

Enables students to correct grammar, usage, punctuation, style, and spelling errors in any word processing document. Also determines the readability level.

* Digital Chisel from Pierian Spring Software

Enables students and teachers to create interactive multimedia presentations, storybooks, or reports. Supports QuickTime movies, sound, and animation as well as painting and drawing tools.

* Key Into Spanish from Exceller Software Corporation

Provides instant translation between English and Spanish for any word typed at the keyboard. Includes a 30,000- word dictionary and an appendix of useful phrases and weights and measures. May be used with other applications to check spelling.

* MacLink Plus from DataViz

Converts files between Macintosh and PC formats as well as between different Macintosh formats.

* Media Weaver from Humanities Software

Facilitates students' use of multimedia and the writing process. Includes features that help teachers create exercises to encourage process writing. Provides a bilingual interface that supports writing in English and Spanish. Includes a library of art, photos, sounds, and movies. Uses PlainTalk for text-to-speech editing.

* TimeLiner from Tom Snyder Productions

Enables students to create time lines that represent sequences of events. Relationships between time, size, weight, speed, distance, and temperature can

also be sequenced. Prints long banners, single sheets, or posters.

* Write On! Sentences to Paragraphs II from Humanities Software
Offers practice in writing paragraphs that exhibit a strong topic sentence, supporting details, and a summary sentence. Reviews specific strategies such as narrowing a broad topic, ordering, adding supporting details, and linking sentences by example, cause and effect, comparison, and contrast.

* Write On! Paragraphs to Essays I from Humanities Software
Offers practice in writing strong paragraphs. Instruction begins with developing topic sentences that take students into main ideas, ordering, details, and summarizing--and all the way to short essays.

Curriculum and Other Materials

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Writing and Publishing Tools Curriculum Guide

This comprehensive teacher's guide tells how to get started with the Macintosh, describes each of the software programs, and explains how to start using them in the classroom. Five lessons on the writing process give teachers "basic recipes" for using the software tools to support each stage of the process. Nine broader projects--all adaptable for different content areas and grade levels--provide teachers with complete instructions for writing-related activities.

Ordering Information

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Writing and Publishing Tools Bundle

Includes Power Macintosh 5260/120 and Writing and Publishing Tools Kit--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2822LL/C

With CPU setup: B2823LL/C

Writing and Publishing Tools Kit

Order No.: T1801LL/B

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Article Change History:

30 Oct 1996 - Added part numbers

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20476



Tech Info Library

Secondary Reference Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Secondary Reference Bundle: Description (10/96)

=====

Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains a description of the Apple Education Series: Secondary Reference Bundle.

DISCUSSION -----

The Apple Education Series: Secondary Reference Bundle provides a Macintosh computer and the Secondary Reference Kit--an extensive library of reference works on compact disc--to meet the research needs of middle and high school students. Along with traditional encyclopedias and an atlas--in multimedia versions that take full advantage of the technology--the kit also provides ample resources in art, science, history, and current events. For example, students will have immediate access to video clips of astronauts walking on the moon, collections of art from around the world, help in language learning, and more.

Today's students are thinking about the relationships among facts--instead of simply accumulating them. And one way they're doing this is by collaborating with others and communicating what they've learned. To facilitate that aspect of knowledge development, the Secondary Reference Kit also includes Digital Chisel, a multimedia authoring tool that enables students to communicate what they've learned by creating reports and presentations that can include pictures, video clips, and text.

The Secondary Reference Kit--the perfect complement for computers in middle and high school libraries, multimedia centers, classrooms, and labs.

More Choices, More Flexibility

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Now, when you order a Macintosh computer with the Secondary Reference Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh® 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details.
2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.
3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Secondary Reference Kit

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* Artrageous from SoftKey International, Inc.

Enables students to learn about the effects of color, composition, light and perspective on paintings. Provides hundreds of paintings that students can examine and then alter--to see the impact of each effect. Includes a database on the artists and their paintings, and a reference section of art terms, definitions, and movements.

* Cartopedia from Dorling Kindersly Multimedia

Combines the cartographic qualities of an atlas with the background information of an encyclopedia and the statistical depth of a gazetteer. Includes detailed information on each of the world's 193 countries, data charts, graphics, diagrams, detailed maps, photos, and videos.

* CD Sourcebook of American History from Infobases, Inc.

Presents American history through the eyes of founders, colonists, presidents, pioneers, and others. Provides 20,000 pages of original source documents,

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firsthand accounts, photographs, paintings, political cartoons, and more. Offers 10 multivolume histories including Autobiography of Benjamin Franklin, and Alexis DeTocqueville's Democracy in America.

* Digital Chisel from Pierian Spring Software

Enables students and teachers to create interactive multimedia presentations, storybooks, or reports. Supports QuickTime movies, sound, and animation as well as painting and drawing tools. Comes with a multimedia library that contains pictures, movies, and sounds.

* Eyewitness Encyclopedia of Science from Dorling Kindersley Multimedia

Covers topics in mathematics, physics, chemistry, and life sciences in a multimedia reference guide. Includes quizzes and specialized sections, such as a "who's who."

* Grolier Multimedia Encyclopedia from Mindscape, Inc.

Combines the resources of a 21-volume encyclopedia with the impact of video and animation. Includes sophisticated hypertext searching tools that allow students to explore ideas by linking words across cultures and time. Contains pictures, video clips, sounds, maps, and speeches.

* Our Times from Vicarious Software

Offers a multimedia encyclopedia that is based on information in the book Our Times: The Illustrated History of the 20th Century and on The Columbia Encyclopedia, Fifth Edition. Enables students to access all of the text from The Columbia Encyclopedia. Combines the elements of text, video, photographs and other images, and sound.

* RedShift from Maris Multimedia Ltd.

Provides a highly realistic three-dimensional simulation of space and the solar system. Allows students to view planets, moons, and stars--295,000 celestial objects in all--from any location inside the solar system. Facilitates the accurate simulation of a wide range of astronomical events.

* The Rosetta Stone PowerPac from Fairfield Language Technologies

Provides a unique multimedia tool for language learning. Combines real-life color images, the voices of native speakers, and written text. This special edition, with 22 chapters each of beginning French, Russian, Spanish, German, Dutch, and English, is taken from the award-winning 92-chapter Rosetta Stone Level I programs.

* 3D Atlas from Creative Wonders

Provides a three-dimensional interactive globe that allows students to explore geography from environmental, physical, and political points of view. Contains multimedia exhibits, short video documentaries, and time-lapse photography. Also includes a large array of statistics in categories from agriculture to transport.

* TIME Magazine Multimedia Almanac from SoftKey International, Inc.

Contains a selection of fully indexed Time magazine articles from the past 70 years with photos, videos, charts, maps, source materials, and directories that students can place in their projects.

* ZooGuides: The Rainforest from REMedia, Inc.

Provides an in-depth look at the animals, plants, and people of the rain forest regions. Includes detailed information on the wildlife of the rain forests, as well as on conservation issues. Enables students to investigate methods employed to help save the rain forests.

Ordering Information

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Secondary Reference Bundle (Featured Solution)

Includes Power Macintosh 5260/120 and Secondary Reference Kit--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2807LL/C

With CPU setup: B2808LL/C

Secondary Reference Kit

Order No./Price: T1677LL/E

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Article Change History:

30 Oct 1996 - Added part numbers

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20477



Tech Info Library

Elementary Reference Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Elementary Reference Bundle: Description (10/96)

Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains a description of the Apple Education Series: Elementary Reference Bundle.

DISCUSSION -----

The Apple Education Series: Elementary Reference Bundle provides a Macintosh computer and the Elementary Reference Kit--an extensive library of reference works on compact disc--to meet the research needs of elementary students. Along with traditional encyclopedias and an atlas--in multimedia versions that take full advantage of the technology--the kit also provides ample resources in art, science, music, and the environment. For example, students will have immediate access to video clips of astronauts walking on the moon, facts about hundreds of animals, a resource devoted entirely to dinosaurs, collections of art from around the world, and more.

Today's students are thinking about the relationships among facts--instead of simply accumulating them. And one way they're doing this is by collaborating with others and communicating what they've learned. To facilitate that aspect of knowledge development, the Elementary Reference Kit also includes HyperStudio, an award-winning multimedia program that enables students to communicate what they've learned by creating reports and presentations that can include video clips, pictures, and text.

The Elementary Reference Kit--the perfect complement for computers in elementary school libraries, multimedia centers, classrooms, and labs.

More Choices, More Flexibility

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Now, when you order a Macintosh computer with the Elementary Reference Kit, you may also order two other Apple Education Series kits. It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details.
2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.*
3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors.

(Monitor is sold separately.)

Elementary Reference Kit

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* Eyewitness Encyclopedia of Nature from Dorling Kindersley Multimedia Provides a multimedia reference guide to the natural world. Enables students to watch the behavior of animals in their natural habitat, hear calls of birds of prey, and understand environmental systems of the natural world. Contains stories about more than 250 plants and animals.

* Grolier Multimedia Encyclopedia from Mindscape, Inc.

Combines the resources of a 21-volume encyclopedia with the impact of video and animation. Includes sophisticated hypertext searching tools that allow students to explore ideas by linking words across cultures and time. Contains pictures, video clips, sounds, maps, and speeches.

* HyperStudio from Roger Wagner Publishing, Inc.

Makes it easy for teachers and students to create multimedia presentations that include text, sound, pictures, animations, and movie clips. Includes a self-paced tutorial and samples of presentations.

* Maps 'n' Facts from Broderbund Software, Inc.

Offers a comprehensive world atlas as well as a data-base of information on topics such as agriculture, demographics, education, health, manufacturing, crime, economics, government, people, travel, and the environment. Maps, charts, and text can be printed or exported for reports or presentations.

* Microsoft Dinosaurs from Microsoft Corporation

Enables students to explore the world of prehistoric animals through movies, text, illustrations, and narra-tion. Allows students to access information through an index, atlas, or time line, or by dinosaur family.

* Microsoft Musical Instruments from Microsoft Corporation

Presents the sights and sounds of 200 musical instru-ments from around the world-organized alphabeti-cally, geographically, by family of instruments, and by type of ensemble.

* The Rosetta Stone PowerPac from Fairfield Language

Technologies Provides a unique multimedia tool for language learn-ing. Combines real-life color images, the voices of native speakers, and written text. This special edition, with 22 chapters each of beginning French, Russian, Spanish, German, Dutch, and English, is taken from the award-winning 92-chapter Rosetta Stone Level I programs.

* The San Diego Zoo Presents...The Animals! from Mindscape, Inc.

Lets students see and hear more than 200 exotic animals, birds, and reptiles. Uses movies, sounds, and stories to present comprehensive information. Includes more than 300 animal and habitat exhibits and more than 1,300 color photographs.

* The Way Things Work from Dorling Kindersley Multimedia

Brings David Macaulay's best-selling book to life. Cross-links more than 200 inventions by machine types, inventors, principles of science, and a time line.

* With Open Eyes: Images from the Art Institute of Chicago from Voyager Contains full-screen pictures of over 200 works of art from The Art Institute of Chicago's world-class collection. Provides audio descriptions as well as close-up views of the artwork.

* ZooGuides: Whales and Dolphins from REMedia, Inc.

Provides an in-depth look at whales and dolphins. Includes movies, maps of where species are found, text, sound, and photos, as well as a detailed guide to all the families of whales and dolphins.

* ZooGuides: World of Reptiles from REMedia, Inc.

Provides an in-depth look at reptiles. Includes movies, maps of where species are found, text, sound, and photos, as well as a detailed guide to the various suborders and families of reptiles.

Ordering Information

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Elementary Reference Bundle (featured solution)

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Includes Power Macintosh 5260/120 and Elementary Reference Kit--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2809LL/C

With CPU setup: B2810LL/C

Elementary Reference Kit

Order No./Price: T1676LL/D

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Article Change History:

30 Oct 1996 - Added part numbers.

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Tech Info Library Article Number:20478



Tech Info Library

Elementary Curriculum Connections Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Elementary Curriculum Connections Bundle: Description (10/96)

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Article Created: 27 September 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains the description for the Apple Education Series: Elementary Curriculum Connections Bundle.

DISCUSSION -----

Teachers of students in the upper elementary grades know how important it is to create environments that support the development of communication and higher-order thinking skills. Often they use interdisciplinary projects that provide opportunities for active and collaborative learning. Now Apple has made that easier to do.

The Apple Education Series: Elementary Curriculum Connections Bundle provides a Macintosh computer and the Elementary Curriculum Connections Kit--a collection of software tools and resources along with theme-based student projects that make it easy to integrate technology into the upper elementary curriculum. These projects, offering an integrated curriculum approach to the use of computers in the classroom, address the areas of social studies, math, language arts, science, art, music, and more.

Flexibility and adaptability are key here. The variety and scope of the activities make them easy to adapt for different learning styles. And they offer practical ways to introduce different software applications and electronic resources. Students working on a migration project, for example, might interview immigrants about their personal experiences and use the electronic encyclopedia to learn more about their homelands. Planning their own imaginary migration, the students might research possible routes with the electronic atlas, manage their provisions with the spreadsheet, and use the word processor or the multimedia authoring tool to record their journey and prepare it for sharing.

Whether you're just beginning to integrate technology into the curriculum or you're looking for new technology resources for your classroom, the Elementary

Curriculum Connections Kit is the perfect choice.

More Choices, More Flexibility

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Now, when you order a Macintosh computer with the Elementary Curriculum Connections Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details.

2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.

3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Elementary Curriculum Connections Kit

=====

Software

* At Ease from Apple Computer, Inc.

Offers an easy-to-use alternative--specially designed for children--to the standard Macintosh user interface.

* ClarisWorks from Claris Corporation

Combines word processing, database, spreadsheet, graphics, presentation, and communications software in one familiar, efficient environment. Provides drawing and painting tools, charts, and built-in calculations that students can use to create memos, newsletters, graphs, and reports. Uses PlainTalk for text-to-speech editing.

* The Cruncher from Davidson & Associates, Inc.

Teaches students how to use spreadsheets and graphs in everyday life. Helps students apply mathematical concepts to real-world situations and display the solutions in graphs and charts with sound and animation.

* Earth Explorer from Enteractive, Inc.

Combines an interactive, multimedia encyclopedia with activities that allow students to discover how natural and human forces affect the earth. Encourages students to look at complicated topics from different perspectives.

* Eyewitness Encyclopedia of Science from Dorling Kindersley Multimedia Covers topics in mathematics, physics, chemistry, and life sciences in a multimedia reference guide. Includes quizzes and specialized sections, such as a "who's who."

* Grolier Multimedia Encyclopedia from Mindscape, Inc.

Combines the resources of a 21-volume encyclopedia with the impact of video and animation. Includes sophisticated hypertext searching tools, allowing students to explore ideas by linking words across cultures and time. Contains pictures, video clips, maps, and sounds.

* HyperStudio from Roger Wagner Publishing, Inc.

Makes it easy for teachers and students to create multimedia presentations that include text, sound, pictures, animations, and movie clips. Includes a self-paced tutorial and samples of presentations.

* Maps 'n' Facts from Broderbund Software, Inc.

Offers a comprehensive world atlas as well as a database of information on topics such as agriculture, demographics, education, health, manufacturing, crime, economics, government, people, travel, and the environment. Maps, charts, and text can be printed or exported.

* Math Workshop from Brøderbund Software, Inc.

Enables students to practice and improve computational and problem-solving skills. Tracks progress as students refine their skills in basic arithmetic, estimation, pattern and shape recognition, spatial orientation, scale, symmetry, and problem solving. Includes thousands of math problems at multiple levels of difficulty.

* Scholastic Smart Books: If Your Name Was Changed at Ellis Island from Scholastic Inc.

Engages students in a compelling tale about the immigration experience. Includes video clips, music, and newsreels representing life in earlier times, as well as features that encourage collaboration. Allows teachers to review student notes, record voice messages for students, and create electronic portfolios of student progress. Includes the paperback book.

* SIMtown from Maxis, Inc.

Engages students in an easy-to-use simulation that teaches the basic concepts of economics and resource management. Students create and run their own towns--at the same time developing skills in problem solving, deductive reasoning, and critical thinking.

* Student Writing Center from The Learning Company

Combines full-featured word processing and easy desktop publishing with unique student features that assist in all facets of writing. Designed for writing across the curriculum as well as teacher productivity.

* What's the Secret, Volume 2 from 3M Learning Software

Presents opportunities for students to make discoveries about the world we live in. Starts with questions such as How does my brain think? and Why does glue stick? Encourages students to try out scientific principles. Based on the PBS family science show "Newton's Apple." Includes video clips from the show.

Curriculum and Other Materials

=====

Elementary Curriculum Connections Teachers' Guide

This valuable guide tells how to get started with the Macintosh, describes each of the software programs, and explains how to start using them in the classroom. At the heart of the guide is a collection of interdisciplinary projects and information on assessment, classroom management, and home/school connections. Twenty-seven projects are described in detail. An additional 54 are described more briefly.

Ordering Information

=====

Elementary Curriculum Connections Bundle

Includes Power Macintosh 5260/120 and Elementary Curriculum Connections Kit--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2811LL/C

With CPU setup: B2812LL/C

Elementary Curriculum Connections Kit

Order No. T1798LL/B

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Article Change History:

30 Oct 1996 - Added part numbers.

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Tech Info Library Article Number:20479



Tech Info Library

QuickTime for Windows 2.1.2: Known Issues (9/96)

Revised: 9/27/96
Security: Everyone

QuickTime for Windows 2.1.2: Known Issues (9/96)

Article Created: 27 September 1996

TOPIC -----

This article contains a list of known issues with QuickTime for Windows 2.1.2.

DISCUSSION -----

The following list details known issues with QuickTime for Windows 2.1.2. Additional information about QuickTime products for Macintosh and Windows can be found on the worldwide web at:

<http://quicktime.apple.com>

1) 32-bit QuickTime for Windows does not have an MCI driver for Win95. This is because Windows 95 does not support 32-bit MCI drivers. 32-bit applications can still make MCI calls, but they will be serviced by 16-bit QTW. Note that you can install both 16- and 32-bit QTW on your system, and 16-bit QTW will automatically be used to support MCI. A similar but opposite situation exists on Windows NT, where 16-bit MCI drivers are not supported, and 32-bit QTW must be installed to get MCI support for both 16-bit and 32-bit applications.

2) 32-bit QuickTime for Windows runs on Windows 95 and Windows NT only. It will not run on Windows 3.1, even if you have Win32s installed.

3) MACE compressed sound is not supported.

4) QuickTime VR (distributed separately) is currently only a 16-bit component, and therefore only works with 16-bit QuickTime for Windows. As a workaround, you can install both 16- and 32-bit QuickTime for Windows on your system, and use the 16-bit Movie Player when you want to view QTVR scenes or objects.

5) QuickTime for Windows may set the audio Requested Rate to the rate of the first movie that you play (which will be 22050 Hz if you play the calibration movie during installation). You may want to change Requested Rate on the QTW control panel Audio page. QTW will not change Requested Rate once you have set

it.

6) Sigma Designs' recently released Real Magic MPEG driver (v2.20) is incompatible with QuickTime for Windows. As a workaround on Win31, you can reinstall the older Real Magic driver (v2.01), but on Win95 there is no other version to install. Sigma Designs and Apple are currently working on a solution.

7) The Cirrus display driver v1.23 (that is, Compaq/CL3X v1.23) can cause QTW control panel crashes. Upgrading to v1.24 fixes the problem.

8) When you are running Windows 95 and you assign a sound to play when a program is launched, you may get a system halt when you launch the 16-bit Movie Player for the very first time. The problem will not recur after the initial system halt and reboot.

9) The game "Critical Path" incorrectly requires MCIQTW.DRV to be in its directory. When you install QuickTime for Windows 2.1.1 and delete the old version, this file is removed. You must copy C:\{windows\system}\MCIQTW.DRV to x:\CRITPATH\QTW for the game to work.

10) The game "RedShift" incorrectly requires QTIM.DLL to be in its directory. When you install QuickTime for Windows 2.1.1 and delete the old version, this file is removed. You must copy C:\{windows\system}\QTIM.DLL to x:\REDSHIFT\QTW for the game to work.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20480



Tech Info Library

QuickTime for Windows 2.1.2: Read Me File (2/97)

Revised: 2/27/97
Security: Everyone

QuickTime for Windows 2.1.2: Read Me File (2/97)

Article Created: 27 September 1996
Article Reviewed/Updated: 27 February 1997

TOPIC -----

This article contains the ReadMe file for QuickTime for Windows
Version 2.1.2.

DISCUSSION -----

For More Info

For more up-to-date information on QuickTime for Windows, check out our Web site
at <http://quicktime.apple.com/>

What's In This Document

Key features
Minimum PC configuration
Quick fix for display problems
Things you need to know
Modifying QTW.INI
Making movies playable on both Macintosh and Windows

Key Features

- Improved performance and reliability
- 32-Bit QuickTime for Windows 95 and Windows NT 3.51 or later
- Multifunctional 16/32-bit control panels
- Improved installation and uninstallation process
- Audio support:
 - MIDI Music tracks
 - IMA 4:1 compressed audio
- Accelerated video support:

Direct hardware support for graphics accelerators:

ATI Mach64, Tseng W32P, P9000, Cirrus Logic CL-GD54xx, WD 90C33

Direct hardware support for video drivers that support 16- or 32-bit

Display Control Interface (DCI)

- Support for burnt and searchable text tracks.
- Support for QuickTime VR for Windows (distributed separately).
- Support for MPEG file playback via Sigma Designs RealMagic Board.
- Support for all standard QuickTime decompressors:
 - Apple Graphics, Apple Animation, Apple Uncompressed, Apple Video,
 - Apple Cinepak, Apple Photo JPEG, Indeo 3.2
- Movie Player application can copy selected portions of text track and current visual to clipboard.
- 16- and 32-bit QuickTime for Windows can coexist on Win95 and WinNT.
- The Movie Player is an OLE server, enabling QuickTime movies to be placed and played in 16- or 32-bit applications.
- QuickTime has MCI (Media Control Interface) that provides media integration in applications like Windows' Media Player and various multimedia authoring applications.
- Visual Basic 2.0, 3.0 and 4.0 is supported with a 16-bit VBX file for QuickTime Movie control.

Minimum Pc Configuration*

386SX at 20 MHz

4 MB RAM

6 MB hard disk space available

VGA or better display card

Windows compatible sound card

CD-ROM recommended

Windows 3.1, Windows for Workgroups 3.11,

Windows 95 or Windows NT 3.51 or later

* MPC 1 and above rated machine.

Quick Fix For Display Problems

QuickTime for Windows is very reliable. However in rare cases you can experience display problems or crashes when attempting to run QuickTime movies or pictures. This is usually caused by older or poorly written system video drivers reporting incorrect video hardware configuration information. If this occurs you can almost always use the QuickTime control panel to work around the problem:

1) Open the Windows Control Panel:

- In Windows 95, select Start/Settings/Control Panel. If you see two QuickTime control panels, perform steps 2-4 on both of them.
- In Windows 3.1 and Windows NT, double-click the Control Panel icon in the Main program group.

2) Double-click the QuickTime control panel icon.

3) Click the More button, then click the Video tab at the top of the window. The video page will appear.

4) Click Video Driver in the Draw Method box, then click Apply. Click Close to shut down the QuickTime control panel.

- 5) Restart Movie Player or the appropriate application to try again.
- 6) If the application still does not work, repeat steps 1-4, and choose a slower draw method (listed in the Draw Method box from fastest to slowest).

In the rare event you cannot gain access to the control panel (due to very serious video driver bugs), you will need to edit the QTW.INI file by hand. Most video playback problems can be corrected by adding:

```
[Video]
Optimize=Driver
```

```
[Video 32]
Optimize=Driver
```

If you still have display problems, make sure you have installed the latest video driver from your computer manufacturer.

Things You Need To Know

-
- 1) 32-bit QuickTime for Windows will not run on Windows 3.1 (even if Win32s is installed).
 - 2) When running QuickTime VR (distributed separately) you must use the 16-bit Movie Player, until a 32-bit QuickTime VR is released.
 - 3) Sigma Designs' recently released RealMagic MPEG driver (v2.20) is incompatible with QuickTime for Windows. As a workaround on Win3.1, you can install the old RealMagic driver (v2.01), but on Win95 there is no other version to install. Sigma Designs and Apple Computer are currently working on a solution.
 - 4) The QuickTime for Windows control panel may crash if your computer is using Cirrus display driver version 1.23. If this happens, you must upgrade to version 1.24 or later.
 - 5) The game "Critical Path" requires MCIQTW.DRV to be in its directory. When you install QuickTime for Windows 2.1.2 and delete the old version, this file is removed. You must copy MCIQTW.DRV from your "windows system" directory (usually C:\WINDOWS\SYSTEM) to \CRITPATH\QTW for the game to work.
 - 6) The game "Redshift" requires QTIM.DLL to be in its directory. When you install QuickTime for Windows 2.1.2 and delete the old version, this file is removed. You must copy QTIM.DLL from your "windows system" directory (usually C:\WINDOWS\SYSTEM) to \REDSHIFT\QTW for the game to work.

Modifying QTW.INI

Do not modify QTW.INI by hand. Please use QuickTime's Control Panel. See above (Quick Fix For Display Problems) for the one exception to this rule.

Making Movies Playable On Both Macintosh And Windows

To make a movie playable on both the PC and the Mac, follow these steps:

- 1) Open a movie file using Movie Player 2.0 or above on the Macintosh.
- 2) Choose Save As from the File menu.

- 3) In the dialog box that appears, click the radio button labeled "Make movie self-contained." This tells the utility to sever any links to other movies after incorporating the relevant video into this movie.
- 4) Select the checkbox labeled "Playable on non-Apple computers." This causes the movie to be saved as a single fork movie.
- 5) Rename the movie using PC naming conventions. The filename should be 8 characters in length for maximum portability. Use the extension ".mov." For example: MYMOVIE.MOV

The resulting file is a QuickTime cross-platform movie that can be played on either a Macintosh or any x86-based computer with Windows 3.x, Windows NT, and Windows 95.

Remember, when creating movies on the Macintosh that the following features are not yet available on Windows:

- MACE, sprites, time code, and modifier tracks
- Apple Component Video decompressor
- Multiple video tracks
- Display of non-burnt text tracks

Article Change History:

27 Feb 1997 - Fixed the URL.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:20481



Tech Info Library

Apple Spec Database runtime application Read Me (9/96)

Revised: 9/27/96
Security: Everyone

Apple Spec Database "runtime" application Read Me (9/96)

=====

Article Created: 27 September 1996

TOPIC -----

This article is the Apple Spec Database "runtime" application ReadMe file.

DISCUSSION -----

Name: Apple Spec Database "runtime" application

Version: 9/96

Released: September 16, 1996

Description: This application allows users who do not have FileMaker Pro 3.0 to view and use the Apple Spec Database. To use this application the "Apple Spec 9-96.sea" file should also be downloaded.

From the Read Me

Apple Spec Database files contain detailed technical specifications on a variety of Apple computers, displays, and printers introduced since 1984. These specifications include information about memory configurations, power requirements, video capabilities, built-in ports, software, sound capabilities, and logic board components.

The database was originally designed for those who had a regular need for this kind of information, such as sales and support professionals. It also became an easy way for others to learn more about some of the products Apple has introduced over the years. The information is delivered in a cross-referenced database format for easy search and retrieval. It will look best when viewed on a monitor set to 16 or more colors.

Apple Spec Database was created in FileMaker Pro 3.0. To use the database:

Step 1

Open the self-extracting archive which contains the Apple Spec Database files to decompress them. The self-extracting archive is named "Apple Spec 9-96.sea".

Step 2

Open the file named "Apple Spec" using FileMaker Pro 3.0. If you do not have FileMaker Pro 3.0, you can use the Apple Spec Database "runtime" application. (See step 3.)

Step 3 (only necessary if you do not have FileMaker Pro 3.0)

Open the self-extracting archive which contains the Apple Spec Database "runtime" application to decompress it. The self-extracting archive is named "Apple Spec 9-96 app.sea".

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Tech Info Library Article Number:20482



Tech Info Library

PC Compatibility Crd: AppleShare Client for Windows Set Up(9/96)

Revised: 9/27/96
Security: Everyone

PC Compatibility Crd: AppleShare Client for Windows Set Up(9/96)

=====

Article Created: 27 September 1996

TOPIC -----

I have a Power Macintosh 7200/120 computer with a PC Compatibility Card installed running Windows v3.11. I am having difficulty configuring the AppleShare Client for Windows to work under the PC/DOS card and Windows for WorkGroups. I need the IRQ, DMA and interrupt settings.

Where can I find this information?

DISCUSSION -----

These instructions are in Appendix B of the PC Compatibility Card User's Manual, page 155.

Begin_Table

Installing AppleShare for Windows in Windows for Workgroups
=====

This section describes how to install and set up the AppleShare for Windows protocol for use with an ODI driver in Windows for Workgroups.

Step 1

Install the NetWare client software.
For more information, see "Installing NewWare Client Software" earlier in this appendix.

Step 2

Install AppleShare for windows according to the instructions that came with it.

Step 3

Refer to "Running the Network Protocol Setup (SETNET) Utility" near the end of this appendix and follow the instructions there.

Step 4

After running setnet, make sure your configuration files contain the following sections.

These sections assume no other network software is installed.

NET.CFG (with ODI support installed)

```
LINK SUPPORT
    BUFFERS 10 628
    MEMPOOL 16K
```

```
PROTOCOL APPLETALK
    DEFAULT MACODI #1
    AARP MACODI #1  H(0001) L(6) B(090007FFFFFFF)
```

```
LINK DRIVER MACODI
    INT #1 10
    PORT #1 300 0
    FRAME ETHERNET_SNAP
    FRAME ETHERNET_802.3
    PROTOCOL IPX 0 ETHERNET_802.3
    PROTOCOL APPLETALK 80007809B ETHERNET_SNAP
    PROTOCOL AARP 80F3 ETHERNET_SNAP
```

ATDRIVER.BAT (with ODI support installed)

```
C:\APPLE\A_SHARE\LSL.COM
C:\APPLE\A_SHARE\MACODI.COM
C:\APPLE\A_SHARE\ODI.EXE
```

If you install a NetWare client after the AppleShare client, make sure that IPXODI and VLM are loaded after ATDRIVER.BAT in the NET.CFG file.

NOTE: To run the AppleTalk protocol in both the Apple and DOS environments you must have a Macintosh with the Curio Prime Ethernet interface. For more information see the Tech Info Library article titled, "DOS Compatibility Cards and Supported Protocols."

End_Table

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20483



Tech Info Library

Apple Color LaserWriter 12/660 PS: Description (10/96)

Revised: 10/18/96
Security: Everyone

Apple Color LaserWriter 12/660 PS: Description (10/96)

=====

Article Created: 27 September 1996
Article Reviewed/Updated: 18 October 1996

TOPIC -----

This article contains the Apple Color LaserWriter 12/660 PS description.

DISCUSSION -----

Description
=====

The Apple Color LaserWriter 12/660 PS is a high-performance, multiplatform Adobe PostScript color laser printer that provides outstanding results for both color and grayscale printing. It's ideal for anyone who requires convenient, superior-quality color printing capabilities.

Today, everyone—from senior executives to sales professionals to schoolteachers—is looking to improve the impact of printed documents by incorporating color. Color charts can highlight financial data, color logos can make product presentations more appealing, color graphics can grab—and hold—student interest, and on and on. Unfortunately, until now, high-quality color printing involved expensive specialized equipment that put it out of reach for most of those who could benefit from it.

The Color LaserWriter 12/660 PS provides a breakthrough in color printing performance. With its 600-dot-per-inch resolution, it provides the outstanding print quality you need—fast. Its performance contributes to your efficiency; for example, the Color LaserWriter 12/660 PS can be used to print multiple color copies (up to 180 per hour), making it perfect for producing handouts. And to help you get started using this printer quickly and efficiently, your purchase includes not only everything needed to start printing impressive color documents right away, but also delivery and setup.

That convenience remains true over time, too, because the Color LaserWriter 12/660 PS requires only seven printer supplies and features an easy-access

front-loading design. It also comes with valuable tips and techniques to help you get the best performance and image quality possible when working with many of the most popular graphics and page-layout applications. Add to that this printer's easy and flexible networking capability, which lets you share its cost across an entire workgroup (including systems running Windows 95), and color printing has never been so simple.

So if you want convenient color printing—without a compromise in quality—the Apple Color LaserWriter 12/660 PS is the printer for you.

Features

=====

Breakthrough Print Quality

- Offers true 600-dpi resolution for sharp text and graphics
- Provides superior color print quality, as well as high-quality black-and-white printing
- Uses Color PhotoGrade technology for near-photographic-quality color
- Supports ColorSync 2.1 for outstanding color matching
- Provides valuable tips and techniques that can help you enhance print performance when working with many popular graphics and page-layout applications
- Includes 39 PostScript and 64 TrueType fonts

Compatibility

- Works with Windows 95, Windows NT, Windows 3.1, and UNIX software-based systems, as well as with the full line of Macintosh and Power Macintosh computers
- Offers a range of networking connections: standard LocalTalk, IEEE-1284 bidirectional parallel, and Ethernet (supporting AppleTalk, TCP/IP, and Novell NetWare protocols)

Ease of use

- Includes delivery and setup, so you can get started printing immediately
- Offers easy, single-button installation of printing software and fonts
- Includes everything needed to print impressive color output; requires only seven printer supplies
- Includes a 250-sheet cassette and 100-sheet multipurpose tray; offers optional 250-sheet tray that supports letter, legal, A4, and B5

Superior Productivity

- Prints an impressive 12 pages per minute for black and white, 3 pages per minute for color, and 1 page per minute for transparencies
- Provides impressive performance through its powerful RISC processor—the 30-MHz AMD 29030—and Apple-designed color-matching and compression ASICs
- Includes a SCSI interface for hard disk drive font storage

System Requirements

=====

- An Apple Macintosh or compatible computer with at least 4MB of RAM and Macintosh system software version 7.1 or later
- An IBM or compatible computer with at least 8MB of RAM and Microsoft Windows 3.1 or Windows 95 or later

Ordering Information

=====

Apple Color LaserWriter 12/660 PS Order No. B3020LL/A

- Color LaserWriter 12/660 PS
- Color LaserWriter 12/660 PS Setup Kit (contains cyan, magenta, yellow, and black toner cartridges, photoconductor replacement kit, fuser oil, user's guide, tips and techniques for optimizing image quality and performance, and limited warranty)

+=====+	
Options and Accessories	Order Number
+=====+	
Color LaserWriter Cyan Toner Cartridge	M3757G/A
+-----+	
Color LaserWriter Magenta Toner Cartridge	M3760G/A
+-----+	
Color LaserWriter Yellow Toner Cartridge	M3758G/A
+-----+	
Color LaserWriter Black Toner Cartridge	M3756G/A
+-----+	
Color LaserWriter Photoconductor Replacement Kit	M3761G/A
+-----+	
Color LaserWriter Fuser Oil	M3755G/A
+-----+	
Color LaserWriter Transparencies—Letter	M3876G/A
+-----+	
Color LaserWriter Transparencies—A4	M3877G/A
+-----+	
Color LaserWriter 250-Sheet Feeder	M3762G/A
+-----+	
Color LaserWriter Universal Cassette	M3874G/A
+-----+	
Color LaserWriter Internal Hard Disk Drive	M3875G/A
+-----+	
Apple Ethernet Thin Coax Transceiver	M0329Z/B
+-----+	
Apple Ethernet Twisted-Pair Transceiver	M0437Z/B
+-----+	
Apple Ethernet AUI Adapter	M043LL/A
+-----+	
Apple 1284 Parallel I/O Cable	M4235ZM/A
+=====+	

Article Change History:

18 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20484



Tech Info Library

Color LaserWriter 12/660 PS: Technical Specifications (4/97)

Revised: 4/30/97
Security: Everyone

Color LaserWriter 12/660 PS: Technical Specifications (4/97)

Article Created: 30 September 1996
Article Reviewed/Updated: 30 April 1997

TOPIC -----

This article contains the Apple Color LaserWriter 12/660 PS technical specifications.

DISCUSSION -----

Technical Specifications
=====

Print Engine and Controller

- 30-MHz AMD 29030 RISC processor
- Engine life of 300,000 pages monochrome, 150,000 pages color
- No monthly maximum duty cycle

Print Quality

- True 600-dpi resolution
- Color PhotoGrade, Apple's standard enhanced 600-dpi imaging, 200 lines per inch, nearly two times standard 600-dpi color laser printers

Memory

- 16MB of RAM standard; supports Color PhotoGrade Apple Contone Compression technology which enables 130MB of data to be printed with only a 16MB printer
- Expandable to 40MB with optional upgrades (1MB, 4MB, or 16MB 72-pin, 60ns SIMMs)

Interfaces

- Ethernet port (supports EtherTalk, TCP/IP, and Novell NetWare)

protocols)

- LocalTalk port
- All ports active simultaneously
- IEEE 1284 bidirectional parallel port (special cable required)
- SCSI port for external or optional internal hard disk drive for font storage

Print Speed

- 12 pages per minute for monochrome
- 3 pages per minute for color
- 1 page per minute for transparencies
- Actual print speed depends on file complexity, network traffic, application, and computer used

Language Supported

- Adobe PostScript Level 2

Fonts

- 39 PostScript (Type 1) fonts in ROM, plus screen fonts for Macintosh and Windows from the following families:

ITC Avant Garde Gothic	ITC Bookman Courier	Helvetica
Helvetica Narrow	Helvetica Condensed	Palatino
New Century Schoolbook	Symbol	Times
ITC Zapf Chancery	ITC Zapf Dingbats	

- 64 TrueType fonts on Macintosh disks from the following families:

Chicago	Delphian	ITC Garamond Narrow
Geneva	Helvetica Black	Helvetica Compressed
Lubalin Graph	Lucida Bright	Machine
Monaco	Nadianne	New York
Old English Text	Onyx	Oxford
Swing	Zeal	

- Prints any PostScript (Type 1) or TrueType fonts

Storage

- Optional internal 240MB hard disk drive

Paper Capacities

- Standard 250-sheet feeder, 100-sheet multipurpose tray
- Optional 250-sheet universal feeder

Print Materials

- 16- to 24-lb. (60 to 90 g/m²) bond from the 250 sheet cassette
- 16- to 28-lb. (60 to 105 g/m²) bond from the multi-purpose tray

- Paper: U.S. letter, legal, A4, and B5
- Most letterhead and colored stock
- Use only Apple Color LaserWriter 12/600 PS transparencies

Printer Supplies

- Cyan, magenta, yellow, and black toner cartridges
 - Print 4,000 pages each at 5% coverage
- Photoconductor replacement kit
 - Prints 40,000 pages in black and white or 10,000 pages in color, continuous printing.
 - Prints 13,000 pages in black and white or 6,500 pages in color, intermittent printing. (Printing single-page documents only)
- Fuser oil
 - Prints 10,000 pages
- Fuser replacement kit
 - Air filter, ozone filter, fuser unit transfer drum cleaning unit; replace at 60,000 pages

Power Requirements

- U.S./Japan: 100 to 120 V, 50 to 60 Hz
- Europe/Australia: 220 to 240 V, 50 Hz

Power Consumption

- Operating mode: 100/120 V, 535 W; 220/240 V, 524 W
- Standby mode: 110/120 V, 215 W; 220/240 V, 238 W
- Energy-saving mode: 42 W (complies with EPA Energy Star)

Environmental Requirements

- Temperature: 50 to 86 deg. F (10 to 30 deg. C)
- Humidity: 20% to 80% noncondensing
- Toner cartridge transit environment: -4 to 104 deg. F (-20 to 40 deg. C)

Size and Weight

- Height: 18.0 in. (45.7 cm)
- Width: 21.0 in. (53.3 cm)
- Depth: 23.0 in. (58.4 cm)
- Weight: 110.0 lb. (49.5 kg)

System Requirements

- An Apple Macintosh or compatible computer with at least 4MB of RAM and Macintosh system software version 7.1 or later
- An IBM or compatible computer with at least 8MB of RAM and Microsoft Windows 3.1 or Windows 95 or later

Ordering Information

=====

- Apple Color LaserWriter 12/660 PS Order No. B3020LL/A
- Color LaserWriter 12/660 PS
 - Color LaserWriter 12/660 PS Setup Kit (contains cyan, magenta, yellow, and black toner cartridges, photoconductor replacement kit, fuser oil, user's guide, tips and techniques for optimizing image quality and performance, and limited warranty)

Begin_Table

+=====+	
Options and Accessories	Order Number
+=====+	
Color LaserWriter Cyan Toner Cartridge	M3757G/A
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+-----+	
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+-----+	
Color LaserWriter Black Toner Cartridge	M3756G/A
+-----+	
Color LaserWriter Photoconductor Replacement Kit	M3761G/A
+-----+	
Color LaserWriter Fuser Oil	M3755G/A
+-----+	
Color LaserWriter Transparencies-Letter	M3876G/A
+-----+	
Color LaserWriter Transparencies-A4	M3877G/A
+-----+	
Color LaserWriter 250-Sheet Feeder	M3762G/A
+-----+	
Color LaserWriter Universal Cassette	M3874G/A
+-----+	
Color LaserWriter Internal Hard Disk Drive	M3875G/A
+-----+	
Apple Ethernet Thin Coax Transceiver	M0329Z/B
+-----+	
Apple Ethernet Twisted-Pair Transceiver	M0437Z/B
+-----+	
Apple Ethernet AUI Adapter	M043LL/A
+-----+	
Apple 1284 Parallel I/O Cable	M4235ZM/A
+=====+	

End_Table

Article Change History:

- 21 Feb 1997 - Edited printer supplies info for clarity.
- 18 Oct 1996 - Changed distribution status.
- 30 Apr 1997 - Corrected error in Print Materials section.

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Tech Info Library Article Number:20485



Tech Info Library

File Sharing and FoxPro Record Lock Process Issue (9/96)

Revised: 9/30/96
Security: Everyone

File Sharing and FoxPro Record Lock Process Issue (9/96)

=====

Article Created: 30 September 1996

TOPIC -----

My Power Macintosh 9500/150 computer freezes when I try to "Close Locks" in Microsoft's FoxPro with File Sharing turned on. The computer fails during the lock process when trying to lock the 221st record. The same computer can then be restarted with the Shift key held down, which turns extensions off, and more than 220 locks can be closed.

Is something wrong with the File Sharing extension, or is this limit also imposed by the AppleShare File Server?

DISCUSSION -----

This error is a result of a toolbox call to PBLockRange receiving return code -5015, which means a server cannot lock any additional ranges. This toolbox call is primarily used by database application to insure integrity of file updates, by selectively locking a range of bytes, typically a record's worth, while an update write operation takes place.

This toolbox call only has meaning when applied to a file on a server volume or a local volume which is shared. Thus when the computer is booted with extensions off, no AppleShare activity like File Sharing or mounting of servers can happen. The call to PBLockRange is ignored since there is no integrity exposure of multiple shared access. This would explain why the error does not occur with extensions off.

"Inside Mac" does not state a limit for simultaneous ranges to be locked, presumably because it can change with the environment (File Sharing, AppleShare Server, Netware) or future implementations. It would appear that Mac OS File Sharing has a limit of 220 ranges that can be locked. Other implementations of AFP (AppleTalk Filing Protocol) could have other maximums.

In talking with Microsoft, they mentioned that this issue was solved with their Visual FoxPro 3.0 product.

If you want to determine the number of locks, here is a FoxPro program that can be used to determine the maximum number of locks in the File Sharing environment.

Begin_Table

```
===== Begin Code Below =====  
SET STATUS ON  
USE SYS(2004)+"Tutorial:Customer.dbf" SHARED  
SET MULTLOCKS ON  
DO WHILE !EOF() AND RLOCK()  
    SKIP  
ENDDO  
===== End Code Above =====
```

End_Table

This program sequences through every record in the database and locks the record, until range locks are exceeded or all records are locked. The database specified, Tutorial:Customer.dbf, is an installed FoxPro sample database or it could be your database. To determine the maximum for a server, there must be enough records in the database to exhaust all available range locks.

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Tech Info Library Article Number:20486



Tech Info Library

AppleShare 4.2.1 to 4.2.2 Updater (9/96)

Revised: 9/30/96
Security: Everyone

AppleShare 4.2.1 to 4.2.2 Updater (9/96)

Article Created: 30 September 1996

TOPIC -----

This article is the AppleShare 4.2.1 to 4.2.2 Updater read me information.

DISCUSSION -----

This patcher application will update AppleShare from 4.2.1 to 4.2.2. Some third party applications and control panels have been found to change the modification dates of certain files to the current date even though no changes have been made to the file.

AppleShare 4.2.1 to 4.2.2 Note

With AppleShare 4.2.1, the modification date of a file can change, even if a file has read-only access. If this occurs, no modifications are made to the actual data in the file. The change is being made by the server, not the client workstation or the application. AppleShare 4.2.2 resolves this issue with third party software incorrectly changing the modification dates of certain files. This patcher application will update AppleShare 4.2.1 to 4.2.2 and prevent this problem from occurring. Apple recommends that AppleShare 4.2.1 customers install this patch.

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Tech Info Library Article Number:20487



Tech Info Library

Newton: Use Proper Localized Newton OS Patches (10/96)

Revised: 10/1/96
Security: Everyone

Newton: Use Proper Localized Newton OS Patches (10/96)

=====

Article Created: 1 October 1996

TOPIC -----

I have Apple MessagePad 120, which has the German Newton OS installed on it. Patches are available for the U.S. Newton OS, but not for the German Newton OS. Can I use the U.S. Patches on the German Newton OS?

DISCUSSION -----

No. You must use the proper localized OS patches. You cannot mix the Newton OS patches.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20489



Tech Info Library

At Ease: Add CD-ROM Discs & Other Information Appears (10/96)

Revised: 10/1/96
Security: Everyone

At Ease: Add CD-ROM Discs & Other Information Appears (10/96)

Article Created: 1 October 1996

TOPIC -----

When adding CD-ROM discs in the At Ease 3.0.x Administration application, in some cases clicking the Settings button, will display items for another previously installed CD-ROM disc. The settings may or may not be for a CD-ROM disc that is currently in the list, but will always be for a CD-ROM disc that was added sometime in the past.

DISCUSSION -----

A bug was found in the CD-ROM preferences code which dated back to At Ease 3.0. This bug affects all At Ease 3.x (both basic and workgroups, including 3.0.3) and 4.0 for workgroups. The bug has been noted and will be addressed in the next 4.0 version of At Ease; there is no known time frame for this fix.

NOTE: This bug only affects the CD-ROM preferences file.

Fix for At Ease 3.0.x

The "At Ease 3 CDRom Prefs Patch.sea" file has been released and can be found at Apple's online software update locations. This patch is a system extension that corrects a problem with the CD-ROM Preferences command in At Ease versions 3.0 and later and At Ease for Workgroups versions 3.0 through 3.0.3.

Technical Explanation

The bug found calls _UniqueID to locate an unused resource ID to add the CD-ROM item list information. Unfortunately, the call this looking at the Administration application, and not the CD-ROM preference file, so UniqueID will not check for a unique ID in the proper file. This would not be a problem if UniqueID was random, but it seems to generate IDs that are not totally random and thus results in IDs that conflict with IDs that are already in the CD-ROM preference file.

Workaround

If you have At Ease 3.0.x, you should down load the At Ease 3 CDROM Prefs Patch and apply it. If you are using At Ease 4.0, below is a workaround, follow the steps below:

Step 1

Quit the At Ease Administration application and place the CD-ROM Preferences file, located either on the server, or locally (depending on where their information is stored) in the trash. This will start over with an empty CD-ROM list.

Step 2

Launch the At Ease Administration application and add all of the CD-ROM discs at one time. Do not quit the Administration application until they have all been added. You should be able to change the settings later with no problems; it's adding a new CD-ROM discs that cause the bug.

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Tech Info Library Article Number:20490



Tech Info Library

Apple QuickTake Cameras: External Power Q&A (10/96)

Revised: 10/1/96
Security: Everyone

Apple QuickTake Cameras: External Power Q&A (10/96)

=====

Article Created: 1 October 1996

TOPIC -----

This article about the QuickTake 100 and QuickTake 150 digital cameras contains questions and answers regarding the external power requirements.

DISCUSSION -----

Question: What are the external power requirements of the Quicktake cameras?

Answer: The manuals for the QuickTake 100 and Quicktake 150 state that the external power requirements for the camera are:
4.5 V DC/1.75 A to 8.0 V DC/1.0 A.

Question: What is the voltage output of the Battery booster pack?

Answer: 6 volts (nominal).

Question: What is the polarity of the cable used to connect the battery pack to the camera?

Answer: The center terminal of the connector is positive and the shell is negative.

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Tech Info Library Article Number:20491



Tech Info Library

PowerBook Computers: Which Modems Came With Them? (10/96)

Revised: 10/4/96
Security: Everyone

PowerBook Computers: Which Modems Came With Them? (10/96)

Article Created: 1 October 1996
Article Reviewed/Updated: 4 October 1996

TOPIC -----

This article contains a list of Macintosh PowerBook computers that came with modems.

DISCUSSION -----

U.S. or International?

Please note that the international (INTNT'L) and United States (US) versions of the PowerBook computer models listed in the chart below may vary in the types of modems that shipped with them. You should also be aware that all of the international versions of the modems have mini-DIN 8 ports instead of RJ-11 ports, each of which was designed for the appropriate country-specific DAA type.

Begin_Table

Macintosh PowerBook Computers

100, 140, 145, 145B, 170 (INTNT'L)	- Apple Fax Data Modem (2400 bps data, 9600 bps fax)
100, 140, 145, 145B *, 170 (US)	- Apple Fax Data Modem (2400 bps data, 9600 bps fax)
145B * (US)	- Global Village Powerport Bronze Fax modem (2400 bps data, 9600 bps fax) (service part number

150 ** (US & INTNT'L)	- Did not include an internal modem.
160, 165c, 180, 180c	- Apple Express Modem (14.4 bps)
Duo 200 & 2300 series (US & INTNT'L)	- Apple Express Modem for Duo (14.4 bps)
500 Series (INTNT'L) ***	- Apple Express Modem II (14.4 bps)
500 Series (US)	- Global PowerPort Village Mercury for the PowerBook 500 Series (19.2 bps)
5300 & 190 series (US & INTNT'L)	- Do not support internal modems. However, PC (PCMCIA) Card modems can be used in the built-in PC Card slot.

- * - Some early PowerBook 145B models did not include a modem at all while others shipped with the Apple Fax Data Modem.
- Some later PowerBook 145B Plus Pack models shipped with a third-party modem:

PowerBook 145B Plus Pack

- + One version of the PowerBook 145B Plus Pack shipped with a built-in Global Village Powerport/Bronze Fax modem.
- + Other versions of the version of the PowerBook 145B Plus Pack were sold with several different bundled software applications, but did not include a modem.

** Although the PowerBook 150 did not include an internal modem, it was shipped with modem patch software from Apple installed in the System folder. This modem patch software is necessary in order for a third-party modem to be installed and utilized in this computer.

*** International versions of the Macintosh PowerBook 500 series computers came with the Apple Express Modem II (not available in the U.S) instead of a Global Village Modem.

End_Table

This article was published in the Information Alley on 4 October 1996.

Article Change History:

04 Oct 1996 - Added Info Alley keyword.

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Tech Info Library Article Number:20493



Tech Info Library

Tech Note: System 7.5.5 (10/96)

Revised: 4/21/97
Security: Everyone

Tech Note: System 7.5.5 (10/96)

Article Created: 2 October 1996

TOPIC -----

System 7.5.5 includes changes to the Virtual Memory Manager, some substantial Code Fragment Manager improvements, and a variety of enhancements and improvements. We recommend this update for all Macintosh computers running System 7.5.3. System 7.5.5 will only install on a Macintosh or Mac OS-compatible computer running some version of System 7.5.3. If you are running an earlier version of System Software, you need to upgrade to System 7.5.3 before you can install System 7.5.5.

Contents of this Tech Note

- About System 7.5.5 Features
- Future System Software Support
- What Happened to System 7.5.4?
- Detecting System 7.5.5

DISCUSSION -----

About System 7.5.5 Features

Virtual Memory

We rewrote parts of the Virtual Memory Manager for all machines that can support virtual memory. Performance using virtual memory should be substantially improved. When compared to the currently shipping virtual memory, when VM is turned on, the system boots up faster, Power Macintosh applications launch faster, and QuickTime movies play smoother. The following sections describe some of the features of this new VM.

- VM Performance Issues
 - We improved the page aging algorithm.
Every 8 page faults, we aged the physical RAM pages and refilled the

"victim" list consisting of the pages that are to be replaced in the next 8 page faults. The function which did this could take up to 46 ms to age 48 MB of RAM on a Power Macintosh 7500. We replaced the algorithm used by this function with a much simpler and faster algorithm. Worst case for the new algorithm is about the same as the current algorithm because it only has to look at every physical page about once. The pause every 8 page faults is gone.

- Pages are written to disk multiple times because the act of writing a page to disk marks the virtual memory page dirty. When a dirty logical page is replaced, a virtual memory optimization finds up to 6 additional dirty pages contiguous in the virtual memory backing store file, marks the pages clean, and then writes them out to disk with a single write request. Since it's likely that dirty logical pages close to a dirty logical page will have a similar "age" and thus will likely be replaced in the near future, too, this optimization will likely make future page faults faster.

However, LockMemory marks all of the pages locked as dirty and since LockMemory is called on pages written by DMA I/O devices, the just-cleaned pages are dirtied when they are written. That results in an I/O trace to the virtual memory backing store file that can look something like "write 7 pages, read one page, write 7 pages, read one page " instead of the intended "write 7 pages, read 1 page, read 1 page, read 1 page, read 1 page, read 1 page, read 1 page, read 1 page, read 1 page, write 7 pages, read 1 page..."

- New VM API call

A new API call, LockMemoryForOutput, has been added to the _MemoryDispatch trap. This new routine works exactly like LockMemory except that it does not dirty the locked pages. LockMemoryForOutput is meant to be used for DMA operations that just read memory. DMA operations that write to memory must use LockMemory to ensure that the pages are marked dirty. LockMemoryForOutput is called through the _MemoryDispatch trap using selector 10.

The following glue will be added to Memory.h for the new call:

```
/* Lock memory for output */
#pragma parameter __D0 LockMemoryForOutput(__A0, __S1)
extern pascal OSErr LockMemoryForOutput(void *address, unsigned long
count)
TWOWORDINLINE(0x700A, 0xA05C);
```

Developers can determine if LockMemoryForOutput is available by testing for the gestaltVMHasLockMemoryForOutput bit (bit 1) in the gestaltVMAttr Gestalt selector. If bit 1 is set, LockMemoryForOutput is available.

- VM Bug Fixes

- System stability improvements

We fixed several internal calls which had the potential of hanging or crashing your machine when passed invalid arguments. Because of a bug in VM, CFM could occasionally leave a file open when it should not be

left open. Several crashing conditions in HoldMemory and LockMemory were repaired. Other fixes which had previously been made in PowerPC VM were rolled into 68K VM as well.

- Added two new SysError values

If VM's deferred user function table ran out of entries, VM would trash low memory starting at location 0. We now call SysError with dsVMDeferredFuncTableFull (112) instead of trashing memory off of a NULL pointer. You can get this error in several ways. One way is to defer already-deferred i/o requests. Another way is to install a Time Manager task which has already been installed. VM was ignoring all errors while reading or writing to the "VM Storage" backing store file. If there was an error, the system would likely crash later with a seemingly unrelated problem. There's no way to continue or recover if this happens, so VM now calls SysError with dsVMBadBackingStore (113) instead of continuing on with a bad page or memory. This error can happen whenever your backing store volume returns an error. Examples can be genuine disk i/o errors, losing battery power on a SCSI-disk-mode PowerBook, turning off an external hard disk which contains your backing store, and so forth.

- Calls which may be deferred to VM safe time

The following parts of the system are patched by virtual memory so that they may possibly be deferred to VM safe time:

PostEvent

Time Manager tasks

Read, Write, Control, & Status driver calls

VBL tasks

Slot VBL tasks

ADBOP

SCSIDispatch

Inside Macintosh:Memory page 3-11 has a discussion of page faults and deferring user code while the driver of the paging device is busy. The list on page 3-12 is incomplete; the types of code listed above are a more complete list, based on the current VM sources.

- VM now holds some stack for Control and Status calls

VM now holds 2K of stack for all _Control and _Status calls. This 2K of stack was previously being held for _Read and _Write calls.

These changes apply to all machines which can run virtual memory (that is, all machines except the Macintosh Plus, SE, Classic, LC, Portable, PowerBook 100, or Macintosh II without a PMMU).

Code Fragment Manager

We now load libraries better in low memory situations when virtual memory is off. This should help products which use a fair amount of memory (for example, multimedia games) on small memory configuration entry-level Macintosh computers. In particular, a "private copy" of the code for a shared library is now placed in the application heap if there is sufficient room in the application heap, but

there is no room in temporary memory or the system heap. The Code Fragment Manager will use no more than the difference between the minimum memory partition size and the actual memory partition size for this private copy.

We bypass the file system cache (using the technique documented in Inside Macintosh:Files on page 2-95) when reading fragments in memory. We use BlockMoveData in more places. These changes result in faster application loading.

A possible confusing issue for developers is that the Code Fragment Manager may return different error codes under System 7.5.5 than it did under System 7.5.3 or earlier, especially in the case of a missing weakly imported library (called a soft import in Inside Macintosh:PowerPC System Software.) The error code returned will depend upon the options passed to GetSharedLibrary. In particular the errors cfragNoLibraryErr (-2804) and cfragLibConnErr (-2817) might be returned for very similar reasons. Developers should treat these errors as interchangeable. You should check for the existence of weakly imported symbol by using the code in Inside Macintosh: PowerPC System Software on page 1-25, rather than by calling GetSharedLibrary and depending upon a specific error code being returned.

These changes apply to all PowerPC based Macintosh computers. There are no changes to the 68K version of the Code Fragment Manager in this release.

Modern Memory Manager

If an application tried to allocate a small negative amount of memory it would crash with a type 11 error. Inside the Modern Memory Manager, we changed a local variable from signed long to unsigned long, and added checking for overflow from high positive numbers to low negative ones. This affects all PowerPC Macintosh computers.

Background-Only Applications

If two (or more) background-only applications were running and both called MaxApplZone, the system would hang, because the Process Manager was not correctly saving and restoring the process state for each application. (This is the bug documented in Technote PS 2, "Background Only Applications.") This bug had existed since the introduction of faceless background applications. We now correctly save and restore the process state for each application. This affects all machines.

Floppy disk insertion and asynchronous i/o bug

On a Macintosh 6100, 7100, or 8100 machine, when a floppy disk was inserted and there was asynchronous file system activity going on, the machine could hang. An internal routine was incorrect because the ROM was finalized while some experimentation was going on with how the file system works. Machines with later ROMs are fine. We patch the 6100/7100/8100 ROM to bring this ROM family up to date. This only affects these three classes of machine. It affects them at any clock speed.

Floppy disk formatting

On fast processors (180 Mhz or better, 604e), floppy disk formatting would sometimes fail because the code didn't wait long enough to switch heads to the second side. This left the second side unformatted. We changed the timing in the floppy disk formatting routines for this case, and now format floppies correctly. Some machines may have an extension called "PowerMac Format Patch" which does the same thing. If System 7.5.5 installer detects this extension, it should delete it. (The extension will not install its code under System 7.5.5 or later.)

Emulator cache flush bug

If the emulator was requested to flush a non-existing memory range, the emulator could get stuck in an infinite loop. We now check the range to be flushed and exit if invalid memory is specified. This fix affects the PowerBook 5300, 2300, and PCI-based desktop Macintosh computers.

CalcCMask

When color searchprocs were used with CalcCMask the resulting bit mask was randomly shifted to the left creating a jagged edge. This shifting effect was caused by a logic error in an internal QuickDraw macro. The macro returned incorrect mask values (0 / 0xFF instead of 0 / 1) to CalcCMask when the destination pixel depth was 1 bit.

File Manager flush bug

The File Manager was making a request to flush a non-existing memory range. Because of the Emulator cache flush bug described above, the emulator would get stuck in an infinite loop. We patch _GetFPos, _SetFPos, and _Read to fix this problem. This fix affects the PowerBook 5300, 2300, and PCI-based desktop Macintosh computers.

Infrared Remote

On machines which support Infrared Remote Control, there were two problems which could arise. If the CPU was powered up using the remote control, further remote control commands were ignored. If the CPU was powered up normally via the keyboard, the remote control commands would work correctly. However if the volume up or down button was held down (causing repeated Infrared Remote commands) for a sufficient length of time, infrared commands would stop working. This was caused by a patch which wasn't getting installed under some circumstances. This fix applies to all machines which support Infrared Remote Control.

LocalTalk DMA

Fixes a potential data corruption problem when the Macintosh 5400/120 is configured as follows: as a server with multiple clients connected, and simultaneously as an Apple Remote Access server with at least one Apple Remote Access client connected and that client is logged onto a server via Apple Remote Access. When lots of traffic was being generated, the clients could experience data corruption when copying files to or from the Macintosh 5400/120 server. We

also fixed a problem where LocalTalk DMA 1.0 would load on machines without the proper hardware.

IR Talk

System 7.5.3 Revision 2 forgot to include the control panel and driver for IR Talk, so a machine which shipped with System 7.5.3 installed and upgraded directly to System 7.5.3 Revision 2 did not have the same IR Talk drivers as a machine which had System 7.5 Update 2.0 installed, or a machine which had System 7.5 Version 7.5.3 installed.

Ethernet on 5400/6400

On the Macintosh 5400 and 6400 models, the Ethernet support had a bug which manifested itself on very busy Ethernets. These models could have slow communications because of dropped packets. This was due to an internal setting which gave higher priority to certain kinds of packets. Now all packets have the same priority.

SCSI Manager

Added a call to LockMemoryForOutput() as described in the Virtual Memory paragraph.

We changed the interrupt level at which SCSI completion routines get executed from level 2 to level 1. Because the interrupt level was at level 2 the SCSI completion routines slowed the performance of expansion cards (such as video capture and sound cards) whose interrupt level was also at level 2. This affects only PowerPC machines running a native version of SCSI Manager 4.3.

We corrected several errors with the MESH SCSI Controller (found on the desktop PowerPC Macintosh computers.) ACK could be released before REQ. There was a disconnect/reconnect bug with reads on old tape drives. We could misread interrupts from the MESH chip.

We fixed two bugs related to the internal SCSI bus on PCI Macs with Fast SCSI. First, we could occasionally mishandle a reconnect if it came in at precisely the same instant we were attempting a new command on the bus. Second, there was a bug in the Mesh controller which could cause it to give a command done interrupt before the target had released REQ. On a fast machine it was possible to issue a new command to the chip while REQ was still on the bus. The controller interpreted this as a new byte and we transferred it twice. This only happens on asynchronous in phases such as message in, asynchronous data in or status phase. The usual result of this bug was a hang. We now wait for REQ to be removed by the device before issuing a new command to the chip.

Sharing printers

Under some conditions involving a blank name in Sharing Setup and the use of shared printers, you could fail to print with a "Resource Not Found" error. This was because System 7.5 Update 2.0 deleted the blank Pascal string used by Sharing Setup. We reinstall the blank user name string if it is missing. This would only affect some Performa users and some users who had never set their

user name, but upgraded with System 7.5 Update 2.0.

PCI startup hang

On 180 Mhz and faster PCI Macs, there was a bug initializing the PCI bridge chip. This made the PCI bus inaccessible during system startup, resulting in a hang. We now initialize the PCI bridge chip more reliably.

Interrupt Service Routines

If you exit an interrupt service routine at a lower interrupt level than that set when you entered the routine, the interrupt level isn't cleared properly, and you won't process any interrupts of lower priority until an interrupt of the original priority or higher is encountered. This affects PCI Macs and Macs with PowerPC upgrade cards installed. The work around for developers is to ensure that you exit any interrupt service routine at the same priority as that which was set when you entered the routine. We fixed a Sound Manager interrupt service routine which was doing this on desktop Macs with PowerPC upgrade cards.

Control Panels and Shared Libraries

This was noticed during the testing of System 7.5.5. We discovered a third party control panel which was linked with MathLib (probably because it linked with CLib.) Because MathLib is also in ROM, space was allocated for the MathLib globals twice. Because control panels run in the Finder process space, the MathLib globals space was allocated in the Finder's application heap, not in the system heap.

On most machines, the MathLibs globals allocated by the ROM combined with the 22K of MathLib globals allocated by the linked MathLib library are small enough to fit in the free and purgable space left in the Finder's application heap. But on the PowerMac 7500/8500/9500, the MathLib globals allocated by the ROM are also 22K, and the combined 44K of MathLib globals uses all but a few bytes of the Finder's application heap. This results in repeated "Out Of Memory" warnings whenever you try to do anything in the Finder.

Future System Software Support

=====

With the release of System 7.5.5 Update, Apple is delivering its final system software release for the Macintosh Plus, SE, Classic, Portable, PowerBook 100, SE FDHD, SE/30, LC, II, IIX, and IICX. These computers were not designed to support 32-bit memory addressing. Future Mac OS releases will require 32-bit memory addressing, which is supported by all other Macintosh models.

What Happened to 7.5.4?

=====

System 7.5.4 was declared finished. Distribution to seed sites had already begun. A problem was found which led to us halting distribution and revising the product. Rather than having to struggle with two versions of 7.5.4 and the

resulting confusion this would cause, we decided to revise the product version number to 7.5.5.

The differences between 7.5.4 and 7.5.5 are:

- A revision to the IR Talk for the Macintosh 5400 and 6400 families.
- We save the VM preferences and chosen desktop pattern when installing on the Macintosh 5400 and 6400 families.
- A minor revision of the Energy Saver control panel.

Detecting System 7.5.5
=====

To distinguish between the multiple versions of system software, the 'sysu' Gestalt selector has been provided. It returns the version number of the currently installed system update, formatted according to the same conventions as the version numbering used in 'vers' resources, as illustrated in Figure 1.

Begin_Graphic

Figure 1

The format of the Gestalt response for the 'sysu' selector.

```
+---+---+---+---+---+---+---+---+
| 0   2 | 0   6 | 8   0 | 0   0 |
+---+---+---+---+---+---+---+---+

+---+---+
| 0   2 | the Major revision level
+---+---+

+---+---+
| 0   6 | the Minor revision level
+---+---+

+---+---+
| 8   0 | the Development stage
+---+---+

+---+---+
| 0   0 | the Prerelease revision
+---+---+
```

End_Graphic

The presence of the 'sysu' Gestalt selector allows application programs to determine if the current installed system software version was established using the system update. The 'sysu' Gestalt selector will only be defined if a system update package was used to establish the current system version: the 'sysu' selector is not defined on machines shipped with System 7.5.3 preinstalled, nor on system software versions earlier than 7.5.3.

Using the 'sysv' and 'sysu' Gestalt Selectors

Here is how you can use the 'sysv' and the 'sysu' Gestalt selectors to establish information about System 7.5.5:

```
long response, updateversion;
OSErr err;
Boolean seven_five_five;
Boolean is_an_update;

seven_five_five = false;
is_an_update = false;

err = Gestalt(gestaltSystemVersion, &response);
if (err == noErr) {
    seven_five_five = (response == 0x00000755);
    if (seven_five_five) {
        err = Gestalt('sysu', &updateversion);
        is_an_update = (err == noErr);
    }
}

/* at this point, seven_five_five will be true if system 7.5.5 is the current
operating system, and is_an_update will be true if the current system version
was established by update. if is_an_update is true, updateversion will contain
the System update's version number (0x02068000 for 7.5.5). */
```

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Tech Info Library Article Number:20494



Tech Info Library

DOS/PC Compat Card: Error 171 When Installing Windows 95 (10/96)

Revised: 10/4/96
Security: Everyone

DOS/PC Compat Card: Error 171 When Installing Windows 95 (10/96)

=====

Article Created: 3 October 1996
Article Reviewed/Updated: 4 October 1996

TOPIC -----

I keep getting the message, "Error 171 has occurred, please contact technical support," whenever I try to install Windows 95 from the multipart floppy disks onto the PC drive container (used with a DOS or PC compatibility card).

DISCUSSION -----

The most likely reason you are getting this error is that you have mounted the PC drive container onto the desktop in the Macintosh environment. You need to unmount the PC drive container by dragging the icon of PC drive file to the trash (or by selecting it and choosing "put away from the File menu). When the drive file is no longer on the desktop, the Windows 95 installer should be able to access the PC drive container and install per the normal instructions.

Article Change History:
04 Oct 1996 - Corrected minor typo.

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Tech Info Library Article Number:20495



Tech Info Library

ANAT Server: Clean System Install Issue (10/96)

Revised: 10/3/96
Security: Everyone

ANAT Server: Clean System Install Issue (10/96)

=====

Article Created: 3 October 1996

TOPIC -----

This article describes an issue which may arise after performing a clean system software installation on an Apple Network Administration Toolkit (ANAT) server.

DISCUSSION -----

You may encounter errors after a clean installation of system software, re-installation of AppleShare Server software, and then immediately installing ANAT, specifically AppleShare agent and At Ease server, before setting up the server with an Owner and Macintosh name.

The At Ease Server extension will return the error, "Unable to initialize At Ease Server."

The AppleShare Agent will return, "AppleShare Agent Unable to create ADSP listener. Error code -1029". Followed by a cricket like sound.

You can either launch the AppleShare Admin application and setup the server, or open the Sharing Setup control panel and enter the Owner Name and Macintosh name. Restart the server and the ANAT software should load correctly.

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Tech Info Library Article Number:20496



Tech Info Library

Network Administrator Toolkit & Quarterdeck Mail Issue (10/96)

Revised: 10/3/96
Security: Everyone

Network Administrator Toolkit & Quarterdeck Mail Issue (10/96)

=====

Article Created: 3 October 1996

TOPIC -----

I have performed a clean system software installation, then an Apple Network Administrator Toolkit (ANAT) installation, and then a Quarterdeck Mail installation. Quarterdeck Mail will not load because of an unknown error, what is wrong?

DISCUSSION -----

You are experiencing a problem between extensions. If you disable the Network Assistant Startup extension, the Quarterdeck Mail extension loads properly. Ordinarily the Quarterdeck extensions loads after ANAT.

You need to rename either the Quarterdeck, or the Network Assistant Startup extension so the Quarterdeck extension load ahead of Network Assistant Startup alphabetically.

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Tech Info Library Article Number:20497



Tech Info Library

Performa 6400: Farallon Fast Ethernet PCI Card & Driver (10/96)

Revised: 10/3/96
Security: Everyone

Performa 6400: Farallon Fast Ethernet PCI Card & Driver (10/96)

=====

Article Created: 3 October 1996

TOPIC -----

I just installed a Farallon PCI Fast Ethernet Card in my Performa 6400 and it will not working. The card came with no software.

DISCUSSION -----

The Farallon PCI Fast Ethernet Card's drivers are in ROM on the card, so there is no software to install. With these Farallon cards, the drivers are read from ROM, but only through Open Transport. Therefore, you must use Open Transport networking when starting the computer so the drivers will load.

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Tech Info Library Article Number:20498



Tech Info Library

PC Compatibility Card: Configuring GDT PowerPrint (10/96)

Revised: 10/3/96
Security: Everyone

PC Compatibility Card: Configuring GDT PowerPrint (10/96)

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Article Created: 3 October 1996

TOPIC -----

I am trying to get the Printer Specific option for PC Compatibility printing to work with GDT PowerPrint. GDT tech support ensured that the proper settings are made for the PC side.

Using the GDT Softworks, the Mac OS prints properly. However when printing from the DOS/Windows environment, the PC Print Spooler launches but remains idle. PC spool files appear in the System Folder:Preferences:Spooler folder, but PC Print Spooler does not appear to do anything with these files.

DISCUSSION -----

Use the following steps to properly configure the GDT PowerPrint software.

Step 1

Connect the printer to your Macintosh using the PowerPrint cable.

Step 2

Install GDT PowerPrint 3.0.1 or later.

Step 3

Choose the Chooser in the Apple Menu, and select the printer.

Step 4

Select the correct port the printer is connected to.

Step 5

Open PC Print Spooler and select Printer Specific in the Preferences window.

Step 6

Switch to the PC environment

Step 7

Launch Windows and go to the printer area (depending on which version of Windows you have this varies).

Step 8

Double-click "Add New Printer" to add the printer.

Step 9

Follow the prompts and install the proper printer driver.

Your printer is now properly configured for printing. The printout may take a little time to print since it has to spool to the Mac OS. PC Print Spooler then tells the GDT driver to print the spool file, then the GDT driver sends the data to the printer.

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Tech Info Library Article Number:20499



Tech Info Library

PC Compatibility Card: CDR101 error reading CD-ROM Discs (10/96)

Revised: 10/3/96
Security: Everyone

PC Compatibility Card: CDR101 error reading CD-ROM Discs (10/96)

Article Created: 3 October 1996

TOPIC -----

I have a PC Compatibility Card in my Power Macintosh computer. I have installed the DOS/Windows drivers for the CD-ROM, but I can only access CD-ROM discs when I am using the Mac OS. When I try to access a CD-ROM disc, I get a message, "CDR101: Not ready reading drive E:, why?"

DISCUSSION -----

CDROM.SYS is the MS-DOS driver allowing the PC Compatibility Cards to access Apple CD-ROM drives. CDROM.SYS requires the proper loading of the Apple CD-ROM extension in the Mac OS, when the Mac OS is starting up. Here are some reason why you may be getting the CDR101: Not ready reading drive E: message.

- 1) You may be using a third-party CD-ROM drive that uses its own CD-ROM extension instead of the Apple CD-ROM extension. Check the CD-ROM drive manufacturer to see if it is compatible with the Apple CD-ROM extension. If it is not compatible, you will not be able to use the CD-ROM drive when you are in the DOS/Windows environment.
- 2) You may be using CD-ROM acceleration software with an Apple CD-ROM drive that replaces the Apple CD-ROM extension. If this is the case, you need to use the Extension manager to switch between the Apple CD-ROM extension and the third-party CD-ROM extension at startup, when you plan on using the PC Compatibility Card.
- 3) You may be using Apple CD-ROM version 5.1.1 or 5.1.2. With these versions of Apple CD-ROM, the PC/Windows environment is unable to read CD-ROM discs if a CD-ROM is not in the drive at startup. The document titled "DOS Compatible: CD-ROM Needs to be in Drive at Startup" explains this issue. To resolve this issue, install Apple CD-ROM 5.1.6 or greater.
- 4) The CD-ROM you are trying to use may not be a format that the PC Compatibility Card can read. The following formats are supported:

ISO 9660

Audio

Hybrid (dual-format Mac/PC) CD-ROM discs*.

* NOTE:

Requires Apple CD-ROM 5.1.5 or later.

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Tech Info Library Article Number:20500



Tech Info Library

PC Compatibility Card: Window for Workgroups TCP/IP Setup 10/96

Revised: 10/3/96
Security: Everyone

PC Compatibility Card: Window for Workgroups TCP/IP Setup 10/96

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Article Created: 3 October 1996

TOPIC -----

This article provides instructions for installing Microsoft's TCP/IP protocols and services to your PC Compatibility Card.

DISCUSSION -----

Equipment required:

- DOS Compatibility Card or PC Compatibility Card
- Windows for Workgroups installation media.
- Microsoft TCP/IP (32-bit) for Windows for Workgroups

TCP/IP and Windows for Workgroups

=====

Windows for Workgroups has many TCP/IP product choices that add the TCP/IP protocol and services to your machine. One of these products is Microsoft's 32bit TCP/IP product. This lab will guide you through the installation of this software using the NDIS driver supplied on the Apple PC Card installer disk.

Installation

=====

Step 1

Start "Network Setup"

All network configuration is done with the "Network Setup" application found in the "Network" group on the desktop level. When this program starts you'll find an empty configuration.

Step 2

Press the "Networks..." button to begin the installation.

Step 3

Click the "Install Microsoft Windows Network:" button.

Step 4

Click the "OK" button.

You will return to the "Network Setup" window.

Step 5

Press the "Drivers..." button to add the network interface driver software.

An empty "Network Drivers" dialog appears.

Step 6

Click the "Add Adapter..." button.

After scanning the drive a list of the built-in driver interfaces appears.

Step 7

Select Unlisted or Updated Network Adapter option.

Since you need to use the driver provided on the "PC Software" disk of the DOS Compatibility Card software you must select the Unlisted or Updated Network Adapter" option.

Step 8

Click the "OK" button.

A window will appear, which allows you to navigate to the driver file on the disk. Leave the default of "A:\\" unchanged.

Step 9

Insert the "PC Compatibility Card, PC Image" installer disk.

Step 10

Click the "OK" button.

After the floppy is scanned you are presented with one driver to select, "PC Card Network Driver (NDIS2)".

Step 11

Select PC Card Network Driver (NDIS2)

Step 12

Click the "OK" button.

The original "Network Drivers" window is redisplayed with the new adapter driver and 2 default protocols, NetBEUI and IPX/SPX.

Beginning the TCP/IP protocol installation

Step 13

Click the "Add Protocol..." button.

Step 14

Select the "Unlisted or Updated Protocol" option.

Step 15

Click the "OK" button.

The next dialog box will ask you for the location of the protocol installer. Use the default of "A:\"

Step 16

Insert the "TCP/IP-32 for Windows for Workgroups" installer disk and click the "OK" button.

Step 17

Select the only option available in the next window, "Microsoft TCP/IP-32 3.11b" and click the "OK" button.

After the protocol stack is copied from the disk, you return to the "Network Drivers" window which now shows the new TCP/IP protocol component.

Step 18

Remove the extra protocols by highlighting NetBEUI and IPX, then clicking the remove button.

Step 19

Select the TCP/IP protocol item and press the "Setup..." button.

Fill in all relevant information in the following windows. When all the TCP/IP information is entered, click the "OK" button to return to the "Network Drivers" window.

Note:

You must provide a minimum of the IP Address and Subnet Mask. Many Installations also require the Default Gateway and DNS Information.

Step 20

Click the "OK" button.

A screen asking for some client computer information will appear. After providing the relevant information, click the "OK" button.

Windows for Workgroups now begins to install the new components your selected options require. You might need to supply original Windows for Workgroups software during this process.

When all software has been loaded you'll be asked to restart the computer.

Step 21

Click the "No" button.

You now need to make the final configuration adjustment in the PROTOCOL.INI configuration file. In the PROTOCOL.INI file you need to make an entry for the correct Ethernet Frame Type.

Step 22

Use the "Notepad" application in the "Accessories" group and open the "C:\WINDOWS\PROTOCOL.INI" file.

After it is displayed find the section that begins with the "[MACNDIS]" heading. You'll find a line in that section that begins "ProtocolDot2...".

Step 23

Change the "ProtocolDot2... to ProtocolDIX="800,806,8035".

NOTE:

The "800,806,8035" needs to be enclosed in double quotes). This entry informs the NDIS driver you wish to use the correct Ethernet frame type for TCP/IP applications (ETHERNET_II).

Step 24

Save the file and quit Notepad.

Step 25

Quit Windows.

Step 26

Restart your computer.

Once you restart Windows you can enter a DOS shell and use PING to test your connectivity. You'll notice a new program group, "Microsoft TCP/IP-32" that contains some basic TCP/IP software utilities.

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Tech Info Library Article Number:20501



Tech Info Library

Micropolis (S) Pte Ltd (10/96)

Revised: 10/3/96
Security: Everyone

Micropolis (S) Pte Ltd (10/96)

=====

Article Created: 3 October 1996

Micropolis (S) Pte Ltd

Western Regional Sales Office
100 Century Center Court, Suite 410
San Jose, CA 95112-4512
408-441-0333
408-441-0334 Fax

Eastern Regional Sales Office
1 Stiles Road, Suite 303
Salem, New Hampshire 03079
603-898-3550
603-898-3530 Fax

800-395-3748 Sales
818-709-3300 Tech Support
818-709-3310 Fax

Internet: <http://www.microp.com>

Company Profile:

Manufacturer of high-capacity, high-speed storage, including AV optimized hard drives, video-on-demand systems, and more.

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Tech Info Library Article Number:20502



Tech Info Library

Network Assistant: How to Get Software Versions (10/96)

Revised: 10/3/96
Security: Everyone

Network Assistant: How to Get Software Versions (10/96)

=====

Article Created: 3 October 1996

TOPIC -----

I am using the Network Assistant application which is part of the Apple Network Administrator Toolkit (ANAT), and I'm trying to get software version information about one of the workstations. When I select the Software Version menu item from the Reports menu, a window reports, "This report displays version information for software installed on (name of remote workstation)". However, the window only lists the software installed on my local computer. How do I get information about the workstation that I selected?

DISCUSSION -----

In this window, is a Get Report button. Click on one of the software items in the list then click Get Report, and the version information from the remote workstation will be returned. The main window will only list software located on the local computer.

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Tech Info Library Article Number:20503



Tech Info Library

StyleWriter: Software Installation Troubleshooting (10/96)

Revised: 10/7/96
Security: Everyone

StyleWriter: Software Installation Troubleshooting (10/96)

=====

Article Created: 3 October 1996

TOPIC -----

This article covers some of the more common issues when trying to install the Apple StyleWriter software.

DISCUSSION -----

Error Message During Installation

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Prior to ANY software installation, you should start with extensions off when running any installer and check to make sure there is adequate hard drive space for installation.

Remove the Fonts Folder

Sometimes when the Installer finds a font already installed, it generates an error. If you are doing the standard Easy Install and a generic error message appears instructing you that the printer software could not be installed onto the requested disk, remove the Fonts folder. To remove the Fonts folder, do the following:

Step 1

Restart your computer with extensions off.

Step 2

Open the System folder.

Step 3

Drag the fonts folder out of the system folder and place it on the desktop.

Step 4

Restart the computer again with extensions off

Step 5

Launch the StyleWriter software installer (use the Easy Install).

After the installation is successfully completed, drag the individual fonts one at a time from the desktop to the NEW fonts folder created in the System folder. When a duplicate font is found, you do not need to replace the font. Once the old fonts folder has been emptied, throw it away.

IMPORTANT:

DO NOT drag the old Fonts folder from the desktop into the System folder.

Custom Install the StyleWriter Driver

If the easy install did not complete, perform a custom Installation of the StyleWriter printer driver. To install just the StyleWriter printer driver, do the following:

Step 1

Restart your Macintosh with the extensions off (hold down the shift key at startup).

Step 2

Launch the StyleWriter software installer.

Step 3

Select Custom Install from pop-up menu in the main Installer window.

Step 4

Select QuickDraw Printer Software.

Step 5

Click the Install button.

Removing Extensions, Control Panels, and Preferences Folders

If you still cannot install the StyleWriter printer software, you need to remove the Extensions, Control Panels, and Preference Folders. To do this, follow these steps.

Step 1

Remove the Extensions, Control Panels, and Preferences folders from the System folder and place them on the desktop.

Step 2

Restart with Extensions off.

Step 3

Use the Custom Installation procedure again.

If this successfully installs, you can replace the Extensions, Control Panels, and Preferences by opening each folder up on the desktop and dragging the individual files from each folder into the newly created folders in the System folder. Once the old folders are emptied, you can move them to the trash.

IMPORTANT:

Do NOT drag the old folders themselves from the desktop into the System folder.

The reason you may have to remove these folders is that some installers lock the driver if it is already installed. Also, the printing preferences are sometimes locked, or the General Controls control panel is set to Protect System Folder. Virus software may also remain active even with Extensions off, preventing changes to the System folder. Any of these circumstances can result in the generic "installation cannot take place on this disk" message.

Custom Installation of Desktop Printing Software

With most current StyleWriter printer models, Apple has included the Desktop Printing extension as part of the software. Once you have successfully installed the StyleWriter printer driver, you can use the Custom Installation procedure to install the Desktop Printing extension. If the Desktop Printing extension does not install, you will need to remove the Control Panels, Extensions, and Preferences folders, then perform the custom installation procedure again.

This article appeared in the 7 October 1996 issue of the Information Alley.

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Tech Info Library Article Number:20504



Tech Info Library

Open Transport PPP 1.0f1c9: Beta Release (10/96)

Revised: 10/4/96
Security: Everyone

Open Transport PPP 1.0f1c9: Beta Release (10/96)

Article Created: 4 October 1996

TOPIC -----

This article is the enclosed file with the Open Transport PPP 1.0f1c9 beta release.

DISCUSSION -----

Name: Open Transport PPP
Version: 1.0f1c9
Released: September 23, 1996

Description: Unsupported beta release of Open Transport PPP 1.0. For complete information, please see the Read Me included with this software.

OT PPP 1.0f1c9 consists of 1 disk:

Name as Posted	Actual Disk Name
OT PPP 1.0f1c9.sea	OT/PPP Install

This software is available in two formats (disk images and "Net Install"):

1) A self-extracting archive of a Disk Copy 1440K disk image. To use, download, double-click the downloaded file (this decompresses it), and use Disk Copy to create the disk. Disk Copy can be found in the Utilities folder posted here.

2) A complete OT PPP 1.0f1c9 "Net Install". It includes all software from the OT PPP 1.0f1c9 disk image plus the contents of OT PPP 1.0f1c9-Extras.sea. This posting is provided as a convenience for those customers who:

- want to download just one file.
- want a pre-configured "Net Install" to place on their hard drive or on a server.

PLEASE NOTE: You do not need to download the "Net Install" if you have already downloaded the disk image of OT PPP 1.0f1c9 and the OT PPP Extras.

From the Read Me included with this software:

Open Transport/PPP
Internet Beta Seed Number 2
Cover Letter

Dear Beta Tester!

Thank you for your interest in our software and willingness to take the time to perform beta testing. This is one of multiple rounds of beta testing, and as the software matures have increased the number of users testing it. This version is being released to all registered Apple Developers, selected customer seed sites, and publically on the Internet. The public seed will commence after OT 1.1.1 goes GM.

Open Transport/PPP requires Open Transport 1.1.1b8c5 or later and has similar CPU and system requirements: 68030 processors and above, or Power Macintosh machines, and on System 7.1, 7.1.1., 7.1.2, or System 7.5.3 or later. System software 7.5.3 may be required by certain application software. Please refer to the 'Read Me Before Installing' file for more information. Open Transport 1.1.1b8c5 is available as a public beta release in the "unsupported" folder on Apple Software Updates sites. You must install OT 1.1.1b8c5 or later before installing this release of OT/PPP.

This release does not come with Apple Technical Support. Apple staff and 3rd party developers will be monitoring the Internet newsgroup comp.sys.mac.comm and we recommend that be the first place you go for help. We will also be publishing information related to PPP on the Open Transport web site <<http://dev.info.apple.com/opentransport>> as we understand the common questions people ask.

Open Transport/PPP provides IP over PPP functionality for dialup clients. It is the first PPP implementation for Mac OS using STREAMS (the native OT API), the first PPP that is native on Power Macintosh, and is the first PPP for Mac OS capable computers that does not use the MacTCP MDEV API (which will be retired with the Mac OS 8, replaced by STREAMS). Apple has developed this PPP implementation from the ground up and it does not share code with any currently shipping PPP implementations. Open Transport/PPP is compliant with the following RFC's:

- * RFC 1661 - PPP
- * RFC 1662 - PPP in HDLC-like framing
- * RFC 1334 - PPP Authentication protocols
- * RFC 1332 - IPCP Internet Protocol Control Protocol
- * RFC 1144 - Compressing TCP/IP Headers for Low-Speed Links

The release includes the IP/PPP client, manual connect & disconnect, CHAP & PAP, terminal window, connect (chat) script, and auto-connect, and an AppleScript scripting addition. The distribution also includes CCL scripts for many popular

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analog and ISDN modems. Users interact with the software through the TCP/IP, PPP & Modem control panels.

The OT/PPP API will be provided in a subsequent beta release.

We are particularly interested in your testing OT/PPP interoperability with a wide variety of PPP servers and internet providers, as well as exercising the software in general.

Please use the template included with the distribution when submitting bugs.

If you are a customer who is part of Apple's Customer Quality Feedback (CQF) seeding program for Open Transport, please report bugs to your CQF contact. More information about CQF can be found at <<http://www.cqf.apple.com>>

If you are a developer, please use the enclosed template and send your bug reports to DEVSUPPORT@applelink.apple.com and cc: ppp-beta@seeding.apple.com.

If you are an Internet Service Provider or customer who is not part of one of Apple's developer programs, please send your bug reports to paris-seed@seeding.apple.com. Please send any comments of a more general nature to ppp-beta@seeding.apple.com.

Please read the 'Read Me Before Installing' file contained in this seed package for valuable and late-breaking information.

This release also includes a tool we are developing to make it easier to generate modem scripts for new modems, the Apple Modem Script Generator. The scripts MSG generates may need manual fine-tuning. If you are a modem developer and creating CCL scripts for OT/PPP, please contact Beth Reed <reed1@applelink.apple.com> in Evangelism so that we can make sure you're notified of any late breaking changes or enhancements to the CCL language. Please feel free to send any comments concerning the Modem Script Generator to msg@seeding.apple.com.

The ARA Modem Scripting guide in Acrobat format is also included with this release. Though it has not yet been updated to describe PPP-specific changes to the CCL language it should prove a valuable reference for writing and understanding CCL's you need to manually edit.

Thank you for your interest in Open Transport/PPP.

Richard V. Ford Open Transport Product Manager rvf@apple.com

Jose Carreon Open Transport Evangelist carreon@applelink.apple.com

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Tech Info Library Article Number:20505



Tech Info Library

Open Transport PPP Extras 1.0f1c9: Beta Release (10/96)

Revised: 10/4/96
Security: Everyone

Open Transport PPP Extras 1.0f1c9: Beta Release (10/96)

Article Created: 4 October 1996

TOPIC -----

This article is the enclosed file with the Open Transport PPP Extras 1.0f1c9 beta release.

DISCUSSION -----

Name: Open Transport PPP Extras
Version: 1.0f1c9
Released: September 23, 1996

Description: Extra software and documentation to accompany the unsupported beta release of Open Transport PPP 1.0, which is included with the "Net Install" of Open Transport PPP 1.0f1c9.

This software consists of a self-extracting archive. To use, download, double-click the downloaded file (this decompresses it).

Files included in OT PPP 1.0f1c9 Extras

OT/PPP bug Report Template
OT/PPP Seed Cover Letter
OT/PPP Seed Draft.pdf
ARA Modem Scripting Guide.pdf

Modem Script Generator 1.0a1
- Modem Script Generator 1.0a1
- About Apple MSG
- Read Me

Modem Scripts- New
• Scripts

- 3Com Impact ISDN 56K MLPPP	1.0f1c6
- 3Com Impact ISDN 64K MLPPP	1.0f1c6
- Motorola BitSURFR 56K MLPPP	1.0f1c3
- Motorola BitSURFR 64K MLPPP	1.0f1c3
- Motorola ModemSURFR 28.8	1.0f1c6
- Netopia ISDN 56K MLPPP	1.0f1c6
- Netopia ISDN 64K MLPPP	1.0f1c6
- Null Modem 9600	1.0f1c9
- Null Modem 19200	1.0f1c9
- Null Modem 57600	1.0f1c9
- Null Modem 115200	1.0f1c9

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Tech Info Library Article Number:20506



Tech Info Library

Printing Stickies: Change Name at Bottom (10/96)

Revised: 10/4/96
Security: Everyone

Printing Stickies: Change Name at Bottom (10/96)

=====

Article Created: 4 October 1996

TOPIC -----

Whenever I print a Stickies note, a name and date show at the bottom of the page. I want to change the name, how do I do this?

DISCUSSION -----

The name which prints at the bottom of the page is the Owner Name in the Sharing Setup control panel. To change the name, open the Sharing Setup control, highlight the Owner Name field, and type the change.

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Tech Info Library Article Number:20509



Tech Info Library

StyleWriter Printers: Print Quality Depends On Paper (10/96)

Revised: 10/7/96
Security: Everyone

StyleWriter Printers: Print Quality Depends On Paper (10/96)

=====

Article Created: 7 October 1996

TOPIC -----

I have a StyleWriter and everytime I go to print the only quality option
avaialble in the print dialog is Best. The Normal and Draft options are dimmed.

DISCUSSION -----

You need to check the paper type setting. Unless you are printing on special
types of media, the paper type should be set for Plain. Some paper types such as
Transparency, Glossy, and Back Print Film require you to use the Best quality
mode.

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Tech Info Library Article Number:20510



Tech Info Library

StyleWriter Printers: Out of Paper Message Troubleshooting 10/96

Revised: 10/7/96
Security: Everyone

StyleWriter Printers: Out of Paper Message Troubleshooting 10/96

=====

Article Created: 7 October 1996

TOPIC -----

I keep getting an error message when I try to print from my StyleWriter printer stating that I am out of paper, but the printer has paper in the tray. When I click on Continue, I get an error message stating the paper is there, but it is the wrong size. Why?

DISCUSSION -----

These error messages are usually caused by using an incorrect or damaged printer cable.

First check to make sure that you are using a peripheral-8 cable (serial cable), and not a LocalTalk or PhoneNet cable with the StyleWriter printer. LocalTalk cables and PhoneNet cables, use small boxes along with specialized cable to connect devices. PhoneNet cables resemble telephone cable. You can only use LocalTalk and PhoneNet cables with certain StyleWriter models containing the optional LocalTalk Adapters.

The correct cabling for most StyleWriter printers is peripheral-8 (serial) cable. The serial cable is a direction connection between the computer and the printer. You should not have any type of splitting or adapter devices between the computer and the printer. In addition, the serial cable should have eight (8) straight and intact pins on both ends of the cable.

If you are using a peripheral-8 cable and still experience problems, try connecting the printer to another computer, or try another peripheral-8 cable.

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Tech Info Library Article Number:20511



Tech Info Library

Quadra/Centris 610 DOS Compatibility Card: Read Me (10/96)

Revised: 10/8/96
Security: Everyone

Quadra/Centris 610 DOS Compatibility Card: Read Me (10/96)

=====

Article Created: 8 October 1996

TOPIC -----

This is the readme file that shipped with the Centris 610 and Quadra 610 DOS Compatibility computers. These computers shipped with PC Setup version 1.0.

DISCUSSION -----

Using DOS and Window Applications With the DOS Compatibility Card for Macintosh

This document contains important information about using your DOS Compatibility Card that is not included in your user's guide.

Using Memory Management Utilities

If you use a memory management utility such as EMM386 or QEMM, you need to configure it to be compatible with your DOS Compatibility Card.

- If you will be using EMM386 (included as part of DOS) and don't require expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS RAM=D000-EFFF
```

If you require expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE RAM=D000-EFFF FRAME=D000
```

- If you use QEMM, it is recommended that you use the frame option (ST:F):

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:F ARAM=B080-B7FF ARAM=C900-DFFF R:1
```

- If you choose to use the Stealth mapping option (ST:M), set CONFIG.SYS to:

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:M X=C800-CFFF X=FC00-FCFF X=FE00-FFFF
```

ARAM=B080-B7FF ARAM=C900-DFFF R:2

For other memory management utilities, configure them so that the only areas in the BIOS that can be mapped to upper memory are from D000 through EFFF.

Make sure you verify that the HIMEM.SYS line in the CONFIG.SYS file has the switch to turn memory testing off. If the HIMEM.SYS line doesn't turn memory testing off, the ROM BIOS may become corrupted when the DOS Compatibility Card is configured for 2 MB of memory:

DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF

NOTE:

Apple does not recommend using automated memory configuration utilities with the DOS Compatibility Card because they can require more memory than management utilities you configure manually. They can also be incompatible with the DOS Compatibility Card.

Using the Serial Ports on the Macintosh

The maximum baud rate supported by the DOS Compatibility Card when a COM port is mapped to a Macintosh serial port is 19,200. If you're capturing serial output to a Macintosh file, there is no limit.

Due to the RS-232 implementation of the Macintosh, not all RS-232 signals are available. These signals are not available: Carrier Detect (CD), Data Set Ready (DSR), Request to Send (RTS), and Ring Indicator (RI). If your application or serial device requires these signals, it will not work.

NOTE:

See "Serial Port Pinout" later in this document for a list of the Macintosh and PC connectors.

The DOS Compatibility Card does not support Carrier Detect (CD). You must configure your communications applications so they do not use CD. Most communications applications can be set to respond to the CARRIER string sent back by most modems.

Using Video

- Correcting Video Synchronization (Video Synch)

Some application programs that write directly to the hardware (especially games) may cause the Apple 13", 14", and 16" monitors to lose video synch when you start the program. If this happens, call the software company to see if one of the following conditions exists:

1. There is a switch to force the application program to make BIOS calls.
2. There is an upgrade available with this feature.

These applications will run on a standard VGA, SVGA, or MultiSync monitor.

- Getting Color on Your VGA Monitor

Due to the way some programs check for color VGA, they may be installed in VGA monochrome. In these cases check the documentation that came with your software to see if there is a setup option to install standard VGA. If the setup option is available, install the software with the standard VGA option. Once a program is installed with standard VGA, it will always display in color.

If you are installing Windows, even though the SETUP program comes up in color, the express setup may install in VGA monochrome. To avoid this you can use the custom setup and verify the video is set to VGA in the configuration screen.

Another way to avoid installing in VGA monochrome is to use the INSTALL.BAT file located on the DOS Compatibility Card Installer (for the DOS Environment) disk. Follow these steps:

1. Run the INSTALL.BAT command, but choose not to install.

The Installer places WINSETUP.BAT and a hardware information file on your C:/ volume.

2. Use the WINSETUP.BAT file to install Windows.

This will force Windows to install in color. You can also use the Windows SETUP program to change the video at any time.

- Using the Video Drivers

Included with your DOS Compatibility Card are video drivers for Windows and third-party applications. These drivers allow you to run Windows with 256 colors at 640 by 480, or if you are using an Apple 16" or VGA display, 16 colors at 800 by 600. Follow these steps:

1. Insert the Display Driver Disk 1 disk in the floppy disk drive while the PC is in the foreground.

2. From DOS, set the current drive to A by typing:

A:

3. Run the setup program by typing:

SETUP

Follow the instructions on the screen to install the video drivers.

NOTE:

If you are using an Apple 16" monitor, DOS will always be displayed at 640 by 480 centered on your monitor.

Using the Apple Adjustable Keyboard

If you are using an Apple Adjustable Keyboard, you cannot use key combinations that combine keys from the main keyboard with function keys at the same time (such as shift-F1). For this reason, you cannot restart the DOS Compatibility Card using the Control, Alt, and Delete key combination. If you need to restart the DOS Compatibility Card, use the Reset button in the PC Setup control panel.

Using Backup Programs

To back up the drive files on your Macintosh, either make a copy of the files by duplicating them in the Finder, or use a Macintosh backup application program. Do not use PC backup programs. PC backup programs do not work because the floppy disk drive is controlled by the Macintosh.

Using MacShare

MacShare is a PC application program included with your DOS Compatibility Card software that allows the PC to view Macintosh folders and volumes as drive letters on the PC. MacShare allows as many shared drives as there are drive letters. To specify the number of drive letters, modify your CONFIG.SYS to include a LASTDRIVE statement:

```
LASTDRIVE=x
```

x must be a letter between E and Z because the PC reserves drives A through D for its floppy and hard disk drives. For example, if you use M as your LASTDRIVE value, you could have up to nine extra drives (using drives labeled E through M). The CD-ROM driver, if installed, will use one letter.

NOTE:

Each additional drive letter uses 100 additional bytes of PC memory.

Using PC Drives and Partitions

The PC Setup control panel allows you to use PC SCSI drives and partitions with the DOS Compatibility Card. If you use a PC drive or partition and you have a utility that mounts these devices on the Macintosh, be sure to unmount the drive or partition before starting the PC by dragging its icon to the Trash. If you don't unmount the drive or partition, you may lose data since both the Macintosh and the PC may write to the device at the same time.

NOTE:

If you are using Apple's Macintosh PC Exchange 2.0 to mount PC devices, the software alerts you if you try booting the PC while the device is mounted.

If you intend to mount your PC drive file, partition, or disk on the Macintosh using a utility such as Apple's Macintosh PC Exchange, do not use a PC compression program. Drives that are compressed cannot be mounted.

Using Floppy Disks and CD-ROM discs

When the PC is in the foreground, you cannot insert Macintosh floppy disks into the floppy disk drive. The PC ejects a Macintosh floppy disk if one is inserted.

Write-protected PC floppy disks can be accessed by both the PC and the Macintosh. Write-enabled floppy disks can be accessed only by the environment that was in the foreground when the floppy disk was inserted.

To eject a floppy disk while the PC is in the foreground press Command-E.

NOTE:

Using Command-E works only when the PC can access the floppy disk. Otherwise switch to the Macintosh and eject the floppy disk from the Macintosh.

CD-ROM discs can be accessed by both the Macintosh and PC (if the included PC software is installed). To eject a CD-ROM disc from the PC, press Command-Y. If the CD-ROM disc cannot be ejected (because a file is in use or the CD-ROM is being shared), the Macintosh beeps to notify you and will not eject the CD-ROM disc.

Printing

The recommended print driver to use with your DOS or Windows application when printing to a QuickDraw (non-PostScript) printer is the Epson LQ-2500.

If the top and bottom of your document gets clipped when you are printing from your PC, follow these steps:

1. Double-click the System Folder on your Macintosh and open the Extensions folder.
2. Double-click the PC Print Spooler.
3. Choose Preferences from the File Menu.
4. Click the button for "Gaps between pages (60 lines)" (under "When emulating an Epson printer").

You can also set notification and status options in this dialog box.

Caches

Your DOS Compatibility Card works best with the Macintosh computer's caches enabled. Follow these steps to enable the caches:

1. Choose Control Panels from the Apple menu.
2. Open the Cache Switch control panel.
3. Click the button for Faster (caches enabled).

4. Close the Cache Switch control panel.

Serial Port Pinout

To connect existing PC serial devices to your Macintosh, you need cables with the correct pinout. The following chart matches the Macintosh pin (Mac Mini DIN-8) with the corresponding PC pin (DB-25):

Begin_Table

Mac Signal	Mac Mini DIN-8	DB-25	RS-232 Name
-----	-----	-----	-----
HSK _o	1	20	DTR
HSK _i	2	5,8	CTS, DCD
TXD-	3	2	TXD
GND	4	7	GND
RXDA-	5	3	RXD
TXDA+	6	N/C	
GPi	7	N/C	
RXD+	8	7	GND

End_Table

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Tech Info Library Article Number:20512



Tech Info Library

PowerBook 1400: Won't Start Up From CD By Holding C Key (11/96)

Revised: 11/18/96
Security: Everyone

PowerBook 1400: Won't Start Up From CD By Holding C Key (11/96)

Article Created: 8 October
Article Reviewed/Updated: 18 November 1996

TOPIC -----

The PowerBook 1400 will not start up from a CD-ROM disc by pressing the "C" key on the keyboard as many other Macintosh computers do. How can I force it to start up from a CD?

DISCUSSION -----

PowerBook 1400 series computers can be started up from a bootable CD-ROM disc by simultaneously holding down these four keys as the computer is starting up: "COMMAND (the Apple key)" "OPTION" "SHIFT" and "DELETE". Release the keys when the "Welcome to Macintosh" dialog box appears on the display.*

This start up procedure is used when you want to bypass the internal hard drive and force the computer to start up from the next available SCSI or IDE device, which in this case, is the CD-ROM mechanism.

If you continue to hold down the keys past the "Welcome to Macintosh" dialog box appears on the display, the hard drive may not mount on the desktop. However, you can force the hard drive to mount using the Drive Setup application.

Drive Setup is located on the PowerBook 1400 CD inside a folder called "Utilities". If the internal hard drive did not mount, you can force it to mount by following these steps:

Step 1

Double click on Drive Setup.

Step 2

Highlight the hard drive <not mounted>.

Step 3

Pull down the Functions menu and select Mount Volumes. The hard drive should show up on the desktop. Quit Drive Setup.

* Note: If you find that your PowerBook computer still will not start up from the CD-ROM disc after holding down the Command-Option-Shift-Delete keys, press the Caps Lock key one time and try it again. The Command-Option-Shift-Delete key sequence will not work when the Caps Lock key is activated. However, because there is no LED light on the Caps Lock key of the PowerBook 1400 computers, it is impossible to tell if the key is active until the computer is started up.

This article was published in the Information Alley on 21 October 1996.

Article Change History:

18 Nov 1996 - Added info about when to release keys.

12 Nov 1996 - Added info about Caps Lock key.

18 Oct 1996 - Changed article status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20513



Tech Info Library

PowerBook 1400: What Kind Of RAM Card Do I Need? (11/96)

Revised: 11/12/96
Security: Everyone

PowerBook 1400: What Kind Of RAM Card Do I Need? (11/96)

Article Created: 8 October 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

What RAM speed is required by the Macintosh PowerBook 1400 series computers?

Is it possible to know which kind of RAM card to buy to expand the memory in my Macintosh PowerBook 1400 series computer without having to open it up?

On which side do I install the RAM expansion cards?

DISCUSSION -----

Speed?

The PowerBook 1400 series computers require 70 nanosecond (ns) RAM. The RAM on the card must be low-profile memory chips.

Which RAM Slot Is Expandable?

The Apple factory slot is to the left (when looking at the PowerBook computer from the front). This slot should not be modified. RAM cards cannot be stacked on top of one another in the Apple factory slot. This slot already has an Apple RAM card in it when it is shipped from Apple.

The customer slot is to the right (when looking at the PowerBook computer from the front). The customer slot supports and has enough room for two cards to be stacked on top of one another.

Which Type of RAM Card Do I Need?

To determine which type of RAM card you need to purchase, follow these guidelines:

* If your Macintosh PowerBook 1400 series computer has a total of 12 MB or 16 MB

of RAM, that probably** means you have the original factory configuration. Only the original RAM is installed. This kind of configuration means that your customer expansion slot is empty. Two RAM cards can be installed in the customer RAM slot, one on top of the other.

** Note: Apple shipped the PowerBook 1400 series computers in both 12 MB and 16 MB configurations. However, it is possible that if your PowerBook has 16 MB, it originally had 12 MB and 4 MB has been added in the customer slot. The only way to be sure the customer slot is empty is to open the computer as described in the Users Manual.

If you are not sure how much RAM you have, you can tell by pulling down the Apple menu when you are in the Finder and selecting About This Macintosh.

There is an Apple RAM expansion card available from authorized Apple Resellers for installation in the customer RAM slot. It is called the Macintosh PowerBook 8 MB Memory Expansion Card (Order No. M4506). This card has a passthrough connector which allows another card to be stacked on top of it.

If you choose to purchase a third-party RAM card (not from Apple), you need to ask the manufacturer if the RAM card they sell goes specifically on the top or bottom or if it will go in either position. You may also want to ask whether or not any other companies' RAM cards can be plugged into their card, or if only their brand of RAM cards can be stacked on top of each other.

* If your Macintosh PowerBook 1400 series computer has a total of more than 16 MB of RAM, that means you definitely have more than the original factory configuration. There is already a RAM card installed in the customer expansion slot.

If the card in the customer expansion slot is an Apple RAM card, you can plug another Apple RAM card in on top of it. If it is a third-party RAM card, you need to ask the manufacturer whether or not this particular card can have another card (Apple or third-party) stacked on top of it.

This article was published in the Information Alley on 12 November 1996.

Article Change History:

12 Nov 1996 - Added keyword.
11 Nov 1996 - Reworded for clarity.
18 Oct 1996 - Changed article status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20514



Tech Info Library

Cyrillic Lang Kit: Does It Follow Stnrd Keyboard Layout? (10/96)

Revised: 10/10/96
Security: Everyone

Cyrillic Lang Kit: Does It Follow Stnrd Keyboard Layout? (10/96)

=====

Article Created: 9 October 1996

TOPIC -----

Do the phonetic transliterated keyboard layouts used by the Russian language in the Cyrillic Language kit follow the same standard set by the American Teachers of Slavic and Eastern European Language (ATSEEL) or the American Association for the Advancement of Slavic Studies (AASSS)?

DISCUSSION -----

ATSEEL and AAASS have not yet officially agreed upon a recognized standard set of keyboard layouts. However, ATSEEL's Ad Hoc Committee on Standardization of Computer Keyboards for Cyrillic does have a suggestion for keyboard layout usage.

Apple has included as shareware on the CD, Matvey Palchuk's keyboard layout which is based on the work of ATSEEL's Ad Hoc Committee. Since, there was no agreed upon standard at the time Apple's Cyrillic Language Kit was released, it was decided that this was the most appropriate approach for Apple to take.

More information on Matvey Palchuk's keyboard layout is available from the following web site: <<http://www.pitt.edu/~mapst57/rus/russian.html>>.

Note:

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The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20517



Tech Info Library

Cyrillic Language Kit: Using KeyCaps (10/96)

Revised: 10/10/96
Security: Everyone

Cyrillic Language Kit: Using KeyCaps (10/96)

Article Created: 9 October 1996

TOPIC -----

Why doesn't my keyboard seem to match what I see in the manual when I use KeyCaps?

DISCUSSION -----

The keyboards pictured on the keyboard layout cards, key cap labels and in the manual are representations of the ISO international keyboard. This keyboard is not sold in the US. However, it is widely used outside the US. These keyboard layouts will only have minor differences on US keyboards.

Depending on which keyboard is in use, some characters may vary from the included keyboard layout charts. For instance, when you are using the Russian Normal layout with an Apple Extended Keyboard, the square bracket character appears to the left of the number 1 key (under the Escape key), not as shown on the printed layouts.

One KeyCaps feature is the ability to hold down the Command key (in any of the Cyrillic layouts) and see the QWERTY layout (AZERTY or QWERTZ for the French or German transliterations). This is very helpful for faster keymapping recognition without having to look down at the physical keyboard.

Tech.db: 11838
RTA#: 139474
Submitted by: Chris Wesselman, #206
Date Received: 9/26/96
Assigned to: DSE
TIL# 20518
Action: created new articles
Date Closed: 9 October 1996

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Tech Info Library

Cyrillic Lang Kit: Are Phonemic Stress Marks Included? (10/96)

Revised: 10/10/96
Security: Everyone

Cyrillic Lang Kit: Are Phonemic Stress Marks Included? (10/96)

=====

Article Created: 9 October 1996

TOPIC -----

Although it is not used in the formal written languages some languages, including Russian (for example) utilize something called phonemic stress. A word, therefore, can change its meaning if a different vowel is stressed. This becomes more important for students and language teachers, or where some ambiguity could be implied.

Does Apple include any kind of support for phonemic stress marks in the Cyrillic Language Kit?

DISCUSSION -----

There is no current plan to include phonemic stress marks in Apple's Cyrillic Language Kit. There is, however, a third-party TrueType font called Nevsky which includes accented characters.

It is available from the following web site:
<<http://www.language.brown.edu/LRC/Software.html>>.

A Russian accented QWERTY keyboard layout is also included with the Nevsky font. The web site includes instructions and examples.

Note:

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Tech.db: 11838
RTA#: 139474

..TIL20519-Cyrillic_Lang_Kit-Are_Phonemic_Stress_Marks_Included-10-96_(TA36091).pdf

Submitted by: Chris Wesselman, #206

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Tech Info Library Article Number:20519



Tech Info Library

Cyrillic Language Kit: Which Languages Are Supported? (10/96)

Revised: 10/10/96
Security: Everyone

Cyrillic Language Kit: Which Languages Are Supported? (10/96)

=====

Article Created: 9 October 1996

TOPIC -----

Which languages, alphabets, and keyboard layouts are supported by Apple's Cyrillic Language Kit?

DISCUSSION -----

The Cyrillic Language Kit supports several Slavic Languages using different variations of the Cyrillic alphabet.

Apple's Cyrillic Language Kit includes two cards, scored for folding in half, to show the Russian, Cyrillic-QWERTY, Cyrillique-AZERTY, and Kyrillisch-QWERTZ layouts. Additionally, there are keyboard stick-ons for Russian, Ukrainian, and Bulgarian. There is no need for stick-ons if using a transliterated keyboard. The manual also includes all the layouts, as well as a transliteration guide (with the names of the letters and a hex table).

There are two separate installations one for English and one for French systems. The following keyboards layouts are available (if all are installed) from the keyboard menu:

Russian

This is referred to in the manual as Russian Normal. This is the one Russians would use, or learn in school. In other words, it is their version of the QWERTY keyboard used in the U.S. It includes "Option" and "Option-Shift" key layouts for additional letters used in the Ukrainian, Belorussian, Macedonian, or Serbian.

Cyrillic-QWERTY

This is a transliteration of the American English QWERTY keyboard. Transliteration means that if I type Xris (Russian for Chris, the "x" is a guttural "h" sound), the correct Cyrillic characters are produced. This would be

used by English QWERTY keyboard users who do not know the "native" Cyrillic keyboard layouts (Russian, Ukranian or Bulgarian). It also includes the "Option" and "Option-Shift" layouts.

Cyrillique-AZERTY

This is the transliteration for the French keyboard. It also includes "Option" and "Option-Shift" layouts.

Kyrillisch-QWERTZ

This is the transliteration for the German keyboard. It also includes "Option" and "Option-Shift" layouts.

Ukrainian

This keyboard layout includes some "Option" and "Option-Shift" letters.

Bulgarian

This keyboard layout includes some "Option" and "Option-Shift" letters.

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Tech Info Library Article Number:20520



Tech Info Library

Apple Video Player: Video Startup Not Installed (10/96)

Revised: 10/10/96
Security: Everyone

Apple Video Player: Video Startup Not Installed (10/96)

=====

Article Created: 10 October 1996

TOPIC -----

Whenever I try to open the Apple Video Player application, I get the following message, "Apple Video Player requires the Video Startup Extension to be installed. Make sure it has been installed in your Extensions folder and that the computer has been restarted."

I have checked in my Extensions folder and the Video Startup extension is installed. Why do I keep getting the error message?

DISCUSSION -----

You need to make sure the Apple Video Player and Video Startup extension are using the same version. If the Apple Video Player version number does not match the Video Startup extension version number, this error message will be seen regardless of whether the Video Startup extension is installed in the Extensions folder.

The Apple Video Player application is normally in the Apple Extras folder while the Video Startup extension is in the Extensions folder. To find the version number of these files you can choose the Get Info command in the File menu.

If you have installed System 7.5 Update 2.0 on your computer, you should perform a custom install Apple Video Player 1.4, which will install both the Video Startup extension and the Apple Video Player.

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Tech Info Library Article Number:20521



Tech Info Library

Power Macintosh 8500 Freezing With S-Video Cable (10/96)

Revised: 10/11/96
Security: Everyone

Power Macintosh 8500 Freezing With S-Video Cable (10/96)

=====

Article Created: 11 October 1996

TOPIC -----

When I connect an external S-video cable only, in other words there is no monitor, to my Power Macintosh 8500/120, the computer appears to hung if I open the Color Picker. The mouse moves, but only beeps when I click anywhere. I do not have to be using a video application, just changing a color in the Labels control panel or in Eudora.

DISCUSSION -----

We were able to reproduce what you describe on a Power Macintosh 8500, by attaching an S-video cable to the secondary video port. After restarting the computer, it was apparent from the Monitors and Sound control panel that "another monitor" was present. Double-clicking a color in the Labels control panel produced the same situation as the ghost monitor, for more information see Tech Info Library article, "System 7.5: Known Color Picker Problems."

Workaround

When the computer appears to hung, you can dismiss the unseen Color Picker dialog by pressing the return or enter key. The computer should then continue to working as expected, however, you cannot change the color with Color Picker.

Another workaround is to change the relative color bit depth settings of the "ghost" and visible monitors so the greater color depth is on the visible monitor. We set the visible monitor to millions of colors and the Color Picker dialog appeared on the main monitor.

Another workaround would be to attach a second monitor and set its color bit depth lower than the first monitor.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20522



Tech Info Library

Apple Video Player and Scratch Disk (10/96)

Revised: 10/11/96
Security: Everyone

Apple Video Player and Scratch Disk (10/96)

=====

Article Created: 11 October 1996

TOPIC -----

I want to know if there is a way to select which hard disk the Apple Video Player (AVP) uses when capturing video. When I capture video on my Power Macintosh 8500 using AVP, the video capture always occurs on my external hard drive. The external hard disk is not the startup volume.

Which hard disk will Apple Video Player use as a scratch disk, and is there a way to change the scratch disk in Apple Video Player?

DISCUSSION -----

Apple Video Player uses the disk it was launched from for temporary disk space. However, if there is not enough space on the default disk, AVP will not look for another disk to use. There currently is no way to change this from within the Apple Video Player.

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Tech Info Library Article Number:20523



Tech Info Library

ObjectSupportLib 1.1: Its Significance (9/96)

Revised: 12/20/96
Security: Everyone

ObjectSupportLib 1.1: Its Significance (9/96)

Article Created: 11 October 1996

TOPIC -----

This article describes the versions of ObjectSupportLib and the significance of version 1.1.

DISCUSSION -----

ObjectSupportLib v1.0.2

Shipped with AppleScript 1.1 and with System 7.5, 7.5.1, 7.5.2 and 7.5.3.

ObjectSupportLib v1.0.4

This is the latest version of the ObjectSupportLib that is shipping to developers on the "Essentials • Tools • Objects" CD #20.

ObjectSupportLib v1.1

The ObjectSupportLib 1.1 is functionally identical to ObjectSupportLib 1.0.2. The ObjectSupportLib 1.1 originally shipped with AppleScript 1.1. This library's version was mistakenly labeled as 1.1 to match AppleScript 1.1's version string.

The latest version of the ObjectSupportLib as of this article's publishing is 1.0.4.

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Tech Info Library Article Number:20524



Tech Info Library

MacTCP Control Panel: How & Where to Obtain It (10/96)

Revised: 10/14/96
Security: Everyone

MacTCP Control Panel: How & Where to Obtain It (10/96)

=====

Article Created: 11 October 1996

TOPIC -----

In order to use the Internet, I have been told by my Internet service provider, that I need to get the MacTCP control panel from Apple Computer, Inc. Where can I get it?

DISCUSSION -----

You have various options depending on what version of the Mac OS you have installed.

System 6.0.8 and System 7.0.x
=====

With either Mac OS 6.0.8 or 7.0.x installed, you must use the MacTCP control panel.

Options

- Purchase the TCP/IP Connection for Macintosh kit (Apple PN: M8113Z/B). This kit is available from Apple Developer Catalog (US: 800-282-2732, Outside US: 716-871-6555).
- Purchase any third-party (non-Apple) software packages, or books which license the MacTCP control panel from Apple Computer, Inc.
- Purchase the Mac OS 7.5.x software.

System 7.1.x
=====

With System 7.1 installed, you can use either classic AppleTalk, or Open Transport. If you use classic AppleTalk, you need the MacTCP control panel. If

you use Open Transport, you need the TCP/IP control panel.

Options for Classic AppleTalk

- Same as Mac OS 6.0.8 and 7.0.x users

Options for Open Transport

- Purchase Open Transport (Apple PN: M4252Z/A). It is available from Apple Developer Catalog, or wherever Apple software is sold.
- Purchase the Mac OS 7.5.x software.

System 7.5

With System 7.5 installed on non PCI-based Power Macintosh computers you can use either classic AppleTalk, or Open Transport. On PCI-based Power Macintosh computers, you can only use Open Transport. If you use classic AppleTalk, you need the MacTCP control panel. If you use Open Transport, you need the TCP/IP control panel. The MacTCP control panel is integrated into System 7.5 and later.

If you are using System 7.5, you should update to the latest version available.

Options for Classic AppleTalk

- Use the Custom Installation of Mac OS 7.5 to install the MacTCP control panel.

Options for Open Transport

- Use the Custom Installation of Mac OS 7.5 to install the MacTCP control panel. Then use the Network Software Selector application to switch to Open Transport.

This article appeared in the 11 October 1996 issue of the Information Alley.

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Tech Info Library Article Number:20525



Tech Info Library

EtherHelp 3.0: How to Get It (10/96)

Revised: 10/14/96
Security: Everyone

EtherHelp 3.0: How to Get It (10/96)

=====

Article Created: 14 October 1996

TOPIC -----

This article describes where to get EtherHelp 3.0.

DISCUSSION -----

EtherHelp 3.0 is a blind packet capture application specifically designed to help people, who design, build, manage, and support networks, get a better idea of what is happening on a LAN or WAN without having to visit that location.

The application works by capturing all network traffic, or a specified portion of that traffic, in the form of packets. Packets captured are not displayed in EtherHelp, but can be saved in a file, which can then be forwarded to a support organization for analysis by EtherPeek 3.0, which can display the saved packets.

If you would like a copy of EtherHelp 3.0, it is available from the Service folder in the tools folder. The URL is:

[ftp://service:mesmer@ftp.aggroup.com/root/service/tools/EtherHelp_3.0_Inst
aller](ftp://service:mesmer@ftp.aggroup.com/root/service/tools/EtherHelp_3.0_Installer)

An EtherHelp guide is also available in the same folder.

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Tech Info Library Article Number:20526



Tech Info Library

Energy Saver 2.0.2: Error Message on Startup (10/96)

Revised: 10/14/96
Security: Everyone

Energy Saver 2.0.2: Error Message on Startup (10/96)

=====

Article Created: 14 October 1996

TOPIC -----

I performed a clean installation of System 7.5.3 from the Macintosh System 7.5 Version 7.5.3 CD-ROM disc, and then I installed System 7.5.5 Update on my Power Macintosh 8500. When I restarted the computer, a dialog appeared with this message, "...the energy saver extension is incompatible with this system. It's version 2.0.2 but should be version 2.0.2." What is wrong?

DISCUSSION -----

Make sure you are using the same version of the Energy Saver control panel and Energy Saver extension. Then, increase the memory partition of the Energy Saver control panel by 23K to correct this.

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Tech Info Library Article Number:20527



Tech Info Library

LaserWriters: Driver Availability for Windows NT 4.0 (3/97)

Revised: 3/21/97
Security: Everyone

LaserWriters: Driver Availability for Windows NT 4.0 (3/97)

=====

Article Created: 14 October 1996
Article Reviewed/Updated: 21 March 1997

TOPIC -----

Are there any Apple LaserWriter printer drivers available for Windows NT 4.0?

DISCUSSION -----

The drivers in the following list are included in Windows NT 4.0 and are supported by Microsoft.

Color LaserWriter 12/600 PS
LaserWriter 12/640 PS
LaserWriter 16/600 PS
LaserWriter Pro 810
LaserWriter Pro 630
LaserWriter Pro 600
LaserWriter Select 360
LaserWriter II_f
LaserWriter II_g
LaserWriter II_{nt}
LaserWriter II_{ntx}
LaserWriter II_{ntx}-J
Personal LaserWriter NT
Personal LaserWriter NTR
LaserWriter Plus
LaserWriter

Apple provides Windows NT 3.5x and 4.0 printer drivers for the following printers:

Color LaserWriter 12/600 PS
Color LaserWriter 12/660 PS
LaserWriter 12/640 PS
LaserWriter 16/600 PS

This software is available as a part of the LaserWriter software for Windows 3.1 on the Apple Software Updates sections. Installation instructions are available in the readme file.

Microsoft wrote the AppleTalk stack for Windows NT, and they support network printing to these printers (not Apple). Apple does support parallel printing on Windows NT.

For more information about driver availability under Windows NT 3.5 or 3.51, please refer to the Tech Info Library article titled, "LaserWriters: Driver Availability for Windows NT 3.5.1."

Article Change History:

21 Mar 1997 - Added additional NT 4.0 information.

24 Feb 1997 - Added Color LaserWriter 12/660 PS.

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Tech Info Library Article Number:20528



Tech Info Library

Apple Workgroup Servers: Can PC Compat Cards Be Used? (4/97)

Revised: 4/8/97
Security: Everyone

Apple Workgroup Servers: Can PC Compat Cards Be Used? (4/97)

=====

Article Created: 14 October 1996
Article Reviewed/Updated: 8 April 1997

TOPIC -----

Are the PC Compatibility Cards supported in the PCI-based Workgroup Servers?

DISCUSSION -----

The PC Compatibility cards were not tested by Apple in the Workgroup Server computers, so Apple cannot suggest or recommend their use. It could be theorized that they should work in the same manner as if they were installed in a PCI-based Power Macintosh computer.

An Apple Workgroup Server (WGS) with a PC Compatibility Card installed would be considered quite an unusual setup because the WGS is designed to be used only as a dedicated server. Additionally, the PC Compatibility cards have no server capabilities and will not run Microsoft Windows NT. The PC Compatibility Card could only be used to emulate a desktop PC-DOS computer.

This article was published in the Information Alley on 18 October 1996.

Article Change History:
08 Apr 1997 - Edited for technical accuracy.
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Tech Info Library Article Number:20529



Tech Info Library

ANS 500 or 700: Drive & PCI Card Distribution (10/96)

Revised: 10/18/96
Security: Everyone

ANS 500 or 700: Drive & PCI Card Distribution (10/96)

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Article Created: 14 October 1996
Article Reviewed/Updated: 18 October 1996

TOPIC -----

What is the recommended way to distribute my drives and PCI cards for increased performance in an Apple Network Server (ANS) 500 or 700?

DISCUSSION -----

The Network Server 500 and Network Server 700 have three SCSI buses and two PCI buses.

For SCSI, there are two SCSI-2 Fast and Wide (20 MB/s) buses available internally and one SCSI-1 (5MB/s) bus available externally. The front panel covers Bus 0 IDs 0 through 3, and Bus 1 IDs 4-6, additionally available on the Network Server 700 are Bus 1 IDs 0 and 1 in the rear of the machine.

The preferable arrangement is to divide the drives among the buses as much as possible, especially in a mirror or stripe configuration. The DAT and/or CD may be moved to accommodate a more even balance. If this is done the bootlist needs to be updated for diagnostic devices. A drive that is not SCSI-2 Fast and Wide should be placed on the external bus whenever possible. When that drive is being accessed on one of the two internal buses, the SCSI-2 fast and wide features of the bus are disabled. If the drive was the only drive on one of the internal buses that would not cause any loss of performance on the other internal bus.

For PCI cards, the built-in I/O devices share one PCI bus. The top two PCI slots are for PCI bus 1 which is shared with the system. The bottom four slots are for PCI bus 2. To balance the load between PCI buses, a high bandwidth PCI device should be installed in bus 2. This should not be important with lower bandwidth devices such as a regular 10 MB/second Ethernet card. A few 100 MB/second Ethernet cards or FDDI cards can introduce a significant bandwidth on the 132 MB/second PCI bus.

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Article Change History:

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Tech Info Library Article Number:20530



Tech Info Library

Powerbook: Why Won't It Read Macintosh Floppies?

Revised: 10/18/96
Security: Everyone

Powerbook: Why Won't It Read Macintosh Floppies?

=====

Article Created: 14 October 1996
Article Reviewed/Updated: 18 October 1996

TOPIC -----

When I insert some Macintosh-formatted floppy disks into my Powerbook computer it wants to initialize them. However, the same floppy disks are read by my desktop Macintosh with no difficulties. Why does this happen?

DISCUSSION -----

This type of situation can occur even though your Macintosh Powerbook computer's floppy drive is operating within specification. The head mechanism used in Powerbook computers' floppy drives is not capable of recalibrating to the same degree as the floppy drives in desktop Macintosh computers. Therefore, PowerBook computers are "less tolerant" of poor quality disk formatting.

Commercial floppy disks which are duplicated in large volumes at very high speeds generally have lower quality formats. In order to access the information from such disks it may be necessary to format some disks on the Powerbook computer. Then duplicate the commercial software from the original disks using a desktop Macintosh computer and disk duplicating software, such as Apple Disk Copy.

In order to confirm that the Powerbook floppy drive is operating within specification try formatting a disk on the Powerbook. If it can consistently format disks and consistently read them, it is probably operating normally.

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Tech Info Library Article Number:20531



Tech Info Library

System 7.5.5: Needs System 7.5.3 Error Message (10/96)

Revised: 10/15/96
Security: Everyone

System 7.5.5: Needs System 7.5.3 Error Message (10/96)

=====

Article Created: 15 October 1996

TOPIC -----

When installing System 7.5.5 I received an error message indicating that I need System 7.5.3 installed, however, System 7.5.3 is already installed. Is there a problem with the System 7.5.5 installation disks?

DISCUSSION -----

System 7.5.5 will only install after System 7.5.3 has been installed. If the System 7.5.5 installer produces the error you describe and System 7.5.3 is installed, check to be sure you have not renamed any system files. Two files, when renamed, have been found to cause the install issue you describe, their original final names are:

System 7.5 Update
System 7.5.2 Update

When updated to System 7.5.3, the System 7.5 Update file is for a system updated from System 7.5, while the System 7.5.2 Update file is for a system updated from System 7.5.2.

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Tech Info Library Article Number:20533



Tech Info Library

System 7.5.5: System Update 2.0 Custom No Longer Works (10/96)

Revised: 10/24/96
Security: Everyone

System 7.5.5: System Update 2.0 Custom No Longer Works (10/96)

Article Created: 15 October 1996
Article Reviewed/Updated: 16 October 1996

TOPIC -----

This article describes an issue involving System 7.5.5 where System 7.5 Update 2.0 custom installations no longer function.

DISCUSSION -----

Because of the way the System 7.5 Update 2.0 installer checks for a valid system, you cannot perform a custom install from the System 7.5 Update 2.0 installer after installing System 7.5.5 Update. The System 7.5 Update 2.0 installer is looking for a System file with version 7.5. When it finds 7.5.5, it disables all install options.

If you need to custom install software from System 7.5.3, you can use another source such as the System 7.5 Version 7.5.3 software. You can purchase this software at most Apple dealers. You can also clean install System 7.5, or the system your computer came with, update to System 7.5.3, then reinstall System 7.5.5.

A Fix

The System 7.5 Update 2.0 Custom Install script fixes this issue, and has been placed on all Apple software update locations. Below is informaiton from the Read Me file:

System 7.5 Update 2.0 Custom Install Script For Customers Using System 7.5.5

After installing System 7.5.5 Update, you may find it necessary to reinstall components from System 7.5 Update 2.0. However, System 7.5 Update 2.0 will not allow installation of components on computers running System 7.5.5. The supported solution is to perform a clean install. In response to customer needs, Apple Computer is providing this unsupported installer script to allow the custom installation of System 7.5 Update 2.0 components. For example, if you

have the need to install Open Transport 1.1, and have installed System 7.5.5 Update, you can use this unsupported script to install Open Transport 1.1 without performing a clean install.

Instructions For Use

Before using this installer script, it is extremely important that you perform the following instructions to ensure proper installation:

- 1) Make a backup of your system folder before attempting to use this unsupported installer script.
- 2) Open the Extensions Manager control panel.
- 3) Choose "System 7.5.5" from the Sets pop-up menu.
- 4) If you have third-party peripheral devices that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, alternative input devices, network card drivers, and removable media.)
- 5) Restart your computer.
- 6) Locate the "System 7.5 Update 2.0 Install" icon that came with your original System 7.5 Update 2.0.
- 7) Drag the "Sys 7.5 Upd 2.0 Custom Install" icon on top of the "System 7.5 Update 2.0 Install" icon.
- 8) Select the components you wish to custom install.
- 9) Click on the "Install" button.
- 10) When the installation is complete, restart your computer.
- 11) Immediately reinstall System 7.5.5 Update by closely following the instructions in the document "About System 7.5.5 Update".

This custom installer script is not supported by Apple Computer. For customers using System 7.5 Update 2.0 to upgrade their computer to System 7.5.3, the supported solution is to perform a clean install of System 7.5 and then install System 7.5 Update 2.0. If you attempt to use this unsupported installer script and continue to experience problems, Apple Computer recommends that you follow the supported solution.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the

Apple Tech Info Library.

Article Change History:

16 Oct 1996 - Included the System 7.5 Update 2.0 Custom Install information.

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Tech Info Library Article Number:20534



Tech Info Library

Open Transport 1.1.1 Read Me - Part 1 (12/96)

Revised: 12/20/96
Security: Everyone

Open Transport 1.1.1 Read Me - Part 1 (12/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 20 December 1996

TOPIC -----

This article is the Open Transport 1.1.1 ReadMe - Part 1 file.

DISCUSSION -----

Open Transport 1.1.1 Read Me - Part 1

Introduction
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This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), see the Open Transport User's Guide. For additional technical information about Open Transport, see the "Open Transport Technical Info" file that came with Open Transport.

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=====

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What's new in Open Transport 1.1.1 - AppleTalk

What's new in Open Transport 1.1.1 - TCP/IP

Known limitations and other issues

System 7.5.3 notes

License agreement

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This release of Open Transport is subject to the terms and conditions of the license agreement that accompanies the software in the file "LICENSE." By downloading the software you agree to abide by the terms and conditions of the license agreement.

System requirements

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Open Transport is designed to work on Mac OS-compatible computers with a Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603(e), or 604 microprocessor. You should use system software version 7.5.3, 7.5.5 or later with Open Transport, although the earlier system software versions 7.1, 7.1.1 and 7.1.2 releases are also compatible.

Open Transport 1.1.1 can be used on the Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx product lines. When you install OT1.1.1 on a 52xx, 53xx, 62xx and 63xx model you may get a dialog box indicating a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed or loaded until the Cache/ROM DIMM is replaced. Your computer will continue to run classic networking. The required repairs are covered under the Apple repair extension program. Please contact an Apple-authorized service provider to have your computer repaired.

Open Transport requires a minimum of 5 MB of RAM (68030 or 68040 computers) or 8 MB of RAM (PowerPC-based computers). Open Transport memory requirements are based on total system memory including virtual memory, minus the size of any RAM disk and disk cache you're using.

Network interface options

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Open Transport 1.1.1 supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For computers without expansion options, Open Transport 1.1.1 also supports a SCSI-attached network adapter. Third party network interface options available for Open Transport include Fast Ethernet, ATM, and FDDI.

Before you install Open Transport 1.1.1

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- Read the section "Known Limitations and Other Issues" below to make sure Open Transport 1.1.1 will work on your computer.

- Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.
- For best results, you should install Open Transport 1.1.1 over Open Transport 1.1 and not over a beta version of 1.1.1. Several beta test sites have experienced problems when updating over a beta release. If you choose to install Open Transport 1.1.1 over a beta version, be sure to copy and save your prefs file.
- Turn on only those extensions installed with your system software. (Open the Extensions Manager control panel and select System 7.5.3 from the Sets pop-up menu, then restart your computer.) Do not turn off all extensions before installing Open Transport.
- Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx models using System 7.5.3 can install Open Transport 1.1.1 directly. Other supported systems must install Open Transport 1.1 and system software version 7.1, 7.1.1, 7.1.2 or 7.5.3 before updating to version 1.1.1.
- If you use SLIP or PPP software to access the Internet, verify that your SLIP or PPP software is compatible with Open Transport. See the section under "Dialup network connectivity - TCP/IP."
- When Open Transport is installed, the Network control panel is replaced by the AppleTalk configuration utility program. The MacTCP control panel is replaced by the TCP/IP configuration utility program. Both AppleTalk and TCP/IP are located in the Control Panels folder. For simplicity and consistency, user documentation generally refers to AppleTalk and TCP/IP as "control panels" even though technically they are utility programs.
- You should download a copy of System 7.5, Update 2.0 to your hard disk or have a copy of the Open Transport 1.1 retail package available. This will give you the software to reinstall Open Transport 1.1 in case you decide to remove Open Transport 1.1.1.

How to turn off or remove Open Transport 1.1.1

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Switching to Classic Networking

If your computer does not have a PCI bus, and is using system software version 7.5.3, you can use the Network Software Selector (NSS) utility to turn on classic networking instead of Open Transport. The NSS utility is installed in the Apple Extras folder when you install System Update 2.0. After selecting classic networking, close NSS and restart your computer. When your computer starts up again, open the Network control panel and choose the network connection you want to use.

Removing Open Transport with the Installer

You can remove Open Transport software with the Custom Remove option in the

Installer. However, the Custom Remove option removes a file called the Apple Shared Library Manager (ASLM). If any previous version of ASLM was installed, it was automatically updated to version 2.0.1 when you installed Open Transport 1.1.1. When you remove Open Transport, your previous version of ASLM is not automatically restored.

After removing Open Transport 1.1.1, you must reinstall any applications that rely on ASLM.

To remove Open Transport 1.1.1 using the Installer, follow these steps:

1. Open the Installer included with Open Transport 1.1.1. The Welcome screen appears.
2. Click OK.
3. In the window that appears, choose Custom Remove from the pop-up menu in the upper-left corner.
4. In the list that appears, click the box next to Open Transport so an 'X' appears in it.
5. Click Remove. If a window appears asking you whether to quit any open applications, click Continue. A window will appear telling you to restart your computer.
6. Click Restart.
7. On a Power Macintosh system with PCI bus, you will then need to reinstall Open Transport 1.1 software using either (1) the System 7.5, Update 2.0 installer, (2) the Open Transport 1.1 installer, or (3) a system software CD. If you use the system update installer or the system software that came with your computer, perform a custom install of the network software.
8. On a Macintosh system without PCI bus, classic networking will be restored and made active.

Open Transport Extras Folder

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• This release also contains an Open Transport Extras folder which includes the following files for your convenience:

- Claris EMailer 1.1v3 patcher
- MacPPP 2.5 software files
- Remote Only ADEV software
- Network Options for AppleTalk & TCP/IP
- the Open Transport Reference Q & A
- the Open Transport User's Guide

General compatibility

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Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple Computer, Inc.
- existing applications that use MacTCP as specified by Apple Computer, Inc.
- existing devices (such as printers) that you select in the Chooser

- existing NuBus network interface cards for the Mac OS

Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network without upgrading other computers on the network.

Apple product compatibility update

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- At Ease version 2.x or 3.x may encounter problems when starting up with Open Transport. Apple has released an updater utility ("At Ease Basic OT Updater") on Apple Software Update sites on the Internet and selected online services. If you are using At Ease for Workgroups, you should upgrade to version 3.0.2.

- Assistant Toolbox version 1.2 is not compatible with Open Transport, and will result in AppleTalk being turned off each time you restart your system. System 7.5.3 includes an updated version of Assistant Toolbox that is compatible with Open Transport.

- The Apple PCI Token Ring Card (M3904Z/A) requires Open Transport 1.1 or later. The Apple PCI Token Ring card is compatible with Power Macintosh 7500, 8500 and 9500 computers; it is not compatible with 7200/75 and 7200/90 computers.

- Apple LaserWriter Bridge and LocalTalk Bridge versions 2.1f2 or later are compatible with Open Transport.

- Apple Internet Dialer 1.0, part of the Apple Internet Connection Kit 1.0 (stock number M4276LL/A), is not fully compatible with System 7.5.3. This is corrected in AICK 1.1 (stock number 504081U). AICK customers with version 1.0 can update their software by downloading a "patcher" from the Apple Internet Connection Kit home page, available at <<http://www.online.apple.com/kit1/>>.

- Apple Internet Mail Server 1.1 or later software is compatible with Open Transport 1.1 and later. System Update 2.0 (System 7.5.3) is strongly recommended.

- Apple Remote Access (ARA) Multiport Server 2.1, ARA Client 2.0.1, and ARA Personal Server 2.0.1 are compatible with Open Transport 1.1 and later.

- Apple PCI-based Workgroup servers (Application, AppleShare, and Internet) are compatible with Open Transport 1.1.

- Computers running the current versions of Apple IP Gateway and AppleTalk Internet Router must not be updated to Open Transport; these products are based on classic networking. These products do, however, interoperate with computers using either classic or Open Transport networking. Apple has not yet announced plans regarding future versions of these products.

- Apple's MacTCP Ping is not compatible with Open Transport; no update is planned. MacPing from Dartmouth, available at <<ftp://ftp.dartmouth.edu>>, OTTool from Neon Software, available at <<ftp://ftp.neon.com>> and Mac TCP Watcher v2.0 from Peter N. Lewis & Stairways Software available at <<ftp://ftp.share.com>> are Open Transport-compatible alternatives.

NOTE: This note is not part of the original Read Me file. MacTCP Ping 2.0.2 will work for simple pings, but other functions, like record route fail with no explanation.

- ZapTCP is not compatible with Open Transport.

Dialup network connectivity - AppleTalk

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For dialup connectivity to AppleTalk networks, Open Transport supports Apple Remote Access version 2.0.1 or later.

Dialup network connectivity - TCP/IP

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For dialup connectivity to TCP/IP networks (including the Internet) Open Transport supports third-party extensions known as "MDEVs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided in this manner. Not all versions of all MDEVs are compatible with Open Transport 1.1 and later.

Open Transport 1.1 and later recognizes and is compatible with the following MDEVs. When properly installed they appear in the "Connect via" pop-up menu in the TCP/IP control panel.

- FreePPP - version 1.0.5 or later

FreePPP is shareware and can be found on the Internet, typically at "info-mac" mirror sites in the comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:
<<http://www.pht.com/info-mac/mirror-list.html>>

Some sites where FreePPP can be found currently include:

<<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>>
<<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>>

FreePPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using FreePPP with VM, either update to FreePPP 2.5, or temporarily turn VM off. The current version of FreePPP is 2.5rf.

- MacPPP - version 2.1.4 or later (MacPPP 2.5 is recommended)

MacPPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using MacPPP with VM, either update to MacPPP 2.5, or temporarily turn VM off.

An Open Transport-compatible version of MacPPP (MacPPP 2.5) is included in the Open Transport Extras folder. For more information, please refer to the MacPPP Read Me document.

- InterPPP - version 1.2.9 or later; InterPPP II - version 1.1 or later
InterPPP and InterPPP II are commercial software products. For availability and ordering information in the U.S., contact InterCon Systems at 800-468-7266 or 703-709-5500.
- MacSLIP - version 3.0.3 or later
MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the U.S., contact TriSoft at 800-531-5170 or 512-472-0744. For more details see the MacSLIP Web page at <<http://www.zilker.net/~hydepark/>>
- Sonic PPP - version 1.0.2 or later
SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering information in the U.S., contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax). For more details see the Sonic Systems Web page at <<http://www.sonicsys.com/>>
- NTS PPP - 2.0 or later
NTS PPP is commercial software developed by Network Telesystems, Inc. For availability and ordering information in the U.S., contact Network Telesystems at 408-523-8100 (voice) 408-523-8818 (fax). For more details see the Network Telesystems Web page at <<http://www.nts.com/>>
- SAT/SAGEM PPP - 1.02b1 or later
SAT/SAGEM PPP is commercial software developed by SAT/SAGEM. For availability and ordering information in the US, contact SAT/SAGEM at 408-446-8690 (voice) 408-446-9766 (fax). For more details see the SAGEM Web page at <<http://www.satusa.com/>>
- LeoTCP - 2.0.1 or later
LeoTCP is commercial software developed by Hermstedt GmbH. For availability and ordering information in the U.S., contact Hermstedt USA at 1-800-828-5522 (voice). In Europe contact Hermstedt GmbH at +49 621-76500 (voice) +49 621-7650100 (fax).
- T-Online CSLIP - version 1.0.3 or later
T-Online CSLIP is commercial software developed by Computer Consulting GbR. For availability and ordering information in Europe, contact format network & communication at 49 2206 95840. For more details, contact format network & communication at info@format.de.
- University of Michigan ISDN PPP - 2.0.6 or later
- OT/PPP - version 1.0f1c9 or later
Open Transport supports extensions that uses the STREAMS architecture. Apple Computer is developing a version of PPP that takes advantages of this capability. A beta version of OT/PPP 1.0 is available from the "unsupported" folder of Apple Software Updates sites and requires OT 1.1.1.

In addition to these, there are a number of other MDEVs (examples include those from Pacer, FCR, and Tribe) which are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect via" pop-up menu as

"TCP/IP PPP."

Tips for SLIP and PPP configurations

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- Some MDEVs are known to be incompatible with other MDEVs. If you experience problems, remove unused MDEVs so that only one MDEV is installed on your computer at a time.
- Users who dial into a TCP/IP network or Internet Service Provider (ISP) may have been assigned a router (gateway) address that is not a part of their local subnet. This was an accepted but technically invalid configuration for MacTCP. Open Transport users should not enter a value for the router address or subnet mask; Open Transport/TCP generates correct values for these fields automatically. In unusual circumstances, these supplied values can be overridden using the Administration mode of the TCP/IP control panel.
- If BootP is used over SLIP or PPP for interface configuration, and if BootP returns additional default router addresses, Open Transport will automatically add those addresses to the list of default routers.
- When Open Transport is installed on a computer that previously had MacTCP configured for a server configuration, the initial configuration method—the selection in the "Configure" pop-up menu in the TCP/IP control panel—is set for the use of a BootP server. This default may not be the appropriate choice for you; please verify.
- If your computer was previously configured for MacTCP "server" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:
 1. Open the TCP/IP control panel.
 2. Choose Using PPP Server or Using SLIP from the Configure pop-up menu.
 3. Close the TCP/IP control panel, and save changes when prompted.
 4. Try connecting again.
- If your computer was previously configured for MacTCP "manual" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:
 1. Open the TCP/IP control panel.
 2. Choose Manual from the Configure pop-up menu.
 3. Verify that the correct IP address is entered in the Address field.
 4. Close the TCP/IP control panel, and save changes when prompted.
 5. Open the configuration utility supplied with your SLIP or PPP software, and verify that it also reflects the correct IP address in the appropriate location. Refer to the documentation supplied with your SLIP or PPP software for further information on how to enter an IP address, and how to save an updated configuration.
 6. Try connecting again.

NOTE: In MacPPP's ConfigPPP control panel, this setting is entered in the IPCP

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dialog box. Refer to the documentation that came with MacPPP or FreePPP for additional information.

For additional information, see the file OT 1.1.1 Read Me - Part 2.

Article Change History:

20 Dec 1996 - Added MacTCP Ping note.

23 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20535



Tech Info Library

Open Transport 1.1.1 Read Me - Part 2 (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1 Read Me - Part 2 (10/96)

Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1 ReadMe - Part 2 file.

DISCUSSION -----

Open Transport 1.1.1 Read Me - Part 2

What's new in Open Transport 1.1.1 - general

• Open Transport can now be used on the Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx product lines. When you install OT 1.1.1 on a 52xx, 53xx, 62xx and 63xx computer, you may get a dialog box indicating a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed or loaded until the Cache/ROM DIMM is replaced. The required repairs are covered under the Apple repair extension program. Please contact an Apple-authorized service provider to have your computer repaired. (Your computer will continue to run classic networking until it is repaired.)

• When running System 7.5.3 on a 68020 computer that has been upgraded using a 68040 accelerator card, Open Transport will now run correctly.

• Memory management is improved. On PowerPC-based computers, memory is no longer fragmented. On 68030 or 68040 computers that have turned on the "Load only when needed" option, memory will not unfragment for 2 minutes after a TCP application completes.

• Performance enhancements for opening and closing endpoints have been added. This is particularly visible on Mac OS computers that are busy Web servers.

• Open Transport now registers and unregisters CRM serial drivers.

- The NuBus version of the DOS Compatibility Card is compatible with Open Transport 1.1.1.
- Infrared-compatible versions of LocalTalk drivers are now installed on all models. Previously these drivers were only installed on PowerBooks.

What's new in Open Transport 1.1.1 - AppleTalk

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- AppleTalk now properly handles Phase I RTMP packets on LocalTalk. This was causing problems using EtherPrint, TeleBridge, and other third-party forwarding technologies.
- Fixed a problem on a PowerBook Duo where AppleTalk would awaken from sleep on the wrong port when docking with an Ethernet MicroDock.
- Fixed a problem in ARA compatibility where Open Transport would sometimes not get the complete zone list from the server.
- Fixed some problems in ARA compatibility where a packet would not get routed properly, causing computers attached to the local cable of the server not to be visible to the ARA client.
- When using ADEVs, Open Transport requests a specific address from the ADEV. Some ADEVs return no error, but modify low memory locations to indicate a different address than that requested. Open Transport now picks up that different address and uses it (however, if the User Defined option is turned on, AppleTalk will not open).
- Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped. Use the AppleTalk Options control panel to fix the problem. Open the control panel, turn on the "Suppress router-related alerts" option, then close the control panel.

What's new in Open Transport 1.1.1 - TCP/IP

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Server specific fixes and enhancements

- The performance of opening and closing TCP endpoints has been improved. This improvement will be most noticeable on servers with a high volume of short-duration connections (such as Web servers).
- In OT 1.1, sometimes TCP connections could not be reused. Eventually a server application would not be able to accept incoming connections. This has been fixed.
- Fixed a problem where busy TCP servers sometimes accepted no new inbound connections for about 30 seconds every 4 minutes.

- Fixed a memory leak which occurred when Hosts files were used and TCP/IP was set to "load only when needed." Previously, Hosts file entries were not properly deleted from memory when TCP/IP unloaded.
- Introduced a better DNR cache limitation algorithm. Entries that haven't been used for 15 minutes can now be flushed whenever the DNR is heavily used.

Other TCP/IP fixes and enhancements

- Open Transport's MacTCP compatibility now honors the pushFlag parameter to TCPSend call. This is required for some legacy applications to correctly communicate with older, nonconforming hosts. However, no direct control of the TCP pushFlag is or will be provided through the native OT API.
- Entries in the Address and Alias caches now flush when they reach their "time-to-die," and not when they exceed it. TCP/IP also no longer caches resource records with a 0 time to live.
- The DNR now more robustly supports service load-balancing strategies. It no longer maps directly between an alias and the IP address of the host being aliased.
- When dealing with DHCP servers, Open Transport now tries "full-size" packets first, then falls back to "short" packets.
- Fixed a problem with timer overflow on long DHCP leases. Previously, if the lease exceeded 24 days, then TCP/IP connectivity would be lost in a matter of hours.
- Fixed a problem that occurred when one end of a connection closes a "tcp" endpoint, while the other end simultaneously aborts the connection.
- Fixed a problem where a DNR SysInfo request will sporadically fail when a valid reply is mistakenly treated as having been truncated.
- Fixed a hang that occasionally occurred when flushing the DNR address cache.
- Fixed a problem where resolving a bad name sometimes returned no error, when in fact an error occurred.
- Fixed a hang that occurred with applications that use the TCPNoCopyRcv call through the MacTCP compatibility interface. This hang occurred when the MacTCP compatibility interface ran out of memory, either due to being given a small buffer by the application, or by receiving enough inbound data to fill most of the inbound buffer space.
- Fixed a memory leak when opening the resolver in MacTCP emulation mode.
- Open Transport 1.1.1 is compatible with NuBus Token Ring adapters. To ensure compatibility with existing NuBus Token-Ring drivers, Open Transport TCP/IP artificially imposes a MTU of 1500 bytes. This limit should be addressed in a future release.

- Open Transport's MacTCP emulation can now abort a connection where the underlying stream is blocked due to flow control. Applications using the native Open Transport API will have to issue an I_FLUSH ioctl before sending a disconnect when they want to disconnect/abort a flow-controlled connection.

- A new traceroute program for Open Transport/TCP, called "WhatRoute," is now available at <<http://crash.ihug.co.nz/~bryanc/>>. The latest version of Mac TCP Watcher (v2.0) <<ftp://ftp.share.com/peterlewis/>> also now supports traceroute.

Known limitations and other issues

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- The AppleTalk control panel displays separate printer and modem ports on the PowerBook 190. LocalTalk will only work correctly when the modem port is selected in the AppleTalk control panel.

- The software that dims the screen of PowerBook Duo computers when the PowerBook is docked and idle is not compatible with Open Transport. Use a third-party screen saver in place of the Apple-provided module.

- In some cases, on a PowerBook 190 configured to use the Infrared Port in the AppleTalk "Connect via" pop-up menu, networking services may become disabled following a sleep/wake or restart. If this happens, try putting the computer to sleep and waking it up again, or use the AppleTalk control panel to temporarily select the modem/printer port before switching back to the infrared port.

- On a IIfx or a Quadra 950, Open Transport can only use the "compatible mode" setting in the Serial Switch control panel. Don't use the "faster mode" setting with LocalTalk.

- On 68030 and 68040 computers, changes in AppleTalk configurations can cause systems running Meeting Maker 3.5 or 3.5.1 to crash. This can occur when changing AppleTalk links, turning AppleTalk off, or bringing ARA connections up or down. This problem will occur on classic networking as well. Apple is working with ON Technology to resolve this problem.

- Open Transport generally requires more memory (RAM) than MacTCP. To conserve memory, you might try some of the following:

- Rename or re-order one or more third-party system extensions (INITs), to change the order in which memory is allocated when your computer starts up. If you use extensions from Global Village, try renaming those extensions so that they load last.
- Especially on PowerPC-based computers, turn on virtual memory.

- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), "pinging" an Open Transport workstation will fail if TCP/IP is not currently being used. To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.

- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.

- The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one. This should be addressed in a future release.

- Generally, you should turn on the "Load only when needed" option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded, your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.

- If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.

- If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)

- If you are using Netscape, 16MB or more of built-in memory (RAM) is recommended.

- Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder. Do not delete this file when installing or configuring Open Transport.

- You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.

- Claris EMailer version 1.1 v3 or later is compatible with Open Transport 1.1.1. Earlier versions of Claris EMailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting EMailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X.) For your convenience, the Claris EMailer version 1.1 v3 patcher and Claris EMailer Lite version 1.1 v3 patcher has been provided in the Open Transport Extras folder.

- The current version of the MacTraceRoute Ethernet LAP does not work on computers running Open Transport.

- NFS/Share versions 1.4.4 or later are compatible with Open Transport.

- When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change Open Transport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the X).
- eXodus 5.2.2 and later are compatible with Open Transport.
- Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport. Make sure you are using Anarchie 1.6 or later.
- If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This problem can be fixed by installing a router. Another workaround is to clear the PRAM on the ARA computer. (Hold down the Control, Option, and P keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.
- Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.
- MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the "reconnect" choice does not work correctly.
- The system will crash during launch of NetPresenz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.
- Current versions of VersaTerm SLIP are not compatible with Open Transport.
- Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to "Load only when needed" (in the control panel's Options window). Contact Sassafras for the latest revisions at <<http://www.sassafras.com>>.
- The combination of Open Transport 1.1.1, LocalTalk Bridge 2.1f2, Global Village Toolbox and GlobalFax extensions causes a crash. This also happens when using classic networking. The workaround is to move the LocalTalk Bridge file to the Extension folder, renaming it to "aLocalTalk Bridge." You can make an alias and rename the alias as desired. Put the alias wherever you want, including the Control Panels folder. This will allow the LocalTalk Bridge to load before Global Village and avoid the cause of the crash.
- To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.1.1.
- After installing Open Transport 1.1.1 over a network while using Classic AppleTalk, open the Open Transport 1.1.1 AppleTalk control panel. If you are not using an infrared device, open the "Connect via" pop-up menu and choose Serial

Port.

- The current official release of the MPW shell will hang the system when used with virtual memory and Open Transport. When using the MPW shell and Open Transport, turn off virtual memory. The ETO #21 pre-release MPW shell, version 3.4.2b2, fixes this problem.

System 7.5.3 notes

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- System 7.5.3 includes both classic and Open Transport networking.
- The Network Software Selector (NSS) utility, included in the Apple Extras folder with System 7.5.3, provides an easy way to specify either classic or Open Transport networking. The computer must be restarted for a change to take effect.
- During system startup, System 7.5.3 checks for the stored preference for networking software. The load process then causes the appropriate control panels—"Network" and "MacTCP" for classic networking, "AppleTalk" and "TCP/IP" for Open Transport—to become visible. Those control panels associated with the disabled network software are hidden.
- Prior to installing OT 1.1, it was technically possible to install the older MacTCP on a computer running Open Transport. With OT 1.1 and later this is no longer possible.
- If it becomes necessary to reinstall MacTCP or the Network System Installer (NSI) on a 68030, 68040, or NuBus PowerPC-based computers running System 7.5.3 and Open Transport, you must first use NSS to specify classic networking and restart. After restarting, MacTCP and the other components of classic networking are visible.
- If you have a PCI-based computer connected to a Novell Netware network and are using the Netware 5.1 client software, you should also install the Ethernet Compatibility extension version 1.0.3. This extension is available only through a Custom Install from the System Update 2.0 installer, selecting the Ethernet Driver Update. This corrects a problem that could cause your system to crash at shutdown when using MacIPX. However, there will be a two-minute delay in shutting down the computer.
- Network Time v2.0.1 is not compatible with the AutoPower On/Off control panel version 1.0 on a NuBus Power Macintosh with Open Transport. To use Network Time v2.0.1, remove the AutoPower On/Off control panel.

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Tech Info Library

Open Transport 1.1.1 Technical Information (10/96)

Revised: 2/17/97
Security: Everyone

Open Transport 1.1.1 Technical Information (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1 Technical Information file.

DISCUSSION -----

Open Transport 1.1.1 Technical Information

This document contains technical information about Open Transport that may be useful to network managers and administrators. You do not need to read this document in order to use Open Transport.

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Introduction

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Open Transport is modern networking and communications system software for the Mac OS. It is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Mac OS computers, while preserving built-in support for easy-to-use networking. Open Transport 1.1.1 is compatible with system software version 7.5.3, 7.5.5 and later, as well as versions 7.1, 7.1.1, and 7.1.2.

For more important information about system requirements, compatibility, and known incompatibilities and limitations, read the Open Transport 1.1.1 Read Me document.

Files added by the Open Transport installer

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Open Transport installs the AppleTalk and TCP/IP control panels into the Control Panels folder inside the System Folder of your startup disk. The Open Transport Installer also adds the following files to the Extensions folder inside the System Folder:

Shared Library Manager

Shared Library Manager PPC

These extensions implement a shared library mechanism on 68K and PowerPC Mac OS computers, respectively. Both extensions are required on PowerPC-based computers in order to support both emulated and native shared libraries.

OpenTransportLib

Open Transport Library

These shared libraries implement core Open Transport services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptAppleTalkLib

Open Tpt AppleTalk Library

These shared libraries implement Open Transport AppleTalk services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptInternetLib

Open Tpt Internet Library

These shared libraries implement Open Transport TCP/IP services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

Open Transport 68K Library

This shared library implements core Open Transport services on 68030- and 68040-based computers.

Open Tpt ATalk 68K Library

This shared library implements Open Transport AppleTalk services on 68030- and 68040-based computers.

Open Tpt Inet 68K Library

This shared library implements Open Transport TCP/IP services on 68030- and 68040-based computers.

Open Transport AppleTalk Features

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Static and dynamic AppleTalk address allocation

Open Transport AppleTalk supports static assigned (manually administered) protocol addresses as well as the dynamic addressing provided by AppleTalk Address Resolution Protocol (AARP). Static addressing allows AppleTalk nodes to be managed using the protocol address as a unique and stable identifier.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently—either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict when a new dynamic node acquires an address assigned to manually-addressed node that is not connected or is off line. Administrators can enforce the addressing policy for a subnet by locking the addressing mode. As a precaution, Open Transport AppleTalk checks for duplicate protocol addresses on the LAN even when static addressing is configured.

Use of parameter RAM

Under classic AppleTalk, AppleTalk's on/off state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name are saved in persistent memory (parameter RAM) for reuse at startup. To ensure backward compatibility, this information is still stored and retrieved on systems using Open Transport AppleTalk. However, the following differences are found with Open Transport:

- At startup, Open Transport reads the current AppleTalk configuration file to determine if AppleTalk should be turned on or off. This value overrides the value saved in parameter RAM. The user is not explicitly notified when this occurs.
- If the network interface specified in the current AppleTalk configuration file is locked and the specified port is not available or cannot be initialized, Open Transport will not automatically switch the port back to LocalTalk. Instead, AppleTalk will remain off. The user sees a dialog box with this information.

Open Transport TCP/IP features

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Open Transport brings a workstation-class implementation of TCP/IP protocols to Mac OS. As with MacTCP, Open Transport TCP/IP is a full 32-bit stack. Open Transport TCP/IP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol.
- IP multicast, for participation as an MBone client for applications written to the native Open Transport API
- simultaneous TCP connections for applications written to the native Open Transport API are limited only by installed memory and processor power, for increased functionality as an Internet or other TCP/IP network server
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR)
- support for developer access to raw IP services, as well as TCP and UDP
- Ethernet Version 2.0 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts
- implicit and explicit domain name search paths, for increased control of domain name resolution
- use of multiple IP routers with fail-over, for increased robustness in mission-critical applications
- TCP wildcard source port assignments start at 2048, increasing from that point.

DHCP server support

Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport TCP/IP has been tested with the following DHCP server implementations:

- Competitive Automation (URL: <http://www.join.com>)
- FTP Software (URL: <http://www.ftp.com>)
- Hewlett Packard HP-UX (URL: <http://www.hp.com>)
- Microsoft Windows NT Advanced Server (URL: <http://www.microsoft.com>)
- Silicon Graphics (URL: <http://www.sgi.com>)
- Sun Solaris and SunOS (URL: <http://www.sun.com>)
- TGV (URL: <http://www.tgv.com>)

DHCP address lease support

Open Transport TCP/IP supports DHCP address leases. Open Transport TCP/IP automatically attempts to renew any address lease that reaches its renewal interval (by default, the renewal interval is reached when the lease is halfway completed). The renewal interval may be configured to a different value by making changes to the configuring DHCP server. Renewal is attempted regardless of how many times the lease has already been renewed. Lease rebinding is also supported. Should an interface's IP address lease expire, the interface is closed down. Open Transport TCP/IP does not currently support the DHCP Client ID option or the DHCPINFORM message, nor will it currently try to use the remainder of a previous but unexpired lease upon rebooting.

Windows NT advanced server support

With Open Transport 1.1 and later, Mac OS clients are interoperable with the Windows NTAS DHCP server on LAN links. However, Mac OS clients cannot acquire configuration information from an NT DHCP server across a dialup (PPP) link because there is not yet an accepted industry standard for DHCP over dialup. The NT implementation is based on proprietary Microsoft extensions. Mac OS clients cannot acquire configuration information nor register with a Microsoft WINS server. WINS is also dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support).

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group. Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge

Macintosh clients running versions of Open Transport prior to 1.1 could experience some interoperability problems due to other significant differences between the Microsoft implementation and that of a typical UNIX-based server.

BootP support

Open Transport 1.1 and later fully supports Bootstrap Protocol (BootP). Versions of Open Transport prior to 1.1 failed to accept a BootP Reply sent to the unicast (subnet broadcast) address, (for example, xxx.xxx.xxx.255. Replies sent to the all-nets broadcast address (for example, 255.255.255.255) were handled properly. Also, earlier versions of Open Transport required that the BootP gateway be zero hops away.

Local Hosts file support

Open Transport TCP/IP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is normally stored in the Preferences folder in the active System Folder. When Open Transport TCP/IP is initialized, it reads the Hosts file (if any). As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Open Transport TCP/IP is more stringent regarding the content and format of the Hosts file than was MacTCP, which permitted violation of the FQDN requirement

for <domain-name>. For instance, the format:

```
charlie          A          128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP ("charlie" could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie          CNAME      myhost.mydomain.edu
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

You can create a Hosts file with any text editor or word processor (the Hosts file must be stored in text format). If you use a Hosts file, keep it as short as possible, and include only entries that will be accessed frequently. This reduces the memory required to cache the DNS information and minimizes the need to maintain and update Hosts files as system information changes.

Open Transport TCP/IP automatically uses a Hosts file stored the Preferences folder of the active System Folder. If no Hosts file is found in the Preferences folder, Open Transport TCP/IP searches the active System Folder for a Hosts file. You can specify a particular Hosts file to use with a specific configuration. For example, one Hosts file might be set up for a user connecting via Ethernet, and another set up for when that user connects via modem.

For additional information about the Hosts file design of the Open Transport Domain Name Resolver, see the document "Apple Open Transport Reference Q&A." The latest version of the Q&A is on the Open Transport 1.1 Installation CD, and is available on the Internet at <ftp://seeding.apple.com/ess/public/opentransport/>.

MacTCP "server" addressing support

Open Transport TCP/IP supports both Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. MacTCP Server mode addressing was a combination of BootP and RARP. When Server mode was selected, MacTCP used BootP to attempt to acquire an IP address. If that failed, MacTCP tried RARP. Whichever protocol was successful was stored as a preference, and was used first the next time the computer started up. In Open Transport, you must choose BootP or RARP explicitly.

MacTCP "dynamic" addressing

Open Transport does not support MacTCP "dynamic" addressing. MacTCP dynamic mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set up a Macintosh-only standalone TCP/IP network. Use of this dynamic addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Open Transport TCP/IP supports the industry standard DHCP.

MacIP support

MacIP is a protocol specification developed for carrying TCP/IP traffic on AppleTalk-only networks, originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services.

Use of MacIP typically requires a gateway, which strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are sent back to the MacIP end-node, the gateway replaces the AppleTalk encapsulation. MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network.

Open Transport supports MacIP in the TCP/IP control panel. Once selected, TCP/IP data is encapsulated in AppleTalk packets, and is sent through the selected network interface.

PPP connectivity

With the exception of OT/PPP 1.0f1c9 or later, PPP (Point to Point Protocol) connectivity for Open Transport is currently based on the use of third-party software extensions known as "MDEVs." Early versions of these MDEV extensions may not be compatible with Open Transport. For information about MDEV compatibility, see the Open Transport 1.1 Read Me document.

OT/PPP is implemented using the Open Transport native STREAMS environment.

Memory requirements

Open Transport provides many new features and capabilities to Mac OS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors contributing to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC code. PowerPC code is typically larger (but also faster).
- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC-based computers.

- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces.
- Open Transport requires less memory on systems with virtual memory enabled. Classic networking has about the same memory requirements regardless of the VM setting.
- Open Transport is based on the cross-platform standard STREAMs environment, which requires more memory than classic networking.

The difference in memory requirements depend upon the configuration of your computer. Some examples of base memory requirements include:

Begin_Table

Computer System	Virtual Memory	Classic AppleTalk & MacTCP	Open Transport
PowerPC-based	On	350K to 450K	200KB
PowerPC-based	Off	350K to 450K	up to 1.2MB
608x0-based	Off	350K to 450K	700KB to 800KB

End_Table

Application compatibility guidelines

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Apple has defined three levels of interoperability with Open Transport. The first, "Open Transport Compatible," is used to describe network applications originally developed for "classic" AppleTalk or MacTCP programming interfaces that now take advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the Open Transport control panels. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

"Open Transport Ready" applications have adopted the new Open Transport APIs. They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport-ready applications benefit from the new control panels and may also realize a significant performance boost when running on PowerPC-based computers.

The highest category of interoperability is "Open Transport Enhanced." In addition to adopting the new Open Transport APIs and being Power PC native, these applications can be dynamically configured to support AppleTalk, TCP/IP, or serial communication.

Applications that rely on undocumented APIs or examine private data structures in AppleTalk or MacTCP may not be fully compatible with Open Transport. Updated versions of these software products will be required for full compatibility.

Performance

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Open Transport is designed to take advantage of the PowerPC processor. For maximum performance, however, networking applications must also take advantage of the PowerPC processor, and should adopt the new Open Transport programming interfaces.

In general, current Mac OS networking applications are written for the 680x0 processor and use the "classic" (680x0-based) networking programming interfaces. These applications can still be used with Open Transport, and may perform somewhat better. Networking applications that are PowerPC-native but not Open Transport-ready may yield better performance, but still fall short of the maximum potential performance because they make use of Open Transport backward compatibility rather than its full capabilities.

Performance improvements will be greater with protocols that use larger datagram sizes. For example, TCP/IP users will see greater improvements than AppleTalk users, because AppleTalk has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor.

Overall performance also depends on the amount of RAM available. Larger packet sizes and higher throughput place increased demand on the buffering system of Open Transport. If Open Transport becomes low on memory, throughput decreases to accommodate the limitation.

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Tech Info Library

Quality Software Bundles: Description (10/96)

Revised: 10/16/96
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Quality Software Bundles: Description (10/96)

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Article Created: 16 October 1996

TOPIC -----

This article contains the description for the Apple Quality Bundles which consists of the following different bundles:

- Early Learning Kit
- It's Elementary!
- College in Mind?
- Extreme Fun Pack

DISCUSSION -----

The Apple Quality Bundles are new value-added software solutions for home learning and entertainment. The collection features award-winning programs from leading developers of home learning and entertainment software, and is part of Apple's commitment to offering the best value to its customers, and to utilize its expertise in education to bring learning home. The packs are above and beyond the extensive solutions already packaged with Macintosh Performa computers.

Because these kits supply up to eight programs for one low price, they present an ideal opportunity for Performa owners to expand their learning and entertainment software libraries with proven titles hand-picked by Apple. The kits are designed for preschoolers, elementary school students, college-bound teenagers, and gamers of all ages. Because there are so many programs in each pack, the Quality Bundles provide longevity of use for the family, increasing their value even more.

Early Learning Kit

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With eight leading programs included, the Early Learning Kit gives preschoolers a head start in preparing for school. Richly interactive multimedia software helps kids develop basic skills and knowledge, including letter and word recognition, vocabulary, numbers and counting, art, and music.

The software makes learning fun and provides lots of activities for families to share.

Included Software

- Playskool Puzzles by Hasbro Interactive
- Sesame Street, Let's Make a Word by Creative Wonders
- How Many Bugs in a Box? by Simon & Schuster
- Millie's Math House by Edmark
- FisherPrice Sing-Alongs by Davidson
- Putt-Putt Saves the Zoo by Humongous Entertainment
- Jump Start Kindergarten by Knowledge Adventure
- Kids Art Center by Creative Wonders

It's Elementary!

=====

This set of eight engaging, interactive programs helps youngsters ages seven to ten build the knowledge and skills needed in elementary school. Creative multimedia programs cover all the major subject areas, including language arts, math, science, and social studies.

Included Software

- Counting on Frank by Creative Wonders
- What's the Secret? by Imation
- Wide World of Animals by Creative Wonders
- Schoolhouse Grammar Rock by Creative Wonders
- Imagination Express, Destination: Ocean by Edmark
- The Amazon Trail by MECC
- Elroy Hits the Pavement by Headbone Interactive
- Amazing Animation by Vividus

College in Mind?

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This bundle of eight top Macintosh programs helps high school students select, gain admission to, and prepare for college or a university, while having fun at the same time. Chock full of resources for doing homework and research, planning college applications, and finances, and hunting for jobs, this kit helps teens get organized and sharpen their test-taking, writing, and interview skills.

Included Software

- U.S. News & World Report, Getting Into College, 1996 Edition by Creative Multimedia
- The Princeton Review, Inside the SAT by The Princeton Review
- Correct Grammar by Softkey
- Monarch Notes on CD-ROM by Thynx
- INFOPEDIA Reference Library by Softkey
- Espresso Calendar by Berkeley Systems
- Resume Maker Deluxe by Individual Software
- You Don't Know Jack by Berkeley Systems

Extreme Fun Pak

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Winners of rave reviews and multiple awards, these six programs are guaranteed to transport hard-core gamers into the realm of white-knuckle fun, time after time. The Extreme Fun Pak brings together all the most popular game categories, from first-person flight and space combat adventure to otherworldly role-playing and the classic fun of arcade action.

Included Software

- Marathon 2 by Bungie
- Wing Commander III by Electronic Arts
- Panzer General by Mindscape/SSI
- Flight Unlimited, Limited Edition by Looking Glass Technology
- Entomorph by Mindscape/SSI
- Diamonds 3D by Macsoft

Ordering Information

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Note: The Apple Quality bundles will be available from authorized Apple dealers starting October 15, 1996. Although all the programs featured in the bundles are full-featured, except for the Limited Edition version of Flight Unlimited, not all programs come with the complete documentation that would be available if purchased separately. Some have online documentation only, but all come with some kind of documentation and help.

Early Learning Kit

Order Number: M5464LL/A

It's Elementary!

Order Number: M5463LL/A

College in Mind

Order Number: M5462LL/A

Extreme Fun Pack

Order Number: M5465LL/A

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Tech Info Library Article Number:20538



Tech Info Library

High School Biology Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

High School Biology Bundle: Description (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 30 October 1996

TOPIC -----

This article contains a description of the Apple Education Series: High School Biology Bundle.

DISCUSSION -----

Educators nationwide have been searching for innovative ways to facilitate science teaching and learning. Today, with the same technology tools used by scientists, biology teachers are creating classrooms that encourage inquiry and reward curiosity. Now Apple has made that easier to do.

The Apple Education Series: High School Biology Bundle provides a Macintosh computer and the Biology Kit with Probes, which includes a rich set of software programs. Spanning the biology curriculum from genetics to ecology, these interactive programs engage students' interest--and they promote conceptual understanding. In addition, the kit contains a microcomputer-based lab (MBL) with a set of physiology probes and a collection of eight technology-based classroom investigations--one for each topic in the basic biology curriculum.

With the Biology Kit with Probes and a Macintosh computer, you'll discover how computer simulations, multimedia, data collection, graphing, model building, and analysis can enhance "hands-on" laboratory activities in biology.

Note: To ensure successful implementation, we strongly recommend initial training (High School Biology Staff Development) for any teacher using the High School Biology Bundle.

More Choices, More Flexibility
=====

Now, when you order a Macintosh computer with one of the Biology Kits, you may also order two other Apple Education Series kits. It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power Macintosh 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details.

2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.*

3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

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Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Biology Kit

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Curriculum Software

* A.D.A.M. Essentials from A.D.A.M. Software, Inc.

Helps students to learn about anatomy and physiology by allowing them to "dissect" the body from anterior and posterior views, explore major body systems, and visual-ize important concepts through text and animation.

* Astound from Gold Disk, Inc.

Enables students and teachers to integrate all types of multimedia elements into classroom presentations, reports, overhead transparencies, and color slides.

* Biology Explorer from Logal Software Inc.

* ClarisWorks from Claris Corporation

Combines word processing, database, spreadsheet, graphics, presentation, and telecommunications software in one familiar, efficient environment.

* Clip-Art for Science Teachers from Ventura Educational Systems

Provides science teachers with a variety of detailed diagrams that can be added to tests, reports, overhead transparencies, and worksheets.

* Investigating Lake Iluka from Interactive Multimedia, Ltd.

Simulates a coastal lake environment that students can explore. Contains tools for investigating the physical, chemical, and biological characteristics of the ecosystem as well as associated news reports.

* Life Story from Sunburst Communications, Inc.

Explores the discovery of DNA and the struggles of researchers Crick, Watson, and Franklin. Includes segments from the BBC drama, "The Race for the Double Helix," molecular animations, and interviews.

Reference Software

* The San Diego Zoo Presents...The Animals! from Mindscape, Inc. .

* LIFEmap Series (Animals, Animals with Backbones, and Organic Diversity) from Warner New Media

* Grolier Multimedia Encyclopedia from Mindscape, Inc.

Curriculum Investigations

Model investigations on eight topics (basic chemistry, cells, genetics, classification, plants, animals, physiology, and ecology) provide supplemental activities to support an existing biology curriculum. These investigations demonstrate how multimedia, simulations, and computer-based data collection, analysis, and presentation tools can facilitate the fundamental scientific processes of hypothesizing, experimenting, measuring, interpreting, inferring, and communicating. Each investigation includes suggested outcomes, preparation and prerequisites, directions, and curriculum integration and assessment suggestions.

Biology Kit with Probes

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This kit includes all contents of the Biology Kit, plus the following:

Microcomputer-based Lab

Connect this microcomputer-based lab and set of physiology probes to your Macintosh computer to conduct experiments involving temperature, pulse, and EKG. The MBL uses the power of the computer to control experiments, gather data, and analyze the results, so your students can concentrate on the underlying principles at work.

Biology Staff Development

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Participants in a two-day training session will explore the role of technology in the science classroom and gain a hands-on familiarity with all the materials in the bundle--including the software and probes. Special attention will be paid to the model investigations. Participants will gain a working knowledge of at least one investigation and learn how to apply it to their own classrooms.

Ordering Information

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Biology Bundle

Includes Power Macintosh 5260/120 and Biology Kit with Probes--a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2816LL/C

With CPU setup: B2818LL/C

Biology Kit

Order No.: T1569LL/E

May be purchased only with a computer.

Biology Kit with Probes

Order No.: B2819LL/B

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Biology Staff Development

Order No.: T1570LL/A

Article Change History:

30 Oct 1996 - Added part numbers.

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Tech Info Library Article Number:20539



Tech Info Library

Power Macintosh 9500/200:Use HD SC Setup or Drive Setup? (11/96)

Revised: 11/12/96
Security: Everyone

Power Macintosh 9500/200:Use HD SC Setup or Drive Setup? (11/96)

Article Created: 15 October 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

I have a Power Macintosh 9500/200 computer, and I need to initialize the hard drive. I thought this computer required Drive Setup, but I could only find Apple HD SC Setup in the Disk Tools folder on the system software CD-ROM disc. Can I use HD SC Setup to reinitialize my hard drive? If not, where is Drive Setup?

DISCUSSION -----

No, you should not use Apple HD SC Setup to initialize the hard drive in your Power Macintosh 9500/200. Apple HD SC Setup was not intended to be included with your computer. Instead, Drive Setup is the supported disk utility for use with all PCI-based Power Macintosh computers, including the Power Macintosh 9500/200. If you have already used HD SC Setup, it should not cause any problems with your computer. However, Apple recommends that you reinitialize the hard drive using Drive Setup.

Drive Setup is included with your computer, but it is on a floppy disk called Drive Setup Software rather than on the Apple Macintosh CD System Software 7.5.3 (Version 5.0). Additionally, in order to properly use Drive Setup, you must use Drive Setup and then run the Drive Setup Updater utility program, which corrects an issue that could prevent your computer from starting up properly.

On the system software CD disc, there is a Read Me file titled, "Where is Drive Setup". This file describes this issue in detail and provides the necessary steps for using Drive Setup.

This article was published in the Information Alley on 16 October 1996.

Article Change History:
12 Nov 1996 - Added alley blurb.

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Tech Info Library Article Number:20540



Tech Info Library

Open Transport 1.1.1: Component Technologies FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Component Technologies FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Component Technologies FAQ (frequently asked questions).

DISCUSSION -----

Question: What technology components comprise Open Transport?

Answer: Open Transport supports LANs and WANs and will integrate serial communications, modems, and remote (dial-up) networking in a consistent model for end-users, network managers, and developers. The Open Transport architecture consists of:

- standards based programming interfaces for applications developers and for network interface controller developers,
- a new cross-platform development model for integration of networking with the underlying operating system,
- a set of dynamic link-and-load memory management services,
- new implementations of MacOS protocol stacks,
- new human interface applications and control panels, and
- a set of backward-compatibility support modules.

Question: What current MacOS technologies and components will Open Transport replace?

Answer: When installed, Open Transport replaces the current MacOS

implementations of AppleTalk and TCP/IP (including the protocols and the "Network", "MacTCP", and "Admin TCP" control panels).

Over time, Open Transport is also designed to replace the Connection Manager and the Communications Resource Manager of the current Communications Toolbox architecture.

Question: Does that mean that Apple is migrating serial communications away from the Communications Toolbox (CTB)?

Answer: Partially, but not entirely. The CTB File Transfer and Terminal Managers continue to be supported and will be preserved in the MacOS 8 release - although on new Open Transport/Serial underpinnings.

Over time, plans call for the CTB Connection Manager and its tools to be phased out in favor of Open Transport. MacOS 8 is expected to provide support for the Connection Manager APIs, although Apple has no current plans to port existing Connection Manager tools other than the Serial Tool to MacOS 8. Apple recommends that developers plan their update to Open Transport/Serial (and away from CTB Connection Manager) to coincide with (or precede) the availability of MacOS 8.

At this time, there are no plans to replace or eliminate the File Transfer or Terminal Manager services.

Question: What standards are implemented in the Open Transport architecture?

Answer: Open Transport brings standards based networking into MacOS with support for:

- the X/Open Transport Interface (XTI), the POSIX compliant API for support of networking applications,
- the Datalink Provider Interface (DLPI), for development of network interface controller (NIC) drivers, and,
- a port of a UNIX System V release 4.2 compatible STREAMS environment for network protocol developers.

Question: Did Apple develop the STREAMS environment for Open Transport?

Answer: To maximize the stability, performance, and robustness of Open Transport, Apple selected Mentat Inc. - the leading supplier of high performance kernel-level network software - to supply the STREAMS environment for Open Transport.

Mentat Portable STREAMS (MPS) is an independent fast, full-featured, multiprocessor safe version of the UNIX System V Release 4 STREAMS environment. Its incorporation into Open Transport provides a reliable platform for protocol development, including Apple's own implementation of a STREAMS based AppleTalk stack. MPS also allows easy porting from other platforms of third party

protocols. MPS is the same implementation of STREAMs found inside many industry standard UNIX operating systems, including those from IBM and OSF, as well as other platforms such as Novell NetWare.

Question: Did Mentat supply other technology to Apple in connection with Open Transport?

Answer: Yes. Mentat supplied the source code base for Open Transport/TCP, and has worked closely with Apple on the development of an archetypal high-performance DLPI driver.

Mentat TCP (MTCP) is a robust implementation of TCP/IP that conforms with all industry standards, and is the basis of another leading workstation TCP stack. It makes a significant contribution to the performance and functionality of Open Transport/TCP.

Question: Is there more information available about Mentat Inc. and its products?

Answer: Mentat maintains a presence on the world wide web at:
<http://www.mentat.com>

Question: What dynamic link-and-load technology is used by Open Transport?

Answer: On 680x0 MacOS systems, Open Transport uses the Apple Shared Library Manager (ASLM) 2.0. On PowerPC MacOS systems, Open Transport is based on a combination of ASLM (for 680x0 applications) and the newer Code Fragment Manager, CFM (for PowerPC applications).

Question: Which protocols are supported by Open Transport?

Answer: Open Transport version 1.1.1 includes implementations of AppleTalk and TCP/IP, and consistent API access to serial communications.

Apple and third parties are investigating or working to add support to Open Transport for Point to Point Protocol (PPP), NetWare (NCP/IPX), Windows 95 and Windows NT (SMB/TCP/NetBIOS), DECnet and LAT. Some of these additional capabilities may be incorporated or bundled with future releases of Apple Open Transport (see Future Directions).

Question: Are there any changes in AppleTalk or TCP/IP with Open Transport?

Answer: Yes. The new Open Transport/AppleTalk and Open Transport/TCP protocol stacks both have been implemented as Open Transport STREAMs modules and as native code on PowerPC MacOS computers. They support the new XTI APIs, and their shared libraries can be dynamically loaded and unloaded as needed.

Both protocols also support dynamic reconfiguration (changed settings without

requiring reboot), and feature new configuration applications offering Basic, Advanced, and Administrator tools. The new configuration applications - AppleTalk and TCP/IP - replace the older control panel implementations - Network, MacTCP, and AdminTCP. For backward compatibility the new applications continue to be stored in the Control Panels folder.

Each protocol stack also offers addition protocol-specific feature enhancements.

Question: When should users update their systems to Open Transport?

Answer: With the availability of Open Transport v1.1, Apple encourages all MacOS System 7.x users with systems meeting the minimum configuration requirements to take advantage of the increased performance and new features provided by System 7.5.3 and Open Transport v1.1.

Question: Does this mean that Apple expects everyone to stop using current AppleTalk and MacTCP?

Answer: Open Transport is designed to replace current AppleTalk (58.x) and MacTCP (2.0.x) on Apple Macintosh and MacOS compatible systems meeting minimum configuration requirements. The transition will happen over time, as developers deliver Open Transport-ready and enhanced applications, as users gain experience with Open Transport, and as Apple continues to enhance Open Transport.

Open Transport is not designed to run on 68000 or 68020 Macintosh systems, which should stabilize on current versions of classic AppleTalk and MacTCP software. If Open Transport is installed on these systems, classic networking will still be selected and loaded at system start-up time.

Developers are strongly encouraged to begin all new development for MacOS using Open Transport.

Question: What files are installed as a part of Open Transport?

Answer: When installed, Open Transport adds the following to the Control Panels Folder:

- AppleTalk - the control panel application replacing the classic Network control panel.
- TCP/IP - the control panel application replacing the classic MacTCP and AdminTCP control panels.

Open Transport adds the following files to the Extensions Folder:

- Shared Library Manager and Shared Library Manager PPC - extensions that implement the Apple Shared Library Manager for 680x0 and PowerPC, respectively.

- OpenTransportLib and Open Transport Library - shared libraries that implement core Open Transport services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.
- OpenTptAppleTalkLib and Open Tpt AppleTalk Library - shared libraries that implement Open Transport AppleTalk protocols and services on PowerPC systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.
- OpenTptInternetLib and Open Tpt Internet Library - shared libraries that implement Open Transport TCP/IP protocols and services on PowerPC MacOS systems. The first library contains the modules and APIs for PowerPC native applications; the second for 680x0 applications running in emulation on PowerPC systems.
- Open Transport 68K Library - shared library that implements core Open Transport on 680x0 systems.
- Open Tpt ATalk 68K Library - shared library that implements Open Transport AppleTalk protocols and services on 680x0 MacOS systems.
- Open Tpt Inet 68K Library - shared library that implements Open Transport TCP/IP protocols and services on 680x0 MacOS systems.

Depending on the specific system configuration, the following Extensions also may be installed:

- Ethernet (Built-In) - code resource to allow access to built-in Ethernet port.
- Serial (Built-In) - code resource to allow access to built-in serial port.

Open Transport documentation is also provided in electronic format:

- Open Transport Guide Additions - AppleGuide database that updates the Macintosh Guide with information about Open Transport (System 7.5.3 only);
- a User's Guide (in Acrobat Reader format) which parallels the printed manual;
- the Open Transport Read Me containing any late-breaking news; and,
- a text file called "Open Transport 1.1 Technical Info" which contains a distillation of this Q&A.

Article Change History:

23 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20541



Tech Info Library

Open Transport 1.1.1: Apple Adoption of OT FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Apple Adoption of OT FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Apple Adoption of Open Transport 1.1.1 FAQ (frequently asked questions).

DISCUSSION -----

Question: When will Open Transport become part of Mac OS?

Answer: Open Transport is a standard component of the Mac OS beginning with System 7.5.3 (System Update 2.0).

Open Transport v2.0 is being developed as an integral part of the Mac OS 8 release; support is planned for all Mac OS 8 platforms, including the Common Hardware Reference Platform (CHRP).

Question: What Apple products will support Open Transport? Will these also be native on Power Macintosh?

Answer: Apple includes or plans to include support for Open Transport in the following products, as well many other unannounced products:

- Apple Remote Access 3.0
- MacSNMP 1.5
- Mac OS 8

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23 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20542



Tech Info Library

Open Transport 1.1.1: AppleTalk Features FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: AppleTalk Features FAQ (10/96)

Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, AppleTalk Features FAQ (frequently asked questions).

DISCUSSION -----

Question: What are some of the upgraded features of Open Transport/AppleTalk?

Answer: Open Transport/AppleTalk now includes new support for assigned (manually administered) protocol addresses. This allows AppleTalk nodes to be managed using protocol address as a unique identifier. It also may reduce the network traffic associated with AppleTalk's dynamic address assignment features (AARP).

Dynamic addressing continues to be available for those customers who prefer automated address allocation.

Question: AppleTalk preferences, such as the last used protocol address and the selected network interface, have been stored in persistent parameter RAM in the past. How does this relate to the new Open Transport network configurations and manual addressing?

Answer: Under the classic AppleTalk networking architecture, AppleTalk's ON/OFF state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name were saved in persistent memory (parameter RAM) for reuse at boot time. To ensure backwards compatibility, this information is still stored and retrieved on systems using Open Transport/AppleTalk.

However, there are some changes made with Open Transport to accommodate the expanded capabilities of multiple, saved configuration files, and required network settings.

- At boot time, Open Transport reads the current Open Transport/AppleTalk configuration file to determine if AppleTalk should be set to ON or OFF. This value will override the value saved in parameter RAM.
- If the network interface specified in the current AppleTalk configuration file is locked (in other words, it is a required setting) and the specified port is not available or cannot be initialized, AppleTalk will not automatically switch to LocalTalk; instead AppleTalk will remain OFF. The user will receive notification in the event this occurs.

Question: What happened to the "Network" control panel?

Answer: The Network Control Panel has been replaced by the Open Transport/AppleTalk configuration utility (control panel). This change was made to reflect the function of the utility - to configure AppleTalk network connections.

Question: Are there other changes to the human interface for AppleTalk?

Answer: Yes. The AppleTalk configuration utility now provides basic troubleshooting information. For example, the Advanced and Administrator views provide access to the hardware (Media Access Control) address, current AppleTalk router address and the current AppleTalk network number range for the cable. Previously this information was only available through the use of router administration or protocol analysis software.

Question: Are there other changes to AppleTalk of interest?

Answer: Yes. Beginning with Open Transport/AppleTalk v1.1, AppleTalk now includes integrated support for both multinode and multihomed operation, accessible to developers at the API level. Configuration and use of the second, third, or more network interfaces or protocol addresses requires application program support.

Multihoming is the term applied to the capability to communicate using more than one network interface at a time using the same protocol. This term is taken from the idea that the workstation makes a "home" on more than one network at the same time.

Multinode is the term applied to the capability to communicate through more than one network protocol address at the same time on a given network interface, using a single protocol. This term is taken from the idea that the workstation or PC appears to outside parties to be multiple end-nodes on the network.

Question: Earlier information about Open Transport said that AppleTalk could be dynamically loaded and unloaded only as needed, similar to Open Transport/TCP. Is this feature available?

Answer: This capability has been removed from Open Transport at this time. It was not technically feasible to provide this feature without creating compatibility problems with existing applications.

Question: Is Open Transport/AppleTalk "AppleTalk Phase 3"?

Answer: No. Open Transport/AppleTalk is a new, modern implementation of the AppleTalk Phase 2 protocol architecture for MacOS, from the people who invented AppleTalk.

Article Change History:

23 Oct 1996 - Changed distribution status.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20543



Tech Info Library

Open Transport 1.1.1: Applications Compatibility FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Applications Compatibility FAQ (10/96)

Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Applications Compatibility FAQ (frequently asked questions).

DISCUSSION -----

Question: Is Open Transport compatible with existing applications and network extensions?

Answer: Apple and third party developers have announced hundreds of Open Transport compatible applications. Open Transport includes software libraries that provide "backward compatibility" services in four areas:

- to support existing applications that utilize the documented AppleTalk APIs;
- to support existing applications that utilize the documented MacTCP APIs;
- to support MacTCP Link Access Extensions (mdevs) on case by case basis; and,
- to support existing NuBus based network interface cards and drivers.

Note: WinSock compatibility services are provided through third party software, available from NetManage. For more information, please refer to Open Transport and Cross-Platform Issues.

Open Transport compatibility services are available to applications accelerated for PowerPC as well as for 680x0 applications, as it provides the necessary "mixed-mode glue" as part of the Software Developer's Kit (SDK).

Question: What is implied when an application is "Open Transport Compatible"? Does that mean that it takes advantage of new Open Transport features?

Answer: Apple has defined three levels of interoperability with Open Transport. The first - known as Open Transport Compatible - is used to describe a network application originally developed for "classic" AppleTalk or MacTCP, that now takes advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the new Open Transport configuration utilities. However, they will not realize a significant performance increase on PowerPC MacOS systems, nor can they take advantage of Open Transport's transport-independence capabilities.

Open Transport Ready applications are those that have been modified to adopt the new Open Transport APIs (XTI). They are PowerPC native, in addition to running on 680x0 MacOS systems. Open Transport Ready applications not only benefit from the new configuration utilities, but have the opportunity for a significant performance boost when running on PowerPC MacOS.

The third and final category of interoperability is referred to as Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being PowerPC native, these applications have been modified to exploit the transport-independent capabilities of Open Transport, that is, they can be dynamically configured to support AppleTalk, TCP/IP, or serial communications.

Question: How is backward compatibility for AppleTalk implemented?

Answer: AppleTalk applications backwards compatibility is accomplished by intercepting all AppleTalk networking calls at the ".ddp" driver API. Above this protocol layer, applications written to the classic AppleTalk APIs continue to rely on the classic (680x0 based) implementation of AppleTalk. Calls to the ".ddp" driver are translated to the corresponding Open Transport XTI calls and are then passed to the new native implementation of DDP for processing. The process is reversed for incoming packets.

Using this approach, backwards compatibility is very robust - the classic implementations of ADSP, ASP, ATP, NBP, ZIP, and PAP are actually present (vs. simply mimicked). This also decreases the total memory footprint of backwards compatibility as compared to an implementation based on individual adaptation layers for each of the AppleTalk protocols. The primary trade-off of this approach is that applications relying on backwards compatibility do not gain any meaningful performance increases on PowerPC MacOS; essentially only native DDP is actually in use in these cases. (see Figure 1)

Open Transport/AppleTalk also includes broad support for existing applications software and network devices that rely on the Chooser or the Network Control Panel software for selection and configuration, known as "cdevs" and "adevs" respectively.

Question: How is backward compatibility for MacTCP implemented?

Answer: TCP/IP (MacTCP) applications backwards compatibility is accomplished by intercepting all MacTCP networking calls at the ".ipp" driver level. Calls to the ".ipp" driver are translated to corresponding Open Transport XTI calls and then passed to the native TCP/IP stack for processing. The process is reversed for incoming packets.

This approach allows most MacTCP applications to benefit from the native implementation of the TCP/IP protocols on PowerPC MacOS, at least to some degree. While the backwards compatibility layer itself must run as 680x0 code, most of the handling of the packet happens in the new native Open Transport/TCP implementation. The drawback of this implementation is that "warts and all" backward compatibility is somewhat less robust; applications depending on idiosyncrasies of MacTCP or referencing internal MacTCP data structures are likely to need an update. (See Figure 1)

TCP/IP backward compatibility also includes targeted support for select software products that rely on the MacTCP (or Admin TCP) Control Panel software for configuration. Support for these software modules, known as MacTCP Link Access Modules, or simply "mdevs", is more limited than that provided for AppleTalk "adevs", due to certain technical considerations.

Question: Are there other compatibility issues with PCI MacOS systems and existing network software products?

Answer: Certain network software products - such as MacIPX from Novell, PathWORKS (LAT and DECnet) from Digital Equipment Corp. or Thursby Software Systems, and Insignia Solutions SoftWindows - interact directly with the MacOS ethernet hardware, expansion slots, and driver software. With the introduction of PCI and Open Transport to MacOS, these elements have changed substantially; PCI has replaced NuBus, the system Registry has replaced the Slot Manager, Open Firmware has replaced the role of NuBus ROMs, and DLPI has replaced the ".enet" driver API. If not addressed, these changes would have resulted in significant compatibility problems between PCI MacOS systems and these network software products.

To support these types of products, MacOS System Software 7.5.2 (and more recent) includes a compatibility library that allows these products to identify and communicate with the built-in ethernet controller on PCI MacOS systems as if it were a "classic" NuBus ethernet device. This compatibility software emulates not only the necessary low-level ethernet driver calls, but also the Slot Manager and other related APIs necessary to preserve compatibility with these applications.

This compatibility software is limited, however, in that it supports access only to the built-in ethernet adapter of PowerPC MacOS systems with PCI. Thus, existing versions of products such as MacIPX and SoftWindows will not be able to take advantage of PCI network interface options such as token ring, fast ethernet, or FDDI. New versions of these applications will be required to gain full access to all PCI NIC options.

Note that this compatibility module was not available in the original distribution of System 7.5.2 for the Power Macintosh 9500 (with Open Transport

v1.0). This is one of the reasons that customers with 9500s were urged to update to System Enabler 1.1 or greater.

With the availability of System 7.5.3 this compatibility library is included as a part of system software. Customers using MacIPX should note that an updated version of the compatibility library is included as a Custom Install option with the System Update 2.0 installer. For more information regarding this updated library, please refer to the System Update 2.0 release notes.

Question: How is backward compatibility for NuBus network interface cards implemented?

Answer: For 680x0 and PowerPC MacOS systems with NuBus, Open Transport v1.1 will allow use of existing NuBus NICs and drivers. This compatibility is provided by software support mapping DLPI driver calls generated by new Open Transport protocols to corresponding calls to "classic" MacOS LAP Manager, .enet and .tokn APIs.

Question: Are there other known limitations to applications backward compatibility?

Answer: Yes, there are some. Applications that rely on undocumented APIs or examine private data structures in classic AppleTalk or MacTCP will not be fully compatible with Open Transport.

Examples include the MacSNMP AppleTalk and TCP/IP Agents (however, MacSNMP and the Macintosh System Agent are compatible), the Apple Internet Router 3.x and some utilities like MacTCP Watcher and MacTCP Spy.

Updated versions of these software products will be required for full compatibility.

Question: There have been reports of problems with MacX 1.2. Is there an Open Transport compatible X Window System server available?

Answer: Apple MacX 1.5 is compatible with Open Transport and is a recommended upgrade for all customers who have any earlier versions of MacX.

Although not related to Open Transport, there is a known bug in MacX 1.2 that can cause a system crash when running on System 7.5.2.

Question: There have been reports of problems with Apple Remote Access 2.0.1 and Open Transport. What is the status?

Answer: Apple Remote Access 2.0.1 is fully compatible with Open Transport v1.1.

Apple Remote Access 2.0.1 running on a system with the earlier Open Transport 1.0.x releases always operated in the "Remote Only" mode. In that mode, only resources at the remote site would be visible in the Chooser while connected via

dial-up; local resources would reappear when the dial-up link was disconnected.

Question: There have been reports of problems with the use of Open Transport 1.0.x and network protocol analysis tools such as ag Group Etherpeek and Neon Software NetMinder. What is the status of this?

Answer: Open Transport v1.1 includes support for promiscuous mode and raw packet access. Apple is currently working with vendors to assure that ethernet and other NIC driver developers are implementing promiscuous mode support in a consistent manner.

Open Transport v1.0.x did not include support for the DLPI messages necessary to enable promiscuous mode on ethernet hardware. Because applications such as Etherpeek and NetMinder rely on this capability, they could not perform data collection on systems running these earlier versions of Open Transport.

Question: There have been reports of problems with the Apple LaserWriter Bridge and LocalTalk Bridge and Open Transport. What is the status?

Answer: Apple LaserWriter Bridge (LWB) and LocalTalk Bridge (LTB) software were designed to check for a specific version of AppleTalk software. Because Open Transport registers itself as a more recent version, these programs currently will not launch. An update for Open Transport-compatibility is currently underway.

Availability and distribution of these updates will be announced in the near future.

Question: There have been reports of problems with MacTCP Ping and Open Transport. What is the status?

Answer: MacTCP Ping is an unsupported utility developed by Apple Computer specifically for MacTCP. It is not compatible with Open Transport.

Compatible Ping utilities, such as MacPing Pro from Dartmouth, are currently available.

Question: There have been reports of problems with Assistant ToolBox and Open Transport. What is the status?

Answer: Prior versions of Assistant Toolbox (v1.2 and earlier) , which has shipped as a component of the PowerBook Productivity Bundle, were discovered to have a conflict with Open Transport v1.1.

An updated version of Assistant Toolbox is included as a part of System Update 2.0 (System 7.5.3).

Question: There have been reports of problems with At Ease and Open Transport.

What is the status?

Answer: At Ease v3.0.1 and earlier have a conflict with Open Transport. At Ease v3.0.2 and later are compatible.

Article Change History:

23 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20544



Tech Info Library

Open Transport 1.1.1: Availability & Distribution FAQ (4/97)

Revised: 4/3/97
Security: Everyone

Open Transport 1.1.1: Availability & Distribution FAQ (4/97)

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Article Created: 16 October 1996
Article Reviewed/Updated: 02 April 1997

TOPIC -----

This article is the Open Transport 1.1.1, Availability & Distribution FAQ (frequently asked questions).

DISCUSSION -----

Question: What is the current version of Open Transport, and what are its key features?

Answer: Open Transport v1.1.1. This "rapid response" release is an update to Open Transport v1.1, to address the most pressing customer requests, in advance of the next feature release of Open Transport (currently planned as OT 1.5 - see Future Directions). Open Transport v1.1.1 includes the following updates and new features as compared to the earlier Open Transport 1.1 release:

- now also supports the Performa 5200, 5300, 6200, and 6300 systems;
- includes internal changes to minimize memory fragmentation resulting from dynamic loading and unloading of TCP/IP;
- includes changes to the TCP/IP DNR for interoperability with sites using the load-balancing name daemon;
- includes changes for support of the upcoming Open Transport/PPP release;
- includes all bug fixes available to date.

Question: How is Open Transport v1.1.1 available?

Answer: Open Transport v1.1.1 is built as a stand-alone installer, and is distributed online from a variety of Apple, and Internet sites.

Question: Does System 7.5.3 or System Update 2.0 include Open Transport 1.1.1?

Answer: No. MacOS system software ships with Open Transport 1.1. Open Transport 1.1.1 was not yet available at the time these products went to manufacturing. Future releases of MacOS system software are planned to include the most current release of Open Transport available at the time. However, incremental updates to OT may be provided independantly (such as with OT 1.1.1) to provide responsive customer support.

Question: Does the Open Transport single-user software package contain Open Transport 1.1.1?

Answer: No. The retail software package ships with Open Transport 1.1. Open Transport 1.1.1 was not yet available at the time this product went to manufacturing. Current plans call for the Open Transport software package to be updated with each feature-based release of Open Transport; however, incremental updates to OT may also be provided independantly (such as with OT 1.1.1) as needed to provide responsive customer support.

Question: Are there changes in the system requirements for Open Transport 1.1.1?

Answer: There are no changes from the previous release, Open Transport 1.1, in the memory, processor, or OS requirements (see Open Transport and MacOS System 7.5.3). Installation of Open Transport 1.1.1 requires that a previous version of Open Transport already be installed and (on applicable systems) selected as the active network system via the NSS.

Question: What of the earlier Open Transport 1.1 release?

Answer: Open Transport v1.1 included the following updates and new features as compared to the earlier 1.0.x releases:

- added support for 68030 and 68040 MacOS systems,
- added support for PowerPC MacOS systems with NuBus,
- added support for NuBus, SCSI, and CommSlot network interface adapters,
- offered tuning to optimize performance of high speed datalinks,
- offered tuning to support multiple client, multithreaded server applications,
- added support for multinode and multihomed operation of AppleTalk protocols,
- added support for raw packet access and promiscuous mode, to enable the

development of Open Transport-ready network analyzers and other network management utilities,

- recognized a significantly expanded selection of MacTCP dial-up network extensions (mdevs),
- allowed reconnection of a dial-up TCP/IP session without reloading networking and without system restart,
- provided display of the datalink Media Access Control address for Ethernet and token ring networks,
- provided user notification in the event duplicate AppleTalk or TCP/IP addresses are established,
- automatically converted user's existing AppleTalk and MacTCP setting to Open Transport configuration files during installation (only if Open Transport preferences do not already exist),
- included improved compatibility with Apple Remote Access 2.0.1,
- included improved compatibility with a wider range of DHCP servers,
- provided a basis for future support for PPP-based AppleTalk and TCP/IP remote networking,
- provided a basis for future support for modem and ISDN communications devices,
- included support for MacOS system software System 7.5.3,
- included support for the creation of a "universal system folder",
- included support for the Network Software Selector utility to provide easy transition from classic to Open Transport networking on MacOS systems supporting both,
- offered improved Balloon Help text for System 7 users, and,
- included all bug fixes available to date.

Question: How is Open Transport v1.1 available?

Answer: Open Transport v1.1 is available through a broad range of distribution channels:

- as a no-charge upgrade to customers with existing MacTCP volume license software maintenance agreements;
- as a no-charge upgrade to customers with existing system software volume license software maintenance agreements;

- as a component of MacOS system software release System 7.5.3;
- as a component of MacOS system software update System 7.5 System Update 2.0;
- as a retail software product in single-user software package;
- through an OEM redistribution licensing program from Apple Software Licensing,
- bundled with Apple and third party applications software that are Open Transport-ready; and,
- from select Apple-licensed publishers and Internet Service Providers.

Question: How do volume license software maintenance customers receive Open Transport?

Answer: A master copy of the Open Transport software and documentation is automatically be mailed to the contact of record for customers with active MacTCP or MacOS System Software maintenance contracts.

Question: How could a customer receive a copy of System 7.5.3?

Answer: System 7.5.3 will be pre-installed on MacOS systems beginning in first half calendar 1996. System 7.5.3 will also become available as a shrink-wrap retail product in first half calendar 1996.

Question: How could a customer receive a copy System 7.5 System Update 2.0?

Answer: System 7.5 System Update 2.0 is available through a variety of channels, including:

- On the Internet,
Worldwide Web: <<http://www.info.apple.com/swupdates>>
ftp: <<ftp://ftp.info.apple.com>>
- On the electronic information services: America Online (keyword: applecomputer), and CompuServe (GO APLSUP);
- Through Apple User Groups; and,
- From the Apple Order Center, in floppy or CD update kits. The update is available at no charge plus \$13 shipping and handling. Call U.S. +1 (800) 293-6617, ext. 984 to order.

Question: What is the part number and pricing for the Open Transport single-user software package?

Answer: In the U.S. order number M4252Z/A; the estimated retail price is \$39.

Question: Since Open Transport is included with System Update 2.0 and System 7.5.3, why might a customer want to purchase the Open Transport single-user software package?

Answer: The Open Transport single-user software package is designed for customers running System 7.1.x who are not ready to upgrade to System 7.5.3, yet want to take advantage of Open Transport features. It might also be of interest to customers running System 7.5.3 who want a printed copy of the user documentation.

Question: Is Open Transport localized for non-English speaking countries?

Answer: As a part of MacOS System 7.5.3, Open Transport 1.1 is being localized around the world. Please contact the Apple Assistance Center in your area for details. Availability of localized versions of OT 1.1.1 will vary on a country by country basis.

Question: How is Open Transport available to software developers, publishers, and/or Internet Service Providers (ISPs) for redistribution and bundling?

Answer: Apple offers two different redistribution licensing agreements for Open Transport, designed to meet the needs of publishers, software developers, and ISPs.

The first agreement is designed for Internet service providers, network and communications reference work authors and publishers, and others interested in bundling Open Transport software as an added customer benefit to their product or service offering. This license is based on a sliding-scale per-unit license fee, and requires annual reporting of licenses issued. Interested parties should send electronic mail to SW.LICENSE@apple.com.

The second agreement is designed for software developers with products that adopt the new Open Transport APIs who wish to ship Open Transport as a part of an integrated product installation process. This agreement is based on an addendum to the MacOS SDK, and allows qualified developers to ship the Open Transport run-time environment to end-users as a part of their product.

To qualify, developers must execute the Open Transport License Addendum through Apple Software Licensing, and meet the following requirements:

- have developed an Open Transport-ready or Open Transport-enhanced software product (including applications developed for Apple's NetSprockets game architecture),
- be current subscribers to the MacOS SDK,
- provide Apple advance notice of their intent to ship their Open Transport product(s), distribute the required Open Transport components

only in conjunction with their product(s), and,

- annually report the total number of licenses issued.

Other terms and conditions apply, however, no additional fees (beyond the MacOS SDK subscription) are required for this license. Interested parties can send electronic mail to SW.LICENSE@apple.com.

Question: Will localized versions of Open Transport software be available for developer and ISP licensing?

Answer: Initially the Open Transport redistribution licensing program will only have the U.S. English version of the software available. Licensing of localized versions of Open Transport will depend upon demand and availability.

Question: What of the earlier Open Transport v1.0.x releases?

Answer: Open Transport v1.0.x releases were all designed for use only on the Apple PCI Macintosh systems:

- Open Transport version 1.0, for the Power Macintosh 9500, was focused on offering compatibility with existing networking client applications and on upgrading the feature set and performance of TCP/IP. It shipped only as an integral part of system software with the 9500.
- Version 1.0.1 was a maintenance update, designed to correct a potential problem with data truncation in large file transfers. Open Transport v1.0.1 was distributed electronically, as an update to be applied to an existing installation of Open Transport v1.0.
- Version 1.0.6 added support for the Power Macintosh 7200, 7500, and 8500 systems and addressed bugs discovered since the 1.0 release. Open Transport v1.0.6 shipped as a component of System Software 7.5.2 version 2 on the Power Macintosh 7200, 7500, 8500, and 9500 models.
- Version 1.0.7 included changes to improve performance and compatibility of Open Transport/TCP with third party SLIP and PPP software and with certain Internet Service Providers (ISPs). Open Transport v1.0.7 was distributed electronically, as an update to be applied to an existing installation of Open Transport v1.0.6.
- Version 1.0.8 was also a maintenance release, and included better compatibility with Qualcomm Eudora, Claris EMailer and EMailer Lite, CE Software QuickMail, and Netscape Communications client software, as well as improvements in BootP and DHCP interoperability. Open Transport v1.0.8 was distributed via a variety of information services and a number of Internet sites - as a full installation of Open Transport software.

Question: Why was Open Transport made available on PCI Power Macintosh systems first?

Answer: Starting with the introduction of the Power Mac 9500, Apple moved to adopt industry standards for both network driver software - Open Transport DLPI - and network hardware - PCI. This strengthened the business case for new and existing third party developers who could, as a result, include MacOS on PowerPC in their plans for cross-platform network connectivity products. The Power Macintosh 9500 was the first system to incorporate both of these standards, and has since been followed by additional systems and configurations.

In particular, Apple made the business decision to move to standards for networking on the hardware and software fronts in tandem, that is, PCI and DLPI. This created a dependency that required customers deploy Open Transport with their PCI MacOS systems. It also minimized the work by third parties needed to create drivers for new PCI networking cards. As a result customers have found a broad selection of third party PCI networking options for MacOS.

Article Change History:

02 Apr 1997 - Revised eMail addresses

23 Oct 1996 - Changed distribution status.

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Tech Info Library

Open Transport 1.1.1: Cross-Platform Issues FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Cross-Platform Issues FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Cross-Platform Issues FAQ (frequently asked questions).

DISCUSSION -----

Question: Will Apple port Open Transport to Windows or UNIX?

Answer: Apple does not plan to port Open Transport to other operating systems. Rather, Open Transport is based on Apple porting three existing, cross-platform industry standards to MacOS. These standards have their roots in the UNIX community and experienced UNIX network developers will find themselves "right at home" when developing for Open Transport.

Question: What about Windows developers? What about Windows Sockets?

Answer: NetManage, the leading developer of TCP/IP protocols and applications for DOS and Windows, now offers Windows Socket tools for MacOS, to provide access to Open Transport/TCP and MacTCP services via the Windows Sockets (WinSock 1.1) API.

NetManage's WinSock for the MacOS is WinSock 1.1 compliant and is being certified by the WinSock Labs operated by Stardust Technologies, Inc., which performs compatibility testing. The SDK for MacOS costs \$250 per license, with free distribution.

For more information, contact NetManage at 1-408-973-7171.

Question: With both XTI and Windows Sockets available for Open Transport, which API should a developer use?

Answer: The choice of API will depend upon a developer's background, experience, and goals. For developers with a background in UNIX, a need for POSIX compliance, or a need to deploy an application across MacOS and UNIX systems, XTI is the logical choice. For developers with a background on Microsoft Windows, or a need to deploy an application across MacOS and Windows, Windows 95, and/or Windows 95 systems, the planned WinSock tools from NetManage will provide an attractive cross-platform alternative.

Apple is committed to XTI and will focus development on transport independence around this API. MacOS developers now using classic AppleTalk or MacTCP APIs are encouraged to move to Open Transport XTI API.

Article Change History:

23 Oct 1996 - Changed distribution status.

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Tech Info Library

Open Transport 1.1.1: Developer Adoption FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Developer Adoption FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Developer Adoption FAQ (frequently asked questions).

DISCUSSION -----

Question: Which third party developers support Open Transport?

Answer: Seeding of Open Transport among developers began more than a year in advance of release, and reached more than 5,000 developers. Several hundred developers are actively working with Apple on development efforts.

The following software developers are among those who have announced support for Open Transport to date:

- ACI
- Adobe Systems
- AG Group
- AGE Logic, Inc.
- Asanté Technologies, Inc
- Atomic Games
- Carnegie Mellon University
- CE Software
- Claris Corporation
- Dantz Development
- Delphic Software, Inc.
- Digital Ocean
- EveryWare Development Corp.
- Farallon Computing, Inc.
- Gradient Technologies
- HI Resolution Software
- Hughes Advanced Systems

- IBM
- Intercon Systems, Inc.
- Maxum
- Mentat Inc.
- Metrowerks, Inc.
- Neon Software
- NetManage, Inc.
- NorthWestern University
- Novell
- Pacer Software
- Pole Position Software GmbH
- Progressive Networks
- Quark, Inc.
- Remedy Corp.
- Seaquest Software
- SoftArc
- StarNine Technologies, Inc.
- Starlight Networks
- Systematics Softworks GmbH
- The University of Michigan
- The Wollongong Group
- Thursby Systems Software, Inc
- Vicom Technology
- Wall Data
- White Pines
- WRQ

The following developers have announced support for both Open Transport and PCI on Power Macintosh:

- Asanté Technologies, Inc
- Attachmate
- Creative Solutions
- Dayna
- Digiboard
- Digital Equipment Corporation
- Efficient NW
- Farallon Computing, Inc.
- Focus
- Fore Systems, Inc.
- 4-Sight International Limited
- Hermstedt GmbH
- Innosys
- Interphase
- Newer Technology
- Neutral
- QLogic
- Rockwell
- SAT/Sagem
- SCii Telecom
- Silicon Valley Bus
- Spectra Systems

- Workstation Technologies

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Tech Info Library

Open Transport 1.1.1: For More Information FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: For More Information FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, For More Information FAQ (frequently asked questions).

DISCUSSION -----

Question: How can interested parties get more information on Open Transport?

Answer: Documentation for Open Transport is publicly available by anonymous ftp on the Internet at a number of sites, including
<ftp://seeding.apple.com/ess/public/opentransport/>

Question: Can customers apply to receive pre-release copies of Open Transport for implementation testing?

Answer: The Open Transport Early Access program provided pre-release access to Open Transport v1.1. Since the product is now shipping, pre-release seeding of the Open Transport 1.1 has been discontinued. As plans for future versions of Open Transport develop, Apple expects to offer a similar customer testing and preview program. Announcement of details will occur at the appropriate time.

Question: Can developers apply to receive pre-release copies of Open Transport for development and testing?

Answer: The Open Transport v1.1 developer seeding program reached over 5,000 developers. Since the product is now shipping, pre-release seeding of the Open Transport 1.1 has been discontinued. A new seeding program is anticipated for future versions of Open Transport. Details will be announced at a later date.

The Open Transport software developers kit (SDK) is available as a component of

the MacOS SDK, and is available on the Internet at
<ftp://seeding.apple.com/ess/public/opentransport/>

Question: How can developers get support while developing Open Transport applications?

Answer: Apple Developer Support services have engineering specialists fully trained on Open Transport development and debugging. Access to these engineers is just one of the benefits of the Apple Developer Partner's program.

For more information on Apple's Developer Support services, including information on how to register as an Apple Developer Partner, contact the Macintosh Developer Services Information Line at US +1(408) 974-4897.

For developers not a part of Apple's Developer Support services programs, Apple has assigned evangelism resources to the support of Open Transport. All interested developers are encouraged to contact Open Transport Evangelism by email to opentpt@applelink.apple.com.

Question: Are there general reference sources on XTI, STREAMs and DLPI?

Answer: Sources of information that are applicable to XTI and STREAMs include:

- OSF/1 Operating System: Network Applications Programmer's Guide; Open Software Foundation, Prentice Hall, ISBN 0-13-640145-7
- UNIX Network Programming; W. Richard Stevens, Prentice Hall, ISBN 0-13-949876-1
- UNIX System V Release 4: Programmer's Guide: STREAMs; Unix Press (A Prentice Hall title), ISBN - 0-13-020660-1
- Programming UNIX SVR4.2: Network Programming Interfaces; UNIX Press (A Prentice Hall title), ISBN 0-13-017641-9
- X/Open CAE Specification: X/Open Transport Interface (XTI); X/Open Company, Ltd. (XO/CAE/91/600) ISBN 1-872630-29-4
- Transport Provider Interface Specification, rev 1.5 (92/12/10); UNIX International, OSI Special Interest Group
- Data Link Provider Interface Specification, rev 2.0.0 (91/08/20); UNIX International, OSI Work Group

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Tech Info Library

Open Transport 1.1.1: Future Directions FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: Future Directions FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Future Directions FAQ (frequently asked questions).

DISCUSSION -----

Question: What is the next planned release of Open Transport?

Answer: Open Transport 1.5 is the next planned release of Open Transport. OT 1.5 is planned to be feature-driven, and is expected for release in first quarter CY1997. Some of the key features planned include:

- AppleScript support in AppleTalk and TCP/IP control panels
- API for developers to access configuration data
- Integrated PPP for AT & TCP
- Multi-homing for AT & TCP
- Multi-node support for AT & TCP
- SNMP support

Question: What about the Apple Internet Router? Will it be revised for Open Transport?

Answer: Apple is not announcing future plans regarding this product at this time.

Question: Will Apple or Novell deliver an Open Transport-ready MacOS client that uses IPX protocols?

Answer: Novell currently offers the NetWare Client for MacOS v5.1, providing access to file, print, and NetWare Directory Services (NDS) using NCP/IPX

protocols. An Open Transport-ready implementation of NetWare protocols and client services is currently under investigation. The two companies are not ready to announce product details or availability at this time.

Question: Will Apple or Microsoft deliver an Open Transport-ready MacOS client that uses NetBIOS/TCP protocols?

Answer: Windows NT AS currently includes strong MacOS connectivity solutions based on AppleTalk protocols. Other protocol options are under investigation at Apple, Microsoft, and with third parties. No additional details are available at this time.

Question: What standards are to be supported by OT/PPP?

- RFC 1661 - PPP
- RFC 1662 - PPP in HDLC-like framing
- RFC 1570 - PPP LCP extensions
- RFC 1334 - PPP Authentication protocols
- RFC 1663 - PPP Reliable transmission
- RFC 1378 - ATCP AppleTalk Control Protocol
- RFC 1332 - IPCP Internet Protocol Control Protocol
- RFC ???? - IPsec
- RFC ???? - DHCP Client ID

Question: What about IP version 6 (IPv6) support in Open Transport?

Answer: IPv6 is an proposed update of the current Internet Protocol (IPv4), part of the TCP/IP suite of protocols used to allow computers to communicate with each other over the Internet. The Internet Engineering Task Force (IETF) is in the process of specifying the standards for IPv6.

IPv6 is being designed to respond to the limitations of IPv4 - including an upcoming shortage of new IP addresses - to allow for the continued expansion of the Internet and deployment on corporate networks. IPv6 also incorporates new functionality to provide security, multimedia support, and plug and play capabilities, features necessary to usher the Internet into the twenty-first century.

At the October 1995 Networld+InterOp trade show, Apple and Mentat demonstrated a prototype of Internet Protocol Version 6 running on Open Transport. The demonstration showed the flexibility of the Open Transport environment - with current IPv4 applications such as Fetch, Netscape, and Web*Star running unmodified with IPv6 support - and showed the benefits of Open Transport's underlying standards based architecture - facilitating code portability. The demonstration also included basic interoperability testing with IPv6 prototype implementations from DEC and HP, using standard IP utilities such as Ping and Telnet.

Apple and Mentat will continue to work together to ensure timely availability of IPv6 for MacOS once the standard has been completed.

Question: Will Open Transport v2.0, for MacOS 8, offer any new capabilities?

Answer: Yes. Open Transport v2.0 is being designed to take full advantage of the new microkernel services available in MacOS 8. As a result, Open Transport networking on MacOS 8 is planned as a set of multithreaded, preemptively scheduled tasks running in protected memory.

To a user, this will mean that networking will be even more robust and higher performance. To a developer, this will mean that a rogue application running in another memory space will not be able to corrupt system level networking task.

In addition, Open Transport v2.0 is expected to incorporate a second generation update to the human interface introduced with Open Transport v1.0.

Current plans call for this release to include support for features such as:

- Configuration selection will be integrated with system level workspaces and the location assistance toolbox;
- Advanced end-users and network administrators will be able to configure a protocol stack for simultaneous support of multiple network connections (multihoming);
- Administrators will find additional trouble-shooting tools (such as Ping, traceroute, local ARP cache, access to local routing tables, and others) integrated with the configuration utilities;
- Support for AppleScript*; and
- Desktop aliases for network configurations to allow double-click reconfiguration of services.

Open Transport 2.0 is also planned to include integrated support for NetWare/IPX, X.25, ATM, and ISDN.

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23 Oct 1996 - Changed distribution status.

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Tech Info Library

Open Transport 1.1.1: General Information FAQ (10/96)

Revised: 10/23/96
Security: Everyone

Open Transport 1.1.1: General Information FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, General Information FAQ (frequently asked questions).

DISCUSSION -----

Question: What is Apple Open Transport?

Answer: Apple Open Transport is the modern networking and communications subsystem for the Mac OS. Open Transport is based on industry standards and brings a new level of networking connectivity, control, and interoperability to MacOS systems, while preserving and enhancing the hallmark of the Macintosh and MacOS - built-in support for easy-to-use networking.

Question: What long-range Apple goals are advanced through Open Transport?

Answer: Apple believes that communications and collaboration technologies are integral and fundamental to personal and workgroup computing. With Open Transport our goal is to provide the foundation to make MacOS the best desktop OS for multiprotocol networking, anywhere.

Question: What needs must be addressed to be "the best"?

Answer: Networking and communications technologies are mission critical thus reliability is a base-level requirement. Organizations require interoperability in heterogeneous environments; full compliance with standards is necessary.

High performance is also key. Increasing file sizes often related to the rich media types found in graphics and publishing, multimedia, video production, and technical markets create a demand for effective use of higher bandwidth

communications technologies such as ISDN, FDDI, fast Ethernet and ATM.

Beyond these base-level requirements, network managers, end-users and developers each have additional needs.

- Network managers need networked systems to support a flexible model of administration that accommodates both centralized and decentralized management models.
- Users are typically more interested in communications as a basis for productivity applications. As such, they want networking that is easy to set up and easy to use. This becomes even more important when users are mobile, needing access to networking services from wherever they may be without requiring complex reconfiguration for each connection type and location.
- Developers need to address the broadest possible markets with minimum incremental investment. In short, they need standards based, cross-platform APIs and development tools.

Question: What were some of the key goals driving the development of Open Transport?

Answer: Apple began with two key assumptions: that networking is inherently a multiplatform, multiprotocol proposition; and that customers should not have to start over to achieve networking interoperability. This led us to adopt five key design goals:

- Open Transport must protect customer and developer investments in existing network infrastructure and applications.
- Open Transport must be based on existing cross-platform industry standards.
- Open Transport must provide users with an easy to set-up, easy to use abstraction of the underlying complexity of multiprotocol networking.
- Open Transport must also provide a complementary abstraction of networking and communications services for applications developers.
- Open Transport must offer a flexible run time model - one that lets a specific protocol be configured and selected at run time, rather than linked at compile time.

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Tech Info Library

Open Transport 1.1.1: Key Features and Benefits FAQ (10/96)

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Security: Everyone

Open Transport 1.1.1: Key Features and Benefits FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Key Features and Benefits FAQ (frequently asked questions).

DISCUSSION -----

Question: How can Open Transport benefit users?

Answer: Open Transport provides individual computer users with many benefits. Two of the most immediately visible and important benefits relate to making networking more accessible - that is, easier to configure and easier to use.

For example, Open Transport makes it easy to switch from one network configuration to another. A computer user "on the go" might want to hook up to the Internet in various locations, each requiring a different network configuration. With Open Transport settings for each network location can be stored for easy access and use. Changed settings are available immediately - no reboot of the computer is required to use the new configuration.

Open Transport also integrates on-line help, based on Apple Guide technology, to make it easier for an individual to hook up to an network, with fewer demands on network manager and support resources.

Question: How can Open Transport benefit network managers and organizations?

Answer: Open Transport provides significant new flexibility in setting up network configurations; with Open Transport, the network manager can recommend or require configuration settings for users on the network, or allow users to determine their own settings.

Open Transport also improves support for centralized configuration management.

For example, Open Transport/TCP supports the Dynamic Host Configuration Protocol (DHCP), allowing network managers to administer addressing and other TCP/IP configuration information from a central server.

Question: How can Open Transport benefit developers?

Answer: Open Transport is designed to make it easier and more cost-effective to develop MacOS-applications for a wide variety of customers and markets. With Open Transport, MacOS has built-in networking and communications based on cross-platform industry standards including the POSIX compliant X/Open Transport Interface (XTI), UNIX STREAMs and Data Link Provider Interface (DLPI).

Applications written to support Open Transport can directly support a wide range of networking environments (serial, dial-up network, LAN, and WAN), and multiple protocols (AppleTalk, TCP/IP, serial, and others) from a common code base. This capability is sometime" referred to as transport independence."

Question: What is transport independence? Why is it important?

Answer: Different people judge networking in different ways. End-users focus on what they can do using the network, and tend to select applications based on functionality and ease of use. Network managers are interested in delivering reliable network services in a cost efficient manner. Developers want to create compelling functionality for users, but are strongly influenced by the availability of networking infrastructure.

Unfortunately, with current networking tools and systems developers are forced to tie their applications to specific network infrastructure requirements - driven by their API choices. This creates a potential conflict between individual and organizational needs. If network managers restrict protocols to control support costs, users may not have access to the applications they need. If user require specific applications they may increase support costs for the network manager by "dragging along" specific network infrastructure requirements. Developer are stuck in the middle, making decisions for both users and network managers by selection of an API at compile time.

Transport independence is a concept that breaks this undesirable linkage. When implemented, it allows developers to write to a uniform set of APIs, users to focus on selecting the best applications, and network managers to make independent decisions about network infrastructure, all on an ongoing basis.

Question: What benefits can be realized from transport independent applications?

Answer: For end-users, transport independence brings an increased freedom to select applications that meet their needs, without being concerned with the bits and bytes of networking protocols. For network managers, transport independence allows increased flexibility in designing and controlling infrastructure demands arising from support of end-user applications, that is, the freedom to manage the bits and bytes of networking protocols.

Developers who create transport independent applications will find access to broader markets with incremental resources; code written for the AppleTalk market, for example, can be delivered to TCP/IP markets as well.

Question: How does Open Transport enable transport independence?

Answer: Open Transport brings together four technologies to support the development and deployment of transport independent applications on MacOS:

- a set of look-and-feel guidelines that promote consistency for configuration of network services across protocols,
- a unified set of cross-platform, standards based APIs for all networking and communications protocols; for example, applications can send and receive data over an AppleTalk LAN or the TCP/IP based Internet using the same programming interfaces,
- a dynamic link-and-load architecture and set of protocols; protocols are loaded and unloaded on demand, conserving system resources, and making it possible to substitute TCP for ADSP at application launch time (for example), and
- an addressing and naming support tool box; for example, applications can open a communications end-point by name (that is, "seeding.apple.com" or "printer16:LaserWriter@sales"; Open Transport will automatically provide the appropriate name-to-address mapping services (that is, DNR, NBP, and so on).

Together these support the creation of transport independent applications on MacOS.

Question: Are all Open Transport applications transport independent?

Answer: No. While Open Transport provides the necessary foundation, there are certain guidelines and programming practices required for developers to create transport independent applications. For example, most protocols have many features in common - but also some features that are protocol-specific. If an application depends on a protocol-specific feature, then it will depend upon that protocol as well.

In some cases it may be appropriate or desirable to develop a transport-specific application. For example, an MBone client is currently only useful when communicating using TCP/IP.

Question: Does transport independence imply that an organization can offer "AppleTalk services" without supporting AppleTalk protocols?

Answer: For each service and network environment, protocol and services choices will be determined by a combination of factors; transport independence is only

one of them.

This begins with both the client and the server implementations of the particular service of interest (file, print, e-mail, directory, security, back-up, calendar, and so on) supporting the Open Transport APIs. Next, both the client and server must have the protocol stack(s) of choice installed. Finally, the server application must include some administration utility to allow the network manager to specify the protocol(s) over which application and/or presentation layer services are to be provided.

The user experience for selecting the server (that is, "Choosing", or "name-binding") may vary depending on the underlying protocol. For example, AppleTalk offers a distinctive user experience through the "Chooser" and the underlying NBP/ZIP protocols. TCP/IP offers a substantially different model for name-to-address translation (DNS); NetWare/IPX still another (NDS).

Apple is committed to evolving MacOS networking services, including but not limited to AppleEvents, FileSharing, electronic mail, and AppleShare to Open Transport and to transport independent operation.

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Question: In addition to providing for transport independence, how is the Open Transport standards based architecture important?

Answer: Although it might seem that the use and support of standards based APIs is of direct interest only to developers writing applications code, Apple's adoption of a fully standards based architecture for networking also has important benefits for individual users, network managers, and organizations. Some of these include:

- Porting of network protocols, drivers, and applications from other platforms (especially UNIX) to MacOS becomes easier, resulting in an even wider selection of networking software for the MacOS,
- A larger developer community is focused on STREAMs than would be focused solely on the MacOS, making it possible to leverage development efforts underway outside Apple - for example, Apple's demonstration of IPv6 (next generation TCP/IP) on the Macintosh platform in cooperation with Mentat Inc., and,

- Developers experienced in writing high-performance, high-reliability networking hardware and software for UNIX systems can apply their expertise directly to the MacOS, accelerating the availability of similar solutions for MacOS customers.

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Open Transport 1.1.1 and MacOS System 7.5.3 FAQ (10/96)

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Open Transport 1.1.1 and MacOS System 7.5.3 FAQ (10/96)

Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1 and MacOS System 7.5.3 FAQ (frequently asked questions).

DISCUSSION -----

Question: After installing System Update 2.0 (System 7.5.3) I've noticed that the Ethernet address of a system has changed from 00:A0:40:xx:xx:xx to 00:05:02:xx:xx:xx. Why? Is this due to Open Transport?

Answer: Apple was initially assigned Ethernet MAC (Media Access Control) addresses of 00:08:07:xx:xx:xx. Apple NuBus and on-board Ethernet implementations from 1989 through part of 1995 were given addresses from this range. In 1995, however, Apple began to reach the end of the available addresses in that range, and petitioned the IEEE for an additional vendor code (address range) assignment. We were granted 00:A0:40. Apple began using these new addresses (00:A0:40:xx:xx:xx) in some of our Ethernet implementations mid-year 1995.

MAC addresses are typically stored in an EPROM (erasable programmable read-only memory) on the Ethernet chip set, in "token ring format". This format has each byte stored in bit-reversed order. For example:

Ethernet format (hex):00A040
Binary equivalent: 0000 00001010 00000100 0000
Token ring format (hex):000502
Binary equivalent:0000 00000000 01010000 0010

Some Macintosh systems - the Power Macintosh 7200, 7500, 8500, and 9500 - and some Apple NuBus Ethernet cards had their MAC address unintentionally stored in Ethernet format; not in the standard token ring format. That is, rather than storing the address as 00:05:02:xx:xx:xx and then converting to yield the

assigned address range of 00:A0:40:xx:xx:xx, the addresses were stored as 00:A0:40:xx:xx:xx and would convert to 00:05:02:xx:xx:xx on the wire.

At the same time, however, there was also a bug in the Open Firmware code for these same systems that caused them to NOT convert the address stored in the EPROM. The result was that the intended MAC addresses (00:A0:40:xx:xx:xx) were being used on the wire by these Ethernet implementations, even though they were not stored in the correct format. (A rare case of "two wrongs do make a right".)

MacOS network utilities also access the EPROM to read MAC addresses, however, and correctly assume the token ring format. Thus they convert stored addresses at the application layer before presentation to the user. When running on one of the affected systems, such a utility would report an address of 00:05:02:xx:xx:xx, even though a network analyzer packet trace would show an address in the range 00:A0:40.

Because the Open Firmware bug did not apply to Apple NuBus Ethernet cards with MAC addresses in the new range (Open Firmware is a PCI specific technology), the MAC addresses WERE converted from 00:A0:40:xx:xx:xx to 00:05:02:xx:xx:xx, resulting in the use of unauthorized addresses on the wire. Fortunately, the 00:05:02 range was still unassigned, and these cards did not create interoperability problems.

Upon original discovery of this situation, Apple quickly petitioned the IEEE and was granted the 00:05:02 range. This was in addition to the already approved 00:08:07 and 00:A0:40 ranges.

System Update 2.0 (System 7.5.3) includes a fix for the Open Firmware bug that impacted the Power Macintosh 7200, 7500, 8500, and 9500 systems. Once updated to MacOS System 7.5.3, these systems will now convert their address before use, and as a result appear as 00:05:02:xx:xx:xx on the wire. This change impacted a Open Firmware component, and was not a part of Open Transport v1.1.

Note that because Apple has been granted use of the 00:05:02 range, these PCI MacOS systems now have properly stored and communicated addresses. This change brings consistency to the behavior of all Apple on-board and NuBus Ethernet implementations, and allows Apple and third party network management utilities to correctly read and report these addresses to users without requiring new versions of utility software.

These changes were necessary to assure ongoing standards compliance, and to remedy the compatibility issues with network management utilities. However, they may impact networks including the Apple Ethernet implementations noted above. Specifically, any network access and configuration services which depend upon statically configured MAC addresses will require reconfiguration by the network administrator once System 7.5.3 is introduced into the environment. Such services can include BootP, DHCP, RARP, certain firewall and security products, some routing Access Control Lists, and smart Ethernet hubs incorporating MAC-level security.

The 00:A0:40 address range is now reserved for future Apple expansion, at such time as the 00:08:07 and 00:05:02 ranges are exhausted. This situation did not

effect Power Macintosh 7200, 7500, 8500, and 9500 systems or other Apple Ethernet implementations with physical Ethernet addresses in the original 00:08:07 range.

Question: Does System 7.5.3 require the use of Open Transport?

Answer: System 7.5.3 supports and includes both classic and Open Transport networking.

Doing an Easy Install of System 7.5.3 on an 68030, 68040, or NuBus PowerPC MacOS system installs Open Transport v1.1 and classic networking. Easy Install on a 68000 or 68020 Macintosh will install only classic networking. Easy Install on PCI MacOS systems will install only Open Transport.

Question: Why does System 7.5.3 include both classic and Open Transport networking?

Answer: System 7.5.3 includes both classic and Open Transport networking to support a Universal System Folder, which could provide networking services for any MacOS system, from the Mac Classic to the most powerful PowerPC.

Question: Since both Open Transport and classic networking are included with System 7.5.3, which network software will actually be used?

Answer: The networking software used by System 7.5.3 depends upon four factors:

- the configuration of the system where 7.5.3 was installed;
- an initial stored preference, established at system software installation time;
- the configuration of the system currently being booted, which might be the same as or different from the system where 7.5.3 was installed; and
- the user's change to the stored preference, if any.

Together these factors determine the networking software system loaded at system startup (boot) time:

- Classic networking will load and run when booting System 7.5.3 on a 68000 or 68020 Macintosh, even if Open Transport is also installed;
- Open Transport will load and run when booting System 7.5.3 on PCI MacOS systems meeting Open Transport minimum memory requirements, even if classic networking is also installed;
- Both classic and Open Transport options are available on 68030, 68040 and NuBus PowerPC MacOS systems meeting Open Transport minimum memory requirements. The networking software used at boot time is selected based upon the stored preference.

When System 7.5.3 is Easy Installed on these machines, the initial preference is to load and run classic networking. Open Transport can be enabled using the Network Software Selector utility, discussed below.

If Open Transport is Custom Installed from the System Update 2.0, or installed using the stand-alone Open Transport installer, the initial preference is to load and run Open Transport networking. Classic networking can be enabled using the Network Software Selector utility.

- Classic networking will load and run when booting MacOS systems with less than 5 MB (680x0) or 8 MB (PowerPC) total system memory.

If this constrained-memory situation occurs on a 68030, 68040, or NuBus MacOS system, classic networking will load and run, with full support for AppleTalk and MacTCP.

If this constrained-memory situation occurs on a PCI MacOS system - perhaps due to the definition of a large RAM disk - classic networking will become available, but will be limited to support only for AppleTalk on LocalTalk; no TCP/IP services will be available.

Question: What happens if a boot device is moved to a different system after the preference has been established?

Answer: The stored preference for network software will be honored, if possible, at boot time. Whenever the system configuration being booted meets the minimum requirements for the preferred network software, it will load and run. If the stored preference has been deleted, or is not appropriate for the system being booted, the rules noted above around minimum and recommended memory size, processor, and bus type determine which network software system loads.

Question: Why is the network software preference initially set during system installation time? Wouldn't checking system configuration at boot time be a more flexible way to support the Universal System Folder?

Answer: As described above, a number of system configuration checks are made at boot time - including processor, bus type, and system RAM - and influence the choice of network software when booting a Universal System Folder.

On MacOS systems that support both networking software systems, however, an initial preference is established based on system configuration at installation time. For the majority of users, this system (the installation system) is the same one as where the System Folder being created will be used. In these cases, the update / installation script establishes a preference based on the recommended memory configuration (vs. the minimum required memory, which is still always tested at boot time).

There are two reasons for doing this in this manner:

- Testing for minimum memory requirements at system start-up time assures

a compatible hardware-software combination each time a system is booted. If a system configuration changes to fall below Open Transport's minimum memory requirements - which might happen due to reconfiguration, or by moving an external boot device to a different system - System 7.5.3 automatically drops back to classic networking to provide basic connectivity to the outside world.

- When there is no stored preference, System 7.5.3 selects between classic and Open Transport networking based on the system configurations described above. As this check is based on total memory (including VM but less RAM disk), in the absence of a preference, a seemingly unrelated user action such as turning VM on or off could change the network system used at (next) boot time. For example, enabling VM on an 8 MB system would provide at least 9 MB RAM at next startup, moving the system from classic to Open Transport "unexpectedly"; turning on a RAM Disk could cause another reversal. Thus, setting an initial preference "locks in" a predictable behavior.

Question: How can a user specify a preference for a specific network software system, overriding the system installation preference?

Answer: Apple has developed a utility called the "Network Software Selector" (NSS), which allows a user to indicate a preference for classic or Open Transport networking. Network Software Selector is distributed as a part of System 7.5 Update 2.0, and in other System 7.5.3 configurations - it is located in the Apple Extras Folder.

NSS may not be supplied in all configurations of System 7.5.3; for example, PCI MacOS systems manufactured with System 7.5.3 pre-installed may not have the Network Software Selector utility included, because these systems require Open Transport.

To indicate a preference, the user launches NSS and clicks the radio-button control indicating either classic or Open Transport networking. After quitting NSS, the system must be re-started for the preference to have a change to take effect.

Question: Does the Network Software Selector allow a user to specify a preference for a networking system that is "not valid" for the current system configuration?

Answer: Yes, with the Network Software Selector it is possible to set a preference for classic networking while currently booted on a PCI MacOS system, or to set a preference for Open Transport while booted on a 68000 or 68020 Macintosh. This is designed to allow an administrator to prepare an external boot device with an Universal System Folder that has a configuration different than their own machine.

The Network Software Selector indicates a user preference; the actual network software loaded is determined when the system is booted. If a preference for Open Transport is set but the device is a 68000 or 68020, classic networking

would load, ignoring the preference. If that boot volume is moved to a Power Macintosh 9500, Open Transport would load, as this PCI system requires Open Transport. Move the boot volume to a Quadra 800 and restart; Open Transport would load based on the stored preference.

Question: Can the stored preference be deleted? Why might this be a useful action?

Answer: The preference for network software system is stored as a part of the AppleTalk Prefs file, kept in the System Folder. Deleting this file will also delete the stored preference.

In some support environments it may be useful to create a Universal System Folder that does not include a stored preference. For example, if a network administrator's system is configured differently from the systems found with end-users, the preference set at system software installation time (based on the configuration of the administrator's system) may not be optimum for end-users' systems.

If all of the end user population is configured similarly, the network administrator could use the Network Software Selector utility to modify the stored preference before distributing system software. However, if end-users' system configurations vary widely, deleting the preference would have the effect of deferring the selection of network software to boot time for each individual user.

Should an end-user want to "lock-in" a preference for their system, they would need to simply launch and then close the NSS utility on their machine. This records the network system currently in use as the preference.

Question: When might a user want to use NSS to enable Open Transport, disabling classic networking?

Answer: The Network Software Selector provides System 7.5.3 users an easy way to update to Open Transport networking, without requiring custom system software installations.

Open Transport should be enabled when the user is ready to take advantage of any of Open Transport's features, such as multiple saved network configurations, reconfiguration without restart, support for PowerPC native code; when the user want to run Open Transport-ready or Open Transport-enhanced applications; or when a network manager requires the use of Open Transport to connect to a centrally administered network.

Of course, users that have previously dropped back to classic networking in order to maintain compatibility with an older network application will want to re-enable Open Transport once the application has been updated.

Question: When might a user override the default for Open Transport and specify a preference for classic networking?

Answer: The Network Software Selector provides an easy way to temporarily drop back to classic networking, if needed, on systems that support both networking models. There are two reasons why there might be a call to do so:

- a need to maximize RAM available for running applications, especially if VM is turned off; or,
- a need to run older networking software that is not yet Open Transport compatible.

Before dropping back to classic networking, users are encouraged to check with the application developer to find out if an Open Transport-compatible or Open Transport-ready version of the application is available.

Question: On systems that support both classic and Open Transport networking, how are configuration preferences managed? How does the Network Software Selector interact with these preferences?

Answer: When initially installed, Open Transport AppleTalk and TCP Preferences files are created based on the current settings for classic networking. The Prefs files will each contain a single configuration, entitled "Default". Classic settings are not modified by this installation process.

When booted with Open Transport active, classic networking components and preferences are hidden, and Open Transport initializes with the default configurations. Should the system switch back to classic networking at a later time, Open Transport settings are hidden and the saved classic settings are restored.

Each time the system switches between classic and Open Transport - whether through the use of the Network Software Selector utility or by moving an external boot volume from system to system (where different memory sizes or processor types could cause a switch) - this process will be repeated.

Note that after the initial installation, there is no exchange of configuration information between classic and Open Transport networking. If changes are made in network addressing, and so on while running classic networking, those changes will not be in effect up on switching back to Open Transport. The inverse holds true as well.

For AppleTalk users this would very rarely be any sort of problem, as AppleTalk dynamic addressing and dynamic naming would typically adjust to the system environment at network initialization time.

For TCP/IP users, this could create the potential for some confusion if a user installed Open Transport but continued to run classic networking for a while -- making some configuration changes during that time. Later, when they enable Open Transport networking using the Network Software Selector utility, they'll find that the default Open Transport/TCP configuration reflects their "old" MacTCP settings, not the most recent version.

While there is some potential confusion for users in this behavior, Apple looked carefully at the alternatives, including the possibility of converting information every time the stored preference for network system changed. That approach would have resulted in more frequent and more difficult end-user problems, so was abandoned in favor of the single-conversion at installation time.

Question: On systems that support both classic and Open Transport networking, how are control panels managed? How does the Network Software Selector interact with these files?

Answer: During the boot process, a MacOS system running System 7.5.3 checks for the stored preference for networking software as described above. Once the selection of network software has been determined and validated, the load process also causes the appropriate control panels -- "Network" and "MacTCP" for classic networking; "AppleTalk" and "TCP/IP" for Open Transport -- to be "unhidden". Those associated with the disabled network software are hidden (made invisible).

For the Network Software Selector "show and hide" mechanism to work, it is very important that all files associated with networking be stored in their original and proper locations, with their original file names. Users should not rename these files, nor should they partially install or de-install networking software by dragging copies of files into or out of the System Folder.

Question: Does the Network Software Selector allow running Open Transport on a 68000 or 68020 Mac? If not, why not?

Answer: While NSS can change the stored preference to Open Transport at any time, the preference will be honored at boot time only on those models that can use Open Transport - 68030, 68040, and PowerPC MacOS systems.

68000 and 68020 systems always load and run classic networking. Open Transport was not engineered to support these two older processors as the overall processor and system memory requirements associated with Open Transport's additional features are generally higher than that available in these older systems.

Question: Does the Network Software Selector allow running classic networking on a PCI Power Mac? If not, why not?

Answer: While NSS can change the stored preference to classic networking at any time, that preference will be honored at boot time only on those models that can use classic - 68030, 68040, and NuBus PowerPC MacOS systems.

However, certain MacOS systems with PCI - designed for entry-level markets, where users' networking needs and system memory configurations may be limited - may ship with a default preference to initially support only AppleTalk on LocalTalk using classic networking. On these systems, a user can easily enable Open Transport using NSS when they are ready to take advantage of PCI network

cards, or when they want to gain direct access to TCP/IP networks such as the Internet.

Classic networking is not generally supported on PCI MacOS systems for a number of reasons:

- PCI MacOS systems are based on PowerPC, and only Open Transport provides PowerPC native code;
- Apple simultaneously adopted hardware and software standards for networking by supporting PCI networking via Open Transport's DataLink Provider Interface (DLPI) driver architecture;
- Many of the new features provided by Open Transport, such as multiple saved configurations, reconfiguration without restart, and support for current standards (DHCP, IP multicast, and so on) would have been technically difficult or impossible to retrofit to classic networking; and,
- Open Transport prepares the way for the Copland release of MacOS, by carefully defining an execution model consistent with protected memory and preemptive scheduling.

Question: Can MacTCP be installed on a system running Open Transport?

Answer: With System 7.5.2 it was possible - although not recommended or supported - to install MacTCP on PCI MacOS systems through drag-copy of specific files. Beginning with System 7.5.3, this is no longer possible.

In order to meet the requirements of the Universal System Folder, System 7.5.3 automatically hides files associated with classic networking on systems where Open Transport is in effect (and correspondingly hides Open Transport files on systems where classic networking is running). If a user installs MacTCP on a PCI machine - where Open Transport is always active - the "just installed" MacTCP files will be automatically be hidden by the MacOS immediately upon reboot of the system. This could be confusing to users who may not be aware that this software configuration (MacTCP on PCI machines) is not supported.

If, for any reason, it becomes necessary to reinstall MacTCP on a 68030, 68040, or NuBus PowerPC MacOS system running Open Transport, the end-user must first use the Network Software Selector utility to specify a preference for classic networking and reboot the system. Only after the reboot will MacTCP and the other components of classic networking be visible. The converse would also be true for Open Transport on these machines - only the currently running network system is visible and can be modified or updated.

Question: Does System 7.1.x support both classic and Open Transport networking?

Answer: System 7.1.x continues to support classic networking, and gains the option of running Open Transport v1.1.

Customers running 7.1.x on 68000 and 68020 systems will continue to use classic networking; Open Transport v1.1 will not install on these systems. (System 7.1.x does not support PCI MacOS systems.) Customers running System 7.1.x on 68030, 68040, and NuBus PowerPC MacOS systems can use either classic or Open Transport networking. To enable Open Transport, users must run the Open Transport installer, available as a part of the stand-alone retail distribution package.

Question: Is the Network Software Selector available for System 7.1.x customers?

Answer: No, the Network Software Selector is a feature only found in System 7.5.3.

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Tech Info Library

Open Transport 1.1.1: Network Compatibility FAQ (10/96)

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Security: Everyone

Open Transport 1.1.1: Network Compatibility FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Network Compatibility FAQ (frequently asked questions).

DISCUSSION -----

Question: Is Open Transport interoperable with installed AppleTalk and TCP/IP networks?

Answer: Open Transport 1.0.x is compatible with existing AppleTalk and TCP/IP networks at the "packets on the wire" level. Organizations can introduce one, a few, or hundreds of new MacOS systems running Open Transport into their environment without worrying about interoperability with existing networking services.

Question: There have been reports of problems with the PCI MacOS systems when transferring large files over Ethernet networks. Is this due to running Open Transport software?

Answer: Apple has received reports describing problems transferring large files from PCI Macintosh systems to a variety of AFP servers. The reports state that file transfers stop and a -1072 error is generated. The reports also state that after the problem occurs, both AppleTalk and TCP/IP services are lost and systems must be restarted to restore them. If Ethernet traces are taken, they show that the system disappears from the network.

This problem has been identified as a bug in the Ethernet driver that can exhibit itself if there is a lot of PCI bus activity. In this case, it is possible that Ethernet DMA will start to transmit a packet, and an under run will occur because DMA cannot get enough bandwidth to transfer the entire packet to the Ethernet controller. If this condition occurs more than 10 times in

sequence, the bug in the driver causes it to not recover the buffers associated with the under run. The driver allocates 10 buffers; when they are gone the transmitter will not longer be able to send packets. This problem could occur in some normal situations with a lot of disk activity.

This problem is present only in the built-in Ethernet drivers that shipped with the Power Macintosh 7200, 7500, 8500, and 9500 systems prior to the availability of System 7.5.3. (The first Power Macintosh 9500 systems shipped with v1.0 of this driver; the Power Macintosh 7200, 7500, and 8500 systems shipped with v1.0.1.)

Apple has released an updated driver that fixes this problem, first available as version 1.0.2 of the "Ethernet (Built-In)". The most current version of this driver is included with System 7.5.3.

Question: There have been reports of problems with the Power Mac 7200/90 and its operation on Ethernet networks. Is this due to running Open Transport software?

Answer: Apple has determined that under certain network conditions, independent of the protocol being utilized, a Power Macintosh 7200/90 may fail to send large packets over its built-in Ethernet. The trouble mode is that the 7200/90 may lock-up, time-out, or have extremely slow Ethernet performance under certain conditions. These conditions generally occur only when transferring large packets of data over large and busy networks.

The problem has been isolated to the 7200/90 system logic board, and is limited to the subset of 7200/90 systems with a serial number lower than "XX544XXXXXXX". No other Power Macintosh, Power Macintosh LC, Performa or PowerBook models experience this problem, including the 7200/75. The problem is not related to Open Transport.

Apple has proactively notified customers of this issue, and has instituted troubleshooting procedures to make it easy to determine if a system is impacted. All manufacturing sites have implemented a logic board change and Power Macintosh 7200/90 systems currently available should not be affected by this issue.

If a customer has completed the troubleshooting procedures and finds that their 7200/90 experiences the trouble mode, they should contact their local Apple Authorized service provider or call Apple (1-800-SOS-APPLE in the US) to be advised on how to have the logic board replaced free of charge.

Question: There have been reports of problems with connecting the Power Mac 7200 to token ring networks. Is this due to running Open Transport software?

Answer: Currently, the Apple PCI Token Ring Card will not work with the Power Macintosh 7200. Apple is working on a solution that will provide support for Power Macintosh 7200 models and will advise Apple Authorized Service Providers when that solution becomes available. This problem is due to a bus timing issue and is not related to the use of Open Transport software.

Question: Open Transport doesn't seem to send packets larger than 1500 bytes on a token ring network. Is this normal?

Answer: Due to limitations in Apple's currently available token ring drivers, an artificial limit is imposed on the maximum packet size. This limit is planned to be addressed in a future version of driver software. Open Transport fully supports larger frame sizes.

Question: Is Open Transport compatible with existing Internet Service Provider offerings?

Answer: Open Transport/TCP currently supports dial-up connectivity to TCP/IP networks, including the Internet, through backward compatibility with select third party software modules known as mdevs.

With the appropriate software installed, end-nodes can use either SLIP or PPP to connect to Internet Service Providers and other dial-up IP-access points. Not all versions of all mdevs are supported by Open Transport compatibility services, thus it is important that recommended versions of software be installed for the greatest level of compatibility.

It is also very important that TCP/IP addressing and other configuration information be properly configured. As there is a new human interface provided by Open Transport/TCP, there are some differences in the process as compared to the older MacTCP software. In particular, when running TCP/IP over a SLIP or PPP link only, it is recommended that the "router address" and "subnet mask" fields be left blank in the TCP/IP control panel.

Question: Which MacTCP dial-up extensions ("mdevs") are supported by Open Transport/TCP?

Answer: Apple has worked together with third party developers to test a variety of mdevs with Open Transport 1.1. The following mdevs, when installed, will appear listed by name in the "Connect Via:" pop-up menu in the TCP/IP control panel:

- FreePPP - Apple and the developer recommend that you use version 1.0.5 or more recent.
- InterPPP II - Apple and the developer recommend that you use version 1.1 or more recent.
- InterSLIP - Apple and the developer recommend that you use version 1.0.1 or more recent.
- MacSLIP - Apple and the developer recommend that you use version 3.0.2 or more recent.
- MacPPP - Apple and the developer recommend that you use version 2.1.4 SD or more recent (version 2.2.0 is not recommended).

- SonicPPP - Apple and the developer recommend that you use version 1.0.2 or more recent.

Question: Earlier versions of this Q&A listed VersaTerm SLIP as compatible with Open Transport. What is the current status?

Answer: After additional testing and field experience, Apple and Synergy Software have jointly determined that there is a compatibility problem between the current releases of VersaTerm SLIP and Open Transport. Apple and Synergy are continuing to investigate and work towards a solution.

Question: Are any other mdevs recognized by Open Transport?

Answer: There are a number of third party PPP mdevs that are all derived from a common technology base, FCR PPP. The derivative implementations have not been individually tested by Apple, although Apple and FCR have worked closely together in testing the core technology.

Each of these derivatives registers with Open Transport using the same "signature". When any one is installed, it will appear as "TCP/IP PPP" in the menu, rather than as it's own brand name. These include:

- About Software FCR PPP
- 4-Sight 4-Sight PPP
- InterCon InterPPP
- Network Telesystems NTS PPP
- Pacer Software PacerPPP
- SAT/SAGEM PlanetPPP
- Tribe TribePPP
- White Pine Software WhitePine PPP

Users are always encouraged to check with the third party developer of interest for the most recent information on versions and compatibility.

Question: Is PPP connectivity distributed as a bundled component of Open Transport v1.1.1?

Answer: Not at this time. Apple is developing an Open Transport implementation of PPP, for support of TCP/IP and AppleTalk protocols. When available, current plans call for OT/PPP to be included with future distributions of Open Transport.

Question: Does Apple currently offer a solution for SLIP or PPP dial-up to the Internet?

Answer: Yes. The Apple Internet Connection Kit (AICK) is a selection of the most popular Internet applications from third party companies, including the Netscape Navigator and RealAudio Player from Progressive Networks, as well as Claris

Emailer Lite.

AICK 1.1 includes MacPPP 2.5 (Version 1.0 included MacPPP 2.1.4) along with the Apple Internet Dialer - software designed to make it simpler for MacOS customers to register with a qualified Internet Service Provider (ISP) and get connected to the Internet. To help users work with their Internet applications, the Apple Internet Connection Kit includes AppleGuide software for on-line assistance.

Question: Does the Apple Internet Connection Kit require Open Transport?

Answer: The Apple Internet Connection Kit (AICK) can support either MacTCP 2.0.6 or Open Transport/TCP 1.x. Customers should update their copy of AICK with the Apple Internet Dialer 1.1. This revision of the dialer is fully compatible with Open Transport 1.1 and System 7.5.3

Question: What is MacPPP 2.5 / 2.1.4? Is it available on the Internet?

Answer: MacPPP 2.5 and 2.1.4 are derivatives of the MacPPP 2.1.x SD versions of Merit's PPP. They include code contributed by Apple engineering to enhance compatibility with Open Transport/TCP.

Question: There have been reports of problems with Open Transport, PPP, and the use of Virtual Memory. Is Open Transport compatible with Virtual Memory?

Answer: Open Transport fully supports the use of virtual memory. However there were some problems with MacPPP versions 2.1.x SD and versions of FreePPP prior to 1.0.4; MacPPP 2.5 and FreePPP 1.0.5 have corrected these problems. Users are advised to update to the most recent version of the software, or temporarily turn VM off.

Question: Are there known limitations to backward compatibility mdev support?

Answer: Due to some shortcomings in the Open Transport 1.0.x backward compatibility services, there were some additional limitations with earlier versions of Open Transport:

- Some mdevs were not be able to auto-dial, that is, automatically connect to the service provider when launching a TCP/IP application. This has been addressed with updated versions of mdevs.
- Once a TCP/IP application launched and used a SLIP or PPP mdev, use of a different mdev could have required restarting the Macintosh. Disconnecting from and re-dialing a service provider could also have the same effect. This has been corrected in Open Transport v1.1.

Question: Are there differences in configuring Open Transport/TCP and MacTCP for Internet Service Providers (ISPs)?

Answer: Some ISPs do not strictly follow standards, which call for assigning end-node IP addresses on the same subnet as the router (gateway). Open Transport strictly enforced this requirement in versions prior to 1.0.7. In versions since OT 1.0.7 (including 1.1), the TCP/IP Control Panel automatically generates a compatible router address to facilitate connectivity to the ISP. To take advantage of this feature, the user simply leaves the router and subnet mask fields empty when configuring Open Transport/TCP for dial-up access.

Question: If a user needs an updated copy of an mdev, where can they find the software?

Answer: Sources for software vary, as some products are commercial, and some are shareware or public domain.

- FreePPP is shareware and can be found on a variety of Internet sites; typically at "info-mac" mirror sites in the comm/tcp directory. A list of info-mac mirror sites can currently be found at:

<http://www.mcp.com/hayden/iskm/info-mac-mirrors.html>

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/>

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/>

- InterPPP and InterPPP II are commercial software products. For availability and ordering information contact InterCon Systems, US +1(800) 468-7266 or (703) 709-5500.
- MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information contact TriSoft, US +1(800) 531-5170 or (512) 472-0744.
- VersaTerm SLIP is commercial software developed by Synergy Software. For availability and ordering information contact Synergy, US +1(610) 779-0522.
- MacPPP (v2.1.4) is available as a part of the Apple Internet Connection Kit, Apple Computer Inc., US +1(800) 462-4396 for fax information or +1(800) 538-9696 to locate an Apple reseller near you.

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Open Transport 1.1.1: Network Interface Options FAQ (10/96)

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Open Transport 1.1.1: Network Interface Options FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, Network Interface Options FAQ (frequently asked questions).

DISCUSSION -----

Question: What network interface options are available with Open Transport?

Answer: Open Transport v1.1 supports PCI and NuBus NICs, CommSlot and built-in (LocalTalk and Ethernet) network adapters. For models without slot-based expansion options, Open Transport v1.1 supports SCSI-attached network adapters, including PC Cards compliant with the Macintosh PC Card specifications.

NIC options available for Open Transport include Ethernet, token ring, fast Ethernet, FDDI, and ATM.

Question: What about dial-up network connectivity solutions?

Answer: For connectivity to AppleTalk networks, Open Transport v1.1 and greater is fully compatible with Apple Remote Access v2.0.1 client and personal server.

For dial-up connectivity to TCP/IP networks including the Internet, Open Transport recognizes third party MacTCP software extensions (known as mdevs), providing SLIP or PPP connectivity. See Network Compatibility for more information.

Apple has now reached the beta milestone with a new, PowerPC native implementation of PPP for Open Transport. This software, OT/PPP, will support TCP/IP connections in its first released version, with AppleTalk on PPP (ATCP) in a future version.

Question: Does Open Transport influence or restrict the choice of modems for dial-up communications?

Answer: No. Open Transport provides a new, consistent programming interface for serial communications from within system software. However, there are no changes in the external behavior of the serial ports based on the presence or absence of Open Transport on a system.

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Open Transport 1.1.1: Network Planning & Admin FAQ (10/96)

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Open Transport 1.1.1: Network Planning & Admin FAQ (10/96)

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TOPIC -----

This article is the Open Transport 1.1.1, Network Planning & Administration FAQ (frequently asked questions).

DISCUSSION -----

Question: Does Open Transport offer network managers more control over Mac OS networking?

Answer: Yes. Open Transport allows network managers to specify details of the network connection and configuration in advance, via a "preferences" file. These configurations may contain a mixture of user-provided information and network manager recommended and/or network manager required settings. Recommended data provides a default for the end-user, while required configuration data is locked with an administrator's password.

Open Transport configurations can be prepared on one machine and distributed to other systems. To support this, the Open Transport configuration utilities allow a configuration to "exported" and "imported". Exported configurations can be distributed via electronic mail, a file server, or even "sneaker net".

Question: Will Open Transport require organizations to make changes in network administration, planning, or design?

Answer: The first Open Transport protocols - AppleTalk and TCP/IP - offer new features that give a network manager more flexibility and control. Some of these features, when implemented in a network environment will require additional thought and planning by a network manager.

In particular, Open Transport/AppleTalk adds support for the use of static (manually assigned) AppleTalk node addresses. If implemented, a network manager

may prefer to assign addresses based on a pre-designed protocol address management plan. Open Transport/TCP adds support for the Dynamic Host Configuration Protocol (DHCP). DHCP allows network managers to allocate IP addresses and other configuration information from a DHCP server. Optimum deployment of DHCP services within an enterprise requires planning.

In order to better conform to applicable standards, Open Transport/TCP also has somewhat more rigorous requirements regarding the content and format of the local HOSTS file. This could require some updating of existing MacTCP-compatible host files. See TCP/IP Features for more information.

Question: Does the use of AppleTalk manual addressing increase the requirement for network administration?

Answer: Open Transport/AppleTalk offers network administrators a choice. Sites that prefer to have the network infrastructure automatically assign unique protocol addresses can continue to rely on AppleTalk Address Resolution Protocol (AARP). Sites that find advantage in having fixed and well-known protocol addresses for each end-node can implement manual addressing.

When manual addressing is selected there will be a requirement to allocate and assign the initial protocol addresses, which will subsequently be "locked". Some administrators may prefer to do this allocation based on a central numbering plan, creating individual configuration templates (recommended or required settings) for each user. Others may prefer to allow the network to determine the initial address configuration (that is, use dynamic addressing once), and then lock the uniquely assigned addresses after initialization.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently - either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict between a new dynamic node acquiring an address assigned to an off-line, manually-addressed node. Administrators can enforce the addressing policy for a subnet by locking the addressing mode in the "dynamic" or in the "manual" state. As an administrative precaution, however, Open Transport/AppleTalk does continue to check for the presence of duplicate protocol addresses on the LAN when static addressing is configured.

Question: Are there other benefits that arise from the new support for AppleTalk manual addressing?

Answer: Yes. Manual configuration of static AppleTalk addresses supports MacOS products that utilize WAN datalinks where non-full-mesh topologies are important. This includes datalinks such as Frame Relay, SMDS, and ATM.

Question: Does Open Transport/TCP support BootP?

Answer: Yes. Open Transport v1.1 fully supports Boot Protocol (BootP).

With Open Transport v1.0.x, there was an error condition in which Open Transport would fail to accept a BootP Reply if it were sent to the unicast (subnet broadcast) address, that is, xxx.xx.x.255; replies sent to the all-nets broadcast address (that is, 255.255.255.255) were handled properly. Both situations are correctly handled by Open Transport v1.1.

Open Transport 1.1 now also supports BootP gateways located 1 or more hops away. Earlier versions of Open Transport required that the BootP gateway be zero hops away.

Question: Which DHCP servers are supported by Open Transport/TCP?

Answer: Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport/TCP has been tested with the following DHCP server implementations:

- Competitive Automation,
- FTP Software <http://www.ftp.com>
- Hewlett Packard HP-UX <http://www.hp.com>
- Microsoft Windows NT Advanced Server
- Silicon Graphics <http://www.sgi.com>
- Sun Solaris and SunOS <http://www.sun.com>
- TGV <http://www.tgv.com>

Question: Does Open Transport/TCP support DHCP address leases?

Answer: Yes. Open Transport/TCP fully supports DHCP address leases. Open Transport/TCP will automatically attempt to renew any address lease that reaches it's renewal interval, which defaults to half of the lease's lifetime. (The Renewal Interval may be configured to a different value by making changes to the configuring DHCP server). Renewal will be attempted regardless of how many times the lease has already been renewed.

Should an interface's IP address lease expire, the interface will be closed down.

Question: Are there interoperability issues of note regarding DHCP servers?

Answer: Some DHCP servers require padding to a fixed packet size; other servers do not accept padded packets. Open Transport 1.1 and greater automatically adapt to the type of DHCP requests that a given server accepts, while earlier (1.0.x) versions sent non-padded packets.

Network managers should also note that Open Transport 1.1 and greater support DHCP gateways located one or more hops away. Earlier versions of Open Transport required that the gateway be zero hops away.

Question: Can Open Transport/TCP act as a DHCP client to a Windows NT Advanced Server?

Answer: Yes. With Open Transport v1.1, MacOS clients are fully interoperable with the Windows NTAS DHCP server.

Macintosh clients running earlier versions of Open Transport (1.0.x) could experience some of the following interoperability problems due to differences between the Microsoft implementation and that of a typical UNIX server.

- Clients running Open Transport v1.0 or v1.0.1 were not able to acquire leased IP addresses.

This was due to unusually long reply-time-out values used in the NTAS implementation. Open Transport v1.0.6 was changed to accommodate NTAS behavior in this regard.

- Clients running Open Transport versions prior to v1.0.8 would be incompletely configured via DHCP.

NTAS sends only IP address, IP address lease information, the configuring server's IP address, and a subnet mask. Investigation revealed that other configuration options entered in the NT DHCP server's database (default gateway address, domain name server addresses, domain name, broadcast address, and so on) were not sent unless specifically requested by the client using the DHCP Parameter Request List option.

Apple believes that requiring use of this option in order for the client to be properly configured is contrary to the DHCP server specification described in RFC 1541 (Dynamic Host Configuration Protocol), and it appears to be unique to the NTAS implementation. However, in interest of interoperability, Open Transport v1.0.8 and v1.1 use the Parameter Request List option to request default gateways, DNS servers, domain name, subnet mask, and broadcast address. This permits Open Transport/TCP clients to be fully configured by these servers, at the expense of a few additional packets on the wire during the initialization phase.

Question: Can Open Transport/TCP act as a WINS client to a Windows NT Advanced Server?

Answer: No, not at this time. The Microsoft WINS server is dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support) that provide some automation for assignment and registration of IP host and domain names. The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group. Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge. We welcome customer feedback on this topic - should sufficient demand for a WINS client materialize, we'd be open to exploring this issue. A future MacOS WINS client would be dependent upon Microsoft releasing sufficient technical detail regarding their proprietary extensions to IP to make an interoperable implementation possible.

Question: When installing and configuring Open Transport, are there any additional issues of note for network managers?

Answer: The following comments have been developed based on feedback from customers.

- Because the new domain name resolver supplied with Open Transport/TCP is both more capable and more standards compliant than the one included with MacTCP, configuration changes may be desirable or necessary. For example, although common practice in configuring MacTCP, it is no longer necessary to repeat the primary DNS server address in the configuration.
- Network managers should note that although the TCP/IP control panel can properly receive and utilize multiple gateway and name server addresses from a DHCP server, only the first one returned has been displayed in the TCP/IP control panel. This has been resolved in OT 1.1.1.
- Error -3205 can result if the user has manually modified (moved, renamed, or deleted) files installed by Open Transport. Both the Shared Library Manager and Shared Library Manager PPC files must be present on a PowerPC MacOS system. In general, users should not attempt to modify the OT installation through any means other than the Apple supplied installer scripts.
- Users are occasionally encountering an error message like 3Cannot open connection to DNS Name Server2 when trying to run classic MacTCP applications. This can result if the user has manually modified (moved, renamed, or deleted) files installed by Open Transport. The MacTCP DNR file must remain in the System Folder at the root level for backward compatibility to function.
- With System 7.5, TCP/IP support was included but was not automatically installed (it required a Custom Install action). As of System 7.5.3 and Open Transport, TCP/IP services are always installed. However, if there are no MacTCP preferences on the target disk, TCP/IP is installed with a default configuration specifying configuration via MacIP in the current AppleTalk zone, but it is set to 3Never Load2. To enable TCP/IP, use the TCP/IP Control Panel in the Advanced or Administrator mode and select the Options dialog.

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Open Transport 1.1.1 and Servers FAQ (10/96)

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Open Transport 1.1.1 and Servers FAQ (10/96)

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TOPIC -----

This article is the Open Transport 1.1.1 and Servers FAQ (frequently asked questions).

DISCUSSION -----

Question: What role does Open Transport play for servers?

Answer: The Open Transport architecture is designed to provide server applications: file, print, database, e-mail, directory, and other: with a foundation for higher performance and for more flexible configuration, while maintaining the historical differentiation of MacOS servers - ease of configuration and administration.

Question: How will Open Transport enhance server flexibility?

Answer: Open Transport introduces the capability of activating more than one network connection at the same time, using the same networking protocol. This capability is known as multihoming, and enables servers to support more clients, to offer greater total performance, and to increase the reliability of mission critical applications.

Open Transport also enables the development of transport independent applications. This will be especially valuable for server applications which need to be deployed in AppleTalk, or TCP/IP, or NCP/IPX, or other protocol environments.

Question: How will Open Transport enhance server performance?

Answer: Servers, as network-aware applications, gain access to the higher

performance PowerPC native implementation of networking protocols that Open Transport provides. To exploit this performance opportunity, server applications must be accelerated for PowerPC and must utilize the new Open Transport XTI APIs.

Severs will also benefit through access to new high-speed PCI datalink implementations such as fast Ethernet and ATM.

Question: Will Apple's server products such as AppleShare exploit Open Transport features?

Answer: Yes. AppleShare 4.2.1 is the first version of AppleShare to be both PowerPC native and Open Transport ready. It takes advantage of other Open Transport features as well, including support for multihoming.

Question: Are PCI MacOS systems with Open Transport recommended as application servers?

Answer: Apple recommends that server application developers adopt Open Transport v1.1 as the basis for new network applications development as soon as is possible within their product life cycles. As these updated versions of server software become available customers will find that the combination of PCI, Power Macintosh, and Open Transport makes a great platform for flexible, high-performance network applications.

It should also be noted that Apple generally recommends the Apple Workgroup Server product family, rather than re-purposed desktop hardware, for use as server platforms.

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TOPIC -----

This article is the Open Transport 1.1.1, Performance FAQ (frequently asked questions).

DISCUSSION -----

Question: Is Open Transport native on PowerPC MacOS? Does this make networking faster?

Answer: Open Transport is written to take advantage of the PowerPC processor - it is native code. This provides the necessary foundation for significantly increased networking performance in MacOS. To realize the performance gains at the application level, however, it is equally important that networking applications also be accelerated for Power Macintosh, and that applications adopt the new Open Transport XTI programming interfaces.

The compatibility services for existing AppleTalk and TCP/IP applications run as 680x0 code in emulation on Power Macintosh. This protects a customer's investment in networking applications, but also obscures - or in some cases, outweighs - the underlying performance increases from the native protocol implementations.

Question: Does Open Transport PowerPC native code include drivers for Macintosh onboard Ethernet

Answer: PCI Power Macintosh systems ship with a PowerPC native DLPI driver for built-in Ethernet Power Macintosh 6100, 7100, and 8100 models currently have 680x0 drivers.

Question: Will existing networking applications see performance improvements

with Open Transport on PowerPC MacOS systems?

Answer: In general, current MacOS networking applications are written for the 680x0 processor and use the classic networking programming interfaces. These are not likely to see performance boosts with Open Transport, as most of the performance potential comes from the move to native code for the PowerPC processor. Even for PowerPC native applications, use of the backward compatibility libraries offsets most of the performance gains in the low level protocol handling.

Users that select PowerPC native applications that are Open Transport-ready will realize the greatest performance gains. Performance of specific network applications may also be significantly influenced by the underlying processor speed of the system. Customers with demanding, network I/O intensive applications should give strong consideration to the higher performance PowerPC MacOS systems.

However, even with existing applications using backward compatibility, TCP/IP users are likely to see some performance improvements with Open Transport. This is because of the differences in the way compatibility is provided for MacTCP vs. AppleTalk, and differences in the two protocol architectures.

Question: Will networking applications see performance improvements with Open Transport on 680x0 based applications?

Answer: Not in general, as most of the potential for increased performance with Open Transport comes from the move to PowerPC native code. However, users may find that Open Transport TCP exhibits superior performance to MacTCP, especially under adverse networking circumstances (slow links, noisy lines), due to its more robust implementation and more sophisticated error handling and recovery.

Question: When will new or updated applications that support the native Open Transport APIs become available?

Answer: Applications that are PowerPC native and Open Transport ready are available now. Users are urged to contact the specific third party vendor of interest for more details on their specific products.

Question: How is Open Transport performance being measured?

Answer: Apple has established plans for measuring the performance of Open Transport and related system components through four benchmark test suites:

- SpudPPC - this low-level benchmark tool focuses on measuring the raw throughput potential of Open Transport. It supports both AppleTalk and TCP/IP protocols, is PowerPC native code, and uses Open Transport programming interfaces. Because it measures point-to-point, memory-to-memory data transfers, it most directly measures the performance of Open Transport.

Because this test has the most direct access to Open Transport (the application layer is "thin"), and because it is fully accelerated for PowerPC, this benchmark will generally indicate an upper bound on the performance potential of Open Transport.

- AppleShare file copy - this end-user benchmark focuses on measuring the throughput of the AppleShare client while drag-copying a file from the MacOS desktop using the Finder. It is specific to the AppleTalk protocol suite, runs in 680x0 emulation, and depends upon backward compatibility services to access Open Transport networking. Because it measures user-perceived throughput of a complete application chain, this test only indirectly measures the performance of Open Transport.

Because this test depends upon emulated code, backward compatibility, and AppleTalk protocols, this benchmark will generally indicate a lower bound on the performance potential of Open Transport.

- Fetch 3.x - this end-user benchmark focuses on measuring the throughput of the popular ftp client, Fetch. It is specific to the TCP/IP protocol suite, runs as PowerPC native code, and uses Open Transport programming interfaces. Because it measures user-perceived throughput of a complete application chain, this test only indirectly measures the performance of Open Transport.

Because this test is PowerPC native, Open Transport ready, and is based on TCP/IP protocols, this benchmark will generally tend toward the upper bound on the performance potential of Open Transport.

- ZD Labs NetBench 4.0 - this suite of benchmarks is designed to test file server implementations. It is specific to the AppleTalk protocol suite, runs in 680x0 emulation, and depends upon the File System and backwards compatibility services to access Open Transport networking. Because it measures user-perceived throughput of a complete client-server environment, this test only indirectly measures the performance of Open Transport.

Because this test depends upon emulated code, backward compatibility, and AppleTalk protocols, this benchmark will generally indicate a lower bound on the performance potential of Open Transport. However, because it interacts with an AFP server - which may be PowerPC native and Open Transport ready - it can be useful in measuring the multi-client scalability of file server implementations built on Open Transport.

Only a combination of tests can provide good coverage, as user-perceived networking performance is heavily influenced by a combination of a number of MacOS components including the file system, the Finder, driver code, and the applications used to move data across the network.

Question: How much faster will native Open Transport applications be?

Answer: Networking performance is influenced by many factors. As noted elsewhere in this document, customers will see the highest performance when using PowerPC

native applications that fully support Open Transport APIs.

Performance potential will be greater with protocols that use larger datagram sizes, such as TCP/IP, than with AppleTalk which has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, or ATM, both the performance of the network interface card (NIC) driver code and the number of allocated buffers are significant factors.

Open Transport has been clocked at over 9.3 Mbps using the SpudPPC tool. A pre-release version of a third party implementation of NFS was benchmarked at over 8.4 Mbps. Both figures approach theoretical maximum performance for 10 Mbps Ethernet

Question: What about high-speed networking connections like fast Ethernet, ATM, and FDDI?

Answer: Benchmarking on fast Ethernet, FDDI, and ATM datalinks has been underway for some time. Some sample results include:

- 48 Mbps with a Rockwell fast Ethernet card and driver (1500 byte block size)
- 72 Mbps with a Rockwell FDDI card and driver (4K block size)
- 93 Mbps with an Interphase ATM-155 card and driver (8K block size)

These tests were performed using Open Transport/TCP 1.1 beta software, running on a Power Macintosh 9500/132, using the SpudPPC tool.

Other tests, such as the one conducted by Fore Systems on their 155 Mbps ATM cards, have shown even higher throughput. In one test, Fore was able to transmit UDP over their LAN-E stack on ATM (using 1500 byte datagrams) at over 100 Mbps.

AppleTalk performance is lower than TCP/IP performance due to the smaller DDP packet size and the ATP retry-acknowledgment algorithm. Current testing on fast Ethernet is turning in figures around 35-45 Mbps with a PowerPC native ATP test tool. This is a significant performance improvement, and further progress should be realized as application code is revised to take full advantage of Open Transport and PowerPC.

Question: Does Open Transport support the use of large datagram sizes? Does datagram size have an impact on network throughput?

Answer: Maximum allowable datagram size is dependent on both the selected datalink and the selected protocol stack. Open Transport supports the use of large datagram sizes as appropriate to the protocol and datalink in use.

Because Open Transport/AppleTalk is based on the Phase 2 architecture, datagram size for AppleTalk is limited to a maximum of 617 bytes. Open Transport/TCP supports larger datagrams; up to 1,500 bytes on Ethernet and fast Ethernet, and up to 16K on token ring; even larger block sizes can be used on FDDI and ATM.

Block size does play a role in maximum throughput; the larger the block size used, the greater the potential end-to-end throughput. Users demanding the highest network throughput may find FDDI to be a more attractive alternative than fast Ethernet because it can support larger block sizes at the same bit rate.

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Open Transport 1.1.1: System Requirements FAQ (10/96)

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TOPIC -----

This article is the Open Transport 1.1.1, System Requirements FAQ (frequently asked questions).

DISCUSSION -----

Question: Which MacOS systems can take advantage of Open Transport?

Answer: Open Transport is designed to work on portable and desktop Apple Macintosh or MacOS compatible computers with a Motorola 68030 or 68040 family microprocessor, or a PowerPC 601, 603(e), or 604 microprocessor.

Apple recommends running MacOS System 7.5.3 with Open Transport, although the earlier System 7.1, 7.1.1 and 7.1.2 releases are also compatible. System 7.5.3 requires a minimum of 4 MB (680x0) or 8 MB (PowerPC) total memory; Open Transport requires a minimum of 5 MB (680x0) or 8 MB (PowerPC).

Systems running Open Transport may be able to benefit from larger than minimum memory configurations when using FDDI or ATM, as these datalinks can provide increased performance by taking advantage of larger datagrams and buffer sizes. Effective use of additional system RAM for buffers is application dependent.

Question: How do settings such as Virtual Memory and RAM disk affect Open Transport's minimum memory requirements.

Answer: Open Transport minimum memory requirements are based on total system memory including VM, less the size of any RAM disk and Disk Cache defined.

Question: How is the Memory Available as reported by the "About this Macintosh..." dialog related to Open Transport's actual memory requirements.

Answer: The "About this Macintosh..." dialog reports on both the total free memory and the largest block of contiguous free memory. In practice, the latter figure is a better indicator of whether an additional application can be launched.

If a user repeatedly opens (launches) and closes (quits) multiple applications that use Internet networking services, and if the user has set Open Transport TCP/IP preferences to load networking services only when needed, this can, over time, result in a situation where Open Transport loads into memory "between" other running applications. This "memory fragmentation", in turn, can result in a smaller value reported by "About this Macintosh..." for free contiguous memory. In extreme cases, this could limit the number of concurrent applications that a user could run.

If this situation arises, Apple recommends use of the Advanced Mode of the TCP/IP Control Panel to access the Options dialog; remove the "X" in the "Load only when needed" option. After restarting the system, Open Transport TCP/IP will load when called on by an application for the first time, but will then remain loaded. This will help avoid memory fragmentation.

Open Transport 1.1.1 includes some additional internal changes designed to reduce the frequency and significance of memory fragmentation due to the dynamic loading and unloading of TCP/IP. Depending on the pattern of use, however, it may still be desirable to disable the "load only when needed" option as discussed above

Question: Does Open Transport require more system RAM than classic networking?
If so, how much more, and why?

Answer: Open Transport provides many new features and capabilities to MacOS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport are dynamic; they vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors which contribute to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC code; RISC code is typically larger - but also faster - than CISC programming,
- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC MacOS systems,
- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces,

- Open Transport is very "VM-friendly", and has a lower memory footprint on systems with virtual memory enabled; classic network has about the same footprint regardless of the VM setting,
- Open Transport is based on the cross-platform standard STREAMS environment, which increases the total size of the implementation as compared to the proprietary classic networking implementation, and,
- To lay the groundwork for Copland's protected memory model, Open Transport allocates memory for TCP/IP applications in the system area; MacTCP allocated memory in each application.

Thus the difference in memory requirements will depend upon which configurations are measured. Some examples of base memory requirements include:

- On a PowerPC system with VM on, classic AppleTalk and MacTCP require about 350-450K; Open Transport will require about 200K to load; in other words, Open Transport base memory requirements are about 200K smaller.
- On a 680x0 system with VM off, classic AppleTalk and MacTCP require about 350-450K total system memory; Open Transport will require about 700-800K to load; in other words, Open Transport is about 350K larger.
- On a PowerPC system with VM off, classic AppleTalk and MacTCP require about 350-450K; Open Transport can require up to 1.2 MB to load, in other words, Open Transport is about 800K larger.

Question: Why does Apple recommend System 7.5.3 (System 7.5 Update 2.0)? What about System 7.5, 7.5.1, and 7.5.2?

Answer: Open Transport internal and external testing included work with all MacOS system software releases from System 7.1 forward, however, Apple's testing was most concentrated on System 7.1.x and System 7.5.3.

In moving from earlier versions of System 7.5 to System 7.5.3 a user's system will benefit from a number of updates and bug fixes that -- while not a part of Open Transport -- can improve system performance and reliability on the network for a variety of tasks, including printing and file transfers. The combination of the deeper test coverage and the important system updates that are a part of the system software update leads the Open Transport team to overall recommend System 7.5.3.

System 7.1.x users are encouraged to evaluate their needs and to consider updating to System 7.5.3.

Question: Was Open Transport 1.1 released in Japan for System 7.5.2? If so, why isn't this generally recommended?

Answer: Apple did not provide Kanji localized versions of Open Transport 1.0.8; thus, Kanji customers with PCI MacOS systems had not been able to benefit from the fixes released in OT 1.0.8. Because of the lead times required to localize

System 7.5.3 for Kanji, Apple elected to complete the localization and testing of Open Transport 1.1 independently of plans to localize System 7.5.3-J.

This decision resulted in delivery of Open Transport 1.1-J for System 7.5.2-J customers. This is a regional exception to Apple's overall recommendation to use Open Transport 1.1 in combination with System 7.5.3. When KanjiTalk 7.5.3 becomes available, Apple will recommend that all KanjiTalk 7.5.2 customers update to 7.5.3.

Question: Why didn't Open Transport 1.1 support Power Macintosh 5200/5300/6200/6300 desktop computers?

Answer: Very late in the final quality assurance cycle of Open Transport 1.1, the OT team was notified of a reproducible crash affecting some, but not all, customers with Power Macintosh or Performa 5200/5300/6200/6300 desktop computers.

Rather than delay the release of OT 1.1 and System Update 2.0 (System 7.5.3) further - which both brought many significant improvements to MacOS customers - the Performa, Open Transport, and System 7.5.3 teams working together decided that the best alternative was to disable OT 1.1 on these systems until the problem(s) were fully identified and an appropriate solution could be implemented and tested.

After additional research, this problem was isolated as a hardware issue. In response, Apple announced an Repair Extension program.

Open Transport 1.1.1 - which includes Apple Shared Library Manager 2.0.1 - (re-)enables Open Transport on these previously restricted MacOS systems. OT 1.1.1 now includes a hardware test that runs at boot time. If OT is called for on a system affected by the hardware problem, a new dialog alerts the user that classic networking is being substituted, and directs them to consult their Apple service provider for hardware service.

Question: What models are included in the Repair Extension program; that is, which models require Open Transport 1.1.1 to take advantage of Open Transport?

Answer: The models included are:

- Power Macintosh 5200/75 LC, 5300/100 LC
- Macintosh Performa 5200, 5215, 5300
- Macintosh Performa 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290, 6300

Question: What is the nature of the hardware issue that led to the original decision to disable Open Transport on these systems?

Answer: These systems might experience a system freeze upon start-up. The system freeze may be caused by known component problems on the logic board. The Repair Extension program includes replacing the logic board, as appropriate, to correct the system freezes.

Article Change History:

23 Oct 1996 - Changed distribution status.

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Tech Info Library Article Number:20558



Tech Info Library

Open Transport 1.1.1: TCP/IP Features FAQ (10/96)

Revised: 12/20/96
Security: Everyone

Open Transport 1.1.1: TCP/IP Features FAQ (10/96)

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Article Created: 16 October 1996
Article Reviewed/Updated: 23 October 1996

TOPIC -----

This article is the Open Transport 1.1.1, TCP/IP Features FAQ (frequently asked questions).

DISCUSSION -----

Question: What are some of the features of Open Transport/TCP?

Answer: With the broad cross-platform adoption of TCP/IP - and the tremendous visibility of the Internet - Apple has made a significant investment in bringing a workstation-class implementation of TCP/IP protocols to MacOS. As with Apple's earlier MacTCP, Open Transport/TCP is a full 32-bit stack.

Open Transport/TCP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies;
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol;
- IP multicast, for participation as an MBone client;
- simultaneous TCP connections limited only by installed memory and processor power, for increased functionality as a Internet or other TCP/IP network server;
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR);
- support for RFC 1123 and RFC 793 TCP Urgent Pointer semantics;

- support for developer access to raw IP services, as well as TCP and UDP;
- Ethernet version 2 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts;
- implicit and explicit domain name search paths, for increased control of domain name resolution; and,
- multiple IP routers with fail-over, for increased robustness in mission critical applications.

Question: How does the new support for Dynamic Path MTU discovery work?

Answer: Open Transport/TCP sets the "don't fragment" bit in the IP datagram header on transmission unless the packet size is larger than the MTU for the network. Intermediate routers are required by current RFCs to send back an "ICMP can't fragment" error when presented with a "don't fragment" packet that cannot be forwarded without fragmentation with that MTU size. In that event, Open Transport/TCP moves to the next smaller MTU size for that path and re-sends the packet, again with the "don't fragment" bit set. This process automatically results in using the largest supported MTU size for off-subnet traffic.

Question: How does the new Open Transport/TCP domain name resolver (DNR) work?

Answer: The Open Transport/TCP DNR implements name-to-address (A), address-to-name (PTR), system CPU and OS (HINFO), and mail exchange (MX) queries. It does not implement negative caching, but depends on a local full service resolver to provide this facility. The DNR will always request recursion, but will follow references if recursion is not available.

The DNR caches name-to-address and cname-to-name mappings; this feature cannot be disabled. However, conforming to DNS practice, a reply that includes a Time to Live (TTL) of zero will result in a mapping that is used only once - it will not be cached and not be reused. (TTL values for DNS entries are configured by the administrator of the DNS server.) Unlike the older MacTCP DNR implementation, which has a cache limited to a maximum of nine entries, the Open Transport DNR is dynamically-sized with no hard limit; it expands as needed, limited only by the available system RAM.

The DNR does not cache host info (OS and CPU type information) nor does it cache Mail Exchange/Preference information. It does not save name server references after a query is resolved; further queries begin anew at the configured name servers.

Fully qualified domains names or FQDNs (those ending with a "."), and provisional FQDNs (those containing at least one "." internally but not ending with ".") are submitted for resolution without manipulation. Otherwise the name is assumed to be a partially qualified domain (PQDN).

The first - but optional - step in PQDN resolution is the use of an Implicit

Search Path. To be used, Implicit Search must first be configured using the Advanced or Administrator view by entering values in the "Implicit Search Path: Starting Domain Name" and "Ending Domain Name" fields. When so configured the DNR will attempt to change the PQDN to a FQDN for resolution by concatenating the PQDN with domain names in the ancestor hierarchy delimited by the Starting and Ending Domain Name values (that is, searching for a PQDN of joe could result in a search for joe.hardware.support.apple.com, joe.support.apple.com and joe.apple.com). Implicit searching stops when the FQDN is resolved, or when the Ending Domain Name value has been tried and fails (that is, joe.com would not be tried, assuming an Ending Domain Name value of apple.com).

If the PQDN has not yet been resolved (including the case where an Implicit Search Path was not configured), explicit Additional Search Domains are searched. For each Search Domain configured, name server(s) are contacted in the order specified in the Name Servers field. If the name is resolved in the first search domain from which an answer is returned other Search Domains will not be checked. Note that at least one Search Domain (roughly equivalent to MacTCP's Default Domain) must be explicitly configured in order to resolve any PQDNs.

If an authoritative answer that the "name-does-not-exist" is returned, the DNR immediately begins the search in the next configured Search Domain. The search continues through the configured Search Domains.

The DNR has an overall time-out of 2 minutes, after which it will abandon the search.

Question: Does Open Transport/TCP support a local HOSTS file?

Answer: Open Transport/TCP supports one or more HOSTS file, stored in the System Preferences folder, that may be used to supplement and/or customize the domain name resolver's initial cache of information. The selected file is opened and parsed when Open Transport/TCP is initialized. As with MacTCP, the supported HOSTS file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Supported features include blank lines, comments (indicated by a semicolon), and data entry. Comments may begin at any location in a line; they may follow data entry on the same line. A comment extends from the semicolon to the end of the line. Data entry must follow the format:

```
<domain-name> <rr> [<comment>]
```

where <domain-name> is an absolute or Fully Qualified Domain Name, and where

```
<rr> = [<ttl>] [<class>] <type> <rdata> OR [<class>] [<ttl>] <type> <rdata>
```

The only <class> currently supported is IN (Internet Domain); <ttl>, time to live, indicates the record's configured lifetime in seconds; and <type> can be A (host address), CNAME (canonical name of an alias), or NS (name server). If <ttl> is not present the entry is assumed to have an infinite lifetime; this may also be indicated by specifying a value of minus-one (-1). \$INCLUDE and \$ORIGIN are not supported.

Open Transport/TCP is more stringent regarding the content and format of the HOSTS file than was MacTCP, which permitted violation of the FQDN requirement for . For instance, this format:

```
charlie          A          128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie          CNAME      myhost.mydomain.edu
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

If a HOSTS file is used, every effort should be made to keep it as small as possible and to only include entries that will be accessed frequently. This reduces the total memory footprint required to cache the DNS information and minimizes the need to maintain and update the HOSTS files as system information changes over time.

In order to activate a HOSTS file, the Advanced or Administrator mode must be used to select the desired file. The text file must already exist; it could have been created with any text editor or word processor.

The HOSTS file is tied to the selected configuration. An administrator might, for example, specify different HOSTS files for use when connecting via Ethernet to the campus LAN and when dialing-in from a remote location. Thus, each OT/TCP configuration must individually specify a HOSTS file - even if the same one is to be used with each configuration.

Question: What are some of the changes to the human interface for Open Transport/TCP?

Answer: The Open Transport/TCP configuration application represents a complete overhaul of the human interface from the MacTCP software it replaces. In addition to generic new features noted elsewhere (multiple saved configurations, recommended and required settings, on-line documentation, and so on), key new features include:

- direct entry of IP addresses and subnet mask in standard "dot notation";
- explicit selection of desired configuration method, now including Manual, RARP, BootP, MacIP, and DHCP;
- support for attachment to networks using Classless InterDomain Routing (CIDR);

- support for multiple entries in the router, name server, and explicit domain search lists; and
- improved support for large AppleTalk networks when using MacIP server/gateways.

Question: Does Open Transport/TCP support MacTCP "Server" addressing?

Answer: MacTCP Server mode addressing is a combination of the Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. When Server mode is selected, MacTCP will use BootP to attempt to acquire an IP address. If BootP fails to provide a valid address it then tries RARP. Whichever protocol is successful is stored as a preference, and is used first on next system startup. While this "fall-back" approach adds a degree of robustness from the users point of view, it also adds a degree of unpredictability from a network administrators point of view.

Based on customer feedback, Open Transport/TCP has been designed to allow a network administrator to explicitly specify the single method they prefer to use. Thus while both RARP and BootP are individually supported, Server mode does not appear as a choice in the Open Transport/TCP configuration utility.

Question: Does Open Transport/TCP support MacTCP "Dynamic" addressing?

Answer: No. MacTCP "Dynamic" mode addressing was based on an Apple-proprietary extension to TCP/IP protocols, which applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks. This made it very easy to set-up a MacOS only TCP/IP network, but could create additional work for a network administrator in more typical heterogeneous TCP/IP networks.

The Internet community (the IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Apple has adopted the industry standard DHCP and dropped support for the earlier Apple "Dynamic" mode addressing with Open Transport/TCP.

Question: What is MacIP?

Answer: MacIP, sometimes also referred to as KIP (Kinetics Internet Protocol), is a protocol specification developed as a method for carrying TCP/IP traffic on AppleTalk only networks - originally these would have been LocalTalk networks. MacIP is today frequently used in conjunction with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services. MacIP specifies encapsulation of TCP/IP datagrams in AppleTalk packets for transmission over such connections.

Use of MacIP requires a gateway. AppleTalk encapsulated IP packets are sent to the gateway using AppleTalk protocols (DDP). The gateway strips off the encapsulation and places the IP packet on the TCP/IP LAN. When packets are

destined for a MacIP end-node, the gateway provides the needed encapsulation services.

MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network, acting as a middleman between the MacIP end-node and the appropriate TCP/IP based hosts on the LAN or WAN.

Open Transport supports MacIP end-nodes. It is selected using the TCP/IP configuration utility by choosing "AppleTalk (MacIP)" in the "Connect via:" pop-up menu. The user (or network administrator) must also specify which zone contains the desired MacIP gateway. Once selected, TCP/IP will be encapsulated in AppleTalk and will be sent to the gateway via the NIC selected using the AppleTalk configuration utility.

Question: How is MacIP support improved with Open Transport/TCP?

Answer: Open Transport/TCP offers new features in the human interface for selecting the MacIP server, including:

- AppleTalk zones are now displayed in a scrolling list in a movable window. This display is easier to view compared to MacTCP's pop-up menu, especially when there are a large number of zones in the network.
- The Zone list window now supports selection using the mouse, the arrow keys, and/or "type-select", allowing the user to more quickly select a specific zone from the list.
- There is an option to display only those AppleTalk zones containing MacIP servers. When selected, this creates a background search task which when completed filters the zone list display to show only those zones containing active MacIP servers.
- There is a short cut "Current Zone" option which causes the Mac to check the current AppleTalk zone for a MacIP server without requiring the user to select a specific zone. This can be a time-saver for the user and a potential bandwidth-saver on the network, especially when there are mobile users that connect in different locations to a enterprise-wide network for MacIP services.

Article Change History:

23 Oct 1996 - Changed distribution status.

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Tech Info Library

At Ease 4.0: Auto-Mounting Server Volumes (10/96)

Revised: 10/17/96
Security: Everyone

At Ease 4.0: Auto-Mounting Server Volumes (10/96)

Article Created: 16 October 1996

TOPIC -----

Will At Ease 4.0 let server volumes mount automatically without having to enter a name and password? In my lab, when a user selects a Workgroup they are prompted to enter a name and password for each volume marked to automatically mount. This happens for the volume designated as the place to Save the Workgroup data and any other volumes selected to mount when the workgroup is opened.

DISCUSSION -----

Overview

Workgroup data volumes and other server volumes can automatically be mounted by At Ease 4.0. The At Ease Administrator adds the volumes to a list of "approved volumes". This is done by selecting "Access to Volumes" from the Security Menu in the At Ease Administration program. When a volume is added to the list the volume setting "At Ease Users will log in to this volume using:" defaults to "Users must enter their own name and password"

Before a volume will auto-mount (mount without prompting for a user name and password) the volume setting needs to be changed to use a predefined name and password.

Steps to configure Server Volumes

The steps to add server volumes to the list and change the volume settings are as follows:

- 1) From the At Ease Administration workstation, mount the server volume on the desktop. If it is to be a workgroup data server you must mount it using a name and password that has write privileges.

- 2) From the At Ease Administration program Security menu select "Access to Volumes".

3) Select the "Add Volume" button. This takes you to the Add Volume screen. Select the server volume and press the add button.

4) In the window of Approved Server Volumes select the newly added volume and click the Volume settings button.

5) In the settings window click the radio button stating At Ease users will log into this volume using "The user name and password for" below this options it reflects the name used to mount the volume on the desktop. This is not the default option for volumes added to the approved volumes list that is why the system forces the users to enter a name and password every time. The default is enter "Their own name and password"

With the volumes settings changed any volume designated as the workgroup location will auto-mount and not prompt the user to log in. The same is true for any other volumes marked to mount when a workgroup loads. Volumes are designated to mount via the Workgroup Login panel.

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Tech Info Library Article Number:20560



Tech Info Library

Macintosh 5200/5300/6200/6300: Using Open Transport (11/96)

Revised: 11/12/96
Security: Everyone

Macintosh 5200/5300/6200/6300: Using Open Transport (11/96)

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Article Created: 17 October 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

This article contains the questions and answers about using Open Transport on Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers.

Questions Answered in this Article

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- 1) Why didn't Open Transport 1.1 support Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers?
- 2) What was the cause of Open Transport 1.1 not working on the Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers?
- 3) Does Open Transport 1.1.1 work on all Power Macintosh 5200, 5300, 6200, and 6300 series computers?
- 4) What specific computer models are included in the Repair Extension Program and consequently require Open Transport 1.1.1 to take advantage of Open Transport?

DISCUSSION -----

1) Question: Why didn't Open Transport 1.1 support Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers?

Answer: Very late in the final quality assurance cycle of Open Transport 1.1, the engineering team was notified of a reproducible crash affecting some, but not all, customers with Power Macintosh or Performa 5200, 5300, 6200, or 6300 series computers.

Rather than further delay the release of Open Transport 1.1 and System Update 2.0 (System 7.5.3)--which both brought many significant improvements to Mac OS

customers--the Performa, Open Transport, and System 7.5.3 teams worked together to decide that the best alternative was to disable Open Transport 1.1 on these systems until the cause was fully identified and an appropriate solution could be implemented and tested.

2) Question: What was the cause of Open Transport 1.1 not working on the Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers?

Answer: The cause was isolated as a hardware issue caused by specific, known component issues that have been identified by Apple. Symptoms of these issues include frequent system freezes, which can be traced to these hardware issues. Apple initiated the Repair Extension Program to resolve these issues that some customers were experiencing.

3) Question: Does Open Transport 1.1.1 work on all Power Macintosh 5200, 5300, 6200, and 6300 series computers?

Answer: Yes, Open Transport (OT) 1.1.1 can be used on the Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers. However, when you install OT 1.1.1 on one of these computers, a dialog box may appear indicating that a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed until the Cache/ROM DIMM is replaced. The required repairs are covered under the Apple Repair Extension Program. Contact an Apple-authorized service provider to have your computer repaired. (Your computer will continue to run classic networking until it is repaired.)

4) Question: What specific computer models are included in the Repair Extension Program and consequently require Open Transport 1.1.1 to take advantage of Open Transport?

Answer: The models included are:

- * Power Macintosh 5200/75 LC, 5300/100 LC
- * Macintosh Performa 5200, 5215, 5300
- * Macintosh Performa 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290, 6300

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Article Change History:

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- 23 Oct 1996 - Changed distribution status.

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Tech Info Library

At Ease 4.0: Internet Prefs Not Copied Back to Server (10/96)

Revised: 10/17/96
Security: Everyone

At Ease 4.0: Internet Prefs Not Copied Back to Server (10/96)

=====

Article Created: 17 October 1996

TOPIC -----

This article describes an Internet preferences issue copying back to an At Ease 4.0 Workgroup server.

DISCUSSION -----

If the User Setting "Copy Internet User Preferences" is selected, the user preferences are copied from the server to the workstation when the user signs into any workgroup. When the user quits or restarts, the preferences are copied back to the server. However, if the user is logged into At Ease under a Finder workgroup, the Internet preferences are not copied back to the server.

The workaround is to switch to a Panels or Restricted Finder workgroup, with the At Ease menu, before quitting or restarting. The internet preferences will then be copied back to the server.

This issue will be addressed in a future release of At Ease. There is no known time frame for future At Ease releases.

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Tech Info Library Article Number:20565



Tech Info Library

System 7.5.5 Update: For Non-US Systems Read Me (10/96)

Revised: 10/17/96
Security: Everyone

System 7.5.5 Update: For Non-US Systems Read Me (10/96)

=====

Article Created: 17 October 1996

TOPIC -----

This article is the System 7.5.5 Update, For Non-US Systems ReadMe file.

DISCUSSION -----

Important information about System 7.5.5 Update for customers using non-U.S. English systems

On September 19, 1996, Apple Computer released System 7.5.5 Update for U.S. English systems. If your computer does not have the U.S. English version of System 7.5.3, you should not attempt to download and install the System 7.5.5 Update files located in this directory. As stated in the press update and Q&A document, Apple expects localized versions of System 7.5.5 Update to be available in many countries within 90 days after the U.S. introduction. Please contact your local Apple support center for local availability.

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Tech Info Library Article Number:20566



Tech Info Library

System 7.5.5 Update Tips Read Me (10/96)

Revised: 10/17/96
Security: Everyone

System 7.5.5 Update Tips Read Me (10/96)

Article Created: 17 October 1996

TOPIC -----

This article is the System 7.5.5 Update Tips ReadMe file.

DISCUSSION -----

System 7.5.5 Update: Tips for Installation

This document gives you late-breaking news about installing System 7.5.5 Update. Follow the instructions here to make installing System 7.5.5 Update as smooth as possible.

Installation when using Energy Saver version 1.2 and earlier. If you have Energy Saver version 1.2 or earlier on your system, you may experience problems installing System 7.5.5 Update. To determine the version of your Energy Saver, follow these steps:

- 1) Make sure you are in the Finder by choosing Finder from the Application menu at the top right of your screen.
- 2) Open your hard disk.
- 3) Open the System Folder.
- 4) Open the Control Panels folder.
- 5) Look for the Energy Saver control panel. If you don't see it, close the Control Panels window, open the Control Panels (disabled) folder, and look for the Energy Saver control panel. If you don't see the control panel in this folder either, you can install System 7.5.5 Update now.
- 6) Click the Energy Saver icon once to select it and choose Get Info from the File menu.
- 7) Look at the section called Version in the middle of the Info window.

If the version number is 2.0 or higher, you can install System 7.5.5 Update now. If the version number is 1.2 or lower, follow these steps:

- 1) Drag the Energy Saver control panel out of your Control Panels folder

to your desktop.

- 2) Install System 7.5.5 Update.
- 3) Restart your computer.
- 4) Drag the Energy Saver control panel back to your Control Panels folder.
- 5) Restart your computer.

System 7.5.5 Update does not install QuickTime 2.5. System 7.5.5 Update is ready to work with QuickTime 2.5. However, the update does not install QuickTime 2.5. You must install QuickTime 2.5 separately. You can download QuickTime 2.5 software from Apple Computer's web site at <http://www.quicktime.apple.com>.

System 7.5.5 Update should not be installed on Apple Workgroup Servers. System 7.5.5 Update is not currently approved for installation on Apple Workgroup Servers.

System 7.5.5 Update should only be installed on U.S. English systems. System 7.5.5 Update will incorrectly install over systems based on languages other than U.S. English. You should not attempt to do this, as it may disable your system. Apple expects localized versions of System 7.5.5 Update to be available in many countries within 90 days after the U.S. introduction. Please contact your local Apple support center for local availability.

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Tech Info Library Article Number:20567



Tech Info Library

At Ease: Update History & How to Get Latest Version (10/96)

Revised: 10/18/96
Security: Everyone

At Ease: Update History & How to Get Latest Version (10/96)

=====

Article Created: 17 October 1996

TOPIC -----

With all the recent At Ease updates made available, which should I apply to my At Ease environment?

DISCUSSION -----

At Ease 3.0 was released in summer of 1995 as both a workgroups and basic product. A few bugs were reported by schools using the 3.0 workgroups product, and 3.0.1 was released late in 1995 to both fix those bugs and to increase performance. There was no concurrent release of the basic product to version 3.0.1 since the majority and more serious of the problems were network or workgroups related.

In early 1996, a security bug that existed in workgroups version 3.0 and 3.0.1 was found to cause a problem on certain IDE disk drives that required an immediate fix. Additionally, an incompatibility with Open Transport (shipped in System 7.5.3) caused problems with At Ease 3.0.x on some newer computers. Version 3.0.2 workgroups was created to fix these problems.

At Ease 3.0.3 is primarily a recompile of the current At Ease workgroups 3.0.2 sources, along with a small change to the basic admin application, At Ease Setup.

The At Ease 3 CDROM Prefs Patch fixes a problem discovered shortly after version 3.0.3 was released.

The following table summarizes how to get to the best update level.

Begin_Table

What you have now	What to install to get the fixes for that version
-----	-----

At Ease (Basic) 2.0.x	At Ease Update 1.0
At Ease (WG) 2.0.x	At Ease 2.0.3 Update + At Ease Update 1.0
At Ease (Basic) 3.0	At Ease 3.0.3 Updater + At Ease 3 CDROM Prefs Patch
-- or --	At Ease Update 1.0 + At Ease 3 CDROM Prefs Patch
At Ease (WG) 3.0.x	At Ease 3.0.3 Updater + At Ease 3 CDROM Prefs Patch
At Ease 4.0	No updates are currently available for At Ease 4.0
End_Table	

The At Ease Update software mentioned above can be found on Apple Computer's software update locations. These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20568



Tech Info Library

System 7.5.5: Won't Work on Some Mac OS Compatibles (10/96)

Revised: 10/18/96
Security: Everyone

System 7.5.5: Won't Work on Some Mac OS Compatibles (10/96)

=====

Article Created: 18 October 1996

TOPIC -----

I have read that System 7.5.5 will not work on some Mac OS compatible computers.
Is this correct?

DISCUSSION -----

This is correct. On some Mac OS compatible computers, System 7.5.5 will not work. You should use the version of the Mac OS installed on your Mac OS Compatible computer, or contact the manufacturer of your computer to find out what version of the Mac OS you can use.

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Tech Info Library Article Number:20569



Tech Info Library

StyleWriter 1200: Use Latest Driver to Improve Speed (10/96)

Revised: 10/18/96
Security: Everyone

StyleWriter 1200: Use Latest Driver to Improve Speed (10/96)

=====

Article Created: 18 October 1996

TOPIC -----

I have a StyleWriter 1200 and a StyleWriter II printer. The StyleWriter 1200 takes longer to print the same document than the StyleWriter II does.

DISCUSSION -----

You need to use the StyleWriter 1500 printer driver with the StyleWriter 1200 printer. When you upgrade to the StyleWriter 1500 software, you will notice an increase in speed using the StyleWriter 1200 printer.

All customers who own a StyleWriter 1200 should upgrade to the StyleWriter 1500 printer software v2.2 or higher, since it is the most recent software for the StyleWriter 1200 printer.

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Tech Info Library Article Number:20570



Tech Info Library

Read Me for International Keyboards (10/96)

Revised: 10/21/96
Security: Everyone

Read Me for International Keyboards (10/96)

Article Created: 21 October 1996

TOPIC -----

This article is the ReadMe for International Keyboards file.

DISCUSSION -----

IMPORTANT KEYBOARD INFORMATION

This document provides late-breaking information that could not be included in the PC Compatibility Card User's Manual or in the DOS Compatibility Software Update User's Manual.

INSTALLING APPLE KEYBOARD FILES ON WINDOWS 3.1

1. Start Windows.
2. Insert the "International keyboard files" floppy in the drive.
3. Open the International control panel.
4. Select the desired language in the Keyboard layout area; then click OK.
5. In the Install Driver dialog box, click Browse.
6. Select the appropriate drive containing the keyboard file of the desired language. (Keyboard files have .dll file name extensions). The path is <floppy drive>\KEYBOARD\WIN31\<language>\<filename>.dll
7. Select the desired file, then close the control panel and restart Windows.

INSTALLING APPLE KEYBOARD FILES ON WINDOWS 95

1. Start Windows 95 and click the Start button.
2. Verify the keyboard file (file names have .kbd extension) for the desired language does not exist the System directory (under the Windows directory). Otherwise, delete it by dragging the file in the Recycle Bin and deleting.

3. Click on Settings; then select Control Panel.
4. Double click on the Keyboard icon.
5. Click on the Language tab.
6. If the language you desire to install already appears in the language list, select it and click on the Remove button.
7. Click on the Add button.
8. In the list that appears, select the desired language and click OK.
9. Click the name of the language whose keyboard layout you want to use; then click Set as Default.
10. On the bottom of the window, click on the Apply button.
11. At this point, a small dialog box for locating the keyboard file will appear if Windows is searching for the keyboard file for the first time.
12. Insert the "International keyboard files" floppy in the drive.
13. Click on the Browse button; then select the floppy drive.
14. In the Folders window, locate the folder containing the desired file, then click OK. The path is: <floppy drive>\KEYBOARD\WIN95\<language>
15. Make sure to switch the language in the keyboard bar on bottom right hand (this bar is where the current time appears).
16. Restart any applications that were running during the keyboard installation to active recently selected keyboard file.

ADDITIONAL INFORMATION

The keyboard drivers included on the "International keyboard files" floppy correspond to the keyboard layout of the Apple Design Keyboard and the Apple ISO Extended Keyboard II. Some of the drivers are updates to the ones included on the PC Utility CD; users should install keyboard files from the floppy rather than from the CD.

Keyboard drivers are included for Window 3.1 and Windows 95 in support the following layouts: Belgian, British, Danish, Dutch, Finnish, French-Canadian, French, German, Italian, Norwegian, Spanish, Swedish, Swiss-French

In some drivers, the numeric separator in the numeric keypad does not match the separator of the Apple Design Keyboard and the Apple ISO Extended Keyboard II. If that is the case with your desired keyboard driver, you should enter the separator from the main portion of the keyboard.

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Tech Info Library Article Number:20572



Tech Info Library

Monitors & Sound CP: Sound Out Doesn't Adjust RCA Volume (10/96)

Revised: 10/21/96
Security: Everyone

Monitors & Sound CP: Sound Out Doesn't Adjust RCA Volume (10/96)

=====

Article Created: 21 October 1996

TOPIC -----

On my Power Macintosh 7500 computer I am trying to adjust the volume of the RCA Sound Out connectors. I have tried to adjust the volume using the Sound Out Level and Computer Speaker Volume in the Monitors & Sound control panel. But neither of these adjust the volume of the RCA Sound Out connectors.

DISCUSSION -----

What you are describing is normal for the Sound Out connector. The RCA Sound out plugs in the back of several Power Macintosh models including the Power Macintosh 7500, 7600 and 8500 give a continuous "line-out" level used in most stereo equipment. There is no way to adjust the sound level of the RCA sound out level. You can mute the sound of the RCA sound out connectors by selecting Mute in the Computer Speaker Volume level in the Monitors & Sound control panel.

The purpose of the Sound Out Level volume control in the Monitors & Sound Control Panel is to adjust the volume of the headphone connector. With the two controls (Sound Out Level and Computer Speaker Volume), you can adjust the Internal computer speaker and the headphone connector independently of each other.

NOTE:

Monitors & Sound control panel automatically mutes and un-mutes the Computer Speaker Volume when you plug a headphone plug into the headphone connector. You can go into the Control Panel and un-mute the control panel manually, but it defaults to mute when the computer is restarted.

This article appeared in the 21 October 1996 issue of Information Alley.

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Tech Info Library Article Number:20573



Tech Info Library

Power Macintosh: Memory FAQ (10/96)

Revised: 10/22/96
Security: Everyone

Power Macintosh: Memory FAQ (10/96)

Article Created: 22 October 1996

TOPIC -----

This article contains the answers to frequently asked questions about memory expansion in Power Macintosh computers.

Note: The majority of this information is taken directly from the Developer Technical Support TECHNOTE: SIMMs to DIMMs: Making Sense Out of Memory Expansion for the Power Macintosh.

Questions Answered in this FAQ

1) Why has Apple transitioned memory expansion from 72-pin SIMMs to 168-pin DIMMs for Power Macintosh computers?

2) Why do SIMMs need to be installed in complementary pairs, when DIMMs can be added on a per module basis?

3) How does the PowerPC address memory?

4) What is memory interleaving and what advantage does it provide?

5) How is memory interleaving enabled?

6) What speed SIMMs and DIMMs are required for Power Macintosh computers?

7) Can faster speed memory modules be used in Power Macintosh computers and will they increase system performance, for example, 60 nsec instead of 70 nsec modules for a performance increase of 10 - 15 percent?

8) Can different speed memory modules be intermixed, for example, 60 and 70 nsec modules in a Power Macintosh computer that is specified at 70 nsec?

9) What does refresh rate or count refer to (such as, 1K, 2K, or 4K)?

- 10) How do Power Macintosh computers provide continuous refreshing?
- 11) How are different sized SIMMs and DIMMs -- 16 Mbytes, 32 Mbytes, etc. -- designed with different types of DRAM devices, such as 4M x 4, 2M x 8, and 1M x 16 parts?
- 12) Do Macintosh computers support composite memory modules?
- 13) Can memory modules with different refresh rates or counts be intermixed?
- 14) What is EDO memory and do Macintosh computers support it?
- 15) What is parity memory and do Power Macintosh computers support it?
- 16) What is ECC memory and do Macintosh computers support it?

DISCUSSION -----

1) Question: Why has Apple transitioned memory expansion from 72-pin SIMMs to 168-pin DIMMs for Power Macintosh computers?

Answer: New Macintosh computers incorporating DIMMs provide a number of key advantages for an ever-increasing RAM footprint and memory-hungry applications (such as in multimedia development):

- * a wider 64 bit data path
- * higher memory capacity
- * greater flexibility because systems do not require DIMMs to be installed in complementary pairs.

2) Question: Why do SIMMs need to be installed in complementary pairs, when DIMMs can be added on a per module basis?

Answer: The reason is because of differences in the "width" of the data bus. On SIMMs, the data bus is 32 bits wide while the data bus on DIMMs is 64 bits wide.

To span the PowerPC 64 bit data bus, SIMMs need to be installed in complimentary pairs . DIMMs, with their 64 bit data bus, can be installed individually in second generation Power Macintosh computers.

The only exception to this are some entry-level Power Macintosh computers, such as the Power Macintosh 5200/75 LC, which incorporate a PowerPC 603 processor configured with a 32 bit bus. In such computers, SIMMs are used for memory expansion and not installed in identical pairs.

3) Question: How does the PowerPC address memory?

Answer: PowerPC microprocessors are 32 bit processors that have 4 Gbytes of address space. This means that the processor instructions are encoded in 32 bits, and that they can address or access 4 Gbytes of data. Although the PowerPC has 4G of address space, only a portion of the 4G is allocated for main memory

(DRAM memory). For example, the total RAM expansion on entry-level Macs can be as much as 136 Mbytes, while RAM expansion on Power Mac 9500 can be as much as 1.5G. The remaining portion of the address space is allocated for system ROM, PCI cards, system control, etc.

Data is transferred between the PowerPC and main memory via the 64 bit data bus by memory reads or memory writes.

There are two types of memory transactions: single- and four-beat transfers. A single-beat memory transaction reads or writes between one to 8 bytes of data. (Equating 8 bytes to 64 bits and noting that the data bus is 64 bits wide, the PowerPC can read or write eight bytes in a single memory operation.) A four-beat memory transaction reads or writes a cache block of 32 bytes to or from memory. Each of the four beats encompasses 8 bytes.

What's important to understand is that the memory bus is 64 bits wide and up to 8 bytes can be transferred in a single memory operation.

4) Question: What is memory interleaving and what advantage does it provide?

Answer: Even though the system data bus is 64 bits wide, the memory controller in Power Macintosh 7500, 7600, 8500, and 9500 computers can support 128 bit data read and write operations by interleaving data between corresponding DIMMS.

Memory interleaving provides higher bandwidth (MBytes per second) between the PowerPC microprocessor and main memory. It also provides a significant performance boost, increasing the execution speed of memory-intensive programs. How much faster depends on the program's software architecture and whether an L2 cache is present.

5) Question: How is memory interleaving enabled?

Memory interleaving is a function of the memory controller used in Power Macintosh 7500, 7600, 8500, and 9500 computers. Memory interleaving is enabled by the power-up software when it detects two DIMMs in corresponding expansion slots (such as, A1 and B1, A2 and B2, and so on) that are the same density, have the same memory bank configuration, and have the same DRAM addressing modes.

6) Question: What speed SIMMs and DIMMs are required for Power Macintosh computers?

Answer: The access time of DRAMs used to expand memory on most Power Macintosh computers are 80 nsec, 70 nsec, and faster, as we move into the future. Always be sure to check memory expansion specifications for your particular computer before making a purchase.

7) Question: Can faster speed memory modules be used in Power Macintosh computers and will they increase system performance, for example, 60 nsec instead of 70 nsec modules for a performance increase of 10 - 15 percent?

Answer: Faster speed memory modules will most likely work fine in Power Macintosh computers, for example, 60 nsec instead of 70 nsec modules. This will not increase CPU performance, however. The PowerPC processor will not access memory any faster with faster memory module speed, since Power Macintosh computers do not use memory module speed sense lines.

Note: Apple recommends that for memory expansion that you stay with the speed specified for the computer. Although faster devices most likely will work, keep in mind that these are untested configurations.

8) Question: Can different speed memory modules be intermixed, for example, 60 and 70 nsec modules in a Power Macintosh computer that is specified at 70 nsec?

Answer: As long as memory modules speeds are equal to or less than the Power Macintosh-specified memory speed, installing different speed modules should have no impact on the Power Macintosh computer's functionality.

9) Question: What does refresh rate or count refer to (such as, 1K, 2K, or 4K)?

Answer: The term "4K refresh," for example, refers to the number of refresh cycles required to refresh all sections of the memory array and is determined by the number of row addresses. (12 addresses will address 4096, or 4K, locations. Similarly, 11 addresses will address 2048, or 2K, locations.)

Data stored in DRAM devices is volatile. To maintain data integrity, DRAM requires a power source and continuous refreshing.

DRAMs are specified at different refresh rates that may or may not be compatible with a particular PC model. Macintosh computers are compatible with widely available DRAM devices.

For example, below are three common 16 MBit DRAM devices used to construct SIMMs or DIMMs.

Begin_Table

Organization	Refresh - Addressing	Refresh - Addressing
=====	=====	=====
4M x 4	4K - 12/10	2K - 11/11
2M x 8	4K - 12/9	2K - 11/10
1M x16	4K - 12/8	1K - 10/10

End_Table

This information demonstrates that 4M x 4 devices come in 4K and 2K refresh rates, with 12/10 and 11/11 addressing, respectively. Addressing notation refers to a matrix array organization where 4K refresh devices (12/10) have 12 row addresses and 10 column addresses. Likewise, 2K refresh devices (11/11) have 11 row addresses and 11 column addresses. Both modes (12/10 & 11/11) have 22 address lines (number of column plus row lines) which is required for an address

space of 4,194,304 (or 4M) locations, each of which contains a 4-bit word.

Note: 4M x 4 refers to a DRAM device with an address space of 4M locations, each containing a data word 4 bits wide. (4M x 4 equals 16 Mbits; DRAM devices are usually referred to by size [total number of bits].)

10) Question: How do Power Macintosh computers provide continuous refreshing?

Answer: The power source and refreshing are provided as long as the computer is powered on. The Memory Controller in Apple Macintosh and Power Macintosh computers generate a CAS (Columb Address Strobe) before RAS (Row Address Strobe) refresh cycle every 15.6 msec. DRAM devices contain an address refresh counter which is triggered by a CAS before RAS memory cycle.

A 16 MBit (11/11) device with an 11 row address - referred to as a 2K refresh part - requires all row address combinations (2048) to be accessed every 32 msec. A 4K refresh device (12/10) requires 64 msec to refresh all row addresses. DRAM row addresses are refreshed by the Refresh Address Counter, which is triggered by a CAS before RAS refresh cycle.

The importance, therefore, lies less in whether or not a Macintosh CPU supports 1K, 2K, and/or 4K refresh DRAM parts than whether the Macintosh Memory Controller and DRAM devices have compatible addressing schemes, and whether the DRAM devices are compatible with CAS before RAS refresh cycles every 15.6 use.

11) Question: How are different sized SIMMs and DIMMs -- 16 Mbytes, 32 Mbytes, etc. -- designed with different types of DRAM devices, such as 4M x 4, 2M x 8, and 1M x 16 parts?

Answer: Consider three different DIMM modules designed using 4M x 4, 2M x 8, and 1M x 16 devices: DIMM #1, DIMM #2, and DIMM #3.

Remembering that DIMMs and SIMMs have a 64 bit and 32 bit wide data bus, respectively, the following examples can be applied to SIMM modules by using half the number of devices to span 32 bits.

DIMM #1
=====

This is a 32 Mbyte DIMM using 4M x 4 devices in a single bank design. SIMM and DIMM memory modules accommodate one or two memory banks. This DIMM has the following characteristics:

- * a single bank implementation;
- * the memory is laid out to span 64 bits, so 4M x 4 devices require 16 parts per bank;
- * the addressing is common across all DRAM on the module and is multiplexed via RAS and CAS singles, as noted by Control;
- * the module has a density of 4M x 64 (address space of 4M by 64 bits wide), or 32 Mbytes.

Note: Macintosh computers will size and determine the addressing mode (e.g., 4M x 4, 2M x 8, etc.) of memory modules at system startup.

DIMM #2

=====

This is a 16 Mbyte DIMM using 2M x 8 devices in a single bank. You may be asking yourself: if both 4M x 4 and 2M x 8 parts are considered 16 Mbit devices and both examples are single bank designs, why is DIMM #1's design 32 Mbytes and DIMM #2's design 16 Mbytes?

Since the data path of a 2M x 8 device is 8 bits wide, rather than 4 bits wide -- as for 4M x 4 parts -- it requires half the number of devices to span across 64 bits.

Note: DIMM #2 uses 8 devices and DIMM #1 uses 16. DIMM #2 thus has a module density of 2M x 64, or 16, Mbytes.

DIMM #3

=====

This is a 16 Mbyte DIMM using 1M x 16 devices in a two bank design. What's important to note for this particular design is the following:

- * There are two separate memory banks;
- * each bank contains four devices - spanning 64 bits
- * both banks have common address and data buses

In this example, there are two 1M x 64 banks, resulting in a module density of 2M x 64 or 16 Mbytes.

12) Question: Do Macintosh computers support composite memory modules?

Answer: No. Apple defines a composite memory module as one that loads the data bus with more than one DRAM input load per bank. Both SIMM and DIMM can accommodate a maximum of two memory banks per module.

13) Can memory modules with different refresh rates or counts be intermixed?

For first generation Power Macintosh computers that require SIMMs to be installed in pairs, the two SIMMs within a pair need to be identical. Other pairs can have different supported refresh rates.

DIMMs with different supported refresh rates can be intermixed. But if it's intended to enable memory interleaving, DIMMs with different refresh rates may or may not have DRAM devices with same addressing modes.

Note: DRAM devices require the same addressing mode to enable interleaving.

14) Question: What is EDO memory and do Macintosh computers support it?

EDO (Extended Data Out -- sometimes called hyperpage) memory are DRAM devices that improve access timing by extending its data out timing while allowing the

memory controller to address the next column address. Although EDO devices will improve timing efficiency to main memory by approximately 10%, it does not necessarily mean programs will execute 10% faster. Because much of the time the CPU fetches instructions and data from cached memory, for example, L1 cache within the PowerPC microprocessor and or L2 cache on the mother board.

EDO DRAM is a superset of conventional (also called Fast Page Mode) DRAM. This means that an EDO DRAM can be used in place of a Fast Page Mode DRAM, although unless the memory controller is designed to utilize the faster EDO timing, the memory performance will be the same as Fast Page Mode.

Power Macintosh computers do not yet support the extended data out timing that EDO DRAM devices can provide. In the future, Power Macintosh computers will support the extended data out timing, taking full advantage of EDO DRAM devices.

Macintosh Computers that CAN use EDO memory

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* Although you will not derive any performance benefits by using EDO DIMMs, you can use them in Power Macintosh 5400, 7500, 7600, 8500, and 9500 and Macintosh Performa 6400 series computers.

Macintosh Computers that CANNOT use EDO memory

=====

* You cannot use EDO DIMMs in the Power Macintosh 7200 computer. Using EDO memory in the Power Macintosh 7200 computer can cause damage to the logic board and to the DIMMs. Because of this, Apple does not support using EDO memory in the Power Macintosh 7200 computer. Any damage incurred from using EDO memory in the Power Macintosh 7200 computer may not be covered under Apple Computer's limited hardware warranty.

* Also, the Power Macintosh 6100, 7100, and 8100 series computer do not support EDO memory.

15) Question: What is parity memory and do Power Macintosh computers support it?

Answer: If a computer is designed for parity RAM, the parity bit allows the memory controller to check for DRAM errors in the form of a parity error. A parity error cannot correct system errors, but the system can be designed to alert the user that a memory error has occurred.

Apple's newly-introduced Network Server 500 and 700 products are the only computers that support parity memory; all other Power Macintosh Desktop, Tower, and PowerBook computers do not. Parity memory modules add one parity bit to each byte. Thus, a 64 bit DIMM -- eight bytes -- expands from 64 bits to 72 bits wide.

16) Question: What is ECC memory and do Macintosh computers support it?

Answer: Macintosh computers do not support ECC memory. ECC (Error Correction

Coding) memory has additional check bits for each byte. This entails the memory controller calculating and writing error control check bits on each memory write operation, and recalculating and comparing the check bits on memory read operations, and then if necessary correcting the bad bits. As opposed to parity, this can automatically correct single bit RAM errors.

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Tech Info Library Article Number:20575



Tech Info Library

Power Macintosh: Memory FAQ (3/97)

Revised: 3/24/97
Security: Everyone

Power Macintosh: Memory FAQ (3/97)

Article Created: 22 October 1996
Article Reviewed/Updated: 24 March 1997

TOPIC -----

This article contains the answers to frequently asked questions about memory expansion in Power Macintosh computers.

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Questions Answered in this FAQ

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- 1) Why has Apple transitioned memory expansion from 72-pin SIMMs to 168-pin DIMMs for Power Macintosh computers?
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 - 3) How does the PowerPC address memory?
 - 4) What is memory interleaving and what advantage does it provide?
 - 5) How is memory interleaving enabled?
 - 6) What speed SIMMs and DIMMs are required for Power Macintosh computers?
 - 7) Can faster speed memory modules be used in Power Macintosh computers and will they increase system performance, for example, 60 nsec instead of 70 nsec modules for a performance increase of 10 - 15 percent?
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- 14) What is EDO memory and do Macintosh computers support it?
- 15) What is parity memory and do Power Macintosh computers support it?
- 16) What is ECC memory and do Macintosh computers support it?
- 17) My manual suggests that when upgrading my cache, I use Apple-branded cache. I would like to purchase a 512k cache module, but it does not appear that Apple sells this size. What size should I purchase?

DISCUSSION -----

1) Question: Why has Apple transitioned memory expansion from 72-pin SIMMs to 168-pin DIMMs for Power Macintosh computers?

Answer: New Macintosh computers incorporating DIMMs provide a number of key advantages for an ever-increasing RAM footprint and memory-hungry applications (such as in multimedia development):

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- * higher memory capacity
- * greater flexibility because systems do not require DIMMs to be installed in complementary pairs.

2) Question: Why do SIMMs need to be installed in complementary pairs, when DIMMs can be added on a per module basis?

Answer: The reason is because of differences in the "width" of the data bus. On SIMMs, the data bus is 32 bits wide while the data bus on DIMMs is 64 bits wide.

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The only exception to this are some entry-level Power Macintosh computers, such as the Power Macintosh 5200/75 LC, which incorporate a PowerPC 603 processor configured with a 32 bit bus. In such computers, SIMMs are used for memory expansion and not installed in identical pairs.

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There are two types of memory transactions: single- and four-beat transfers. A single-beat memory transaction reads or writes between one to 8 bytes of data. (Equating 8 bytes to 64 bits and noting that the data bus is 64 bits wide, the PowerPC can read or write eight bytes in a single memory operation.) A four-beat memory transaction reads or writes a cache block of 32 bytes to or from memory. Each of the four beats encompasses 8 bytes.

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For example, below are three common 16 MBit DRAM devices used to construct SIMMs or DIMMs.

Begin_Table

Organization	Refresh - Addressing	Refresh - Addressing
=====	=====	=====
4M x 4	4K - 12/10	2K - 11/11
2M x 8	4K - 12/9	2K - 11/10
1M x16	4K - 12/8	1K - 10/10

End_Table

This information demonstrates that 4M x 4 devices come in 4K and 2K refresh rates, with 12/10 and 11/11 addressing, respectively. Addressing notation refers to a matrix array organization where 4K refresh devices (12/10) have 12 row addresses and 10 column addresses. Likewise, 2K refresh devices (11/11) have 11 row addresses and 11 column addresses. Both modes (12/10 & 11/11) have 22 address lines (number of column plus row lines) which is required for an address space of 4,194,304 (or 4M) locations, each of which contains a 4-bit word.

Note: 4M x 4 refers to a DRAM device with an address space of 4M locations, each containing a data word 4 bits wide. (4M x 4 equals 16 Mbits; DRAM devices are usually referred to by size [total number of bits].)

10) Question: How do Power Macintosh computers provide continuous refreshing?

Answer: The power source and refreshing are provided as long as the computer is powered on. The Memory Controller in Apple Macintosh and Power Macintosh computers generate a CAS (Columb Address Strobe) before RAS (Row Address Strobe) refresh cycle every 15.6 msec. DRAM devices contain an address refresh counter which is triggered by a CAS before RAS memory cycle.

A 16 MBit (11/11) device with an 11 row address - referred to as a 2K refresh part - requires all row address combinations (2048) to be accessed every 32 msec. A 4K refresh device (12/10) requires 64 msec to refresh all row addresses. DRAM row addresses are refreshed by the Refresh Address Counter, which is triggered by a CAS before RAS refresh cycle.

The importance, therefore, lies less in whether or not a Macintosh CPU supports 1K, 2K, and/or 4K refresh DRAM parts than whether the Macintosh Memory Controller and DRAM devices have compatible addressing schemes, and whether the DRAM devices are compatible with CAS before RAS refresh cycles every 15.6 use.

11) Question: How are different sized SIMMs and DIMMs -- 16 Mbytes, 32 Mbytes, etc. -- designed with different types of DRAM devices, such as 4M x 4, 2M x 8, and 1M x 16 parts?

Answer: Consider three different DIMM modules designed using 4M x 4, 2M x 8, and 1M x 16 devices: DIMM #1, DIMM #2, and DIMM #3.

Remembering that DIMMs and SIMMs have a 64 bit and 32 bit wide data bus, respectively, the following examples can be applied to SIMM modules by using half the number of devices to span 32 bits.

DIMM #1

=====

This is a 32 Mbyte DIMM using 4M x 4 devices in a single bank design. SIMM and DIMM memory modules accommodate one or two memory banks. This DIMM has the following characteristics:

- * a single bank implementation;
- * the memory is laid out to span 64 bits, so 4M x 4 devices require 16 parts per bank;

..TIL20575-Power_Macintosh-Memory_FAQ_3-97_(TA36147).pdf

- * the addressing is common across all DRAM on the module and is multiplexed via RAS and CAS singles, as noted by Control;
- * the module has a density of 4M x 64 (address space of 4M by 64 bits wide), or 32 Mbytes.

Note: Macintosh computers will size and determine the addressing mode (e.g., 4M x 4, 2M x 8, etc.) of memory modules at system startup.

DIMM #2

=====

This is a 16 Mbyte DIMM using 2M x 8 devices in a single bank. You may be asking yourself: if both 4M x 4 and 2M x 8 parts are considered 16 Mbit devices and both examples are single bank designs, why is DIMM #1's design 32 Mbytes and DIMM #2's design 16 Mbytes?

Since the data path of a 2M x 8 device is 8 bits wide, rather than 4 bits wide -- as for 4M x 4 parts -- it requires half the number of devices to span across 64 bits.

Note: DIMM #2 uses 8 devices and DIMM #1 uses 16. DIMM #2 thus has a module density of 2M x 64, or 16, Mbytes.

DIMM #3

=====

This is a 16 Mbyte DIMM using 1M x 16 devices in a two bank design. What's important to note for this particular design is the following:

- * There are two separate memory banks;
- * each bank contains four devices - spanning 64 bits
- * both banks have common address and data buses

In this example, there are two 1M x 64 banks, resulting in a module density of 2M x 64 or 16 Mbytes.

12) Question: Do Macintosh computers support composite memory modules?

Answer: No. Apple defines a composite memory module as one that loads the data bus with more than one DRAM input load per bank. Both SIMM and DIMM can accommodate a maximum of two memory banks per module.

13) Can memory modules with different refresh rates or counts be intermixed?

For first generation Power Macintosh computers that require SIMMs to be installed in pairs, the two SIMMs within a pair need to be identical. Other pairs can have different supported refresh rates.

DIMMs with different supported refresh rates can be intermixed. But if it's intended to enable memory interleaving, DIMMs with different refresh rates may or may not have DRAM devices with same addressing modes.

Note: DRAM devices require the same addressing mode to enable interleaving.

14) Question: What is EDO memory and do Macintosh computers support it?

EDO (Extended Data Out -- sometimes called hyperpage) memory are DRAM devices that improve access timing by extending its data out timing while allowing the memory controller to address the next column address. Although EDO devices will improve timing efficiency to main memory by approximately 10%, it does not necessarily mean programs will execute 10% faster. Because much of the time the CPU fetches instructions and data from cached memory, for example, L1 cache within the PowerPC microprocessor and or L2 cache on the mother board.

EDO DRAM is a superset of conventional (also called Fast Page Mode) DRAM. This means that an EDO DRAM can be used in place of a Fast Page Mode DRAM, although unless the memory controller is designed to utilize the faster EDO timing, the memory performance will be the same as Fast Page Mode.

There are three categories of Power Macintosh computers based on their level of EDO memory support. In some Power Macintosh computers, you can use EDO memory and get some potential performance boosts. In others, you can use EDO memory even though you will not derive any benefits from doing so. Finally, there are some Power Macintosh computers in which Apple does not recommend using EDO memory because doing so may damage your computer.

Power Macintosh Computers that Support EDO Memory

The following Power Macintosh computers fully support EDO memory and may experience increased performance:

- Power Macintosh 4400 series
- Power Macintosh 5500 series
- Power Macintosh 6500 series
- Macintosh Performa 6400/200 with internal Zip drive

All memory installed must be EDO to take advantage of the benefits. If you mix FPM and EDO RAM, the EDO modules will perform as if they were FPM.

IMPORTANT: There are two types of EDO memory--5 Volt and 3.3 Volt. The Power Macintosh 4400 series requires 3.3 Volt EDO memory whereas the Power Macintosh 5500, 6500, and 6400 computers require 5 Volt EDO. The two types of EDO memory are NOT interchangeable. Most 5 V and 3.3 V EDO memory are physically keyed differently to prevent you from using the wrong type, but even if the DIMM can be installed, verify that you are installing the correct type.

Additionally, EDO memory can also be used as video memory in the Power Macintosh 4400 ONLY. However, when using EDO memory as video memory, the Power Macintosh 4400 uses 5 Volt EDO memory rather than the 3.3 Volt used as DRAM.

Power Macintosh Computers that Can Use EDO memory

Although you will not derive any performance benefits by using EDO DIMMs, you can use them in the following Power Macintosh computers:

- Power Macintosh 6100 series
- Power Macintosh 7100 series
- Power Macintosh 8100 series
- Power Macintosh 5200 series
- Power Macintosh 5300 series
- Power Macintosh 5400 series
- Power Macintosh 6200 series
- Power Macintosh 6300 series
- Power Macintosh 6400 series
- Power Macintosh 7500 series
- Power Macintosh 7600 series
- Power Macintosh 8500 series
- Power Macintosh 9500 series
- Macintosh Performa 6360 series
- Some Macintosh Performa 6400 series

Power Macintosh Computers that CANNOT use EDO memory

You cannot use EDO DIMMs in the Power Macintosh 7200 computer. Using EDO memory in the Power Macintosh 7200 computer can cause damage to the logic board and to the DIMMs. Because of this, Apple does not support using EDO memory in the Power Macintosh 7200 computer. Any damage incurred from using EDO memory in the Power Macintosh 7200 computer may not be covered under Apple Computer's limited hardware warranty.

15) Question: What is parity memory and do Power Macintosh computers support it?

Answer: If a computer is designed for parity RAM, the parity bit allows the memory controller to check for DRAM errors in the form of a parity error. A parity error cannot correct system errors, but the system can be designed to alert the user that a memory error has occurred.

Apple's newly-introduced Network Server 500 and 700 products are the only computers that support parity memory; all other Power Macintosh Desktop, Tower, and PowerBook computers do not. Parity memory modules add one parity bit to each byte. Thus, a 64 bit DIMM -- eight bytes -- expands from 64 bits to 72 bits wide.

16) Question: What is ECC memory and do Macintosh computers support it?

Answer: Macintosh computers do not support ECC memory. ECC (Error Correction Coding) memory has additional check bits for each byte. This entails the memory controller calculating and writing error control check bits on each memory write operation, and recalculating and comparing the check bits on memory read operations, and then if necessary correcting the bad bits. As opposed to parity, this can automatically correct single bit RAM errors.

17) Question: My manual suggests that when upgrading my cache, I use

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Apple-branded cache. I would like to purchase a 512k cache module, but it does not appear that Apple sells this size. What size should I purchase?

Answer: At this time, 256k is the largest cache module Apple sells for the 7200/7300/7500/7600/8500/8600 models.

This article was published in the Information Alley on 22 October 1996.

Article Change History:

24 Mar 1997 - Added info on largest cache Apple sells.

28 Feb 1997 - Updated information with latest computers.

12 Nov 1996 - Added alley blurb.

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Tech Info Library Article Number:20575



Tech Info Library

Color StyleWriter 2500: PhotoGrade Print Kit General Info 10/96

Revised: 10/24/96
Security: Everyone

Color StyleWriter 2500: PhotoGrade Print Kit General Info 10/96

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Article Created: 23 October 1996
Article Reviewed/Updated: 24 October 1996

TOPIC -----

This article contains a general Information about the Color PhotoGrade Print Kit (M5577LL/A) including; contents, printing with the Color PhotoGrade Print Kit, tips for color printing, and purchasing supplies.

DISCUSSION -----

Color PhotoGrade Print Kit Contents
=====

In the Color PhotoGrade Print Kit you have everything you need to begin printing photo realistic images on your Color StyleWriter 2500. The kit contains :

- a Color PhotoGrade Ink Cartridge (approx. 45 pages per cartridge)
- a packet of Color Ink Jet PhotoGrade Paper (60 sheets)
- Color StyleWriter 2500 PhotoGrade Updater software (on a floppy disk)
- ink cartridge storage case
- PhotoEnhancer Plus software

Printing with the Color PhotoGrade Print Kit
=====

IMPORTANT:

To get the results you want, you must use the kit contents together. That is, use the Color PhotoGrade Ink Cartridge to print on the Color PhotoGrade Paper, and choose the appropriate settings in the printer dialog box.

Step 1

Install the PhotoGrade ink cartridge in the printer.

Step 2

Load the PhotoGrade paper into the sheet feeder.

Make sure the whiter side faces you.

Step 3

Open the document you want to print.

Step 4

Choose Print from the File menu.

Step 5

Choose PhotoGrade from the Paper Type pop-up menu in the Print dialog box.

Step 6

Click Color.

Step 7

Select Scatter and verify ColorSync is turned on in the Color Options dialog

An X in the checkbox means ColorSync is turned on. Scatter blends the ink colors in a random scattering of dots for the best quality image.

Step 8

Click OK when you are finished.

Step 9

Click Print when you are ready.

Tips for color printing

=====

- You must use the PhotoGrade paper and the PhotoGrade ink cartridge.
- Be sure to load the PhotoGrade paper so the whiter side faces you.
- Choose PhotoGrade from the Paper Type pop-up menu in the Print dialog box.
- Be sure to turn on ColorSync and leave the ColorSync settings on Automatic.
- Select the Scatter halftoning option (instead of Pattern).
- Make sure the ColorSync extension is enabled in your Extensions folder. If it is not, you must reinstall the Color StyleWriter 2500 software that came with your printer.
- If dark streaks or ink stains appear on printed documents, move the internal paper selector to the "envelope" position (leaving a bit more space between the printhead and the surface of the paper).

- The PhotoGrade Updater software does not support QuickDraw GX. You must disable QuickDraw GX before printing with the Color PhotoGrade Print Kit.

Purchasing Supplies

=====

When you run out of PhotoGrade ink or paper, you can purchase replacement supplies from your local reseller. Each item is sold separately.

- Color StyleWriter 2500 Color PhotoGrade Ink Cartridge: M5579G/A
- Color StyleWriter 2500 Color PhotoGrade Paper, Letter-size: M5578G/A
- Color StyleWriter 2500 Color PhotoGrade Paper, A4-size: M5581G/A

Article Change History:

24 Oct 1996 - Added software title.

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Tech Info Library Article Number:20576



Tech Info Library

AppleVision 1710AV: ADB Devices Can Cause Video Distortion 10/96

Revised: 10/23/96
Security: Everyone

AppleVision 1710AV: ADB Devices Can Cause Video Distortion 10/96

Article Created: 23 October 1996

TOPIC -----

I have an AppleVision 1710AV Display connected to my Power Macintosh. I use my computer primarily for video conferencing. I have noticed that when I am in the highest resolution (1024x768), that the image is blurred slightly.

DISCUSSION -----

The AppleVision 1710AV Display uses the Apple Desktop Bus (ADB) signals to synchronize video scan rates, when scan rates are changed and at startup.

When other peripheral devices use power from the ADB line, this may cause the video image to become slightly blurred when in the highest resolution (1024x768), however less dense formats display properly.

If you remove the devices using power from the ADB line, the image should return to normal. In order to use the ADB devices, you should use an alternate power source, or a different system configuration selected to avoid the loss of sharpness at high pixel density formats.

Other Apple Multiple Scan Displays do not use ADB in this way, and are unaffected by added ADB peripherals.

This article appeared in the 23 October 1996 issue of Information Alley.

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Tech Info Library Article Number:20578



Tech Info Library

Macintosh Performa 5400/160 (non-US): Description (10/96)

Revised: 10/24/96
Security: Everyone

Macintosh Performa 5400/160 (non-US): Description (10/96)

=====

Article Created: 24 October 1996

TOPIC -----

This article contains a description of the Macintosh Performa 5400/160 computer, which is only available outside of the United States.

DISCUSSION -----

With its state-of-the-art RISC-based processor and advanced multimedia capability, the all-in-one Macintosh Performa 5400/160 computer is ready to inspire your creativity and boost your productivity.

The computer's 160-megahertz PowerPC 603e processor and its 16 megabytes of RAM let you easily run an abundance of Macintosh applications--and there's plenty of room to store them on the 1.6-gigabyte internal hard drive. To get you started, there are more than a dozen learning, home, and entertainment programs, plus a collection of multimedia reference CDs.

The Performa 5400/160 includes a CD-ROM drive for multimedia applications and a 15-inch monitor (12.8-inch diagonal viewable image size) to display vibrant colors. There's also a built-in microphone to directly record your own sounds. Multimedia playback is made more lifelike through the built-in stereo speakers enhanced by SRS 3D surround sound and the Macintosh 16-bit stereo sound system.

To connect to the world of information services, including the Internet, the Performa 5400/160 features a built-in 28.8-kilobit-per-second modem. The modem also allows you to use your computer as a fax or answering machine.

If you need even more advanced capabilities in the future, expansion is easy through the industry-standard Peripheral Component Interconnect (PCI) slot and built-in SCSI support. You can also add the capabilities of watching television in a Macintosh window and recording video from VCRs and video cameras.

The Macintosh Performa 5400/160: A powerful, convenient system for all your home and office computing tasks.

Features

=====

Complete, ready-to-use system

- * Computer, multiple-scan 15-inch color display (12.8-inch diagonal viewable image size), CD-ROM drive, floppy disk drive, hard disk, microphone, and stereo speakers integrated into one convenient package
- * Keyboard, mouse, and all necessary cables
- * Apple System 7.5.3 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, Macintosh PC Exchange software, and QuickDraw 3D
- * Internal 28.8-Kbit/s modem for data, fax, voice, and digital answering machine
- * Built-in 8x-speed, tray-loading CD-ROM drive
- * Front-panel volume control and headphone/speaker jack
- * CD-quality digital sound with SRS 3D surround sound enhancement

Preinstalled software

- * Apple System 7.5.3

Ordering Information

=====

Macintosh Performa 5400/160

Computer with built-in multiple-scan 15-inch display (12.8-inch diagonal viewable image size), 28.8-Kbit/s modem, 1.6GB hard disk, 8x-speed CD-ROM drive, and floppy disk drive. Mouse, keyboard, and cables also included. Check with your Apple reseller for specific configuration information and ordering numbers.

Optional Enhancements

* High Performance Module
(256K level 2 cache)
Order No. M4505LL/A

* Apple Video System
Order No. M2894LL/D

* Apple TV/FM Radio System
Order No. M4586LL/A

* Apple Presentation System
Order No. M2895LL/A

* Apple External Video Connector
Order No. M4099LL/D

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20579



Tech Info Library

Macintosh Performa 5400/160 (non-US): Specifications (10/96)

Revised: 10/24/96
Security: Everyone

Macintosh Performa 5400/160 (non-US): Specifications (10/96)

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Article Created: 24 October 1996

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 5400/160 computer, which is only available outside of the United States.

DISCUSSION -----

Technical Specifications

=====

Microprocessor

- * PowerPC 603e processor running at 160 MHz
- * 32K internal cache
- * Integrated floating-point unit
- * 64-bit memory bus
- * Optional High Performance Module (256K level 2 cache)

Memory

=====

- * Comes with 16 MB of RAM (8 MB on the logic board and an 8MB DIMM in one of the DIMM sockets)
- * Can be expanded to 136 MB using two 64 MB DIMMs
- * Uses 64-bit-wide, 168-pin, 70-nanosecond or faster, fast-paged-mode DIMMs (1K and 2K refresh)

Disk drives

=====

- * Internal 1.6GB hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal AppleCD 8x-speed CD-ROM drive

Display

=====

Built-in display

- * 15-in. RGB color display (12.8-in. diagonal viewable image size)
- * 0.28-mm dot pitch
- * Noninterlaced, flat, square cathode-ray tube (CRT)
- * User-adjustable resolutions from 640 by 480 pixels to 832 by 624 pixels
- * Resolution can be changed without restarting the computer
- * Refresh rate up to 75 Hz
- * Built-in base tilts from -5 to +15 degrees, swivels a full 360 degrees
- * Meets SWEDAC MPR2 international guidelines for magnetic-field emissions

Display support

- * 16-bit color for display of up to 32,768 colors at 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors at 832- by 624-pixel resolution
- * 1MB video frame buffer (independent of system RAM)

Built-in modem

=====

- * 28.8-Kbit/s, V.34, data/fax/voice modem
- * Works with supplied software to provide answering machine capability
- * Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- * Stereo 16-bit sound
- * Built-in stereo speakers
- * Built-in microphone
- * Sound-output port
- * Sound-input port
- * Front headphone jack and volume control
- * Apple sound enhancements, including SRS 3D surround sound

Expansion interfaces

=====

- * PCI expansion slot for industry-standard 6.88-in., 15-watt expansion cards
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * RS-232/RS-422 serial port for an AppleTalk network connection, other networking connections, communications equipment (including GeoPort-compatible devices), or a printer
- * SCSI interface port for as many as six external SCSI devices, such as disk drives, CD-ROM drives, and/or digital scanners
- * Optional video-out port for connection to an external monitor for video mirroring (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- * Communications slot (used by the built-in 28.8-Kbps data/fax/voice modem)
- * Video slot (used by the optional Apple Video System to connect a VCR, video camera, or other video equip-ment; supports both composite and S-video input)
- * TV tuner slot (used by the optional Apple TV/FM Radio System)

Electrical requirements

=====

- * Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- * Frequency: 50 to 60 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 17.5 in. (44.5 cm)
- * Width: 15.1 in. (38.3 cm)
- * Depth: 16 in. (40.6 cm)
- * Weight: 47 lb. (21 kg)

Operating environment

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

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Tech Info Library Article Number:20580



Tech Info Library

Macintosh Performa 5400/180 (non-US): Description (10/96)

Revised: 10/24/96
Security: Everyone

Macintosh Performa 5400/180 (non-US): Description (10/96)

=====

Article Created: 24 October 1996

TOPIC -----

This article contains the specifications for the Macintosh Performa 5400/180 computer.

IMPORTANT: This computer is only available for sale outside of the United States.

DISCUSSION -----

From its state-of-the-art RISC-based processor to its sleek graphite color, the Apple Macintosh Performa 5400/180 computer is like no other Macintosh you've ever seen. This sophisticated all-in-one system is ready to use right out of the box, with everything you need to inspire your creativity and increase your productivity.

The computer's 180-megahertz PowerPC 603e processor and 16 megabytes of RAM let you easily run an abundance of Macintosh applications--and there's plenty of room to store them on the 1.6-gigabyte internal hard drive. To get you started, there are more than a dozen learning, home, and entertainment programs, plus a collection of multimedia reference CDs.

The Performa 5400/180 includes multimedia features that are expensive add-ons with other computers, including a CD-ROM drive for multimedia applications and a 15-inch monitor (12.8-inch diagonal viewable image size) to display vibrant colors. Using the built-in capabilities, you can watch television in a window, listen to FM radio, and view and record video from VCRs and video cameras. There's also a built-in microphone to directly record your own sounds. These multimedia features are made more lifelike through the built-in stereo speakers enhanced by SRS 3D surround sound and the Macintosh 16-bit stereo sound system.

To connect to the world of information services, including the Internet, the Performa 5400/180 features a built-in 28.8-kilobit-per-second modem. The modem

also allows you to use your computer as a fax or answering machine.

If you need even more advanced capabilities in the future, expansion is easy through the industry-standard Peripheral Component Interconnect (PCI) slot and built-in SCSI support.

The Macintosh Performa 5400/180: Performance, convenience, and sophistication that will add elegance to your home or office.

Features

=====

Complete, ready-to-use system

- * Computer, multiple-scan 15-inch color display (12.8-inch diagonal viewable image size), CD-ROM drive, floppy disk drive, hard disk, microphone, and stereo speakers integrated into one convenient and stylish package
- * Apple TV/FM Radio System and video input
- * Matching keyboard, mouse, and all necessary cables
- * Apple System 7.5.3 software, including Apple Guide software for step-by-step help with basic system operation, QuickTime multimedia software, Macintosh PC Exchange software, and QuickDraw 3D
- * Internal 28.8-Kbit/s modem for data, fax, voice, and digital answering machine
- * Built-in 8x-speed, tray-loading CD-ROM drive
- * Front-panel volume control and headphone/speaker jack
- * CD-quality digital sound with SRS 3D surround sound

Preinstalled software

- * Apple System 7.5.3

Ordering Information

=====

Macintosh Performa 5400/180

Computer with built-in multiple-scan 15-inch display (12.8-inch diagonal viewable image size), 28.8-Kbit/s modem, 1.6GB hard disk, 8x-speed CD-ROM drive, floppy disk drive, Apple TV/FM Radio System, and video input. Mouse, keyboard, and cables also included.

Optional Enhancements

- * High Performance Module
(256K level 2 cache)
Order No. M4505LL/A
- * Apple Presentation System
Order No. M2895LL/A
- * Apple External Video Connector
Order No. M4099LL/D

Product specifications are subject to change. Check with your Apple reseller for

the most current information about product specifications and configurations.

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Tech Info Library Article Number:20581



Tech Info Library

At Ease 3.0.3 Read Me (10/96)

Revised: 10/24/96
Security: Everyone

At Ease 3.0.3 Read Me (10/96)

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Article Created: 24 October 1996

TOPIC -----

This article is the At Ease 3.0.3 ReadMe file.

DISCUSSION -----

This document reflects the latest information on At Ease version 3.0.3. Please read this document carefully. The software may have changed slightly since the manual was printed.

Installing At Ease

You should use the Installer program to install At Ease. Do not attempt to install At Ease by dragging files onto your hard disk. The Installer places the files in the correct locations on the disk.

Before using the At Ease Installer program, make sure you have quit all other application programs. If you have trouble installing, temporarily turn off all extensions by holding down the Shift key while you restart your computer. Then try installing again.

If you install At Ease 3.0.3 on a computer running system software version 7.0 or 7.1 and you later install version 7.5 on your computer, use the Custom Install option of the At Ease Installer to install the At Ease Guides. If you are using the Custom Install option and you check one or more features to be installed, the selected size field may be incorrect. You can click the small Info button for each selected feature to look at the actual size.

Installing Mouse Practice

If your version of At Ease came with Mouse Practice, install it immediately after installing At Ease.

Removing At Ease

If you decide to remove At Ease, use the At Ease Installer program. Never attempt to remove At Ease from your System Folder while At Ease is turned on. See the manual for more information on removing At Ease.

Getting Help in At Ease

In addition to the manual and this Read Me file, there are several ways of obtaining online help in At Ease.

Apple Guide (System 7.5 Users)

If you are using system software version 7.5 or later, you can use Apple Guide to get instructions for using At Ease. At Ease Guide, the Apple Guide for the At Ease panels, is available from the Guide menu whenever At Ease is the active application program. At Ease Setup Guide, the Apple Guide for the At Ease Setup program, is available from the Guide menu whenever At Ease Setup is the active program.

At Ease Setup Help (System 7.0 or 7.1 Users)

If you are using system software version 7.0 or 7.1, At Ease includes online help for the At Ease Setup program. To use At Ease Setup Help, click the question mark button that appears on each page of the At Ease Setup program.

Balloon Help

Balloon Help is available for almost every function of At Ease. To activate Balloon Help, choose Show Balloons from the Guide menu (system software version 7.5) or the Help menu (system software version 7.0 or 7.1). When you are finished using Balloon Help, choose Hide Balloons from the Guide menu or Help menu.

Upgrading From Earlier Versions of At Ease

For most upgrades, your administrator password (if you had one) will remain the same in the At Ease Setup program in version 3.0.3. When the At Ease Setup program asks for an administrator name, type "At Ease Administrator," which is the default administrator name.

Upgrading From Version 1.x

If you are upgrading from At Ease version 1.x to version 3.0.3, you must first remove the old version by using the At Ease Installer program that came with the old version. When the Installer screen appears, hold down the Option key to change the Install button to Remove. Then click Remove to remove the old version.

Any items you created in version 1.x are automatically assigned to a setup or user named At Ease 1.0.

Upgrading From Version 2.x

Upgrading from version 2.x to version 3.0.3 occurs automatically when you first run the At Ease Setup program of version 3.0.3. At Ease turns itself off at the end of the installation process, so you must run the At Ease Setup program to turn At Ease back on.

Installing Other Programs While Running At Ease

You should not install programs onto your hard disk while running At Ease. Before you install programs, turn At Ease off in the At Ease Setup program and restart your computer. When you finish installing programs, turn At Ease back on and restart the computer again. Programs you install onto your hard disk are not automatically added to At Ease setups or users; you must use the At Ease Setup program to provide access to the new programs.

If some program buttons are not displayed properly in At Ease after you install new software, you should rebuild your desktop. To do so, turn At Ease off and restart your computer. While the computer is restarting, hold down the Command and Option keys until you see a message asking whether you want to rebuild the desktop file. Click OK. When the computer has finished starting up, turn At Ease back on in the At Ease Setup program and restart the computer again.

Restrictions on Floppy Disk Use

Floppy disks can be used only if a user has been given the access privileges to open and save documents on floppy disks. If a user is not allowed to open and save on floppy disks, any disk the user inserts will be ejected.

Restricted Finder Users

There are several things you should know about the restricted Finder environment.

Security in the Restricted Finder

In trying to maintain compatibility with other programs, the restricted Finder environment can sometimes allow programs to bypass some of the security features you selected in the At Ease Setup program. If programs you use seem to pose security problems, you may want to remove them from your hard disk.

Security is maintained for restricted Finder users by creating a list of "approved" application programs, desk accessories, and control panels that can be opened by the user. This list includes

- all items in the current setup folder
- items in the Apple Menu Items folder (if you have given access to them)
- the Chooser (if you have given access to it)
- the Print Monitor
- items in the Startup Items folder (only if the setup will open them)
- items in the Shutdown Items folder
- items in the Control Panels folder (if you have given access to them)
- the At Ease Setup program (administrator password required)
- approved sublaunched programs (for more information, see "Sublaunching Programs" later in this Read Me file)

If a document exists in any of these places, the application that created the document can also be opened.

The At Ease Setup program can always be opened because the administrator password restricts access.

The list of approved programs does not include programs in the user's own documents folder. (If it did, a user could copy a program from a floppy disk to his or her documents folder and attempt to open it without permission.)

Macintosh Guide and the Restricted Finder

Because of changes in the Finder made for restricted Finder users, instructions in Macintosh Guide (available from the Guide menu in system software version 7.5 or later) may not always be accurate. For example, when users who do not have access to control panels use Macintosh Guide to request instructions on adjusting the sound volume, they will not be able to complete the required steps.

Desktop Items and the Restricted Finder

When a user connects to (mounts) a disk other than the startup disk, items on the desktop of the disk are placed in a folder called "Items for Desktop," located at the top level of that disk. When the user disconnects from (unmounts) the disk, the items are not replaced on the desktop.

Copying in the Restricted Finder

If a user drags a folder for which he or she doesn't have access (such as another user's folder) into his or her own folder, the computer will not copy any files from the dragged folder, but it will add an empty folder of the same name to the hierarchy for the user's folder.

File Sharing and the Restricted Finder

File sharing does not work with the restricted Finder. When a restricted Finder user logs in, At Ease turns off file sharing. The next regular Finder user who logs in and wants to use file sharing must return to the Sharing Setup control panel and turn file sharing on again.

Do not use file sharing on computers that will be updated via the Update Computers command in At Ease Setup.

RAM Disks and the Restricted Finder

Do not use RAM disks if any user works in the restricted Finder; doing so may cause your computer to crash.

Sublaunching Programs

Sublaunching is the process by which one program opens another program (called a subprogram) without the user having directly opened the subprogram. The security

features of At Ease can sometimes interfere with a program's ability to sublaunch necessary subprograms. When a program attempts to sublaunch a subprogram to which a user has not been given access, the computer usually displays a -5000 error code.

There are two ways to allow programs to sublaunch the subprograms they need. In either case, the subprogram bypasses the security that At Ease provides.

- In the At Ease Setup program, open the Settings menu and choose Application Preferences. Add the necessary subprograms to the list, then select each subprogram and click the checkbox labeled "Can be launched by other applications." This setting applies to all users and setups, so you need to follow this procedure only once. You should be aware that this setting allows all users—including restricted Finder users—to open the subprogram.
- In the At Ease Setup program, give access to all the necessary subprograms. This procedure allows you to specify which users or setups have access to the subprograms. The disadvantage of this procedure, however, is that users see a button for each subprogram even though they normally won't need to open the subprograms directly.

At Ease 3.0.3 and Kid Pix Studio

Kid Pix Studio sublaunches each subprogram a child uses. But because of a software incompatibility, At Ease does not view these subprograms as application programs. To allow Kid Pix Studio to sub-launch its subprograms successfully, choose Application Preferences from the Settings menu of At Ease Setup and click the Custom button in the screen that appears. In the Custom Add screen, add each of the following subprograms:

Name	File Creator
-----	-----
KPS 0	Kîd0
KPS 1	Kîd1
KPS 2	Kîd2
KPS 3	Kîd3
KPS 4	Kîd4
KPS 5	Kîd5

To type the î character in the file creator names, hold down the Option key while you type the letter i, then release the Option key and immediately type the letter i again.

For more information on using the Custom Add screen, see "Application Preferences" later in this Read Me file.

At Ease 3.0.3 and Control Panels

Users who start out in the At Ease panels and switch to the Finder may experience problems when opening control panels. If they choose Control Panels from the Apple menu of the Finder, the Control Panels folder appears as expected. If they choose a particular control panel from the Control Panels submenu, however, they are returned to the At Ease panels. In most cases, the

selected control panel appears in front of the At Ease panels. But for certain control panels, such as the Extensions Manager in system software version 7.5, a message appears saying that the selected control panel can't be opened in At Ease.

To avoid these problems, At Ease users who switch to the Finder should not use the Control Panels submenu. Instead, they should choose Control Panels from the Apple menu of the Finder and then double-click the control panel they want in the Control Panels window that appears.

At Ease 3.0.3 and CD-ROM Discs

At Ease can display only one CD-ROM panel at a time. If a user inserts another CD-ROM disc to which he or she has access, a message appears indicating that the disc can be accessed using buttons. If the user ejects the first CD-ROM disc, the second CD-ROM disc appears as a panel.

The CD-ROM Preferences feature does not work properly with audio CDs.

At Ease 3.0.3 and the Find File Feature in System 7.5

While At Ease is running, Find File finds only those items in locations to which the user has complete access, including the user's documents folder and the Trash folder. Most other locations (including server volumes and the user's setup folder) do not return any information when Find File is used.

At Ease 3.0.3 and the Startup Items Folder in System 7.5

Any item in the Startup Items folder will be opened at startup, even if you didn't give the user access to the item or to the program used to create it. If you don't want all users to have access to an item, don't place the item in the Startup Items folder.

Application Preferences

The Custom button in the Application Preferences screen should be used only when At Ease security settings are interfering with a program's ability to sublaunch other programs that it needs and the "Can be launched by other applications" setting doesn't solve the problem. It is very unlikely that you will need to use the Custom button.

When you click the Custom button, the Custom Add screen appears. You provide a name (which can be anything you like, since it's needed only for display in the list of applications) and the file creator for each subprogram you are having difficulty sublaunching. You must type the file creator exactly, including any spaces and special characters. (You can usually get the name of the file creator from the developer of the software.)

The Custom button also allows you to remove programs from the Application Preferences list—even programs that you added to the list using the Add Other button. To do so, click a program's name in the list and click the Custom button. If the Custom Add screen does not already include a name and file creator for the program, type the program's name (exactly as it appears in the

list) and its file creator. Then click Remove.

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Tech Info Library Article Number:20582



Tech Info Library

Macintosh Performa 5400/180: Specifications (10/96)

Revised: 10/24/96
Security: Everyone

Macintosh Performa 5400/180: Specifications (10/96)

=====

Article Created: 24 October 1996

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 5400/180 computer.

IMPORTANT: This computer is only available for sale outside of the United States.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 180 MHz
- * 32K internal cache
- * Integrated floating-point unit
- * 64-bit memory bus
- * Optional High Performance Module (256K level 2 cache)

Memory

=====

- * Comes with 16MB of RAM (uses one DIMM socket)
- * Can be expanded to 136MB using two 64MB DIMMs
- * Uses 64-bit-wide, 168-pin, 70-nanosecond or faster, fast-paged-mode DIMMs (1K and 2K refresh rate)

Disk drives

=====

- * Internal 1.6GB hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 8x-speed CD-ROM drive

Display

=====

Built-in display

- * 15-in. RGB color display (12.8-in. diagonal viewable image size)
- * 0.28-mm dot pitch
- * Noninterlaced, flat, square cathode-ray tube (CRT)
- * User-adjustable resolutions from 640 by 480 pixels to 1,024 by 768 pixels
- * Resolution can be changed without restarting the computer
- * Refresh rate up to 75 Hz
- * Built-in base tilts from -5° to +15°, swivels a full 360°
- * Meets SWEDAC MPR2 international guidelines for magnetic-field emissions

Display support

- * 16-bit color for display of up to 32,768 colors at 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors at 832- by 624-pixel or 1,024- by 768-pixel resolution
- * 1 MB video frame buffer (independent of system RAM)

Built-in modem

=====

- * 28.8-Kbit/s, V.34, data/fax/voice modem
- * Works with supplied software to provide answering machine capability
- * Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- * Stereo 16-bit sound
- * Built-in stereo speakers
- * Built-in microphone
- * Sound-output port
- * Sound-input port
- * Front headphone jack and volume control
- * Apple sound enhancements, including SRS 3D surround sound

Expansion interfaces

=====

- * PCI expansion slot for industry-standard 6.88-in., 15-watt expansion cards
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * RS-232/RS-422 serial port for an AppleTalk network connection, other networking connections, communications equipment (including GeoPort-compatible devices), or a printer
- * SCSI interface port for as many as six external SCSI devices, such as disk drives and/or CD-ROM drives
- * Optional video-out port for connection to an external monitor for video mirroring (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- * Communications slot (used by the built-in 28.8-Kbit/s data/fax/voice modem)
- * Video slot (used by the Apple Video System to connect a VCR, video camera, or other video equipment; supports both composite and S-video input)

- * TV tuner slot (used by the Apple TV/FM Radio System)

Electrical requirements

=====

- * Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- * Frequency: 50 to 60 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 17.5 in. (44.5 cm)
- * Width: 15.1 in. (38.3 cm)
- * Depth: 16 in. (40.6 cm)
- * Weight: 47 lb. (21 kg)

Operating environment

=====

- * Operating temperature: 50° to 104° F (10° to 40° C)
- * Storage temperature: -40° to 116° F (-40° to 47° C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

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Tech Info Library Article Number:20583



Tech Info Library

At Ease: ClarisWorks Document in Shared Folder (10/96)

Revised: 10/24/96
Security: Everyone

At Ease: ClarisWorks Document in Shared Folder (10/96)

=====

Article Created: 24 October 1996

TOPIC -----

I put a ClarisWorks document into the shared folder for my users to use as a template. But when more than one user tries to open the document it says "This item could not be used because it contains items that are in use." How do I let all of my users access this document at the same time?

DISCUSSION -----

To do this, you must save the ClarisWorks document as "stationary." This will let all of your users access that document and use it as a template.

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Tech Info Library Article Number:20588



Tech Info Library

Qualcomm, Inc. (10/96)

Revised: 10/24/96
Security: Everyone

Qualcomm, Inc. (10/96)

=====

Article Created: 24 October 1996

Qualcomm, Inc.

6455 Lusk Blvd.
San Diego CA 92121

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619-597-5058 - FAX

Internet:
Main: quest-rep@qualcomm.com
Home Page: <http://www.qualcomm.com/>
FTP site: <ftp://ftp.qualcomm.com/>

Company Profile:
QUALCOMM develops, manufactures, markets, licenses, and operates advanced communications systems and products based on its proprietary digital wireless technologies.

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Tech Info Library Article Number:20589



Tech Info Library

QuickTime: What is CoolTalk? - Description (10/96)

Revised: 10/25/96
Security: Everyone

QuickTime: What is CoolTalk? - Description (10/96)

=====

Article Created: 25 October 1996

TOPIC -----

I've seen some discussions mentioning CoolTalk. What is it?

DISCUSSION -----

Apple Computer Inc. and Netscape are collaborating on a video conferencing part of Navigator called CoolTalk. CoolTalk allows Navigator users to audio conference to any other CoolTalk client (Macintosh, Windows, or various flavors of Unix) as well as share data. When a Macintosh based CoolTalk user connects to another Macintosh-based CoolTalk user, they can also use video.

As of September 1996, CoolTalk is still a beta product. Since Netscape usually opens up their beta software to the public, it is available to Netscape users as public beta software.

CoolTalk is based on QuickTime Conferencing. CoolTalk has both Apple's and Netscape's name on the product, but it is distributed and supported by Netscape.

Systems Supported

=====

- * Windows 3.1/NT/95
- * MacOS 7.5.3 - Power Macintosh only
- * HP-UX 9.0X
- * IRIX 5.x
- * OSF1 3.2
- * Solaris 2.4 or higher
- * SunOS 4.1.3 or higher

Requirements

- * PC - 486 class with 8MB of RAM, running MS Windows 95, NT, or 3.1

- * Macintosh - Power Macintosh with System Software 7.5.3 or higher
- * Unix - Solaris 1, Solaris 2, HP-UX, Irix, or Digital Unix (with Multimedia Services)
- * 9600 bps or faster TCP/IP Internet connection (28800 or faster for Macintosh)
- * Sound card (Windows compatible for PC, Macintosh built-in sound)
- * Microphone and speakers (if you wish to use the audio features; external speakers/headphones recommended)

For additional information on CoolTalk, visit Netscape's homepage.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20590



Tech Info Library

Macintosh Performa: No Hard Disk to Restore On (11/96)

Revised: 11/12/96
Security: Everyone

Macintosh Performa: No Hard Disk to Restore On (11/96)

=====

Article Created: 28 October 1996
Article Reviewed/Updated: 12 November 1996

TOPIC -----

I am attempting to use the system software CD-ROM disc to restore the system software on my Macintosh Performa 6400 computer. However, when I run the Apple Restore program an error message appears stating, "No hard disk to restore on". How can I restore the system software?

DISCUSSION -----

The likely cause of this error is starting up the computer using the Shift-Option-Command-Delete key sequence. Holding down these keys at startup forces the system to start up from the next SCSI device (above 0), which is the CD-ROM disc. However, if you start up the computer using this key sequence on a computer with an IDE hard drive, the system may have difficulty seeing the hard disk.

Instead, you should start up the computer while holding down the C key (lower case) when you need to restore your system software. (This is noted in the User's Manual for the Macintosh Performa 6400 series computers)

Holding down the C key at startup has the same effect as does the Shift-Option-Command-Delete key sequence, but it allows the hard drive to be properly recognized.

This article was published in the Information Alley on 31 October 1996.

Article Change History:
12 Nov 1996 - Added alley blurb and keyword.

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Tech Info Library Article Number:20591



Tech Info Library

MegaPhone: GeoPort Telephone Tool Named Changed (10/96)

Revised: 10/28/96
Security: Everyone

MegaPhone: GeoPort Telephone Tool Named Changed (10/96)

=====

Article Created: 28 October 1996

TOPIC -----

I installed the GeoPort-EM 3.0 Update, now when I launch MegaPhone I get a message stating that the GeoPort(tm) Telephone Tool cannot be found. Will use GeoPort Telephone Tool Instead temporarily. Why?

DISCUSSION -----

The name of the GeoPort Telephone Tool changed in the GeoPort-EM 3.0 Update. The trademark symbol was dropped from the extension.

Workaround

In order to avoid getting error message every time you launch MegaPhone, you need to change the connection tool.

Step 1

Launch MegaPhone

Step 2

Choose Preferences from the File menu

Step 3

Click the Change button under Hardware.

Step 4

Choose GeoPort Telephone Tool

Step 5

Click OK.

This article appeared in the 28 October 1996 issue of the Information Alley.

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Tech Info Library Article Number:20592



Tech Info Library

Macintosh 6360,6400,5400: SCSI Devices Aren't Recognized (2/97)

Revised: 2/28/97
Security: Everyone

Macintosh 6360,6400,5400: SCSI Devices Aren't Recognized (2/97)

=====

Article Created: 29 October 1996
Article Reviewed/Updated: 25 February 1997

TOPIC -----

We are trying to use SCSI devices with our Macintosh Performa and Power Macintosh 6360, 6400, and 5400 series computers, but some of the devices are not being recognized.

- * Is this a known issue with these computers?
- * If so, what is the solution?

DISCUSSION -----

Yes, Apple is aware of some timing issues with SCSI on these computers. However, many SCSI problems can be attributed to termination, cable or SCSI ID issues. Be sure to follow standard SCSI troubleshooting before assuming this is a SCSI timing problem. Also, verify that any software required for your particular SCSI device is properly installed. For more information, check the manuals that came with the computer and SCSI device. Or, use the search strings "connecting and SCSI" or "0009387" in the Tech Info Library to locate the article, "Macintosh: Connecting SCSI Devices".

Apple has developed an update for the Macintosh Performa and Power Macintosh 6360, 6400, and 5400 series computers to correct a SCSI timing issue that can occur when using some SCSI devices. Apple developed this update based on reports from users who are having difficulty using some UMAX and Agfa scanners and some SCSI-based printers such as the Apple LaserWriter II SC, Personal LaserWriter SC, and some GCC SCSI-based printers. The 6360/64xx/54xx Update is available from the Apple Software Updates sites. Apple plans on including this update in future versions of the Mac OS.

The 6360/64xx/54xx Update fixes have been rolled into Mac OS 7.6. If you have installed Mac OS 7.6, you do not need the 6360/64xx/54xx Update.

The 6360/64xx/54xx Update disk will do the following:

* Fix issues with using some external SCSI devices, such as external hard disks, scanners, or removable storage devices.

* Fix issues with printing to a Personal LaserWriter SC or LaserWriter II SC printer.

Apple recommends using the LaserWriter IISC GX printer driver under QuickDraw GX, as there are known line layout problems with the non-GX Personal LaserWriter SC printer driver. QuickDraw GX can be installed from your System Software CD that came with your computer. Or, if you do not have QuickDraw GX, it is available from Apple's Software Update sites.

* Add support for additional Ethernet network protocols. If your computer uses the optional Ethernet CS II card to provide Ethernet networking, the 6360/64xx/54xx Update installs files that provide support for the MacIPX and Local Area Transport (LAT) network protocols.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 29 October 1996.

Article Change History:

28 Feb 1997 - Added third party printer information.

25 Feb 1997 - Added Mac OS 7.6 information.

19 Nov 1996 - Added info about where to obtain update.

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Tech Info Library Article Number:20593



Tech Info Library

Network Server: How To Eject A Floppy Disk (10/96)

Revised: 10/29/96
Security: Everyone

Network Server: How To Eject A Floppy Disk (10/96)

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Article Created: 29 October 1996

TOPIC -----

On my RS6000, I have an eject button for the floppy drive. On the Apple Network Server, there is no eject button. How do I get the floppy disk out?

DISCUSSION -----

Open a terminal window (if you are in CDE) and type the command "fdeject" to eject the floppy disk.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20594



Tech Info Library

PowerBook: What Is Trackpad Climate Control? (10/96)

Revised: 10/29/96
Security: Everyone

PowerBook: What Is Trackpad Climate Control? (10/96)

=====

Article Created: 29 October, 1996

TOPIC -----

This article contains the text of the Read Me file for the Trackpad Climate Control software.

DISCUSSION -----

What Is Trackpad Climate Control?

Trackpad Climate Control is a system extension that will reduce or eliminate unexpected movements of the pointer caused by moisture on the trackpad or humidity. The extension is designed for the Macintosh PowerBook 190, Macintosh PowerBook 1400, and Macintosh PowerBook Duo 2300.

Who Should Use Trackpad Climate Control?

You should use Trackpad Climate Control if you notice the pointer moving abruptly when you initially touch the trackpad or "jumping" to its previous position when you lift your finger after moving the pointer or tapping the trackpad.

Do not use Trackpad Climate Control if you have not had pointer-movement problems on your computer. (The extension could make the pointer less responsive when you use the trackpad.)

The extension works only with the PowerBook 190, PowerBook 1400, and PowerBook Duo 2300.

Installing Trackpad Climate Control

Follow these steps to install the extension.

1. Drag the Trackpad Climate Control icon to the icon of the System Folder on your computer's hard disk.

2. When a message appears, click OK to place the file in the Extensions folder.
3. Restart your computer.

Pointer Movement with Trackpad Climate Control Installed

The Trackpad Climate Control extension monitors pointer movements and attempts to eliminate the undesired jumps that can result from moisture on or around the trackpad. Because the extension affects pointer movement, you may notice that the pointer is somewhat less responsive when you use the trackpad.

Once you've installed the Trackpad Climate Control, you can turn it off with the Extensions Manager control panel (by removing the checkmark beside its name in the control panel and restarting the computer).

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Tech Info Library Article Number:20595



Revised: 10/29/96
Security: Everyone

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TOPIC -----

DISCUSSION -----

The version of the AppleShare client used does not appear to affect these limits.

System Version	Local Volume	Remote Volume
pre-7.5	2GB	2GB

7.5 or later	4GB	2GB*	
PCI ROM	2TB	2GB*	
+-----+	+-----+	+-----+	+

* If the server is AppleShare 4.2.1 with the Custom Settings patch installed, this number will be 4GB.

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Tech Info Library Article Number:20598



Tech Info Library

Mac Display Card 24AC: ROM V1.0 Isn't Compat w/7.5.3 (10/96)

Revised: 10/30/96
Security: Everyone

Mac Display Card 24AC: ROM V1.0 Isn't Compat w/7.5.3 (10/96)

Article Created: 30 October 1996

TOPIC -----

I just upgraded from Mac OS version 7.5.1 to 7.5.3 and now I am unable to use my 24AC Display Card. When I change resolutions or the bit depth (number of colors displayed), the screen is not legible. What could be happening?

DISCUSSION -----

The symptom you are describing is related to the ROM version of the Macintosh Display Card 24AC. Version 1.0 of the ROM is not compatible with System 7.5.3 or greater. When Apple shipped the Macintosh Display Card 24AC, it had ROM v1.1 installed. ROM version 1.1 is fully compatible with System 7.5.3 and greater.

The only way you would have ROM version 1.0 on your Macintosh Display Card 24AC would be if you had a DVT card (developer version) or the card was purchased from Radius.

Identifying ROM Versions

=====

To identify what version of the ROM is installed on the Macintosh Display Card 24AC, look for a label on the solder side of the display card. The label has Mac Display Card 24AC printed on it. A Bar Code number is also printed on the card. If the Macintosh Display Card 24AC

If you have a DVT card, contact Apple Computer, or your local Service Provide to get a replacement card. If you have a Radius version of the display card, contact Radius for additional help and instructions.

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Tech Info Library Article Number:20599



Tech Info Library

Early Childhood Connections: Description (10/96)

Revised: 10/30/96
Security: Everyone

Early Childhood Connections: Description (10/96)

=====

Article Created: 30 October 1996

TOPIC -----

This article contains a description of the Early Childhood Connections Bundle.

DISCUSSION -----

Early Childhood Connections is a developmentally appropriate, computer-based learning program designed to introduce early number and language concepts, problem solving, music, and creative arts to children ages three through five. The program combines hardware, software, books, and interactive CD-ROMs to create a multisensory learning environment for young children.

Powerful, easy-to-use computer

The Apple Macintosh computer is so easy to use that teachers and students are free to concentrate on learning concepts--not computer skills. And Apple's At Ease interface, through graphics and sound, allows very young children access to their own work, while offering protection for teacher files and programs. Yet for all this ease of use, the Macintosh is a powerful machine that can be upgraded as your computing needs grow.

Resources for students

The library of innovative software for the very young is designed to promote learning through exploration that involves animation and sound. A selection of children's literature is provided to expand the learning possibilities inherent in the software.

Resources for the teacher

Software is provided to help teachers create high-quality newsletters and classroom materials. And to facilitate teachers' instructional efforts, the Teacher Resource Guide offers ideas on how to integrate technology into your classroom. In addition, toll-free technical support is provided for the lifetime

of your product.

Open-ended design

Best of all, Early Childhood Connections is flexible, and its open-ended design allows teachers to create dynamic learning environments and easily integrate the program into existing classroom practices.

Purchase Options

=====

Choose the featured solution--a convenient way to order a Power Macintosh 5260/120 computer and the Early Childhood Connections Kit with just one part number.

or

Choose one of the other computers listed below and order the computer and kit separately. Both items must appear on the same purchase order.

Computer Options

=====

Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Early Childhood Connections Kit

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The kit includes:

Two-Volume Binder Set

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- * Volume 1, Teacher Resource Guide: A manual that provides a thematic approach to curriculum integration.
 - * Volume 2, Student Software: User documentation for all software included in the software library.

Early Childhood Connections Installation CD

Contains the software applications. See descriptions that follow.

* Four Books on CD-ROM

- Just Grandma and Me from Living Books, a Random House/Brøderbund Company
- A Silly Noisy House from The Voyager Company
- My Silly CD of Colors from Discis Knowledge Research, Inc.
- My Silly CD of Counting from Discis Knowledge Research, Inc.

* Two Children's Books

- We Are All Alike ... We Are All Different from Scholastic Inc.
- Sing a Song of Popcorn from Scholastic Inc.

* At Ease from Apple Computer, Inc.

An easy-to-use alternative to the standard Macintosh user interface that has been specially designed for young children.

* Bailey's Book House from Edmark Corporation

Five activities designed to provide early literacy experiences for children, including learning letter names and sounds, playing with rhymes, and composing a story.

* Davidson's Kid Works 2 from Davidson & Associates, Inc.

A word processing program specifically geared to the needs of the very young, with a built-in text-to-speech feature that lets children create and then hear their own illustrated stories.

* Easy Street from Mindplay

A child's classification program that uses a shopping metaphor to introduce such concepts as memory, problem solving, and matching.

* Kid Pix 2 from Broderbund Software, Inc.

A multimedia paint program and supplemental software designed especially to help young artists get started, with helpful features such as a talking alphabet and a number of "rubber-stamp" images.

* Millie's Math House from Edmark Corporation

Six activities that lead young learners through an exploration of basic mathematical concepts, such as numbers, counting, and patterns.

* The Writing Center from The Learning Company

An easy-to-use word processing and page-layout program that makes it a snap for teachers to create high-quality, visually appealing documents such as parent handouts and newsletters.

Additional Product Information

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Setup and Consultation

Setup of your Early Childhood Connections computer is optional. An authorized Apple representative will come out to your location, set up your system, and answer any questions you have about getting started with your new equipment.

Technical Support

With your Early Childhood Connections purchase, you are entitled to toll-free telephone support for the lifetime of your product. Support service is available from 7 a.m. to 6 p.m. Pacific time, Monday through Friday, excluding holidays. If you have any questions, just call 1-800-800-APPL (2775).

Apple Education Finance Program

For information on the advantages of leasing Early Childhood Connections, please contact the Apple Education Finance Program at 1-800-255-2652.

Ordering Information

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Early Childhood Connections Bundle

Includes Power Macintosh 5260/120 and Early Childhood Connections Kit.
Without setup: B2867LL/C
With setup: B2827LL/C

Early Childhood Connections Kit

Without setup: T0609LL/G
With setup: B2826LL/B
May be purchased only with a computer.

Power Macintosh 5400/180

Order No.: M5162LL/A

Power Macintosh 6400/200

Order No.: M5427LL/A
Monitor is sold separately.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20600



Tech Info Library

Math Education Bundle: Description (10/96)

Revised: 10/30/96
Security: Everyone

Math Education Bundle: Description (10/96)

Article Created: 30 October 1996

TOPIC -----

This article contains a description of the Apple Education Series: Math Grades 5-8 Bundle.

DISCUSSION -----

When schools put computers on students' desktops, the teachers and students both benefit. Now Apple has made that easier to do.

The Apple Education Series Math: Grades 5-8 Bundle provides a Macintosh computer and the Math: Grades 5-8 Kit--a collection of some of the most useful math software available. The kit offers students a rich set of software programs and learning options that are engaging, interactive, and fun. Each program emphasizes different aspects of math, from problem solving to probability, allowing students more participation than ever in a math class.

The National Council of Teachers of Mathematics has been looking for innovative methods to teach new priorities in math. In the Math Kit, you'll discover some of those new methods. The software and curriculum materials were specifically chosen to fill the gap in accessible math software for grades 5-8. Each program supports the standards set by the NCTM.

The Math: Grades 5-8 Kit--the perfect complement for computers in the math class.

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More Choices, More Flexibility

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Now, when you order a Macintosh computer with the Teacher Solution Kit, you may also order two other Apple Education Series kits.

It's as easy as 1-2-3.

1. Select a computer. Order the featured solution--which includes a Power

Macintosh 5260/120 and the kit--or choose one of the other computers listed below and order the computer and kit separately. Refer to the computer data sheets for more details. Refer to the computer data sheets for more details.

2. Choose two other kits. If you wish to order additional Apple Education Series kits, you can find out what's available on the Education Price List and review the contents on their respective data sheets.

3. Purchase everything at once. The Macintosh computer and up to three kits must all appear on the same purchase order.

Computer Options

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Power Macintosh 5260/120 (featured computer)

Equipped with 16 MB of RAM, built-in 14-inch color display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, stereo speakers and microphone, AppleDesign Keyboard, and mouse.

Power Macintosh 5400/180

Equipped with 16 MB of RAM, built-in tilt-and-swivel 15-inch color multiple-scan display, 1.2 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, video-input/output, stereo speakers and microphone, AppleDesign Keyboard, and mouse; includes a PCI expansion slot.

Power Macintosh 6400/200

Equipped with 16 MB of RAM, 256K level 2 cache, 2.4 GB hard disk drive, 8x-speed CD-ROM drive, Ethernet networking, microphone, AppleDesign Keyboard, and mouse; includes two 7-inch PCI expansion slots; supports 16-bit color for display of up to 32,768 colors on a variety of monitors. (Monitor is sold separately.)

Math: Grades 5-8 Kit

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* Building Perspective from Sunburst Communications, Inc.

A challenging activity of spatial perception in which students examine buildings of different heights viewed from the side. Then they must determine the top view of an entire block of buildings based on their ground-level observations.

* Divide and Conquer from Sunburst Communications, Inc.

A code-breaking activity in which letters stand for the numbers 0-9. The computer calculates the quotient and remainder, but the answers are in code and the students must crack the code. Students must find clues in patterns, form hypotheses, reason logically, and exchange opinions about numerical relationships, place-value notations, and unknowns.

* Measurement in Motion from Learning in Motion

Students investigate relationships between points, lines, angles, areas, and time. Using QuickTime technology and easy-to-use measurement tools, they can analyze movies of their own or use the ones that are included. Students create points, lines, angles, areas, and numerical data on each changing frame of the movie display. Students can display information in numeric tables, line graphs,

bar charts, histograms, or scatter plots.

* Probability Constructor from LOGAL

Students perform many different probability experiments by working with six familiar models instead of relying solely on abstract numbers and symbols.

By controlling and observing colorful animations, students experiment with the laws of probability, choosing marbles from a jar, tossing coins, rolling dice, spinning color wheels, generating random digits, and using an area model. The results of each experiment are then translated to graphs, tables, or Venn-like diagrams for easy analysis. By analyzing the data, students learn about probability concepts such as the difference between experimental and theoretical probability, relationships between frequency and outcome of events, and the law of large numbers.

* TesselMania! from MECC

A creative tool that reveals the important connections between math and the graphic arts. Students use this program to generate their own tessellations, explore transformational geometry, and examine pattern symmetry. The program's special tools allow students to add color, letters, numbers, and facial features and even animate the construction of their designs. The result is a greater appreciation for math's role in the arts—and some M.C. Escher-inspired art to hang on the refrigerator at home.

* ClarisWorks from Claris Corporation

An award-winning product that combines word processing, database, spreadsheet, graphics, presentation, and communications software in one familiar, efficient environment. With 25 drawing and painting tools, 12 types of charts, and 100 built-in calculations, students can easily create memos, lab reports, news-letters, room layouts, charts, graphs, and reports.

Ordering Information

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Math: Grades 5-8 Bundle (Featured solution)

Includes Power Macintosh 5260/120 and Math: Grades 5-8 Kit—a convenient way to order a hardware/software combination with a single part number.

Without CPU setup: B2820LL/C

With CPU setup: B2821LL/C

Math: Grades 5-8 Kit

Order No.: T1175LL/F

May be purchased only with a computer.

Power Macintosh 5400/180

Without setup: M5162LL/A

With setup: B2766LL/D

Power Macintosh 6400/200

..TIL20601-Math_Education_Bundle-Description_10-96.pdf

Without setup: M5427LL/A

With setup: B3043LL/A

Monitor is sold separately.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20601



Tech Info Library

Apple Media Tool: Creating X-platform QTVR movies (10/96)

Revised: 10/31/96
Security: Everyone

Apple Media Tool: Creating X-platform QTVR movies (10/96)

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Article Created: 30 October 1996

TOPIC -----

When I try using the Apple Media Tool Converter v2.0 on my QuickTime VR movie, I get an error message that reads "not a cross-platform panoramic movie! Use QuickTime VR Utilities to convert it." Where can I find QuickTime VR Utilities?

DISCUSSION -----

The error message you are seeing is the result of using the wrong type of tool to convert a QuickTime VR (QTVR) movie. The addendum which came with Apple Media Tool 2.0 recommends using the Apple Media Tool Converter, however it is incorrect. You cannot use Apple Media Tool Converter v2.0 to convert QuickTime VR movies. In fact, if you try checking your already-flattened QTVR movie with the converter, you will get the same error.

How to Convert QuickTime VR Movies

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Step 1

Launch QTVR Player.

The QTVR Player come with the QuickTime VR Authoring Tools, which is on QuickTime VR Tools CD.

Step 2

Open your QuickTime VR movie.

Step 3

Choose Save As... from the File menu.

Step 4

Check Make Movie Self-Contained and Playable on non-Apple computers options.

Step 5

Type in a name for the new cross-platform QTVR movie.

Step 6

Select the OK button.

You now have a cross-platform QTVR movie.

This article appeared in the 31 October 1996 issue of Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20603



Tech Info Library

Total Recall Corporation (10/96)

Revised: 10/31/96
Security: Everyone

Total Recall Corporation (10/96)

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Article Created: 31 October 1996

Total Recall

2462 Waynoka Rd.
Colorado Springs, CO 80915

Phone: (800) 743-0594
(719) 380-1616

FAX: (719) 380-7022

WWW Address: <http://www.recallusa.com>

Company Profile:

Total Recall, the former makers of Data Recovery Toolkit, are now using a different approach to data recovery. Users now need to connect to Total Recall's web site and download the Disk Recover software (which fits on a single floppy) and run it on their hard drive. The program recovers what it can and then you must call Total Recall for a "key" to unlock the recovered data. The charge is based on the amount of data that the program can recover, and the size of the hard drive. If the Disk Recover program cannot recover anything, you can send your hard drive to Total Recall for professional data recovery.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20604



Tech Info Library

Dispatcher Software: Type 11 Error with HP DeskWriter (3/97)

Revised: 3/10/97
Security: Everyone

Dispatcher Software: Type 11 Error with HP DeskWriter (3/97)

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Article Created: 10 October 1996
Article Reviewed/Updated: 10 March 1997

TOPIC -----

When trying to print a scanned image from the Color OneScanner Dispatcher software v1.0, 1.2, or 2.0, to a Hewlett-Packard DeskWriter, the Dispatcher software crashes. The error is usually a Type 11 error.

DISCUSSION -----

Service & Support Engineering has been able to reproduce the issue consistently. Hewlett-Packard is aware of the situation.

Updated software that remedies this behavior has been posted by Hewlett-Packard to their World Wide Web site. The updated software for the DeskJet 800 family of printers is version 9.3. For the DeskWriter 600 family, the updated software is version 9.2.1.

As a workaround, you can print from an application other than Dispatcher.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
10 Mar 1997 - Updated with vendor info.
28 Feb 1997 - Updated with the current status.

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Tech Info Library Article Number:20605



Tech Info Library

Apple Network Server: Getting More DDS Cleaning Tapes (10/96)

Revised: 10/31/96
Security: Everyone

Apple Network Server: Getting More DDS Cleaning Tapes (10/96)

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Article Created: 31 October, 1996

TOPIC -----

My Apple Network Server came with some DDS 4mm Cleaning tapes. How can I get some more of these tapes?

DISCUSSION -----

The DDS 4mm Cleaning tapes that come with the Apple Network Server can be purchased from Hewlett Packard (HP). The HP part number is 922-83k (2-pack).

NOTE:

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20607



Tech Info Library

Font Extension 3 Version 1.0.4 Information: Read Me (11/96)

Revised: 11/1/96
Security: Everyone

Font Extension 3 Version 1.0.4 Information: Read Me (11/96)

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Article Created: 1 November 1996

TOPIC -----

This article is the Font Extension 3 Version 1.0.4 Information Read Me file.

DISCUSSION -----

Font Extension 3 version 1.0.4 fixes a hang (infinite loop) in Japanese Language Kit (JLK) 1.2 when using Adobe Acrobat. This problem was found testing System 7.5.2 on the PowerBook 190. Font Extension 3 version 1.0.3 was made with this fix to ship with the PowerBook 190. 1.0.3 was a 68K only version. Font Extension was later rebuilt as a Fat binary extension to work on both 68K and PowerPC based machines. Apple recommends JLK users upgrade Font Extension 3 to version 1.0.4.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20608



Tech Info Library

Macintosh Performa: Can't Choose Partition to Restore (12/96)

Revised: 12/19/96
Security: Everyone

Macintosh Performa: Can't Choose Partition to Restore (12/96)

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Article Created: 1 November 1996
Article Reviewed/Updated: 19 December 1996

TOPIC -----

Using Drive Setup, I have partitioned the hard drive in my Macintosh Performa 6400 computer. I want to be able to choose which partition I want to restore the system software and applications from the Macintosh Performa system CD-ROM disc. However, the Restore All Software and Restore System Software applications do not allow me to specify which volume to restore to nor do they identify which volume will be used. How can I control which hard disk the Restore applications will use?

DISCUSSION -----

At this time, the Performa Restore application does not permit you to choose the volume on which to restore the System Software or All Software. The restoration application defaults to the internal hard disk and then to the first created partition on this disk.

However, there are two different methods you can use if you have to restore to a volume other than the internal hard drive's first partition.

* You can manually drag the necessary software from the "Hard Disk Files" folder on the Performa CD-ROM disc to the preferred volume.

* Once you start-up using the Performa CD-ROM disc, each of the hard disk volumes will appear on the desktop. Simply drag each volume, except the one you wish to restore to, into the Trash. If the volumes are not mounted, the Restore applications will not see them, and will not try to restore to them.

Note that if you subsequently run Disk First Aid or Drive Setup, the volumes may get mounted.

This article was published in the Information Alley on 1 November 1996.

Article Change History:

19 Dec 1996 - Added additional information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20609



Tech Info Library

At Ease Admin: User Info Could Not Be Authenticated (10/96)

Revised: 11/2/96
Security: Everyone

At Ease Admin: User Info Could Not Be Authenticated (10/96)

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Article Created: 2 November 1996

TOPIC -----

When I launch the At Ease Administration application, I get an error that says "Can't access the server because the user information could not be authenticated." What user information does this refer to? How can I fix it?

DISCUSSION -----

The user information being referred to is the name and password you are entering. The error message is informing you that you do not have privileges which can be proven. Make sure you are entering your AppleShare user name and password exactly as it was set up with the AppleShare Admin application on the server. Also make sure your user's login is enabled with AppleShare Admin.

This error can be recreated by just entering the wrong name and password when trying to configure the At Ease server for the first time.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20610



Tech Info Library

WEB (http and WWW) Servers for the Mac OS (10/96)

Revised: 11/5/96
Security: Everyone

WEB (http and WWW) Servers for the Mac OS (10/96)

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Article Created: 2 November 1996

TOPIC -----

This article provides a partial list of third-party software which provides WEB servers for the Mac OS. This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

DISCUSSION -----

WEB (http and WWW) Servers for the Apple Macintosh

Web*Star 1.3.1

From StarNine/QuarterDeck
<http://www.starnine.com/>

WebSTAR helps you publish hypertext documents to millions of Web users around the world, right from your Macintosh. You can also use WebSTAR to put any Macintosh file on the Web, including GIF and JPEG images, Shockwave movies, QuickTime VR, and Java applets. And yet, using WebSTAR is as easy as double-clicking. Plus, it's faster than many Web servers running on UNIX.

Currently Bundled on Apple Internet Server Solutions for the WWW.

NetPresenz 4.0.1

From Peter Lewis, Stairways Software
<http://www.share.com/peterlewis/>

NetPresenz allows your Macintosh to become an FTP, WWW, or Gopher server so that other people can get information from your Mac over the Internet. It honors the Users & Groups privileges and passwords and supports multiple logins, anonymous FTP (user name "anonymous" or "ftp"), full CGI support, MacBinary and BinHex

transfers and much more. It runs either as a background only application or as a normal application displaying the log file.

MacHTTP 2.2.2

From Chuck Shotton

<http://www.biap.com/>

<http://www.starnine.com/>

MacHTTP is a shareware product, and is best used for small or internal web sites. It is the most widely-used desktop Web server on the Internet.

WebSTAR and StarNine - The commercial version of MacHTTP has become StarNine's new WebSTAR product. For more details on WebSTAR, upgrades from MacHTTP, etc., check StarNine Technology's home page.

Boulevard 1.0b21

<http://www.resnova.com/boulevard/>

Boulevard for MacOS is a high performance, full featured web server, designed to host professional web sites. The Boulevard interface is rich, elegant, and easy to use. Boulevard supports CGIs, ACGIs, and W*API plug-ins. The server has built-in support for many functions that are traditionally handled by CGIs, making Boulevard a faster and more economical choice than other Macintosh web servers.

RushHour

<http://www.maxum.com/>

RushHour is the Macintosh Web server optimized for what is probably the vast majority of your server volume - Graphics. Your full-featured Web server, like StarNine's WebSTAR, handles all sorts of files under virtually any conditions, but most of the overhead involved in doing so is unnecessary for most files. RushHour cuts out the overhead and adds a high-performance RAM cache to serve your GIF, JPEG, and other large binary data with extreme speed.

Sonic Servers

<http://www.sonicsys.com/>

Sonic Internet Servers are a group of high performance software Internet Servers which make it easy and economical for businesses to establish a presence on the Internet as well as providing Intranet solutions for intra-office communications. This group of highly integrated Internet Servers includes Web, E-mail, FTP, DNS and DHCP. These servers run on any Macintosh computer and offer easy set-up and maintenance.

All Sonic Internet Servers can be configured and managed via InterManage, Sonic's common management interface application which is included with the Internet Servers. InterManage can access each Internet Server over the LAN or through the Internet, giving the network manager the flexibility to perform

configuration and maintenance from anywhere in the world!

Web for One

<http://www.resnova.com/>

Web for One(TM) is a personal web server designed to let every MacOS computer on a TCP/IP network publish documents on the Internet or LAN. For small business and home users with continuous Internet connections, this provides an easy and inexpensive way to establish a presence on the Internet.

Web for One is a full featured web server, optimized to run in the background using very little memory. The web server supports CGIs, ACGIs, and has built-in support for image maps, server-side includes, server push, directory browsing and automatic form processing. By integrating these features with the server, users can create dynamic, interactive web pages without using expensive and cumbersome CGIs.

WebCenter

From Chris Hawk)

<http://www.slaphappy.com/>

WebCenter is a high-performance web server for the Macintosh and Macintosh compatibles. It offers a wide range of features, making it suitable for virtually any Macintosh-based web site with features like: Multi-threading for fast connection handling, Full CGI compatibility with other MacOS web servers, Server Side Includes to create dynamic web pages, Memory-based file caching for fast file access, Customizable through AppleScript-ability and attach-ability Password-based file access through server realms, Allow or deny clients based on their network address, Power Mac native for quick performance, Open Transport native for maximum performance.

Distributed as freeware. No other MacOS web server has WebCenter's breadth of features. WebCenter is capable of handling tens of thousands of hits per day, enabling it service even the busiest of Macintosh-based web sites.

FireSite v1.0.2

<http://www.clearway.com/>

FireSite gives you fast, interactive Web serving power at an affordable price. Before ClearWay created FireSite, running a Web server had to be expensive and complicated. FireSite cuts through the cost and complications, and makes your own interactive Web server an affordable reality. With FireSite, all you need to connect your own Web server to the Internet is a simple 28.8K modem and a regular phone line. FireSite automatically uses your Internet Service Provider as a lightning-fast 'graphics cache', and accelerates your Web site far beyond the speed limits of your modem!

Common Lisp Hypermedia Server (CL-HTTP)

<http://www.ai.mit.edu/projects/iiip/doc/cl-http/home-page.html>

CL-HTTP is a full-featured server for the Internet Hypertext Transfer Protocol (HTTP 1.1, HTML 2.0, & pre-HTML 3.0) that comes complete with source code.

A World-Wide Web (WWW) server was implemented in Common LISP in order to facilitate exploratory programming in the interactive hypermedia domain and to provide access to complex research programs, particularly artificial intelligence systems. The server was initially used to provide interfaces for document retrieval and for email servers. More advanced applications include interfaces to systems for inductive rule learning and natural-language question answering.

InterServer Publisher 1.2.1

<http://www.intercon.com/products/interserverp.html>

InterCon's InterServer Publisher* answers the increasing demand for distributing information electronically. As the industry's first integrated Macintosh-based Internet server package, InterServer Publisher allows you to create a highly interactive Web, FTP (File Transfer Protocol), and Gopher server presence on the Internet in a matter of minutes.

NetWings HTTP Server

http://netwings.com/nw_home_pages/prod_info.html

Our NetWings and those Macs can get you and your students surfing and serving the Internet now. If you've got one Mac, or twenty. NetWings can let you serve and surf over any type of internet connection. It's software only, you don't need a router and it works on a LocalTalk or EtherTalk LAN. It caches pages. It has site blocking. It does web, ftp, gopher, email, and much more.

Web Server 4D

<http://www.mdg.com/>

Web Server 4D is a fast web server and a very fast relational database in one. This provides unparalleled site tracking without sacrificing performance. In fact, the author of Web Server Construction Kit For Macintosh (Hayden Books), Stewart Buskirk wrote in the comparisons of various packages that, "Web Server 4D is wicked fast!"

Web Server 4D can track new vs. repeat users, serves different pages based on domain, IP or browser, serves files from memory not slow disks, supports clickable maps, Guest Books, form to Email, inserts page counts, odometer page counts, current date, current time all without using CGI - although WS4D is compatible with CGI! Security for any file/folder is available with users and groups support (and tracking history for each realm, user and group!). Supports multiple hosts from one server. Other web servers cannot compare to the standard built-in features of WS4D. Developer edition includes open 4D source code which allows complete customization or integration with existing databases.

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Tech Info Library

Apple Quality Bundles: CDs Labeled for Windows (12/96)

Revised: 12/11/96
Security: Everyone

Apple Quality Bundles: CDs Labeled for Windows (12/96)

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Article Created: 4 November 1996
Article Reviewed/Updated: 11 December 1996

TOPIC -----

I have the Early Learning Kit, which is one of the Apple Quality Bundles, and I noticed that some of the CD-ROM discs are labeled as Windows, Windows 3.1 and Windows 95 compatible. Are these discs mislabeled or are they supposed to also work on a PC running Windows or Windows 95?

DISCUSSION -----

The Early Learning Kit includes the following CD titles:

- Playskool Puzzles by Hasbro Interactive
- Sesame Street, Let's Make a Word by Creative Wonders
- How Many Bugs in a Box? by Simon & Schuster
- Millie's Math House by Edmark
- FisherPrice Sing-Alongs by Davidson
- Putt-Putt Saves the Zoo by Humongous Entertainment
- Jump Start Kindergarten by Knowledge Adventure
- Kids Art Center by Creative Wonders

With the exception of "Jump Start Kindergarten by Knowledge Adventure", all of the above CD's are labeled as Windows, Windows 3.1 or Windows 95 compatible on the silk screen of the CD. This is incorrect as none of these CD's labeled as Windows, Windows 3.1 or Windows 95 compatible will actually run on a PC running these operating systems. This was an error during the manufacturing process of these titles. All of the titles in this bundle were developed to run under the Macintosh System Software 7.5.3 or later only. The minimum system recommendations that appear on the box are as follows:

- A PowerPC processor-based Apple Macintosh
- 5 megabytes of RAM available for running the applications
- Macintosh operating system software version 7.5.3 or later
- A double-speed CD-ROM drive
- A 13-inch monitor that can display 256 colors at 640x480 DPI resolution

Article Change History:

11 Dec 1996 - Updated article with new information.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20615



Tech Info Library

Apple Printers: Which Support 2-Byte Printing? (11/96)

Revised: 11/4/96
Security: Everyone

Apple Printers: Which Support 2-Byte Printing? (11/96)

=====

Article Created: 4 November 1996

TOPIC -----

Which Apple printers (both LaserWriter and StyleWriter models) are able to print Japanese characters?

DISCUSSION -----

You can print Japanese Characters (Kanji) or any other 2-byte characters to ALL Apple Printers (both QuickDraw and PostScript), provided you are using 2-byte TrueType fonts. However, if you are using 2-byte PostScript Type 1 outline fonts, then you need to use a PostScript printer specifically localized for that language. The following Apple printers were specifically designed to print Kanji characters:

LaserWriter IINTX-J
LaserWriter Select 610 (360-J)
LaserWriter Pro 400
LaserWriter Pro 405
LaserWriter 16/600-J
LaserWriter 12/600-J

For additional information about printing Kanji characters, use the search string "kanji and printing" to locate the following articles in the Tech Info Library:

- Printing Kanji Characters
- LaserWriters: Printing 2-byte Languages/Characters

This article was published in the Information Alley on 4 November 1996.

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Tech Info Library Article Number:20616



Tech Info Library

Performa 6400: Demo Runs Automatically After Restore (11/96)

Revised: 11/5/96
Security: Everyone

Performa 6400: Demo Runs Automatically After Restore (11/96)

=====

Article Created: 5 November 1996

TOPIC -----

After restoring all the software on my Macintosh Performa 6400 series computer, the screen flashes while the desktop is appearing. Then, the Performa demo starts running automatically. How can I stop this?

DISCUSSION -----

The Restore All Software function on the Performa CD-ROM disc installs a Performa demo that automatically launches on startup. Before the demo launches, a script runs to verify that the display resolution is set to 640x480. This causes the flashing that you see as the desktop appears.

If, after restoring all software, you would like to stop the Performa Demo from automatically launching, remove the Launch Performa Demo or Launch Welcome Sequence files located in the Startup Items folder in the System Folder on the Hard Drive.

This article was published in the Information Alley on 5 November 1996.

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Tech Info Library Article Number:20619



Tech Info Library

PowerPC Interrupt Extension: Read Me (2/97)

Revised: 2/6/97
Security: Everyone

PowerPC Interrupt Extension: Read Me (2/97)

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Article Created: 6 November 1996
Article Reviewed/Updated: 06 February 1997

TOPIC -----

This article contains the ReadMe file for the PowerPC Interrupt Extension.

DISCUSSION -----

Where Can I Find the Extension online?

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* America Online - keyword: applecomputer

* CompuServe - GO APLSUP

* Internet (specific location)

ftp://ftp.info.apple.com/Apple_Support_Area/Apple_SW_Updates/US/Macintosh/System/Other_System/PowerPC_Interrupt_Extension.sea.hqx

Overview and Installation

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* What is the PowerPC Interrupt Extension?

This system extension may improve reliability and performance on Power Macintosh computers, PowerPC-based Performa computers, Mac OS-compatible computers, and on desktop computers upgraded with a PowerPC upgrade card. This extension requires System 7.5.5.

* Who should install the PowerPC Interrupt Extension?

Apple recommends installing the PowerPC Interrupt Extension for all customers who have installed System 7.5.5 Update on a desktop Power Macintosh,

PowerPC-based Performa, Mac OS-compatible, or on a desktop computer with with a PowerPC upgrade card.

* What does installing the PowerPC Interrupt Extension do?

After installing the PowerPC Interrupt Extension, you may notice improvements in reliability and stability. You may have experienced your computer freezing for several seconds before returning to normal operation, or completely freezing and requiring a restart. This extension fixes one source of this problem.

* I have a PowerBook with a PowerPC upgrade card. Should I install the PowerPC Interrupt Extension?

PowerBooks, both with and without the PowerPC upgrade card, do not experience the problems resolved by the PowerPC Interrupt Extension. Therefore, it is unnecessary for customers with these computers to install the extension.

* I have a PowerPC-based PowerBook**. Should I install the PowerPC Interrupt Extension?

PowerBooks do not experience the problems resolved by the PowerPC Interrupt Extension. Therefore, it is unnecessary for customers with these computers to install the extension.

** The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

* I have a Macintosh based on the 680x0 processor. Should I install the PowerPC Interrupt Extension?

Macintosh computers with a 68000, 68020, 68030, or 68040 processor do not experience the problem fixed by the PowerPC Interrupt Extension. Therefore, it is unnecessary for customers with these computers to install the extension.

* How do I get System 7.5.5 Update?

To use the PowerPC Interrupt Extension, you must have System 7.5.5 Update installed. You can download the PowerPC Interrupt Extension and System 7.5.5 Update from the Internet at <http://www.support.apple.com/> as well as through America Online (keyword: applecomputer) and CompuServe (shortcut: GO APLSUP). You can also order the System 7.5.5 update for \$13 by calling the Apple Order Center at 1-800-293-6617 ext.1322.

* Once I install the PowerPC Interrupt Extension, do I need to do anything else?

No. The PowerPC Interrupt Extension works automatically once you install it according to the installation instructions.

* How do I install the PowerPC Interrupt Extension?

To install this extension follow these steps:

1. Locate the System Folder icon on your computer's hard disk.
2. Drag the PowerPC Interrupt Extension icon onto the System Folder icon.
3. Click on the OK button when you see the message "Extensions need to be stored in the Extensions folder in order to be available to the Macintosh. Put 'PowerPC Interrupt Extension' into the Extensions folder?"
4. Select Restart from the Special menu for the changes to take effect.

* How do I disable the PowerPC Interrupt Extension?

To disable this extension follow these steps:

1. Select Control Panels from the Apple Menu.
2. Locate the Extensions Manager icon and double click it.
3. Scroll through the list until you see PowerPC Interrupt Extension.
4. Click on the PowerPC Interrupt Extension name so that the check mark beside it disappears.
5. Select Restart from the Special menu.

Technical Details

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The following is provided for application developers and others who are interested in the technical details of the PowerPC Interrupt Extension. You do not need to understand the following information to use the extension.

The PowerPC Interrupt Extension applies a fix to the low level interrupt services on desktop PowerPC-based Macintosh, Performa, and Mac OS-compatible computers, and on desktop computers upgraded with a PowerPC. Before this fix, a condition could exist where no interrupt was pending but the computer would wait for an interrupt. In this condition the computer would ignore all lower priority interrupts and no processing would continue until a higher or equal priority interrupt occurred. In some cases this would cause intermittent, long interrupt latencies. In other cases this could cause the computer to freeze.

One condition which creates the problem is when a completion routine or interrupt task lowers the current interrupt mask value during its execution.

..TIL20621-PowerPC_Interrupt_Extension-Read_Me_2-97_(TA36190).pdf

Installing the PowerPC Interrupt Extension applies a fix which will prevent this from causing a freeze or long interrupt latency.

Article Change History:

06 Feb 1997 - Added online locations to download file.

20 Jan 1997 - Added details about which PowerBooks are PPC-based.

15 Jan 1997 - Added PowerPC-based PowerBook section.

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Tech Info Library Article Number:20621



Tech Info Library

Cyberdog 1.1, OpenDoc 1.1, and Macintosh SE/30 (10/96)

Revised: 11/7/96
Security: Everyone

Cyberdog 1.1, OpenDoc 1.1, and Macintosh SE/30 (10/96)

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Article Created: 7 November 1996

TOPIC -----

I'm trying to install System 7.5.5, OpenDoc 1.1, and Cyberdog 1.1 on a Macintosh SE/30. The SE/30 freezes when I try installing OpenDoc and Cyberdog.

I've tried performing a clean system install. Stated the SE/30 with only Apple extensions with the addition of Mode 32. I have also tried starting with no SCSI devices, rebuilt the desktop, reset PRAM, start with all extensions off. Is there a known issue I do not know about?

DISCUSSION -----

The first 680x0-based version of Cyberdog is 1.1 which also requires OpenDoc 1.1. OpenDoc 1.1 requires 32-bit ROMs in the computer. Therefore the OpenDoc 1.1 installer does not work on Macintosh II, IIX, IICX, and SE/30 computers. Specifically, the OpenDoc 1.1 installer fails with this error, "Illegal instruction, Co-processor not installed."

Engineering is aware of this issue. They have no time frame for a solution, and there are no workarounds.

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Tech Info Library Article Number:20624



Tech Info Library

Easy Install of 7.5.3 Does Not Install TokenRing Drivers (11/96)

Revised: 11/7/96
Security: Everyone

Easy Install of 7.5.3 Does Not Install TokenRing Drivers (11/96)

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Article Created: 7 November 1996

TOPIC -----

I cannot seem to get the System 7.5.3 Installer to "Easy install" the TokenRing drivers on my PowerBook (Duo) 280c. I am running the installer when the PowerBook is docked into a docking station which has a Token Ring card installed. It is as if the TokenRing card is not being recognized by the installer.

I tried doing a "clean install" of System 7.5.3 from the 7.5.3 CD-ROM disc, but still no TokenRing drivers were installed. Why is this happening?

DISCUSSION -----

This situation you encountered appears to be, from our testing results, an issue with the installer, not with your hardware. This situation occurs in all Macintosh models that have TokenRing cards installed, not just the PowerBook Duo in a docking station.

The "Easy Install" option of System Software 7.5.3 CD-ROM disc does not properly detect the presence of an Apple TokenRing card, hence does not install the necessary drivers. You must select "Custom Install" and then "Networking" and "TokenTalk" to get the drivers installed.

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Tech Info Library Article Number:20625



Tech Info Library

At Ease for Workgroups 4.0 and Printer Quota Settings (10/96)

Revised: 11/11/96
Security: Everyone

At Ease for Workgroups 4.0 and Printer Quota Settings (10/96)

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Article Created: 8 November 1996

TOPIC -----

This article describes an issue with Printer Quota Settings and Current Chooser Selection in At Ease for Workgroups 4.0.

DISCUSSION -----

At Ease for Workgroups 4.0 documentation, page 2-149 of the Apple Network Administrator Toolkit (ANAT) manual states, "The printer quotas feature only works with desktop printers. It does not work if a Workgroup's users are printing on the current Chooser selection, even if the current Chooser selection is a desktop printer."

When you open the Access to Printers window and highlight the Current Chooser Selection, the Printer Setting button is dimmed. However, if you double click the Current Chooser Selection, a Quota Window for the Current Chooser Selection opens and leaves you with the impression that the option will work for the Current Chooser Selection, but it will not.

The information in the manual is correct, printer quotas will not work with the current chooser selection.

This issue has been reported to engineering, there is no time frame for a solution.

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Tech Info Library Article Number:20626



Tech Info Library

Performa & Power Macintosh 5400 & 6400: Slow Printing (2/97)

Revised: 2/28/97
Security: Everyone

Performa & Power Macintosh 5400 & 6400: Slow Printing (2/97)

Article Created: 7 November 1996
Article Reviewed/Updated: 28 February 1997

TOPIC -----

My Power Macintosh 5400/120 prints very slowly to a LaserWriter over LocalTalk. When I try printing any document, it takes an extremely long time to print. In some cases, printing takes several hours. However, printing over Ethernet works fine.

What could be causing this?

DISCUSSION -----

Apple Computer, Inc. has received reports of extremely slow printing over LocalTalk from some Macintosh Performa and Power Macintosh 5400 and 6400 series computers. Apple has isolated the cause to specific printing devices on specific configurations noted below.

Description of Issue

The slow printing symptom appears to be caused by specific situations, including:

- When some devices send a CTS (Clear To Send) signal too quickly in response to the computers' RTS (Request To Send). The LaserWriter 16/600 w/1.0 IOP ROMs is an example of this situation.
- When virtual memory is turned on. However, with virtual memory turned off, the printer prints in an acceptable amount of time.

Affected Computers

Any 200 MHz or slower Macintosh Performa or Power Macintosh 5400 and 6400 series computer without L2 cache installed may experience these symptoms.

Affected Printers

- Apple LaserWriter IINT
- Apple LaserWriter 16/600 PS with 1.0 ROMs
- Some GCC BLP class printers

Solutions

• Apple is currently looking into a solution to these issues. In the interim, Apple suggests the following workarounds:

- Add L2 cache (Apple part number: M4505LL/A)
 - Turn off virtual memory (add additional physical RAM if additional memory is needed)
 - Upgrade network from LocalTalk to Ethernet
- If you are printing to a LaserWriter 16/600 PS printer, verify the version of the IOP ROM. The ROM version is written on the printer's startup page in the small print on the left side of the page. If the IOP ROM version is 1.0, contact an Apple-authorized service provider for information about upgrading the printer ROM.

Article Change History:

28 Feb 1997 - Added third-party printers to article.

Copyright 1996-97, Apple Computer, Inc.

Tech Info Library Article Number:20627



Tech Info Library

Open Transport/PPP 1.0: Read Me (11/96)

Revised: 1/21/97
Security: Everyone

Open Transport/PPP 1.0: Read Me (11/96)

Article Created: 11 November 1996

TOPIC -----

This article is the Open Transport/PPP 1.0 ReadMe Before Installing file.

DISCUSSION -----

Introduction

This document contains the late-breaking information about Open Transport/PPP. For instructions about how to use Open Transport/PPP—including the Modem and PPP control panels—see the Open Transport/PPP User's Manual. Onscreen help is also available in Macintosh Guide. Choose Macintosh Guide from the Help menu (the question-mark icon in the upper-right corner of your screen). Information about Open Transport/PPP appears in the Telecommunications topic area. Or you can click the question-mark icon that appears in the Modem and PPP control panels.

Additional information about Open Transport/PPP is also available on the Open Transport/PPP home page:

<http://devworld.apple.com/dev/opentransport/ppp.html>

Included on this home page is a log of the release notes that describes the changes in each of the successive beta releases of the Open Transport/PPP software.

License Agreement

This release of Open Transport/PPP is subject to the terms and conditions of the License Agreement that accompanies the software in the file License. By using the software you agree to abide by the terms and conditions of the License Agreement.

System Requirements

Open Transport/PPP is designed to work on Mac OS-compatible computers with a Motorola 68030- or 68040-family microprocessor, or a PowerPC 601, 603e, 604, or 604e microprocessor.

The recommended system software version for Open Transport/PPP is 7.5.3 or later, updated with Open Transport 1.1.1. System software versions 7.1, 7.1.1, and 7.1.2 releases are also compatible with Open Transport/PPP updated with Open Transport 1.1.1.

IMPORTANT: You must update your system with Open Transport 1.1.1 before installing Open Transport/PPP. See the following section for information about updating to Open Transport 1.1.1.

NOTE: Open Transport/PPP cannot be used with system software versions 7.5, 7.5.1, or 7.5.2. Before installing Open Transport/PPP on one of these systems, run the latest 7.5.3 (or later) system updater.

Open Transport/PPP 1.0 requires a minimum of 500K of RAM (for 68030- or 68040-based computers) or 600K of RAM (for PowerPC-based computers). Open Transport/PPP memory requirements are based on the size of total system memory, including virtual memory, minus the size of any RAM disk or disk cache you're using.

Open Transport Requirements

Version 1.1.1 of Open Transport is required for use with Open Transport/PPP.

NOTE: The Open Transport 1.1.1 update, provided with the Open Transport/PPP installer, requires that you already have Open Transport 1.1. installed on your computer.

Here are the steps required to install Open Transport 1.1.1, depending on the system software you have:

- System 7.1.x
 1. Install Open Transport 1.1. (Can be purchased for \$39ERP; part number M4252Z/A.)
 2. Install Open Transport 1.1.1 Update. (Available free online, or can be purchased through February 1, 1997 for \$13. Call 1-800-293-6617 and ask for offer 1407.)
- System 7.5, 7.5.1, or 7.5.2
 1. Install System 7.5, Update 2.0. (Available free online at Apple Software Update sites. See the following section for information on how to find these sites.)
 2. Turn on Open Transport (if it is not already on) by using the Network Software Switcher. The Network Software Selector is located in the Apple Extras Folder.
 3. Install Open Transport 1.1.1 Update. (Available free online, or can be purchased through February 1, 1997 for \$13. Call 1-800-293-6617

and ask for offer 1407.)

- System 7.5.3 or 7.5.5
 1. Install Open Transport 1.1.1 Update. (Available free online, or can be purchased through February 1, 1997 for \$13. Call 1-800-293-6617 and ask for offer 1407.)
- System 7.5.3 if you have performed a custom installation without installing Open Transport
 1. Use the System 7.5.3 or System 7.5.2, Update 2.0 installer to custom-install Open Transport 1.1.
 2. Install Open Transport 1.1.1 Update. (Available free online, or can be purchased through February 1, 1997 for \$13. Call 1-800-293-6617 and ask for offer 1407.)
- System 7.5.5 if you have updated a system on which Open Transport was not installed due to a custom installation.
 1. Reinstall system software using the system software disks that came with your computer.
 2. Based on the version of the system software that came with your computer, use one of the procedures above to install Open Transport 1.1.1.

Apple Software Update Sites

Information about updating Apple software is available online on the World Wide Web and other online servers. On the Web, go to either of the following sites:

<http://www.info.apple.com>
<http://www.support.apple.com>

Both of these sites provide links to the Apple Software Updates page.

These sites also provide links to the Technical Info Library (TIL). By searching for "find apple software updates" in the TIL, you can find Apple Software Updates locations for Internet, America Online, CompuServe and other online services.

Once you reach an Apple Software Updates site, use the following path to locate the Open Transport software:

Apple SW Updates
 US
 Macintosh
 Networking-Communications
 Open Transport

Before You Install Open Transport/PPP 1.0

- Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.

- If you already use SLIP or PPP software to access the Internet, make a note of the configuration information that you entered into your previous SLIP or PPP control panels. Configurations are not automatically converted from third-party SLIP or PPP software.

Known Incompatibilities and Limitations

- Version 1.1.1 of Open Transport is required for use with this release of Open Transport/PPP. You should not attempt to use Open Transport/PPP with Open Transport 1.1.

- ARA 2.x modem CCL scripts can be used with Open Transport/PPP. However, some ARA 2.x scripts do not support modem-based error correction and data compression, so performance may not be optimal. You should try to use one of the modem scripts provided with Open Transport/PPP. If you can't find one that matches your modem, you can modify an existing script to suit your needs.

- If you are using both ARA 2.1 and Open Transport/PPP, be sure to install Open Transport/PPP after ARA 2.1 to get the correct set of modem scripts for both products.

- If you are running Open Transport/PPP on a desktop Macintosh that has sleep capabilities, your Open Transport/PPP connection will not be automatically terminated when you select Sleep from the Special menu, because sleeping desktop computers can continue network activity (unlike PowerBook models). If you don't want to remain connected to your PPP server when you put your desktop system to sleep, disconnect manually using the PPP control panel.

- If you have a copy of Open Transport/PPP older than 1.0f1c2 installed, you must discard your old Open Transport/PPP preferences files. To do so, remove the Remote Access folder from the active Preferences folder. Restart your computer and then use the Modem and PPP control panels to customize your configuration.

- Open Transport/PPP 1.0 has some incompatibilities with the Apple Express Modem. If the Internal Modem choice does not appear in the Modem control panel Port pop-up menu, uncheck the "Use internal modem instead of Modem/Printer port" checkbox in the Express Modem control panel and restart. Then open the Modem control panel again.

- You may experience some difficulty with older programs that do not use Open Transport and try to use the serial port while PPP is active. The workaround is to disconnect PPP using the PPP control panel before starting up the serial application.

- Claris EMailer version 1.1v3 or later is compatible with Open Transport 1.1.1. A problem in the Quit command of earlier versions of Claris EMailer sometimes causes a crash with Open Transport 1.1.1 (with or without Open Transport/PPP). For your convenience, the Claris EMailer version 1.1v3 patcher and Claris EMailer Lite version 1.1v3 patcher have been provided in the Open Transport Extras folder.

- You may experience CD and TV sound problems when you are dialing your Internet service provider from a Performa 6300CD computer. The workaround is to launch Megaphone before trying to connect.
- When entering phone numbers for the Motorola BitSURFR Pro 56K and 64K ISDN terminal adapters, do not use dashes or spaces between the numbers. For example, "555-9999" should be entered as "5559999". Entering spaces or dashes may prevent successful connections with the BitSURFR Pro, particularly when two ISDN channels are used.
- If you use PortShare Pro from Stalker GmbH to set up a virtual modem or virtual printer port, the ports appear as Modem or Printer, respectively, in the Modem control panel. They do not appear as Virtual Modem or Virtual Printer. PortShare Pro replaces the serial drivers for the on-board modem/printer ports with its own, so selecting Modem or Printer causes Open Transport/PPP (and any other native Open Transport serial application) to use the replacement drivers.
- Open Transport/PPP will report the single channel speed of 56Kbps or 64Kbps. The 112Kbps or 128Kbps speeds are used but not displayed when using a second ISDN channel with multilink PPP. Use the terminal adapter to find out the speed of the second channel.

Compatibility with the Apple Internet Connection Kit

You can install both Open Transport/PPP and the Apple Internet Connection Kit (AICK) on your computer at the same time. Both products enable you to dial with your modem and connect to the Internet.

At the time of this release, AICK does not use the Open Transport/PPP software to dial and connect to the Internet. AICK has its own Dialer, which uses MacPPP software to establish the remote connection. MacPPP is a third-party implementation of the Point-to-Point Protocol.

All of the AICK applications, however, are compatible with Open Transport/PPP 1.0. To use Open Transport/PPP with AICK applications, you must configure Open Transport/PPP as described in the Open Transport/PPP User's Manual and in the "Connecting to the Internet" topic area of Macintosh Guide.

The currently active PPP software is selected using the "Connect via" pop-up menu in the TCP/IP control panel. MacPPP is listed as MacPPP. OT/PPP is listed as PPP. MacPPP is controlled by using the ConfigPPP control panel, the Apple Internet Dialer application, or the Apple Internet Status application. Open Transport/PPP is controlled by using the Modem and PPP control panels, which do not modify or change MacPPP configuration information.

If you use both PPP software packages (one at a time), note that launching either the Apple Internet Dialer or Apple Internet Status will make MacPPP active. Furthermore, you will need to switch TCP/IP configurations each time you switch from one PPP software package to the other. (Information about changing TCP/IP configurations appears in the Network topic area of Macintosh Guide.)

Interactions with Third-Party Software

Netscape 2.x will not work reliably with versions of the Mac OS before System 7.5.3 or versions of Open Transport software before 1.1. If you would like to use Netscape 2.0.1 or later, you should make sure that System 7.5.3 or later and Open Transport version 1.1.1 or later are also used. Failure to follow this recommendation may result in system crashes.

Modem Support

Scripts that support many popular modems are provided on the Open Transport/PPP installation disk(s). The scripts include:

3Com Impact Analog 14.4
3Com Impact ISDN 56K
3Com Impact ISDN 56K MLPPP
3Com Impact ISDN 64K
3Com Impact ISDN 64K MLPPP
Apple Personal Modem
AT&T Dataport 288
AT&T KeepInTouch
Best Data Smart One 28.8/33.6
Dayna CommuniCard 28800
Farallon Netopia 56K
Farallon Netopia 56K MLPPP
Farallon Netopia 64K
Farallon Netopia 64K MLPPP
GeoPort/Express Modem
GeoPort/Express Modem CNG
Global Village Gold/Silver/Merc
Global Village Platinum/Gold II
Hayes Accura 288
Hayes Optima 288
Megahertz CruiseCard 14.4
Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom DeskPorte Fast/288
Microcom QX/4232bis
Motorola BitSURFR 56K
Motorola BitSURFR 56K MLPPP
Motorola BitSURFR 64K
Motorola BitSURFR 64K MLPPP
Motorola ModemSURFR 28.8
Motorola Power/Lifestyle 28.8
Null Modem 9600
Null Modem 19200
Null Modem 57600
Null Modem 115200
Practical Peripherals V.34
Smart One 28.8
Supra 14.4
Supra 28.8/33.6

TDK DF2814
Telebit QBlazer
US Robotics Universal
Zoom V-Series

Apple now installs all modem scripts in the Modem Scripts folder (in the Extensions folder) instead of directly in the Extensions folder. Future Apple products will handle modem scripts the same way. Open Transport/PPP does not recognize modem scripts stored outside the Modem Scripts folder.

Auto-routing of modem scripts has been disabled by the installer. Once Open Transport/PPP is installed, a modem script will not be routed to the Extensions folder if it is dragged into an active System folder.

The Easy Install mode of the installer copies all of the Open Transport/PPP modem scripts to your disk. You can choose Custom Install to limit the installation to only the scripts you choose.

NOTE: You can delete any unneeded scripts from the Modem Scripts folder, which is located inside the Extensions Folder. To recognize scripts, look for files labeled as "Modem Link Tool Personal document."

Additional (Unsupported) Modem Scripts

User-contributed scripts are available online. New modems are regularly introduced and Apple is willing to help publish scripts donated by users to aid in making Apple Remote Access and Open Transport/PPP work easily with as many modems as possible.

IMPORTANT: User-contributed scripts are not tested or supported by Apple Computer, Inc., so you should contact the script's author rather than Apple if you run into difficulty using a script downloaded from the unsupported folder. User-contributed modem scripts are provided on an as-is basis as a convenience to Apple customers. They are not warranted to be complete or free from errors, although Apple may choose to review and fully test some user-contributed scripts and include them in future versions of Apple software. If you want to provide Apple with feedback about particular user-contributed scripts, send electronic mail to the following address: msg@apple.com

To find these scripts, go to any Apple Software Updates location and use the following path:

```
Apple SW Updates
  US
    Macintosh
      Unsupported
        CCL
```

If you want to contribute a modem script, please use the following procedure:

1. Download the sample Read Me file from the User-contributed scripts folder. The file is named CCL_README_TEMPLATE.

2. Customize the sample Read Me as appropriate for the script you want to submit.
3. Send electronic mail to msg@apple.com and enclose the script in bin/hex format.

Scripts will only be posted if they are accompanied by a Read Me explaining the script's purpose and how to contact the author.

(See "Apple Software Updates Sites" near the beginning of this Read Me for information on how to find Apple Software Updates locations.)

Modem Cable Requirements

Most modems require a cable that supports the data terminal ready (DTR) signal. In addition, certain modems require a cable that supports CTS/RTS hardware flow control. To support DTR, the cable must connect pin 20 on the DB-25 connector to pin 1 on the Mini DIN-8. To support CTS/RTS, the cable must connect pin 5 on the DB-25 connector to pin 2 on the Mini DIN-8 and pin 4 on the DB-25 connector to pin 1 on the Mini DIN-8. Contact your modem vendor or Apple-authorized dealer to obtain the necessary cable.

Open Transport/PPP and Apple Remote Access Compatibility

Open Transport/PPP and ARA versions 1.0, 2.0, 2.0.1, and 2.1 are fully compatible and can be used on the same system. Only one can be used at a time.

Versions of ARA before 2.1 install modem scripts directly in the Extensions folder. To make sure that these scripts appear as choices in the Modem control panel, move them to the Modem Scripts folder in the Extensions folder.

ARA 2.1 installs its scripts in the Modem Scripts folder with Extensions. If you are using ARA 2.1, you must install Open Transport/PPP after ARA 2.1 to get a set of scripts in the Modem Scripts folder that works optimally with both products. The Open Transport/PPP scripts support certain modem-based features, such as error correction and data compression, that improve PPP performance. The ARA 2.X scripts may not support these features.

Also, some scripts included with ARA 2.1 are no longer installed with Open Transport/PPP. These scripts are left on your disk by the Open Transport/PPP installer. They may be usable with Open Transport/PPP, but have not been tested for compatibility by Apple.

Registered User or Guest?

If your PPP server does not require a user name and password, or if the server requires only that you enter a name and password in a terminal window, you can select the Guest mode button in the PPP control panel. This will hide the Name and Password fields and will cause the Connect button to be enabled as soon as you enter a phone number.

If your server requires a PPP user name and password instead of, or in addition to, a terminal server login, you must use the Registered User mode of the PPP control panel. In this mode, you must enter something in the Name and Number fields to enable the Connect button. If you leave the Password field blank, and "Save password" is not checked, you will be prompted to confirm that you want to connect without a password.

Connect Scripts

The following varStrings have been added to the CCL scripting language for the user name and password:

Name: ^11 or ^U
Password: ^12 or ^P

When the connect script is executed, these varStrings are substituted by the strings stored in the Name and Password fields of the PPP control panel.

When you record a connect script, and you have entered your name and password in the PPP control panel, the connect script that's recorded by the terminal window will replace those strings by the appropriate varStrings.

The ^U and ^P varStrings are provided as mnemonics for the user name and password, but they cannot be used as parameters of some CCL commands like IFSTR. With those commands, use the ^11 and ^12 varStrings instead.

Connection CCL scripts that use the password varString (^12) in WRITE commands do not log the password in clear text. The password is logged as bullets. This is true whether the user records the script or types it in.

More detailed information about the syntax of the CCL language used for both modem scripts and connect scripts is in the ARA Modem Scripting Guide.PDF file in the OT/PPP Extras folder. This file is in Adobe Acrobat format.

Manual Dialing

Procedures for establishing an Open Transport/PPP connection with manual dialing vary according to the type of modem you are using. To ensure that you can make a connection while using manual dialing, you may need to experiment with pressing the Connect button slightly before or after you hear the remote modem answer the phone.

Using an Express Modem or GeoPort Telecom Adapter

If you are using Express Modem software with either an Express Modem or a GeoPort Telecom Adapter, you must turn on 32-bit addressing in the Memory control panel. Using 24-bit addressing may result in incorrect behavior.

Using Global Village PC Card Products

The Global Village software included with your modem adds an entry to the "Connect via" pop-up menu of the Modem control panel called "PowerPort PC Card". Under some circumstances, an entry for the actual slot your PC Card is plugged into will show up as well ("Upper-slot", "Lower-slot"). These slot-specific items should not be used and the "PowerPort PC Card" item should be used instead or the port will be erroneously reported as busy.

Using an ISDN Terminal Adapter

Both Open Transport/PPP and ARA 2.1 support serial connection speeds of 115,200 and 230,400 bps. By doing so, Apple enables Macintosh users to make ARA and PPP connections over ISDN lines at 64 kbps or even 112 kbps if the ISDN terminal adapters at both ends support channel bonding and proper modem scripts are used.

NOTE: The "Connected at" line of the PPP control panel status box may not accurately reflect the connection speed of ISDN connections. A slower speed may be indicated because ISDN terminal adapter hardware does not report the establishment of second channel connections to the CCL script engine. This will usually happen if you use the Multilink PPP (MLPPP) version of an ISDN script.

Connection speeds of 115,200 and 230,400 bps are not supported by the serial ports on most older Macintosh computers. Here is a partial list of Macintosh models that do have fast serial port support:

- Macintosh Centris 660AV, Macintosh Quadra 660AV and Macintosh Quadra 840AV models
- Macintosh Performa 6100CD series
- Power Macintosh 6100, 7100, 7200, 7500, 7600, 8100, 8500, and 9500 models
- Workgroup Server 6150, 7250, 8150, 8550, and 9150 models

To set the built-in serial ports at 115,200 or 230,400 bps, a new serial driver called SerialDMA must be installed to replace the standard Macintosh serial device driver. SerialDMA is provided by Apple, and the current version is 2.0.2. It is highly recommended that the file Serial (Built-in) be installed in the Extensions folder as well on Macintosh models with PCI slots to support these high speeds (38,400 bps and above). System 7.5.3 or later includes the latest version of SerialDMA and the file Serial (Built-in).

NOTE: In general, ISDN terminal adapters have more configuration options than conventional modems. At this time it is not possible for Apple to support all combinations of these options for all the ISDN terminal adapters that are supported. We have attempted to write scripts that work with the most common ISDN configurations. You may have to get a revised script from your Internet service provider or network administrator if your server uses different options. You can also modify a script yourself using the Modem Script Generator or by editing the script text directly.

How to Turn Off or Remove Open Transport/PPP

To disable and remove Open Transport/PPP software by using the Custom Remove option in the Installer, follow these steps:

1. Open the Installer application included with Open Transport/PPP 1.0. The Welcome to the Apple Installer screen appears.
2. Click the Continue button. The Open Transport PPP Installation screen appears
3. Choose Custom Remove from the pop-up menu in the upper-left corner.
4. In the list that appears, select the files you would like to remove by clicking the box next to each file so that an "X" appears in it. To completely remove Open Transport/PPP, you should select all the files listed.
5. Click the Remove button. If a window appears asking you whether to quit any open applications, click Continue. A window will appear telling you to restart your computer.
6. Click the Restart button.
7. Reinstall and configure your previous SLIP/PPP software as required.

To disable Open Transport/PPP without using the Installer, follow these steps:

NOTE: Although the PPP and Modem control panels appear in the Extensions Manager, there is no component in the Extensions Manager that lets you disable Open Transport/PPP. To disable Open Transport/PPP without using the Installer, you must follow the instructions given here.

1. Move the OpenTpt Remote Access, OpenTpt Modem, and OpenTpt Serial Arbitrator shared libraries from the Extensions folder in the active System Folder.
2. Move the PPP Commands file from the Scripting Additions folder in the Extensions folder.
3. Move the PPP and Modem control panels from the Control Panels folder in the active System Folder.
4. Restart your computer.

It is not necessary to move the Modem Scripts folder from the Extensions folder.

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Tech Info Library Article Number:20628



Tech Info Library

Open Transport/PPP 1.0: Troubleshooting (11/96)

Revised: 2/17/97
Security: Everyone

Open Transport/PPP 1.0: Troubleshooting (11/96)

Article Created: 11 November 1996

TOPIC -----

This article provides some troubleshooting techniques to common issues.

DISCUSSION -----

Your modem is not listed in the Modem control panel

The modem script for your modem might not be properly installed. Refer to the OT/PPP Read Me file in the Open Transport/PPP folder on your hard disk for the list of modem scripts that came with OT/PPP. Modem scripts should be in the Modem Scripts folder, which is located in the Extensions folder (in your System Folder). If you do not have the script, check with one of the following sources to see if a modem script is available:

- your modem manufacturer's technical support line
- your Apple-authorized dealer
- Apple's World Wide Web site (<http://www.apple.com>)

You are unable to make a call

If you cannot make a call, something may be wrong with your telephone line, your modem, or the modem setup.

- Make sure your modem is connected properly and turned on. Refer to your modem documentation if you have any problems.
- Make sure your modem type and port are correctly selected in the Modem control panel.

You cannot hear the modem working

Most modems have built-in speakers that let you hear that the modem is working. While connecting to a remote server, you can hear the dial tone, the tones of the numbers being dialed, and the sounds of the modems communicating with each

other. After a connection is successfully established, the modem typically turns the speakers off. If you cannot hear these sounds, try the following:

- Make sure that the Sound option in the Modem control panel is set to On.
- If your modem has a volume control, make sure that it is not turned all the way down.

You are unable to connect to a server

If your modem is working but you cannot connect to the server, try the following suggestions, in the order in which they are listed here, until you are able to connect:

- Verify the phone number of the server you are trying to call. Dial the number using a regular telephone and listen for the "whistle" of a modem. Make sure that you are calling a PPP server.
- Make sure you are a registered user on the server or that the server is set up for guest access. If you try to connect as a registered user, check that you have entered your user name and password correctly. Passwords are "case-sensitive"—capitalization matters.
- You may need to create pauses while the telephone number is being dialed. Insert a comma between parts of the number where a pause might be needed. Inserting a second comma lengthens the pause. For example, the following entries cause OT/PPP to dial a "9" to get an outside line, then pause before dialing the rest of the number:
 9, 555-1234
 9,, 555-1234
- Make sure you are using the correct modem script for your modem, and that the script came from Apple or the manufacturer of your modem. To test if the problem is your modem and script, try connecting with a different modem.
- The server you are calling may require that you log in to a command-line host through a terminal window. Try selecting the "Connect to a command-line host" protocol option. (From the PPP control panel, click the Options button, then click the Protocol tab to display the protocol options.)
- The server you are calling lets you connect directly, but you have selected the "Connect to a command-line host" protocol option. Try turning this option off. (From the PPP control panel, click the Options button, then click the Protocol tab to display the protocol options.)
- Try deselecting the "Allow error correction and compression in modem" protocol option. (From the PPP control panel, click the Options button, then click the Protocol tab to display the protocol options.)

You cannot maintain the connection

If you are losing the connection, check the following:

- Servers sometimes develop problems that log users out without explanation. Try calling back later. You might also try a different service provider.
- If you have call waiting, an incoming call can interrupt the connection. In the PPP control panel, precede the phone number with the code to turn

off call waiting. Check with your telephone company to find out the code to use.

- Many servers automatically end a connection if it is inactive for a certain time. Check with your Internet service provider or network administrator.
- Some combinations of modems work better than others. Your modem may not be a good match for the modem of the server you are calling. If possible, try calling an alternate number for the server or using a different modem.
- You may have noisy phone lines. If you can hear a "crackle" during a normal voice call, have your line checked by your phone company.

You are unable to dial manually

If you have trouble using the Dial Manually feature, contact the modem manufacturer to be sure the modem script has been upgraded to support the latest features available with OT/PPP.

OT/PPP connects when you start your Macintosh

If you do not want OT/PPP to connect automatically to the Internet when you start up your computer, make sure the "Load only when needed" checkbox in the TCP/IP Options dialog box has an X in it. You open the TCP/IP Options dialog box by clicking the Options button in the TCP/IP control panel. (If the Options button is not visible, you must set the User Mode to Advanced or Administration. Choose User Mode from the Edit menu to open the User Mode dialog box.)

TCP/IP applications do not start OT/PPP automatically

Be sure that the "Connect automatically when starting TCP/IP applications" option (in the PPP control panel's Connection options) is selected.

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Tech Info Library Article Number:20629



Tech Info Library

Open Transport & Microsoft Exchange: Network Error (11/96)

Revised: 11/11/96
Security: Everyone

Open Transport & Microsoft Exchange: Network Error (11/96)

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Article Created: 11 November 1996

TOPIC -----

I'm using Open Transport, with a fixed IP address, on my Macintosh connected with 10 Base-T Ethernet to a Microsoft NT Server running Microsoft Exchange mail server. When I launch Microsoft Exchange, I get the error message, "Network is not available." What is wrong?

DISCUSSION -----

You should not select to have TCP/IP load only when needed. To do this, open the TCP/IP control panel, select User Mode... under the Edit menu and choose either Advanced, or Administration. In the Advanced or Administration user mode you can click Options... and then deselect "Load only when needed" by clicking the checkbox to remove the "X". If no "X" is in the checkbox, this option is not selected.

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Tech Info Library Article Number:20630



Tech Info Library

PlainTalk 1.5: Read Me (1/97)

Revised: 1/20/97
Security: Everyone

PlainTalk 1.5: Read Me (1/97)

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Article Created: 11 November 1996
Article Reviewed/Updated: 20 January 1997

TOPIC -----

This article contains the ReadMe file for PlainTalk 1.5, which is available from:

http://speech.apple.com/ptk/readme_ptk.html

DISCUSSION -----

About PlainTalk 1.5

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PlainTalk is a collection of software that enables your Macintosh to speak written text and respond to spoken commands. PlainTalk 1.5 includes three components, each with its own installer: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition.

This document describes each of these three software packages, and discusses the differences between PlainTalk 1.5 and earlier versions of PlainTalk.

For more information about Apple Computer's speech software, please visit Apple's Speech web site at <http://www.speech.apple.com/>.

English Text-to-Speech

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. To install the English Text-to-Speech software, you need the following software and hardware:

- * any Macintosh or Power Macintosh computer
- * version 6.0.7 or later of system software
- * at least 300 kilobytes (K) of RAM in addition to what the rest of your system software requires
- * at least 5 megabytes (MB) of space available on your hard disk

On System 7.0 or later (System 7.1 or later if you have a computer with less than a 68020 microprocessor) the Text-to-Speech software includes a Speech control panel. In PlainTalk 1.5 and later, this Speech control panel includes a "Talking Alerts" options panel. If you use this to turn the Talking Alerts feature on, your Macintosh will speak the contents of alerts to you. (An alert appears, for example, when your printer runs out of paper while printing.) For more information about the English Text-to-Speech software, see the Using English Text-to-Speech document in the English Text-to-Speech folder.

Mexican Spanish Text-to-Speech

With the Mexican Spanish text-to-speech software installed, many Macintosh programs can read Spanish text out loud. To install the Mexican Spanish text-to-speech software, you need the following hardware and software:

- * a Power Macintosh computer or a Macintosh computer with a 68020, 68030, or 68040 processor
- * version 7.0 or later of system software
- * at least 1.3 MB of RAM in addition to what the rest of your system software requires
- * at least 2 MB of space available on your hard disk

For more information about the Mexican Spanish Text-to-Speech software, see the Using Mexican Spanish TTS document in the Mexican Spanish Text-to-Speech folder.

English Speech Recognition

With the English Speech Recognition package and the proper hardware, your computer can respond to spoken commands. The English Speech Recognition package includes the Speech Recognition system extension, the Speech control panel, and a utility called Speakable Items. With Speakable Items, whenever you say the name of an item inside the Speakable Items folder (which is inside the Apple Menu Items folder), the computer acts as if you double-clicked the item. You can turn Speakable Items on and off using the Speech control panel. You can also use the Speech control panel to set several preferences for how Macintosh Speech Recognition programs listen and respond. For example, you can set the Listening options in the Speech control panel so that the recognizer only listens while you hold down a key of your choice. When you use this option recognition accuracy is improved and misfires (when the computer thinks you spoke a command but you didn't) are eliminated. To install and use the English Speech Recognition software, including the Speakable Items software, you need the following hardware and software:

- * a Power Macintosh computer
- * system software version 7.5 or later
- * a 16-bit microphone, such as the Apple PlainTalk Microphone or the microphone built into some Apple audiovisual displays.

For more information about the English Speech Recognition software and the Speakable Items utility, see the Using Speech Recognition document in the English Speech Recognition folder. You can also learn more about Apple's speech

software -- and check for updates -- by visiting Apple's Speech web site at <http://www.speech.apple.com/>.

Differences between PlainTalk 1.5 and PlainTalk 1.4.1

PlainTalk 1.5 is a relatively minor update to PlainTalk 1.4.1. It contains a couple new features and a few bug fixes:

* The Speech control panel in PlainTalk 1.5 includes a new feature called Talking Alerts. If you use the Talking Alerts options in the Speech control panel to turn the Talking Alerts feature on, your Macintosh will speak the contents of alerts to you. (An alert appears, for example, when your printer runs out of paper while printing.) The Speech control panel is installed when you run any of the PlainTalk 1.5 installers -- English Text-to-Speech, Mexican Spanish Text-to-Speech, or English Speech Recognition.

* The English Speech Recognition installer for PlainTalk 1.5 installs a version of the Speech Recognition extension (version 1.5.1) that allows Speech Recognition to run on all shipping Power Macintosh computers and PowerPC-based PowerBooks** with 16-bit sound input. Version 1.4.1 of the English Speech Recognition installer installed an older version of the Speech Recognition extension (version 1.4.1) which did not work on some PowerPC-based Performas and PowerBooks that had shipped after PlainTalk 1.4.1 was released. Users of those computers had to separately install an updated Speech Recognition extension (version 1.5). That is no longer necessary.

** The following computers are in the PowerPC-based PowerBook computer family: PowerBook 5300, 5300c, 5300ce, 5300cs, 2300c, 1400c, and 1400cs. Additionally PowerBook 200 and 500 series computers which have PowerPC upgrade cards installed are included in the PowerPC-based PowerBook computer family.

* The Speakable Items utility (which gets installed when you run the English Speech Recognition installer) contains a few new default speakable items, including "Quit Application" and "Zoom Window".

* The Speakable Items utility now accepts numbers in item names. For example, if you make an alias to an application named "Super Application 4.3" and drag the alias to the Speakable Items folder, then you can open that application by saying "Open Super Application four point three", or "Open Super Application four three" or simply "Open Super Application". In earlier versions of the Speakable Items utility, numbers in item names were ignored.

* The "listen only while key(s) are pressed" feature (also known as the push-to-talk feature) in English Speech Recognition is now even more tolerant of noise or speech that occurs before the push-to-talk key is pressed, requiring little or no pause before pressing the key down and speaking a command. Using the push-to-talk feature increases recognition accuracy and eliminates misfires (when the computer misinterprets sounds not intended for the computer).

* The English Speech Recognition installer for PlainTalk 1.5 installs a version of the Speech Recognition extension (version 1.5.1) which has features and bug fixes that help developers create more robust speech recognition applications.

Developers can learn how to use speech recognition in their applications by visiting Apple's Speech web site at <http://www.speech.apple.com/>.

Differences between PlainTalk 1.5 and PlainTalk 1.4

PlainTalk 1.4.1 was a minor update to PlainTalk 1.4. It included a few bug fixes, including the following:

- * Version 1.4.1 and later of the Speech control panel (which is installed by version 1.4.1 and later of English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition) contains a fix to incompatibilities that version 1.4 of the Speech control panel had with HyperCard 2.3's popup menus when running on Power Macintosh computers.

- * Version 1.4 of the Speech control panel failed to run on some 68000 Macintosh computers (including Macintosh SE computers). Version 1.4.1 and later of the Speech control panel runs on all Macintosh computers with system software version 7.1 or later.

Differences between PlainTalk 1.5 and PlainTalk 1.3

Version 1.3 and earlier versions of the PlainTalk software had a single installer program that installed both text-to-speech and speech recognition. PlainTalk 1.4 and later contain three separate installers to make it easier to install just the parts that are appropriate for your needs: English Text-to-Speech, Mexican Spanish Text-to-Speech, and English Speech Recognition. You don't have to install them all.

However, if you are going to install version 1.5 of English Speech Recognition or Mexican Spanish Text-to-Speech then you should first install version 1.5 of English Text-to-Speech, even if you already have an older version of English Text-to-Speech installed. English Speech Recognition version 1.5 is a relatively minor update from versions 1.4 and 1.4.1, as described above. But English Speech Recognition version 1.5 (like versions 1.4 and 1.4.1) has some significant differences from the speech recognition software in version 1.3 and earlier versions of PlainTalk. Some features were eliminated to simplify speech recognition and make it more robust and usable. Other options have been added to increase accuracy and eliminate misfires.

- * Version 1.4 and later offers a new listening option in the Speech control panel, 3Listen only while key(s) are pressed,2 that lets you leave Speakable Items on all the time without worrying about misfires. It also improves the accuracy of recognition.

- * Version 1.4 and later works in a wider range of environments thanks to its improved adaptation to room acoustics.

- * Version 1.4 and later does not include or support Speech Macros, the Speech Macro Editor, or Speech Rules. It still supports speaking dialog buttons and the Speakable Items folder. Any item you place inside the folder becomes speakable<saying the name of the item launches or opens the item. You can use the AppleScript ScriptEditor to create scripts that are launched by speaking a command: just save the scripts inside the Speakable Items folder. To see

examples, look inside the Speakable Items folder.

* Version 1.4 and later runs on Power Macintosh computers only, and does not support Macintosh AV computers with 68040 processors. You can continue to use PlainTalk 1.3 on 68040 Macintosh AV computers.

* Version 1.4 and later does not include automatic support for recognizing the spoken names of menu commands. You can still manipulate scriptable programs, such as the Finder, using AppleScript commands. To see examples, look inside the Speakable Items folder.

Deciding whether to upgrade to version 1.5

(if you are currently running version 1.3 or earlier)

In general, version 1.5 offers a more robust and flexible set of features than version 1.3 or earlier versions. However, some people in special circumstances may do better with version 1.3.

* If you have a Macintosh AV computer that has a 68040 processor and you use PlainTalk 1.3's speech recognition capabilities, Apple recommends that you continue using version 1.3 of the PlainTalk software. Though the new text-to-speech software works with these non-PowerPC-based computers, the new speech recognition software does not (because it runs on Power Macintosh computers only). It is not recommended that you mix versions, using the old recognition software with the new text-to-speech software.

* If you make extensive use of PlainTalk 1.3's Speech Macros, the Speech Macro Editor, or the ability to speak menu commands, then you might want to continue using version 1.3. As part of the effort to make the software more robust, version 1.4 and later of English Speech Recognition supports Apple's standard AppleScript ScriptEditor instead of the Speech Macro Editor, and it does not support the ability to speak menu items.

This article was published in the Information Alley on 11 November 1996.

Article Change History:

20 Jan 1997 - Added information about PPC-based PowerBook computers.

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Tech Info Library Article Number:20631



Tech Info Library

MAE & UNIX AppleTalk Software May Conflict (11/96)

Revised: 11/13/96
Security: Everyone

MAE & UNIX AppleTalk Software May Conflict (11/96)

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Article Created: 13 November 1996

TOPIC -----

Under some circumstances, MAE at startup may report that another host with the same name is already on the network. Changing the host name in the Network control panel does not prevent this message. What is wrong?

DISCUSSION -----

AFP (AppleTalk Filing Protocol) server software for UNIX systems like KAShare, KIP/CAP, Ushare, and so on may be causing what you report. For example, KAShare modifies the UNIX kernel to support AppleTalk, as MAE does, similar AFP UNIX server packages may have conflicts as well.

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Tech Info Library Article Number:20634



Tech Info Library

Apple Network Administrator Toolkit Software License (11/96)

Revised: 11/13/96
Security: Everyone

Apple Network Administrator Toolkit Software License (11/96)

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Article Created: 13 November 1996

TOPIC -----

The following information is a part of the documentation that accompanies the product 435036U -- Apple Network Administrator Toolkit. This is the User License information.

For more product information see Tech Info Library article, "Apple Network Administrator Toolkit Specifications."

DISCUSSION -----

Apple Computer, Inc.
Apple Network Administrator Toolkit
10-User Software License Agreement

2. Permitted Uses and Restrictions. The License allow you to install and use the Administration Software on a single Apple-labeled or Apple-licensed computer at a time and the Server Software on a single Apple-labeled or Apple licensed computer at a time. You may also copy and install the Client Software, AppleShare Agent and FirstClass Agent ("Client Software") on up to ten (10) Apple-labeled or Apple-licensed computers owned and/or operated by you by installing the Client Software onto the respective hard disk of each such computer. In addition, you may make one copy of the Apple Software in machine-readable form for backup purposes only.

Summary

- 1 - copy of the Administer software maybe installed.
- 1 - copy of the Server Software maybe installed on only one server at a time.
- 10 - copies of the Client software maybe installed on only 10 CPUs at a time.

IMPORTANT:

Additional copies of the Apple Network Administrator Toolkit manual may be purchased separately. For further information or to place an order, call 800-544-8554.

Clarix offers computer purchasing solutions fro both Clarix and Apple software products. If you have questions about licensing the Apple Network Administrator Toolkit, or other Clarix and Apple Products, please call 800-358-3395.

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Tech Info Library Article Number:20635



Tech Info Library

PowerBook 1400: SoftWindows 95 Cannot Read CDs (11/95)

Revised: 11/14/96
Security: Everyone

PowerBook 1400: SoftWindows 95 Cannot Read CDs (11/95)

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Article Created: 14 November 1996

TOPIC -----

I have installed Insignia Solutions SoftWindows '95 on a PowerBook 1400 series computer. Everything seems to function as expected when I am working in SoftWindows '95 except that it does not recognize anything in the CD-ROM drive in the Windows environment.

DISCUSSION -----

SoftWindows '95 needs to be upgraded to version 1.0.2 or later in order to recognize ATAPI interface CD-ROM drives (like the CD-ROM drive in the PowerBook 1400 series computers). A patch to version 1.0.2 can be found on the Insignia Solutions' ftp site: [ftp.insignia.com](ftp://ftp.insignia.com).

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor, Insignia, for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the Information Alley on 14 November 1996.

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Tech Info Library Article Number:20637



Tech Info Library

PowerBook 270c: Cannot Use Apple HD SC Setup 7.3.5 (11/96)

Revised: 11/15/96
Security: Everyone

PowerBook 270c: Cannot Use Apple HD SC Setup 7.3.5 (11/96)

=====

Article Created: 15 November 1996

TOPIC -----

If you try to reformat the 240 MB hard drive that came in the Macintosh PowerBook Duo 270c computers with Apple HD SC Setup 7.3.5 application (which comes System 7.5.3), the formatting process stops at the verification stage when it produces an error that halts the formatting.

DISCUSSION -----

Apple HD SC Setup 7.3.5 cannot format or initialize the 240 MB hard drive that comes with PowerBook 270c computers. You need to use Apple HD SC Setup 7.3.2, which came with System 7.5, or an earlier version.

There are only two features that are included in Apple HD SC Setup 7.3.5, but are not included in version 7.3.2: support for 4 GB hard drives and support for multiple Macintosh volume partitions.

This article was published in the Information Alley on 15 November 1996.

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Tech Info Library Article Number:20640



Tech Info Library

Macintosh Performa 6400: Which Modem is Included? (11/96)

Revised: 11/22/96
Security: Everyone

Macintosh Performa 6400: Which Modem is Included? (11/96)

Article Created: 15 November 1996
Article Reviewed/Updated: 22 November 1996

TOPIC -----

Is there a way to identify which modem--Geoport or Global Village--was included with my Macintosh Performa 6400 series computer?

DISCUSSION -----

In order to identify the type of modem a Macintosh Performa 6400 series computer contains, use any of the following information:

1) Check the last three characters of the serial number and compare it to the information below:

=====+=====+=====+=====			
Computer	Part Number	Last 3 Characters of Serial Number	Modem Included
=====+=====+=====+=====			
Performa 6400/180	M5167LL/A	7U7	Global Village
		95R	Geoport
-----+-----+-----+-----			
Performa 6400/200	M5168LL/A	836	Global Village
		95S	Geoport
-----+-----+-----+-----			

2) Compare the manuals in the "Using Your Modem" package (which was included with your computer) with those described below:

=====+=====+=====+=====

Global Village Modem	Geoport Modem
----------------------	---------------

=====+=====	
Read Me First: About Your Modem	Apple TeleCom Manual
-----+-----	
TelePort Platinum V	Using Your Modem, Fax, Internet,
Telecommunications Card User's Guide	and Other Telecommunications Programs
-----+-----	
Apple Address Book: User's Guide	
-----+-----	
Apple Fax: User's Guide	
-----+-----	

3) Within the Communications module in ClarisWorks, type AT11 and compare the results obtained to the list below:

=====+=====	
Result Codes	Modem Installed
=====+=====	
240	Global Village Platinum 28.8
-----+-----	
0	Apple Geoport 28.8
-----+-----	
255	Global Village 14.4
(should not be included in Macintosh Performa 6400 computers)	
-----+-----	

Article Change History:
22 Nov 1996 - Added Result Codes section.

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Tech Info Library Article Number:20642



Tech Info Library

Newton Connection Kit 2.03 for Windows: Read Me File (4/97)

Revised: 5/1/97
Security: Everyone

Newton Connection Kit 2.03 for Windows: Read Me File (4/97)

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Article Created: 15 November 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains the Newton Connection Kit 2.03 for Windows readme file.

DISCUSSION -----

Welcome to Newton Connection 2.03 for Windows. This package contains a patch to replace the current Newton Connection 2.00. This document contains information about the installation of the product and details about the problems it fixes.

CONTENTS

=====

- I. Updating the Newton Connection Kit to version 2.03
- II. Release Notes for Newton Connection 2.03
 - 1. Equate Spreadsheet import problem fixed
 - 2. Motorola Marco names problem fixed

I. Updating the Newton Connection Kit to version 2.03

=====

To upgrade your existing version of the Windows Connection Kit to version 2.03, simply copy the following four files to a floppy diskette:

INSTALL.BAT
PATCH.EXE
PATCT.RTP
README.WRI

Once the floppy diskette is created with the 4 files, run the INSTALL program from a DOS prompt by typing A:\Install. The INSTALL program will locate your existing NEWTON.EXE and update it to version 2.03 of the Windows Connection

Kit.

II. Release Notes for Newton Connection 2.03

=====

1. Equate Spreadsheet import problem fixed

The previous version of Windows Connection Kit did not allow spreadsheet data to be imported and synchronized with Equate. This problem has been corrected. Importing data with Equate requires translators provided by Holosoft Inc. If you have not received these translators, contact Holosoft at 408.748.9648.

2. Motorola Marco names problem fixed

On the Motorola Marco, email data fields would not display in the Names overview. This has been fixed so that all data associated with internal apps is now visible within the Overview window. This fix requires new synchronization files to be generated in order to display all data.

Article Change History:

28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:20643



Tech Info Library

LaserWriter Fax Tune-Up: Supported Printers (11/96)

Revised: 11/15/96
Security: Everyone

LaserWriter Fax Tune-Up: Supported Printers (11/96)

=====

Article Created: 15 November 1996

TOPIC -----

What printers are supported with the LaserWriter Fax Tune-Up software.

DISCUSSION -----

The LaserWriter Fax Tune-Up software fixes a problem with the following fax cards:

Apple LaserWriter Select 360
Apple LaserWriter Pro 810

The Apple LaserWriter 16/600 PS fax card does not have the problem, so the LaserWriter Fax Tune-Up is not needed.

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Tech Info Library Article Number:20644



Tech Info Library

LaserWriter 10/600 A3 Plus: Press Release -China only- (11/96)

Revised: 11/15/96
Security: Everyone

LaserWriter 10/600 A3 Plus: Press Release -China only- (11/96)

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Article Created: 15 November 1996

TOPIC -----

This article contains the LaserWriter 10/300 A3 Plus press release. This LaserWriter printer is only available in China.

DISCUSSION -----

Apple Announces Integrated Solution for China's Entry-Level and Corporate Publishing Market Includes Apple's First A3 Laser Printer with Full Bleed

Beijing—November 8, 1996... Apple Chairman and CEO Dr. Gilbert F. Amelio today underscored Apple's commitment to China's publishing market, announcing a low-cost, integrated publishing solution aimed at entry-level users, small- to medium-sized publishers, and corporate customers.

The Quick Start Publisher Pro solution, the first of its kind created specifically for China, combines the latest technology from Apple with leading third-party software applications and fonts. It also includes the Apple LaserWriter 10/600 A3 Plus printer, Apple's first laser printer supporting full-bleed printing on A3 paper.

"China is a market of great strategic importance to Apple," said Dr. Amelio. "Apple believes its strengths in publishing, education, graphics, design, and multimedia applications are very attractive to this high growth market. With solutions specifically targeted at Chinese customers, Apple will have a unique competitive advantage. We intend to continue working closely with our Chinese partners to be a significant participant in the Chinese information market, over the long term."

Quick Start Publisher Pro is designed to deliver what entry-level publishing customers want, including an affordable price, A3 printing capabilities, and high-quality, bundled software. It comes with everything needed to get started, and will run on any Power Macintosh 7200, 7600, 8500, or 9500.

"Quick Start Publisher Pro offers everything that commercial printers and corporate clients have been asking for: ease of use, power, value, and superior typography," said Vincent Tai, General Manager of Apple China/Hong Kong. "These products offer superior value for the entry-level publishing market—from the world's leading publishing vendor."

"With Quick Start Publisher Pro, we are launching the Apple LaserWriter 10/600 A3 Plus printer, a first-of-its-kind design from Apple," said Maury Austin, Vice President of Apple Imaging Division. "It delivers the features that customers in China need most—fast two-byte printing, PostScript support through QuickDraw GX, and printer sharing."

Fast, Full-Bleed A3 Printing

The Apple LaserWriter 10/600 A3 Plus offers 600 dot-per-inch resolution and full-bleed printing on A3 pages. It comes with PostScript conversion software that allows users to print Encapsulated PostScript (EPS) files while sharing the printer over a network. In addition, by using a separate PCI card as the controller and a video connection, the Apple LaserWriter 10/600 A3 Plus printer provides extremely fast throughput of Chinese text and images—up to 10 pages per minute on A4-size paper and 5 ppm on A3-size paper.

Mac OS: Powerful Graphics, Type, and Color Capabilities

The Mac OS is the system software of choice in the publishing industry, and Quick Start Publisher Pro offers a unique solution for working with colorful graphics and Chinese type.

QuickDraw GX, which is built into the Mac OS, is Apple's color publishing platform for printing documents and drawing graphics and text. It provides a rich set of typography features, a sophisticated graphics system, and a more reliable, more consistent use of color.

Using the QuickDraw GX-based software in Quick Start Publisher Pro, for example, users can combine Chinese characters and Roman text horizontally or vertically, reading left-to-right or right-to-left. Because QuickDraw GX treats characters as graphic elements, users can manipulate text in a number of ways. For example, they can scale, skew, and rotate characters, or alter a font's outline and change its ink density to give it a more hand-drawn look.

With WorldScript, the Mac OS technology which supports multiple languages, users can mix Chinese and English—or any other major language—within a single document.

Once satisfied with a document, users can print exactly the same image they see on the screen—with colors, positioning, and orientation all intact—or they can create Portable Digital Documents that can be viewed without the same fonts or application on other systems, and printed correctly on any printer.

Whether outputting to paper or saving as a digital document, users can get more predictable and accurate color with ColorSync, Apple's system-level color technology for Mac OS. ColorSync automatically matches the color profiles of applications, scanners, digital cameras, displays, and printers that do not share the same color range.

Pre-Installed Software

To provide a complete publishing solution, Quick Start Publisher Pro comes with a variety of page-layout, illustration, font, and clip-art applications. This software bundle includes Ready-Set-Go! GX from Daiwan Software; Lightning Draw GX from Lari Software; GX fonts from DynaLab and Sinotype; and 1,000 clip-art images from T-Maker.

Publishing Leadership, China Initiatives

Macintosh is the worldwide platform of choice for publishing professionals. In the world's biggest publishing market, the U.S., 80% of all computers used for color publishing jobs in the advertising, graphic design, printing, publishing and prepress industries are Macintosh, according to a 1996 study by Griffin Dix Research Associates.

In China, Apple is committed to sharing its expertise and experience with the publishing industry. In November 1994, for example, Apple opened the Apple Publishing Technology Center, the first of its kind in China. Established in partnership with the China Research Institute of Printing Science and Technology, a research organization under the Press and Publication Administration of China, and with the cooperation of 15 other vendors who provided key publishing hardware and software, the center today offers a wide range of services, including system integration, consulting, training and high-quality output services.

Today's announcement underscores Apple's long-term commitment to the Chinese publishing market, and the company's belief that the Mac OS provides the best available Chinese-language computing solution.

Pricing and Availability

Quick Start Publisher Pro will be available in December from Apple authorized resellers in China for about US\$2,000. It comes standard with the Apple LaserWriter 10/600 A3 Plus with PCI card, Ready-Set-Go! GX, Lightning Draw GX, DynaLab and Sinotype fonts, and T-Maker clip art. Customers can use the solution with any Power Macintosh system.

Apple Computer, Inc., a recognized innovator in the information industry and leader in multimedia technologies, creates powerful solutions based on easy-to-use personal computers, servers, peripherals, software, personal digital assistants and Internet content. Headquartered in Cupertino, California, Apple develops, manufactures, licenses and markets solutions, products, technologies and services for business, education, consumer, entertainment, scientific and engineering and government customers in more than 140 countries.

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Tech Info Library

Power Macintosh 4400 Series (non-USA): Description (11/96)

Revised: 11/18/96
Security: Everyone

Power Macintosh 4400 Series (non-USA): Description (11/96)

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Article Created: 18 November 1996

TOPIC -----

This article contains the description for the Power Macintosh 4400 series computers.

IMPORTANT: The Power Macintosh 4400 Series is currently only available in Europe.

DISCUSSION -----

Apple's Power Macintosh 4400/160 combines affordability with high performance to provide an ideal system for small and medium-size businesses, education institutions, home offices, and for running productivity applications in any size of organization. Based on high-performance RISC technology, the Power Macintosh 4400/160 computer features a 160-megahertz PowerPC 603e processor.

The three industry-standard Peripheral Component Interconnect (PCI) expansion slots on the Power Macintosh 4400/160 let you customize the Power Macintosh 4400/160 computer easily to more precisely meet your needs. You can find many PCI cards for a variety of uses, including graphics, storage, and high-speed networking.

The Power Macintosh 4400/160 can be connected to a variety of high resolution displays, including the 14" Multitple Scan, 15" Multitple Scan, 15" Multitple Scan AV and Multitple Scan 1710 displays, offering a wide range of viewing capabilities at various price points.

Built-in LocalTalk networking is provided for easy connections to printers and file servers and a PCI card can be added to the Power Macintosh 4400/160 for connection to the Ethernet or other highspeed networks.

So whether you need power and expandability for everyday number crunching, office productivity, or an innovative multimedia project--or want a fast, easy way to get started with the Internet--the Apple Power Macintosh 4400/160 offers

the features you need at an affordable price.

Features

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High performance

- * 160 MHz PowerPC 603e processor
- * Built-in floating-point processor and internal 32K cache
- * Optional 256K Level 2 cache
- * 2D graphics acceleration

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 8X ATAPI CD-ROM drive
- * 16-bit stereo audio input and output

Expandability

- * Three industry-standard PCI expansion slots (45 Watts combined power allowance for all three slots)
- * External SCSI connector for external hard disks, CD-ROM drives, and other SCSI devices
- * Up to 96 MB of system memory
- * Up to 4MB of graphics memory

Compatibility

- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs most 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats

System 7.5 Software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

Ordering Information

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Power Macintosh 4400/160

* Power Macintosh 4400/160 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB IDE hard disk drive and an internal eight-speed ATAPI CD-ROM drive. Includes keyboard & mouse; system software version 7.5.3 or later; complete setup, learning, and reference documentation and limited warranty.

Power Macintosh GeoPort Telecom Adapter

Order No. M3127**/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20646



Tech Info Library

LaserWriter Printer Driver 8.4.1 & PageMaker 6 Issue (11/96)

Revised: 11/19/96
Security: Everyone

LaserWriter Printer Driver 8.4.1 & PageMaker 6 Issue (11/96)

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Article Created: 18 November 1996

TOPIC -----

I have just upgraded to LaserWriter 8.4 or 8.4.1 and now whenever I print from PageMaker 6, I get an extra blank page printed.

DISCUSSION -----

This is a known issue between PageMaker 6.0 and LaserWriter driver 8.4 or 8.4.1. There have also been reports of what you describe occurring with Freehand 5.5 and PhotoShop 3.0.4, however, we have not been able to reproduce this issue with these applications.

A workaround is to hold the option key down when choosing Print from the File menu. The Option key forces PageMaker to use the LaserWriter driver instead of PageMaker's internal driver.

As a longer term solution, we have alerted Adobe to this issue. Apple Engineering will also be putting a workaround to this in place with future revisions of the LaserWriter printer driver.

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Tech Info Library Article Number:20647



Tech Info Library

TextBridge 3.0H & Other Supported Scanners (11/96)

Revised: 11/18/96
Security: Everyone

TextBridge 3.0H & Other Supported Scanners (11/96)

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Article Created: 18 November 1996

TOPIC -----

Does the new TextBridge 3.0H software support any scanners other than the Apple Color OneScanner 600/27 and 1200/300?

DISCUSSION -----

The TextBridge manual we distribute with the Apple Color OneScanner 600/27 and 1200/30 answers your question.

The TextBridge application will support a variety of scanners, those that are TWAIN compatible, those listed both in the TextBridge manual on pages 1-5 and 2-8, and those on their web page. The two scanner drivers bundled with the Color OneScanners provide support for the Apple Color OneScanner 600/27 and 1200/30.

The TextBridge version Xerox Imaging Systems distributes comes with more drivers. Also, on page 1-5 of their manual lists approximately 30 supported drivers from Pixel Translations Incorporated. (We believe Pixel Translations Inc. is now a part of Cornerstone Imaging.)

Cornerstone Imaging may be reached at:
<http://www.cornimage.com>

Xerox can be reached at:
<http://www.xerox.com>

TextBridge information may be obtained at:
<http://www.xerox.com/xis/tbpro30mac/>

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Tech Info Library Article Number:20648



Tech Info Library

Power Macintosh 4400: Read Me (11/96)

Revised: 11/18/96
Security: Everyone

Power Macintosh 4400: Read Me (11/96)

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Article Created: 18 November 1996

TOPIC -----

This article contains the ReadMe file for the Power Macintosh 4400 series computers.

IMPORTANT: The Power Macintosh 4400 series is currently available only in Europe.

DISCUSSION -----

This document provides late-breaking information that could not be included in your user's manual.

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Tips

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Installing Peripheral Component Interconnect (PCI) Cards

Some PCI cards must be installed in a particular slot in your computer. Consult the PCI card's user's manual, ReadMe file, or the card manufacturer to determine if the card you are installing must be installed in a certain slot.

Troubleshooting

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IMPORTANT: For more troubleshooting information on the problems described below and on other topics, refer to Macintosh Guide (available in the Guide menu when the Finder is active). The manuals that came with your computer may also contain helpful information.

Problems when Resetting Parameter RAM (PRAM)

When you restart your computer while holding down the key combination Command-Option-p-r, the PRAM is not reset. To successfully reset the PRAM,

restart the computer but do not hold down the key combination until after you hear the computer's startup sound (usually a musical chord, chime, or beep).

Problems Turning off System Extensions

When you hold down the shift key while starting or restarting your computer, the system extensions are not turned off. To successfully turn off system extensions, start or restart the computer but do not hold down the Shift key until after you hear the computer's startup sound (usually a musical chord, chime, or beep).

Problems Using a Video Adapter

When you use a video adapter to connect a VGA display after using an RGB display with your computer, the VGA display is at a lower resolution than the RGB display. When you use a video adapter to connect a VGA display and an RGB display, the VGA display cannot provide the same resolution as the RGB display.

Printing Problems

* You have trouble printing on a StyleWriter or StyleWriter II printer. Use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver; it is not compatible with PowerPC-based computers.

* You can't use the "Print Later" option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the "Print Later" option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension and restart your computer.

To turn off the Assistant Toolbox extension:

1. Open the Apple (*) menu and choose Control Panels.
2. Open the Extensions Manager control panel.
3. In the list of extensions, click next to the Assistant Toolbox extension to remove the check mark.
4. Restart your computer.

* You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer. This problem can occur when the amount of memory Stickies uses is set below 150K. Try increasing the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

Performance Problems

* You see a message that not enough memory is available. This problem can occur for several reasons. For detailed tips on memory-related problems, refer to both the troubleshooting information in the manuals that came with your computer, and to the information on memory in Macintosh Guide (available in the Guide menu

when the Finder is active).

* If this problem occurs after you have opened the Extensions folder in the System Folder and scrolled through a long list of extensions, you can restore normal performance by restarting your computer.

* Microsoft applications such as Microsoft Word, PowerPoint, or Microsoft Excel display messages that not enough memory is available and that you need to increase the size of memory available. Try quitting all applications before launching Microsoft applications. This will free additional memory for the application. If this does not work, then try turning on virtual memory providing additional memory for the application and system. The documentation that came with your computer may contain more information about virtual memory.

Problems with Sound

HyperCard version 2.3.3 or earlier does not record sound properly on your computer. Other sound recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

Problems Using a RAM Disk

You notice performance problems when using a RAM disk. Make sure the RAM disk size is not set to 100% or you may experience performance problems.

Problems with Programs Freezing or Quitting Unexpectedly

* Maple V quits unexpectedly when you change your monitor resolution. This can occur if you use the Control Strip to change the monitor resolution while the Maple V program is active. Use the Monitors & Sound control panel instead of the Control Strip to change screen resolution. For instructions on using the Monitors & Sound control panel, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

* When you try to install Adobe Premiere Deluxe, the mouse freezes. This can occur if you have virtual memory turned on and AppleTalk active when you try to install Adobe Premiere Deluxe. Turn off virtual memory and make AppleTalk inactive before installing. For instructions, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

This problem does not occur if you select Adobe Premiere 4.2 installation instead of Adobe Premiere Deluxe.

Problems With Monitors

* You have difficulty choosing a video resolution that works well with your hardware. To select the best video resolution to use with your display and computer, use the control strip displayed in the bottom left corner of your screen. (If the control strip is not visible, display it by choosing Control Strip from the Control Panels menu available under the Apple menu.) The recommended resolutions are listed in a plain font. The resolutions listed in italics may not work with your hardware.

* While using video mirroring (a second monitor connected to your computer that shows the same images displayed on the first monitor), you restart or shutdown your computer and both of your monitors appear black or gray when the computer starts up again. Unplug the monitor cable that is connected to the PCI video card in your computer and restart the computer. Or, if you still want to use video mirroring, leave the second display connected to the PCI video card and turn video mirroring off in the Monitors & Sound control panel (available under Control Panels in the Apple menu) before restarting or shutting down your computer. When your computer has restarted, you may turn video mirroring back on in the Monitors & Sound control panel.

Compatibility Problems

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DOS Compatibility Cards

PCSetup is an application program that comes with DOS compatibility cards. PCSetup version 1.5 or earlier may not work with your computer due to minor incompatibility problems.

If you have the DOS compatibility card sound cables installed then the output from the audio will be reversed.

CDPlusGraphics

Your computer displays error messages when you use the CDPlusGraphics application to play a CD-ROM disc that contains both sound and graphics. The graphics tracks of CD+G discs and MIDI tracks of CD+MIDI discs cannot be played on the internal CD-ROM drive in your computer. (However, the audio tracks of these CDs can be played.) To play CD+G and CD+MIDI discs, use an external SCSI CD-ROM drive.

At Ease for Workgroups 3.0 and 3.0.1

In the At Ease Setup program, the "Lock startup volume" check box in the User Settings dialog box is dimmed and unavailable. To make the check box available, install the At Ease for Workgroups Updater version 3.0.2, which is in the Apple Extras folder on the system software CD that came with your computer.

If you are using a version of At Ease prior to 3.0.2, do not remove the "At Ease ATA Extension" in your Extensions folder. (This extension prevents the "Lock startup volume" check box from being available.) If you are using At Ease 3.0.2 or later or you are not using At Ease at all, you may remove the "At Ease ATA Extension."

For more information, refer to the SimpleText file in the the At Ease for Workgroups Updater folder in the Apple Extras folder on the system software CD that came with your computer.

Ethernet Cards

* The Ethernet CS II Card requires Open Transport software. To use Open Transport, open the Network Software Selector application in the Apple Extras folder, and select Open Transport networking. Then use the AppleTalk and TCP/IP control panels to set up networking with the Ethernet CS II Card. (Do not use the Network and MacTCP control panels.)

* MacIPX is not supported currently by Open Transport and therefore does not work with the Ethernet CS II Card or with any Ethernet PCI card.

* The currently shipping versions of Apple IP Gateway and AppleTalk Internet Router are not compatible with Open Transport.

Japanese and Chinese Language Kits

* To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

* To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

STF PowerFax PE

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Emagic Logic Version 2.0.1

In order to use Emagic Logic version 2.0.1, the MIDI Manager extension may be required to enable this onto your computer. Similar applications may also require the MIDI Manager extension.

PCI Video Cards

* The Targa 1000 video card cannot be used with Adobe Premiere version 4.2.1 to capture movies on your computer (although other movie display and editing functions are still available).

* In order to use the Targa 2000 card, you must install it in slot 2 and turn virtual memory off. The manuals that came with your computer may contain more information about turning virtual memory off.

* In order to use Number 9's Imagine 128 video card with the HawkEye control

panel version 4.0.6, you must install the card in either slot 1 or slot 2. If you do not install this control panel, the card can be installed in slots 1, 2, 3, 4, or 5. This card functions best when connected to a multi sync monitor.

* In order to use the Media 100qx card, you must install it in slot 2 and turn virtual memory off. The manuals that came with your computer may contain more information about turning virtual memory off. Also note that this card has special configuration requirements--consult the card's manufacturer to configure your system for best performance.

* In order to use the ATI XClaim GA video card, you must have SGRAM video memory installed in your computer. This card is not compatible with systems containing EDO and SDRAM video memory.

Video Support

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DIMM Support

4 MB EDO (Extended Data Output) video DIMMs will fit in the DIMM slots on your computer's main logic board, but they are not supported on your computer. Your computer supports SGRAM DIMMs in 1, 2, and 4 MB sizes, SDRAM DIMMs in 1, 2, and 4 MB sizes, and EDO DIMMs in 1 and 2 MB sizes.

Video DIMM Performance

EDO DIMMs provide good performance. SDRAM DIMMs provide improved performance over EDO DIMMs. SGRAM DIMMs provide the highest level of performance.

Note that if you have EDO memory installed in your computer and have reinstalled system software using either the net install or floppy disks, you may see some very small images (small dots or lines) displayed outside the perimeter of windows displaying QuickTime movies or some video games. To eliminate this problem, drag the 4400/160 Graphics Extension from the Apple Extras folder of the system software CD-ROM disc to the System Folder on your computer's hard disk. Computers with SDRAM or SGRAM installed do not experience this problem.

VGA-to-RGB Monitor Adapter

If you have a computer with an RGB video connector and a VGA monitor, you can use the black VGA-to-RGB monitor adapter (P/N 5900289-A) to connect this display to your computer to provide you with the maximum available resolutions and bit depths.

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory lets your application use less memory.

Your computer comes with virtual memory turned on. With virtual memory turned

on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?" and "Tips for PowerPC-based computers."

For best performance, try setting virtual memory to no more than 150% of the memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

If virtual memory is turned on and you notice performance problems (such as unusually slow computer response) when using certain application programs, you may want to turn off virtual memory.

To improve performance, you can also install more memory (RAM) in your computer. See the user's manual that came with your computer for more information.

Important Information About Document Auto-Save

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The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

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AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Mac OS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use Macintosh PC Exchange to mount the Mac OS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both Mac OS- and DOS-format partitions, Macintosh PC Exchange will recognize only the Mac OS partition. In addition, Macintosh PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use Macintosh PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use Macintosh PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Mac OS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Mac OS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for Macintosh PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your

computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, click the device's icon to select it and choose Put Away from the File menu. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use either the disk setup and partitioning software that came with the SCSI controller card installed in your PC or the one that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, Macintosh PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

* A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your computer.

* Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk

space.

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Tech Info Library Article Number:20650



Tech Info Library

Newton Connection Kit: Isn't Compatible w/ Newton 2.0 OS (11/96)

Revised: 11/18/96
Security: Everyone

Newton Connection Kit: Isn't Compatible w/ Newton 2.0 OS (11/96)

=====

Article Created: 18 November 1996

TOPIC -----

I recently upgraded my Apple MessagePad 120 with the Newton 1.x OS to a Apple MessagePad 130 with the Newton 2.0 OS installed. I can no longer get my Newton Connection Kit to work. Why?

DISCUSSION -----

You cannot use the Newton Connection Kit with the Newton 2.0 OS. A replacement for the Newton Connection Kit will be available from Apple Computer, Inc. at a later date. In the meantime, look at the Tech Info Library article titled "Newton OS 2.0: Newton Connection Utility Alternatives". This article proves several options for transferring data from a Newton 2.0 OS device to both a Macintosh or Windows computer.

You can also use the Newton Backup Utility to backup and restore the information on you Apple MessagePad 130 device.

This article appeared in the 18 November 1996 issue of the Infomation Alley.

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Tech Info Library Article Number:20651



Tech Info Library

WGS 8550/200 & 7250/120: CD-ROM Disc Differences (4/97)

Revised: 5/1/97
Security: Everyone

WGS 8550/200 & 7250/120: CD-ROM Disc Differences (4/97)

Article Created: 18 November 1996
Article Reviewed/Updated: 28 April 1997

TOPIC -----

When we setup our Workgroup Server (WGS) 7250/120 and Workgroup Server 8550/200 we found very few physical differences between the two computers. We could also not immediately tell the differences on the CD-ROM entitled "Workgroup Server Software - contains System Software Version 7.5.3 for the Workgroup Server 7250 and 8550".

Can you help us determine the changes between the computers and the CD-ROMs discs? Since we have both the older and the newer Workgroup servers, it is very likely that we may mix-up the CD-ROM discs.

DISCUSSION -----

You can tell the difference between the older and newer model Workgroup Servers 7250/120 because the newer model has an 8x CD-ROM drive. The accessory kit contents and the new 8x CD-ROM drive are all that changed on the 7250/120. The newer WGS 8550 model has an 8x CD-ROM drive and runs at 200 MHz.

The CD-ROM discs from the previous models of Workgroup Servers and the newer, faster Workgroup Servers do have unique part numbers, but have the same name as they did in the previous models:

Older Workgroup Server CD part # 691-0718-A
Newer (Speed-bumped) Workgroup Server CD part # 691-1225-A

These part numbers are on printed the CD-ROM discs.

The following is a list of differences between the two CD-ROM discs. Either CD will work just fine on either the older or the newer Workgroup server models.

Added to new CD

The following packages have been added to the CD (691-1225-A):

At Ease Updaters
DOS Compatibility
Desktop Pattern Clippings
MacLinkPlus Translators
MacPPP
OpenDoc
PC Compatibility Software
PlainTalk
Pointer Mode Control
QuickDraw 3D
QuickTime Extras
System Profiler

Was On old CD, Not on New CD

The following packages have been removed from the old CD (691-0718-A):

AppleScript
Expansion Card Info
Universal Access
WorldScript Pieces Install

Upgraded Software on new CD

The following packages have been upgraded on the new CD:

Adobe Acrobat Reader 2.1
Apple RAID 1.1.1 Installer

Article Change History:
28 Apr 1997 - Removed out dated on line references.

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Tech Info Library Article Number:20652



Tech Info Library

At Ease 4.0 and AppleShare Access Privileges (11/96)

Revised: 11/19/96
Security: Everyone

At Ease 4.0 and AppleShare Access Privileges (11/96)

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Article Created: 18 November 1996

TOPIC -----

After I login as an At Ease user, I notice that the AppleShare access privileges get reset to full access for the Documents folder and it's sub-folders. Is this correct behavior?

DISCUSSION -----

Yes, At Ease resets the AppleShare privileges for the Documents folder and it's sub-folders when the At Ease user logs in to At Ease. This is done to prevent possible problems with use of At Ease due to the access privileges being incorrectly set for those folders.

This has been the behavior of At Ease since version 2.0. A future release of At Ease may change this behavior.

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Tech Info Library Article Number:20653



Tech Info Library

Macintosh 6360/64xx/54xx Update: Read Me (11/96)

Revised: 2/17/97
Security: Everyone

Macintosh 6360/64xx/54xx Update: Read Me (11/96)

Article Created: 19 November 1996

TOPIC -----

This article contains the ReadMe file for the 6360/64xx/54xx Update.

DISCUSSION -----

The 6360/64xx/54xx Update corrects problems that may occur with external SCSI devices and adds support for additional Ethernet network protocols. The Update is designed for use with the following Power Macintosh and Performa models:

- * Macintosh Performa 6360
- * 64xx series Macintosh computers, such as the Macintosh Performa 6400 and the Power Macintosh 6400
- * 54xx series Macintosh computers, such as the Macintosh Performa 5400 and Power Macintosh 5400

Fixes and Features Provided by this Update

The 6360/64xx/54xx Update provides the following corrections and features for 6360, 64xx series, and 54xx series Macintosh computers:

- * Fixes problems with using some external SCSI devices, such as external hard disks, scanners, or removable storage devices.
- * Fixes problems with printing to a Personal LaserWriter SC or LaserWriter II SC printer. Apple recommends using QuickDraw GX and the LaserWriter II SC GX printer driver with LaserWriter SC printers because there are known problems with the non-GX LaserWriter SC printer driver. You can install QuickDraw GX from the system software CD-ROM disc that came with your computer or download the software from the Apple Software Update sites on the Internet via <<http://www.info.apple.com/swupdates/>>, America Online, or CompuServe.
- * Adds support for additional Ethernet network protocols. If your computer uses the optional Ethernet CS II card to provide Ethernet networking, the

6360/64xx/54xx Update installs files that provide support for the MacIPX and Local Area Transport (LAT) network protocols.

Installing the 6360/64xx/54xx Update

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To install the 6360/64xx/54xx Update, do the following:

1. Start up your computer.

If one or more external SCSI devices are preventing your computer from starting up properly, turn them off before starting up. If your computer still does not start up, turn off your computer and SCSI devices. Then disconnect the SCSI devices and try starting up your computer again.

2. Double-click the Installer icon.

3. Click the Switch Disk button until your hard disk appears in the Destination Disk window.

4. Click the Install button.

5. Click the Restart button after installation was successful.

6. Shut down the computer and reconnect the external SCSI devices that you may have disconnected in step 1. Then start up your computer again.

If you are having problems starting up your computer with external SCSI devices attached, refer to the information on connecting external SCSI devices in your Macintosh user's manual, or contact the manufacturer of your external SCSI device.

Note: If you later reinitialize your internal hard disk with Drive Setup 1.1 or earlier, the fixes installed by the 6360/64xx/54xx Update will be removed, and you will need to install it again. (Most likely you will never need to reinitialize your hard disk, which was set up properly at the factory. Before you reinitialize your hard disk, see the troubleshooting information in your Macintosh user's manual for more information.)

What is installed by the 6360/64xx/54xx Update?

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SCSI updates

The 6360/64xx/54xx Update installer installs a patch to a partition on your internal hard drive and installs updated resources into your System file in the System Folder. None of the SCSI Update files are visible after installation. To confirm whether or not the update is installed, you should check that the new files listed below are in your Extensions folder.

Ethernet updates

The 6360/64xx/54xx Update installer installs the files "PCI Network Legacy Layer" and "PCI Network Legacy Loader" into your Extensions folder in your

System Folder.

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Tech Info Library Article Number:20654



Tech Info Library

Macintosh 6360/64xx/54xx Update: Read Me (2/97)

Revised: 2/25/97
Security: Everyone

Macintosh 6360/64xx/54xx Update: Read Me (2/97)

Article Created: 19 November 1996
Article Reviewed/Updated: 25 February 1997

TOPIC -----

This article contains the ReadMe file for the 6360/64xx/54xx Update.

NOTE: The 6360/64xx/54xx Update fixes have been rolled into Mac OS 7.6. If you have installed Mac OS 7.6, you do not need the 6360/64xx/54xx Update.

DISCUSSION -----

The 6360/64xx/54xx Update corrects problems that may occur with external SCSI devices and adds support for additional Ethernet network protocols. The Update is designed for use with the following Power Macintosh and Performa models:

- * Macintosh Performa 6360
- * 64xx series Macintosh computers, such as the Macintosh Performa 6400 and the Power Macintosh 6400
- * 54xx series Macintosh computers, such as the Macintosh Performa 5400 and Power Macintosh 5400

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The 6360/64xx/54xx Update provides the following corrections and features for 6360, 64xx series, and 54xx series Macintosh computers:

- * Fixes problems with using some external SCSI devices, such as external hard disks, scanners, or removable storage devices.
- * Fixes problems with printing to a Personal LaserWriter SC or LaserWriter II SC printer. Apple recommends using QuickDraw GX and the LaserWriter II SC GX printer driver with LaserWriter SC printers because there are known problems with the non-GX LaserWriter SC printer driver. You can install QuickDraw GX from the system software CD-ROM disc that came with your computer or download the software from the Apple Software Update sites on the Internet

via <<http://www.info.apple.com/swupdates/>>, America Online, or CompuServe.

* Adds support for additional Ethernet network protocols. If your computer uses the optional Ethernet CS II card to provide Ethernet networking, the 6360/64xx/54xx Update installs files that provide support for the MacIPX and Local Area Transport (LAT) network protocols.

Installing the 6360/64xx/54xx Update

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To install the 6360/64xx/54xx Update, do the following:

1. Start up your computer.

If one or more external SCSI devices are preventing your computer from starting up properly, turn them off before starting up. If your computer still does not start up, turn off your computer and SCSI devices. Then disconnect the SCSI devices and try starting up your computer again.

2. Double-click the Installer icon.

3. Click the Switch Disk button until your hard disk appears in the Destination Disk window.

4. Click the Install button.

5. Click the Restart button after installation was successful.

6. Shut down the computer and reconnect the external SCSI devices that you may have disconnected in step 1. Then start up your computer again.

If you are having problems starting up your computer with external SCSI devices attached, refer to the information on connecting external SCSI devices in your Macintosh user's manual, or contact the manufacturer of your external SCSI device.

Note: If you later reinitialize your internal hard disk with Drive Setup 1.1 or earlier, the fixes installed by the 6360/64xx/54xx Update will be removed, and you will need to install it again. (Most likely you will never need to reinitialize your hard disk, which was set up properly at the factory. Before you reinitialize your hard disk, see the troubleshooting information in your Macintosh user's manual for more information.)

What is installed by the 6360/64xx/54xx Update?

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SCSI updates

The 6360/64xx/54xx Update installer installs a patch to a partition on your internal hard drive and installs updated resources into your System file in the System Folder. None of the SCSI Update files are visible after installation. To confirm whether or not the update is installed, you should check that the new files listed below are in your Extensions folder.

Ethernet updates

The 6360/64xx/54xx Update installer installs the files "PCI Network Legacy Layer" and "PCI Network Legacy Loader" into your Extensions folder in your System Folder.

Article Change History:

25 Feb 1997 - Added Mac OS 7.6 information.

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Tech Info Library Article Number:20654



Tech Info Library

Apple MPEG Media System: Can't Copy Part of an MPEG Movie 11/96

Revised: 11/19/96
Security: Everyone

Apple MPEG Media System: Can't Copy Part of an MPEG Movie 11/96

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Article Created: 18 November 1996

TOPIC -----

I am using the Apple MPEG Media System and MoviePlayer to play a MPEG movie file. I copied a small part of the movie to a new MoviePlayer file, but when I save it as a self-contained movie, it saves as the same size as the original movie. If I saved it normally (with dependencies), the file size is small but cannot be played without the original MPEG movie. Why?

DISCUSSION -----

There is an inherent limit with MPEG which disallows a subset of the whole video to be moved out by itself. It is possible to extract only the parts you want to use, but it requires writing code to go and get certain required overhead information from the MPEG movie. So, it is possible to make a smaller subset of a larger video, but only if extra code is written. Without writing code, as you have discovered, when you copy a sequence from a MPEG video and save it as a self contained movie, it will be the same size as the original.

If you do not make an edited movie self-contained (not flattened), you have a "chapter marker" movie. Since the default save mode of Movie Player is a reference file (not a flattened/self contained file), the default movie format is very small since It is only a reference to a location within the full MPEG movie file.

Important:

You cannot copy a MPEG movie from a video CD (CDi) to a hard disk for playback. The block sizes of the CD-ROM disc and hard drive are different, so checksums will not match.

This article appeared in the 19 November 1996 issue of the Information Alley.

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Tech Info Library Article Number:20655



Tech Info Library

AppleShare 4.2.x and Network Trash Recovery (11/96)

Revised: 11/20/96
Security: Everyone

AppleShare 4.2.x and Network Trash Recovery (11/96)

=====

Article Created: 19 November 1996

TOPIC -----

I'm trying to recover a file I accidentally deleted on the AppleShare File Server. The file is in the Network trash folder, however, this folder is invisible and I'm unable to drag the file out of the folder. How do I get it back?

DISCUSSION -----

You cannot restore a Network Trash file from within AppleShare or AppleShare Admin. You can make the Network Trash folder visible by using ResEdit or similar utility application, and then move the file where you want to save it.

WARNING:

The instructions in this article refer to using ResEdit. Apple Computer, Inc., is not liable for any damage done to your software through the use of ResEdit to alter software. The User Assistance Center phone representatives (at 800-SOS-APPL) do not provide technical support for ResEdit. It is supported by APDA. For contact information on APDA, search the Tech Info Library under "APDA".

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Tech Info Library Article Number:20656



Tech Info Library

French Mac OS Update 2.0 & FU1 Version Issue (11/96)

Revised: 11/20/96
Security: Everyone

French Mac OS Update 2.0 & FU1 Version Issue (11/96)

=====

Article Created: 19 November 1996

TOPIC -----

I have a computer running the French version of System 7.5. The computer's modem sounds do not work in communications applications like Global Village's Z-Term, although MegaPhone does seem to have the modem sounds available. The modem will connect without a problem, but I cannot hear the modem handshake or connection.

After updating to System 7.5.3, I noticed other sound related problems on my computer. Audio CDs mount on the desktop and the Audio CD Player does recognize them, but there is no sound output. The Playthrough option is not available in the Sound or Monitors and Sound control panels. System sounds do not play consistently. Lastly, there is no sound output from the modem within MegaPhone. I have performed numerous clean system software installations and updates, but I cannot resolve this issues.

DISCUSSION -----

The issues you describe are related to the FU1 version of the French OS Update 2.0. This version of the update has been available from the Apple Canada Web Site for about 6 months. The FU2 version will take care of most of the issues related to sound on Macintosh Performa and Power Macintosh computers. The only issues not addressed are modem sounds. These are more related to localized versions of the drivers supplied by Global Village and are under investigation by Apple Engineering and Global Village.

Unfortunately, the Mise A Jour FU1 -7.5.3 CD-ROM is the version currently shipping from Claris Canada. The FU2 version is available from Apple Canada's Web Site as well as from SOFTWARE Updates site in the US.

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Tech Info Library Article Number:20657



Tech Info Library

Open Transport/PPP: Removing OT/PPP (11/96)

Revised: 11/20/96
Security: Everyone

Open Transport/PPP: Removing OT/PPP (11/96)

Article Created: 20 November 1996

TOPIC -----

This article describes how to remove Open Transport/PPP (OT/PPP).

DISCUSSION -----

To disable and remove Open Transport/PPP software by using the Custom Remove option in the Installer, follow these steps:

- Open the Installer application included with Open Transport/PPP 1.0. The Welcome to the Apple Installer screen appears.
- Click the Continue button. The Open Transport PPP Installation screen appears.
- Choose Custom Remove from the pop-up menu in the upper-left corner.
- In the list that appears, select the files you would like to remove by clicking the box next to each file so that an "X" appears in it. To completely remove Open Transport/PPP, select all of the files listed.
- Click the Remove button. If a window appears asking whether to quit any open applications, click Continue.
- When the window indicating a restart is required appears, click the Restart button.

To disable Open Transport/PPP without using the Installer, follow these steps:

NOTE: Although the PPP and Modem control panels appear in the Extensions Manager, there is no component in the Extensions Manager to disable Open Transport/PPP. To disable Open Transport/PPP without using the Installer, follow the instructions given here.

- Move the OpenTpt Remote Access, OpenTpt Modem, and OpenTpt Serial Arbitrator shared libraries from the Extensions folder in the active System Folder.

NOTE: This step is also useful in returning the computer system to a

default condition.

- Move the PPP Commands file from the Scripting Additions folder in the Extensions folder.
- Move the PPP and Modem control panels from the Control Panels folder in the active System Folder.
- Restart the computer.

It is not necessary to move the Modem Scripts folder from the Extensions folder.

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Tech Info Library Article Number:20658



Tech Info Library

OT/PPP 1.0 & Global Village Combo PC Card Incompatible (5/97)

Revised: 5/5/97
Security: Everyone

OT/PPP 1.0 & Global Village Combo PC Card Incompatible (5/97)

Article Created: 20 November 1996
Article Reviewed/Updated: 5 May 1997

TOPIC -----

Using the Global Village PowerPort Platinum Pro PC Card (for PowerBook computers) and trying to connect with OT/PPP 1.0, I sometimes get this error dialog which states:

"The connection attempt failed: The port may already be in use by another application.

Check for other uses of the port, like an extension that receives faxes or a communication program. Also check the AppleTalk control panel to see if AppleTalk is set to use the same port being used by the Modem control panel."

DISCUSSION -----

This behavior is caused by an incompatibility between OT/PPP 1.0, and the Global Village PowerPort Platinum Pro PC Card. This is the PC card that has combined Ethernet and a 28.8 kbps modem.

Global Village has released updated software that should resolve the issue. It is available from the Global Village software update site:

ftp://ftp.globalvillage.com/pub/software/mac/PP_PC_Card_beta_OT_PPP.sea.hqx

Article Change History:
05 May 1997 - Updated with software patch information.

Copyright 1996-1997, Apple Computer, Inc.

Tech Info Library Article Number:20659



Tech Info Library

At Ease Administration: Error While Editing Workgroup (11/96)

Revised: 11/21/96
Security: Everyone

At Ease Administration: Error While Editing Workgroup (11/96)

=====

Article Created: 21 November 1996

TOPIC -----

I am using At Ease Administration to administer my At Ease 4.0 network. When I try to change the information in one of my workgroups I get the following error, "An error occurred while trying to edit the workgroup xxxxxx." What do I do to fix this?

DISCUSSION -----

The workgroup you are working with has probably become corrupted and cannot be fixed. One option is to duplicate the workgroup by clicking the Duplicate button. The duplicate can now be edited, so you can delete the original and use the duplicate.

Another option would be to delete the workgroup which is getting errors, and build a new workgroup.

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Tech Info Library Article Number:20660



Tech Info Library

At Ease 3.0.3 Updater Read Me (11/96)

Revised: 11/21/96
Security: Everyone

At Ease 3.0.3 Updater Read Me (11/96)

=====

Article Created: 21 November 1996

TOPIC -----

This article is the At Ease 3.0.3 Updater ReadMe file, and it contains important information about the At Ease 3.0.3 Updater.

DISCUSSION -----

Contents

=====

Requirements for Updating

- Version 3.0 Already Installed
- Updating Some or All Workstations
- Using an AppleShare Server for At Ease for Workgroups

Updating Procedure

- Installation Options
- Files the Updater Needs to Locate
- Updating From the Floppy Disk
- Updating Over the Network
- Using an Updated Copy of the Administration Program
- New Desktop Printer Extension

Changes Made in Previous Versions

- Using the Lock Startup Disk Feature
- System Startup Crashes While Using Open Transport
- Possible Hard Disk Corruption on IDE Hard Disks When Using the Lock Startup Volume Feature
- Launching Applications From Other Applications
- Login Procedure
- At Ease Setup Changes

Clarifications

- Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)

- CD-ROMs and At Ease
- Documents Created by Approved Applications
- Server Mounting in At Ease
- Disk Security
- At Ease and File Sharing
- Maximum Number of Connected Users on an At Ease Server
- Bypassing At Ease at Startup on Certain Power Macintosh Models
- At Ease and RAM Doubler
- At Ease and Hard Disk Toolkit (HDT)
- At Ease and QuickMail

Major Problems Corrected in Versions 3.0.1-3.0.3

- Users Visible After Update From Version 2.x
- No Report of Damaged Preferences File at Login
- Shorter Login or Logout Times on Large Systems
- Documents Panel Remains Visible
- Setup Application Correctly Recognizes Setups
- Virex Incompatibility Corrected
- Items in the Apple Menu Remain Visible
- Servers Mount Correctly
- Import Users Function Works Correctly
- Middle-Level Administration

The At Ease 3.0.3 Updater updates At Ease 3.0 or At Ease for Workgroups 3.0, 3.0.1, or 3.0.2 to the latest version, 3.0.3. The changes in version 3.0.3 primarily affect non-workgroups users because previous updates have addressed many problems in the workgroups product.

At Ease for Workgroups 3.0.2 users do not need to update to version 3.0.3. All problems with the workgroups product discussed in this document were corrected in At Ease for Workgroups version 3.0.2. (The only change to version 3.0.2 in this update is the correction of a rare problem with the login dialog box: if the login dialog box shows only the user list—not the workgroups list—and the user cancels out of the dialog box, the user list may disappear.)

Since this document gives information on updating both At Ease and At Ease for Workgroups, items that apply only to the workgroups product are indicated by "[WG]."

Requirements for Updating =====

Version 3.0 Already Installed -----

You can use the Updater only on a workstation that has version 3.0 or later installed. The Updater will not run if you have an older version (2.x or earlier) of At Ease installed. If you have an earlier version of At Ease, you should first update it to version 3.0, then use the Updater.

[WG] Updating Some or All Workstations -----

..TIL20661-At_Ease_3-0-3_Updater_Read_Me_11-96_(TA36229).pdf

The databases used by At Ease 3.0, 3.0.1, 3.0.2, and 3.0.3 are fully compatible. This means that if you are updating the workgroups version of At Ease, you can update some At Ease workstations on the network and not others. To benefit from all the enhancements in this version, however, you should update all At Ease workstations.

[WG] Using an AppleShare Server for At Ease for Workgroups

If your At Ease server is an AppleShare volume, all At Ease workstations on the network must have version 3.0 installed. If any workstation with an older version of At Ease tries to access the server, a message will appear reporting that the At Ease Preferences file is bad.

Updating Procedure

=====

Installation Options

There are two ways of updating one or more machines using At Ease: by using the Updater's floppy disk on each workstation or by installing the updated software over the network.

Files the Updater Needs to Locate

In most cases, the Updater attempts to locate and update the At Ease and At Ease Startup files automatically. If it cannot find either of these files, it will ask you for the location of the missing file. If you cannot find the file, you can click the Skip button to cancel the update, leaving your files untouched. If you have more than one copy of the setup program on your disk, the Updater will require that other copies be removed before the update can take place. You can have the Updater remove the other copies automatically, or you can cancel the update and remove them manually using the Finder.

Some administrators remove the setup program on certain workstations. On these workstations, the Updater will ask you to locate the setup program. If you are updating the workgroups version of At Ease and cannot locate the program, click the Skip button to bypass this request.

If you are updating the non-workgroups version of At Ease, it is highly recommended that you update the setup program when requested. Since the Updater will probably turn off At Ease on your workstation after it has completed the update, you will need an updated setup program in order to turn At Ease back on. Therefore, it is best not to skip the update.

Updating From the Floppy Disk

Follow these steps to update At Ease from the floppy disk:

1. Turn off At Ease on each workstation that you are updating. (See the user's manual for instructions on how to do this, if necessary.)
2. Insert the Updater disk.

3. Double-click to open the At Ease 3.0.3 Updater application.
4. Click Begin in the opening screen.
5. If the Updater cannot find a file it needs to update, a message appears asking you to locate that file. If you cannot find the file, click Skip to cancel the update.
6. If necessary, locate any missing files and start the update again.

[WG] Updating Over the Network

1. Copy the Updater application to an AppleShare server volume to which your At Ease workstations have access.
2. Make sure the application is locked. (To do this, select the Updater's icon, choose Get Info from the File menu, then click to put an X in the checkbox labeled "Locked.")
3. Turn off At Ease on each workstation you are updating.

Tip: Before updating any workstations on the network, you may want to turn off At Ease on all machines you will be updating by using the Update Computers feature. After you have updated your At Ease machines, you can turn At Ease on using this same feature. (See the user's manual for instructions, if necessary.)

4. Mount the server volume that contains the Updater application.
5. Double-click to open the Updater application.
6. Click Begin in the opening screen.

Using an Updated Copy of the Administration Program

Be sure to update the copy of At Ease Setup or At Ease Setup (Workgroups) that you use to administer At Ease to version 3.0.3. You should also remove any old copies of this program from your hard disk (or disks).

New Desktop Printer Extension

The Apple Extras folder on your Updater disk contains an updated version of the Desktop Printer Extension, an extension used by printer drivers for many newer models of printers. This version of the extension corrects problems that may occur when you are in the restricted Finder mode in At Ease.

You need to install this extension (version 1.03 or later) only if you are using an older version of it. If the Desktop Printer Extension is not already in the Extensions folder in your System Folder, or you have a newer version of the extension, do not install it. (Installing this extension will not affect computers that do not already have it, but the extension will occupy a small amount of memory.) If you are not sure what version of the extension you have,

select it and choose Get Info from the File menu.

To install the extension, follow these steps:

1. Open the Apple Extras folder on the Updater disk.
2. Drag the Desktop Printer Extension icon to the System Folder on your hard disk.
3. Click OK each time a message appears.

Changes Made In Previous Versions

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[WG] Using the Lock Startup Disk Feature

A bug in version 3.0.1 prevents the Lock Startup Disk feature from working correctly. Although the feature may appear to be active (indicated by a checkmark in the box next to the feature), it may not be active, in which case users will be able to view the startup volume by starting up from a floppy disk (or another volume). After updating your computers to version 3.0.3, you should first attempt to make sure the feature is disabled, quit the administration application, and then re-enable it. This will ensure that the latest update code is installed on your startup disk.

Note that this feature does not work on all Macintosh computers. You should read the section "Disk Security," later in this document, to find out about the compatibility of this feature with your computer.

System Startup Crashes While Using Open Transport

A change to the At Ease Startup extension in this version corrects a problem with system crashes on 68K machines that have Open Transport networking enabled. (This problem may also show up on certain PowerPC machines, notably the Power Macintosh 7500.)

[WG] Possible Hard Disk Corruption on IDE Hard Disks When Using the Lock Startup Volume Feature

This version of At Ease prevents a possible hard disk corruption that can occur when the Lock Startup Volume feature is activated on some newer computers using an IDE (ATA) internal hard disk. These computers include the Macintosh PowerBook 190, PowerBook 2300, and PowerBook 5300, but not the Macintosh Quadra 630. If this problem occurs, the computer displays a "sad Macintosh" icon when restarted.

Version 3.0.3 does not repair an already affected hard disk. If your hard disk has been corrupted, the At Ease-IDE Utility allows you to recover your hard disk. This utility is available on the Updater disk. See the At Ease-IDE Utility Read Me for additional information.

[WG] sub-launching Applications From Other Applications

For security, At Ease does not normally allow applications to open, or sub-launch, other applications. You can allow users to sub-launch applications in At Ease in one of two ways: (a) by installing the sub-launched application in the user's setup; or (b) by choosing the Application Preferences command from the Options menu in At Ease Setup and clicking to put an X in the checkbox labeled "Can be launched by other applications" for each sub-launched application.

Version 3.0.1 provides one simple way to allow sub-launching for all applications. The User Settings dialog box (which you open by choosing User Settings from the Security menu) now contains a checkbox labeled "Always permit sub-launches." When this checkbox is selected, At Ease always allows applications to open other applications. (This setting takes precedence over any setting in the Application Preferences dialog box.)

By selecting this option, an administrator avoids having to select individual applications for sub-launching. The checkbox can best be thought of as a "compatibility mode" feature that allows many applications to work better.

Login Procedure

To improve login speed, At Ease no longer saves panel or page information. Thus, when a user logs back in to the panels environment, she or he will always be brought to the first page of the "brown" panel.

[WG] At Ease Setup Changes

When At Ease Setup starts up, it now checks the internal databases. This check can take from a few seconds (when no users are logged in to the At Ease server) to almost a minute (on slow networks, when users are already logged in to At Ease). A message informs you that this check is taking place.

Clarifications

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Using Kid Pix Studio (Correction to Read Me for At Ease 3.0)

In the Read Me file for At Ease 3.0, the section "At Ease for Workgroups 3.0 and Kid Pix Studio" explains how to use At Ease 3.0 with Kid Pix Studio. The information about setting up subprograms with the Application Preferences command contains an error for the file "KPS 5." The file creator for "KPS 5" should be "Kîd5," not "Kîd4."

NOTE: To create the î character, hold down the Option key and type the letter i, then release the Option key and immediately type i again.

CD-ROMs and At Ease

An administrator can allow only certain CD-ROM discs to be used on a workstation. This feature applies only to CD-ROM discs that are used from the CD-ROM drive of the user's computer. It does not apply to discs in CD-ROM drives

that are connected to an AppleShare file server. These drives appear to At Ease as AppleShare volumes, not as CD-ROM drives.

Documents Created by Approved Applications

A document that is available to users may be opened if the application that created the document is on the "approved" list of applications. At Ease creates this list by searching locations to which the users of a setup have access, including the setup folder, the Apple Menu Items folder, the Control Panels folder, and the Startup Items folder.

If any documents (or stationery pads) exist in those locations, At Ease assumes that the application that created them is also approved. For example, if the Apple Menu Items folder contains a SimpleText stationery pad, and users of that setup have access to "other items" in the Apple menu, those users will be able to open any SimpleText documents, no matter where the documents are located. This is true for both panels and for the restricted Finder.

[WG] Server Mounting in At Ease

The administrator decides whether users of a particular setup can (a) start up with the last server volumes used or (b) use the Chooser's marked startup volumes instead. At Ease permits only one of these options for a given setup.

This option can be set in At Ease Setup (Workgroups) by selecting a setup and then putting an X in the checkbox labeled "Always remember the user's last-used AppleShare logins." When the checkbox is selected, any AppleShare volumes mounted at logout will be remembered by At Ease and remounted the next time the user logs in. When the checkbox is not selected, any server volumes that were set in the Chooser to connect at startup will mount with the same privileges as were set with the Chooser. Because this feature operates on a user-by-user basis, the setting must always be the same for any user who belongs to multiple setups.

If a server has volumes (such as a CD-ROM drive) to which you want users to have access when they log in, you should leave the "remember" checkbox unselected and use the Chooser to set up the volumes to be mounted on each workstation. You must do this on each computer because the AppleShare information is stored in the System Folder of the workstation, not on the server volume.

[WG] Disk Security

The disk security feature in At Ease prevents users from starting up a workstation from a floppy disk and then accessing the startup disk. This feature was introduced in At Ease 2.0. In version 3.0, you set this feature using a checkbox labeled "Lock Startup Volume" in the User Settings dialog box.

If At Ease detects that the security option cannot be used on a workstation, it dims the checkbox for this option. There are two primary reasons why the Lock Startup Volume option cannot be used:

- Unknown hard disk driver

If you have reformatted your startup disk with a non-Apple hard disk driver, the disk security option may not work with that driver. If the Lock Startup Volume checkbox is dimmed, please contact the driver software manufacturer to see if that disk driver is compatible with this At Ease feature.

- Non-partitioned IDE drives

Some Macintosh computer models use a hard drive mechanism called IDE (or ATA) for the startup disk. (Computers that use this drive type include the Power Macintosh 5200, 5300, and 6200, and the Macintosh PowerBook models 150, 190, and 5300.)

The security in At Ease requires that the startup hard disk drives be partitioned. All SCSI hard drives are partitioned at the factory, and in the future the IDE drives will be partitioned. But for current Macintosh models with IDE drives that are not partitioned, the disk security will work only if the IDE drive is reformatted using a partitioned driver. One program that can partition these drives is Drive7, from Casa Blanca Works. (The IDE hard drive must be reformatted in order to partition it. You cannot update the driver on the disk.)

At Ease and File Sharing

Turning on file sharing on a computer using At Ease version 3.0 or 3.0.1 is not recommended. At Ease attempts to turn off file sharing when a restricted Finder user starts up. You should be sure that file sharing is turned off (by checking in the Sharing Setup control panel).

[WG] Maximum Number of Connected Users on an At Ease Server

Because At Ease can open up to four files on the server for each machine that is in the login screen, it is possible that some versions of AppleShare will not allow as many machines to connect as may be indicated in the AppleShare Admin File Server Preferences dialog. Version 4.2 of AppleShare should eliminate this restriction.

Bypassing At Ease at Startup on Certain Power Macintosh Models

Certain newer Macintosh computers using system software version 7.5.2 may allow users to bypass At Ease by holding down the Shift key when starting up. This problem has been fixed in system software version 7.5.3, but you can also prevent users from bypassing At Ease by clicking to put an X in the checkbox labeled "Don't allow shift key at startup to disable extensions" in the setup application. You may need to do this for each machine on which the problem has occurred.

At Ease and RAM Doubler

RAM Doubler version 1.6 is not compatible with At Ease 3.0.1. The computer may freeze when users launch applications from At Ease if RAM Doubler is installed. Apple recommends that customers contact Connectix Corporation to determine whether an updated version of RAM Doubler is available. For more information, contact Connectix at 800-950-5880 or 415-571-5100.

[WG] At Ease and Hard Disk Toolkit (HDT)

In rare cases, if your internal hard disk has been formatted with certain versions of the Hard Disk Toolkit (HDT), activating the Lock Startup Volume feature in At Ease for Workgroups may prevent your internal disk from starting up. If your internal hard disk has been formatted using HDT, you should back up the data on your hard disk before activating the Lock Startup Volume feature. Because all internal hard disks on computers sold by Apple are formatted using Apple software, not HDT, you will not experience this problem unless you have reformatted the internal hard disk with HDT. To determine if your internal hard disk has been reformatted with the Hard Disk Toolkit, select the hard disk, choose Get Info from the File menu, and check the Info dialog box for "<name of hard drive>, FWB."

At Ease and QuickMail

When a user attempts to save a file from QuickMail, he or she may be prompted to save the file in a location other than the user's documents folder. If the user clicks Cancel and then chooses Save again, the file will be saved in the user's documents folder.

Major Problems Corrected in Versions 3.0.1-3.0.3

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Users Visible After Update From Version 2.x

After an update from version 2.x to version 3.0, users already registered in At Ease occasionally did not show up in the setup application. (The setup window showed setups, but no users.) Users should appear after the automatic update from 2.x to this version (3.0.3).

No Report of Damaged Preferences File at Login

On some networks (especially if workstations were not turned off periodically), a message appeared when a workstation logged in indicating that application preferences might be damaged, even though other computers on the network were working properly. Restarting the server usually cleared up this problem. The problem has been fixed in versions 3.0.1 or later.

[WG] Shorter Login or Logout Times on Large Systems

In server-based At Ease networks with many users, workstations took an excessively long period of time to log in or out of the system. In versions 3.0.1 and later, the login and logout times have been reduced for very large networks. Apple recommends that you use version 4.2 (or later) of AppleShare if you are encountering problems with long login or logout times.

[WG] Documents Panel Remains Visible

When an At Ease user was logged in, a message occasionally appeared indicating that the server had been disconnected, and the documents panel disappeared, even

though the server volume had not actually been disconnected. This problem has been corrected.

[WG] Setup Application Correctly Recognizes Setups

The setup application occasionally interpreted one or more setups as locked, so that they could not be modified by the administrator. This problem has been corrected.

Virex Incompatibility Corrected

The Virex application was not compatible with At Ease 3.0. If both programs were installed, the user experienced a system crash when starting up the computer. This problem has been corrected.

Items in the Apple Menu Remain Visible

Occasionally some aliases in the Apple menu were deleted when a restricted Finder user returned to the login screen. This problem has been corrected.

[WG] Servers Mount Correctly

Server volumes selected in the Chooser occasionally could not mount when a user logged in. This problem has been corrected.

Note: This feature works only if the user's setup has the "Always remember the user's last-used AppleShare logins" option turned off. See the user's manual for instructions.

[WG] Import Users Function Works Correctly

A number of changes were made to the "import users" function. A problem that prevented the cancellation of importing when many errors occurred has been corrected.

[WG] Middle-Level Administration

Middle-level administrators can now add users to setups that they own.

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Tech Info Library Article Number:20661



Tech Info Library

At Ease-IDE Utility Read Me (1/97)

Revised: 1/17/97
Security: Everyone

At Ease-IDE Utility Read Me (1/97)

=====

Article Created: 21 November 1996
Article Reviewed/Updated: 17 January 1997

TOPIC -----

This article is the At Ease-IDE Utility ReadMe file.

DISCUSSION -----

At Ease-IDE Utility

The Problem

This utility program fixes a problem that may appear if you are using At Ease for Workgroups 3.0 or 3.0.1 and the following conditions are true:

- the At Ease administrator has set the "Lock startup volume" option,
- the Macintosh running At Ease is equipped with an IDE internal hard drive and a recent version of the driver software. (This includes the PowerBook 190, PowerBook 2300, and PowerBook 5300.)

In these circumstances, turning on the computer and attempting to boot from the internal hard disk will cause a "sad Mac" window to appear. You will not be able to get to the At Ease logon screen or to the Finder.

The Solution

If this occurs, follow these steps:

1. Insert a bootable floppy disk that contains the At Ease-IDE Utility and do a restart while holding down simultaneously the Command-Shift-Option-Delete keys. It will take some time before the Finder appears. (See instructions at the end of this document for obtaining such a disk if you don't have one. It is also possible to connect a bootable external hard drive containing the At Ease-IDE

Utility and, in the same manner, start up from that drive.)

2. If you see a dialog asking if you want to rebuild the desktop, click on cancel.
3. Once you have booted and are in the Finder, run the At Ease-IDE Utility. (Note that your internal hard disk will not be visible on the desktop.)
4. Choose "Restart" from the Special Menu in the Finder and allow the floppy disk to be ejected so that you are booting from the internal hard disk.
5. If At Ease is on, you will go to the At Ease logon screen as usual. (Note that if your computer's startup disk has been locked by At Ease for Workgroups, it will still be locked after running the At Ease-IDE Utility.)
6. If At Ease is off, you will go to the Finder.
7. Immediately upgrade to At Ease for Workgroups version 3.0.2 or later. (See below for information on obtaining version 3.0.2).

The data on your internal hard disk will not be affected by this problem or by running the At Ease-IDE utility.

On At Ease for Workgroups 2.x versions, IDE (ATA) drive locking was not supported, so the problem will not appear. You should still consider upgrading to At Ease 3.0.2 or subsequent versions.

Obtaining a Bootable Floppy Disk With the At Ease-IDE Utility

1. If you have a Disk Tools disk for the computer with the problem, you can move the At Ease-IDE Utility to that disk -- there should be room -- and then startup from that disk.
2. If you have access to any of the following on-line services, you can download a bootable disk image called "At Ease-IDE Utility Disk" at the following online locations:
 - America Online - keyword: applecomputer
 - CompuServe - GO APLSUP
 - Internet -
 - Worldwide Web: <<http://www.info.apple.com/swupdates>>
 - ftp: <<ftp://ftp.info.apple.com>>
3. If you do not have on-line access, you can obtain the At Ease-IDE Utility by calling 800-SOS-APPL, or 800-767-2775. (Available in the US only.)

Obtaining At Ease For Workgroups 3.0.2 Update

You can obtain the At Ease for Workgroups 3.0.2 update from any of the above

on-line services using the same path.

Article Change History:

17 Jan 1997 - Updated online references.

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Tech Info Library Article Number:20662



Tech Info Library

LaserWriter Printers: Rename & Turning Off Startup Page (11/96)

Revised: 11/21/96
Security: Everyone

LaserWriter Printers: Rename & Turning Off Startup Page (11/96)

=====

Article Created: 21 November 1996

TOPIC -----

I have a PostScript Apple LaserWriter and would like to change the name that shows up in the chooser under "select a LaserWriter". Also, I'd like to turn off the startup page.

DISCUSSION -----

In order to change the LaserWriter name, your LaserWriter printer needs to be a network PostScript printer and its current name is listed in the Chooser when selecting the LaserWriter or LaserWriter GX icon. You cannot change the name of the LaserWriter Select 310, which is a PostScript printer, because it is not a networkable printer, and does not broadcast a name through AppleTalk.

To change the name of the printer you will need either a copy of LaserWriter Utility or Apple Printer Utility. These utilities are on the first disk of the printer disk set, or you can install them with the custom install feature. If you are running system 7.5.x, you can custom install either utility directly using the system 7.5 installer.

Using LaserWriter Utility To Rename a Printer

=====

To access the printer using LaserWriter utility, you must already have your LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

Step 1

Launch the LaserWriter Utility.

The LaserWriter Utility tries to make a connection to the current printer when the initial screen appears. If the connection is successful, the splash screen disappears and three menus appear in the Menu bar.

If the LaserWriter Utility does not make a connection, make sure you have the proper printer selected in the Chooser, and verify that you can print to the printer.

Step 2

Choose Name Printer from the Utilities menu.

Step 3

Type the new name for the printer.

Step 4

Click the Rename button.

Using LaserWriter Utility To Turn Off The Startup Page

=====

Step 1

Launch the LaserWriter Utility.

The LaserWriter Utility tries to make a connection to the current printer when the initial screen appears. If the connection is successful, the splash screen disappears and three menus appear in the Menu bar.

If the LaserWriter Utility does not make a connection, make sure you have the proper printer selected in the Chooser, and verify that you can print to the printer.

Step 2

Choose Set Startup page from the Utilities Menu.

A dialog appears allowing you to select Startup page on or off.

Step 3

Choose if you want the Startup page on or off.

Step 4

Click OK

Using Apple Printer Utility (1.x)

=====

To access the printer using Apple Printer Utility, you must already have your

LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

Step 1

Launch the Apple Printer Utility.

A window appears with a list of printers. This is similar to the way printers appear in the Chooser.

Step 2

Select the printer you want to connect to.

Step 3

Click the Open Printer button.

A status window appears informing you that it is checking the status of your LaserWriter printer. After this is complete, a window with all the printer information appears. The information is subdivided into two sections, printer information and printer preferences.

Step 4

Click the triangle next to printer preferences to set the startup page or rename the printer. Steps 5 through 7 explain how to rename a LaserWriter printer. Steps 8 through 10 explain how to change the startup page status.

To rename the LaserWriter printer:

Step 5

Click the triangle next to Name.

The name of the current printer appears.

Step 6

Type over the current name of the printer.

Step 7

Click the Send button at the top of the window.

Changes will not be made unless you click the Send button.

To change the Startup Page status:

Step 8

Click the triangle next to Startup Page

Most printers will have a check box for Print a startup page each time the printer is turned on.

Step 9

Click the check box to change the status.

An X in the box indicates a startup page prints when the printer is powered on. The default is to generate a startup page.

Step 10

Click the Send button at the top of the window.

Changes will not be made unless you click the Send button.

Note:

Some printers such as the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS have more than one test page. You can select which pages, if any, you want to print at startup.

Using Apple Printer Utility (2.x)

=====

To access the printer using Apple Printer Utility, you must already have your LaserWriter properly configured in the Chooser. The easiest way to determine if your printer is properly configured is to print to the printer. If you can print to the LaserWriter printer, then it is properly configured.

Step 1

To access the printer using Apple Printer Utility, first ensure you have a working connection to the printer. Next, launch the Apple Printer Utility application.

Step 1

Launch the Apple Printer Utility.

A window appears with a list of printers. This is similar to the way printers appear in the Chooser.

Step 2

Select the printer you want to connect to.

Step 3

Click the Open Printer button.

A status window appears informing you that it is checking the status of your LaserWriter printer. After this is complete, a window with all the printer information appears. The information is subdivided by category.

Steps 4 through 6 explain how to rename a LaserWriter printer. Steps 7 through 9 explain how to change the startup page status.

To rename the LaserWriter printer:

Step 4

Click the triangle next to Name.

The name of the LaserWriter printer appears.

Step 5

Type over the current name of the printer.

Step 6

Click the Send button to send the new name to the printer.

Changes will not be made unless you click the Send button.

To change the Startup Page status:

Step 7

Click the triangle next to Startup Page.

A check box for Print a startup page each time the printer is turned on appears.

Step 8

Click the check box to change the status.

An X in the box indicates a startup page prints when the printer is powered on. The default is to generate a startup page.

Step 9

Click the Send button at the top of the window.

Changes will not be made unless you click the Send button.

Note:

Some printers such as the Color LaserWriter 12/600 PS and Color LaserWriter 12/660 PS have more than one test page. You can select which pages, if any, you want to print at startup.

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Tech Info Library Article Number:20663



Tech Info Library

LaserWriter Driver 8.x: LW Icon Isn't in Chooser (11/96)

Revised: 11/21/96
Security: Everyone

LaserWriter Driver 8.x: LW Icon Isn't in Chooser (11/96)

=====

Article Created: 21 November 1996

TOPIC -----

I am installing my LaserWriter printer and the instructions say to select LaserWriter 8 in the chooser. I have installed the software multiple times, but there is still nothing in the chooser that reads LaserWriter 8.

DISCUSSION -----

Check the listing of icons in the Chooser for a printer Labeled LaserWriter GX. If you see this printer active, you have QuickDraw GX installed and active. When QuickDraw GX is active, non-GX printer drivers, such as the LaserWriter 8 are hidden, and only the QuickDraw drivers are available. You can select and use the LaserWriter GX icon instead of the LaserWriter 8 driver if you want. For more information about Quickdraw GX consult the documentation that came with your system software, and the manual that came with your printer.

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Tech Info Library Article Number:20664



Tech Info Library

Apple Internet Connection Kit 1.1.5 ReadMe (11/96)

Revised: 11/22/96
Security: Everyone

Apple Internet Connection Kit 1.1.5 ReadMe (11/96)

=====

Article Created: 21 November 1996

TOPIC -----

This article is the Apple Internet Connection Kit (AICK) 1.1.5 Read Me file.

DISCUSSION -----

Important Information About the Apple Internet Connection Kit

Before you install the Apple Internet Connection Kit, read the following information.

Getting Help for Installing and Using Your Internet Connection Kit

Apple will assist you with the installation and setup of the Apple Internet Connection Kit. Our specially trained telephone support staff can assist you with information on:

- installation
- registration
- configuration

Once you have selected and registered with an Internet service provider, the provider will be able to assist you with:

- basic product use
- applications questions or issues
- billing issues
- connection questions and problems

If you are accessing the Internet over a LAN, contact your network administrator for help in setup and use.

Telephone support is available Monday through Friday (excluding holidays) from 6 a.m. to 6 p.m. Pacific Standard Time. In Canada, hours are 8 a.m. to 8 p.m.

Eastern Standard Time. For the appropriate phone number to call for support, see the support materials that came with your product.

Apple provides an excellent online reference source for technical information: the Apple Tech Info Library. You can search through thousands of articles on Apple products, past and present, updated regularly by Apple Support personnel. The Apple Tech Info Library (TIL) is available on the Internet (<http://www.info.apple.com/til.html>), AppleLink (Support -> Tech Info Library), and CompuServe (GO APLTIL).

System Requirements

- Power Macintosh or Macintosh computer with a 68030 microprocessor or greater
- Macintosh system software version 7.5 or later
- MacTCP or Open Transport; if you are using Open Transport, you must use version 1.0.8 or later (version 1.1 is strongly recommended)
- 8 megabytes (MB) of random-access memory (RAM), 12 megabytes is recommended; you must turn on virtual memory when using less than 12 megabytes of RAM
- 21 MB hard disk space

Open Transport Users

Open Transport version 1.1 is strongly recommended for use with the Apple Internet Connection Kit. You must use Open Transport version 1.0.8 or later.

IMPORTANT: If you do not use the Dialer and you are using a version of Open Transport earlier than version 1.1, you must restart your computer if you change Internet providers or TCP/IP settings before you can connect to the Internet again.

Apple's System 7.5 Update 2.0 will install Open Transport version 1.1 for you. Look for information about this update and others on Apple forums and Apple Web sites on the Internet.

Installing and Setting Up the Internet Connection Kit

Make sure you've quit all open applications before you attempt to install the Internet Connection Kit.

To install the Apple Internet Connection Kit on your hard drive, double-click the Installer icon and then follow the instructions on your screen. Click the Apple Internet Dialer icon in the Launcher window and follow the instructions that appear on-screen.

If you already have Netscape installed on your computer before you install the Internet Connection Kit, a Backup Folder is created automatically when you install the Internet Connection Kit. The bookmarks that you have created using your previous version of Netscape will be saved in the Backup Folder.

IMPORTANT: Internet applications such as Netscape Navigator™ must have TCP properly configured to function properly. Use the Dialer to ensure that TCP is

configured correctly whether you are using the automatic registration process or manually defining your Internet Service Provider.

Problems While Registering

When you register with a service provider by using the Dialer, the Dialer will gather some personal information from you (such as your name and address) and then it will connect to the registration server and launch Netscape Navigator. If your network connection drops while you are trying to register or there is some problem you encounter with the registration server, you need to quit the Netscape Navigator application. Once you quit, the Dialer will offer you the option to Cancel or Continue the registration process. Click Continue to try to register again immediately, or click Cancel and try later.

Using or Deselecting the Launcher

The Launcher window provides an easy way to open programs and other items; you click a Launcher button once to open the item it represents. The Launcher is set to open automatically after you've installed the Internet Connection Kit.

If you don't want to use the Launcher interface for accessing the applications in the kit, open the General Controls control panel and deselect (remove the X) the "Show Launcher at startup time" option.

Saving Internet Service Provider Registration Information

You will be asked to write down your user name and password after registering with an Internet service provider. You can write the information down on paper, or you can retain this information on your computer by following these steps:

1. Press Command-Shift-3 to take a screen shot of what is on your monitor screen; the screen shot will be saved on your hard drive with the name "Picture 1," and the file can be opened with many applications, including SimpleText.
2. Select the image and copy it into your Scrapbook.

If you forget to write the information down, you will need to contact your service provider to get that information, should you need it. Apple will not be able to assist you with recapturing this information.

If You Already Have an Internet Service Provider

If you already have an Internet service provider, use the Define New Provider command in the Provider menu. You should call your service provider to get the setup information to complete the dialog box that appears.

Connecting to a News Server for the First Time

Connecting to a news server for the first time or switching service providers can take from one minute to more than 20 minutes, depending on your Internet service provider's configuration. If there is a large number of newsgroups to download from the news server to which your service provider has enabled you to connect, the initial connection time could be quite lengthy. Subsequent

connections are likely to be much quicker.

Backing Up Your Internet Service Provider Information

Once you have successfully registered with an Internet service provider, it is recommended that you back up the preferences and settings in case you need to restore them. You can do this by opening the Dialer and selecting Backup Provider Information from the File menu.

Using the Correct Version of MacPPP

Apple Internet Connection Kit requires version 2.5 of MacPPP. If you have a different version of MacPPP installed on your machine, you should replace it with the version provided in your package. The Apple Internet Connection Kit Installer does this for you automatically. Older versions of MacPPP, including MacPPP 2.1.4 and 2.2, are not compatible with the Internet Connection Kit, and should not be used with this product. Other implementations of PPP are not supported.

Using SLIP Software

The Apple Internet Dialer is configured to use the MacPPP version that is included with this kit; it will not work with InterSLIP software. InterSLIP software is included with the Internet Connection Kit as a convenience, but it will not work with the Dialer. If you need to use a SLIP connection, contact your Internet service provider for instructions on setting up and configuring your system using SLIP software.

Troubleshooting Insufficient Memory Messages

If you are attempting to run several Internet applications simultaneously and you see a message indicating that your system does not have enough memory to run an application (or if you see an insufficient memory message the first time you attempt to use the Dialer to register with an Internet service provider), you can try one of the following:

- Close all unnecessary applications.
- Turn on virtual memory (VM); see Macintosh Guide for details about how to use VM.
NOTE: For best performance, never set VM to more than twice the amount of physical RAM (if you have an 8 MB system, VM should be no more than 16 MB).
- Purchase more RAM.

Restoring Your LAN Configuration

If you inadvertently installed the Dialup configuration over your existing Internet LAN configuration, you can restore your settings by following the steps provided in one of the sections below, as appropriate for your MacTCP or your Open Transport system:

If you have MacTCP:

1. Open the Internet Connection Kit folder.
2. Open the folder called Backup Folder.
3. Open your System Folder next to the Backup Folder.
4. Copy the MacTCP Prep file from the Backup Folder into the Preferences folder of your System Folder.
5. Restart your machine.

If you have Open Transport:

1. Open the TCP/IP control panel.
2. Choose Configurations from the File menu.
3. In the list of configurations, click Default to highlight it (if it is not already).
4. Click the Make Active button.
5. Close the TCP/IP control panel.

What Is Installed in Your System Folder?

After doing an Easy Install, the Apple Internet Connection Kit puts the following items in various places in your System Folder:

- Apple Guide 2.0.2
- ObjectSupportLib 1.0.2 (AppleScript document)
- PPP 2.5 (MacPPP) extension and (if necessary) PPP Preferences (Preferences folder)
- MacTCP 2.0.6, MacTCP Prep, MacTCP TokenRing extension, Hosts file (all are installed only if you do not have Open Transport)
- Internet Config extension and Internet Config Preferences
- Internet Dialer Folder (Preferences folder)
 - Modem Information
 - Internet Dialer Prefs
 - reg server
- Launcher 2.8, and Launcher Preferences
- QuickTime 2.1, QuickTime Musical Instruments, and QuickTime PowerPlug (on PowerPC-based computers only)
- Sound Manager 3.1, Sound control panel 8.0.5
- RealAudio Daemon
- Netscape preferences (Preferences folder)
- additional fonts

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Tech Info Library Article Number:20665



Tech Info Library

LW Select 360: Paper Pulls from Multipurpose Tray (11/96)

Revised: 11/21/96
Security: Everyone

LW Select 360: Paper Pulls from Multipurpose Tray (11/96)

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Article Created: 21 November 1996

TOPIC -----

I have a LaserWriter Select 360 and every time I try to print, the printer indicates it is out of paper. However, there is plenty of paper in the paper cassette. If I put paper in the multipurpose tray it prints from there instead, even though I have selected autoselect in the print dialog. I am also having a problem with my startup page printing off center.

DISCUSSION -----

The LaserWriter Select 360 paper cassette allows you to use a variety of paper sizes by adjusting the cassette to meet the paper sizes used. In order to adjust the cassette, you must extend or retract a blue guide in the center of the tray to meet the top of the paper. When adjusted properly this guide clicks into place against a marking on the tray that specifically indicates what the paper size is. If this clip is damaged, the cassette indicates the wrong paper size to the printer.

When selecting autoselect from the print dialog, the Mac OS checks the printer to see what paper sizes are installed and compares them to what is selected in page setup, for example US Letter. If the printer indicates something other than US Letter paper in the cassette and there is no other source for 8.5 x 11 paper, the printer assumes you have put 8.5 x 11 in the multipurpose tray and pull from there. If there is no paper in the multipurpose tray an out of paper message appears.

When the clip is moved to adjust for paper size, a white spindle on the outer right back of the tray rotates to trigger a response from the printer. If the clip is seated properly in the cassette tray, the spindle appears as follows:

```
----->          three grooves pointing one direction
----->
----->
<-----          followed by three grooves pointing the other direction
```

<-----

<-----

followed by a blank area the size of three grooves

<----- followed by three grooves pointing the same direction

<-----

<-----

If it appears in any other configuration, adjust the cassette one more time to be sure it is seated properly. If so, then the cassette will need to be repaired or replaced by your local Apple service provider.

Why The Printer Indicates the Wrong Paper Size

Essentially the peg on the bottom of the blue clip has come unseated from the white hook which connects it to the rotating spindle. Because of this, the spindle gives an incorrect reading and the printer believes that there is some other paper type besides U.S. Letter in the tray. This clip can be reseated by disassembling the tray, but this should only be done by an Apple Authorized Service Provider to avoid damaging the tray in a manner that is not covered by warranty.

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Tech Info Library Article Number:20666



Tech Info Library

Power Macintosh 4400: Black Screen & Video Mirroring (11/96)

Revised: 11/22/96
Security: Everyone

Power Macintosh 4400: Black Screen & Video Mirroring (11/96)

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Article Created: 22 November 1996

TOPIC -----

I am using video mirroring with my Macintosh Performa 4400. However, whenever I restart or shut down the computer, both monitors appear black or gray when the computer starts up again. How can I prevent this from happening?

DISCUSSION -----

This appears to be an issue with the system software on the Power Macintosh 4400. Apple plans on resolving this issue in a future version of the Mac OS. In the interim, you can use one of the following workarounds.

* If you no longer want to use video mirroring, follow these steps:

Step 1

Shut down the computer.

Step 2

Unplug the monitor cable that is connected to the PCI video card.

Step 3

Restart the computer.

* Or, if you still want to use video mirroring after restarting, follow these steps:

Step 1

Before shutting down or restarting the computer, open the Monitors & Sound

control panel.

Step 2

Turn off Video Mirroring in the Monitors & Sound control panel.

Step 3

Restart or shut down your computer.

Step 4

Once the computer has restarted, turn Video Mirroring back on in the Monitors & Sound control panel.

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Tech Info Library Article Number:20667



Tech Info Library

LW Printers: Using a Multipurpose Tray w/ QuickDraw GX (11/96)

Revised: 11/22/96
Security: Everyone

LW Printers: Using a Multipurpose Tray w/ QuickDraw GX (11/96)

=====

Article Created: 22 November 1996

TOPIC -----

I am printing to a LaserWriter printer using Quickdraw GX and cannot find an option for the multipurpose tray in the print dialog box, or in tray options.

DISCUSSION -----

There is no multipurpose tray option within QuickDraw GX. There is a selection for manual feed in the print dialog. You can use this option with minor setting changes to obtain the same functionality as the multipurpose Tray option.

Using the QuickDraw GX Manual Feed With A Multipurpose Tray

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Click on the desktop printer icon. A Printing menu appears in your menu bar next to the Special menu. If a Check appears next to Show Manual Feed Alerts, you need to disable the alert messages, by choosing Show Manual Feed Alerts. If you do not have a check next to the Show Manual Feed Alerts, manual feed alerts is already disabled, so you can use your multipurpose tray without making any changes.

The only PostScript LaserWriter you cannot use this workaround with is the LaserWriter Select 310 printer. There is no manual feed disable feature available with this printer.

This article appeared in the 22 November 1996 issue of the Information Alley.

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Tech Info Library Article Number:20669



Tech Info Library

Avid Cinema: Don't Adjust Memory Requirements (11/96)

Revised: 11/22/96
Security: Everyone

Avid Cinema: Don't Adjust Memory Requirements (11/96)

=====

Article Created: 22 November 1996

TOPIC -----

After I raised the memory allocation for the Avid Cinema application the video stutters and there seem to be other QuickTime performance problems. What is wrong?

DISCUSSION -----

Adjusting the memory requirements of the Avid Cinema application through the "Get Info" window can have adverse effects on the performance of the application. For best results, do not adjust the Preferred Size or Minimum Size in the "Get Info" window. With virtual memory off, the correct settings for Avid Cinema 1.0 should be:

Minimum Size: 10000K
Preferred Size: 12000K

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Tech Info Library Article Number:20670



Tech Info Library

Network Server 500/700: User Environment Variables (4/97)

Revised: 4/16/97
Security: Everyone

Network Server 500/700: User Environment Variables (4/97)

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Article Created: 22 November 1996
Article Reviewed/Updated: 16 April 1997

TOPIC -----

I am trying to set environment variables unique to each user on my Network Server. I am modifying the ".profile" file for each user, but the file is never run when I log into CDE (Common Desktop Environment) so none of the variables are set in the graphical environment. However, if a user Telnet into the machine, the variables are set.

DISCUSSION -----

The environment variables for CDE are stored in the ".dtpfile" file. This file is run whenever a user logs into CDE, and is stored in the users \$home directory (ksh environment). The ".profile" script is only used for shell logins, such as Telnet or rlogin.

However, you can modify your .dtpfile to invoke your .profile if you are logging in to CDE and need to set your paths from the ".profile". To modify your .dtpfile, uncomment the last line in the .dtpfile (remove the "#" from the line DTSOURCEPROFILE=true).

Library paths will not be set, however, so you will need to modify the .dtpfile for setting these.

Article Change History:
16 Apr 1997 - Added section on .dtpfile

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Tech Info Library Article Number:20671



Tech Info Library

PC Exchange 2.0.5: Trouble Reading Large DOS Volumes (11/96)

Revised: 11/25/96
Security: Everyone

PC Exchange 2.0.5: Trouble Reading Large DOS Volumes (11/96)

Article Created: 22 November 1996

TOPIC -----

I am having trouble reading all the information from a DOS formatted SyQuest 270 cartridge with PC Exchange v2.0.5. PC Exchange reads the first 200 MB of data, then continues trying to read the cartridge for varying amounts of time depending on how much information remains on the cartridge, then just displays the information it was able to read.

A dialog informs me that the disk is full, then shows the directory. However, the directories are incomplete. SyQuest informed me that PC Exchange has trouble reading DOS formatted cartridges with over 200 MB of data. Is this correct?

DISCUSSION -----

Yes, PC Exchange has trouble working with large DOS volumes. When PC Exchange runs out of memory it will display a truncated list of files. This limit varies depending on the number of files on the volume. A smaller number of large files will be displayed properly and a larger number of small files will be truncated.

This should be fixed in a future version of PC Exchange.

This article appeared in the 25 November 1996 issue of the Information Alley.

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Tech Info Library Article Number:20672



Tech Info Library

Elementary Curriculum Connections Kit - The Cruncher (11/96)

Revised: 11/25/96
Security: Everyone

Elementary Curriculum Connections Kit - The Cruncher (11/96)

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Article Created: 25 November 1996

TOPIC -----

My school is using The Cruncher v.1.21C, a CD-ROM title, that shipped with the Elementary Curriculum Connections Kit for a Power Macintosh 5260/120. Our school is using the Spreadsheet portion of the application. Every time we select a cell and choose the Cell Attributes... command from the Format menu, we receive a message that says, "Sorry, a system error occurred. 'The Cruncher' error type 11".

This behavior happens with both System Software 7.5.3 and System Software 7.5.5 on our computers. How can we fix this issue?

DISCUSSION -----

According to Davidson & Associates, Inc., the developer of The Cruncher, this is a known issue with version 1.21C. Users can workaroud this issue by turning off the Modern Memory Manager in the Memory control panel and restarting their computer. After restarting, users should be able to change Cell Attributes normally. Davidson is currently working with Apple to correct this.

For the latest information regarding The Cruncher users should contact Davidson & Associates directly. The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20673



Tech Info Library

WorldScript Power Adapter Extension: What it is Used For? 11/96

Revised: 11/25/96
Security: Everyone

WorldScript Power Adapter Extension: What it is Used For? 11/96

=====

Article Created: 25 November 1996

TOPIC -----

I a Power Macintosh computer, but do not have any of the language kits installed. Can I remove the WorldScript Power Adapter extension?

DISCUSSION -----

Even if you do not have a language kit installed, you should leave the WorldScript Power Adapter extension in your Extensions folder. There is a misconception that this extension is only used with language kits. However, the WorldScript Power Adapter extension is used with both Roman and non-Roman languages.

The WorldScript Power Adapter extension is poorly named; it is more closely related to the Macintosh Script Manager. It contains native PowerPC implementations of many of the general script utilities, including routines used by Roman programs, not just non-Roman. These routines include anything that has to do with laying out and drawing text in QuickDraw. When the WorldScript Power Adapter extension is not installed on a Power Macintosh computer, the routines are emulated, so you are not getting the maximum performance from your computer.

Reinstalling the WorldScript Power Adapter
=====

If you have removed the WorldScript Power Adapter extension and want to reinstall it, you need to reinstall the entire Mac OS System 7.5.x software. The Custom Install option does not allow you to install just the WorldScript Power Adapter. The WorldScript 1.1 Updater software posted on Apple's software update sites, updates the WorldScript I and WorldScript II extensions, but it does not install the WorldScript Power Adapter.

This article appeared in the 25 November 1996 issue of the Information Alley.

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Tech Info Library Article Number:20675



Tech Info Library

Macintosh Performa 6400: QuickDraw GX Location (11/96)

Revised: 11/25/96
Security: Everyone

Macintosh Performa 6400: QuickDraw GX Location (11/96)

=====

Article Created: 25 November 1996

TOPIC -----

I want to install QuickDraw GX on my Macintosh Performa 6400 computer. I have searched my hard disk but could not find the software. I used the Restore All Software option on the Macintosh Performa 6400 Restoration CD, but it still did not install QuickDraw GX. How can I get QuickDraw GX?

DISCUSSION -----

As you have discovered, QuickDraw GX is not installed using the Restore All Software option on the Macintosh Performa 6400 Restoration CD. Instead, you must open the several folder to find the installer for QuickDraw GX.

The path for the QuickDraw GX software is:

Performa CD -> Hard Disk Files -> Apple Extras Files -> System Software Extras (scroll down to see it) -> QuickDraw GX.

Other software in the System Software Extras folder includes; QuickDraw 3D, QuickDraw 3D extras, PowerTalk, PowerTalk Extras, Sound control Panel, and Text-to-Speech.

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Tech Info Library Article Number:20676



Tech Info Library

Color StyleWriter 2200: Communication Settings (11/96)

Revised: 11/25/96
Security: Everyone

Color StyleWriter 2200: Communication Settings (11/96)

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Article Created: 25 November 1996

TOPIC -----

What are the communication specifications (baud rate, parity, start and stop bits) on the Color Stylewriter 2200?

DISCUSSION -----

The data format for the Color Stylewriter 2200 is:

Asynchronous serial
1 Start Bit
8 Data Bits
1 Stop Bit
No Parity

The same data format is used for transmit and receive.

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Tech Info Library Article Number:20677



Tech Info Library

At Ease 4.0: Frequently Asked Questions (11/96)

Revised: 11/26/96
Security: Everyone

At Ease 4.0: Frequently Asked Questions (11/96)

Article Created: 26 November 1996

TOPIC -----

This article contains answers to frequently asked questions (FAQ) about At Ease 4.0.

Questions in this FAQ

-
- 1) Is there any way to shorten the list of At Ease 4.0 users, or group them so a user does not have to scroll through a potential list of 4,000 users?
 - 2) Can At Ease workstations recognize a CD-ROM tower connected to a server?
 - 3) When I use the At Ease Administration program to add a workstation to my approved list I got the following error, "Could not write the workstations list out to the server." Where is the workstation list and how can I fix this?
 - 4) Question: Do you have to install At Ease to use the Network Assistant software?
 - 5) Do teacher handouts affect students disk quota?
 - 6) With At Ease 4.0, I cannot select a printer for printer quotas unless a desktop printer file exists. How can I get a desktop printer file for my non-Apple printer?

DISCUSSION -----

- 1) Question: Is there any way to shorten the list of At Ease 4.0 users, or group them so a user does not have to scroll through a potential list of 4,000 users?

Answer: One way is to group users is by user type. To change the list use the show option at the login screen and select only Users, Workgroup Administrators, or Administrators. The names on the login screen then appear in alphabetical

order. Users can move closer to their name by pressing the first two or three letters of their name which will bring them closer to their name without scrolling through the entire list.

Another option would be to change the System Settings and require the users enter their name and password.

2) Question: Can At Ease workstations recognize a CD-ROM tower connected to a server?

Answer: Workstations can see the CD-ROM discs as shared server volumes. It does not treat them as CD-ROM drives.

3) Question: When I use the At Ease Administration program to add a workstation to my approved list I got the following error, "Could not write the workstations list out to the server." Where is the workstation list and how can I fix this?

Answer: The workstation list is kept in the At Ease Server Prefs file on the At Ease server. This file is located in the Preferences folder which is in the System Folder. You should place the At Ease Server Prefs file in the trash, choose the Empty Trash command from the Special menu, and restart you server. Then reconfigure the server with the At Ease Administration application.

4) Question: Do you have to install At Ease to use the Network Assistant software?

Answer: No, You can perform a custom install of Network Assistant without installing At Ease.

5) Question: Do teacher handouts affect students disk quota?

Answer: Yes. When a teacher uses the Hand out feature in the Panels environment, the document is copied to each users Handout folder inside the their documents folder.

6) Question: With At Ease 4.0, I cannot select a printer for printer quotas unless a desktop printer file exists. How can I get a desktop printer file for my non-Apple printer?

Answer: The Read Me file states that At Ease does not create desktop printer files for non-Apple printers, you need to check with your printer vendor.

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Tech Info Library Article Number:20678



Tech Info Library

LocalTalk and LaserWriter Bridge 2.1: Read Me (11/96)

Revised: 11/26/96
Security: Everyone

LocalTalk and LaserWriter Bridge 2.1: Read Me (11/96)

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Article Created: 26 November 1996

TOPIC -----

This article is the LocalTalk & LaserWriter Bridge 2.1 Information ReadMe file.

DISCUSSION -----

You use the Apple LocalTalk Bridge to share LocalTalk-only devices, such as some LaserWriter printers, PowerBook notebook computers, or Newton MessagePad communications devices, on an Ethernet or Token Ring network. With the LocalTalk Bridge, you can access an Ethernet or Token Ring network while maintaining a seamless connection to your LocalTalk network. The LocalTalk Bridge is a commercial product, Apple part number M3246Z/A. A detailed product specification sheet is available on the Internet at:

<<http://product.info.apple.com/productinfo/datasheets/ss/localtalkbridge.html>>

You use the Apple LaserWriter Bridge much as the LocalTalk Bridge, except the LaserWriter Bridge is for printers only. You can share any printer that uses the LaserWriter icon in the Chooser using the LaserWriter Bridge. The LaserWriter Bridge is available for download at Apple Software Update sites on the Internet and many online services.

To use either of these utilities with Open Transport, you need to use version 2.1 or later of the utilities. This package includes a program to update LocalTalk Bridge 2.0 or 2.01 software to version 2.1. It also includes version 2.1 of the LaserWriter Bridge program.

System requirements for the LocalTalk or LaserWriter Bridge

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System software version 7.1 or later

Either classic AppleTalk networking software or Open Transport version 1.1 or

later.

Memory requirements:

- System software version 7.5.3, included in this package, requires a minimum of 4MB of RAM for computers with 68000-family microprocessors or 8MB of RAM for computers with PowerPC microprocessors.
- Open Transport requires a minimum of 5MB of RAM for computers with 68000-family microprocessors or 8MB of RAM for computers with PowerPC microprocessors. Open Transport memory requirements are based on total system memory including virtual memory, minus the size of any RAM disk and disk cache you choose.

Installing the software

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LocalTalk Bridge

If you have LocalTalk Bridge 2.0 or 2.0.1 software, use the updater program to update your software to version 2.1 (compatible with Open Transport).

There are two versions of the updater application. The file called "LTB 2.0 to 2.1 patch" updates LocalTalk Bridge version 2.0 to 2.1. The file called "LTB 2.0.1 to 2.1 patch" updates LocalTalk Bridge version 2.0.1 to 2.1.

1. To update your software, double-click the appropriate LocalTalk Bridge 2.1 updater application.
2. Choose Restart from the Special menu. When your computer starts up again, the updated LocalTalk Bridge is installed, and your LocalTalk Bridge control panel will be compatible with Open Transport.

LaserWriter Bridge

1. Replace your installed version of LaserWriter Bridge software with the version provided.
2. Choose Restart from the Special menu. When your computer starts up again, the updated LaserWriter Bridge is installed, and your LaserWriter Bridge control panel will be compatible with Open Transport.

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Tech Info Library Article Number:20679



Tech Info Library

LaserWriters: Meaning of VMerror & Limitcheck Errors (11/96)

Revised: 11/27/96
Security: Everyone

LaserWriters: Meaning of VMerror & Limitcheck Errors (11/96)

=====

Article Created: 27 November 1996

TOPIC -----

Sometimes when I print to my LaserWriter printer, I get an error that there was a VMerror or limitcheck error. What do these errors mean?

DISCUSSION -----

The PostScript language does not restrict or limit the sizes or quantities of things described in the language, such as numbers, arrays, stacks, paths, and so on. However, a PostScript interpreter running in a particular printer does have limits: the interpreter in the printer cannot process a printjob that exceed these limits. If the PostScript Interpreter attempts to perform some operation that would exceed one of these limits it may return the error "limitcheck," or "VMerror" if it exhausts virtual memory resources.

If you print a lot of complex documents to a PostScript printer, you may someday encounter a limitcheck or VMerror error.

limitcheck
=====

The occurrence of a limitcheck error usually indicates the print job itself contains an error or the job has some operation that exceeds one of the printers limits. There are different types of limitcheck errors; the specific limitcheck encountered error is typically listed when the error is reported. Appendix B of the PostScript Language Reference Manual provides an explanation and the typical values for such limits.

VMerror
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A VM error may occur if the memory becomes too low for the PostScript interpreter to reallocate memory to finish processing a job, or perhaps even provide a more accurate or specific error message, or to display any error message at all. It is impossible to predict accurately how much VM available to the PostScript interpreter a printjob will consume, and though by adding more memory to the printer may resolve a VMerror, there may be other workarounds to printing a complex document as well.

To workaround limitcheck and VM errors, try:

- Make sure your Macintosh is configured properly, such as you are using the latest or fashionably current version of the LaserWriter driver (which are v8.3.4 and 8.4.1 at the time this article was written).
- Make sure the proper PPD is selected. Instructions for selecting the proper PPD are listed in the Selecting a PPD File section later in this article. Old versions of the LaserWriter driver prior to LaserWriter 8.x did not use PPDs.
- If you are printing to an old printer with PostScript Level 1 ROMs, print instead to a printer containing PostScript Level 2 ROMs.
- Install more memory in the printer, particularly if it is a printer that contains an old implementation of PostScript (PostScript Level 1).
- Try creating a new document, then copy and past the contents of the old document into the new, then print.
- If you are using fonts that are non-resident to the printer, fonts not built-in to the ROM, select the Page Setup menu option, "Unlimited Downloadable Fonts in Document." One side effect is this option may be your print times may increase. Alternatively, use fewer non-resident fonts in your document, perhaps one or two typefaces, or merely use the built-in fonts. (A list of resident fonts can be displayed with the Apple Printer Utility, or found in the printer's specification sheet or manual.)
- Reduce the complexity of the document by removing unnecessary graphics.
- Cut down on the complexity of the graphics in a document. For example, some programs will "auto-trace" graphics, and sometimes the auto-trace results in excess bezier points. In this example, try hand-tracing the document with an illustration program, or edit out some of the unnecessary points.

Reduce the number of graduated fills (fills that go from one color to another in a rainbow-type fashion) in your document, or choose a solid screen or single percentage gray tone.

- Print the document a few pages at a time.
- If you notice that the document always stops printing when processing a certain page, try printing that page by itself, then print the pages that follow.

- Look for corruption in your document. For instance, if only a some pages do not print, look for in those pages a repeating element such as a font or graphic. Try placing that font or graphic on a page by itself and print just that page. If that page will not print, the font or graphic itself may be corrupted, requiring you to reinstall the font or obtain/create a new graphic.

Selecting a PPD File

=====

Step 1

Open the Chooser

Step 2

Select the LaserWriter 8 driver

Step 3

Locate and select the printer from the printer list

Step 4

Choose Setup. . ."

Be patient after selecting Setup for a dialog to appear: it may take a little while, particularly if someone else is printing to that printer.

One dialog may appear stating "setting up PostScript printer." When a PPD has been selected, another dialog stating "Current printer Description File (PPD) Selected: name of PPD" is displayed.

Step 5

Verify the proper PPD has been selected. If the proper PPD was not select, for example Generic is listed as being the selected PPD, click on the Select PPD button, then select the PPD for your printer. If no PPD appears in the listing of PPDs (which are stored in the Printer Descriptions folder), then reinstall the printer software so that the correct PostScript Printer Description file becomes available, then repeat these steps to configure your Macintosh printer driver to use the proper PPD.

References

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PostScript Language Reference Manual, Adobe Systems Incorporated.
ISBN 0-201-181274-4

This article appeared in the 27 November 1996 issue of the Information Alley.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20681



Tech Info Library

Languages Supported by ZM-System 7.5.5 Update (11/96)

Revised: 11/27/96
Security: Everyone

Languages Supported by ZM-System 7.5.5 Update (11/96)

=====

Article Created: 27 November 1996

TOPIC -----

What are the languages supported by System 7.5.5 Update?

DISCUSSION -----

Spanish
Danish
Swedish
German (including Swiss-German)
Dutch
English (British, US, and International)
Norwegian
Catalan
Polish
Italian
Croatian
Finnish
French (including Swiss-French and French-Canadian)
Ukrainian
Hungarian
Turkish
Bulgarian
Korean
Portuguese
Romanian
Chinese (Simplified and Traditional)

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Tech Info Library Article Number:20682



Tech Info Library

CFM-68K Runtime Enabler Extension: Stability Issue (3/97)

Revised: 3/24/97
Security: Everyone

CFM-68K Runtime Enabler Extension: Stability Issue (3/97)

Article Created: 27 November 1996
Article Reviewed/Updated: 20 March 1997

TOPIC -----

This article describes a stability issue with the CFM-68K Runtime Enabler and 680x0 processor based Macintosh computers. There is also a series of related questions and answers.

DISCUSSION -----

Apple recommends customers disable the CFM-68K Runtime Enabler extension.

Apple Computer has discovered a bug in the CFM-68K Runtime Enabler extension that can affect the stability of Macintosh computers based on the 680x0 processor. This extension allows the use of certain applications on 680x0 computers, and is installed by an application installer only if the application requires the extension. Customers will know they have this extension installed if the file " CFM-68K Runtime Enabler" (note that the file name begins with a space) is located in their Extensions folder which resides inside their System folder.

In certain circumstances, the bug can cause applications which rely on the CFM-68K Runtime Enabler to not function properly, resulting in application instability and potential loss of data. The most obvious symptoms are what appear to be random system crashes and hangs. Macintosh and Mac OS-compatible computers based on the PowerPC processor are not affected by this bug.

Because of the potential quality impact of this bug, Apple is recommending that customers with computers based on the 680x0 processor disable the CFM-68K Runtime Enabler extension and not use programs which rely on this extension. See below for instructions on how to disable this extension. Apple is currently working to resolve this bug.

What is the CFM-68K Runtime Enabler?

The CFM-68K Runtime Enabler is an extension which makes it easier for developers of applications to design their programs to run on both 680x0 and PowerPC computers without having to write separate programs for both processor families.

On a more technical level, the Code Fragment Manager ("CFM") was originally introduced by Apple only for Macintosh and Mac OS-compatible computers based on the PowerPC processor. It allows applications to share their programming code through special files known as shared libraries. In addition to being able to share programming code, applications which are programmed to use shared libraries can reduce their memory requirements. In response to the success of the PowerPC version of CFM, Apple introduced a version of CFM for Macintosh computers based on the 680x0 processor. This version of CFM for 680x0-based Macintosh computers is the CFM-68K Runtime Enabler extension.

What applications are affected by this bug?

Only applications which have been explicitly programmed to use the CFM-68K Runtime Enabler can be affected by this bug. Apple Computer products which rely on CFM-68K Runtime Enabler are: OpenDoc, Cyberdog, LaserWriter (versions 8.4 and 8.4.1 only), and the Apple Media Tool. Only the 68K versions of these software packages are affected. This bug does not affect PowerPC versions of these products. There are currently few applications which rely on the CFM-68K Runtime Enabler and therefore Apple does not believe that this problem is very widespread.

You can identify applications which rely on the CFM-68K Runtime Enabler extension once the extension is disabled (see below for instructions on disabling the extension). When the CFM-68K Runtime Enabler is disabled, applications which rely on it will report the following error when you attempt to launch them:

"This application requires installation of the 'CFM-68K Runtime Enabler'."

Is this bug caused by these applications?

Not directly. The bug is caused by the use of CFM-68K Runtime Enabler in ways it was not designed to handle. Unfortunately, its limitations were not recognized by the applications.

What should I do if I have installed one of these affected products?

If you have installed OpenDoc or Cyberdog, you should not use these products until Apple releases a solution for this problem. If you have installed LaserWriter version 8.4 or 8.4.1, you should install LaserWriter version 8.3.4, which does not rely on the CFM-68K Runtime Enabler. If you do not have LaserWriter 8.3.4, you can download it from the Apple support site on the World Wide Web, which is located at:

<http://www.info.apple.com/>

If you are a member of the Apple Media Tool developer community, please visit the AMT web site at <http://amt.apple.com/> for more information.

If you have a PowerPC-based Macintosh or Mac OS-compatible computer, your computer is not affected by this problem. Therefore, you can continue to use these products.

Should I contact third-party application developers about this problem?

No. Since a fix for this problem will be accomplished by modifying Apple's CFM-68K Runtime Enabler, third-party application developers will be unable to assist you with this problem.

How do I disable this extension?

There are two ways to disable this extension. One is to drag the extension out of the Extensions folder which resides in your System Folder. The other is to use the Extensions Manager control panel.

To disable the CFM-68K Runtime Enabler extension using the Extensions Manager control panel, perform the following steps:

- 1) Open the Apple menu item and select Control Panels.
- 2) Locate Extensions Manager and double click it to open it.
- 3) Locate " CFM-68K Runtime Enabler". Note that there is a space at the beginning of the name. You should find this extension near the top of the Extensions Manager window under the Extensions heading.
- 4) If there is a check mark next to CFM-68K Runtime Enabler, click on it so that there is no check mark.
- 5) Close the Extensions Manager window.
- 6) Restart your computer.

Is this bug caused by recent changes in the CFM68k Runtime Enabler?

No. This bug exists in all currently shipping versions of CFM-68K Runtime Enabler, but was found during recent testing.

Why has it taken Apple this long to identify this bug?

Only recently have applications begun to make use of the CFM-68K Runtime Enabler extension. The conditions which cause this bug have only been exposed by recent increased use of the extension by applications.

I have a PowerPC computer. Does this affect me?

No. The bug is only in the CFM-68K Runtime Enabler extension, which runs only on Macintosh computers based on the 680x0 processor. The Mac OS on PowerPC computers does have code fragment capabilities, but it is accomplished through different programming techniques not affected by this bug.

What is Apple doing to fix this bug?

Apple has assigned a team of engineers to develop a solution for the bug. At this time, there is not enough information to make any statements about delivery of a solution.

How can I get the technical details about this bug?

Apple has a Technote about this bug available on the World Wide Web at:

<http://devworld.apple.com/dev/technotes/tn/tn1084.html>

This article was published in the 2 December 1996 "Information Alley."

This article was published in the 20 March 1997 "Information Alley."

Article Change History:

20 Mar 1997 - Included Information Alley statements.

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Tech Info Library Article Number:20684



Tech Info Library

Macintosh 5400, 6400, & 6360: -23 Error When Printing (3/97)

Revised: 3/21/97
Security: Everyone

Macintosh 5400, 6400, & 6360: -23 Error When Printing (3/97)

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Article Created: 27 November 1996
Article Reviewed/Updated: 21 march 1997

TOPIC -----

I have Power Macintosh 5400/120 computer that I am using in conjunction with a Hewlett Packard Deskwriter 660c printer. When I attempt to print, either an error -23 occurs or the computer hangs. How can I prevent this from happening?

DISCUSSION -----

The cause appears to be the HP printer driver. Apple Computer and Hewlett Packard have verified that a -23 error may occur when printing from a Power Macintosh or Performa 5400, 6400, or 6360 computer to any HP Deskwriter 600 series printer using certain older versions of the HP Serial printer driver.

Revised printer drivers have been posted by Hewlett-Packard to their World Wide Web site.

For DeskWriter 600 series printers, use version 9.2.1 of the driver.
For DeskWriter 800 series printers, use version 9.3 of the driver.

If you need to print but do not have the revised driver, a workaround would be to either turn off virtual memory or use the AppleTalk (rather than Serial) printer drivers.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:
21 Mar 1997 - Updated with HP driver information.

Copyright 1996-1997, Apple Computer, Inc.

Tech Info Library Article Number:20685



Tech Info Library

Newton Connection Kit for Windows: Can't Use OS/2 (11/96)

Revised: 12/2/96
Security: Everyone

Newton Connection Kit for Windows: Can't Use OS/2 (11/96)

=====

Article Created: 2 December 1996

TOPIC -----

I have an Apple MessagePad 120 with the Newton 2.0 OS. I am trying to get data off the Messagepad 120 into my OS/2 computer. When I try to use the Windows shell within OS/2 with the Newton Connection Kit, an error message appears on the MessagePad stating that the PC is not responding. How can I get this to work?

DISCUSSION -----

The Newton Connection Kit for Windows is not supported using the Windows shell with OS/2. Apple Computer, Inc. does not have a solution for getting data from Apple MessagePad devices to OS/2 computers. Apple does not currently have plans to support OS/2 operating system.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20686



Tech Info Library

Writing & Publishing Tools: Author's Toolkit Dictionaries 12/96

Revised: 12/2/96
Security: Everyone

Writing & Publishing Tools: Author's Toolkit Dictionaries 12/96

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Article Created: 2 December 1996

TOPIC -----

The Author's Toolkit, included on the Apple Education Series, Writing and Publishing Tools Backup CD (691-1214-A v1.1) does not install the dictionaries used by the application. The dictionaries cannot be custom installed or drag copied to the hard disk. When I choose Dictionaries from the Edit menu, I get an error message that states "Can't find the spelling dictionaries. Make sure that the folder "SCET Dictionaries" is in the Preferences Folder."

Why does this happen and where can I get these dictionaries?

DISCUSSION -----

The Apple Education Series - Writing and Publishing Tools CD installs a number of packages included with the Writing and Publishing Tools software bundle. The dictionaries were inadvertently left off the CD-ROM disc. The Author's Toolkit is specifically looking for a folder called "SCET Dictionaries" that includes the following dictionaries:

SCET Main Dictionary
SCET User Dictionary

This folder should be placed in the Preference folder located in System Folder. You can obtain a copy of the dictionaries from Sunburst Communications, the developer of The Author's Toolkit. Sunburst can be reached at following addresses and phone numbers:

Sunburst Communications
101 Castleton Street
Pleasantville, NY 10570 U.S.A.

e-mail: support@nysunburst.com OR SunHelp@aol.com
World Wide Web: <http://www.nysunburst.com>
America Online: keyword: SUNBURST

(800) 321-7511 (this is customer service, so ask for tech support)

(914) 747-3310 (this is an automated operator, so press the number for customer service and ask for technical support)

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Tech Info Library Article Number:20688



Tech Info Library

7500/7600/8500: Use Built-In Video For Video Digitizing (12/96)

Revised: 12/2/96
Security: Everyone

7500/7600/8500: Use Built-In Video For Video Digitizing (12/96)

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Article Created: 2 December 1996

TOPIC -----

This article discusses potential issues with digital video recording when adding and using a third-party PCI video card to a Power Macintosh 7500, 7600, or 8500 series computer.

DISCUSSION -----

The Power Macintosh 7500, 7600, and 8500 series computers come with built-in video support and support for digital video recording. Because the video digitizer is tied to the built-in video on these computers, digital video recording will work best when the built-in video is used.

If a PCI video card is added, and the built-in video is not used at all (that is, there is nothing connected to the built-in video connector), video digitizing applications such as Apple Video Player will record sluggishly.

If a PCI video card and built-in video are being used simultaneously (that is, there are two monitors connected to the computer), Apple Video Player will work best when the video window is on the monitor connected to the built-in video connector.

This article was published in the Information Alley on 2 December 1996.

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Tech Info Library Article Number:20690



Tech Info Library

6360/54xx/64xx:Digitizer Not Available w/ Only PCI Video (12/96)

Revised: 12/2/96
Security: Everyone

6360/54xx/64xx:Digitizer Not Available w/ Only PCI Video (12/96)

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Article Created: 2 December 1996

TOPIC -----

This article discusses issues of which you should be aware when adding and using a third-party PCI video card to a Power Macintosh or Macintosh Performa 6360, 5400, or 6400 series computer.

DISCUSSION -----

The Power Macintosh or Macintosh Performa 6360, 5400 series, and 6400 series Power Macintosh come with built-in video support. These computers also have support for video editing, the TV Tuner Card, and the FM/TV Tuner Card. Because the video digitizer is tied to the built-in video on these computers, there are two situations of which you should be aware:

1) If a PCI video card is added, and the built-in video is not used at all (that is, there is nothing connected to the built-in video connector):

The video digitizer will not initialize on startup and will not be available to applications such as Apple Video Player and Apple FM Radio. Apple Video Player, Apple FM Radio, Avid Cinema, and any other application requiring the video digitizer will not function when the built-in video connector is not being used.

2) If a PCI video card and built-in video are being used simultaneously (there are two monitors connected to the computer):

Apple Video Player will launch, but will perform much better when the video window is on the monitor connected to the built-in video connector. Apple FM Radio will work with no problems (assuming the FM/TV Tuner Card is installed). Avid Cinema will work with no problems (assuming the Avid Cinema hardware and software are installed) as long as the monitor connected to the built-in video connector is the monitor with the menu bar. The menu bar must be on this monitor when the computer is started up. To change the location of the menu bar, open the Monitors & Sound control panel and click the Arrange button.

This article was published in the Information Alley on 2 December 1996.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20691



Tech Info Library

AppleShare Workstation: Maximum Viewable Volumes (12/96)

Revised: 12/2/96
Security: Everyone

AppleShare Workstation: Maximum Viewable Volumes (12/96)

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Article Created: 2 December 1996

TOPIC -----

What is the maximum number of viewable volumes in the AppleShare client login window?

The reason I ask is our Windows NT server has 200 volumes, and when connecting to the server with AppleShare Workstation client software we can only see 150. We are at the point where AppleShare and the server have been chosen in the Chooser; guest or registered user and password has been entered; then in the volume selection window, only 150 volumes are available to be selected.

DISCUSSION -----

AppleShare Workstation (client software) 3.6.1 or later should support up to 256 volumes. You should upgrade to the latest version of AppleShare Workstation software which can be found on Apple Computer's online software update locations.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" -- Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" -- Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20692



Tech Info Library

PowerBook 5300 Series: Hard Drive Speed (12/96)

Revised: 12/2/96
Security: Everyone

PowerBook 5300 Series: Hard Drive Speed (12/96)

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Article Created: 2 December 1996

TOPIC -----

What are the rotational speeds of the IDE drives installed by Apple in the PowerBook 5300 series computers?

DISCUSSION -----

The rotational speed of the 500 MB, 750 MB, and 1.1 GB IDE hard drives used in the PowerBook 5300 series is 4000 RPM.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20693



Tech Info Library

PCI Power Mac: Drive Setup Is Unable To Update Driver (12/96)

Revised: 12/3/96
Security: Everyone

PCI Power Mac: Drive Setup Is Unable To Update Driver (12/96)

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Article Created: 2 December 1996

TOPIC -----

This article discusses situations where Drive Setup 1.0.4 may not be able to update the SCSI driver on a PCI-based Power Macintosh computers, like a 7600/132 or 8500/180.

DISCUSSION -----

Some users have reported issues when attempting to updated their SCSI disk driver with Drive Setup 1.0.4. They notice the Update Driver option is dimmed, and if they reformat the hard disk, they can update the driver.

The update driver option may be dimmed because of the following:

The hard disk was formatted with a third-party utility

Drive Setup will not attempt to update the drivers on a device being controlled by a third party driver. A reason for this, is to not replace a security driver which may have moved vital data on the hard disk. The next time the user starts the computer, the hard disk may now be corrupted and unusable.

The installed driver is newer than the version supplied in Drive Setup

Check the version of the hard disk driver by selecting the hard disk and choosing the Get Info command in the File menu. The Info window will show the version information for the driver in the Where field. For instance, a drive formatted with Apple's Drive Setup might show:

Macintosh HD, Bus 0, SCSI ID 0, (v8.0.4)

The driver version is listed between the parentheses. If the version is newer than the version of the driver installed by Drive Setup, Drive Setup will not be able to update the driver. You do not want to place an older version of the driver on the hard disk so the update option is disable in this circumstance.

You can refer to the last two digits of the driver version number to determine whether the version of Drive Setup will have a newer driver. For example, if in the Get Info window, the driver version number is 8.0.5 and the version of Drive Setup is 1.0.4, Drive Setup will not update the driver (.0.5 is newer than .0.4).

Some PCI Power Macintosh computers shipped with Drive Setup 1.0.4 and with hard disks that contain SCSI driver version 8.0.5. Driver version 8.0.5 has fixes specific to the Power Macintosh 9500/200. The 9500/200 ships with a Drive Setup Updater program that will let users update their SCSI driver to version 8.0.5 after formatting with Drive Setup 1.0.4. However, other PCI Power Macintosh computers, like the Power Macintosh 7600 and 8500, may also ship with hard disks that have driver version 8.0.5. Drive Setup 1.0.4 will not update these drivers resulting in the update option being dimmed.

Do not be concerned with Drive Setup 1.0.4 not being able to update the driver on computers other than the Power Macintosh 9500/200. Due to manufacturing efficiency, the 8.0.5 version of the SCSI driver is being installed on all SCSI hard disks. If you are not using a Power Macintosh 9500/200, there is no harm in formatting the hard disk with Drive Setup 1.0.4 and having the driver revert to version 8.0.4. Also, there is no need to format a hard disk and revert to driver version 8.0.4 just because the update option in Drive Setup is dimmed.

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Tech Info Library Article Number:20694



Tech Info Library

PCI Power Mac: Drive Setup Is Unable To Update Driver (12/96)

Revised: 12/20/96
Security: Everyone

PCI Power Mac: Drive Setup Is Unable To Update Driver (12/96)

Article Created: 2 December 1996
Article Reviewed/Updated: 20 December 1996

TOPIC -----

This article discusses situations where Drive Setup 1.0.4 may not be able to update the SCSI driver on a PCI-based Power Macintosh computers, like a 7600/132 or 8500/180.

DISCUSSION -----

Some users have reported issues when attempting to updated their SCSI disk driver with Drive Setup 1.0.4. They notice the Update Driver option is dimmed, and if they reformat the hard disk, they can update the driver.

The update driver option may be dimmed because of the following:

The hard disk was formatted with a third-party utility

Drive Setup will not attempt to update the drivers on a device being controlled by a third party driver. A reason for this, is to not replace a security driver which may have moved vital data on the hard disk. The next time the user starts the computer, the hard disk may now be corrupted and unusable.

The installed driver is newer than the version supplied in Drive Setup

Check the version of the hard disk driver by selecting the hard disk and choosing the Get Info command in the File menu. The Info window will show the version information for the driver in the Where field. For instance, a drive formatted with Apple's Drive Setup might show:

Macintosh HD, Bus 0, SCSI ID 0, (v8.0.4)

The driver version is listed between the parentheses. If the version is newer than the version of the driver installed by Drive Setup, Drive Setup will not be able to update the driver. You do not want to place an older version of the

driver on the hard disk so the update option is disable in this circumstance.

You can refer to the last two digits of the driver version number to determine whether the version of Drive Setup will have a newer driver. For example, if in the Get Info window, the driver version number is 8.0.5 and the version of Drive Setup is 1.0.4, Drive Setup will not update the driver (.0.5 is newer than .0.4).

Some PCI Power Macintosh computers shipped with Drive Setup 1.0.4 and with hard disks that contain SCSI driver version 8.0.5. Driver version 8.0.5 has fixes specific to the Power Macintosh 9500/200 and Workgroup Server 8550/200. The 9500/200 and WS 8550/200 ships with a Drive Setup Updater program that will let users update their SCSI driver to version 8.0.5 after formatting with Drive Setup 1.0.4. If either the 9500/200, or 8550/200 is reformatted using Drive Setup, the driver installed will be listed, when performing a Get Info, as version 8.0.4. The Drive Setup Updater when used to update the driver to version 8.0.5 will still be listed, in Get Info, as 8.0.4 -- the driver itself gets updated, but the version string does not. Other PCI Power Macintosh computers, like the Power Macintosh 7600 and 8500, may also ship with hard disks that have driver version 8.0.5. Drive Setup 1.0.4 will not update these drivers resulting in the update option being dimmed.

Do not be concerned with Drive Setup 1.0.4 not being able to update the driver on computers other than the Power Macintosh 9500/200. Due to manufacturing efficiency, the 8.0.5 version of the SCSI driver is being installed on all SCSI hard disks. If you are not using a Power Macintosh 9500/200, there is no harm in formatting the hard disk with Drive Setup 1.0.4 and having the driver revert to version 8.0.4. Also, there is no need to format a hard disk and revert to driver version 8.0.4 just because the update option in Drive Setup is dimmed.

This article was published in the Information Alley on 4 December 1996.

Article Change History:

20 Dec 1996 - Updated information on Driver version and Get Info listing.

04 Dec 1996 - Added keyword.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20694



Tech Info Library

GeoPort/Express Modem Update 3.0 & Apple Telecom 3.0 (12/96)

Revised: 12/3/96
Security: Everyone

GeoPort/Express Modem Update 3.0 & Apple Telecom 3.0 (12/96)

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Article Created: 2 December 1996

TOPIC -----

Is the Apple Telecom 3.0 software included in the GeoPort and Express Modem Update 3.0 software found on Apple Computer's software update locations?

DISCUSSION -----

The GeoPort and Express Modem Update 3.0 upgrades the lower level components of Apple Telecom software to 3.0.3. It does not provide the Apple Telecom 3.0 applications, in other words the Apple Telecom 2.x applications are not upgraded.

As of November, 1996 the only users that should have Apple Telecom 3.0 applications are Macintosh or Performa computers that contain a bundled GeoPort internal modem.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20695



Tech Info Library

Apple Printer Utility: How To Install a 'Fat' Version (12/96)

Revised: 12/3/96
Security: Everyone

Apple Printer Utility: How To Install a 'Fat' Version (12/96)

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Article Created: 3 December 1996

TOPIC -----

How do I install a 'fat' version of the Apple Printer Utility?

Note:

A 'fat' version of an application means the application contains both PowerPC native code and 68000 code.

DISCUSSION -----

If you to install a 'fat' version of the Apple Printer Utility from the LaserWriter 8.4 or LaserWriter 8.4.1 installation disks, you must install the software in the following order.

Step 1

Launch the LaserWriter software Installer.

Step 2

Select Custom Install

Step 3

Select the first option; Printer software fro all Macintosh computers.

If you perform an easy install or Custom Install of the Apple Printer Utility, only a version that runs on the computer architecture of the target computer is installed. So, if you have a Macintosh Quadra 700, only a 68k version of the software would be installed. If you had a Power Macintosh 6100 computer, only a PowerPC version of the software would be installed.

This article appeared in the 3 December 1996 issue of the Information Alley.

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Tech Info Library Article Number:20696



Tech Info Library

AICK 1.2: Product Description and Details (12/96)

Revised: 12/4/96
Security: Everyone

AICK 1.2: Product Description and Details (12/96)

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Article Created: 4 December 1996

TOPIC -----

This article describes the Apple Internet Connection Kit (AICK) 1.2 and gives product details.

DISCUSSION -----

The Apple Internet Connection Kit is an integrated collection of Apple and third-party software that lets a Macintosh computer user connect directly to the Internet quickly and easily. It's the perfect solution for users who want direct Internet access -- today.

The popularity of the Internet continues to grow exponentially, as more and more people discover the amazing information and communication resources available online. But navigating (or "surfing") the Internet requires more than just a desire to try it. You need a variety of software tools -- browsers, viewers, file-transfer programs, e-mail, and more -- as well as a qualified Internet service provider. In fact, setting up your computer for Internet connection can be a time-consuming process.

Luckily, Macintosh users who want to connect to the Internet already have one big advantage: right out of the box, the Macintosh is the easiest-to-use computer available. Now Apple has made direct Internet connection easier than ever for Macintosh owners.

With the Apple Internet Connection Kit, you get high-quality, "best of class" software in all of the categories you need for successful Internet access and use. You also get the Apple Internet Dialer, which makes signing up with a qualified Internet service provider and getting connected to the Internet a matter of minutes rather than days. Just double-click the application and fill in the blanks, and the Apple Internet Dialer will call a service provider for you. Within minutes, you'll be connected to the Internet -- where you can send and receive e-mail, conduct research, plan your own travel itinerary, play games, shop, and much, much more.

Because dealing with the Internet sometimes raises more questions than it answers, the Apple Internet Connection Kit includes a Getting Started Guide and special Apple Guide online help, as well as third-party documentation.

The Apple Internet Connection Kit -- the easiest, fastest, most complete tool for connecting your Macintosh computer directly to the Internet.

Features

Quick, direct Internet access

- Features software that makes creating an account with an Internet service provider a quick, online process
- Includes all of the software tools needed for direct Internet access
- Lets you access and use all the Internet hot spots: the World Wide Web (WWW), e-mail, newsgroups, and FTP servers
- Enables local area networks that are connected to the Internet to standardize on one set of Internet tools

Ease of use

- Provides an all-in-one solution for Internet connection
- Installs easily; one-button installation and configuration for all key applications
- Helps you automatically create a new account with an Internet service provider, or you can use an existing account
- Is compatible with other Internet tools

Applications included

- Apple Internet Dialer, online Internet service registration and connection software
- Netscape Navigator
- Apple Guide for the Apple Internet Connection Kit
- Claris EMailer Lite
- Dartmouth Fetch
- NewsWatcher
- NCSA Telnet
- QuickTime plug-in
- QuickTime VR Player
- Macromedia Shockwave plug-ins
- RealAudio Player
- Adobe Acrobat Reader
- Aladdin Stuffit Expander
- OnBase Technology DragNet
- Farallon Look@Me
- Dartmouth MacPing
- PPP and SLIP software

Technical support

- Includes a Getting Started Guide and electronic third-party documentation
- Features online help via Apple Guide assistance
- Provides access to Apple Internet Connection Kit website
- Provides telephone support for installation and configuration

Product Details

Apple Internet Dialer online Internet service registration software

- Helps you automatically create an account with an Internet service provider
- Offers a choice of qualified Internet service providers in your area
- Configures the applications to run on your system

Netscape Navigator browser software

- Allows you to browse the World Wide Web

Claris EMailer Lite software

- Enables you to send and receive Internet e-mail

Dartmouth Fetch FTP software

- Lets you access File Transfer Protocol (FTP) services to download specific files

NewsWatcher browser software

- Allows access to Usenet newsgroup discussions

NCSA Telnet terminal emulation software

- Allows your Macintosh to emulate a terminal for connection to many libraries and catalogs

QuickTime plug-in, QuickTime VR Player

- Lets you view video and interactive multimedia presentations over the Internet

Macromedia Shockwave plug-ins

- Lets you interact with "shocked" websites containing Macromedia Authorware, FreeHand, and Director multimedia content

RealAudio Player

- Enables you to hear live audio broadcasts over the Internet

Adobe Acrobat Reader

- Lets you view Portable Document Format (PDF) files in their exact original format

Aladdin Stuffit Expander decompression software

- Automatically decompresses files that you download from the Internet

OnBase Technology DragNet

- Helps you organize your frequently visited websites, newsgroups, and FTP sites, as well as keep track of your favorite e-mail addresses

Farallon Look@Me

- Lets you view another Look@Me user's screen anywhere in the world for real-time collaboration over the Internet

Dartmouth MacPing

- Provides a useful network troubleshooting tool

PPP and SLIP software

- Allows the use of the MacTCP application program over your modem line, so your Macintosh and Internet applications can communicate with the protocols used by the Internet (PPP and SLIP)

Support

- Includes a Getting Started Guide to help you get acquainted with the Internet and set up your account with an Internet service provider
- Provides telephone support for installation and configuration

Online help and documentation

- Includes Internet-specific Apple Guide online help
- Offers third-party documentation on CD
- Provides access to Apple Internet Connection Kit website

System requirements

- Apple Macintosh, Power Macintosh, PowerBook, or other Mac OS-based computer (68030 or later)
- Minimum 12MB of RAM with virtual memory, 16MB recommended
- Macintosh system software version 7.5 or later
- A 9,600 bps (or faster) modem (28,800 bps recommended) or a connection to a local area network that is already connected to the Internet
- A minimum of 25MB of available hard disk space
- A high-density floppy disk drive or CD-ROM drive

Ordering Information

Apple Internet Connection Kit

Order No. 504181U

- CD-ROM with disc exchange containing all of the Internet software and support (including electronic documents) described in "Product Details"

For information regarding ClarisPLUS volume licensing, contact Claris Corporation at one of the following:

For K-12: 1-800-747-7483

All others: 1-800-725-2747

For more information about Apple's Internet products, visit our website at:
<http://www.apple.com/>

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20698



Tech Info Library

QuickDraw 3D v1.5: Read Me (12/96)

Revised: 12/4/96
Security: Everyone

QuickDraw 3D v1.5: Read Me (12/96)

Article Created: 4 December 1996

TOPIC -----

This article is the QuickDraw 3D version 1.5 ReadMe file.

DISCUSSION -----

Important Information About QuickDraw 3D

QuickDraw 3D enables your computer to display three-dimensional graphics using applications designed to take advantage of QuickDraw 3D. It also provides a common file format, called QuickDraw 3D Metafile (or 3DMF for short), for exchanging 3D documents. QuickDraw 3D also provides acceleration services which support plug-and-play accelerator cards.

For computers running the Mac OS, the following are required to install and run QuickDraw 3D:

- A PowerPC based computer with a minimum of 16 megabytes of memory (RAM)
- Mac OS System 7.1.2 or later

The latest version of QuickDraw 3D, along with software demos, QuickDraw 3D Metafiles, and additional information is available through the Internet at the following site:

<http://quickdraw3d.apple.com/>

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models, and textures that allow you to explore the 3D capabilities of your computer:

- SimpleText version 1.3.1 and Scrapbook version 7.5.2. These applications allow you to open and interact with 3DMF models.
- A new Scrapbook File with sample 3DMF models.

- A number of 3DMF models provided by:
Model Masters at URL: www.interaccess.com/modelmaster
Plastic Thought, Inc. at URL: www.3d-active.com
Viewpoint DataLabs International at URL: www.viewpoint.com
Zygote at URL: www.zygote.com

You can expect even more applications that use QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

Troubleshooting

If you try to start an application that uses QuickDraw 3D and get the message "The application '<application name>' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions folder, inside the System Folder:

- QuickDraw 3D
- QuickDraw 3D IR
- QuickDraw 3D RAVE
- QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application. This is done by:
 - selecting the application's icon in the Finder
 - choosing Get Info from the File menu
 - typing a lower number in the boxes for Minimum Size and Preferred Size
- Install more memory (RAM).

If you are using a localized system, and you install this U.S. software, you will need to copy the Scrapbook File in the QuickDraw 3D Folder to the System Folder on your computer. Otherwise, when you choose Scrapbook from the Apple menu, you will get an empty scrapbook. Note that this operation will replace any existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

Some of the sample models included with QuickDraw 3D, such as Big Ben and Red Hatchback, are highly detailed (they contain additional 3D modeling data such as vertex normals and surface UVs) and thus will require a larger amount of memory than the other supplied models. If you experience problems when opening these files from SimpleText, you should open only one file at a time.

How QuickDraw 3D uses memory

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D are open, the library does not take up memory space (RAM). Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared

library doesn't increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from temporary memory. This memory shows up in the About This Macintosh window as memory used by the System. When you quit the application, the memory becomes available, but the size shown in the About This Macintosh window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed).

Apple QuickDraw 3D Accelerator Card

If you have an Apple QuickDraw 3D Accelerator Card present in your machine, the following files will also be installed in the Extensions folder, inside the System Folder:

- Apple QD3D HW Driver
- Apple QD3D HW Plug-In

If you need to re-install these files at a later time, you can do so by launching the Installer, as described in the section below under "If you need to reinstall QuickDraw 3D," selecting Custom Install from the pop-up menu, and then selecting the Apple QuickDraw 3D Accelerator Card item in the list.

We recommend that you turn off Virtual Memory when using Apple's QuickDraw 3D Accelerator Card.

Scrapbook 7.5.2

We strongly recommend that the Scrapbook not be used with less than 300k of memory available. To determine how much memory is available, choose About This Macintosh from the Apple menu and look at the value next to Largest Unused Block.

If you need to reinstall QuickDraw 3D

If you need to reinstall QuickDraw 3D, follow these steps:

- 1) Open the QuickDraw 3D Install folder and double-click the Installer icon.
- 2) After installing QuickDraw 3D, restart your computer.
- 3) If you want the items in the QuickDraw 3D Extras folder, drag the folder to the newly-created QuickDraw 3D Folder inside the Apple Extras folder.

Removing QuickDraw 3D

If you wish to remove QuickDraw 3D, follow these steps:

- 1) Open the QuickDraw 3D Install folder and double-click the Installer

icon.

- 2) Choose Custom Remove from the pop-up menu.
- 3) Click the box next to each item to put a check in it.
- 4) Click Remove.
- 5) Restart your computer.

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Tech Info Library Article Number:20701



Tech Info Library

Apple Network Server: Shutting Down uShare (3/97)

Revised: 3/12/97
Security: Everyone

Apple Network Server: Shutting Down uShare (3/97)

=====

Article Created: 4 December 1996
Article Reviewed/Updated: 12 March 1997

TOPIC -----

I am attempting to unmount volumes on an Apple Network Server but get an error saying the volumes are in use. I suspect this is because uShare still has active processes. I shutdown uShare using the following command:

```
/ushare/bin/ustop
```

DISCUSSION -----

Though the command above generally works well for shutting down uShare, it may leave a number of processes active. The following command will force uShare to kill all open processes with a timeout value set to zero:

```
/ushare/bin/usstop to=0 all
```

Article Change History:
12 Mar 1997 - Made changes for technical accuracy.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20703



Tech Info Library

AMT and Audio Issue on Windows PCs (12/96)

Revised: 12/5/96
Security: Everyone

AMT and Audio Issue on Windows PCs (12/96)

=====

Article Created: 5 December 1996

TOPIC -----

There is a issue with audio when running an AMT project on PCs under Windows (Windows 95, Windows NT Workstation 3.51, and Windows 3.1). Here is the brief description:

In a project with audio narration for each screen, sound is in the form of an audio-only QuickTime movie, a keyboard object is used in each screen to let the user set the audio volume level.

Everything works fine on the Macintosh computer. On the PC, the number (volume) keys work, but if you set the volume low or off, when you advance to the next screen, the audio level gets reset to a louder setting -- possibly the default volume setting for the sound card.

DISCUSSION -----

This behavior, and the possibility of a change, is under investigation. This behavior does not occur when using .WAV audio files. If the setting the sound level for Windows users is an important feature for your project, try using .WAV files for your sounds.

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Tech Info Library Article Number:20707



Tech Info Library

About At Ease 4.0.1 Updater: Read Me (2/97)

Revised: 2/12/97
Security: Everyone

About At Ease 4.0.1 Updater: Read Me (2/97)

=====

Article Created: 6 December 1996
Article Reviewed/Updated: 12 February 1997

TOPIC -----

This article is the About At Ease 4.0.1 Updater ReadMe file.

DISCUSSION -----

Important Information about At Ease 4.0.1 Updater

The At Ease 4.0.1 Updater updates At Ease for Workgroups 4.0 to the latest version. This updater works only with At Ease version 4.0.

Requirements for Updating
=====

Version 4.0 Already Installed

You can use the Updater only on a workstation that has version 4.0 installed. The Updater will not run if you have an older version (3.x or earlier) of At Ease installed. If you have an earlier version of At Ease, you must obtain At Ease 4.0 (which is part of the Apple Network Administrator Toolkit) before you can use this updater.

At Ease Server Not Changed

Only the At Ease client and administrator workstations need to be updated. The At Ease Server used in version 4.0 has not changed for 4.0.1 and will not be updated by this updater application program. You should continue to use the At Ease 4.0 version of the At Ease Server extension.

Updating Procedure
=====

Installation Options

There are three ways of updating At Ease 4.0 on one or more machines: by using Network Assistant 2.0 or later, by using an At Ease 4.0.1 Updater's floppy disk on each workstation, or by installing the updated software on each workstation by launching the Updater over the network on a server. Note that if you choose to perform the update by using Network Assistant, you must first update one workstation via floppy disk or over the network. It is probably most convenient to first update the administrator workstation from which you will perform the At Ease 4.0.1 update. On this workstation you must install both the administrator and client workstation software. The administrator workstation and every client workstation which you wish to update must already have Network Assistant installed on it.

Files the Updater Needs to Locate

The Updater attempts to locate and, in most cases, update all of the files automatically.

If it cannot automatically find a file, it will ask you for the location of the missing file. If you cannot locate the file, or if you know the file does not exist on the machine, you can click the Skip button to bypass that particular file. You may need to do this if you want to update just the administration program on your machine because it does not also have the workstation software installed on it.

If the Updater finds multiple copies of a file, it will ask if you want to remove the other copies before it updates. Other copies must be removed before the update can take place. You can have the Updater remove the other copies automatically, or you can cancel the update and remove them manually using the Finder. If you cancel the update, no files will be touched.

Updating Using Network Assistant

Using the Network Assistant application program to perform the update, it is not necessary to visit each individual workstation; the updating can be done from an administrator's workstation, as long as the administrator's workstation has already been updated to At Ease 4.0.1, and as long as the four boxes "Allow administrators to:", "Restart and shut down this workstation", "Copy items to this workstation", and "Delete and Replace items on this workstation" are checked.

Follow these steps to update At Ease 4.0 to version 4.0.1 by using Network Assistant 2.0 or later:

- 1) Launch the At Ease Administration application program from an administrator workstation. Make sure the At Ease server that you want to administer is listed in the upper left-hand corner of the initial window. If it is not, click the Change Server button and find the correct At Ease server. Enter the administrator's password and click the OK button.

- 2) The next window that appears is the main At Ease Administration window. Turn

off At Ease on each client workstation you are updating by clicking the "Off" button in the upper right-hand corner. Now quit At Ease Administration.

3) Launch Network Assistant, enter your password, and click OK. In the Workstation Status window will appear each client workstation which can be administered by the workstation running Network Assistant. Hold down the shift key and click on each workstation which you want to update to At Ease 4.0.1.

4) From the Manage menu select the Restart... menu item. In the resulting dialog click on the "Let users save their work" button and then click the restart button. The selected machines will restart and launch the Finder.

5) In the Workstation Status window, reselect the workstations you selected in step 3 above, and from the Manage menu, select the Copy Items... menu item.

6) In the resulting dialog, click on the word "contains" and from the pop-up menu select the word "is". In the white box to the right enter the words "At Ease" and click the Find button below. In the "Items found on" list, select the line whose "Kind:" is "system extension" and whose "Location:" ends with ":System Folder:" in the panel below (there may be only one item in the list). Click on the Copy button below the list.

7) A dialog will appear warning you that the item already exists. Click on the Replace button.

8) In the box to the right of the "name" and "is" buttons, change "At Ease" to "At Ease Startup" and click the Find button. In the "Items found on" list, select the line whose "Kind:" is "system extension" and whose "Location:" ends with ":System Folder:Extensions:" in the panel below (there may be only one item in the list). Click on the Copy button below the list.

9) A dialog will appear warning you that the item already exists. Click on the Replace button.

10) Click on the Close Window button which is below the Find button. Quit the Network Assistant application program.

11) Launch the At Ease Administration application program as you did in step 1 above. Make sure the At Ease server that you want to administer is listed in the upper left-hand corner of the initial window. If it is not, click the Change Server button and find the correct At Ease server. Enter the administrator's password and click the OK button.

12) The next window that appears is the main At Ease Administration window. Turn on At Ease on each client workstation you updated by clicking the "On" button in the upper right-hand corner. Quit the At Ease Administration application program.

13) Repeat steps 3 and 4 above to restart each client workstation in order to activate At Ease again.

Updating From a Floppy Disk

If you want to update to At Ease 4.0.1 by using a floppy disk, and you do not have one, you can make an update floppy disk from the on-line image by using the Disc Copy application program.

Turn off At Ease on each client workstation you are updating by launching the At Ease Administration application program on an administrator workstation. Turn At Ease "Off" in the main window.

Follow these steps on each client workstation to update At Ease from the floppy disk:

- 1) Restart the client workstation; it will now start up in the Finder instead of in At Ease.
- 2) Insert the Updater disk.
- 3) Double-click to open the At Ease 4.0.1 Updater application program.
- 4) Click Begin in the opening screen.
- 5) If the Updater cannot find a file it needs to update, a message appears asking you to locate that file. If you cannot find the At Ease or At Ease Startup files, click Skip to cancel the update.
- 6) If necessary, locate any missing files and start the update again.

When each client workstation has been updated, turn At Ease back on at each client workstation by launching the At Ease Administration application program on an administrator workstation; turn At Ease "On" in the main window. Restart each client workstation, which will now start up in At Ease.

Updating Over the Network

Perform these steps on an administrator workstation:

- 1) Copy the Updater application to an AppleShare server volume to which your At Ease workstations have access.
- 2) Make sure the application is locked. (To do this, select the Updater's icon, choose Get Info from the File menu, then click to put an X in the checkbox labeled "Locked.")
- 3) Turn off At Ease on each workstation you are updating by running the At Ease Administration application and turning At Ease "Off" in the main window.

Perform these steps on each client workstation to be updated:

- 1) Restart the client workstation; it will now start up in the Finder instead of in At Ease.
- 2) Mount the server volume that contains the Updater application and locate it.
- 3) Double-click to open the Updater application.

4) Click Begin in the opening screen.

When each client workstation has been updated, turn At Ease back on at each client workstation by running the At Ease Administration application program from an administrator workstation. Turn At Ease "On" in the main window. Restart each client workstation, which will now start up in At Ease.

Clarification: User's Own AppleShare Privileges

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A change has been made to version 4.0.1 to allow certain AppleShare volumes mounted by At Ease users to use their AppleShare access privileges instead of having At Ease mandate additional restrictions. This change mostly benefits restricted Finder users, but panels users may also benefit from this. Because this change may unknowingly and adversely affect security at some sites, this feature is initially OFF in At Ease 4.0.1, and must be activated by the administrator for every workgroup that he or she wishes to allow this.

What this feature does is to allow any mounted AppleShare volume, other than the current workgroup data server volume, to use the access rights that are given to the AppleShare user. If turned on, At Ease will no longer attach read-only privileges to folders that the user are able to open. Additionally, copy restrictions are removed, allowing the user to copy files to and from the AppleShare volume if permitted by AppleShare. At Ease does not (and cannot) give more access than was set by the AppleShare Administration program for that logged-in AppleShare user on that server. Users are still restricted to applications that are allowed to be launched on these volumes.

When a user attempts to open or save a document using the standard open or save file dialog and the feature has been turned on, the "Places" location will also show any AppleShare volumes that are mounted. This permits the user to open or save to the AppleShare volume; a feature that did not exist previously.

To activate this feature, the administrator should create or edit a workgroup and select the Locations pane for that workgroup. At the bottom of the pane, select the "Use existing AppleShare privileges..." checkbox to turn this feature on. Administrators may want to make sure that any AppleShare volumes that they have set to auto mount (using the Access To Volumes menu command), use the user's own names and passwords if security is an issue for that volume.

As mentioned earlier, the workgroup data server volume's rights do not change when using this feature. This is because of security concerns with the Documents folder used on the server volume.

Other Changes and Enhancements

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The following additional changes have been made in At Ease 4.0.1 and are described in detail below.

Major Changes

1) Deletions of large numbers of users in the main window of the administration program has been speeded up. Administrators should note that if you decide not to delete the user's documents folders (and its contents), then this will also speed up deletion, regardless of whether or not the user had any existing documents (that is, if you want to make it go the fastest, you should select NO when asked to delete the user's documents).

2) A problem where CD-ROM settings shown in the CD-ROM Preferences menu command in the administration program, showing information for a different CD-ROM has been fixed. This problem most often showed itself on 7.5.3 or later machines, and usually running on PPC systems. If you are having this problem, you MUST delete your CD-ROM Preferences file on the server before attempting to add or alter any CD-ROM discs since the fix cannot repair an already corrupted file.

3) A crash problem was fixed on At Ease workstations when entering the Finder (either restricted or non-restrictive). This problem would only occur on pre-7.5 systems that did not have the Drag Manager extension installed. Most likely, you would only see this with system 7.1.2, but it was possible on other earlier 7.x systems.

4) If there is more than one At Ease server in your AppleTalk zone, and one of the servers was not set up properly, there would be a chance that the very first time you ran the At Ease Administration program on a given system that it would locate the not-setup machine and not allow you to administer the other machine.

5) If, when printing the activity log file, there was one or more applications that the administration program did not recognize, the print out (or export) would not include the signature, even though the screen display would show it (for example, creator 'chzr').

6) If a user logged into a restricted Finder workgroup that wasn't using desktop printers (that is, by using either the current Chooser selection, or no printers options instead), but there happen to be desktop printers on the desktop, they were not removed.

7) Fixed a problem with some routers where the machine would hang when trying to obtain the zone list. This normally occurred only if the local network had multiple AppleTalk zones.

8) Fixed problems involving removable media with restricted Finder workgroups.

9) Fixed a problem where workgroup administrators could not remove items left in the hand in folder's by users in the restricted Finder environment. The administrator can now delete these items.

10) Fixed a problem when using LaserWriter 8.4 desktop printers; panels users could change to any desktop printer in the Print dialog even if the workgroup did not have access to previously installed printers.

11) Fixed a printing problem with LaserWriter 300 printers using Printer Share.

12) When using the "Copy Internet Preferences" feature, if a user logs into an unrestricted Finder workgroup, internet preferences will now be copied back to the server when the user logs out.

13) Users can no longer access the At Ease Items WG folder located on the server volume. This normally only affects restricted Finder workgroup users that have their workgroup data server volume set to be the same as the At Ease server volume.

Minor or Cosmetic Changes

1) Some dialogs that referred to "floppy disks" that should have said "removable media" have been changed.

2) Cosmetic change to the administration program's Location pane when editing a workgroup. The text that said "Allow applications to be opened from removable media" has been changed to say "Allow any applications..." since it was unclear that this option allowed all applications, not just applications added to the workgroup, to be opened from removable media.

3) When importing users in At Ease, a minor problem was fixed where you could sometimes single click on items in the Available Fields list to add it to the Imported Fields list.

4) If the minimum password length was greater than seven, and you edited an existing user in the administration program, an erroneous alert would be displayed which required you to re-enter the password again.

5) Removable media volumes (other than floppies) now show a "floppy" icon instead of a "hard disk" icon in the Eject disk dialog.

6) The At Ease Administration's Activity Log and Disk Space windows did not properly track the mouse click in the close box of the window.

7) On PowerPC machines, the At Ease Administration application now shows color icons when displaying them in the Items pane of the workgroup setup.

Article Change History:

12 Feb 1997 - Updated with new Read Me file.

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Tech Info Library Article Number:20709



Tech Info Library

Energy Saver 2.0.x and Monitor Sleep Modes (12/96)

Revised: 2/17/97
Security: Everyone

Energy Saver 2.0.x and Monitor Sleep Modes (12/96)

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Article Created: 6 December 1996

TOPIC -----

I have noticed that my 15-inch Multiple Scan Display does not seem to go into sleep mode with Energy Saver 2.0.x. The screen goes black but the power indicator does not change to indicate the monitor is asleep. At this point, just moving the mouse will wake up the system.

If I choose Sleep from the Special menu, the monitor does go into sleep mode and the system will only wake up when a key is pressed. What is going on?

DISCUSSION -----

This will happen if you are using the separate timings for monitor sleep, system sleep, and hard drive spin down in the Energy Saver control panel. If the monitor is set to sleep before the system is set to sleep, the monitor is put into suspend mode. That is the video is turned off but one of the sync lines is still active to keep the monitor awake. The system itself is still functioning and moving the mouse or pressing a key will cause the video to return instantly. This is more of a screen saver feature than an energy saving feature although it does save some energy.

If the system continues idle for the amount of time set for system sleep, the monitor will be put into sleep mode. Actually, the whole system will be put to sleep. Selecting Sleep from the Special menu also puts the whole system to sleep. A key must be pressed to wake up the system at this point.

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Tech Info Library Article Number:20710



Tech Info Library

Can HD SC Setup or Drive Setup Format Any Disk (12/96)

Revised: 12/11/96
Security: Everyone

Can HD SC Setup or Drive Setup Format Any Disk (12/96)

=====

Article Created: 6 December 1996

TOPIC -----

Can I format any disk with Apple HD SC Setup or Drive Setup?

DISCUSSION -----

No. Hard disks that Apple builds into their products include a firmware response, which identifies the disk as an Apple-supplied disk, and is used in communicating with Apple's formatting utilities. Third-party disks normally do not identify themselves as being produced by Apple. Apple formatting software will therefore dim the format, initialize, or update functions when a non-Apple disk is selected for actions in the utility.

For this reason, when replacing or adding either an internal, or external disks to your Macintosh, Apple recommends choosing a third-party formatting utility that can initialize and update any disk.

An exception to the above is in the A/UX environment. The version of Apple HD SC Setup provided with A/UX does not check for the Apple disk firmware response. This is because in a UNIX environment, third-party disks are frequently used for expansion so the Apple disk identification was bypassed.

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Tech Info Library Article Number:20712



Tech Info Library

When to Update Hard Disk Drivers: General Tips (12/96)

Revised: 12/6/96
Security: Everyone

When to Update Hard Disk Drivers: General Tips (12/96)

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Article Created: 6 December 1996

TOPIC -----

When should I use the update driver function of my disk formatting software?

DISCUSSION -----

All Macintosh hard disks contain a small partition containing low level drive support code, that is instructions that are loaded into memory at start up time to support the functions of the hard disk.

If your hard disk does not mount on the desktop normally, updating the driver with your formatting utility may be the solution.

Other strange or unexplainable problems with hard drives, can sometime be cleared up by updating the hard disk drivers.

As a general rule, you should use the same formatting utility to update the drivers as you used to format the disk originally. If you are updating drivers with a different utility, you should backup existing data when possible and consult the vendor of the new utility to see if the old drivers can safely be replaced by their new driver. Drives with multiple partitions could be at risk of data loss.

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Tech Info Library Article Number:20713



Tech Info Library

Macintosh Performa 6360 & 6400: Can't Update Driver (2/97)

Revised: 2/25/97
Security: Everyone

Macintosh Performa 6360 & 6400: Can't Update Driver (2/97)

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Article Created: 6 December 1996
Article Review/Update: 25 February 1997

TOPIC -----

I am unable to use Drive Setup (v1.1) to update the hard disk driver on any Macintosh Performa 6360 or 6400 series computer because the Update option under the Functions menu is disabled. Why is the Update option disabled? How can I update the driver on these computers?

DISCUSSION -----

The Update option is disabled because Drive Setup has detected that a newer version of the driver is already installed on the hard drive.

In manufacturing, Apple uses a software loading system which loads the driver onto the hard drive. Since the SCSI issues corrected in the 6360/64xx/54xx Update disk were found and corrected, Apple included the driver update into the manufacturing process.

Future versions of Drive Setup will incorporate the new driver. Until this version Drive Setup is available, if you need to reinstall your driver you will need to reformat the hard drive with Drive Setup 1.1 and then install the 6360/64xx/54xx Update disk. The 6360/64xx/54xx Update disk is available from the Apple Software Updates areas on the online services and Internet.

The 6360/64xx/54xx Update fixes have been rolled into Mac OS 7.6. If you have installed Mac OS 7.6, you do not need the 6360/64xx/54xx Update.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online

services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

25 Feb 1997 - Added Mac OS 7.6 information.

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Tech Info Library Article Number:20714



Tech Info Library

Megaphone: Answers Calls When Computers Are Asleep (12/96)

Revised: 12/6/96
Security: Everyone

Megaphone: Answers Calls When Computers Are Asleep (12/96)

=====

Article Created: 6 December 1996

TOPIC -----

If a Macintosh Performa 6360 or 6400 series computer is set to Sleep (from the Special menu or through Energy Saver), will Megaphone still answer calls?

DISCUSSION -----

Yes, provided that Megaphone is open, Megaphone will wake up the computer and answer the call; the hard drive spins up to allow Megaphone to record the message. Also, for more reliable performance, verify that Megaphone is set to be the front-most application when the telephone rings.

To do this using Megaphone 2.0.3P and 2.0.5P, follow these steps:

Step 1

Open Megaphone.

Step 2

Choose Preferences from the File menu

Step 3

Choose "Incoming Calls" from the Topic: pop-up menu.

Step 4

Click on the "Come to Front when Ringing" check-box.

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Tech Info Library Article Number:20715



Tech Info Library

Apple VideoPhone Kit: Description (12/96)

Revised: 12/9/96
Security: Everyone

Apple VideoPhone Kit: Description (12/96)

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Article Created: 9 December 1996

TOPIC -----

This article contains the product description for the Apple VideoPhone Kit (M5673LL/A), which is only available to U.S. K-12 educational Institutions.

DISCUSSION -----

At the MacWorld Expo in San Francisco, January 1997, Apple will formally announce the Apple VideoPhone Kit. This product appears on the November 16, 1996 Price List Addendum and will be available for ordering at that time.

The Apple VideoPhone Kit is value-packed with a high resolution color camera, Apple VideoPhone videoconferencing and collaboration software, Farallon's Timbuktu Pro, and Macintosh System Software 7.5.5.

Features

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- Provides videoconferencing capability to most Performa and Power Macintosh users.
- Interoperability with Windows and UNIX via Netscape's CoolTalk technology.
- Multi-use color digital camera; use the camera to conduct videoconferences, capture raw video footage, take still photos, and even use it to make movies.
- Color videoconferencing and document sharing for users with ISDN (56k/sec) or faster connection to the Internet, or an Ethernet network.
- Audioconferencing and collaboration for users with a 28.8 modem connection to the Internet.
- File Transfer, Shared Whiteboard, Chat Tool.

- Apple Macintosh System Software 7.5.5 included.
- Farallon's Timbuktu Pro document-sharing software included.

System Requirements

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- Apple VideoPhone Kit is optimized for use with the following computers: Power Macintosh 6100 series, 7100 series, 8100 series, 7500 series, 7600 series, 8500 series. Performa 5400 series, 6400 series, and the Performa 6360.
- An Apple AV card is needed to enable video capability.
- 16MB RAM
- A 28.8 modem Internet connection or faster, or an Ethernet network connection
- At each end, users must have either an Apple VideoPhone or another video conferencing solution compatible with Apple VideoPhone (such as Netscape's CoolTalk conferencing products).

Features and Benefits

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- You can stay in touch with family, friends, and colleagues easily and affordably with Apple VideoPhone Kit. With a 28.8 modem and connection to the Internet, you can use Apple VideoPhone Kit and your computer to call anyone, anywhere in the world without incurring long-distance phone charges.
- Apple's user-friendly design makes it easy to share photos, send live video images, transfer data files, and type "chat" messages back and forth while an audioconference is in session. Customers can even talk to Windows and UNIX users since Apple VideoPhone Kit is compatible with Netscape Communication's CoolTalk cross-platform conferencing software.
- A higher speed Internet connection (128 kps ISDN modem speed, or faster) turns Apple VideoPhone Kit into a value-packed productivity tool.
- Educators can eliminate the downtime and expense of travel by collaborating on projects while videoconferencing with up to four people using Farallon's Timbuktu Pro (included with the purchase of the Apple VideoPhone Kit). They can increase their savings by using Apple VideoPhone Kit to quickly electronically distribute large graphics files and presentations while they videoconference.
- In addition to quarter-screen, 15-25 frames-per-second videoconferencing, the Apple VideoPhone Kit's high resolution color camera can be used to add video clips to presentations and websites, take photographs, and make movies with Apple Video Player software (included with the purchase of the VideoPhone Kit).

..TIL20716-Apple_VideoPhone_Kit-Description_12-96.pdf

Part Numbers and Pricing

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Part #	Description	U.S. K-12 Institution Price
M5673LL/A	Apple VideoPhone Kit	\$255

How to Order

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Eligible U.S. K-12 Institution customers may send a purchase order to

Apple Education

P.O. Box 149116

MS: 198-ED

Austin, TX 78714-9116

FAX: 512-919-2992

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Tech Info Library Article Number:20716



Tech Info Library

LaserWriter 12/640 PS: Solaris 2.5 Print Queue Config. (12/96)

Revised: 12/10/96
Security: Everyone

LaserWriter 12/640 PS: Solaris 2.5 Print Queue Config. (12/96)

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Article Created: 10 December 1996

TOPIC -----

The manual for the LaserWriter 12/640 PS includes information for setting up print queues for Sun Solaris that does not seem to match my Solaris 2.5.x environment. How can I get this setup properly?

DISCUSSION -----

The configuration steps in the manual reflect an earlier version of Solaris which was current when the manual was composed. In the interim, new releases of Solaris have included changes to the Print Manager. The following steps for print queue configuration have been modified to match Solaris 2.5.x:

Step 1

Log in as root.

Step 2

Assign an IP address to the printer as described in the manual in "Step 3: Assigning an IP Address to the Printer,".

Step 3

Make sure the printer's IP name and IP address are entered in the /etc/hosts file.

Step 4

Run admintool.

Step 5

Select Print Manager.

Step 6

From the Browse menu, choose Printers.

Step 7

From the Edit menu, choose Add and then Access to Printer.

Step 8

Enter the queue name that you want to use in the Printer Name field.

Step 9

Enter the printer's IP name in the Print Server field.

Step 10

Click Add.

Step 11

In a command shell execute the following command:

lpsadmin -p <queue name> -s<printer's IP name>!postscript

Step 12

Exit admintool and test the installation by printing a file.

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Tech Info Library Article Number:20722



Tech Info Library

PC Compatibility Card: HP PostScript Printer Issue W/Win95 12/96

Revised: 12/10/96
Security: Everyone

PC Compatibility Card: HP PostScript Printer Issue W/Win95 12/96

Article Created: 10 December 1996

TOPIC -----

I have a PC Compatibility Card running Windows 95 in my Macintosh computer. I also have a Hewlett-Packard PostScript printer connected to my computer. When I print from the Mac OS, it prints correctly. When I print from Windows 95, I get several pages of odd-looking text. I am using a PostScript version of the printer driver for my HP printer.

DISCUSSION -----

This occurs with some Hewlett Packard printers that support both PCL and PostScript, including the following printers:

- LaserJet 6 Series w/ PostScript
- LaserJet 5 Series w/ PostScript
- LaserJet 4 Series w/ PostScript
- DeskJet 1600C/CM
- DeskJet 1200C/PS

The Windows 95 printer drivers for these printers include non-PostScript information called a PJP (Printer Job Language) header that causes the PC Compatibility Card to incorrectly print the PostScript code.

Identification

If the first line of every print job contains the letters "PJP", you are experiencing this issue.

Workaround

Configure the printer driver to not send a PJP header with each print job by setting the printer driver to "archive format". Follow these steps to set the driver to archive format:

Step 1

Open the Properties window for the HP printer driver.

Step 2

Select the PostScript tab.

Step 3

Change the 'PostScript output format' option to 'Archive format'.

Step 4

Click 'OK'.

This article appeared in the 10 December 1996 issue of the Information Alley.

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Tech Info Library Article Number:20723



Tech Info Library

Apple Internet Dialer and AOL Link Extension (12/96)

Revised: 12/10/96
Security: Everyone

Apple Internet Dialer and AOL Link Extension (12/96)

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Article Created: 10 December 1996

TOPIC -----

My Performa computer came with AOL (America Online) 2.7 and AICK (Apple Internet Connection Kit) pre-installed, and I can connect with both without a problem. However, when connecting to AOL I am encouraged to download AOL 3.0. After installing AOL 3.0, the Apple Internet Dialer does not work properly, are there any workarounds?

DISCUSSION -----

AOL 3.0 installs the AOL Link extension, which conflicts with the Apple Internet Dialer.

Here are some workarounds:

If you no longer want to use AOL 3.0

Click and drag the AOL Link extension from the Extensions folder to the desktop, restart the computer, and try the Apple Internet Dialer again. Removing the AOL Link extension does not disable AOL entirely, but it does nullify the benefits of the AOL Link extension.

If you want to continue using AOL 3.0

Insert a tilde(~) character at the beginning of the extension name, for example, ~AOL Link. When you want to use AOL, an error message appears indicating that AOL Link needs to load first, AOL will then make the needed changes (requiring a couple computer restarts) and then let you proceed. At the end of the AOL session, AOL will ask if you want to restore your provider information to it's original configuration -- select yes, restart the computer and the Apple Internet Dialer should function normally.

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Tech Info Library Article Number:20724



Tech Info Library

GVC Platinum Modem: Error Correction & Data Compression (12/96)

Revised: 12/10/96
Security: Everyone

GVC Platinum Modem: Error Correction & Data Compression (12/96)

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Article Created: 10 December 1996

TOPIC -----

How can I set error correction and data compression modes on the Global Village Platinum V modem, which was included with my Macintosh Performa 6400 series computer?

DISCUSSION -----

To set those, you will need to use the Communications module within ClarisWorks to issue AT commands, which are described on pages 47 and 48 of the TelePort User's Guide. Below is a summary of these commands:

%C0 Disables data compression.
%C1 Enables MNP 5 data compression
%C2 Enables V.42 bis data compression.
%C3 Enables both V.42bis and MNP 5 data compression (factory default)

\N0 Selects normal speed buffered mode; no error correction.
\N1 Selects direct mode and is equivalent to &M0 and &Q0.
\N2 The modem will first attempt a LAP-M connection and then an MNP connection.
\N3 Same as \N2, except failure falls back \N0. Factory default.
\N4 Tries to establish LAP-M correction; if failure, modem hangs up.
\N5 MNP mode. Failure to make an MNP connection results in the modem hanging up.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20726



Tech Info Library

Apple Multiple Scan 15AV Display: Description (12/96)

Revised: 12/11/96
Security: Everyone

Apple Multiple Scan 15AV Display: Description (12/96)

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Article Created: 11 December 1996

TOPIC -----

This article contains the product description for the Apple Multiple Scan 15AV Display.

DISCUSSION -----

The Apple Multiple Scan 15AV Display is a high-quality, yet affordable, half-page monitor that's perfect for consumer and education users. It features a sleek new design and offers a host of advanced features to complement the capabilities of your Macintosh Performa, Power Macintosh, or Macintosh PowerBook system. (With the addition of an adapter, it can also be used with PCs running Windows.)

Featuring a flat, square shadow mask screen that provides a larger viewing area than many other 15-inch monitors (13.75-inch viewable image size), the Apple Multiple Scan 15AV Display offers outstanding video performance, including ColorSync profiles for precise color matching. Because it's based on multiple-scan technology, this display lets you select the resolution that best suits the application in which you are working. For example, you might select a lower resolution to work on a presentation or view a QuickTime movie, and then switch to a higher resolution to check on the details of a page-layout document without having to restart your system. And the Apple Multiple Scan 15AV Display's front-facing integrated stereo speakers and front-panel headphone jack make it ideal for working with multimedia.

The Apple Multiple Scan 15AV Display is both simple to set up and enjoyable to use. To minimize static electricity buildup and distortion, it features an advanced antistatic, anti-glare coating. Its conveniently located controls let you adjust brightness, contrast, speaker volume, horizontal/vertical size, and centering for optimal viewing performance. And it complies with the Environmental Protection Agency's Energy Star guidelines for power conservation.

Yet even with all of these features, the Apple Multiple Scan 15AV Display

remains affordable making it the perfect choice for users whose work requires a high-quality, flexible, color viewing solution.

Features

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Outstanding image quality

- Features a high-quality flat, square shadow mask screen for clear, sharp pictures with true colors and a larger viewing area than many 15-inch displays (13.75-inch diagonal viewable image size)
- Provides excellent brightness, contrast, convergence, focus, and white uniformity
- Decreases reflections and distortion through its antistatic, antiglare coating
- Includes front-panel digital controls and knobs that let you precisely adjust screen size, position, brightness, contrast, and speaker volume

Multimedia Integration

- Includes front-facing, CD-quality stereo speakers
- Comes with a front-panel headphone jack
- Supports the advanced multimedia features of Macintosh Performa and Power Macintosh computers

Advanced functionality

- Uses multiple-scan electronics that enable a high level of user flexibility
- Offers a range of resolution modes for Macintosh and IBM PC compatible systems: 640 by 480 pixels to 1,024 by 768 pixels*

NOTE: * Please check to make sure the video capabilities of your CPU support monitor resolutions.

- Comes with mode-switching software for Macintosh to allow resolution changes without restarting

Attractive, Ergonomic Design

- Comes with a tilt-and-swivel base that allows you to position the monitor for optimal viewing comfort
- Complies fully with MPR II standards for low electrical and magnetic emissions

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- Complies with the EPA's Energy Star conservation guidelines by switching into low-power mode during idle periods

Compatibility and Affordability

- Works with Macintosh Performa, Power Macintosh, and Macintosh PowerBook computers, as well as with PCs running Windows (requires Macintosh-to-VGA Adapter)
- Provides advanced capabilities at an affordable price

System Requirements

- Macintosh Performa, Power Macintosh, or Macintosh PowerBook computer
- System software version 7.1 or later
- Cable adapter required for use with some earlier Macintosh models and with Macintosh PowerBook computers; Macintosh-to-VGA Adapter required for use with PCs running Windows

Ordering Information

- Apple Multiple Scan 15AV Display Order No. MN4614LL/A
 - Apple Multiple Scan 15AV Display
 - Apple Multiple Scan and ColorSync software for Macintosh
 - Video cable (attached)
 - Audio cable
 - User's guide
 - Limited warranty
- Macintosh-to-VGA Adapter Order No. MM2612LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20729



Tech Info Library

Apple Multiple Scan 15AV Display: Specifications (12/96)

Revised: 12/20/96
Security: Everyone

Apple Multiple Scan 15AV Display: Specifications (12/96)

Article Created: 11 December 1996
Article Reviewed/Updated: 20 December 1996

TOPIC -----

This article contains the product specifications for the Apple Multiple Scan 15AV Display.

DISCUSSION -----

Technical Specifications
=====

Picture Tube

- 15-in. (diagonal) flat, square shadow mask
- 13.75-in. diagonal viewable image size
- 0.28-mm dot pitch

Resolution

Macintosh computers

- 640x480 pixels at 60 and 67 Hz
- 800x600 pixels at 60 and 72 Hz
- 832x624 pixels at 75 Hz
- 1,024x768 pixels at 60, 70, and 75 Hz

IBM PC compatible systems

- 640 by 480 pixels at 60 Hz (VGA)
- 800 by 600 pixels at 60 and 72 Hz (SVGA)
- 1,024 by 768 pixels at 60, 70, and 75 Hz (SVGA)

Scanning Rates

- 30 to 56.5 kHz (horizontal)
- 56 to 75 Hz (vertical)

Screen Treatment

- Antistatic, antiglare coating

Controls

- Brightness
- Contrast
- Horizontal size and centering
- Vertical size and centering
- Speaker volume
- Power switch

Connector

- 15-pin DSub connector for Macintosh systems

Degauss Circuitry

- Automatic at power up

Electrical Requirements

- Line voltage: 90 to 132 volts AC and 198 to 265 volts AC
- Frequency: 43 to 63 Hz, single phase
- Power: 75 W (maximum) when operating, less than 8 W in energy-saver mode

Environmental Requirements

- Temperature: 50 deg. to 104 deg. F (10 to 40 deg. C)
- Humidity: 90% maximum, noncondensing
- Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and Weight

- Height: 16.1 in. (40.9 cm) (includes tilt/swivel stand)
- Width: 17.3 in. (44.0 cm)
- Depth: 16.0 in. (40.7 cm)
- Weight: 30 lb. (13.5 kg)

Agency Approvals

- FCC Part 15 Class B
- CISPR 22 Class B (EN5008211) complies with European EMC directive
- DOC Class B
- MPR II
- VCCI Class 2
- CE Mark
- EPA Energy Star compliant
- IEC 950
- UL1950
- CSA 950

- EN60950

Audio

- Response: 50 Hz 20,000 kHz
- Output: 2 W
- SPL: 82 db @ 1 kHz, 1 m

System Requirements

=====

- Macintosh Performa, Power Macintosh, or Macintosh PowerBook computer
- System software version 7.1 or later
- Cable adapter required for use with some earlier Macintosh models and with Macintosh PowerBook computers; Macintosh-to-VGA Adapter required for use with PCs running Windows

Ordering Information

=====

- Apple Multiple Scan 15AV Display Order No. MN4614LL/A
 - Apple Multiple Scan 15AV Display
 - Apple Multiple Scan and ColorSync software for Macintosh
 - Video cable (attached)
 - Audio cable
 - User's guide
 - Limited warranty
- Macintosh-to-VGA Adapter Order No. MM2612LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

20 Dec 1996 - Corrected the height and width specifications.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20730



Tech Info Library

LaserWriter 8.4: Changing the Default Paper Size (12/96)

Revised: 12/19/96
Security: Everyone

LaserWriter 8.4: Changing the Default Paper Size (12/96)

Article Created: 12 December 1996
Article Reviewed/Updated: 19 December 1996

TOPIC -----

I recently installed the LaserWriter 8.4.x printer software, and now when I print US Letter Small is the default paper size. Is there a way to change this?

DISCUSSION -----

Some printers support both US Letter and US Letter Small paper sizes. To prevent text from clipping or wrapping to the next line on different printers, Apple recommends using US Letter Small. In the LaserWriter 8.4.x printer driver, the default paper size was changed to US Letter Small. Use the steps below to change the default paper size. There are some applications will not save the changes to the default paper size. This is application specific, so you may or may not be able to change the default paper size.

Step 1

Choose Page Setup from the File menu.

Step 2

Change the paper size, and any other selections you want to have for your printing defaults.

Step 3

Press and hold the Option key, then click OK.

A dialog appears verifying that the setting you just made are what you want to be your default printing settings.

Step 4

Click OK

Article Change History:

19 Dec 1996 - Added info about applications not changing the default.

Copyright 1996, Apple Computer, Inc.

Tech Info Library Article Number:20731



Tech Info Library

LC Ethernet Card: Wasn't tested in all Power Mac Computers 12/96

Revised: 12/12/96
Security: Everyone

LC Ethernet Card: Wasn't tested in all Power Mac Computers 12/96

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Article Created: 12 December 1996

TOPIC -----

I recently upgraded from a Macintosh LC III to a Power Macintosh 6200 series computer. Can I use my PDS Ethernet card in my new computer?

DISCUSSION -----

Apple has not tested the Apple Ethernet LC Card (M0443LL/B) in every Power Macintosh computer with an LC-style Processor Direct Slot (PDS). The LC PDS Ethernet cards fit, and you should not have any problems using them, but they were not tested in every Power Macintosh computer.

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Tech Info Library Article Number:20733



Tech Info Library

Open Transport 1.1.2 Read Me - Part 1 (5/97)

Revised: 5/1/97
Security: Everyone

Open Transport 1.1.2 Read Me - Part 1 (5/97)

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Article Created: 16 December 1996
Article Reviewed/Updated: 1 May 1997

TOPIC -----

This article is the Open Transport 1.1.2 ReadMe - Part 1 file.

DISCUSSION -----

Introduction

This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), see the Open Transport User's Guide. For additional technical information about Open Transport, see the "Open Transport Technical Info" file that came with Open Transport.

Contents

- License agreement
- What's new in Open Transport 1.1.2 - general
- Network interface options
- Before you install Open Transport 1.1.2
- How to turn off or remove Open Transport 1.1.2
- General compatibility
- Apple product compatibility update
- Dialup network connectivity - AppleTalk
- Dialup network connectivity - TCP/IP
- Native dialup network connectivity - TCP/IP
- Tips for SLIP and PPP configurations
- Known limitations and other issues
- System 7.5.3 notes
- System 7.5.5 notes

License agreement

This release of Open Transport is subject to the terms and conditions of the license agreement that accompanies the software in the file "LICENSE." By downloading the software you agree to abide by the terms and conditions of the license agreement.

What's new in Open Transport 1.1.2 - general

- Fixes a performance problem which only affects Print Server Developers using native PAP.
- Introduces a change to TCP that should provide a minor increase in Web servers reusing TCP connections. Open Transport will now unbind while the 2 minute disconnect timer is expiring.
- Fixes a problem with the Open Transport serial STREAMS module that could cause a crash. The crash could result if the modem was turned off, hung, or unresponsive while a connection was attempted with OT/PPP.
- Fixes a problem where disconnecting with MacPPP 2.5.1 could cause a crash if QuickTime Conferencing was running and waiting for connections.
- Includes minor modifications to improve performance, compatibility and reliability.

System requirements

Open Transport is designed to work on Mac OS-compatible computers with a Motorola 68030 or 68040 family microprocessor, or a PowerPC microprocessor. Open Transport is supported on system software versions 7.1, 7.1.1, 7.1.2, 7.5.3, 7.5.5 or later. System software version 7.5.3 or later is recommended. No other system software versions are supported.

Open Transport 1.1.2 can be used on Apple Power Macintosh 5200/75 LC and 5300/100 LC, and Macintosh Performa 5200, 5215, 5300, 6200, 6205, 6214, 6216, 6218, 6220, 6230, 6290 and 6300. (The recently introduced Power Macintosh 5260 and 6320 are not included in this because all known issues were fixed prior to manufacturing.) When you install OT 1.1.2 on a these 52xx, 53xx, 62xx and 63xx models you may get a dialog box indicating a hardware issue was detected. If this alert is displayed, Open Transport cannot be installed or loaded until the Cache/ROM DIMM is replaced. Your computer will continue to run classic networking. The required repairs are covered under the Apple repair extension program. Please contact an Apple-authorized service provider to have your computer repaired.

Open Transport requires a minimum of 5 MB of RAM (68030 or 68040 computers) or 8 MB of RAM (PowerPC-based computers). Open Transport memory requirements are based on total system memory including virtual memory, minus the size of any RAM disk and disk cache you're using.

Network interface options

Open Transport 1.1.2 supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For supported computers without expansion options, Open Transport 1.1.2 also supports a SCSI-attached network adapter. Third party network interface options available for Open Transport include Fast Ethernet, ATM, and FDDI.

Before you install Open Transport 1.1.2

- Read the section "Known limitations and other issues" below to make sure Open Transport 1.1.2 will work on your computer.
- Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.
- For best results, you should install Open Transport 1.1.2 over Open Transport 1.1 or Open Transport 1.1.1, but not over any beta version of Open Transport.
- Turn on only those extensions installed with your system software. (Open the Extensions Manager control panel and select System 7.5.3 or 7.5.5 from the Sets pop-up menu, then restart your computer.) Do not turn off all extensions before installing Open Transport.
- Performa and Power Macintosh 52xx, 53xx, 62xx and 63xx models using System 7.5.3 or later can install Open Transport 1.1.2 directly. Other supported systems must install Open Transport 1.1 or have Open Transport 1.1.1 on system software version 7.1, 7.1.1, 7.1.2 , 7.5.3, or 7.5.5 before updating to Open Transport 1.1.2.
- If you use SLIP or PPP software to access the Internet, verify that your SLIP or PPP software is compatible with Open Transport. See the section under "Dialup network connectivity - TCP/IP."
- When Open Transport is installed, the Network control panel is replaced by the AppleTalk configuration utility program. The MacTCP control panel is replaced by the TCP/IP configuration utility program. Both AppleTalk and TCP/IP are located in the Control Panels folder. For simplicity and consistency, user documentation generally refers to AppleTalk and TCP/IP as "control panels" even though technically they are utility programs.
- You should download a copy of System 7.5 Update 2.0 to your hard disk or have a copy of the Open Transport 1.1 retail package or Open Transport 1.1.1 Internet GM package available. This will give you the software to reinstall Open Transport 1.1 or Open Transport 1.1.1 in case you decide to remove Open Transport 1.1.2.

How to turn off or remove Open Transport 1.1.2

Switching to Classic Networking

If your computer does not have a PCI bus, and is using system software version 7.5.3 or 7.5.5, you can use the Network Software Selector (NSS) utility to turn on classic networking instead of Open Transport. The NSS utility is installed in the Apple Extras folder when you install System Update 2.0. After selecting

classic networking, close NSS and restart your computer. When your computer starts up again, open the Network control panel and choose the network connection you want to use.

Removing Open Transport with the Installer

You can remove Open Transport software with the Custom Remove option in the Installer. However, the Custom Remove option removes a file called the Apple Shared Library Manager (ASLM). If any previous version of ASLM was installed, it was automatically updated to version 2.0.1 when you installed Open Transport 1.1.2. When you remove Open Transport, your previous version of ASLM is not automatically restored.

After removing Open Transport 1.1.2, you must reinstall any applications that rely on ASLM. Reinstalling these applications will install the required ASLM files.

To remove Open Transport 1.1.2 using the Installer, follow these steps:

1. Open the Installer included with Open Transport 1.1.2. The Welcome screen appears.
2. Click OK.
3. In the window that appears, choose Custom Remove from the pop-up menu in the upper-left corner.
4. In the list that appears, click the box next to Open Transport so an 'X' appears in it.
5. Click Remove. If a window appears asking you whether to quit any open applications, click Continue. A window will appear telling you to restart your computer.
6. Click Restart.
7. On a Power Macintosh system with PCI bus, you will then need to reinstall Open Transport 1.1 software using either (1) the System 7.5, Update 2.0 installer, (2) the Open Transport 1.1 installer, or (3) a system software CD. If you use the system update installer or the system software that came with your computer, perform a custom install of the network software.
8. On a Macintosh system without PCI bus, classic networking will be restored and made active.

Open Transport Extras Folder

• This release also contains an Open Transport Extras folder which includes for your convenience:

- Claris EMailer updaters
- MacPPP 2.5 software files
- Remote Only ADEV software
- Network Options for AppleTalk & TCP/IP
- the Open Transport Reference Q & A
- the Open Transport User's Guide

General compatibility

Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple Computer, Inc.
- existing applications that use MacTCP as specified by Apple Computer, Inc.
- existing devices (such as printers) that you select in the Chooser
- existing NuBus network interface cards for the Mac OS

Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network without upgrading other computers on the network.

Apple product compatibility update

• At Ease version 2.x or 3.x may encounter problems when starting up with Open Transport. At Ease Update 1.0 will update non-Workgroup versions of At Ease 2.x or 3.x to include Open Transport compatibility. If you are using At Ease for Workgroups, you should upgrade to version 3.0.2 or later. Both can be found on Apple Software Update sites on the Internet and selected online services.

• Assistant Toolbox version 1.2 is not compatible with Open Transport, and will result in AppleTalk being turned off each time you restart your system. System 7.5 update 2.0 and 7.5.5 includes Assistant Toolbox version 1.3 or later that is compatible with Open Transport.

• The Apple PCI Token Ring Card (M3904Z/A) requires Open Transport 1.1 or later. The Apple PCI Token Ring card is compatible with Power Macintosh 7500, 8500 and 9500 computers; it is not compatible with 7200/75 and 7200/90 computers.

• Apple LaserWriter Bridge and LocalTalk Bridge 2.1 or later are compatible with Open Transport.

• Apple Internet Dialer 1.0, part of the Apple Internet Connection Kit 1.0 (stock number M4276LL/A), is not fully compatible with System 7.5.3. This is corrected in AICK 1.1 (stock number 504081U). AICK customers with version 1.0 can update their software by downloading a "patcher" from the Apple Internet Connection Kit home page, available at <<http://aick.apple.com/>>.

• Apple Internet Mail Server 1.1 or later software is compatible with Open Transport 1.1 and later. System Update 2.0 (System 7.5.3) is strongly recommended.

• Apple Remote Access (ARA) Multiport Server 2.1, ARA Client 2.0.1, and ARA Personal Server 2.0.1 are compatible with Open Transport 1.1 and later.

• Apple PCI-based Workgroup servers (Application, AppleShare, and Internet) are compatible with Open Transport 1.1 or later.

• Computers running the current versions of Apple IP Gateway and AppleTalk Internet Router must not be updated to Open Transport; these products are based on classic networking. These products do, however, interoperate with computers using either classic or Open Transport networking. Apple has not yet announced plans regarding future versions of these products.

• Apple's MacTCP Ping is not compatible with Open Transport; no update is

planned. MacPing from Dartmouth, available at [<ftp://www.dartmouth.edu/pages/softdev/>](ftp://www.dartmouth.edu/pages/softdev/), OTTool from Neon Software, available at [<ftp://ftp.neon.com>](ftp://ftp.neon.com) and Mac TCP Watcher v2.0 from Peter N. Lewis & Stairways Software available at [<ftp://ftp.share.com>](ftp://ftp.share.com) are Open Transport-compatible alternatives.

- ZapTCP is a classic networking tool and is neither compatible nor needed with Open Transport. Functionality similar to ZapTCP is built into Open Transport.

Dialup network connectivity - AppleTalk

For dialup connectivity to AppleTalk networks, Open Transport supports Apple Remote Access version 2.0.1 or later.

Dialup network connectivity - TCP/IP

For dialup connectivity to TCP/IP networks (including the Internet) Open Transport supports third-party extensions known as "MDEVs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided in this manner. Not all versions of all MDEVs are compatible with Open Transport 1.1 and later.

Open Transport 1.1 and later recognizes and is compatible with the following MDEVs. When properly installed they appear in the "Connect via" pop-up menu in the TCP/IP control panel.

- FreePPP - version 1.0.5 or later

FreePPP is shareware and can be found on the Internet, typically at "info-mac" mirror sites in the comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:

[<http://www.pht.com/info-mac/mirror-list.html>](http://www.pht.com/info-mac/mirror-list.html)

Some sites where FreePPP can be found currently include:

[<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>](ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/)

[<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>](ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/)

FreePPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using FreePPP with VM, either update to FreePPP 2.5, or temporarily turn VM off. The current version of FreePPP is 2.5v2.

- MacPPP - version 2.1.4 or later (MacPPP 2.5 is recommended)

MacPPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using MacPPP with VM, either update to MacPPP 2.5, or temporarily turn VM off.

An Open Transport-compatible version of MacPPP (MacPPP 2.5) is included in the Open Transport Extras folder. For more information, please refer to the MacPPP Read Me document.

- InterPPP - version 1.2.9 or later; InterPPP II - version 1.1 or later
InterPPP and InterPPP II are commercial software products. For availability and ordering information in the U.S., contact InterCon Systems at 800-468-7266 or 703-709-5500.

- MacSLIP - version 3.0.3 or later

MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the U.S., contact TriSoft at 800-531-5170 or 512-472-0744. For more details see the MacSLIP Web page at <<http://www.zilker.net/~hydepark/>>

- Sonic PPP - version 1.0.2 or later

SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering information in the U.S., contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax). For more details see the Sonic Systems Web page at <<http://www.sonicsys.com/>>

- NTS PPP - 2.0 or later

NTS PPP is commercial software developed by Network Telesystems, Inc. For availability and ordering information in the U.S., contact Network Telesystems at 408-523-8100 (voice) 408-523-8818 (fax). For more details see the Network Telesystems Web page at <<http://www.nts.com/>>

- SAT/SAGEM PPP - 1.02b1 or later

SAT/SAGEM PPP is commercial software developed by SAT/SAGEM. For availability and ordering information in the US, contact SAT/SAGEM at 408-446-8690 (voice) 408-446-9766 (fax). For more details see the SAGEM Web page at <<http://www.satusa.com/>>

- LeoTCP - 2.0.1 or later

LeoTCP is commercial software developed by Hermstedt GmbH. For availability and ordering information in the U.S., contact Hermstedt USA at 1-800-828-5522 (voice). In Europe contact Hermstedt GmbH at +49 621-76500 (voice) +49 621-7650100 (fax).

- T-Online CSLIP - version 1.0.3 or later

T-Online CSLIP is commercial software developed by Computer Consulting GbR. For availability and ordering information in Europe, contact format network & communication at 49 2206 95840. For more details, contact format network & communication at info@format.de.

- University of Michigan ISDN - 2.0.6 or later

In addition to these, there are a number of other MDEVs (examples include those from Pacer, FCR, and Tribe) which are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect via" pop-up menu as "TCP/IP PPP."

Native dialup network connectivity - TCP/IP

- OT/PPP - version 1.0 or later

Open Transport supports extensions that use the STREAMS architecture. OT/PPP is available on the Apple Software Update sites on the Internet and requires Open

Transport 1.1.1 or later.

Article Change History:

01 May 1997 - Added complete product names for Cache/ROM DIMM program.

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Tech Info Library

Open Transport 1.1.2 Read Me - Part 2 (12/96)

Revised: 12/16/96
Security: Everyone

Open Transport 1.1.2 Read Me - Part 2 (12/96)

Article Created: 16 December 1996

TOPIC -----

This article is the Open Transport 1.1.2 ReadMe - Part 2 file.

DISCUSSION -----

Tips for SLIP and PPP configurations

- Some MDEVs are known to be incompatible with other MDEVs. If you experience problems, remove unused MDEVs so that only one MDEV is installed on your computer at a time.
- Users who dial into a TCP/IP network or Internet Service Provider (ISP) may have been assigned a router (gateway) address that is not a part of their local subnet. This was an accepted but technically invalid configuration for MacTCP. Open Transport users should not enter a value for the router address or subnet mask; Open Transport/TCP generates correct values for these fields automatically. In unusual circumstances, these supplied values can be overridden using the Administration mode of the TCP/IP control panel.
- If BootP is used over SLIP or PPP for interface configuration, and if BootP returns additional default router addresses, Open Transport will automatically add those addresses to the list of default routers.
- When Open Transport is installed on a computer that previously had MacTCP configured for a server configuration, the initial configuration method—the selection in the "Configure" pop-up menu in the TCP/IP control panel—is set for the use of a BootP server. This default may not be the appropriate choice for you; please verify.
- If your computer was previously configured for MacTCP "server" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

- 1) Open the TCP/IP control panel.
- 2) Choose Using PPP Server or Using SLIP from the Configure pop-up menu.
- 3) Close the TCP/IP control panel, and save changes when prompted.
- 4) Try connecting again.

• If your computer was previously configured for MacTCP "manual" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

- 1) Open the TCP/IP control panel.
- 2) Choose Manual from the Configure pop-up menu.
- 3) Verify that the correct IP address is entered in the Address field.
- 4) Close the TCP/IP control panel, and save changes when prompted.
- 5) Open the configuration utility supplied with your SLIP or PPP software, and verify that it also reflects the correct IP address in the appropriate location. Refer to the documentation supplied with your SLIP or PPP software for further information on how to enter an IP address, and how to save an updated configuration.
- 6) Try connecting again.

NOTE: In MacPPP's ConfigPPP control panel, this setting is entered in the IPCP dialog box. Refer to the documentation that came with MacPPP or FreePPP for additional information.

Known limitations and other issues

- The AppleTalk control panel displays separate printer and modem ports on the PowerBook 190. LocalTalk will only work correctly when the modem port is selected in the AppleTalk control panel.
- The software that dims the screen of PowerBook Duo computers when the PowerBook is docked and idle is not compatible with Open Transport. Use a third-party screen saver in place of the Apple-provided module.
- In some cases, on a PowerBook 190 configured to use the Infrared Port in the AppleTalk "Connect via" pop-up menu, networking services may become disabled following a sleep/wake or restart. If this happens, try putting the computer to sleep and waking it up again, or use the AppleTalk control panel to temporarily select the modem/printer port before switching back to the infrared port.
- On a IIfx or a Quadra 950, Open Transport can only use the "compatible mode" setting in the Serial Switch control panel. Don't use the "faster mode" setting with LocalTalk.
- On 68030 and 68040 computers, changes in AppleTalk configurations can cause systems running Meeting Maker 3.5 or 3.5.1 to crash. This can occur when changing AppleTalk links, turning AppleTalk off, or bringing ARA connections up or down. This problem will occur on classic networking as well. Apple is working with ON Technology to resolve this problem.
- Open Transport generally requires more memory (RAM) than MacTCP. To conserve memory, you might try some of the following:
 - Rename or re-order one or more third-party system extensions (INITs), to

change the order in which memory is allocated when your computer starts up. If you use extensions from Global Village, try renaming those extensions so that they load last.

- Especially on PowerPC-based computers, turn on virtual memory. This may affect performance.
- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), "pinging" an Open Transport workstation will fail if TCP/IP is not currently being used. To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.
- When TCP/IP is set to "Load only when needed" (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.
- The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one. This should be addressed in a future release.
- Generally, you should turn on the "Load only when needed" option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded ("Load only when needed" is not checked), your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.
- If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.
- If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)
- If you are using Netscape, 16MB or more of built-in memory (RAM) is recommended.
- Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder.
- You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.

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- Claris EMailer version 1.1 v3 or later and Claris EMailer Lite version 1.1 v4 or later is compatible with Open Transport 1.1.2. Earlier versions of Claris EMailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting EMailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X.)
- The current version of the MacTraceRoute Ethernet LAP does not work on computers running Open Transport.
- NFS/Share versions 1.4.4 or later are compatible with Open Transport.
- When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change OpenTransport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the X).
- eXodus 5.2.2 and later are compatible with Open Transport.
- Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport. Make sure you are using Anarchie 1.6 or later.
- If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This problem can be fixed by installing a router. Another workaround is to clear the PRAM on the ARA computer. (Hold down the Command, Option, and PR keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.
- Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.
- MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the "reconnect" choice does not work correctly.
- The system will crash during launch of NetPresenz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.
- Current versions of VersaTerm SLIP are not compatible with Open Transport.
- Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to "Load only when needed" (in the control panel's Options window). Contact Sassafras for the latest revisions at <<http://www.sassafras.com>>.
- The combination of Open Transport 1.1.2, LocalTalk Bridge 2.1f2, Global Village Toolbox and GlobalFax extensions causes a crash. This also happens when using classic networking. The workaround is to move the LocalTalk Bridge file to

the Extension folder, renaming it to "aLocalTalk Bridge." You can make an alias and rename the alias as desired. Put the alias wherever you want, including the Control Panels folder. This will allow the LocalTalk Bridge to load before Global Village and avoid the cause of the crash.

- To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.1.2.
- After installing Open Transport 1.1.2 over a network while using Classic AppleTalk, open the Open Transport 1.1.2 AppleTalk control panel. If you are not using an infrared device, open the "Connect via" pop-up menu and choose Serial Port.
- The current official release of the MPW shell will hang the system when used with virtual memory and Open Transport. When using the MPW shell and Open Transport, turn off virtual memory. The ETO #21 pre-release MPW shell, version 3.4.2b2, fixes this problem.
- Apple is working on acceptable solutions to the following known problems for future versions of Open Transport:
 - TCP "Ping of Death"
 - TCP "Denial of Service Attacks"
 - Differences in WebStar throughput using Open Transport versus MacTCP over low speed lines.

System 7.5.3 notes

- System 7.5.3 includes both classic and Open Transport networking.
- The Network Software Selector (NSS) utility, included in the Apple Extras folder with System 7.5.3, provides an easy way to specify either classic or Open Transport networking. The computer must be restarted for a change to take effect.
- During system startup, System 7.5.3 checks for the stored preference for networking software. The load process then causes the appropriate control panels—"Network" and "MacTCP" for classic networking, "AppleTalk" and "TCP/IP" for Open Transport—to become visible. Those control panels associated with the disabled network software are hidden.
- Prior to installing OT 1.1, it was technically possible to install the older MacTCP on a computer running Open Transport. With OT 1.1 and later this is no longer possible.
- If it becomes necessary to reinstall MacTCP or the Network System Installer (NSI) on a 68030, 68040, or NuBus PowerPC-based computers running System 7.5.3 and Open Transport, you must first use NSS to specify classic networking and restart. After restarting, MacTCP and the other components of classic networking are visible.
- If you have a PCI-based computer connected to a Novell Netware network and are using the Netware 5.1 client software, you should also install the Ethernet

Compatibility extension version 1.0.3. This extension is available only through a Custom Install from the System Update 2.0 installer, selecting the Ethernet Driver Update. This corrects a problem that could cause your system to crash at shutdown when using MacIPX. However, there will be a two-minute delay in shutting down the computer.

- Network Time v2.0.1 is not compatible with the AutoPower On/Off control panel version 1.0 on a NuBus Power Macintosh with Open Transport. To use Network Time v2.0.1, remove the AutoPower On/Off control panel.

System 7.5.5 notes

The System 7.5.5 Update is a set of system software enhancements that improves the reliability and performance of all Macintosh and Mac OS-compatible computers running system software version 7.5.3.

- System 7.5.5 Update includes improved reliability when using Ethernet and virtual memory. If you use Ethernet and have virtual memory turned on, you may have experienced problems transferring large files over Ethernet. System 7.5.5 Update fixes this problem.

- System 7.5.5 Update includes improvements in LocalTalk that provide:

- better reliability on Macintosh 5400 series computers
- better performance when using some third-party infrared software products

- System 7.5.5 Update includes improved reliability when using Ethernet on the Macintosh 5400 and 6400 series computers.

- System 7.5.5 Update includes improved stability when using a shared printer on a network. If your computer crashed when you were trying to use a shared printer on a network, System 7.5.5 Update fixes the problem.

- If you install Apple Telecom 3.0 or Express Modem 3.0 after installing the System 7.5.5 Update you will not be able to switch on your Express Modem. To fix this incompatibility, run the System 7.5.5 Update again. The System 7.5.5 Update updates your Express Modem 3.0 to Express Modem 3.0.1.

- There is a known incompatibility with the Sagem GeoPort ISDN Adapter 1.0 and System 7.5.5 Update, resulting in the inability to use the GeoPort ISDN Adapter. Sagem has been contacted about this problem and is working on a solution. If you have a Sagem GeoPort ISDN Adapter, you should not install the System 7.5.5 Update until Sagem resolves the conflict. For more information, visit the Sagem web site at <<http://www.satusa.com>> or e-mail sathelp@satusa.com.

- Programs use slightly more memory

If you are having new problems with programs reporting that they do not have enough memory, System 7.5.5 Update may require programs to use an additional 23K of memory. To fix the problem:

- 1) Quit the program if it is open.
- 2) Click the program's icon to select it.
- 3) Open the File menu and choose Get Info.

4) In the Info window, increase the value in the "Preferred size" box by 23.

5) Close the window.

- Launching Timbuktu on System Update 7.5.5 with VM "on" from the Timbuktu menu may cause a crash. Workaround is to launch Timbuktu from the Finder instead.

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Tech Info Library

Open Transport 1.1.2 Technical Information (12/96)

Revised: 2/18/97
Security: Everyone

Open Transport 1.1.2 Technical Information (12/96)

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Article Created: 16 December 1996

TOPIC -----

This article is the Open Transport 1.1.2 Technical Information file.

DISCUSSION -----

This document contains technical information about Open Transport that may be useful to network managers and administrators. You do not need to read this document in order to use Open Transport.

Contents

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Introduction

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Open Transport AppleTalk features

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- Use of parameter RAM

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- DHCP server support
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Memory requirements

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Introduction

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Open Transport is modern networking and communications system software for the Mac OS. It is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Mac OS computers, while preserving built-in support for easy-to-use networking. Open Transport is supported on system software versions 7.1, 7.1.1, 7.1.2, 7.5.3, 7.5.5 or later. System software version 7.5.3 or later is recommended. No other system software versions are supported.

For more important information about system requirements, compatibility, and known incompatibilities and limitations, read the Open Transport 1.1.2 Read Me document.

Files added by the Open Transport installer

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Open Transport installs the AppleTalk and TCP/IP control panels into the Control Panels folder inside the System Folder of your startup disk. The Open Transport Installer also adds the following files to the Extensions folder inside the System Folder:

Shared Library Manager

Shared Library Manager PPC

These extensions implement a shared library mechanism on 68K and PowerPC Mac OS computers, respectively. Both extensions are required on PowerPC-based computers in order to support both emulated and native shared libraries.

OpenTransportLib

Open Transport Library

These shared libraries implement core Open Transport services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptAppleTalkLib

Open Tpt AppleTalk Library

These shared libraries implement Open Transport AppleTalk services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptInternetLib

Open Tpt Internet Library

These shared libraries implement Open Transport TCP/IP services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

Open Transport 68K Library

This shared library implements core Open Transport services on 68030- and

68040-based computers.

Open Tpt ATalk 68K Library

This shared library implements Open Transport AppleTalk services on 68030- and 68040-based computers.

Open Tpt Inet 68K Library

This shared library implements Open Transport TCP/IP services on 68030- and 68040-based computers.

Open Transport AppleTalk Features

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Static and dynamic AppleTalk address allocation

Open Transport AppleTalk supports static assigned (manually administered) protocol addresses as well as the dynamic addressing provided by AppleTalk Address Resolution Protocol (AARP). Static addressing allows AppleTalk nodes to be managed using the protocol address as a unique and stable identifier.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently—either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict when a new dynamic node acquires an address assigned to manually-addressed node that is not connected or is off line. Administrators can enforce the addressing policy for a subnet by locking the addressing mode. As a precaution, Open Transport AppleTalk checks for duplicate protocol addresses on the LAN even when static addressing is configured.

Use of parameter RAM

Under classic AppleTalk, AppleTalk's on/off state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name are saved in persistent memory (parameter RAM) for reuse at startup. To ensure backward compatibility, this information is still stored and retrieved on systems using Open Transport AppleTalk. However, the following differences are found with Open Transport:

- At startup, Open Transport reads the current AppleTalk configuration file to determine if AppleTalk should be turned on or off. This value overrides the value saved in parameter RAM. The user is not explicitly notified when this occurs.
- If the network interface specified in the current AppleTalk configuration file is locked and the specified port is not available or cannot be initialized, Open Transport will not automatically switch the port back to LocalTalk. Instead, AppleTalk will remain off. The user sees a dialog box with this information.

Open Transport TCP/IP features

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Open Transport brings a workstation-class implementation of TCP/IP protocols to Mac OS. As with MacTCP, Open Transport TCP/IP is a full 32-bit stack. Open Transport TCP/IP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies.
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol.
- IP multicast, for participation as an MBone client for applications written to the native Open Transport API.
- simultaneous TCP connections for applications written to the native Open Transport API are limited only by installed memory and processor power, for increased functionality as an Internet or other TCP/IP network server.
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR).
- support for developer access to raw IP services, as well as TCP and UDP.
- Ethernet Version 2.0 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts.
- implicit and explicit domain name search paths, for increased control of domain name resolution.
- use of multiple IP routers with fail-over, for increased robustness in mission-critical applications.
- TCP wildcard source port assignments start at 2048, increasing from that point.

DHCP server support

Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport TCP/IP has been tested with the following DHCP server implementations:

- Competitive Automation (URL: <http://www.join.com>)
- FTP Software (URL: <http://www.ftp.com>)
- Hewlett Packard HP-UX (URL: <http://www.hp.com>)
- Microsoft Windows NT Advanced Server (URL: <http://www.microsoft.com>)
- Silicon Graphics (URL: <http://www.sgi.com>)
- Sun Solaris and SunOS (URL: <http://www.sun.com>)
- TGV (URL: <http://www.tgv.com>)

DHCP address lease support

Open Transport TCP/IP supports DHCP address leases. Open Transport TCP/IP automatically attempts to renew any address lease that reaches its renewal interval (by default, the renewal interval is reached when the lease is halfway completed). The renewal interval may be configured to a different value by making changes to the configuring DHCP server. Renewal is attempted regardless of how many times the lease has already been renewed. Lease rebinding is also supported. Should an interface's IP address lease expire, the interface is closed down. Open Transport TCP/IP does not currently support the DHCP Client ID option or the DHCPINFORM message, nor will it currently try to use the remainder of a previous but unexpired lease upon rebooting.

Windows NT advanced server support

With Open Transport 1.1 and later, Mac OS clients are interoperable with the Windows NTAS DHCP server on LAN links. However, Mac OS clients cannot acquire configuration information from an NT DHCP server across a dialup (PPP) link because there is not yet an accepted industry standard for DHCP over dialup. The NT implementation is based on proprietary Microsoft extensions. Mac OS clients cannot acquire configuration information nor register with a Microsoft WINS server. WINS is also dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support).

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group. Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge.

Macintosh clients running versions of Open Transport prior to 1.1 could experience some interoperability problems due to other significant differences between the Microsoft implementation and that of a typical UNIX-based server.

BootP support

Open Transport 1.1 and later fully supports Bootstrap Protocol (BootP). Versions of Open Transport prior to 1.1 failed to accept a BootP Reply sent to the unicast (subnet broadcast) address, (for example, xxx.xxx.xxx.255. Replies sent to the all-nets broadcast address (for example, 255.255.255.255) were handled properly. Also, earlier versions of Open Transport required that the BootP gateway be zero hops away.

Local Hosts file support

Open Transport TCP/IP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is normally stored in the Preferences folder in the active System Folder. When Open Transport TCP/IP is initialized, it reads the Hosts file (if any). As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Open Transport TCP/IP is more stringent regarding the content and format of the Hosts file than was MacTCP, which permitted violation of the FQDN requirement for <domain-name>. For instance, the format:

```
charlie          A          128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP ("charlie" could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie          CNAME      myhost.mydomain.edu
myhost.mydomain.edu  A          128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

You can create a Hosts file with any text editor or word processor (the Hosts file must be stored in text format). If you use a Hosts file, keep it as short as possible, and include only entries that will be accessed frequently. This reduces the memory required to cache the DNS information and minimizes the need to maintain and update Hosts files as system information changes.

Open Transport TCP/IP automatically uses a Hosts file stored in the Preferences folder of the active System Folder. If no Hosts file is found in the Preferences folder, Open Transport TCP/IP searches the active System Folder for a Hosts file. You can specify a particular Hosts file to use with a specific configuration. For example, one Hosts file might be set up for a user connecting via Ethernet, and another set up for when that user connects via modem.

For additional information about the Hosts file design of the Open Transport Domain Name Resolver, see the document "Apple Open Transport Reference Q&A." The latest version of the Q&A is in the Open Transport Extras Folder and is available on the Internet at <ftp://seeding.apple.com/ess/public/opentransport/>.

MacTCP "server" addressing support

Open Transport TCP/IP supports both Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. MacTCP Server mode addressing was a combination of BootP and RARP. When Server mode was selected, MacTCP used BootP to attempt to acquire an IP address. If that failed, MacTCP tried RARP. Whichever protocol was successful was stored as a preference, and was used first the next time the computer started up. In Open Transport, you must choose BootP or RARP explicitly.

MacTCP "dynamic" addressing

Open Transport does not support MacTCP "dynamic" addressing. MacTCP dynamic mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set up a Macintosh-only standalone TCP/IP network. Use of this dynamic addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Open Transport TCP/IP supports the industry standard DHCP.

MacIP support

MacIP is a protocol specification developed for carrying TCP/IP traffic on AppleTalk-only networks, originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services.

Use of MacIP typically requires a gateway, which strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are sent back to the MacIP end-node, the gateway replaces the AppleTalk encapsulation. MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network.

Open Transport supports MacIP in the TCP/IP control panel. Once selected, TCP/IP data is encapsulated in AppleTalk packets, and is sent through the selected network interface.

PPP connectivity

PPP (Point to Point Protocol) connectivity for Open Transport is currently based on the use of third-party software extensions known as "MDEVs." Early versions of these extensions may not be compatible with Open Transport. For information about MDEV compatibility, see the Open Transport 1.1.2 Read Me document.

Memory requirements

Open Transport provides many new features and capabilities to Mac OS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors contributing to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC code. PowerPC code is typically larger (but also faster).
- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC-based computers.
- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces.

- Open Transport requires less memory on systems with virtual memory enabled. Classic networking has about the same memory requirements regardless of the VM setting.
- Open Transport is based on the cross-platform standard STREAMs environment, which requires more memory than classic networking.

The difference in memory requirements depend upon the configuration of your computer. Some examples of base memory requirements include:

Begin_Table

Computer System	Virtual Memory	Classic AppleTalk & MacTCP	Open Transport
-----	-----	-----	-----
PowerPC-based	On	350K to 450KB	200KB
PowerPC-based	Off	350K to 450KB	up to 1.2MB
608x0-based	Off	350K to 450KB	700KB to 800KB

End_Table

Application compatibility guidelines

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Apple has defined three levels of interoperability with Open Transport. The first, "Open Transport Compatible," is used to describe network applications originally developed for "classic" AppleTalk or MacTCP programming interfaces that now take advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the Open Transport control panels. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

"Open Transport Ready" applications have adopted the new Open Transport APIs. They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport-ready applications benefit from the new control panels and may also realize a significant performance boost when running on PowerPC-based computers.

The highest category of interoperability is "Open Transport Enhanced." In addition to adopting the new Open Transport APIs and being Power PC native, these applications can be dynamically configured to support AppleTalk, TCP/IP, or serial communication.

Applications that rely on undocumented APIs or examine private data structures in AppleTalk or MacTCP may not be fully compatible with Open Transport. Updated versions of these software products will be required for full compatibility.

Performance

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Open Transport is designed to take advantage of the PowerPC processor. For maximum performance, however, networking applications must also take advantage of the PowerPC processor, and should adopt the new Open Transport programming interfaces.

In general, current Mac OS networking applications are written for the 680x0 processor and use the "classic" (680x0-based) networking programming interfaces. These applications can still be used with Open Transport, and may perform somewhat better. Networking applications that are PowerPC-native but not Open Transport-ready may yield better performance, but still fall short of the maximum potential performance because they make use of Open Transport backward compatibility rather than its full capabilities.

Performance improvements will be greater with protocols that use larger datagram sizes. For example, TCP/IP users will see greater improvements than AppleTalk users, because AppleTalk has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor.

Overall performance also depends on the amount of RAM available. Larger packet sizes and higher throughput place increased demand on the buffering system of Open Transport. If Open Transport becomes low on memory, throughput decreases to accommodate the limitation.

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Tech Info Library

Multiprocessing Software Read Me (12/96)

Revised: 12/17/96
Security: Everyone

Multiprocessing Software Read Me (12/96)

Article Created: 17 December 1996

TOPIC -----

This article is the Multiprocessing Software ReadMe file.

DISCUSSION -----

Important Information
About the Multiprocessing Software

Contents

- Introduction
- Installing Multiprocessing Software
- Turn off virtual memory and do not install RAM Doubler
- Turn off hard disk sleep
- Important Information About Document Auto-Save

Introduction

This document provides information about the multiprocessing software that is included with your multiprocessor Power Macintosh computer, and how to configure your computer properly to take advantage of multiprocessor performance.

Installing Multiprocessing Software

Your multiprocessor Power Macintosh computer comes with Apple Multiprocessing software already installed, but doing a "clean" installation of system software will remove the multiprocessing software, and may also turn on virtual memory. (See the "Troubleshooting" chapter of your Power Macintosh User's Manual for more information about clean installation of system software.)

After doing a clean installation of system software, be sure to reinstall the multiprocessing software on this disk. Also, follow the instructions in the next section to turn off virtual memory if necessary. Otherwise, your

multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To reinstall the multiprocessing software, double-click the Installer icon on the disk, and follow the instructions on the screen.

Turn off virtual memory and do not install RAM Doubler

Turn off virtual memory in the Memory control panel, and do not install Connectix RAM Doubler software. If virtual memory is turned on or RAM Doubler is installed, then your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To turn off virtual memory, open the Memory control panel and in the Virtual Memory section, click the Off button. Then restart your computer. For more detailed information about virtual memory, see the "Memory" topic area in Macintosh Guide, available in the Guide menu.

Turn off hard disk sleep

Make sure that the hard disk sleep interval is set to "Never" in the Energy Saver control panel. Otherwise, software applications designed to work with your multiprocessor Power Macintosh may not work properly.

To set your hard disk sleep interval, do the following:

- 1) Open the Energy Saver control panel.
- 2) If necessary, click Show Details to make the additional options available.
- 3) Drag the top and bottom sliders as shown below.

If you wish, you can set a display sleep interval by dragging the middle slider. Display sleep works properly with multiprocessor-compatible software applications.

Important Information About Document Auto-Save

The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any

of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active, and choose the Energy Saving topic area.

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Tech Info Library

Power Macintosh Read Me - Part 1 of 2 (12/96)

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Power Macintosh Read Me - Part 1 of 2 (12/96)

Article Created: 17 December 1996

TOPIC -----

This article is part 1 of 2 of the Power Macintosh ReadMe file.

DISCUSSION -----

Important Information
For Your Power Macintosh Computer

Contents Part 1 of 2
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Tips

- Using a Microphone
- Using the Pointer Mode Control Panel for the Power Macintosh 7200
- Improving Video Capture
- Software for the GeoPort Telecom Adapter or Express Modem
- Installing QuickTime 2.5 and Open Transport 1.1.1
- Installing Acrobat Reader Software from the System Software CD
- Using Power Macintosh MP-Compatible Application Programs

Troubleshooting

- Printing Problems
- Performance Problems
- Problems with Sound
- Problems with Monitors
- Networking and File Sharing Problems
- Problems Using a RAM Disk
- Problems with Programs Freezing or Quitting Unexpectedly
- Problems Sending a Fax
- Problems Using Infrared Features

Tips
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Using a Microphone

For best results when using a microphone with your computer, be sure to use the Apple PlainTalk Microphone. To use speech-recognition technology with your computer, you must use the Apple PlainTalk Microphone (or a compatible powered microphone).

Some models come with the PlainTalk microphone. You can obtain the microphone from an Apple-authorized dealer. (You can't use the round microphone supplied with some other computers.)

The Apple AudioVision 14 Display and AppleVision 1710AV Display have the Apple PlainTalk Microphone built in.

Using the Pointer Mode Control Panel for the Power Macintosh 7200

The Pointer Mode control panel lets you control the way the mouse pointer works with certain types of graphics software and screen capture programs. For more information, read the document titled "Pointer Mode Read Me" in the Pointer Mode folder (inside the Apple Extras or CD Extras folder, whichever is available on your computer or system software CD).

Improving Video Capture

For best video capture performance, you need at least 16 megabytes (MB) of random-access memory (RAM) installed in your computer.

You can increase the speed of video capture by taking one or more of the following actions:

- Turn off virtual memory.
- Set the screen bit depth to millions of colors.
- Reduce the size of the capture window (320x240 and smaller are the best sizes).
- Make sure that the application program you use for capturing video has enough extra memory allocated for one second of video at the size and bit depth that you are using to record. For example, to record 30fps at 320x240 in millions of colors requires at least 4500K (4.5 MB) free in the application partition. About This Macintosh (in the Apple menu) lets you to estimate memory usage.
- Do not allocate all of the available memory to the capture application. When your capture application is running, you should have an unused block size of at least 500K in About This Macintosh.
- Do not run programs other than the capture application while capturing video. If possible, turn off AppleTalk, the menu bar clock, and all unnecessary extensions. Do not turn off QuickTime. (Use the Extensions Manager control panel to turn off these extensions; then restart your computer.)
- Make sure that your hard disk has enough free space to record. If you notice a decline in performance, use a disk optimizer to improve your disk's efficiency.

When working with applications that support adjusting video and sound settings, the following settings allow the highest video capture performance:

- Use the Component Video video compressor. Do not use post-compression.
- Set sound input sampling to 16 bits, stereo, and 44.1KHz. Do not use a sound compressor.

Software for the GeoPort Telecom Adapter and Express Modem

Apple Telecom software is available on the CD that came with your computer. Apple Telecom is the software for the GeoPort Telecom Adapter for PowerPC-based computers and the Express Modem for PowerBook computers.

In the U.S. and Canada, MegaPhone is also available with the Apple Telecom software. It is a screen-based telephone application that supports the telephone capabilities of the Apple Telecom 2.x software using the GeoPort Telecom Adapter, including dialing from a graphical keypad, copying and pasting telephone numbers, and dragging and dropping business card information.

If you are using a GeoPort Telecom Adapter with Apple Telecom software on a Power Macintosh 7200, 7600, 8500, or 9500, be sure to disable LocalTalk. To do this, disconnect any devices attached to the printer port (serial devices can remain attached).

In the U.S., Canada, and Japan, Apple Telecom is available as part of the GeoPort Telecom Adapter Kit, which can be purchased separately. The kit includes MegaPhone as well as SITcomm SE/GTA (a terminal emulation program). Apple Telecom, along with MegaPhone (but without SITcomm) is also available as a free upgrade on CompuServe, America Online, and all Apple Internet sites.

Installing QuickTime 2.5 and Open Transport 1.1.1

Updated Open Transport 1.1.1 and QuickTime 2.5 software are included in the CD Extras folder on the system software CD-ROM disc that came with your computer. You can install these updates if you wish.

Open Transport 1.1.1 is an enhanced version of the networking and communications software for Macintosh computers. QuickTime 2.5 is the latest version of Apple's digital video software, and is particularly useful for content creators using software applications such as Adobe Premiere. For more information about Open Transport and QuickTime, see their folders in the CD Extras folder on the CD.

Installing Acrobat Reader Software from the System Software CD

To install Acrobat Reader software from the system software CD onto your hard disk, make sure that the system software CD that came with your computer is not the startup disk. Then locate the Acrobat Reader folder on the CD and follow the installation instructions.

Note: To make sure that the system software CD is not the startup disk, shut down your computer. Then start up the computer while pressing the eject button on the CD-ROM drive (the disc is ejected). After the computer restarts, reinsert the CD and install the Acrobat Reader software.

Using Power Macintosh MP-Compatible Application Programs

If you're using a Power Macintosh 9500/180MP multiprocessing model, your computer contains two PowerPC processors for faster performance. Though you can use any Macintosh program with a Power Macintosh MP computer, you will get the best performance when you use MP-compatible programs that are designed to take advantage of the second PowerPC processor. These programs can provide significant performance improvements in processor-intensive tasks such as video-editing, 3D modeling, and scientific/technical applications.

To find out if an application program performs better on a Power Macintosh MP model, check the system requirements for the program. As of 11/6/96, the following software applications are known to be MP-compatible:

- Adobe After Effects 3.1
- Adobe Photoshop 3.0.5
- Adobe Premiere 4.2.1 with Movie Capture Module 4.2.2
- Deneba Canvas 5.0
- Kodak Color Processor
- Strata Studio Pro 1.7.5+

An additional listing of MP-compatible programs is available at the Daystar Digital World Wide Web site at
<<http://www.daystar.com/Superfast.Aps/Aps.html>>.

If you don't notice a performance increase when using an MP-compatible program, make sure virtual memory is turned off in the Memory control panel.

The following sections list some usage tips and known compatibility problems with MP-compatible application programs on the Power Macintosh 9500/180MP. If you experience other software issues, contact the program's publisher for assistance.

Strata Studio Pro 1.7.5+

- Make sure sufficient random-access memory (RAM) is available to do a render.
- Make sure to manually save your document after a render is complete. If you quit the program without saving, an alert box will not appear to warn you that there are unsaved changes, and your changes will be lost.
- After a render is complete, choosing "Show Balloons" from the Guide (?) menu will cause the program to unexpectedly quit. (This also can occur in Strata Vision 3D version 4.0.)
- You cannot print a Studio Pro document by dropping the document icon onto a Desktop Printer icon. To print a Studio Pro document, start the Studio Pro program and use the Print command in the program.
- When you save a Studio Pro document, its name does not immediately appear in the "Recent Documents" submenu in the Apple menu.

Premiere 4.2.1

- Use the latest 1.0.0 Premiere MP plug-in from Daystar. There are incompatibilities between the 1.0.0d0 version and the Media 100.
- Using the Copy to Construction commands in the Edit menu will cause the

program to unexpectedly quit.

Troubleshooting

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IMPORTANT: For more troubleshooting information on the problems described below and other topics, refer to Macintosh Guide (available in the Guide menu when the Finder is active) and the manuals that came with your computer.

Printing Problems

Your system freezes or experiences other problems when printing on a LaserWriter Select 300 or 310 printer. This problem can occur when you attempt to print but your printer is not connected to your computer. Trying to cancel printing in the Print Monitor does not solve the problem and may produce a flashing error message or cause your computer's performance to slow down.

Connect the printer to the computer. If you see a message with a Continue button, click Continue. Normal printing is resumed.

You have trouble printing on a StyleWriter or StyleWriter II printer. If you use a StyleWriter or StyleWriter II printer with your computer, use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver; it is not compatible with PowerPC-based computers.

You have trouble printing with Apple PhotoFlash. If you have problems printing images with the PhotoFlash software, make sure that you choose a printer in the Chooser before you choose the Print command from the File menu.

You can't use the "Print Later" option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the "Print Later" option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension.

Use the Extensions Manager control panel to turn off the Assistant Toolbox extension:

- 1) Open the Apple menu and choose Control Panels.
- 2) Open the Extensions Manager control panel.
- 3) In the list of extensions, click next to the Assistant Toolbox extension to remove the checkmark.
- 4) Restart your computer.

You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer. This problem can occur when the amount of memory Stickies uses is set below 150K. Try increasing the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide, available from the Guide menu when the Finder is active. To locate the Stickies application program so you can increase its memory, open the System Folder, then look in the Apple Menu Items folder (inside the System Folder).

Performance Problems

You see a message that not enough memory is available. This problem can occur for several reasons. For detailed tips on memory-related problems, refer to the troubleshooting information in the manuals that came with your computer, and the information on memory in Macintosh Guide (available in the Guide menu when the Finder is active).

If this problem occurs after you open the Extensions folder in the System Folder and scroll through a long list of extensions, restarting your computer will restore normal performance.

Problems with Sound

You can't hear alert sounds, QuickTime movie sound, or text-to-speech sound. You can't record sound using SimpleSound or other sound recording software. If you experience these problems after installing Apple Telecom software, you need to remove the Audio TuneUp system software extension in your System Folder. To remove the extension:

- 1) Open the System Folder on your hard disk.
- 2) Open the Extensions folder (inside the System Folder).
- 3) Locate the Audio TuneUp extension and drag it out of the Extensions folder and out of the System Folder. You can save a copy of Audio TuneUp in another folder or on a floppy disk, but be sure that no copy remains in the Extensions folder or the System Folder. Removing Audio TuneUp does not affect the functionality of your computer.
- 4) Restart your computer.

When you play back sound you've recorded, you notice clicks, pops, or skips. This problem can occur if you have virtual memory turned on while you're recording sound. Turn off virtual memory before recording. For instructions on turning off virtual memory, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Adjusting the volume slider in Apple Video Player and other sound applications does not affect the volume, or turns the volume all the way up or all the way down (no in-between settings). This problem occurs on some newer models that handle sound differently from some application programs. You can use the system sound settings to adjust the volume. Follow these steps:

- 1) Open the Apple menu and choose Control Panels.
- 2) Open the Monitors & Sound control panel.
- 3) Click the Sound button.
- 4) Use the volume or level slider (whichever is available) to adjust the sound volume.

Your program requires the Sound control panel to set sound options. Some application programs that use sound require the Sound control panel, an older control panel that has been replaced on your computer by the Monitors & Sound control panel.

If your application requires the Sound control panel, you can install it from

the Apple Extras folder. For instructions, read the file titled "Installing the Sound Control Panel" in the Sound folder, which is inside the Apple Extras or CD Extras folder. (The Apple Extras folder is on the computer's hard disk, and the CD Extras folder is on the system software CD that came with your computer.)

Note: You can also install the Sound control panel by doing a custom installation of system software. For instructions, refer to the information on doing a custom installation in the Troubleshooting chapter of the manual that came with your computer. When the Custom Install dialog box appears, click "Sound control panel" in the list, then click Install.

HyperCard version 2.3.3 or earlier does not record sound properly on your computer. Other sound recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

Problems with Monitors

There is no image when you try to use a TV as a monitor with a Power Macintosh 8500. You can use a TV or other composite monitor with a Power Macintosh 8500 equipped with 2 MB of video RAM (VRAM), but the VRAM must be installed in the two DIMM slots labeled "VRAM Bank 1." For more information about installing memory DIMMs, refer to the Technical Information booklet that came with your computer.

Networking and File Sharing Problems

IMPORTANT: For information about Open Transport, see the information on networking in Macintosh Guide and in the manual that came with your computer. Additional information about Open Transport is on your hard disk in a separate folder.

AppleShare displays incorrect information for large drives. If you use File Sharing to share a disk larger than 2 gigabytes (GB), some older computers connected to your computer may display an incorrect size for the disk in the Get Info box. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

Since these older computers do not support the larger drives, they also cannot report correct information about the drives. (Computers with System 7.5 display correct information.)

You can't reconnect to a server. If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu, you get a message that the disk could not be opened because you do not have enough access privileges or because the server can't be found on the network. Before you can reconnect to the server, you must close any open files. If you need to save work in a file, use Save As to save it on a different disk.

You see zones and/or servers listed in the Chooser, but the network cable is not connected to the computer. This problem can occur if you disconnect the network cable from the back of your computer while the Chooser is open. Be sure to shut down your computer before disconnecting a network cable.

You have problems using AppleShare Server Software version 4.1 or 4.2. AppleShare server software versions 4.1 and 4.2 are not intended for use with PCI-based computers, including Power Macintosh 7200, 7600, 8500, and 9500 computers. If you attempt to use AppleShare server software version 4.1 or 4.2 with these models, you may experience problems.

Problems Using a RAM disk

You see a message that your RAM disk is unreadable. Under some circumstances you may see the following message after setting up a RAM disk:

"This disk is unreadable by this Macintosh. Do you want to initialize the disk?"
(Important: This message applies to the RAM disk, not to your hard disk, which will not be initialized.)

Decrease the size of the RAM disk. If you see the message again, decrease the size again. Continue to decrease in small amounts until the message no longer appears.

Problems with Programs Freezing or Quitting Unexpectedly

MoviePlayer quits unexpectedly. Using MoviePlayer 2.1, you can play a movie at double (2X) size. You cannot present a movie (that is, play the movie on a second monitor) at double size. Presenting a movie at 2X size results in the Movie Player quitting without warning.

Wiggleworks freezes, quits unexpectedly, or won't produce sound. Wiggleworks 1.0 requires special software, Macintalk Pro, to produce sound. The version of Macintalk Pro that comes with Wiggleworks is not compatible with your computer. After installing Wiggleworks, you need to drag a newer version of Macintalk Pro (version 1.4 or later) to the Extensions folder (inside your System Folder).

There are two ways to obtain Macintalk Pro version 1.4:

- Install PlainTalk from the Apple Extras or CD Extras folder. (The Apple Extras folder is on the computer's hard disk, and the CD Extras folder is on the system software CD that came with your computer.) PlainTalk includes Macintalk Pro version 1.4, which is placed in the Extensions folder when you install PlainTalk.
- Install Macintalk Pro from Apple Computer's America Online or Internet sites. Refer to the manual that came with your computer for information about connecting to Apple's online sites.

If you are unable to obtain Macintalk Pro version 1.4, contact Apple for assistance.

Note: Your computer comes with Macintalk 3. Wiggleworks 1.0 does not work with Macintalk 3. To hear sound with Wiggleworks you must have Macintalk Pro version 1.4 in your Extensions folder, but it is not necessary to remove Macintalk 3.

Maple V quits unexpectedly when you change your monitor resolution. This can

occur if you use the Control Strip to change the monitor resolution while the Maple V program is active. Use the Monitors & Sound control panel instead of the Control Strip to change screen resolution. For instructions on using the Monitors & Sound control panel, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

When you try to install Adobe Premiere Deluxe, the mouse freezes. This can occur if you have virtual memory turned on and AppleTalk active when you try to install Adobe Premiere Deluxe. Turn off virtual memory and make AppleTalk inactive before installing. For instructions, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

This problem does not occur if you select Adobe Premiere 4.2 installation instead of Adobe Premiere Deluxe.

Problems Sending a Fax

You have trouble sending a fax. If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Problems Using Infrared Features

Farallon AirPath v1.0 and Apple IR File Exchange don't work on your computer. Also, Farallon AirDock and other infrared devices are not detected through a serial port that has been selected in the AppleTalk control panel, and the string "(IR)" is not appended to the port name. Infrared (IR) features are not fully supported on desktop computers running system software version 7.2.3. An AirDock connected to a selected AppleTalk serial port will, in most cases, operate normally (though forwarding features are disabled). This lets you connect to the desktop system using Personal File Sharing. These problems do not occur on PowerBook computers, and will be corrected on desktop computers in a future update.

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Tech Info Library

PowerFrax Read Me (12/96)

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PowerFrax Read Me (12/96)

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TOPIC -----

This article is the PowerFrax Read Me file from DayStar Digital dated 7/22/96.

DISCUSSION -----

PowerFrax
=====

PowerFrax is a benchmarking application that generates fractals from the classic Mandelbrot set. The fractal patterns that are shown on the screen are the result of intense floating point calculations performed for each pixel in the image. The length of time required to perform these calculations is a good measure of the capabilities of the processor or processors performing them. PowerFrax has a built-in timer that allows comparisons to be easily made.

Using PowerFrax
=====

PowerFrax has a number of features that make exploring fractals easy and fun.

When you first launch PowerFrax it will open a new window and display the Mandelbrot set. To explore the fractal select the Crop tool in the Info window.

Now click and drag out a selection within the fractal to create a new fractal zoomed in on the area selected. This is the principle way to explore the fractal. To make a square selection hold down the shift key. The area selected is magnified into a new window. Clicking and dragging will work in any fractal window.

The PowerFrax Tools
=====

This section describes the function of the PowerFrax tools.

Drag And Drop

This tool will let you drag a copy of the current window to any application that will accept a dropped picture, e.g. the Scrapbook or the Finder.

Crop

As described above, this tool will let you magnify a selection from an existing fractal into a new window.

Magnify

This tool will let you magnify a fractal. Holding the option key down will let you reduce the fractal.

Shift

This tool will let you shift the fractal. Only the exposed areas will be recalculated. The generation time is not applicable and will not be displayed for a shifted fractal.

Sample

This tool is only available for Julia Set fractals. It is described below.

The PowerFrax Menus

=====

This section describes the options available in the PowerFrax menus.

The File Menu

New - Creates a new Mandelbrot set or one of a number of different types of documents if plug-ins are installed.

Open - Opens a previously saved fractal.

Cycle - All previously saved fractals in the selected folder will be played back repeatedly until 'Stop Cycling' is selected from the File menu.

Close - Closes the current fractal. Hold down the option key to close all the fractals.

Save - Saves the current fractal. Note that PowerFrax does not prompt the user to save changed fractals so be sure to save fractals that you like before closing them or quitting PowerFrax.

Save As - Same as save except that the user will be prompted to name the fractal.

Page Setup - Sets up printing parameters using the standard Page Setup dialog.

Print - Prints the current fractal.

Quit - Quits PowerFrax.

The Edit Menu

Copy - Copies the current fractal to the clipboard.

Default Fractal - Changes the fractal that will be generated when 'New' is selected. This option can also be used to restore the original default fractal.

The Control Menu

Restart - Restarts the current fractal from the beginning.

Repeat - Restarts the current fractal from the beginning. Each time it finishes it will be restarted again after a one second delay.

Exact Colors - Uses the precise color set associated with the fractal. This option is not needed and is not available when the monitor is in millions of color mode. When this option is used, colors in windows other than the current fractal window may not appear correctly. Monitors with at least 256 colors capability are required for this option to work well.

Animate Colors - Centers the current fractal on the monitor, grays out the rest of the screen then cycles through all the available colors in the color set associated with the fractal. Use the command key to reverse the direction of the animation. The option key freezes the animation temporarily. The shift key will slow the animation down. Click the mouse or push any other key to end the animation. Note that on multiple monitor systems the fractal will not be centered.

The Window Menu

Hide Info - Hides the Info window.

Window Name - Selects the named window.

The Multiprocessing Menu

Use 'n' Processors - Selects the number of processors to be used to regenerate all open fractals and to generate all subsequent fractals. This menu is only available on multiprocessing systems.

If you type command-'d', the contents of the multiprocessing menu will change. It will provide an option to specify the number of tasks to generate fractals with. The number of tasks that can be created is restricted to 100. Typing command-'d' again will restore the menu to its original state.

PowerFrax Plug-ins =====

PowerFrax supports plug-ins that can generate documents with content other than the Mandelbrot set. The available plug-ins are Julia Sets and 3D Projection. They are described after the Mandelbrot section below. Plug-ins appear in a hierarchical New menu when they are installed.

Mandelbrot =====

The Mandelbrot set is named after Benoit Mandelbrot, a mathematician who did considerable research into fractal systems. It is based on the iterative application of the function $f(z) = z*z + c$, where z is the result of the previous application and c is a constant point in the complex plane.

To generate a fractal the function $f(z)$ is applied iteratively for each pixel in the image. For each pixel the initial value of z is set to 0 and the value of c is set to the pixel's corresponding point in the complex plane. The function $f(z)$ is applied repeatedly until the magnitude of $f(z)$ exceeds the escape radius or until the number of iterations equals 255. The number of iterations performed determines the color of the pixel.

When a Mandelbrot window is active the Info window appears. The Info window's fields are described below:

- The PowerFrax Info window describes the current fractal. White text fields in the Info window can be edited.
- The Center fields are the center of the current fractal in the complex plane.
- The Step field is the degree of separation of each pixel from its immediate neighbors in the complex plane.
- The Escape Radius field is used to determine when to stop performing iterations.
- The Size fields are the pixel dimensions of the fractal. Editing these two fields is the only way to make the fractal bigger or smaller.
- The Colors menu allows the user to recolor the fractal with any one of a variety of different color sets.
- The Generation Time display shows how long it took to calculate the current fractal. Only the time required to perform the calculations is measured -nothing else.
- The Cursor display shows the position in the complex plane of the pixel under the cursor. If the cursor is not over a fractal then this display will be blank.

Julia Sets =====

There is one Julia set for every point in the Mandelbrot set. The Info window content for a Julia Set is very similar to that for a Mandelbrot set.

There are two additional fields defining the point λ in the Mandelbrot set to which the Julia set corresponds.

There is also a sample tool which will allow λ to be set quickly by clicking on a point in any open Mandelbrot window. The sample tool may be activated at any time by holding down the option key. Try holding the mouse button down and moving the sample tool around inside a Mandelbrot window. The results can be very impressive on a fast machine.

3D Projection =====

This plug-in does not generate a fractal. Instead, it creates a three-dimensional projection of an existing fractal. This plug-in will not be available unless QuickDraw 3D is installed.

The Info window for 3D projections is significantly different from the other two types of plug-ins:

- The Projection field states which fractal the projection was derived from. Note that the fractal from which the projection was derived does not have to be left open.
- The Tessalation field defines how many pixels in the corresponding base fractal are traversed before a new vertex in the projection is defined. The smaller this number the more polygons there will be in the projection.
- Maximum Height defines how 'tall' the projection will be. Making this number negative will turn the projection into valleys instead of mountains.
- Rotation Speed defines the angle in degrees between each subsequent frame displayed in a 3D projection window. Setting this number to 0 will make the projection stationary.
- Polygon Count states how many polygons are in the 3D projection.
- Frame Rate states how many frames per second are being displayed.
- The Size fields are the pixel dimensions of the projection document.
- The Drag And Drop tool is the only tool available for 3D projections.

The 3D Projection plug-in also installs the 3D Projection Menu which contains the following options:

Wire Frame - Renders the projection as a wire frame.

Vertex Shading - Renders the projection using vertex interpolation.

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Tech Info Library Article Number:20741



Tech Info Library

Power Macintosh 6400: Why is Modem Port Covered? (12/96)

Revised: 12/17/96
Security: Everyone

Power Macintosh 6400: Why is Modem Port Covered? (12/96)

=====

Article Created: 17 December 1996

TOPIC -----

I have a Power Macintosh 6400/200 computer, and I want to attach an external modem to it. However, the modem port is covered. Why is this port covered? How can I use a modem with this computer?

DISCUSSION -----

Keep in mind that there are two different versions of an Apple "Macintosh 6400" computer: a Macintosh Performa 6400/200 and a Power Macintosh 6400/200. These two computers differ in the bundled hardware and software configurations.

The Macintosh Performa 6400/200 has the modem port covered because it has an internal modem installed in the communications slot. When an internal modem is installed, the external modem port is not functional so Apple provides a port cover.

However, the Power Macintosh 6400/200 does NOT have an internal modem installed. Instead, this configuration has an Ethernet card installed in the communications slot. Having an Ethernet card installed, does NOT disable the modem port. So, if you have a Power Macintosh 6400/200, the modem port is still functional.

The confusion arises because some Power Macintosh 6400/200 computers have inadvertently shipped with the modem port covered. In these cases, if you remove the port cover, you can use the external modem port.

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Tech Info Library Article Number:20742



Tech Info Library

Power Macintosh Read Me - Part 2 of 2 (12/96)

Revised: 12/17/96
Security: Everyone

Power Macintosh Read Me - Part 2 of 2 (12/96)

=====
Article Created: 17 December 1996

TOPIC -----

This article is part 2 of 2 of the Power Macintosh ReadMe file.

DISCUSSION -----

Important Information
For Your Power Macintosh Computer

Contents Part 2 of 2

=====

Compatibility Problems

- Japanese and Chinese Language Kits
- QuarkXPress
- Microsoft Office
- Monochrome Monitor

Important Information About Document Auto-Save

- Other Document-Saving Products
- Self-Dismissing Dialogs

Important Information About Macintosh PC Exchange

- Apple File Exchange and Macintosh PC Exchange
- AutoDoubler
- Compressed PC Disks and Files
- DMF Format PC Disks
- Working With Disks Containing Multiple Partitions
- Working With DOS-Format SCSI Removable Media Devices
- Working With DOS-Format SCSI Hard Disk Drives
- Tips and Problems

Compatibility Problems

=====

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

- 1) Install the WorldScript Updater 1.0.
- 2) Install the Chinese Language Kit version 1.0 or 1.1.
- 3) Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

QuarkXPress

To use QuarkXPress with System 7.5.3 or later on a PowerPC-based computer, you must upgrade to QuarkXPress version 3.3.2.

Microsoft Office

If you are using Microsoft Office 4.2.1, you need the "Office 4.2x Update For Power Mac" version 1.0.1 extension, and the "Microsoft Office Manager" version 4.2.1b control panel. These can be found on the Internet. Download the MC1164.HQX and MOMPATCH.HQX "patch" (update) files from Microsoft. The patches are available on the Internet at:

<ftp://ftp.microsoft.com/softlib/mslfiles>

Monochrome Monitor

The Apple 12-inch monochrome monitor (M1050) cannot be used with the Power Macintosh 7200, 7600, 8500, 9500, or future models.

Important Information About Document Auto-Save

=====

The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When an application is incompatible with Document Auto-Save, it will either not automatically quit, or it displays alerts or dialog boxes which Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave no documents open that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel to sleep instead of shutting down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide (question mark) menu, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

=====

Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with your Macintosh model or with Macintosh PC Exchange. Version 2.0.5 of PC Exchange contains an easier method for accessing DOS and Apple II ProDOS disks on a MacOS-based computer.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a MacOS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

DMF Format PC Disks

Microsoft provides some PC software on floppy disks that use a formatting scheme called DMF. PC Exchange version 2.0.5 can't read DMF-formatted floppy disks. Standard DOS-format floppy disks work correctly with PC Exchange 2.0.5.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the MacOS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both MacOS- and DOS-format partitions, PC Exchange will recognize only the MacOS partition. In addition, PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a MacOS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple MacOS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

- A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your computer.
- Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:20743



Tech Info Library

Launcher: Category Folders & Bullet • Character (12/96)

Revised: 12/17/96
Security: Everyone

Launcher: Category Folders & Bullet "•" Character (12/96)

=====

Article Created: 17 December 1996

TOPIC -----

When I create category folders, whose names start with the "•" bullet character in the Launcher Items folder, the Launcher does not display a new category button. What's am I doing wrong?

DISCUSSION -----

There is a bug in the Launcher previous to version 2.8. System 7.5 Update 2.0 includes Launcher 2.8, which fixes this issue. Users are encouraged to install System 7.5 Update 2.0 to fix this bug along with other fixes addressed in this update.

System 7.5 users may update the Launcher only by acquiring disks one and three of the System 7.5 Update 2.0 disk set and performing a custom install of the Launcher control panel.

Other workaround solution

This issue shows up in environments where creation of folders is very frequent. Eventually, the directory ID, known as dirID (an unseen folder counter in the file system) becomes too large for the Launcher to process correctly. With this understanding, the following solution could also be adopted.

Locate a folder on the hard drive that has been around for while and would therefore have low dirID number. Using a temporary folder -- the contents of the old folder and the Launcher's failing bullet-named category folder can be swapped, the folder names interchanged, and the folder locations reversed. The old folder with the lower dirID should be processed correctly as a Launcher category folder.

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Tech Info Library Article Number:20744



Tech Info Library

Performa 6360 & 6400: No QuickDraw GX Installer? (12/96)

Revised: 12/17/96
Security: Everyone

Performa 6360 & 6400: No QuickDraw GX Installer? (12/96)

=====

Article Created: 17 December 1996

TOPIC -----

I have both a Macintosh Performa 6360 and 6400 computer. I cannot find the QuickDraw GX installer on either my hard disk or my Performa CD-ROM disc. Was I supposed to get it? If not, why was it not included on the CD-ROM disc?

DISCUSSION -----

Performa 6400 w/Internal Global Village Modem

QuickDraw GX installer is only included with the Macintosh Performa 6400 computers which come with the internal Global Village communication slot card modem. QuickDraw GX can be found on the Macintosh Performa 6400 CD-ROM disc by following this path:

Hard Disk Files

 Apple Extras Files

 System Software Extras

 QuickDraw GX

Performa 6360, 6400 & 6400 (Video Editing) w/Internal Geoport

The Macintosh Performa 6360, 6400 and 6400 Video Editing Edition computers do not include QuickDraw GX in the System Software Extras folder. All of these computers currently ship with internal Geoport communication slot modem, instead of the Global Village communication slot card modem.

These computers also ship with Adobe Acrobat 2.1 preinstalled. If you install QuickDraw GX over a System Folder that already has Adobe Acrobat 2.1 installed, you may receive an error message that says "substitution fonts for Acrobat or ATM may be damaged or missing...".

Where to Get QuickDraw GX

If you did not receive QuickDraw GX with your Macintosh Performa computer, but you would like to install it, you can download it from all Apple Software Update online sites.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

Once you get online in the Apple Software Updates section, the path on most services is as follows:

Apple Software Updates
 US
 Macintosh
 System
 QuickDraw GX

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Tech Info Library Article Number:20745



Tech Info Library

AppleFax Cover Page and the To: Field (12/96)

Revised: 12/18/96
Security: Everyone

AppleFax Cover Page and the "To:" Field (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

When faxing with a Cover Page with AppleFax, some information in the "To:" field is truncated, omitted, or out of logical order.

- The last name is omitted
- There is no line break after the Address Field
- The Zip Code appears before the city
- The State doesn't appear at all

What is wrong?

DISCUSSION -----

You have found a bug in the AppleFax software, some but not necessarily all of the issues listed may occur. It has been reported to engineering, however, there is no known date when this might be fixed.

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Tech Info Library Article Number:20748



Tech Info Library

AIX & Journaled File System: Logical Volume Limitation (12/96)

Revised: 12/18/96
Security: Everyone

AIX & Journaled File System: Logical Volume Limitation (12/96)

Article Created: 18 December 1996

TOPIC -----

This article provides an understanding of journaled file system (JFS) size limitations.

DISCUSSION -----

The maximum size for a JFS is defined when the file system is created. When you create a JFS, there are two significant issues to consider, maximum journaled file system size and journaled file system log size.

Maximum Journaled File System Size

The maximum JFS size is a function of the following three variables, which are set when the file system is created:

- Logical partition size of the volume group
- Fragment size
- Number of i-nodes

The Logical Volume Manager (LVM) limits a volume group to 32 physical volumes and restricts a physical volume to 1016 logical partitions. This means that the maximum file system size as a function of volume group geometry is as follows:

$$32 \times 1016 \times \text{PartitionSize}$$

The fragment size limits the JFS size due to addressability constraints. Each fragment within a file system must be addressable by a 28-bit value. This means that the maximum file system size as a function of fragment size is as follows:

$$228 \times \text{FragmentSize}$$

Journaled file systems are also restricted to 224 i-nodes. This limitation yields the following maximum file system size:

number of bytes per i-node (NBPI) x 224

The following table summarizes the restrictions on journaled file system size:

Begin_Table

NBPI Ratio (bytes)	Fragment Size (Megabytes)	Partition Size (Gigabytes)	Maximum File System Size
512	512, 1024, 2048, 4096	2	8
1024	512, 1024, 2048, 4096	2	16
2048	512, 1024, 2048, 4096	2	32
4096	512, 1024, 2048, 4096	4	64

End_Table

Journaled File System Log Size Issues

Another size-related issue is the size of the JFS log. Changes to JFS on disk control structures are recorded in a separate log logical volume.

In most instances, multiple journaled file systems use a common log configured to be 4MB in size. For example, after initial installation all file systems within the root volume group use logical volume hd8 as a common JFS log. The default logical volume partition size is 4MB, and the default log size is one partition, therefore, the root volume group normally contains a 4MB JFS log. When file systems exceed 2GB or when the total amount of file system space using a single log exceeds 2GB, the default log size may not be sufficient. In either case, the log sizes should be scaled upward.

NOTE: The log should contain 4MB of record space for each 2GB of file system space.

- The default log size may be implicitly increased by creating a volume group with a larger than 4MB partition size.
- On a newly created volume group, the crfs command creates the default log for the volume group. The size of this default log can be specified by using the -l <log_partitions> option of the crfs command.
- JFS logs may be created on an individual basis by using the mklv -t jfslog command followed by the logform command. To associate the new log with a file system, use the -a log=<log_name> option of either the crfs or the chfs command.
- The size of an existing log may be increased only if all file systems using the log are unmounted. After unmounting all necessary file systems, use the extendlv command to increase the size of the log logical volume followed by the logform command. Failure to unmount all file systems using the target log may result in file-system corruption and data loss.

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Tech Info Library Article Number:20749



Tech Info Library

PowerBook 1400: Why Does 1GB Hard Drive Show As 750MB? (12/96)

Revised: 12/18/96
Security: Everyone

PowerBook 1400: Why Does 1GB Hard Drive Show As 750MB? (12/96)

=====

Article Created: 17 December 1996

TOPIC -----

I have a PowerBook 1400c computer which was supposed to have come with a 1 gigabyte (GB) Hard drive. However, from what I can tell in the hard drive window, there is only a total of 750 megabytes (MB) of hard disk space. What's wrong?

DISCUSSION -----

Issue
=====

If your computer was supposed to have come with a 1 GB hard drive, it probably did, but it may have been formatted improperly. The improper formatting, in this case, causes 1 GB hard drives to appear to have less total disk space. The total space showing in the hard drive window is 750 MB. This formatting issue has been noted and corrected at Apple's manufacturing site. This issue should no longer be a factor in any new PowerBook computers.

Which Models Shipped With A 1 GB Hard Drive?
=====

Not all PowerBook 1400 computers shipped with 1 GB hard drives. Only the following models shipped with 1 GB hard drives.

M4856 Macintosh PowerBook 1400c/117
M5576 Macintosh PowerBook 1400c/133

How Can I Tell If My 1 GB Hard Drive Is Formatted Improperly?
=====

If you aren't sure whether or not your hard drive has been improperly formatted,

do the following:

Step 1

Open the hard drive window.

Step 2

Pull down the View menu.

Step 3

Select "by icon" from the menu.

Step 4

Add up the numbers for "in Disk" and "available". If these numbers add up to approximately 750 MB, then the drive will need to be reformatted to obtain the full size of 1 GB.

Resolution

=====

If your PowerBook computer has an improperly formatted hard drive, you will need to follow these steps to reformat* the drive:

* Note: Reformatting your hard drive will cause all the data files on the drive to be permanently erased. Be sure to save your important files to other media before reformatting.

Step 1

Back up the important data from your hard drive to another hard drive or to floppy disks. All of the software that came with your computer is contained on the CD that came with it, so you only need to back up the files you have created.

Step 2

Startup from the PowerBook System CD.

Step 3

Run Drive Setup to reformat/initialize the hard drive.

Step 4

Restore all the software from the PowerBook 1400 CD.

Step 5

Restart

When you open your hard drive window now the amount of space "in disk" and "available" should show that you have approximately 1 GB of hard drive space.

This article was published in the Information Alley on 18 December 1996.

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Tech Info Library Article Number:20750



Tech Info Library

Network Server AIX: Altering the ODM (12/96)

Revised: 12/19/96
Security: Everyone

Network Server AIX: Altering the ODM (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

On a Network Server 500 or 700 running AIX, I moved a PCI Ethernet card to another PCI slot. I was not able to remove the old device, however. The device was in the defined state, but it could not be removed even if I manually deleted the device. This leaves an "en1" device, and a configured "en2" device which should be "en1".

DISCUSSION -----

This is a special case where an object defined in the ODM could not be deleted by deleting the device. You can selectively alter the ODM with the following steps:

Step 1

Before running any "<odmdelete>" or "odmadd" commands, it is recommended that you save the original copies of the Cu* files, like this:

```
cd /etc/objrepos
cp CuAt cuat.old
cp CuDep cudep.old
cp CuDv cudv.old
cp CuDvDr cudvdr.old
cp CuVPD cuvpd.old
```

Step 2

In general, to find out what is in the ODM, you can run the odmget command. There are five files on which you would want to run odmget. These files are in /etc/objrepos; their names are CuAt, CuDep, CuDv, CuDvDr, and CuVPD. The syntax for odmget would be:

```
odmget CuAt > /tmp/cuat
```

```
odmget CuDep > /tmp/cudep
odmget CuDv > /tmp/cudv
odmget CuDvDr > /tmp/cudvdr
odmget CuVPD > /tmp/cuvpd
```

Then you can use pg, vi, or another editor on the /tmp/cu* files to "see" what is in the ODM. You can also "grep" for items, if you know what you are looking for, like this: (This assumes that you put the output of the odmget commands in the /tmp directory, in files beginning with the letters "cu".)

```
grep 'ent_name' /tmp/cu*
```

where "ent_name" is the word for which you are looking. For example:
grep ent2 /tmp/cu*

Step 3

WARNING: If you run "<odmdelete> -o CuAt", you will delete EVERYTHING in /etc/objrepos/CuAt! Consider backing up each /etc/objrepos/Cu* file if you have not already done so.

You can put the commands below in a file, make it executable, and run it. It will delete anything in the ODM that is associated with et2. You will want to also delete all ent2 entries.

Begin_Table

```
DEVICE=et2
    odmdelete -q "name      = $DEVICE" -o CuAt
    odmdelete -q "parent    = $DEVICE" -o CuDv
    odmdelete -q "name      = $DEVICE" -o CuDv
    odmdelete -q "name      = $DEVICE" -o CuDep
    odmdelete -q "dependency = $DEVICE" -o CuDep
    odmdelete -q "value1    = $DEVICE" -o CuDvDr
    odmdelete -q "value3    = $DEVICE" -o CuDvDr
```

End_Table

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Tech Info Library Article Number:20751



Tech Info Library

CD-ROM Discs: Joliet & Romeo Name Definitions (12/96)

Revised: 12/18/96
Security: Everyone

CD-ROM Discs: Joliet & Romeo Name Definitions (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

When creating Compact Discs using CD-R drives, you may encounter the names Joliet and Romeo. This article discusses these file-naming conventions.

DISCUSSION -----

Joliet file-naming Convention
=====

When you choose Joliet, two file lists are maintained on the compact disc. The first file list is for long Windows 95 filenames (up to 64 characters). The second file list is for DOS-compatible filenames that are truncated from the Windows 95 filenames. The way this works for the second file list is that the first six or seven letters of each long filename are used, with the tilde(~) added at the end. A unique number appears after the tilde to prevent duplicate filenames.

Romeo file-naming Convention
=====

The Romeo file-naming convention used only on Windows 95 or Windows NT computers. Do not use Romeo if you want to read the compact disc on operating systems other than Windows 95 or Windows NT. When you choose Romeo file-naming convention during the writing of a CD session, only one file list is maintained on each CD. The Romeo file naming convention uses long Windows filenames (up to 128 characters).

This article appeared in the 18 December 1996 issue of the Information Alley.

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Tech Info Library Article Number:20752



Tech Info Library

AIX: TCP/IP Communication Failure, Cannot ping (12/96)

Revised: 12/18/96
Security: Everyone

AIX: TCP/IP Communication Failure, Cannot "ping" (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

Tips for network communication failure, cannot "ping".

DISCUSSION -----

Communication on a network (using "ping", "telnet", "rlogin", and so on) requires the configuration of hardware and software to work correctly. If you have either a hardware failure, or a software communication problem, you may see anything from a slowdown in communication to 100% packet loss (no communication).

The "ping" command is often used to check network configuration. "ping" is a two part application, one part on the sending machine and the other on the receiving machine. When you send a ping to another host, the software dispatches packets. The packets activate a process at the receiving machine that responds by sending the packets back. If Machine A sends the packet, but the packet never reaches Machine B, you will see 100% packet loss from Machine A. If Machine B receives the packet, sends it back by a different route, and the packet gets lost, you will also see 100% packet loss on Machine A.

The following strategy for problem determination is divided as follows:

- Checking the Hardware
- Checking the Environment
- Checking the Configuration

Checking the Hardware

=====

Hardware Tip 1

Ensure that all plugs are secured and screwed down on the adapters.

Hardware Tip 2

View the status of existing adapters and interfaces (the adapter is the physical hardware; the interface is the software that enables communication on that hardware):

Execute the following to check the adapters and interfaces:

```
lsdev -C | pg
```

The following adapters may be listed:

```
ent#      Standard <Ethernet> Adapter or High Performance <Ethernet>
          Adapter
```

```
tok#      Token Ring High Performance Adapter
```

Verify that the adapter you are using is "Available". The term "Available" indicates that the Network Server recognized that this adapter was ready for use. If the adapter is "Defined", then you need to verify that your hardware is installed correctly. The term "Defined" indicates that the Network Server at one time knew it had available hardware in that slot but currently cannot identify that it has the hardware.

The following interfaces may be listed:

```
en#       Standard <Ethernet> Network Interface
et#       IEEE 802.3 <Ethernet> Network Interface
```

Verify that the interface you are using is "Available". If it is listed as "Defined", then you do not have your interface configured. The Standard <Ethernet> Adapter and the High Performance Adapter can utilize either the en# or et# interface. (These designate which protocols are available on the <Ethernet> style adapters.)

Hardware Tip 3

Check the error report by executing the following:

```
errpt -a | more
```

Look at the Date/Time line. The error log is in LIFO order (last in, first out) so the last error logged will be the first one displayed. If the date is not today's date, then you may not have a hardware error. If it is the current date, check the ERROR LABEL field for errors such as:

```
<Ethernet>
-----
ENT_ERR2
ENT_ERR4
ENT_ERR6
```

The above errors will generally mention that the error is hardware related. Reverify that all plugs are secured and screwed down on the adapters. You may want to reseal the adapters in their slots (proceed with caution) and then ping again and see if any more errors are reported.

Checking the Environment

=====

Environment Tip 1

Execute the following to check the network statistics:

```
netstat -m
```

If the last three lines have something other than "0" then your system may be exhibiting an "mbufs full" problem. Refer to IBM AIX Version 3.2/4.1 Performance Monitoring and Tuning Guide (SC23-2365).

```
26 mbufs in use:
16 mbuf cluster pages in use
70 Kbytes allocated to mbufs
0 requests for mbufs denied
0 calls to protocol drain routines
```

Kernel malloc statistics:

. . .

If the "requests for mbufs denied" line has something other than "0", your system may be exhibiting an "mbufs full" problem. Refer to the IBM AIX Performance Monitoring and Tuning Guide (SC23-2365-03).

Environmental Tip 2

Determine which machine is having the communication failure:

From Machine A, ping Machine B. On Machine B, execute the following:

```
arp -a
```

The output will look similar to:

```
ausvm3.austin.ibm.com (129.35.26.21) at 10:0:5a:ac:22:71 [token ring]
rt=a40:22a1:c211:bb11:d3a0

cia.austin.ibm.com (129.35.22.192) at 10:0:5a:a8:e1:9d [token ring]

risc.austin.ibm.com (129.35.28.168) at 10:0:5a:9:2c:b1 [token ring]
rt=830: 22 a1:c211:2270

ausname1.austin.ibm.com (129.35.17.2) at 10:0:5a:a8:2b:92 [token ring]
```


rt=a40: 22a1:c211:bb11:cff0

Check the listing for Machine A's hostname and IP address. If Machine A is NOT in the list, then packets never get from Machine A to Machine B. Either Machine A is the problem or something between Machine A and Machine B is the problem. If Machine B DOES have Machine A in the list, then either Machine B is the problem, or the return path to Machine A is a problem. Go back to the beginning of this fax and begin to work through the steps with Machine B.

Environmental Tip 3

If NIS is running, it may interfere with pinging by hostname. You may want to disable this option until ping and telnet are working to simplify problem determination. Then, once you can ping, enable NIS and see if you have ping problems. If you do, your NIS configuration needs to be reviewed for correctness.

To disable NIS, start smit with "smit communications" and choose the following:

NFS

Network Information Service (NIS)

Start / Stop Configured NIS Daemons

Then choose the appropriate stop items from those displayed:

Stop the Server Daemon, ypserv

Stop the Client Daemon, ypbind

Stop the yppasswdd Daemon

Stop the ypupdated Daemon

Environmental Tip 4

Verify that your netmask is correct. (A full discussion of a netmask is outside the scope of this document.)

		You can access Machines with IP
		addresses listed below without
		additional routing information
-----		-----
If your	If your	
Address is	Netmask is	
110.120.130.140	255.255.255.0	110.120.130.*
110.120.130.140	255.255.0.0	110.120.*.*
110.120.130.140	255.0.0.0	110.*.*.*

Checking the Configuration

=====

Configuration Tip 1

To verify that the hostname is still the correct hostname for this machine, execute the following:

hostname

The string returned should be the hostname of this machine. If the name returned was not what was expected, run "smit tcpip" and choose the following to set the hostname.

Further Configuration
Hostname

Configuration Tip 2

Verify that the IP address is what is expected by executing the following:

host your_hostname

The output should be similar to:

zcomm1.austin.ibm.com is 129.35.31.99

If the output is not what was expected, you need to correctly configure the IP address for this adapter or check the name resolution (see steps below).

Configuration Tip 3

Check to see if you are running Domain Name Service (DNS):

If /etc/resolv.conf exists, then you are using DNS. Disable DNS by renaming this file to some other filename:

mv /etc/resolv.conf /etc/resolve.conf.hold

If you can now ping, then something is wrong with DNS configuration. (In the /etc/hosts file, you may have to add the IP address and host of the machine you are trying to ping.)

Configuration Tip 4

Examine the /etc/hosts file. Verify that your hostname is in the file only once and that there is no corruption in the file. If your hostname belongs to two IP addresses, then the first hostname it finds in the file will be the IP address that is used. Also, check for a duplicate IP address.

Configuration Tip 5

Execute the following to ensure that software is loaded correctly:

lppchk -v

This will execute for a while and then come to a prompt. If any error messages are displayed, it indicates a possible install or update problem; correct the error and then try pinging.

Configuration Tip 6

Ping by hostname, then by IP address. Both should respond in the same manner. If they don't, check the /etc/hosts file again for duplicates.

Configuration Tip 7

Ping other machines, routers, etc. If only one machine is failing on the ping, your machine could have one of the following:

- a gateway problem
- a route problem

Configuration Tip 8

The following steps illustrate the procedure you will need to use to verify the adapter configuration:

```
netstat -i
```

The above command should produce output similar to the following:

Name	Mtu	Network	Address	Ipkts	Ierrs	Opkts	Oerrs	Col	l
lo0	1536	<Link>		149827	0	149827	0	0	
lo0	1536	127	localhost.xxxxx	149827	0	149827	0	0	
tr0	1492	<Link>		5603085	48642	89675	0	0	
tr0	1492	129.35.16	xxxxxx.xxxxxx.x	5603085	48642	89675	0	0	

Some fields and values you may see in the above output are:

tr0	Represents token ring interface
en0	Represents standard <Ethernet> interface
et0	Represents IEEE 802.3 <Ethernet> interface
lo0	Represents the loopback mechanism
Ierrs/Oerrs	Shows errors for incoming and outgoing packets

If you see only lo0, or if there is an "*" next to your interface, you need to configure the interface again.

Oerrs are bad and may point to a hardware error.

Ierrs generally indicate that your interface is receiving packets for which it does not recognize the format and is discarding them.

If you have checked everything and the ping is still not working and you are running <Ethernet>, try reversing protocols (en0 to et0 and vice versa).

As a final try, you can remove the interface and adapter and try starting again. You can do this from the command line:

```
ifconfig <interface> detach  
rmdev -d -l <interface>
```

```
rmdev -d -l <adapter>
```

Then you will need to reconfigure the adapters and interfaces. You can do that in any of these ways:

- Reboot, or
- In smit, choose:

```
Devices
```

```
Configure Devices Added After IPL
```

or

- From the command line, execute:

```
cfgmgr
```

The above procedures will configure interfaces in a defined state and adapters in an available state. Use normal procedures to customize the configuration for your system.

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Tech Info Library Article Number:20753



Tech Info Library

AIX snap Command and Troubleshooting (12/96)

Revised: 12/18/96
Security: Everyone

AIX snap Command and Troubleshooting (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

This article describes the snap command and provides some troubleshooting help for users who may not know how to navigate AIX on a Network Server 500 or 700.

DISCUSSION -----

The snap command gathers system configuration information and compresses the information into a tar file. The file can then be downloaded to disk or tape, or transmitted to a remote system. The information gathered with the snap command may be required to identify and resolve system problems.

NOTE: Root user authority is required to execute the snap command.

Use the snap -o /dev/rfd0 command to copy the compressed image to diskette. Use the snap -o /dev/rmt0 command to copy the image to tape.

Approximately 8 MB of temporary disk space is required to collect all system information, including contents of the error log. If you do not gather all system information with the snap -a command, less disk space may be required (depending on the options selected).

The snap -g command gathers general system information, including the following:

- Error report
- Copy of the customized Object Data Manager (ODM) database
- Trace file
- User environment
- Amount of physical memory and paging space
- Device and attribute information
- Security user information

The output of the snap -g command is written to the

/tmp/ibmsupt/general/general.snap file.

You should run "snap -a". This will gather all information collected to a subdirectory under /tmp. Use "fdformat" to format a few disks. It should only take one if you delete the core file named unix in /tmp/ibmsupt/dump. Run "snap -o /dev/rfd0" to put the compressed files on the floppy disk.

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Tech Info Library Article Number:20754



Tech Info Library

Apple Media Tool 2.x: Setting QuickTime VR Correction (12/96)

Revised: 12/19/96
Security: Everyone

Apple Media Tool 2.x: Setting QuickTime VR Correction (12/96)

=====

Article Created: 19 December 1996

TOPIC -----

I have created my own QuickTime VR movies using the Apple Media Tool (AMT) 2.0. When I ply them with the QTVR Player, I have the option of selecting No Correction, Partial Correction, or Full Correction. I prefer No Correction, however when running the QTVR movies in AMT, some kind of correction is being performed. Is there a way to change the default correction in Apple Media Tool?

DISCUSSION -----

Version 2.0 of AMT does not allow you set the level of correction -- it defaults to full correction. However, AMT 2.1.1 allows you to set the correction level, similar to the way that the QTVR Player does.

To set the correction level using AMT 2.1.1, do the following:

Step 1

Add a QuickTime VR panoramic movie as a media element.

Step 2

Designate the movie as panoramic (click and hold until the menu appears)

Step 3

Double-click on the movie, the correction setting is available at the bottom of the dialog.

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Tech Info Library Article Number:20756



Tech Info Library

Apple Video System: How to Perform a Screen Capture (12/96)

Revised: 12/19/96
Security: Everyone

Apple Video System: How to Perform a Screen Capture (12/96)

=====

Article Created: 19 December 1996

TOPIC -----

I have the Apple Video System installed in my computer and was trying to capture a frame in Apple Video Player using the screen capture function of the Mac OS (Shift-Command-3). I hear the click sound, but when I open the picture file with SimpleText, the captured frame is missing - the Apple VideoPlayer window is black. How do I capture video frames?

DISCUSSION -----

Apple Video Player and the Video-In System does not support the screen capture function of the Mac OS to capture individual frames. To capture an individual frame, use the controls that are part of Apple Video Player.

How to Capture Video Frames

=====

Step 1

Open Apple Video Player.

Step 2

Select the camera icon from the Controls window.

Step 3

Click "Capture Picture" when the frame you want to save appears.

A dialog appears.

Step 4

Click Save.

Step 5

Enter a name for the file.

The file opens using SimpleText and shows the captured frame.

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Tech Info Library Article Number:20757



Tech Info Library

Korean Language Kit: Installation Options (12/96)

Revised: 12/19/96
Security: Everyone

Korean Language Kit: Installation Options (12/96)

=====

Article Created: 18 December 1996

TOPIC -----

This article contains questions about the installation options for the Korean Language Kit.

Questions Answered in this Article

=====

1) What are the minimum items needed to install the Korean Language Kit, and how much free space on the hard disk does this installation require?

2) What items are installed when I select the Easy Install option for the Korean Language Kit, and how much free space on the hard disk does this installation require?

3) What specific files and fonts are installed into the System Folder when I use the Easy Install option to install the Korean Language Kit?

4) What items do I need to Custom Install if I wish to install all of the items included with the Korean Language Kit, and how much free space on the hard disk does this installation require?

DISCUSSION -----

1) Question: What are the minimum items needed to install the Korean Language Kit and how much free space on the hard disk does this installation require?

Answer:

Minimum Install

=====

Choose Custom Install from the pop-up menu in the Korean Language Kit installer window. Check the following items to install the minimum items necessary to use the Korean Language Kit:

- * Korean Language Support, which includes:
 - Korean support files
 - System resources
 - Seoul font
 - Korean Input Method
 - Language Register
- * Read Me and SimpleText

This installation requires approximately 8 MB of free space available.

2) Question: What items are installed when I select the Easy Install option for the Korean Language Kit and how much free space on the hard disk does this installation require?

Answer:

Easy Install

=====

The following items are installed if you choose Easy Install from the pop-up menu in the Korean Language Kit installer window:

- * Korean Language Support, which includes:
 - Korean support files
 - System resources
 - Seoul font
 - Korean Input Method
 - Language Register
- * Read Me and SimpleText
- * AppleGothic Font
- * AppleMyungjo Font

Note that the only items that are installed beyond the Minimal Install are the AppleGothic and AppleMyungjo fonts.

This installation requires approximately 20 MB of free space available.

3) Question: What specific files and fonts are installed into the System Folder when I use the Easy Install option to install the Korean Language Kit?

The following files and fonts are installed when you use the Easy Install option to install the Korean Language Kit.

System Folder

=====

- Asian Font Arbitrator v1.0.3
- Font Cache
- Hanja.Dic

Fonts Folder

=====

- AppleGothic (suitcase)
- AppleGothic (file)
- AppleMyungjo (suitcase)
- AppleMyungjo (file)
- GHanja24Disk
- GSymbol24Disk
- Hanja24Disk
- Korean Font Icons v7.5.3
- KSSymbol12
- KSSymbol24Disk
- Seoul (suitcase)
- Seoul (file)

Extensions Folder

=====

- FontExtension (Bitmap).K42
- FontSize Patch v1.0
- Inline Support v1.1.3
- Inliner v2.2.3
- InputBackSupport v7.5.3
- Language Kit Additions folder (contains localized menu and dialog resources)
- Language Kit Extension v7.5.3
- Power Input Method v2.0
- WorldScript II v7.5.1
- WorldScript Power Adapter v7.5.3

4) Question: What items do I need to Custom Install if I wish to install all of the items included with the Korean Language Kit, and how much free space on the hard disk does this installation require?

Answer:

Full Install

=====

Choose Custom Install from the pop-up menu in the Korean Language Kit installer window. Check the following items to install all of the items included with the Korean Language Kit:

- * Korean Language Support
 - Korean support files
 - System resources
 - Seoul font
 - Korean Input Method
 - Language Register
- * Read Me and SimpleText
- * AppleGothic Font
- * AppleMyungjo Font
- * Gungseoche Font
- * Pilgiche Font

Note that the only items that are installed beyond the Easy Install are the Gungseoche and Pilgiche fonts.

..TIL20758-Korean_Language_Kit-Installation_Options_12-96_(TA36317).pdf

This installation requires approximately 30 MB of free space available.

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Tech Info Library Article Number:20758



Tech Info Library

Performa 6360 & 6400 Video Editing: Can't Register (12/96)

Revised: 12/19/96
Security: Everyone

Performa 6360 & 6400 Video Editing: Can't Register (12/96)

=====

Article Created: 19 December 1996

TOPIC -----

When I try to register my Macintosh Performa 6360 or Macintosh Performa 6400 Video Editing System computer, I do not see an option for my computer. Does this mean I have the wrong software bundle?

DISCUSSION -----

The registration Model Number pop-up menu only shows options for the Macintosh Performa 6400/180 and 6400/200, which are very similar to your computer. This software was originally introduced on those computers, but the release of the Macintosh Performa 6360 and Macintosh Performa 6400 Video Editing System followed soon thereafter.

For the purposes of registration, choose one of the Macintosh Performa 6400 options. Although the software was inadvertantly not updated for your computer, this will not affect your registration process. Also, you do have the correct software bundle for your computer.

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Tech Info Library Article Number:20759



Tech Info Library

Macintosh Performa 6360 & 6400: Voice Answered as Fax (1/97)

Revised: 1/15/97
Security: Everyone

Macintosh Performa 6360 & 6400: Voice Answered as Fax (1/97)

Article Created: 19 December 1996
Article Reviewed/Updated: 15 January 1997

TOPIC -----

I am using Megaphone and the Apple Telecom fax software which was bundled with my Macintosh Performa 6400 series computer. Sometimes when a voice call is coming through, the fax software seems to take over and attempts to handle the voice call as a fax. How can I prevent this from happening?

DISCUSSION -----

To prevent voice calls from being answered as fax calls, follow these steps:

Step 1

Choose Control Panels from the Apple menu, and open the Express modem control panel.

Step 2

Click on the "On" radio button to turn on the Express Modem.

Step 3

Click on the "Auto-answer incoming calls" check-box to enable the receiving capability.

Step 4

Click on the General Settings pop-up menu and choose "Advanced Options."

Step 5

Verify that the "Voice application" radio button is selected. The dialog should read "Transfer incoming calls which cannot be identified to: "Voice

application."

Step 6

This step is optional. If steps 1 through 5 do not work, try resetting PRAM (parameter RAM) by restarting your computer while pressing and holding the CMD-OPT-P-R keys until you hear the startup chimes the second time.

Article Change History:

15 Jan 1997 - Added step 6.

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Tech Info Library Article Number:20760



Tech Info Library

AppleScript and Clipboard From Finder (12/96)

Revised: 12/20/96
Security: Everyone

AppleScript and Clipboard From Finder (12/96)

Article Created: 20 December 1996

TOPIC -----

We're trying to get information from the clipboard in AppleScript. The following AppleScript works with the Scriptable Text Editor.

```
tell application "Scriptable Text Editor"
    activate
    select first word of window 1 -- there's text in window 1
    copy
    set WordOne to clipboard as text
    display dialog WordOne
end tell
```

However, trying something similar in the Finder does not work. We manually copied the name of a folder, then tried to write a script that would display the contents to the clipboard. Although selecting "show clipboard" from Edit menu shows text on clipboard, the following script does not work, the clipboard appears empty:

```
tell application "Finder"
    set ClipBoardData to clipboard as text
    display dialog ClipBoardData
end tell
```

What gets displayed is "" (nothing). If I go to the Scriptable Text Editor and tell it the same thing, it displays the folder name.

DISCUSSION -----

There are several AppleEvent Suites, such as Text, Database, Telephony, Finder, and so on that are defined and generally agreed upon by developers. Manipulation of the Macintosh clipboard is covered in the Miscellaneous Apple Event Suite. In that suite are defined the ways that applications should implement Cut, Copy and Paste, undoing and redoing operations, creating Edition Manager publishers,

initiating and ending transactions, and other miscellaneous actions. Not all applications support all of the actions in this suite and so do not implement these functions. Some applications implement the suite partially or under the guise of their own custom suite.

The Scriptable Text Editor did not implement the complete Miscellaneous Suite, but Scriptable Text Editor does implement Cut, Copy and Paste as part of what they call the Scriptable TE suite. The Finder did not implement the Miscellaneous Suite or Cut, Copy and Paste as a subset anywhere. This is why your AppleScript gives desired results with Scriptable Text Editor, but not with the Finder.

Jon Pugh, an Apple employee, saw the need to extend the capabilities of AppleScript back in the days before the Scriptable Finder became available. He has released a package of "Free for noncommercial use" Scripting Additions known as Jon's Commands. The extended commands include:

- clipboard info - get a list of data on the clipboard
- set the clipboard to - put data on the clipboard
- the clipboard - get data from the clipboard

This particular set of commands is so popular that Jon separated the clipboard extensions into a stand alone Scripting Addition called clipboard.

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Tech Info Library Article Number:20761



Tech Info Library

At Ease 4.0.1 Updater Installation Issue (12/96)

Revised: 12/20/96
Security: Everyone

At Ease 4.0.1 Updater Installation Issue (12/96)

Article Created: 20 December 1996

TOPIC -----

This article describes an installer issue of the At Ease 4.0.1 Updater.

DISCUSSION -----

The At Ease 4.0.1 Updater attempts to patch three files:

- At Ease - In the System Folder of At Ease Workstations
- At Ease Startup - In the Extensions folder of At Ease Workstations
- At Ease Administration - An application located in the Network Administrator Toolkit folder of computers with the administration software installed.

If a user performed a custom installation of the At Ease Administration software without installing the workstation software (which is a supported configuration), the At Ease and At Ease Startup files will not be present in the system.

The first file the updater needs to patch is At Ease. If the user does not have this file installed and tries to skip it, the updater will cancel the update.

This issue has been reported to Apple engineering, however, there is no known date a fix will be available.

Workaround

Perform one of the following:

- Install the workstation software on the administration computer before running the update,

or

- Copy the At Ease and At Ease Startup files from a workstation to a floppy disk. Insert the floppy disk into the administration computer before running the update. When the updater asks you to locate the file "At Ease" point it at the file located on the floppy disk. It will then let you update the At Ease Administration program on the hard disk of the Administrator computer.

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Tech Info Library Article Number:20762



Tech Info Library

PowerBook 1400: Low Battery Warning Is Too Early (12/96)

Revised: 12/20/96
Security: Everyone

PowerBook 1400: Low Battery Warning Is Too Early (12/96)

=====

Article Created: 16 December 1996

TOPIC -----

I have a PowerBook 1400 series computer which seems to get the first battery warning message as early as 30 minutes. Why does this happen?

DISCUSSION -----

Some PowerBook 1400 owners have noted that the first battery low warning message does occur earlier than expected. Apple is aware of this issue. The first battery warning message is not a good prediction of the total battery life. There are three warnings before the battery completely runs out. To truly test the battery life you should run the computer from the battery until the third (last) battery warning appears.

The computer should run from the battery for over an hour even if you have taken no steps to conserve power. A few of the things that affect battery life include: CD usage, PC card usage, screen brightness, hard disk access/usage, the amount of RAM installed, and whether or not processor cycling is enabled.

Note: Battery recharging takes longer if you use a power adapter designed for the PowerBook 200 or 2300 (Duo) series computers instead of the 45 Watt power adapter that shipped with the PowerBook 1400 series computer.

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Tech Info Library Article Number:20763



Tech Info Library

At Ease 4.0: -5000 Error When Launching CD-ROM Discs (12/96)

Revised: 1/6/97
Security: Everyone

At Ease 4.0: "-5000" Error When Launching CD-ROM Discs (12/96)

=====

Article Created: 20 December 1996

TOPIC -----

When I try to launch an application from a CD-ROM disc on our workstations using At Ease 4.0, part of Apple Network Administrator Toolkit (ANAT), I get a "-5000" error. What am I doing wrong? I have allowed access to all CD-ROM discs in the At Ease Administration application, I thought this should be enough.

DISCUSSION -----

You are correct, allowed access to all CD-ROM discs in At Ease Administration should be enough. However, some applications on CD-ROM discs require that they sublaunch other applications. To fix this, open the At Ease Administration application, choose the System Settings command under the Security menu, and select the "allow sublaunching" radio button. This will resolve this issue.

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Tech Info Library Article Number:20764



Tech Info Library

Pulse Dialing With MacPPP 2.5.1 (1/97)

Revised: 1/6/97
Security: Everyone

Pulse Dialing With MacPPP 2.5.1 (1/97)

Article Created: 3 January 1997

TOPIC -----

This article provides direction on access your ISP through Pulse Dial using MacPPP 2.5.1.

DISCUSSION -----

These directions will let you access your ISP through Pulse Dial when using MacPPP 2.5.1. It assumes the Apple Internet Connection Kit Version 1.2 has been installed, and you already have an ISP (Internet Service Provider) account established.

Step 1

Open Config PPP. You can double click the Config PPP file which is found in the following path:

Internet Connection Kit:Internet Utilities:Config PPP

Step 2

Access the Terminal Window. Select the Terminal Window checkbox in the Config PPP Window. Click Open for a PPP Terminal Window.

IMPORTANT: Be sure to deselect the Autodetect PPP Startup checkbox.

Step 3

Instruct the Modem to dial your ISP's access telephone number. Type in the window "ATDP", followed by the telephone number, then press the Return key. For example, the number 555-1212 would be entered like this:

ATDP5551212<Return>

Step 4

Start the PPP Protocol. As soon as the modem reports Connect, click the Start PPP button.

NOTE: Timing is important, you must wait for the "Connect" message and start the PPP Protocol (click the Start PPP button) before the window starts showing other information.

Expected Results

You should see the MacPPP Connection Status window track the logon progress.

Troubleshooting

If you experience problems confirm the following:

- Verify that your account information valid. Confirm your account name, password and the access telephone number with your ISP.
- Make sure that either the MacTCP, or TCP/IP control panel specify MacPPP as the connection method.
- Is the Autodetect PPP Startup checkbox in the PPP Terminal Window deselected? In other words, does the checkbox have an "x" in it? If it does, deselect or remove the "x" by clicking on it.
- Attempt the connection again, remember timing is important when you click the Start PPP Button.

This article was published in the Information Alley on 6 January 1997.

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Tech Info Library Article Number:20769



Tech Info Library

Math - Grades 5-8 bundle: Current Issues (1/97)

Revised: 1/6/97
Security: Everyone

Math - Grades 5-8 bundle: Current Issues (1/97)

=====

Article Created: 6 January 1997

TOPIC -----

This article contains a list of known issues with the Math: Grades 5-8 bundle V3.4.

DISCUSSION -----

- Probability Constructor is unable to print to a Color StyleWriter 2500 when Background Printing is enabled.

Workaround: Disable Background printing. This is documented in the bundle's documentation.

- Probability Constructor: printing to a LaserWriter may cause the computer to freeze. There is no workaround. This is documented in the bundle's documentation.

- Tesselmania! does not support desktop printing.

Workaround: Print from within Tesselmania! application.

- Tesselmania! cannot run properly with a display of more than 256 colors.

Workaround: Set display to 256 colors. This is documented in the bundle's documentation.

Note:

Measurement in Motion installs system software extensions QuickTime, and Sound Manager, or allows you to drag-install these extensions.

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Tech Info Library Article Number:20770



Tech Info Library

Network Administrator Toolkit: Three Error Messages (1/97)

Revised: 1/7/97
Security: Everyone

Network Administrator Toolkit: Three Error Messages (1/97)

=====

Article Created: 7 January 1997

TOPIC -----

This article describes three error messages of the Apple Network Administrator Toolkit (ANAT).

DISCUSSION -----

1) Question: When I startup my AppleShare/At Ease for WorkGroups 4.0 server, I get the following message, "Unable to initialize At Ease Server." What is causing this error message?

Answer: AppleTalk is inactive.

If you are using Open Transport, open the AppleTalk control panel, click OK in the dialog asking if you want to make AppleTalk active, close the AppleTalk Control panel, and click Save. Then restart the server.

You can also open the Chooser, click the AppleTalk Active radio button, close the Chooser window and click OK. Then restart the server.

If you are using Classic AppleTalk, use the Chooser to make AppleTalk active. Then restart the server.

NOTE: You must restart the server in order to initialize the At Ease Server.

2) Question: On a different AppleShare/At Ease for WorkGroups 4.0 server I get a second message after the one above. It says "AppleShare Agent: Unable to create ADSP listener. Unable to open port. Make sure AppleTalk is turned on in the Chooser (Error: -98)". Why don't I get this message, which clearly says AppleTalk needs to be turned on, on the first server?

Answer: This second server is using Open Transport and has the AppleShare Agent extension installed, which is used by the User & Group Manager application to

administer AppleShare File Server users & groups.

3) Question: On a third AppleShare/At Ease for WorkGroups 4.0 server I get a second message after the first one. It says "AppleShare Agent: Unable to create ADSP listener. Error Code: -23". Why doesn't this message indicate that AppleTalk needs to be turned on?

Answer: This server is using Classic AppleTalk instead of Open Transport.

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Tech Info Library Article Number:20772



Tech Info Library

Early Language Connections bundle: Current Issues (1/97)

Revised: 1/8/97
Security: Everyone

Early Language Connections bundle: Current Issues (1/97)

=====

Article Created: 7 January 1997

TOPIC -----

This article contains a list of known issues with the Early Language Connections bundle V5.2.

DISCUSSION -----

- At Ease sometimes draws a gray menu bar. However, the menu is still active and functional.
- At Ease and Energy Saver: If you skip the configuration of Energy Saver, and do set-up At Ease, an error message appears from At Ease upon launching.

Workaround: This issue and the workaround is documented in the Early Language Connection Bundle documentation.

- At Ease: when "Speak Button Names" is enabled and Virtual Memory is active, the voice stutters when the button name is spoken.

Workaround: Turn-off Virtual Memory.

- Muppets on Stage: Pressing Command-period causes Muppets On Stage to quit. There is no workaround.
- SuperPrint does not support desktop printing.

Workaround: Print from within the SuperPrint application.

- Grady Profile: when the date is asked for, the default year displayed is "94-95". The year can be changed and does not affect the performance of the application.

Note:

Cinderella, Paperbag Princess, Peter Rabbit, and Mud Puddle install the system software extensions QuickTime, and Sound Manager, or make them available for you to drag-install.

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Tech Info Library Article Number:20773



Tech Info Library

Writing and Publishing Tools bundle: Current Issues (1/97)

Revised: 1/7/97
Security: Everyone

Writing and Publishing Tools bundle: Current Issues (1/97)

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Article Created: 7 January 1997

TOPIC -----

This article contains a list of known issues with the Writing and Publishing Tools bundle v1.1.

DISCUSSION -----

- At Ease sometimes draws a gray menu bar. However, the menu is still active and functional.
- Using At Ease to launch ClarisWorks, you are unable to access help features.

Workaround: Add "Claris Quick Help" to the application list for all users using the application preferences in At Ease.

- American Heritage Dictionary may sometimes crash with "Couldn't complete the last command because there was not enough memory...Result Code = -108".

Workaround: Increase application memory size to reduces the chance of encountering this error.

- Cannot get Aspects to work with ClarisWorks documents.

Workaround: The errata provides information about getting an upgrade which provides this feature.

- At Ease: when "Speak Button Names" is enabled and Virtual Memory is active, the voice stutters when the button name is spoken. This problem does not otherwise affect the performance of the application.

Workaround: Turn-off Virtual Memory.

- Digital Chisel: When quitting Digital Chisel, navigation window may sometimes remain open.

Workaround: Close navigation window, then quit.

- Media Weaver unable to paste pictures copied from the Scrapbook. There is no workaround.

Note:

Digital Chisel and MacLink Plus install the system software extensions QuickTime, and Sound Manager, or make them available for you to drag-install.

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Tech Info Library Article Number:20774



Tech Info Library

Button Disabler CP: Doesn't Work w/Power Macintosh 5400 (1/97)

Revised: 1/7/97
Security: Everyone

Button Disabler CP: Doesn't Work w/Power Macintosh 5400 (1/97)

=====

Article Created: 7 January 1997

TOPIC -----

I have a Power Macintosh 5400 and want to use the Button Disabler control panel that shipped with my Power Macintosh 5200. After installing this control panel, it says that it will not work with this Macintosh. Is this correct?

DISCUSSION -----

Yes. This is correct. Button Disabler version 1.1 was the last version of the control panel released by Apple as part of System Software 7.5. The Power Macintosh 5200/75, 5260/100 and 5300/100 computers shipped with a System Software 7.5 based installer. This installer for these computers was created from System Software 7.5. This computer specific installer allows users to custom install the Button Disabler control panel v1.1. The Power Macintosh 5260/120*, 5400/120 and 5400/180 computers currently ship with a System Software 7.5.3 based installer which does not include the Button Disabler control panel.

***NOTE:**

The Power Macintosh 5260/120 does not ship with the Button Disabler control panel. However, since the Power Macintosh 5260 logic board is based on the Power Macintosh 5200/5300 logic board, the control panel should install and work correctly.

This article appeared in the 7 January 1997 issue of the Information Alley.

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Tech Info Library Article Number:20776



Tech Info Library

QuickDraw 3D v1.5: Supports Multiprocessing (1/97)

Revised: 1/7/97
Security: Everyone

QuickDraw 3D v1.5: Supports Multiprocessing (1/97)

=====

Article Created: 7 January 1997

TOPIC -----

I've installed QuickDraw 3D version 1.5 on my 9500/180MP. I heard that QuickDraw 3D took advantage of my multiprocessor - but I can't really see an increase in performance. My application seems to render 3D files at the same speed. Can you explain this?

DISCUSSION -----

When properly installed, QuickDraw 3D 1.5 is both multiprocessor and hardware acceleration aware. However, features such as Virtual Memory, Energy Saver and the amount of RAM available, can affect performance of multiprocessor aware applications and support libraries.

QuickDraw 3D 1.5 marks the first step in offering multiprocessor functionality, seen primarily when using the interactive renderer with large datasets (models). Future releases of QuickDraw 3D will include additional performance enhancements.

For more information on Apple Power Macintosh Multiprocessor equipped computers, look at the Tech Info Library article titled "Power Macintosh Multiprocessor FAQ".

This article appeared in the 7 January 1997 issue of the Information Alley.

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Tech Info Library Article Number:20777



Tech Info Library

AppleShare IP 5.0 Beta: Product Information (1/97)

Revised: 1/8/97
Security: Everyone

AppleShare IP 5.0 Beta: Product Information (1/97)

=====

Article Created: 8 January 1997

TOPIC -----

This article provides AppleShare IP 5.0 Beta product information.

DISCUSSION -----

IMPORTANT: This is Beta Software and is Not Supported

About AppleShare IP

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AppleShare IP 5.0 Beta is an open, extensible platform allowing Mac OS developers to add, enhance or replace existing services or tailor services to specific user needs. As the AppleShare IP 5.0 Admin panel is an OpenDoc container, Mac OS developers can extend functionality for easier network administration.

The AppleShare IP 5.0 Beta software provides an expanded set of network services, including file, mail, print and web. These services are managed by the following programs:

- AppleShare IP 5.0 AppleTalk File Protocol (AFP) Server Beta
- The Apple Macintosh Workstation Client 3.7 Beta
- The AppleShare IP 5.0 Web Server Beta
- The AppleShare IP 5.0 Mail Server Beta
- The AppleShare IP 5.0 Print Server Beta

The AppleShare IP 5.0 AppleTalk File Protocol (AFP) Server Beta includes support for both TCP/IP and AppleTalk. When used in conjunction with Apple Macintosh Workstation client version 3.7, customers keep the familiar Macintosh interface, but TCP/IP is used as the underlying transport protocol. Customers benefit from both the advantages of TCP/IP and AppleTalk.

..TIL20778-AppleShare_IP_5-0_Beta-Product_Information_1-97.pdf

The Apple Macintosh Workstation Client 3.7 Beta supports AppleTalk and TCP/IP protocols. AppleTalk support is included to provide backward compatibility for Personal File sharing and AppleShare 3.x/4.x File Servers. The Apple Macintosh Workstation Client 3.7 Beta allows users to type in an IP address to connect to the AppleShare IP 5.0 Server. And aliases contain both AppleTalk and TCP/IP information.

The AppleShare IP 5.0 Web Server Beta includes CGI support and implements an HTML (Hypertext Markup Language) folder. Files placed within this folder are published using the AppleShare IP 5.0 Web Server. Simplifying the configuration process, security and administration are shared with the file server resulting in lower administration time and less complexity for users.

The AppleShare IP 5.0 FTP (File Transfer Protocol) Beta server supports all common FTP commands, anonymous logins and includes BinHex and MacBinary encoding allowing users to collaborate and share files within the local network and across the Internet from remote locations. The AppleShare IP 5.0 FTP Beta Server automatically Binhex files when requested by an FTP client eliminating the need for administrators to store duplicate files on the server.

The AppleShare IP 5.0 Mail Server Beta provides fast and simple Internet/Intranet email utilizing POP3 (Post Office Protocol version 3)/SMTP (Simple Mail Transport Protocol) mail services compatible with nearly every POP3/SMTP mail client on the market allowing users can access their mail from any client machine -- MacOS Windows, Unix, OS/2. Its robust feature set includes SMTP routing with full support for DNS (Domain Name Services) mail routing, APOP authentication, auto-forwarding and server logging. The AppleShare IP 5.0 Mail Server also supports both AppleTalk and TCP/IP.

The AppleShare IP 5.0 Print Server Beta supports up to 30 printers, 10 queues and 32 simultaneous print sessions freeing users waiting for print jobs. It provides load balancing -- allowing for faster print queue processing by distributing print jobs among multiple printers, LaserWriter 8.4 support, Postscript level 2 and server side PPD (PostScript Printer Descriptions) support.

Technology Information

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AppleShare IP 5.0 Beta is backwards compatible with previous AppleShare servers to provide services for both Mac OS and Windows clients and is compatible with all versions of the Macintosh Workstation client. To take advantage of all the benefits of AFP over TCP/IP, users should upgrade their Apple Macintosh Workstation client to version 3.7. The Apple Macintosh Workstation client version 3.7 is included with AppleShare IP 5.0 Beta.

AppleShare IP 5.0 Requirements:

- Apple Power Macintosh with a PowerPC 601, 604 or 604e microprocessor
- Macintosh System Software Version 7.6 or later
- Open Transport 1.1.2 (included) or later
- a minimum of 24MB of RAM
- minimum of 10MB of available hard disk space

- a CD-ROM drive.

Software Notes

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Non-Supported Beta Software

AppleShare IP 5.0 Software Disclaimer: AppleShare IP 5.0 beta1 Seed is a technology evaluation release and will expire on April 7, 1997. This is not a supported product, but we encourage you to try it and give us feedback. This copy is for evaluation purposes only and is offered at no charge. We cannot guarantee that any subsequent releases will be offered free of charge, but we suggest that you check back frequently for any revisions of this design release.

AppleShare IP 5.0 Beta not Fault-tolerant

The AppleShare IP 5.0 Beta technology is not fault-tolerant and is not designed, manufactured or intended for use or resale as on-line control equipment in the operation of nuclear facilities, aircraft navigation or communication systems, or air traffic control machines in which the failure of the AppleShare IP 5.0 Beta technology could lead directly to death, personal injury, or severe physical or environmental damage. To download this software product, please fill out our short customer survey. Upon completion of the survey, you will be asked to read the license agreement in the language of your choice. After agreeing to the license agreement, you will be able to download the software.

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Tech Info Library Article Number:20778



Tech Info Library

AppleShare IP 5.0 Beta: Technology Information (1/97)

Revised: 1/8/97
Security: Everyone

AppleShare IP 5.0 Beta: Technology Information (1/97)

Article Created: 8 January 1997

TOPIC -----

This article provides AppleShare IP 5.0 Beta technology information.

DISCUSSION -----

IMPORTANT: This is Beta Software and is Not Supported

Apple Macintosh Workstation Client 3.7

The Apple Macintosh Workstation Client 3.7 beta supports AppleTalk and TCP/IP. Since AppleTalk is always active on the AppleShare IP 5.0 Beta Server, a user will be able to select an AppleShare IP 5.0 server by name (NBP protocol) through the Chooser if AppleTalk is routed on the local network.

During the login procedure, the Apple Macintosh Workstation 3.7 client will query the server to determine if the server supports TCP/IP and/or AppleTalk. If the server supports AFP over TCP, then the Apple Macintosh Workstation Client 3.7 will use TCP/IP as the transport mechanism for AFP. From the end user's perspective, their experience is the same and the server volume appears on their Macintosh desktop. However, the underlying transport is TCP/IP.

If the server does not support AFP over TCP/IP then it will revert to using AppleTalk as the transport mechanism. This was implemented in order to support MacOS Personal File sharing and servers implementing AFP over AppleTalk, such as AppleShare 3.x and 4.x servers.

In the case that AppleTalk is not routed on the network, the Apple Macintosh Workstation Client 3.7 allows the end user to type in the server's IP address or DNS name to initiate the login process.

Since the Apple Macintosh Workstation Client 3.7 supports AppleTalk and TCP/IP, aliases made of AppleShare IP 5.0 volumes contain the necessary AppleTalk and

TCP/IP information.

AFP over TCP Specification 2.2

This is on its way.

FTP and File Encoding/Decoding

The logic for conversions (MacBinary vs. BinHex) depends on the data type that the client has selected. There are two main data types: text and binary.

For Retrieving a file:

- If the data type is text and the file is a text file, it will be converted to the standard Telnet text type (CR gets replace with a CRLF).
- If the data type is text and the file is not a text file, it will be converted to BinHex.
- If the data type is binary and MacBinary is enabled, the file will be converted to MacBinary format.
- If the data type is binary and MacBinary is not enabled, only the data fork will be sent.

For Storing a file:

- If the data type is text, the MIME function is used to determine whether the data stream is likely to be text or BinHex.
- If text or BinHex, it will attempt to do the conversion on the fly.
- If not text or BinHex, it will just write out the data to the data fork of the new file. It will also fall back to writing the data fork if it discovers that the file is not in the format the MIME type had guessed.
- If the data type is binary, the MIME function is used to determine whether the data stream is likely to be in MacBinary or not.
- If it is, then it will attempt to convert it on the fly. If not, it will just write the data to the data fork. If the MacBinary guess is later found to be incorrect, it will just write everything out to the data fork.

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Tech Info Library Article Number:20779



Tech Info Library

Macintosh Performa: Can't record while using GV Modem (1/97)

Revised: 1/8/97
Security: Everyone

Macintosh Performa: Can't record while using GV Modem (1/97)

=====

Article Created: 8 January 1997

TOPIC -----

I have a Macintosh Performa 5200 and I am using the Global Village Gold IIv modem. When I am online and the modem is in use, I cannot record any kind of sound. When I try using the Sound control panel, I get an error stating that "The sound input device is already in use and cannot be used for recording." If I use SimpleText to record the sound, I get a slightly different error: SimpleText cannot record at this moment. Another application may be using the Sound input."

What should I do?

DISCUSSION -----

If you are using a Macintosh Performa 5200, 6200, 5300, 6300, 5260, or 6320 series computer and either a Platinum V or Gold IIv modem, you may experience the problem you described.

The Global Village Toolbox, in order to route sound from the modem through the internal speakers, needs to use the sound hardware. Therefore, sound input is disabled.

If you need to use your microphone while simultaneously online, you need to disable the Global Village Toolbox. You can do this using the Extensions Manager control panel, then restart your computer.

Having the Global Village Toolbox disabled should not affect the performance of your data connections using either the Gold IIv or Platinum V modem.

IMPORTANT:

In order to use the fax capabilities of your modem, you need to enable the Global Village Toolbox.

This article appeared in the 8 January 1997 issue of the Information Alley.

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Tech Info Library Article Number:20780



Tech Info Library

PowerBook 1400: Not An HFS Disk & Installation Errors (1/97)

Revised: 2/17/97
Security: Everyone

PowerBook 1400: Not An HFS Disk & Installation Errors (1/97)

Article Created: 9 January 1997
Article Reviewed/Updated: 15 January 1997

TOPIC -----

I just got a new PowerBook 1400 series computer. I started up with extensions off. Then I tried to install some software, but it kept crashing and freezing during the installation process. The same installation disks work with my other PowerBook 1400. I ran Disk First Aid on the internal hard drive and it says, "this is not an HFS disk." What could be wrong?

DISCUSSION -----

ISSUE
=====

A limited number of PowerBook 1400 series computers were shipped out with their hard drives not formatted properly. If you run Disk First Aid on your PowerBook computer and get the message that "this is not an HFS disk", then your computer's hard drive has this formatting problem. Another symptom of not having the hard drive formatted correctly is that software cannot install properly onto the hard drive.

RESOLUTION
=====

To resolve this issue you need to download and install the PowerBook 1400 HD Updater. It is available free from Apple on a variety of online services.

What Is the PowerBook 1400 HD Updater?
=====

The PowerBook 1400 HD Updater is designed to provide a reference file that may not have been copied onto the hard disks of some Macintosh PowerBook 1400 series computers. The reference file is not needed for normal operation of the PowerBook computer.

Disk utility programs, such as Disk First Aid, look for the reference file. If the file is not on the hard disk and you use Disk First Aid or another disk utility, you will see a message reporting that the hard disk is not an HFS volume and cannot be checked by the program. (The message may be somewhat different with a disk utility other than Disk First Aid.)

Who Needs to Use the Updater?

=====

If the reference file is not on your computer's hard disk, you should use the PowerBook 1400 HD Updater to copy the file on the disk. To determine whether you need to use the Updater, follow these steps.

Checking Your Hard Disk

1. Locate Disk First Aid (in the Utilities folder on your hard disk) and open it by double-clicking its icon.
2. Click the icon of the hard disk to select it.
3. If you see a message that you can't repair the startup disk, click OK. (You want to verify the disk, which can be done on the startup disk.)
4. Click Verify.
5. If you see a message "This drive is not an HFS disk," you need to use the PowerBook 1400 HD Updater. (If a status message appears reporting the progress of verification, you do not need to use the Updater. You can click Stop to end the verification process.)

Using the PowerBook 1400 HD Updater

1. Copy the Updater to your computer's hard disk.
2. Double-click the Updater's icon to open it. The Updater automatically copies the reference file on your hard disk.
3. Click OK to quit the Updater.

It is a good idea to check your hard disk after using the Updater. To do this, run Disk First Aid and select the Verify option. If Disk First Aid reports a problem, follow the instructions on the screen. You can also use the Drive Setup program (in the Utilities folder) to check the hard disk. See "Testing Your Hard Disk" in Chapter 7 of the PowerBook 1400 manual for your computer for more information about testing the drive.

Using the Updater will not cause any problem if the reference file is already on the hard disk.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the Information Alley on 9 January 1997. It was published again with new resolution information on 15 January 1997.

Article Change History:

15 Jan 1997 - Added information about software fix.

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Tech Info Library Article Number:20781



Tech Info Library

Performa 6360/6400: How to Restore the Performa Demo (2/97)

Revised: 2/26/97
Security: Everyone

Performa 6360/6400: How to Restore the Performa Demo (2/97)

=====

Article Created: 9 January 1997
Article Reviewed/Updated: 26 February 1997

TOPIC -----

I have just restored the Guided Tour on my Macintosh Performa 6360 (or 6400) computer. The Performa Intro and Demo do not automatically appear as I expected they would. How do I restore the Intro and Demo so they launch automatically like it did when I originally powered on my Macintosh Performa 6360 (or 6400) computer?

DISCUSSION -----

There is nothing wrong with the Guided Tour CD. Below are the steps to restore both the Performa Intro and Performa Demo so it behaves as it did when the computer was first turned on out of the box. These directions apply to both the Macintosh Performa 6400 and the Macintosh Performa 6360 computers.

Step 1

After restoring all software to the hard drive, restart your computer with either the "Macintosh Performa 6400 Series Guided Tour" or "Macintosh Performa 6360 and 6400 Series Guided Tour" compact disc.

Step 2

Choose Restore Guided Tour button from the Launcher window.

Step 3

Restart the computer after restoration is complete.

Step 4

Open the Apple Extras folder inside the hard disk.

Step 5

Open the Performa Extras folder.

Step 6

Open the Peforma Demo folder.

If you do not see a "Launch Performa Demo" icon, open the Media folder. Newer versions of the Performa Demo (the "Macintosh Performa 6360 and 6400 Series Guided Tour" and later) do not place the Launch Performa Demo applet at the top level of the Performa Demo folder.

Step 7

Make an alias of the "Launch Performa Demo".

(select the icon, then choose Make Alias from the File menu [the keyboard shortcut is Command-M]).

NOTE: Do NOT make an alias of the "Performa Demo" applet. To be properly run, the Launch Performa Demo applet must be run first; it sets up the operating environment so that the Performa Demo can run well. Typical indications that the wrong file has been used include the regular Launcher overlapping the regular demo startup, and possibly an error dialog indicating that the user must reset the number of colors in use.

Step 8

Put this alias into the Startup Items folder in the System Folder.

Step 9

Restart your computer.

After the computer restarts, the Performa Intro and Demo work just like they did when the computer was first powered up out of the box.

Article Change History:

26 Feb 1997 - Added 6400 info and reworded for clarity.

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Tech Info Library Article Number:20782



Tech Info Library

How to Set Up At Ease for Workgroups and ClassWorks (1/97)

Revised: 1/9/97
Security: Everyone

How to Set Up At Ease for Workgroups and ClassWorks (1/97)

=====

Article Created: 9 January 1997

TOPIC -----

I'm trying to use At Ease for Workgroups 4.0 with ClassWorks 3, a courseware package from EPC. At Ease was working fine before I installed ClassWorks 3, however, after the installation the workstations now give me an error message indicating they cannot find the At Ease server.

Based on the setup suggestions in the At Ease manual, I made some changes to the AppleShare file server. I put the Documents and At Ease Items WG folders inside a new folder called At Ease, and changed the access privileges on the server so the new folder is now the shared volume for At Ease. After re-configuring the At Ease server information at my Administrator workstation, all my workstations can see the server and At Ease is working fine again.

However, when I run the ClassWorks application and try to log in as a user, from inside the ClassWorks application, I get an error message that the data file could not be found or a -54 error. Why am I getting these errors, and how should I setup the server so both At Ease and ClassWorks work together?

DISCUSSION -----

The access privileges on the AppleShare file server are set incorrectly. Follow the steps below to obtain the correct access privileges for both At Ease for Workgroups and ClassWorks.

NOTE: The "CW3" user referred to below is the user name EPC sets up when installing ClassWorks 3.

Overview
=====

Move the Documents and At Ease Items folders to the root or top level of the boot or startup volume. Share the entire boot volume with Read Only privileges

for user CW3. Change the privileges for only the following folders to Read/Write
for user CW3:

Documents
At Ease Items WG
ClassWorks 2xxx

NOTE: It is important that the privileges be set to Inherit, not Explicit, and
that the Courseware folder be Read Only.

Start the Administrator workstation and enter the new Volume name for At Ease.
Start the user workstations and re-select the At Ease Server.

Detailed Instructions =====

Step 1

Shut down all the user workstations except the Administrator workstation, which
should be at the Finder.

Step 2

The At Ease manual suggests that a folder be created on the server and shared as
the At Ease volume, so that all of the At Ease files and student documents will
be in a single folder. However, because of the way ClassWorks looks for its data
files, this should NOT be done. Instead, you need to share the entire hard drive
for both At Ease and ClassWorks.

NOTE: According to EPC, ClassWorks will only look at the root or top level of
the boot or startup volume, so if multiple partitions or hard drives are on the
server the startup volume should be used.

On the server, quit AppleShare File Server and open the AppleShare Admin
application. Select Access Information from the Privileges menu, select the At
Ease folder previously created in the Shared Items box, and click UnShare.

Step 3

Select the startup volume in the Volumes box, click on Share, and move the CW3
user into the User/Group box; select See Files and See Folders for the CW3 user,
and select Change all Enclosed Folders; click Save. In the dialog window that
appears, choose "Inherit" and click on OK.

Step 4

In the Volumes box, double-click the startup volume and repeat the following
steps for the Documents, At Ease Items WG, and ClassWorks 2xxx folders:

- A. Select the folder
- B. Unselect the "Same as Enclosing Folder" box
- C. Select Make Changes for the CW3 user

D. Click on Save

Step 5

Quit AppleShare Admin and open AppleShare File Server.

Step 6

After the file server is running, open At Ease Administration on the Administrator's workstation. You will get a message indicating the server is not setup properly or could not be found. Click OK and enter the name of the startup volume in the window that appears. Change the login information in the lower part of the window to username= CW3, and leave the password field blank; click OK.

Step 7

You will see a couple of messages indicating that the workgroup data volume could not be found, keep clicking OK. Once the main program window opens, go into each Workgroup and change the "Save workgroup data on" option to the server volume listed in the pop-up menu (it should be the <startup volume name>). Click OK and repeat for each workgroup (this assumes you want to store the data on the server).

Step 8

Start each workstation, and after the message appears that the At Ease Server could not be found, click OK, then select the At Ease Server in the window and click OK again.

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Tech Info Library Article Number:20783



Tech Info Library

PowerBook 1400: Video Out Questions & Answers (1/97)

Revised: 1/10/97
Security: Everyone

PowerBook 1400: Video Out Questions & Answers (1/97)

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Article Created: 9 January 1997

TOPIC -----

This article contains the following common questions and answers about the video out capabilities and differences of the PowerBook 1400 series computers.

- 1) Does the video out connector insert differently than other PowerBook models?
- 2) Is there a PowerBook Display Control Panel?
- 3) How can I select which monitor I want to be the startup monitor?
- 4) What does the Hide Cursor option do?
- 5) I know how to change the color depth on the PowerBook 1400 series computer's display. Can I change the resolution and color depth on the external monitor using the Monitors & Sound control panel?
- 6) How do I turn on video mirroring? I do not see an option in the Monitors & Sound control panel.
- 7) When I connect the external display and drag the monitor in the icon Monitors & Sound control panel for video mirroring, the PowerBook computer's display has a 1 1/2 inch border around it. Why?

DISCUSSION -----

- 1) Question: Does the video out connector insert differently than other PowerBook models?

Answer: The connector faces in the opposite direction than previous PowerBook computer models. That is, the PowerBook video adaptor cable plugs in facing downwards, unlike previous PowerBook computers on which the PowerBook video adaptor cable plugs in facing upwards.

2) Question: Is there a PowerBook Display Control Panel?

Answer: No, the PowerBook 1400 series computers use the Monitors & Sound Control Panel.

3) Question: How can I select which monitor I want to be the startup monitor?

Answer: There is a checkbox for "identify startup monitor". All you have to do is check the box. There is no more need to hold down the Option key while clicking on the Options button. The Happy Macintosh face is available for dragging if you select the Options button.

4) Question: What does the Hide Cursor option do?

Answer: This option is only available when video mirroring is active. This option is beneficial when showing presentations, or other operations where you want the cursor to be hidden on the big screen. It hides the cursor on the screen which has the menu bar in non-mirroring mode. So if you want the external monitor to not have the cursor, you need to first drag the menu bar to the external monitor, then activate video mirroring, then select hide cursor.

5) Question: I know how to change the color depth on the PowerBook 1400 series computer's display. Can I change the resolution and color depth on the external monitor using the Monitors & Sound control panel?

Answer: When the Monitor & Sound Control Panel is opened a second window opens on the external monitor for the selections for that external monitor.

6) Question: How do I turn on video mirroring? I do not see an option in the Monitors & Sound control panel.

Answer: When a second monitor is recognized by the PowerBook computer the Monitors & Sound control panel will have a fourth button called Arrange. When Arrange is selected a window below shows a icon representing each monitor. When one icon is put on top of the other video mirroring results.

7) Question: When I connect the external display and drag the monitor in the icon Monitors & Sound control panel for video mirroring, the PowerBook computer's display has a 1 1/2 inch border around it. Why?

Answer: What you describe is correct if the external monitor is working at lower resolution than the PowerBook. The PowerBook computer's internal display is reduced (for example, from 800x600) to match the lower resolution (for example, 640x480) of the external monitor.

This article was published in the Information Alley on 9 January 1997.

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Tech Info Library Article Number:20785



Tech Info Library

MAE World Wide Web Information (1/97)

Revised: 1/10/97
Security: Everyone

MAE World Wide Web Information (1/97)

=====

Article Created: 10 January 1997

TOPIC -----

Where can I find the latest information from Apple Computer on the Macintosh Application Environment (MAE)?

DISCUSSION -----

MAE provides the ability to run Macintosh software on Unix workstations. Current technical and marketing information, including a full working demo copy of the current version can be found at the MAE website. Use the following URL:

<http://www.mae.apple.com>.

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Tech Info Library Article Number:20786



Tech Info Library

PowerBook 1400, 200, 2300: Disk Copy Needs Floppy Drive (1/97)

Revised: 1/10/97
Security: Everyone

PowerBook 1400, 200, 2300: Disk Copy Needs Floppy Drive (1/97)

Article Created: 10 January 1997

TOPIC -----

I have a Powerbook 1400 series computer. I need to make some duplicate back up application floppy disks. I tried to make disk images with Apple Disk Copy 4.2, but it tells me that, "This Macintosh cannot use this version of Disk Copy. Certain required support is not provided." What does this mean?

DISCUSSION -----

You are probably getting this message because you have a media bay device in your PowerBook computer other than the Floppy drive media bay. For example, if the CD-ROM media bay is in your PowerBook computer, you need to eject the CD from the bay and close the bay door. Choose Sleep from Special Menu. Remove the CD-ROM media bay from the computer. Insert the Floppy drive media bay into the computer.

The Disk Copy utility program checks for the presence of a floppy drive. If there is not a floppy drive, you get a message that it "will not run on this kind of Macintosh computer since certain required support is not provided." You can get this same message on PowerBook 200 or 2300 series (Duo) computers that do not have a floppy disk drive attached externally or in a docking station.

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Tech Info Library Article Number:20787



Tech Info Library

OT/PPP 1.0: Time Remaining Feature (1/97)

Revised: 1/10/97
Security: Everyone

OT/PPP 1.0: Time Remaining Feature (1/97)

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Article Created: 10 January 1997

TOPIC -----

When I sign onto the Internet using Open Transport PPP 1.0 (OT/PPP), I notice that it shows a time remaining. What is this referring to? Is this somehow tapping into the server that I am connected to?

DISCUSSION -----

A PPP server can use a "time remaining" feature to notify a dial-in client how much time remains in the current session. The implementation of this feature (as defined in RFC 1570) is optional and may not be in use by a server you are connected to.

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Tech Info Library Article Number:20788



Tech Info Library

Power Macintosh 7300,7600,8600,9600: New Features (2/97)

Revised: 3/19/97
Security: Everyone

Power Macintosh 7300,7600,8600,9600: New Features (2/97)

Article Created: 13 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

What are the new features of the Power Macintosh 7300, 7600, 8600, and 9600 computers?

DISCUSSION -----

The table below outlines the primary differences among the Power Macintosh 7500, 7600, 8600, and 9500 computers and the Power Macintosh 7300, 7600, 8600, and 9600 computers. These new features are described in more detail in the sections following the table.

New models	Previous models	Major changes
Power Macintosh 7300/166	Power Macintosh 7500/100	Clock speeds 166-200
Power Macintosh 7300/180		MHz, 256K L2 Cache
Power Macintosh 7300/200		installed, 2 GB hard
		drive, 12X-speed
		CD-ROM drive
Power Macintosh 7600/200	Power Macintosh 7600/120	Clock speed 200 MHz,
	Power Macintosh 7600/132	2 GB hard drive,
		12X-speed CD-ROM
		drive
Power Macintosh 8600/200	Power Macintosh 8500/150	Clock speed 200 MHz,
	Power Macintosh 8500/180	new tower enclosure,
		2 GB AV-capable hard
		drive, 12X-speed
		CD-ROM drive,
		internal Zip
		cartridge drive

Power Macintosh 9600/200	Power Macintosh 9500/200	New tower enclosure, 12X-speed CD-ROM drive, new accelerated display card
Power Macintosh 9600/200MP	Power Macintosh 9500/180MP	Clock speed 200 MHz, dual PPC604e microprocessors, new tower enclosure, 12X-speed CD-ROM drive, new accelerated display card

Summary of Changes

=====

The new features in the faster Power Macintosh 7300, 7600, 8600, and 9600 computers include:

- * PowerPC 604e microprocessor in all models
- * Dual microprocessor configuration (Power Macintosh 9600/200MP)
- * Faster processor speeds, ranging from 166 to 200 MHz
- * Second-level (L2) cache in all models
- * Larger size internal hard disks: 2 or 4 GB
- * AV-capable hard disk (Power Macintosh 8600 only)
- * Built-in 12X-speed CD-ROM drive
- * Built-in Iomega Zip removable cartridge drive (Power Macintosh 8600 only)
- * New accelerated display card (Power Macintosh 9600 only)
- * Security bar on the Power Macintosh 7300 and 7600 models
- * New tower enclosure with easy access and security lock (Power Macintosh 8600 and 9600 models)
- * Mac OS in the new models is Macintosh System 7.5.5

PowerPC 604e Microprocessor

=====

All the new models use the PowerPC 604e microprocessor. The PowerPC 604e is a version of the PowerPC 604 with the following enhancements:

- * On-chip data and instruction caches of 32 KB each
- * Processor clock speed up to 5 times the bus clock speed

Dual Processor Configuration

=====

In the 9600/200MP model, two PowerPC 604e microprocessors are on the processor card. With applications that support the new multiprocessor API, the MP configuration provides up to 2 times the performance of the equivalent single-processor computers. The operation of the dual-processor configuration is asymmetric multiprocessing. One processor is the primary processor: it runs the Mac OS and handles interrupts from the I/O systems. The second processor runs MP tasks as set up by the primary processor.

Processor Clock Speeds

=====

The clock speeds for the microprocessors in the Power Macintosh 7300, 7600, 8600, and 9600 computers are increased over their earlier counterparts. The table below shows the microprocessor clock speeds along with the corresponding processor bus speeds.

Model	Processor clock speed	Processor bus speed
Power Macintosh 7300/166	168 MHz	48.0 MHz
Power Macintosh 7300/180	180 MHz	45.0 MHz
Power Macintosh 7300/200	200 MHz	50.0 MHz
Power Macintosh 7600/200	200 MHz	50.0 MHz
Power Macintosh 8600/200	200 MHz	50.0 MHz
Power Macintosh 9600/200	200 MHz	50.0 MHz
Power Macintosh 9600/200MP	200 MHz	50.0 MHz

Second-Level Cache

=====

All the new models include a second-level (L2) cache. The L2 cache provides a performance improvement of up to 40% over machines without such a cache. The L2 cache in the Power Macintosh 9600/200 and 9600/200MP consists of 512 KB of fast static RAM on the main logic board. The L2 cache in the other models consists of a 256 KB DIMM installed in a slot.

Hard Disk Sizes

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The built-in hard disks in the new Power Macintosh computers are either 2 or 4 GB.

AV-Capable Hard Disk

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The 2 GB hard disk in the Power Macintosh 8600 can support AV applications. It can transfer video data at 30 frames per second with no dropped frames.

12X-Speed CD-ROM Drive

=====

All the new models include a built-in 12X-speed CD-ROM drive, an AppleCD 1600i. The AppleCD 1600i supports the worldwide standards and specifications for CD-ROM and CD-digital audio discs described in the Sony/Philips Yellow Book and Red Book. The drive can read CD-ROM, CD-ROM XA, CD-I, and PhotoCD discs as well as play standard audio discs. The AppleCD 1600i CD-ROM drive has a sliding tray to hold the disc. The drive features an 12X-speed mechanism that supports sustained data transfer rates of 1600 KB per second and a data buffer that further enhances performance.

Built-in Removable Cartridge Drive

=====

One of the new models, the Power Macintosh 8600, has a built-in Iomega Zip removable cartridge drive. The built-in Zip drive is similar to its external counterpart. The user has the option of placing a system folder on a Zip cartridge and starting up the computer from the Zip drive.

Video Input

=====

The new Power Macintosh 7600 has the same video input capabilities as the Power Macintosh 8500 and 8600 models. The back of the computer has a small panel with RCA jacks for stereo pairs of audio inputs and outputs, an RCA jack for composite video input, and a multipin connector for S-video input.

Accelerated Display Card

=====

The Power Macintosh 9600 includes a video display card that supports acceleration of 2D graphics and text. The display card has 4 MB of buffer memory and cannot be expanded. The display card supports pixel depths of 8, 16, and 24 bits per pixel on small and medium-sized monitors, and 8 and 16 bits on large monitors, as shown in the table below.

=====+=====+=====		
Resolution (pixels)	Vertical frequency (Hz)	Pixel depths (bits per pixel)
=====+=====+=====		
512 by 384	60	8, 16, or 24
-----+-----+-----		
640 by 480	67	8, 16, or 24
-----+-----+-----		
640 by 870	75	8, 16, or 24
-----+-----+-----		
800 by 600	75	8, 16, or 24
-----+-----+-----		
832 by 624	75	8, 16, or 24
-----+-----+-----		
1024 by 768	75	8, 16, or 24
-----+-----+-----		
1152 by 870	75	8, 16, or 24
-----+-----+-----		
1280 by 960	75	8 or 16
-----+-----+-----		
1280 by 1024	75	8 or 16
-----+-----+-----		
1600 by 1200	60, 67, or 75	8 or 16

Security Bar

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The Power Macintosh 7300 and 7600 models have a security bar that conceals the latches for the top cover. The security bar snaps into place on the front of the case and is held in place by a screw.

New Tower Enclosure

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The new tower enclosure has the following new features:

- * More space for internal storage devices
- * Larger power supply
- * Easier access to internal components
- * Locking feature
- * Space for larger-size DIMMs

Internal Storage Devices

The new tower enclosure has spaces for up to seven internal storage devices. Four of those spaces are accessible from the front; of those four, three can accommodate 5.25-inch devices and one can accommodate a 3.5-inch device. The other spaces are not accessible from the front; they can accommodate three 3.5-inch devices or one 5.25-inch device and one 3.5-inch device.

Larger Power Supply

The power supply in the new tower enclosure now provides a total of 390 watts to support the larger number of drives and the faster processor. The table below shows the maximum power available for additional internal devices such as expansion cards and storage devices. The power supply can support as many as six 15-watt cards or four 25-watt cards.

=====+=====+=====+=====			
Device	Voltage	Current	Power
=====+=====+=====+=====			
Expansion card (15 watts)	+5 V	3 A	15 W
	+-----+-----+-----+-----		
	+12 V	0.5 A	6 W
	+-----+-----+-----+-----		
	-12 V	0.1 A	1.2 W
	+-----+-----+-----+-----		
	+3.3 V	2 A	6.6 W
-----+-----+-----+-----			
Expansion card (25 watts)	+5 V	5 A	25 W
	+-----+-----+-----+-----		
	+12 V	0.5 A	6 W
	+-----+-----+-----+-----		
	-12 V	0.1 A	1.2 W
	+-----+-----+-----+-----		
	+3.3 V	2 A	6.6 W
-----+-----+-----+-----			
Storage devices	+5 V	9 A	45 W
	+-----+-----+-----+-----		
	+12 V	3 A	36 W
	+-----+-----+-----+-----		
	+12 V	7.5 A	--
		peak*	

Access to Internal Components

Two features of the new tower enclosure makes it easier to obtain access to the internal components:

- Removable side panel
- Hinged subchassis

* Removable Side Panel

The entire side panel on the left side of the enclosure is removable. The panel is held in position by a latch with a pushbutton at the top of the enclosure. To remove the side panel takes three steps:

Step 1

Gently tilt the computer onto its right side, as viewed from the front. Small rubber bumpers on the right side act as feet when the computer is on its side.

Step 2

Press down on the button at the top of the side panel and pull the panel away from the enclosure at the top.

Step 3

Pull the side panel to the right (the top of the enclosure) to release it from the bottom of the enclosure, then lift it up and away.

With the side panel out of the way, you have access to the components at the bottom of the computer: PCI expansion slots, the DAV connector, and the space for internal RAID storage devices. Press the button and lift the cover up a few inches.

* Hinged Subchassis

As in earlier Power Macintosh 8500 and 9500 models, access to the DIMM slots is obstructed by the power supply and disk drives. In the new tower enclosure, those components are mounted on a hinged subchassis that can be tilted out of the enclosure.

With the side panel removed, moving the hinged subchassis out of the way takes two steps:

Step 1

Raise the two plastic catches at the top of the open area to release the subchassis. With the computer on its side, and viewed from the front, the catches are at the right of the open space.

Step 2

Grasp the large plastic handle below the catches and slowly lift up, tilting the subchassis to the right. When the subchassis is clear of the internal components, it will rest on its top.

With the computer on its right side, and the subchassis in the open position,

the main logic board with its array of expansion slots is facing up. The user can now insert expansion DIMMs into the appropriate slots.

Locking Feature

The new tower enclosure for the Power Macintosh 8600 and 9600 has a locking feature. A tab on the back of the enclosure connects to an internal latching mechanism for the removable side panel. Pulling out the tab engages the locking mechanism and exposes a hole in the tab. By inserting a security cable or a padlock through the hole, you can secure the tab in the locked position.

Taller RAM DIMM

The method of RAM expansion in the new models is the same as in their earlier counterparts. However, Apple Computer has made the following change to the mechanical specification for the RAM DIMM:

The JEDEC MO-161 specification shows three possible heights for the 8-byte DIMM. All Power Macintosh computers can accommodate DIMMs with the shortest of the three specified heights: 1.100 inches. The new Power Macintosh 8600 and 9600 can also accommodate DIMMs with a height of 1.255 inches.

System Software

=====
The system software has been modified to support the new hardware features. The Mac OS for the new models is a modified version of System 7.5.5 with a new enabler.

Note: The information contained in this article was taken from the Power Macintosh 7300, 7600, 8600, and 9600 Developer Note.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20789



Tech Info Library

QuickDraw GX and Desktop Printing Issue (1/97)

Revised: 1/24/97
Security: Everyone

QuickDraw GX and Desktop Printing Issue (1/97)

Article Created: 15 January 1997
Article Reviewed/Updated: 24 January 1997

TOPIC -----

I have installed both standard Desktop Printing and QuickDraw GX. After I restart my computer, it is not clear which is running since I see the GX desktop printers as well as the non-GX desktop printers. There is a Desktop Printers menu item in the Apple menu as well. Is it possible for both GX and non-GX desktop printers to be installed, and are they compatible? Also, the Desktop Printer menu item in the Apple menu does not display my GX desktop printers.

One last question, are the printer icons in the menu bar (next to the Balloon Help icon) and the Control Strip related to GX or non-GX Desktop Printing?

DISCUSSION -----

QuickDraw GX desktop printing and non-GX Desktop Printing are NOT compatible. If both are installed and enabled when the system starts, QuickDraw GX desktop printing takes precedence over the non-GX Desktop Printing software. Non-GX Desktop Printing is automatically disabled along with its desktop printers -- an "X" mark will appear through each non-GX desktop printer.

The "Desktop Printer" menu item (if present) in the Apple menu is associated with non-GX Desktop Printing. It will still be displayed even with QuickDraw GX running, but will be non-functional until QuickDraw GX is disabled in the Extensions Manager. As the menu item is in no way associated with QuickDraw GX, GX desktop printers will NOT show up in this menu.

NOTE: The Desktop Printer menu is only installed with printer software and stand-alone Desktop Printer installs. It does not get installed as part of regular system installations. Future versions beyond Desktop Printing v2.0.x will no longer install this menu item.

The printer icons in the menu bar and Control Strip are both part of non-GX Desktop Printing and will only show non-GX desktop printers.

Article Change History:

24 Jan 1997 - Changed title to better reflect article subject.

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Tech Info Library Article Number:20790



Tech Info Library

QuickTime for Windows 2.1.x: Error Updating INI Files (1/97)

Revised: 1/15/97
Security: Everyone

QuickTime for Windows 2.1.x: Error Updating INI Files (1/97)

=====

Article Created: 15 January 1997

TOPIC -----

When I try installing QuickTime for Windows 2.1.x (QTW), I get an error message that states "An error occurred while updating ..INI files." when running the QTW 2.1.x installer." How can I correct this?

DISCUSSION -----

When an INI file is larger than 32K bytes, the 16-bit Windows APIs in both Windows 3.1.x and Windows 95, cannot read or write to the INI file. This creates a problem when using the 16-bit Windows APIs, as does QuickTime for Windows, to modify a INI file when it is greater then 32K bytes. However, INI files are text files and you can use the workaround listed below when the INI file is larger than 32K bytes. In this workaround, you will create INI files, which are smaller than 32K bytes, then rejoin the files once you have installed QuickTime for Windows.

Generally INI files are less than 32K. If your INI files are larger than 32K you may have unused or outdated information. The procedure outlined below is the only one we are aware of at this time. Please call Microsoft if you require another method or further explanation.

Workaround
=====

In this example MS Write is used, but you can use any text editor that allows you to create files larger than 32K bytes.

Step 1

Locate the INI files which are 32k bytes or more.

Examples: SYSTEM.INI or WIN.INI

Step 2

Open the SYSTEM.INI or WIN.INI file, using MS Write.

Step 3

PAGE DOWN to about 30 pages.

IMPORTANT:

- The first 30 pages of the SYSTEM.INI file needs to contain the [mci] section.
- The first 30 pages of the WIN.INI, needs to contain the following sections: [Extensions],[mci extensions],[embedding].

Step 4

Hold the SHIFT key while PAGE DOWN through the rest of the file.

Step 5

Cut the selected text.

Step 6

Launch another MS Write document.

Step 7

PASTE into the new MS Write.

Step 8

Save as SYSTEM.QTW

Step 9

Click on the title bar of the first opened Write document. Make sure the selection still there.

Step 10

Delete the section by pressing the DEL key.

Step 11

SAVE AS SYSTEM.INI or WIN.INI

Step 12

Repeat for WIN.INI or SYSTEM.INI if necessary.

Step 13

Run the QuickTime for Windows (QTW) installer.

Once you have installed QTW, you need to re-append the INI files you split.

How to re-append INI files

=====

Step 1

Open the SYSTEM.QTW or WIN.QTW file using MS Write.

Step 2

Choose Select All from the Edit menu.

Step 3

Choose Copy from the Edit menu.

Step 4

Open the SYSTEM.INI or WIN.INI file.

Step 5

Page Down to the end of the file.

Step 6

Choose Paste from the Edit menu.

Step 7

Choose Save from the File menu.

Step 8

Delete SYSTEM.QTW or WIN.QTW

Step 9

Exit and re-enter Windows.

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Tech Info Library Article Number:20791



Tech Info Library

QuickTime for Windows: How to Uninstall W/ Windows 3.1.x (1/97)

Revised: 1/15/97
Security: Everyone

QuickTime for Windows: How to Uninstall W/ Windows 3.1.x (1/97)

Article Created: 15 January 1997

TOPIC -----

How do I uninstall all of the QuickTime for Windows files? I am using Windows 3.1.x.

DISCUSSION -----

Here are the steps you need to uninstall QuickTime for Windows.

Step 1

Find PLAYER.EXE and select it using File Manager.

Step 2

List items by date.

All QuickTime files will cluster around the PLAYER.EXE file.

Step 3

Delete the following:

```
{Windows}\PLAYER.EXE
      \VIEWER.EXE
      \MCENU.HLP
      \PLAYENU.DLL
      \PLAYENU.HLP
      \QTINSTAL.EXE
      \READ_QTW.WRI
      \SAMPLE.MOV
      \VIEWENU.DLL
      \VIEWENU.HLP
```

Step 4

Find ATIVIDEO.QTC and select it.

Step 5

List items by date.

NOTE: All QuickTime files will be write protected, list names with detail and you will see the "r" for write protection.

Step 6

Delete the following files:

```
{Windows}\SYSTEM\*.QTC
      \MCIQTENU.DLL
      \MCIQTW.DRV
      \QTHNDLR.DLL
      \QTIM.DLL
      \QTIMCMGR.DLL
      \QTMOVIE.VBX
      \QTNOTIFY.EXE
      \QTOLE.DLL
      \QTPIC.VBX
      \QTW16.CPL
      \QTWCP.HLP
```

Step 7

Launch Write.exe and open SYSTEM.INI

Note: Removing the following items are not necessary.

- delete this line from the [mci] section in the SYSTEM.INI
QTWVIDEO={Windows' directory}\MCIQTW.DRV
- delete these lines from the [Extensions] section in the WIN.INI
mov={Windows' directory}\player.exe ^.mov
pic={Windows' directory}\viewer.exe ^.pic
- delete these lines from the [mci extensions] section in the WIN.INI
mov=QTWVideo
pic=QTWVideo
jpg=QTWVideo
- delete these lines from the [embedding] section in the WIN.INI
-- PlayerFrameClass=QuickTime Movie, QuickTime Movie,
 {Windows' dir}\Player.exe,picture
-- ViewerFrameClass=QuickTime Picture, QuickTime Picture,
 {Windows' dir}\viewer.exe,picture

Step 8

Delete the QuickTime for Windows Program Group:

- select the QuickTime for Windows group icon delete it.

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Tech Info Library Article Number:20792



Tech Info Library

LaserWriter Select: Japanese Postcard adapter (1/97)

Revised: 1/15/97
Security: Everyone

LaserWriter Select: Japanese Postcard adapter (1/97)

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Article Created: 15 January 1997

TOPIC -----

The service price pages for the LaserWriter Select 360 list a Postcard Attachment (part #922-1103). What is this used for?

DISCUSSION -----

In order to meet the requirements for the Japanese market a special adapter was created to support the very small Kansei-Hagaki paper size used for Japanese postcards. The Japanese Postcard Attachment is installed in the envelope cassette tray rear paper support guide. This allows the very short paper size to be fed through the printer properly.

The Postcard Attachment works with these printers:

- LaserWriter Select 300
- LaserWriter Select 310
- LaserWriter Select 360
- LaserWriter Select 610 <-- Only sold in Japan.

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Tech Info Library Article Number:20793



Tech Info Library

Apple Media Tool 2.1.1: Read Me document (1/97)

Revised: 1/15/97
Security: Everyone

Apple Media Tool 2.1.1: Read Me document (1/97)

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Article Created: 15 January 1997

TOPIC -----

This article provides the Apple Media Tool 2.1.1 ReadMe file.

DISCUSSION -----

This Read Me file provides the following information about Apple Media Tool 2.1.1:

- Apple Media Tool 2.1.1 CD Disc
- Tips and Hints for Using Apple Media Tool 2.1.1
- Known Problems and Limitations of Apple Media Tool 2.1.1
- Known Problems and Limitations of QuickTime VR
- Interesting Web Sites Related to Apple Media Tool

Apple Media Tool 2.1.1 CD Disc

The Apple Media Tool 2.1.1 CD-ROM is a hybrid disc that you can use on Mac OS-based and Windows-based computers. On a Mac OS-based computer, you can see all the folders and files on the CD, including the Windows files.

On a Windows-based computer, you can see these two folders and their contents:

- AMT_PROJ contains Windows versions of the Apple Media Tool demonstration projects.
- AMT_UTIL contains files that allow you to install QuickTime for Windows 2.1.2 and other related AMT files from the CD.

Tips and Hints for Using Apple Media Tool 2.1.1

Here are some tips and hints for using Apple Media Tool that will help you be more productive.

- Because Apple Media Tool requires software in specific locations on your hard disk, you should use the Installer program provided on the Apple Media Tool 2.1.1 CD to install the software.
- If you move your project from one disk to another, choose Check All from the Media menu before you run the project to make sure that Apple Media Tool can locate the media for the project.
- Before your project executes the Open URL command, be sure that an Internet browser program, such as Netscape Navigator, is open and a connection to the Internet is established. You can use the Application Launcher object and the Launch command to open the program. Many Internet browser programs open a connection to the Internet automatically, if configured to do so.
- Experienced Apple Media Tool developers find it useful to increase the amount of memory the program uses while they are designing and prototyping their projects. Doing so can speed up development by improving the performance of Apple Media Tool. You can adjust the memory required by your project later. To increase the amount of memory Apple Media Tool uses, select the program's icon in the Finder and choose Get Info from the File menu. In the Get Info window that appears, change the "Preferred size" setting, then close the window.
- To link two screens that are not linked in the Map window, hold down the Control key, then drag the screen you are linking to from the Screens pane to the Link command in the Actions pane of the Browser miniwindow.
- Because ambient sounds can continue to play while screens change, you do not place the media for an ambient sound as an object in a screen. Instead, create an object with an event and Ambient Sound command to play the sound, then drag the sound media from the Media miniwindow to the Ambient Sound command. (The media for an Ambient Sound command must be a .WAV file.)
- You cannot use the same hot text more than once to execute different actions in a single RTF file.
- Because a hot spot region defines a region of the object, not the media, be cautious using hot spot regions in Picture objects that scroll--Picture View and Picture Scroller objects--or if you use the Switch Media command to change the media displayed in an object.
- Depending on the size of the media and the way you use a Picture View object, your title can require a lot of memory to display the screens containing the Picture View object.

Known Problems and Limitations of Apple Media Tool 2.1.1

- If you use the Text Field object's Save File Name feature, do not include an apostrophe (') character in the file name.
- If you modify an RTF file which is used as media in a project, you will need to save the changes and then choose Replace from the Media menu to add the new

file to your project.

- To use the Text Field object's Save File Name feature in a title that plays on Windows-based computers, the file name you specify must conform to the DOS file name format. Therefore, the name you enter in the Save File Name box must be 8 characters or less, followed by a period and a 3 character suffix, such as "TXT."

- If you use the Application Launcher object and the Launch command to launch one or more titles from another title, all of the titles in the sequence must be in the same folder. If these titles are compiled to play on Windows-based computers, each title consists of four separate files, including a .DLL file. By default, Runtime Maker names a .DLL file KEY.DLL. However, because all the .DLL files for a sequence of titles must be in the same folder, you need to give each .DLL file for each title a unique name. For each title you must then change the [DLL] section of the .INI file to correspond to the new name of that title's .DLL file. To do so, follow these steps:

1. Open the .INI file and find the [DLL] section.
2. Find the line that reads ";DLL name=key.dll."
3. Delete the ";" character.
4. Change "key" to the name you assigned to that title's .DLL file.

- From within an AppleScript script, the 'Quit' command will not work.

Known Problems and Limitations of QuickTime VR

- You cannot print the contents of a QuickTime VR movie object from a title using the Print command.

- A QuickTime VR movie is always the front-most object in the screen, regardless of the order in which it appears in the Objects pane in the Browser miniwindow.

- You cannot use Apple Media Tool Converter to convert a QuickTime VR movie to one that plays on both Mac OS-based and Windows-based computers. If you attempt to do this, a message appears saying that you must use a QuickTime VR editing tool to create a cross-platform movie. You can use QTVRPlayer to convert the movie. QTVRPlayer is located in the Utilites folder on the Apple Media Tool 2.1.1 CD.

- To play a title that includes a QuickTime VR movie on a Windows-based computer, you must install certain QuickTime VR software on the computer. To do so, copy the QTVRW.QTC file into either the same folder as the title or the WINDOWS folder. On a Windows-based computer, this file is in the QTVRW.QTC folder in the AMT_UTIL folder on the CD. On a Mac OS-based computer, it is in the QTVRW.QTC folder in the Windows Files folder in the Utilities folder on the CD.

- A QuickTime VR movie requires most of a computer's processing time when it is playing. Therefore, a title cannot execute effect transitions, play sounds, or play other movies when it is playing a QuickTime VR movie. A QuickTime VR movie is playing any time the pointer is within the object that contains the movie.

- Although you can change the size of an Object Movie or Panoramic Movie object in the Display window, when you run the project or play the title the movie appears at the size specified for the movie in the QuickTime VR editor. To change the size of a movie, you must use a QuickTime VR editor.

Interesting Web Sites Related to Apple Media Tool

The following World Wide Web sites provide information about Apple Media Tool and other Apple Media Program tools and technologies.

Apple Media Tool Home Page

<http://amt.apple.com>

Authoring Multimedia With Apple Media Tool (An Online Course for Developers)

<http://devworld.apple.com/dev/du/amt/index.html>

Apple Media Tool Product Data Sheet

<http://product.info.apple.com/productinfo/datasheets/asindex.html>

Speed for Apple Media Tool (Tips to Optimize Apple Media Tool)

<http://www.sky4studios.be/amt/speedforamt/welcome.html>

Information About Apple Media Tool Accelerator

<http://www.sky4studios.be/amt/welcome>

Apple Media Tool Frequently Asked Questions (FAQ)

<http://ccsmacinfo.ccs.queensu.ca/Mark/AMT2/AMTfaq.html>

How to Create Flipbooks

<http://www.wire.net.au/~czar/InfoAlley/dailies/042696/apple.html>

Interactive Music Track (for the Apple Interactive Music Toolkit)

<http://amp.apple.com/imt/imt.html>

Welcome to QuickTime

<http://quicktime.apple.com>

Welcome to QuickTime VR

<http://quicktimevr.apple.com>

The Unofficial Apple Media Tool Site (Mark Fleming's Apple Media Tool Site)

<http://ccsmacinfo.ccs.queensu.ca/Mark/AMT2/>

XMeDIA Apple Media Tool Engine by The Carl Group

<http://www.carlgrp.com/mm.html>

Enhanced CD Database

<http://www.musicfan.com/ecd>

AMKDEV Archive (Technical Notes for Apple Media Tool Programming Environment)

<http://www2.earthchannel.com/binpub/archives/amkdev/9608/index.html>

Technical Note: Apple Media Tool Memory Usage Explained
<http://devworld.apple.com/dev/technotes/tn/tn1056.html>

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Tech Info Library Article Number:20795



Tech Info Library

Apple Media Tool 2.0: Creating Transparent Colors (1/97)

Revised: 1/15/97
Security: Everyone

Apple Media Tool 2.0: Creating Transparent Colors (1/97)

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Article Created: 15 January 1997

TOPIC -----

I created a new project in Apple Media Tool 2.0 (AMT) that has color preferences set to:

- 1) millions
- 2) 256
- 3) Thousands

One of my pict files has a dark gray (RGB=8,8,8) background which I made transparent. When I view the project in thousands of colors, the background is transparent, as I expect. But when I play the project on a machine that only supports 256 colors, the background is no longer transparent. How can I fix this?

DISCUSSION -----

Apple Media Tool does not handle transparency well when changing color depths. Here are some recommendations on how you can avoid the problem:

- Keep it Simple. Stick to white or black as a transparent color. Never use 16- or 24-bit transparent colors.
- Do as much as possible with QuickTime background stills. QuickTime does a good job of dithering images down to 256 color palettes on Macintosh and Window computers.
- Use Equilibrium's DeBabelizer Toolbox software to create superpalettes that play on Macintosh and Window computers, then make a QuickTime Pict from the result.
- Test extensively on both Macintosh and Window computers using a wide variety of video boards.

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Tech Info Library Article Number:20796



Tech Info Library

Mac OS 7.6: Correct Version of MacsBug to Use (3/97)

Revised: 3/3/97
Security: Everyone

Mac OS 7.6: Correct Version of MacsBug to Use (3/97)

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Article Created: 4 February 1997

TOPIC -----

In the About Mac OS 7.6 Read Me file it states that I need to upgrade to version 6.5.4 of MacsBug. I know people using version 6.5.3 of MacsBug and it works properly for them. Do I really need a new version of MacsBug?

DISCUSSION -----

Certain PCI-Based Mac OS computers using Mac OS 7.6 are not compatible with MacsBug v6.5.3 or earlier. On these computers the display turns a solid shade of gray, or the text is yellow when you enter MacsBug.

Note:

MacsBug is a developer tool, and is not required to use Mac OS 7.6.

MacsBug 6.5.4

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MacsBug v6.5.4 is not completed as of the writing of this article. If you are experiencing the problem described above with MacsBug, you can install an alpha version of this software, version 6.5.4a1. It is posted to Apple's Developer World ftp site in the following location:

ftp://ftp.apple.com/devworld/Tool_Chest/Testing_-_Debugging/Debuggers_-_dcmds/MacsBug_6.5.4a1.sit.hqx

If you are not experiencing problems with MacsBug and Mac OS 7.6, then you do not need to install MacsBug 6.5.4a1.

This article appeared in the 4 February 1997 issue of the Information Alley.

Article Change History:

03 Mar 1997 - Corrected the URL.

Copyright 1997, Apple Computer, Inc

Tech Info Library Article Number:20797



Tech Info Library

PCI-Based Macintosh Computers: Won't Mount CD-ROM (4/97)

Revised: 4/14/97
Security: Everyone

PCI-Based Macintosh Computers: Won't Mount CD-ROM (4/97)

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Article Created: 16 January 1997
Article Reviewed/Updated: 14 April 1997

TOPIC -----

After performing a "clean install" of the system software on my Power Macintosh 8500 computer with version 3.0 of the 7.5.3 System Software CD, I cannot get the computer to mount any compact discs. However, I can startup the computer using the System Software CD. I have tried troubleshooting both the software and hardware, but have not been able to correct this.

DISCUSSION -----

You may have the incorrect version of the System software CD for your computer.

Note:

This issue may occur on any of the newer PCI-based Power Macintosh computers including the Power Macintosh 7600, 8500, and 9500.

Verification

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Here is how you can verify you were shipped the incorrect System Software CD.

- 1) Check the version number of the 7.5.3 System Software CD. Is it version 3.0?
- 2) Check the version number of the Apple CD-ROM extension in the Extensions folder. Is it version 5.1.2?
- 3) Can you startup your Power Macintosh computer from the System Software CD?
- 4) When you startup from your hard disk and have version 3.0 of the 7.5.3 System Software CD in the CD-ROM drive, do you get a -50 error dialog when ejecting the CD? (Either using the Put Away command or dragging the icon to the Trash).

If you answered yes to these questions, then you were shipped the wrong System

Software CD.

Background

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The 3.0 version of the 7.5.3 System Software CD installs version 5.1.2 of CD-ROM Setup software, which does not support the 8x-speed CD-ROM drive in the newer PCI-Based Power Macintosh computers. When the computer starts-up from the hard drive with the incorrect CD in the CD-ROM drive, the older driver loads causing the -50 error when trying to eject the disk. The Tech Info Library article titled "PCI-Based Power Macintosh: -50 Error When Ejecting CD" (TECHINFO-0019271) contains additional information on this issue.

Correcting this Issue

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In order to use your CD-ROM drive, you need CD-ROM Setup v5.1.7. This version of the CD-ROM Setup supports 8x-speed CD-ROM drives and it is available through online services. If you do not have access to Apple's online software update libraries, check with your local Apple service provider, or call the Apple support line.

This article was published in the 14 April 1997 "Information Alley."

Article Change History:

14 Apr 1997 - Added Information Alley statement.

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Tech Info Library Article Number:20799



Tech Info Library

About Mac OS 7.6 Read Me (1/97)

Revised: 1/23/97
Security: Everyone

About Mac OS 7.6 Read Me (1/97)

Article Created: 16 January 1997

TOPIC -----

This article is the About Mac OS 7.6 ReadMe file.

DISCUSSION -----

About Mac OS 7.6

This document provides information about improvements you'll find in Mac OS 7.6, supplementing the information in your installation manual. This document also contains information about known problems with this release and possible solutions.

Mac OS 7.6 includes the following new features and improvements:

- Performance improvements when using virtual memory
- Performance is faster than previous versions of virtual memory when you
- open a large application program that requires a significant amount of RAM
 - switch between large application programs
 - switch between large documents within an application
 - access SCSI devices

The amount of improvement will vary depending on the amount of RAM installed, the amount of virtual memory allocated, and the applications being used.

Virtual memory is automatically turned on when you install Mac OS 7.6. If you have less than 16 MB of built-in memory, do not turn virtual memory off or you may experience problems.

- Volume buttons on 5200, 5300, 6200, 6300, and 630 series computers
- Problems with the volume buttons on the front of your computer have been fixed.
- Support for multiprocessor cards on computers with PowerPC microprocessors

You can install cards with additional processors to increase speed and performance when using applications that take advantage of multiprocessor technology.

- WorldScript Power Adapter provides performance and stability enhancements on computers with PowerPC microprocessors

Computers that use languages based on the Roman alphabet (French and English, for example) also benefit from the improvements provided by WorldScript.

- Computers with 68040 microprocessors and computers with PowerPC processors that use the NuBus expansion bus can use large disks

These computers can now use disks larger than 4 gigabytes, up to a maximum of 2 terabytes. On 68040 computers, large disks cannot be used as startup disks, and cannot contribute to virtual memory totals.

- Enhanced screen capture options

You can copy portions of the screen, and copy the screen images to the Clipboard or a file. Use the following keyboard combinations:

- Command-Shift-Control-3 copies a picture of the entire desktop to the Clipboard.
- Command-Shift-4 creates a picture file of a rectangular selection of the desktop. After pressing and releasing the key combination, position the cursor at the upper-left corner of the area you want to capture, then drag to the lower-right corner. If you continue to press the Shift key while dragging the cursor, the capture area will be constrained to a square.
- Command-Shift-4-Caps Lock creates a picture file of a window. After pressing the key combination, click the window you want to capture.

To save the rectangle or window on the Clipboard instead of as a file, press the Control key as you click. To cancel a Command-Shift-4 screen selection, press the Space bar.

- Compatibility problem fixed

Mac OS 7.6 fixes a problem in system software versions 7.5.3 and 7.5.5 in which the system took some of an application's memory, which occasionally caused compatibility problems.

- Fewer out of memory messages when using the Finder

The Finder has more memory allocated to it, which should reduce error messages and reduce conflicts with certain extensions.

- Improved data integrity

Mac OS 7.6 will save information stored in the disk cache more often, which reduces the chance of a crash causing disk corruption.

- Improved Resource Manager

Resource Manager performance has been improved. Since both system software and applications use the Resource Manager, overall performance is enhanced.

- Shorter startup time

Input devices are no longer reinitialized during startup.

- Virtual memory uses less system RAM

More RAM is now available for applications.

- OpenDoc performance improved

A commonly-used memory allocation routine was made twice as fast as it was previously, resulting in faster OpenDoc performance.

- The Modern Memory Manager is always on

The Modern Memory Manager, used on computers with PowerPC processors, cannot be turned off in the Memory control panel.

You will also notice these improvements, first provided in the 7.5.5 System Update:

- Improved memory management on PowerPC computers

If you could not open an application program in a low-memory situation, you may be able to use the application after you install this software.

- Improved floppy disks reliability in computers with a DOS Compatibility Card
Problems inserting floppy disks while Windows is starting up have been fixed.

- Improved reliability on PowerBook 5300 and 2300 series computers and Macintosh 5400, 6400, 7200, 7500, 7600, 8500, and 9500 series computers

If you have a PowerPC PowerBook or a PCI-based computer, your computer may have "frozen" from time to time while accessing the hard disk. This release fixes one cause of this problem.

- Improved reliability when using Ethernet and virtual memory

Transferring large files over Ethernet with virtual memory turned on is more reliable.

- Improved reliability when using the Apple TV Tuner or Macintosh TV Remote Control

The channel and volume buttons on the remote control now work when pressed rapidly.

- Improvements in LocalTalk

LocalTalk now works more reliably on Macintosh 5400 series computers and performs better when using some infrared software products.

- Improved stability with multiple background application programs

This release fixes a problem that caused a crash when using more than one background program. (A background program is one that works behind the scenes, so you don't see it in the Application menu. Some e-mail programs have this background feature.)

- Improved stability when using a shared printer on a network

The computer will no longer crash when using a shared printer on a network.

- Improved reliability on computers with PowerPC 604 or 604e processors that run at 180 MHz or greater

These computers are less likely to freeze during startup or experience problems

when formatting floppy disks.

- Improved reliability using Ethernet on Macintosh 5400 and 6400 series computers
- Improved reliability using sound-intensive applications on Macintosh Quadra and Centris computers with the PowerPC upgrade card

Known problems and compatibility issues

- PowerTalk is not compatible with Mac OS 7.6

PowerTalk mail, catalogs, the keychain, and other PowerTalk services are not available with Mac OS 7.6. See the Mac OS 7.6 installation manual for more information.

- OpenDoc, Cyberdog, and LaserWriter 8.4 are not installed on computers with 68030 and 68040 microprocessors

OpenDoc, Cyberdog, and the LaserWriter 8.4 driver use a common piece of software called the CFM 68K Runtime Enabler. Apple has discovered a problem with the CFM 68K Runtime Enabler and is not including it with Mac OS 7.6. You cannot install OpenDoc, Cyberdog, and the LaserWriter 8.4 driver on computers with 68030 and 68040 microprocessors. Additionally, other application programs that use the CFM 68K Runtime Enabler will not work on computers with 68030 or 68040 processors and Mac OS 7.6. Other Apple products that use the CFM 68K Runtime Enabler include Apple Telecom software, version 3.0 and later, and the Apple Media Tool.

- Select a printer driver even if you don't have a printer connected

If you don't have a printer connected, either locally or over a network, you should still select a printer driver in the Chooser. To select a printer driver, open the Apple () menu and choose Chooser. Click a type of printer (for example, LaserWriter 8) in the box on the left side of the Chooser. If you don't select a driver, you could experience problems.

- Using AppleVision software on computers with 68040 processors and on computers with PowerPC processors that use the NuBus expansion bus after a clean installation of Mac OS 7.6

Computers with 68040 processors and computers with PowerPC processors that use the NuBus expansion bus use AppleVision software version 1.0.2. If you do a clean installation of Mac OS 7.6, version 1.0.4 of the AppleVision software is installed. (If you do a normal installation, your AppleVision software is not touched, and you retain version 1.0.2.) AppleVision software version 1.0.4 was not meant for computers with 68040 processors or computers that use the NuBus expansion bus. You can still use your computer and monitor with version 1.0.4, but you won't be able to use all of your monitor's features. To regain all the features of your monitor software, reinstall your AppleVision software from its original disks.

- PowerBook 190, 190cs and 5300cs

The PowerBook 190cs and 5300cs display may appear blank upon the first restart after installing Mac OS 7.6, as well as every time after resetting PRAM. This is because the power manager is being updated on the PowerBook. Restarting the PowerBook once more will result in a normal screen. To shut the PowerBook down

safely, press the power button one time (which brings up the shutdown dialog) and then press return.

- Power Macintosh Upgrade Card users cannot use LaserWriter driver 8.4 in 68040 mode

LaserWriter driver version 8.4, installed on PowerPC computers, will not work on computers with 68040 microprocessors. If you have a Power Macintosh Upgrade Card and switch between PowerPC and 68040 modes, you will not be able to print in 68040 mode unless you install LaserWriter driver version 8.3.4 instead of version 8.4. You can install this LaserWriter version by installing a universal system on your computer. (The universal system is a custom installation option.)

Some features in LaserWriter version 8.4 are not available in version 8.3.4. In LaserWriter 8.3.4, you cannot print a PostScript file by dragging it to a desktop printer icon; you must use the Apple Printer Utility or the LaserWriter Utility. (One of these programs was included on the disks that came with your printer.) Also, in LaserWriter 8.3.4, you set up printers in the Chooser, not in the Printing menu.

- Printing with QuickDraw GX while using Cyberdog

Printing is not available with QuickDraw GX while using Cyberdog (both QuickDraw GX and Cyberdog are available with Mac OS 7.6). To work around this problem, save e-mail messages and other Cyberdog files as text, then print them using another application.

- Color OneScanner driver will not work with Virtual Memory turned on

If you are using an Apple Color OneScanner with Scanner extension version 4.1 or earlier, you need to turn VM off. Apple will have a new scanner driver available to address this problem as soon as possible.

- Macintosh Tutorial Part 1 will not work on computers with 68030 or 68040 processors

Part 1 of the Macintosh Tutorial, version 1.2 will not work on computers with 68030 or 68040 processors and Mac OS 7.6. Part 2 of the Macintosh Tutorial will work normally.

- PC Compatibility software and Mac OS 7.6

Mac OS 7.6 does not include PC Compatibility software. If you perform a clean installation of Mac OS 7.6, you will need to reinstall PC compatibility software.

- Apple Telecom software and Mac OS 7.6

Mac OS 7.6 does not include Apple Telecom software. If you perform a clean installation of Mac OS 7.6, you will need to reinstall Apple Telecom software.

- Apple CD-ROM and non-Apple CD-ROM incompatibilities

If your computer or CD-ROM drive is not manufactured by Apple, or you have an Apple CD-ROM drive which has been updated with a non-Apple driver, incompatibilities may result. To permit your CD-ROM drive to function correctly, remove "Apple CD-ROM" from the Extensions Folder, and reinstall the software to support your CD-ROM device.

- Macintosh Easy Open control panel renamed "Mac OS Easy Open" control panel
Some software, including PC Compatibility software versions 1.5 and earlier, installs the Macintosh Easy Open control panel. If you install software that includes the Macintosh Easy Open control panel, remove it and use the Mac OS Easy Open control panel which is installed with Mac OS 7.6.

- Network Software Installer version 1.5.1 installs older version of AppleTalk
The Network Software Installer installs an earlier version of AppleTalk than the one included with Mac OS 7.6. If an earlier AppleTalk version is installed, Open Transport networking software will not work. Do not use the Network Software Installer after installing Mac OS 7.6.

- QuickTake 150 software installs old version of QuickTime PowerPlug
Mac OS 7.6 includes QuickTime PowerPlug version 2.5 for computers with PowerPC microprocessors. The QuickTake 150 installer replaces this with version 2.0. Remove the QuickTime PowerPlug file from your Extensions folder (inside the System Folder) before installing QuickTake 150 software. After the QuickTake software is installed, drag the PowerPlug file back to the Extensions folder.

- Switching between a LocalTalk network and a serial printer
If you use the same port to alternately connect to a LocalTalk network and a serial printer, the port is not always correctly released after you turn off AppleTalk to use the printer. If you have trouble printing after turning AppleTalk off, restart the computer.

- Using the QuickDraw GX Installer when Adobe Acrobat is installed
If you use the QuickDraw GX Installer to either install or remove QuickDraw GX and your computer has Adobe Acrobat installed, Acrobat will display a message about missing fonts each time the computer is restarted. Reinstall or turn off Acrobat to stop the warning message. (Turning off QuickDraw GX in the Extensions Manager will not solve the problem.)

- Using Open Transport PPP with other versions of PPP
If you use other versions of PPP (such as MacPPP), settings for each control panel must be updated separately. If an application (such as the Dialer application included with the Apple Internet Connection Kit) makes changes to one control panel, the other must be updated manually. The Apple Internet Connection Kit Dialer will only work with MacPPP.

- Quadra owners with a PowerPC Upgrade Card
The Drive Setup disk utility does not work with your upgrade card. You can use HD SC Setup to update your driver or initialize a disk, but you need to turn off the PowerPC upgrade card before using HD SC Setup. If you need to start up your computer from a Disk Tools floppy disk, either turn off the upgrade card and use the Disk Tools 1 disk, or make a copy of the Disk Tools 2 disk and replace Drive Setup with HD SC Setup. Then start up your computer with the new Disk Tools 2 you just created.

- Apple HD SC Setup should not be used to update the driver after using Drive Setup
Once a hard drive has been initialized with Drive Setup, do not update the driver with HD SC Setup.

- OpenDoc ODFLibrary and non-Apple installers

Some non-Apple applications and OpenDoc part editors require a later version of the OpenDoc ODFLibrary than the one installed with Mac OS 7.6. In some cases the installers for these products may not replace the older version of ODFLibrary with the newer version they require. If a newly-installed OpenDoc product doesn't work, remove the ODFLibrary file from the Editors folder inside the System Folder, then reinstall the product. This should cause the product's installer to install the correct ODFLibrary. If the product still fails to work, contact the manufacturer.

- Apple Menu Options, General Controls, and Views control panels restored to default values

These control panels are restored to their default values after installing Mac OS 7.6. If you have made changes to either of these control panels, you will need to restore your settings. The Empty Trash warning is also turned back on.

- Macintosh Guide has been renamed "Mac OS Guide"

This change appears in the Guide (question mark) menu when the Finder and Energy Saver control panel are active, but not when some other control panels are active. All instances of Macintosh Guide will be renamed in a future release.

- Aliases in Extensions Manager

The Extensions Manager control panel does not display aliases. If you have aliases in the Startup Items folder or the Shutdown Items folder, you can't turn off those items using the Extensions Manager.

- Using Assistant Toolbox with desktop computers

If you use the Assistant Toolbox extension (for portable computers) on a desktop computer, the contents of your RAM disk will be lost when you shut down your computer. Apple is working on a solution to this problem.

- Apple System Profiler program displays incomplete information

With the exception of internal ATA hard disks, Apple System Profiler does not display information about non-SCSI devices, including PC Cards, ATA devices, and ATAPI devices.

- Using Desktop Shortcut feature of Aladdin Desktop Tools with Mac OS 7.6

With Shortcut, when you are in an Open or Save dialog box, you should be able to click any Finder window and see that window's contents in the Open or Save dialog box's scrolling list. This feature does not work with Mac OS 7.6. Aladdin Systems expects to release an update to address the issue.

- Using MacsBug and Mac OS 7.6

Mac OS 7.6 requires MacsBug version 6.5.4. (MacsBug is a tool for software developers.) For information, check the Apple developer Web site at <http://devworld.apple.com>.

Advanced users can find additional technical information in the Mac OS 7.6 Tech Note document. This document is located on the World Wide Web at <http://devworld.apple.com/dev/technotes.shtml>.

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Tech Info Library

PowerBook 1400: Not Recognizing Added Memory (1/97)

Revised: 1/16/97
Security: Everyone

PowerBook 1400: Not Recognizing Added Memory (1/97)

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Article Created: 16 January 1997

TOPIC -----

I installed additional memory (RAM) into my PowerBook 1400 series computer, but it is not recognizing it, that is, it does not show up in the About This Macintosh or I see a "failing built in memory test" message at startup. What is wrong?

DISCUSSION -----

This type of symptom has been reported to Apple by some customers who have added memory to the user expandable memory slot in their PowerBook 1400 series computers.

Apple has worked closely with developers of third-party (non-Apple) memory upgrades and have identified timing issues between the added RAM and the Power 1400 series computers. Many of these third party memory vendors are now modifying their cards to allow for proper signal timing.

Customers that have added third-party memory upgrades that are not being recognized, or that report memory errors, should contact the vendor of the memory upgrade.

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Tech Info Library Article Number:20801



Tech Info Library

AICK and Telecom 3.0 Connect Speed Issue (1/97)

Revised: 1/16/97
Security: Everyone

AICK and Telecom 3.0 Connect Speed Issue (1/97)

Article Created: 16 January 1997

TOPIC -----

When configuring the Internet Dialer, the port speed setting for a GeoPort defaults to 14.4 kbps. If I'm running Apple Telecom 3.x or the Express Modem 3.x update, why do I not get connect speeds greater than 14.4 kbps? I think that I should set this to 115k or at least 57k. With v.34/.42 protocols, I would want the port speed to be higher than the connect speed to take advantage of compression.

Also, will this setting really have an affect on the speed I will see. When I connected to the AICK (Apple Internet Connection Kit) registration server, I got a connect speed of 28.8 kbps. Why is it connecting at 28.8 kbps speeds when the port appears to be set for 14.4 kbps? That should not happen should it? I have not checked the default settings but I thought connect speed would be dependent on port speed.

DISCUSSION -----

The serial port speed setting determines the communication speed between the serial port and the modem and, in order to take advantage of the full bandwidth of your modem connection that's using compression, your port speed should be set higher than the expected speed from modem to modem. However, the GeoPort modem isn't really using the serial port in the same way. If you read page 115 of the Express/Fax Modem manual that came with the GTAK I it states:

"Traditional modems-external modems or even modems that plug into a slot on a main logic board-use an RS-232-like serial connection protocol between the CPU (Data Terminal Equipment-DTE) and the modem (Data Communications Equipment-DCE). Your modem does not use this type of serial connection.

Since your modem has no DTE-DCE serial interface, commands related to the serial interface have no effect, but still exist for script compatibility reasons."

The fact that the other modems may set the serial port speed to 57.6 kbps indicates to me that the AICK team just chose that modem speed to put there.

On why the modems connect at higher than 14.4 kbps anyway. By default, modems will attempt to connect at the highest speed they are capable of (providing the other end can support the same speed). Therefore, even if the port speed is set to 14.4 kbps, the modem is still negotiating V.34 protocols. However, as you point out, it is desirable to have your serial port speed higher than your modem speed to take advantage of the compression (for traditional style modems).

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Tech Info Library Article Number:20802



Tech Info Library

PC Compatibility Card: Support For 32-Bit Network Drivers (1/97)

Revised: 1/16/97
Security: Everyone

PC Compatibility Card: Support For 32-Bit Network Drivers (1/97)

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Article Created: 16 January 1997

TOPIC -----

Are there any inherent hardware limitations of the Apple Macintosh PC Compatibility cards which would prevent use of a true 32-bit network driver, once one is written to work with the PC Compatible?

DISCUSSION -----

There is not a technical reason why a true 32-bit network driver would not work, once such a driver is written specifically for the Apple PC Compatibility Cards.

At the current time, the drivers enclosed with the Apple PC Compatibility Cards such as MacNDIS and MacODI are both 16-bit real mode drivers.

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Tech Info Library Article Number:20803



Tech Info Library

Performa 6320: SoundLib In Extensions Folder Not Needed (1/97)

Revised: 1/17/97
Security: Everyone

Performa 6320: SoundLib In Extensions Folder Not Needed (1/97)

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Article Created: 13 January 1997

TOPIC -----

I have a Macintosh Performa 6320 computer. After using my computer for a few weeks, the sound no longer worked. My menu bar flashed, but I did not hear any sound. I checked my Extensions folder and I noticed a file called "SoundLib". After removing this file from my System Folder and restarting, I was able to restore sound on my computer. Do I need this in my System Folder or can I delete it permanently?

DISCUSSION -----

Owners of Macintosh Performa 6320 computers should delete this SoundLib file from the Extensions folder. However, any time you "Restore System Software" or "Restore all Software" from the Performa CD, it will be reinstalled, so you need to remove this file again.

The SoundLib file is used only for development and is not needed by any of the third party or Apple Computer software applications included with your Macintosh Performa computer. This SoundLib file is harmless and will not cause any data loss or crashes.

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Tech Info Library Article Number:20806



Tech Info Library

Mac OS 7.6 Spelling Error (1/97)

Revised: 1/23/97
Security: Everyone

Mac OS 7.6 Spelling Error (1/97)

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Article Created: 17 January 1997

TOPIC -----

This article describes a spelling error found in the Extensions Manager control panel.

After I installed System 7.6, opened the Extensions Manager control panel, and viewed by package; I found a "System Software 7.6" package and a "System Software 7.6" package. The "t" was missing from one of the package names.

DISCUSSION -----

This is a known issue, and it was found too late for changes to be made. It will be fixed in the next system software update. The package name comes from one of the 'vers' resources. This spelling error affects these five files:

Apple Ethernet CF
Apple Ethernet LC
Apple Ethernet NB
Apple Built-in Ethernet
Apple TokenRing NB

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Tech Info Library Article Number:20807



Tech Info Library

Mac OS 7.6: AppleShare 3.6.4 Required For Net Install (1/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: AppleShare 3.6.4 Required For Net Install (1/97)

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Article Created: 17 January 1997

TOPIC -----

What version of AppleShare Workstation software must a client have installed when installing MacOS 7.6 from a file server?

DISCUSSION -----

You must have AppleShare Workstation software version 3.6.4 installed before starting a network installation of Mac OS 7.6.

If you have AppleShare Workstation software version 3.6, 3.6.1, or 3.6.2, you need to upgrade to version 3.6.4 before you can install Mac OS 7.6 over a network. This software is provided in the Utilities folder on the Mac OS 7.6 CD-ROM disc. Install this version of AppleShare before proceeding with the Mac OS 7.6 installation.

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Tech Info Library Article Number:20808



Tech Info Library

Mac OS 7.6: AppleShare Workstation Version Issue (1/97)

Revised: 1/20/97
Security: Everyone

Mac OS 7.6: AppleShare Workstation Version Issue (1/97)

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Article Created: 17 January 1997

TOPIC -----

I installed AppleShare Workstation software version 3.6.4 on my system, however when I select a file server from the Chooser, the version that shows up in the login dialog box says v 3.6.3. What version of AppleShare Workstation software do I have installed?

DISCUSSION -----

You have version 3.6.4 installed, the file server login dialog box contains a typographical error. If you choose Get Info in the File menu on the file AppleShare in your Extensions folder, you will see the correct software version number.

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Tech Info Library Article Number:20809



Tech Info Library

PowerBook 1400: External Displays & Resolutions Supported (1/97)

Revised: 1/17/97
Security: Everyone

PowerBook 1400: External Displays & Resolutions Supported (1/97)

Article Created: 17 January 1997

TOPIC -----

What resolutions are supported by the optional external video card (M4509LL/A) available for the PowerBook 1400 series computers?

DISCUSSION -----

External Video Support Matrix

Display	Resolution(HxV)	Bits/Pixel
-----	-----	-----
12-in. RGB Display	512x384	1-8bpp
12-in. Monochrome Display	640x480	1-8bpp
13/14-in. RGB Display	640x480	1-8bpp
VGA (60 Hz)	640x480	1-8bpp
SuperVGA (56 Hz)	800x600	1-8bpp*
VESA 1024x768 (60 Hz)	1024x768	1-4bpp*
Portrait Display	640x870	1-4bpp
Portrait Display	640x818	1-8bpp
15-in. RGB Display	640x870	1-4bpp
15-in. RGB Display	640x818	1-8bpp
16-in. RGB Display	832x624	1-8bpp
Apple 14" Multiple Scan	512x384	1-8bpp
	640x480	1-8bpp
	832x624*	1-8bpp
Apple 17" Multiple Scan	640x480	1-8bpp
	832x624*	1-8bpp

Apple 20" Multiple Scan	640x480	1-8bpp
	832x624*	1-8bpp

* SuperVGA is accessed as a "family mode" option of VGA. To use SuperVGA, you have to use the Monitors control panel when connected to a VGA display capable of doing both VGA and SuperVGA timings.

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Tech Info Library Article Number:20810



Tech Info Library

Power Macintosh 4400/200: Description (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 4400/200: Description (2/97)

=====

Article Created: 19 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 4400/200 series computers.

DISCUSSION -----

The Power Macintosh 4400/200 computer combines high performance with a streamlined, cost-effective design that takes advantage of industry-standard parts to give you Power Macintosh capabilities at a highly economical price. It's an ideal system for small and medium-size businesses, for home offices, and for running productivity applications in organizations of any size.

Based on advanced RISC technology, the Power Macintosh 4400/200 computer provides the two key features that most organizations are looking for in a Macintosh: the speed of the PowerPC processor and the flexibility of the Peripheral Component Interconnect (PCI) expansion architecture. More specifically, for high-performance computing, it offers a fast 200-megahertz PowerPC 603e processor. For expansion, it includes two industry-standard PCI slots that make it easy--and relatively inexpensive--to customize the system to provide additional capabilities that can meet your needs more precisely. In fact, if you want to use your Power Macintosh 4400/200 to run not only the Mac OS, but also MS-DOS and Windows applications, you can simply install a PC Compatibility Card from Apple in one of the system's PCI slots.

With networking and Internet use becoming increasingly important to most individuals and organizations, you'll be glad to know that the Power Macintosh 4400/200 has both bases covered. The Power Macintosh 4400/200 includes built-in LocalTalk networking capabilities, and some configurations include built-in Ethernet and all of the software tools needed to access the Internet. Other configurations can be configured for high-speed Internet access by installing an optional Ethernet or modem card.

So whether you need power and expandability for everyday number crunching, office productivity, or an innovative multimedia project--or want a fast, easy way to get started with the Internet--the Power Macintosh 4400/200 offers the features you need at an affordable price.

Features

=====

High performance

- * 200-MHz PowerPC 603e processor
- * Built-in floating-point processor and 32K internal cache
- * 256K level 2 cache (included with some configurations)
- * Built-in 2-D graphics acceleration

Communications and multimedia

- * 10BASE-T Ethernet port (included with some configurations)
- * Two high-speed serial ports compatible with GeoPort devices and LocalTalk cables
- * 8x- or 12x-speed CD-ROM drive (depending on configuration)
- * 16-bit stereo audio input and output

Expandability

- * Two industry-standard PCI expansion slots (one 12-inch and one 7-inch)
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Up to 160 MB of EDO DRAM
- * Up to 4 MB of video RAM
- * Communication slot for optional internal modem or Ethernet card (Ethernet Card installed in some configurations)

Compatibility

- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs most 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards from Apple
- * Comes with all of the software required for Internet access

System 7.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

Ordering Information

=====

Power Macintosh 4400/200 (US)

Order No. M5767LL/A

- * Power Macintosh 4400/200 computer with 256K level 2 cache, 16 MB of EDO DRAM,

2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Europe/Latin America)

Order No. M5766LL/A

* Power Macintosh 4400/200 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Europe)

Order No. M5842LL/A

* Power Macintosh 4400/200 computer with 256K level 2 cache, 24 MB of EDO DRAM, 2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.6 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Japan)

Order No. M5773LL/A

* Power Macintosh 4400/200 computer with 256K level 2 cache, 16 MB of EDO DRAM, 2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 12x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Asia)

Order No. M5839LL/A

* Power Macintosh 4400/200 computer with 16 MB of RAM, 2 MB video RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20811



Tech Info Library

Power Macintosh 4400/200: Technical Specifications (4/97)

Revised: 4/30/97
Security: Everyone

Power Macintosh 4400/200: Technical Specifications (4/97)

=====

Article Created: 19 January 1997
Article Reviewed/Updated: 30 April 1997

TOPIC -----

This article contains a description of the Power Macintosh 4400/200 series computer.

DISCUSSION -----

Microprocessor

=====

- * 200-MHz PowerPC 603e microprocessor
- * Integrated floating-point unit and 32K internal cache

Memory

=====

- * 16 or 24 MB of EDO DRAM (depending on configuration), expandable to 160 MB
- * 4 MB of ROM
- * 256K level 2 cache (included with some configurations)
- * 2 MB EDO DRAM DIMM (VRAM) (included with some configurations), expandable to 4 MB SGRAM

There is one VRAM slot. VRAM is supported in 1 MB, 2 MB or 4 MB configurations; using these types of VRAM DIMMs:

- +5 V Extended Data Output (EDO) DRAM, 1 MB or 2 MB.
- +3.3 V Synchronous Graphics Random Access Memory (SGRAM), 1 MB, 2 MB or 4 MB.

Disk drives

=====

- * 1.2 or 1.6 GB IDE hard disk (depending on configuration)
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 8x- or 12x- speed (depending on configuration) ATAPI CD-ROM drive

Interfaces

=====

- * Two PCI expansion slots compatible with PCI 2.0-compliant cards (one 12-inch and one 7-inch)
- * One communication slot for internal modem or Ethernet card (Ethernet card installed in some configurations)
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk cables and GeoPort devices
- * Internal/external SCSI bus (up to 5 MB/s) for up to 7 external SCSI devices
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
 - 16-bit audio
 - Up to 44.1-kHz sampling rate
- * DB-15 connector for monitor

Graphics support

=====

- * 2-D accelerated graphics
 - * Support for 24-bit color at up to 800 by 600 pixels, 16-bit color to 1,152 by 870, and 8-bit color to 1,280 by 1,024 (with standard 2 MB of EDO VRAM)
 - * 2 MB EDO DRAM DIMM (VRAM) (included with some configurations), expandable to 4 MB SGRAM
- There is one VRAM slot. VRAM is supported in 1 MB, 2 MB or 4 MB configurations; using these types of VRAM DIMMs:
- +5 V Extended Data Output (EDO) DRAM, 1 MB or 2 MB.
 - +3.3 V Synchronous Graphics Random Access Memory (SGRAM), 1 MB, 2 MB or 4 MB.

GeoPort telephony (Requires GeoPort Telecom Adapter)

=====

- * 28.8-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Includes Apple Design Keyboard and ADB Mouse II

Electrical requirements and compliance

=====

- * Line voltage: 110/220 V AC, RMS single phase
- * Frequency: 47 to 63 Hz, single phase
- * Power: 150 W maximum, not including display
- * EPA Energy Star compliant

ADB power requirements

=====

- * Maximum current draw for all devices: 500 mA

(a maximum of three ADB devices is recommended)

* Mouse draws 10 mA

* Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

* Height: 5.43 in. (13.9 cm)

* Width: 15.12 in. (38.4 cm)

* Depth: 17.37 in. (44.2 cm)

* Weight: 24 lb. (9.5 kg)

Environmental requirements

=====

* Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)

* Storage temperature: -40 to 116 degrees F (-40 to 47 degrees sC)

* Relative humidity: 20% to 95% noncondensing

* Maximum altitude: 10,000 ft. (3,048 m)

Configurations

=====

Power Macintosh 4400/200 (US)

Order No. M5767LL/A

* Power Macintosh 4400/200 computer with 256K level 2 cache, 16 MB of EDO DRAM, 2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Europe/Latin America)

Order No. M5766LL/A

* Power Macintosh 4400/200 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Europe)

Order No. M5842LL/A

* Power Macintosh 4400/200 computer with 256K level 2 cache, 24 MB of EDO DRAM, 2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.6 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software verssion 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Japan)

Order No. M5773LL/A

* Power Macintosh 4400/200 computer with 256K level 2 cache, 16 MB of EDO DRAM, 2 MB video RAM, built-in Ethernet, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 12x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 4400/200 (Asia)

Order No. M5839LL/A

* Power Macintosh 4400/200 computer with 16 MB of RAM, 2 MB video RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and an internal 8x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.3 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Article Change History:

30 Apr 1997 - Added ATAPI statement.
04 Mar 1997 - Added detailed info about VRAM.
13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20812



Tech Info Library

Macintosh Performa 6400/200 Zip: Specifications (2/97)

Revised: 2/13/97
Security: Everyone

Macintosh Performa 6400/200 Zip: Specifications (2/97)

Article Created: 19 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the technical specifications for the Macintosh Performa 6400/200 computer, which includes an internal Iomega Zip Drive.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603e processor running at 200 MHz
- * Integrated floating-point unit
- * 40-MHz, 64-bit bus
- * 32K internal cache
- * 256K level 2 cache

Memory

=====

- * Two DIMM expansion slots
- * Comes with 16 MB of RAM (8 MB on logic board and 8 MB in one DIMM socket)
- * Can be expanded to 136 MB
- * Uses 64-bit-wide, 168-pin, noncomposite, 70-nanosecond or faster DIMMs (1K or 2K refresh)

Disk drives

=====

- * Internal Zip Drive (Zip disks hold up to 100 MB of data)
- * Internal 2.4 GB IDE hard disk drive (Macintosh Performa 6400/200)
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal AppleCD 8x drive

Modem

=====

- * 28.8-Kbit/s data/voice/fax modem
- * Built-in error correction and compression (MNP4, V.42, MNP5, V.42bis)

Sound

=====

- * Stereo 16-bit sound
- * SRS surround-sound enhancement
- * Subwoofer speaker
- * Sound-input port (for an Apple PlainTalk microphone, other microphone, or standard mini-plug audio cable)
- * Sound-output port
- * Front headphone jack and volume control

Interfaces

=====

- * SCSI interface port for connecting as many as five external SCSI devices, such as disk drives, CD-ROM drives, and scanners (multiple devices can be connected to each other from one port)
- * Pre-cabled SCSI expansion bay for additional 5.25-inch internal SCSI device
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * Two serial ports (RS-232/RS-422) for an AppleTalk network connection, other network connections, communications equipment (including GeoPort compatible devices), or a printer
- * Video-output port
- * Two PCI expansion slots (require PCI cards that come with a Macintosh driver and are PCI 2.0-compliant; NuBus cards cannot be used in these slots)
- * Communications (Comm II) slot for a 28.8-Kbit/s modem (used by built-in modem)
- * Video input slot for optional Apple Video System (supports NTSC, PAL, and SECAM video formats)
- * Expansion bay for optional Apple TV/FM Radio System
- * Infrared receiver for remote control (provided with Apple TV/FM Radio System)

Display support

=====

- * 1 MB of video RAM
- * 16-bit color for display of up to 32,768 colors on monitors using 640- by 480-pixel or 800- by 600-pixel resolution
- * 8-bit color for display of 256 colors on monitors using 832- by 624-pixel or 1,024- by 768-pixel resolution

Electrical requirements and compliance

=====

- * Line voltage: 100 to 125/200 to 240 V AC, RMS, single phase
- * Frequency: 47 to 63 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * Energy saving in sleep mode.

Size and weight

=====

- * Height: 16 in. (40.6 cm)
- * Width: 7.8 in. (19.8 cm)
- * Depth: 16.9 in. (42.8 cm)
- * Weight: 44.5 lb. (20.18 kg)

Operating environment

=====

- * Operating temperature: 50 to 97 degrees F (10 to 35 degrees C)
- * Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * Visual beep replaces audible system alerts

Included software

=====

- * ClarisWorks
- * Quicken Special Edition
- * MacLink Plus/Easy Open Translators
- * MacGALLERY Clip Art Treasure Pak
- * ClickArt Performa Collection
- * Photo Deluxe
- * Now Touchbase & Datebook
- * America Online
- * Web Workshop
- * SurfWatch
- * Apple Internet Connection Kit
- * At Ease
- * Apple Telecom
- * Address Book
- * AppleFax
- * MegaPhone

- * The Amazing Writing Machine
- * Thinking Things Collection 2
- * American Heritage Dictionary
- * American Heritage Children's Dictionary
- * ABC World Reference: 3D Atlas
- * Grolier's Multimedia Encyclopedia
- * Our Times
- * Mayo Clinic Family Health v2.0
- * Descent
- * Blockbuster Guide to Movies & Video
- * Club Kidsoft

Software titles may vary and may be modified versions of commercially available products.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20813



Tech Info Library

Indian Language Kit: Read Me (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Read Me (2/97)

=====

Article Created: 19 January 1997
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article contains the ReadMe file for the Indian Language Kit.

DISCUSSION -----

Thank you for choosing the Indian Language Kit. This document provides specific information and tips for using the Indian Language Kit, including important information on installation and compatibility.

Installation

=====

Locate the Installer application inside Install 1.

Sample Software Folder

=====

The floppy disk set and the CD-ROM both contain the software needed to install the Indian Language Kit. The CD-ROM includes demo applications you can use with your Indian Language Kit.

Installation

=====

Refer to the Macintosh Indian Language Kit Installation and User's Guide for installation and setup information.

If you are installing the Indian Language Kit on the Arabic or Hebrew version of the Mac OS, you may want to choose the left-to-right setting in the "Text" control panel for proper justification of the Roman installer interface during installation.

Installing over a system older than System 7.5.5

=====

We recommend that you use System 7.5.5 or 7.6 for best results. The Indian

Language Kit will not install on systems earlier than 7.5. Users of Apple Menu Options versions earlier than 1.1 (version 1.1 is in systems 7.5.3 and 7.5.5) may get an out of memory message during boot after installing any Apple Language Kit. Version 1.1 does not have this problem. If you update your system, such as upgrading System 7.5.3 to System 7.5.5, you should boot with extensions off and reinstall the Indian Language Kit.

Installing with other Apple Language Kits

=====

Multiple Apple Language Kits can be installed on one system for true multilingual computing. However, language kits which are older than the Indian Language Kit should be installed first so that those language resources can be updated by the Indian Language Kit installer. Older Apple Language Kits which should be installed first include: Chinese Language Kit 1.1, Chinese Language Kit 1.1.1, Arabic Language Kit 1.0.1, Hebrew Language Kit 1.0.1, Cyrillic Language Kit 1.0, Japanese Language Kit 1.2 and Korean Language Kit 1.0.

Key Caps Application

=====

The Key Caps Desk Accessory included with the system software (up to 7.6) has been updated to provide better support of Indian languages as part of the Indian Language Kit project. This new Key Caps is an application which can be launched from anywhere you place it on your hard disk. The Indian Language Kit automatically places it in your Apple Menu if one already exists there with the name "Key Caps." On any non-English system, the new Key Caps application is installed into the Apple Extras folder. You can drag it into the Apple Menu Items folder within the active system folder if you want to see it in the Apple Menu. There is no harm in deleting the localized Key Caps DA with other names. If you remove the Indian Language Kit, Key Caps will not be deleted. You can delete it manually by opening your Apple Menu Items folder inside the System Folder, but there is no need to do so.

One anomaly found too late to fix, is that when switching keyboard layouts on NuBus Power Macintosh models running a system older than Mac OS 7.6, the font will occasionally display improperly. If this happens, switch to a keyboard layout of another language and switch back to the desired keyboard layout.

Printer Drivers

=====

The Indian Language Kit is not compatible with LaserWriter drivers earlier than 8.3. For best results, use the LaserWriter 8.4.1 installer included on the Indian Language Kit 1.0 CD.

Indian System and Application fonts

=====

In Font menus throughout the system you will see additional fonts for each language with a different suffix. For example, you will see Devanagari MTS and Devanagari MT. These are mostly the same, except the MTS version uses Chicago as its associated Roman font and has no bold. For this reason you should avoid using the MTS versions of the fonts. Instead use the MT versions of the fonts for each Indian language.

Furthermore, if QuickDraw GX is being used, you will see some additional fonts

that begin with a period (.) and end with X at the top of the Font menu of GX savvy applications. These should NOT be used. For example, you can see a font listed with the name ".Devanagari MT X" which should not be used. Instead, select the font "Devanagari MT." For technical reasons, these fonts cannot be hidden. In future versions of the Indian Language Kit with QuickDraw GX, we hope these fonts will not be visible.

* The fonts you might see in Font menus of GX savvy applications throughout a system with QuickDraw GX installed, which you must NOT use are:

.Devanagari MT X
.Devanagari MT X (Bold)
.Gujarati MT X
.Gujarati MT X (Bold)

* Fonts you will see on any system with the Indian Language Kit installed, which do not print well in bold and which you should avoid using are:

Devanagari MTS
Gujarati MTS
Gurmukhi MTS

* Preferred fonts for all normal usage:

Devanagari MT
Gujarati MT
Gurmukhi MT

* Third-Party Fonts

The Indian Language Kit only supports non-Apple fonts which are both ISCII and WorldScript compliant.

Removing all or part of the Indian Language Kit

=====

You can remove the Indian Language Kit from your system by using the installer and selecting "Custom Remove" from the popup at the top of the Installer window. If you remove the entire Indian Language Kit by selecting all buttons, a few things which were installed by the Indian Language Kit will remain. These things, for instance SimpleText, will not affect your system in anyway. Anything left behind by the installer after performing a removal of the entire Indian Language Kit can be removed manually by dragging the item to the trash.

You can remove particular keyboards shipped with the Indian Language Kit by expanding the packages in the Installation window, selecting "Custom Remove" from the popup and removing the undesired keyboard only. If you remove an entire package, you will disable input with Indian languages. You must not remove all keyboards for a language unless you remove the "Language Support" as well. In other words, if you have installed Devanagari, you must not then remove all of the Devanagari keyboards: "Inscript Keyboard," "QWERTY Keyboard" and "Nepali Keyboard."

Font Line Height

=====

The height of lines when typing or displaying Indic text is significantly more than that of Roman text of the same point size. This is due to the nature of some Indic characters which extend far below the baseline.

Gujarati QWERTY Keyboard and Period

=====

The Gujarati QWERTY keyboard underwent a minor change after the manual was printed. Instead of the Viraam as the default period (full-stop) on the period key, the period (.) is the default and Viraam can be typed by holding down the Option and Shift keys and typing a period.

Compatible Apple WorldScript and QuickDraw GX Application Programs

=====

Apple makes no warranties or representations regarding the quality or compatibility of third party products. Warranties, if any, relating to such third party products are between the software vendors and their customers.

The Indian Language Kit can be used with many non-Indian application programs that use the Apple WorldScript and/or QuickDraw GX software technology. Refer to the Indian Language Kit User's Guide for features that are only available on a system with QuickDraw GX installed. Programs that use one or both of these technologies include these (or later) versions:

- * HyperCard 2.3, from Apple Computer, Inc.
- * SimpleText 1.3.1, from Apple Computer, Inc.
- * CyberDog 1.2, from Apple Computer, Inc.
- * LightningDraw GX 1.0.3
- * Ready, Set, Go! GX 7.0.3
- * WorldWrite 3.0.1
- * NisusWriter 5.0
- * Netscape 3.0.1

Note: The above list is not intended to be comprehensive. Many non-Indian applications that do not employ WorldScript software technology may provide limited functionality and allow input of Indian characters. Please check with application vendors for more information about their product's support for multilingual systems available on the Mac OS.

Language Kit Additions Folder

=====

After a Custom Remove operation to remove the Indian Language Kit, the Language Kit Additions folder will remain in the Extensions folder. This folder takes almost no hard disk space and causes no harm. It can be manually dragged to the Trash. This folder stores Language Kit Additions files. These files are used by the Language Kits to provide a more localized environment while applications programs, that have been localized, are in use.

Article Change History:

- 14 Feb 1997 - Changed distribution status.
- 07 Feb 1997 - Updated with latest version.

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Tech Info Library

Power Macintosh 6500/225 & 6500/250: Specifications (4/97)

Revised: 4/28/97
Security: Everyone

Power Macintosh 6500/225 & 6500/250: Specifications (4/97)

Article Created: 19 January 1997
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains the technical specifications for Power Macintosh 6500/225 and 6500/250 series computers.

DISCUSSION -----

Microprocessor

=====

- * PowerPC 603ev processor running at 225 MHz (Power Macintosh 6500/225)
- * PowerPC 603ev processor running at 250 MHz (Power Macintosh 6500/250)
- * Integrated floating-point unit
- * 50-MHz, 64-bit bus
- * 32K internal cache
- * 256K level 2 cache

Memory

=====

- * Two DIMM expansion slots, no RAM on logic board
- * Includes 32 MB of memory
- * Can be expanded to 128 MB
- * Uses 64-bit-wide, 168-pin, EDO DIMMs (1K or 2K refresh)

Disk drives

=====

- * Internal 2.0 GB IDE hard disk drive (Power Macintosh 6500/225)
- * Internal 3.0 GB IDE hard disk drive (Power Macintosh 6500/250)
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal AppleCD 12x drive
- * Internal Iomega Zip Drive (each cartridge can hold 100 MB)

Sound

=====

- * Stereo 16-bit sound
- * SRS surround-sound enhancement
- * Subwoofer speaker
- * Sound-input port (for an Apple PlainTalk microphone, other microphone, or standard mini-plug audio cable)
- * Sound-output port
- * Front headphone jack and volume control

Interfaces

=====

- * SCSI interface port for connecting as many as five external SCSI devices, such as disk drives, CD-ROM drives, and scanners (multiple devices can be connected to each other from one port)
- * Pre-cabled SCSI expansion bay for additional 5.25-inch internal SCSI device
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * Two serial ports (RS-232/RS-422) for an AppleTalk network connection, other network connections, communications equipment (including GeoPort compatible devices), or a printer
- * Video-output port
- * Two PCI expansion slots (require PCI cards that come with a Macintosh driver and are PCI 2.0-compliant; NuBus cards cannot be used in these slots)
- * Communications (Comm II) slot for a 28.8-Kbit/s modem (used by included Ethernet Card))
- * Video input slot for Apple Video System (supports NTSC, PAL, and SECAM video formats) (Apple Video System included with Power Macintosh 6500/250)
- * Expansion bay for optional Apple TV/FM Radio System
- * Infrared receiver for remote control (provided with Apple TV/FM Radio System)

Graphics support

=====

- * 2 MB synchronous graphics RAM (SGRAM) frame buffer on the logic board.
- * Video display modes supported on built-in monitor port: 640 by 480, 800 by 600, and 832 by 624 at 32 bits per pixel; 1024 by 768 and 1152 by 870 at 16 bits per pixel
- * Built-in 2D and 3D hardware graphics acceleration.

Electrical requirements and compliance

=====

- * Line voltage: 90-130 volts (V) or 180-264 V alternating current (AC), RMS single phase. The computer's voltage needs to be configured manually.
- * Frequency: 47 to 63 Hz
- * Power: 140 watts (W) maximum continuous input power

Size and weight

=====

- * Height: 16 in. (40.6 cm)
- * Width: 7.8 in. (19.8 cm)
- * Depth: 16.9 in. (42.8 cm)

* Weight: 44.5 lb. (20.18 kg)

Operating environment

=====

- * Operating temperature: 50 to 97 degrees F (10 to 35 degrees C)
- * Storage temperature: -40 to 116.6 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Disability access

=====

- * CloseView software magnifies screen image up to 16 times
- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * Visual beep replaces audible system alertss

Configurations

=====

Power Macintosh 6500/225

Order No. M5606LL/A

Computer with 225-MHz PowerPC 603ev processor, 32 MB of RAM, 256K level 2 cache, built-in Ethernet, 2.0 GB hard disk drive, Zip drive, 12x-speed CD-ROM drive, and 1.4 MB floppy disk drive.

Power Macintosh 6500/250

Order No. M5607LL/A

Computer with 250-MHz PowerPC 603ev processor, 32 MB of RAM, 256K level 2 cache, built-in Ethernet, 3.0 GB hard disk drive, Zip drive, 12x-speed CD-ROM drive, 1.4 MB floppy disk drive, and Apple Video System.

Article Change History:

- 28 Apr 1997 - Updated graphic support info.
- 13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20815



Tech Info Library

Power Macintosh 5500/225: Technical Specifications (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 5500/225: Technical Specifications (2/97)

Article Created: 19 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 5500/225 computer.

DISCUSSION -----

Microprocessor

- * PowerPC 603ev processor running at 225 MHz
- * Integrated floating-point unit
- * 50-MHz, 64-bit bus
- * 32K internal cache
- * 256K level 2 cache

Memory

- * Two DIMM expansion slots, no RAM on logic board
- * Includes 32 MB of memory
- * Can be expanded to 128 MB
- * Uses 64-bit-wide, 168-pin, EDO DIMMs (1K or 2K refresh)

Disk drives

- * Internal 2.0 GB IDE hard disk drive
- * Internal Apple SuperDrive floppy disk drive
 - Uses high-density, 1.4MB floppy disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal AppleCD 12x drive

Display

=====

Built-in display

- * 15-in. RGB color display (12.8-in. diagonal viewable image size)
- * 0.28-mm dot pitch
- * Noninterlaced, flat, square cathode-ray tube (CRT)
- * User-adjustable resolutions from 640 by 480 pixels to 832 by 624 pixels
- * Resolution can be changed without restarting the computer
- * Refresh rate up to 75 Hz
- * Built-in base tilts from -5 to +15 degrees, swivels a full 360 degrees
- * Meets SWEDAC MPR2 international guidelines for magnetic-field emissions

Graphics support

- * 2 MB synchronous graphics RAM (SGRAM) frame buffer on the logic board.
- * Video display modes supported on built-in monitor port: 640 by 480, 800 by 600, and 832 by 624 at 32 bits per pixel; 1024 by 768 and 1152 by 870 at 16 bits per pixel; 1280 by 1024 at 8 bits per pixel
- * Built-in 2D and 3D hardware graphics acceleration.

Sound

=====

- * Stereo 16-bit sound
- * Apple sound enhancements, including SRS 3D surround sound
- * Built-in stereo speakers
- * Built-in microphone
- * Sound-output port
- * Sound-input port
- * Front headphone jack and volume control

Expansion interfaces

=====

- * PCI expansion slot for industry-standard 6.88-in., 15-watt expansion cards
- * Apple Desktop Bus port for mouse, keyboard, and other devices (multiple devices can be connected to each other from one port)
- * RS-232/RS-422 serial port for an AppleTalk network connection, other networking connections, communications equipment (including GeoPort-compatible devices), or a printer
- * SCSI interface port for as many as six external SCSI devices, such as disk drives and/or CD-ROM drives
- * Communications slot (used by the built-in Ethernet connector)
- * TV/FM radio expansion bay
- * Video-output port for connection to an external monitor for video mirroring (also supports connection to an NTSC or PAL video-out interface box, such as the Apple Presentation System)
- * Video-input connector (Apple Video System) for receiving video input from a VCR, video camera, or other video equipment; supports both composite and S-video input

Disability access

=====

- * CloseView software magnifies screen image up to 16 times

- * Easy Access software permits combination keys to be pressed sequentially and enables cursor control from the numeric keypad instead of the mouse
- * "Visual beep" replaces audible system alerts

Electrical requirements and compliance

=====

- * Line voltage: 110 to 240 V AC, RMS, single phase, nominal
- * Frequency: 50 to 60 Hz
- * Power: 220 W maximum (continuous)
- * Includes low-power sleep mode
- * U.S. EPA Energy Star compliant

Size and weight

=====

- * Height: 17.5 in. (44.5 cm)
- * Width: 15.1 in. (38.3 cm)
- * Depth: 16 in. (40.6 cm)
- * Weight: 47 lb. (21 kg)

Operating environment

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95%, noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Configurations

=====

Power Macintosh 5500/225

Order No. M5761LL/A

Computer with 225-MHz PowerPC 603ev processor, 32 MB of RAM, 256K level 2 cache, built-in Ethernet, 2.0 GB hard disk drive, 12x-speed CD-ROM drive, 1.4 MB floppy disk drive, and Apple Video System.

Article Change History:

13 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:20816



Tech Info Library

Apple Telecom 3.0 & Keyboard Character No Longer Works (1/97)

Revised: 1/20/97
Security: Everyone

Apple Telecom 3.0 & Keyboard Character No Longer Works (1/97)

=====

Article Created: 20 January 1997

TOPIC -----

This article describes a situation where a keyboard character no longer works after installing Apple Telecom 3.0.

DISCUSSION -----

If a keyboard character is not working after installing Apple Telecom 3.0, below is a description of what may have happened.

While in Apple Phone if you:

- 1) clicked the Opens Preferences Window button or choose Preferences under the edit menu,
- 2) clicked the Modem option,
- 3) selected the "use the key combination for answering/hanging up any application",

the default is set to command-space. If you set this to the letter "A" for example, this letter will continue to function in key caps but will stop working in other applications.

Try changing the key character set in "use the key combination for answering/hanging up any application", to a more unique key combination to resolve this.

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Tech Info Library Article Number:20817



Tech Info Library

Mac OS 7.6 and Passive Matrix PowerBook Display Issue (1/97)

Revised: 1/20/97
Security: Everyone

Mac OS 7.6 and Passive Matrix PowerBook Display Issue (1/97)

=====

Article Created: 20 January 1997

TOPIC -----

Sometimes on the restart after installing Mac OS 7.6, or more often after resetting PRAM, the contrast of my PowerBook passive matrix display is very dark. The brightness and contrast controls do not let the screen be adjusted to a more usable level. Is there a workaround?

DISCUSSION -----

Here is a workaround. Restart the PowerBook; after it has fully started press and hold the power button to get the shutdown dialog, then press the "R" key to restart the computer. On startup, the display should be functioning normally, or allow adjustment if you changed the brightness and contrast settings while the display was dark.

Engineering is aware of this issue, and they are working to correct it in a future update.

Affected PowerBook computers

This issue has been duplicated on PowerBook 5300/190 computers only, but may occur on other passive matrix equipped PowerBook computers. It has not been duplicated on the PowerBook 1400cs computer.

This information can also be found in the About Mac OS 7.6 Read Me file.

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Tech Info Library Article Number:20818



Tech Info Library

Mac OS 7.6: Installs Open Transport 1.1.1 (1/97)

Revised: 1/23/97
Security: Everyone

Mac OS 7.6: Installs Open Transport 1.1.1 (1/97)

=====

Article Created: 20 January 1997

TOPIC -----

What version of Open Transport comes with Mac OS 7.6?

DISCUSSION -----

Mac OS 7.6 ships with Open Transport (OT) version 1.1.1. Open Transport 1.1.2 was completed after the date that Mac OS 7.6 was closed for new component submissions, therefore OT 1.1.1 was used.

If you install Mac OS 7.6 on top of a system that already has OT 1.1.2 installed, you get the error "The file "File Name" already on "Hard Disk Name" is more recent than what you are about to install. Click Continue to replace "File Name" with the older version. Click Cancel to leave the disk "Hard Disk Name" untouched".

If you have Open Transport 1.1.2 installed, you get this error dialog seven times during the installation process. The following files need to be replaced during this process:

OpenTransportLib
OpenTptInternetLib
OpenTptAppleTalkLib
Open Transport Library
Open Tpt Internet Library
Open Tpt AppleTalk Library
TCP/IP

This message occurs because there are resources in the System file specific to the OT 1.1.1 in the 7.6 system file. To avoid a mismatch of Open Transport components, and compatibility problems, the Installer removes OT 1.1.2, and installs OT 1.1.1. After installing System 7.6, with Open Transport 1.1.1, you may reinstall OT 1.1.2 and it will work fine.

The Open Transport 1.1.2 Read Me file contains a list of changes made to Open Transport. This read me file is available in the Tech Info Library articles "Open Transport 1.1.2 Read Me - Part 1" and "Open Transport 1.1.2 Read Me - Part 2."

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Tech Info Library Article Number:20819



Tech Info Library

Mac Performa 6400/200: LW Select 310 Isn't Available (1/97)

Revised: 1/20/97
Security: Everyone

Mac Performa 6400/200: LW Select 310 Isn't Available (1/97)

=====

Article Created: 20 January 1997

TOPIC -----

Occasionally when printing to my LaserWriter Select 310 printer from my Macintosh Performa 6400/200, I get an error dialog that states it cannot find the printer. When I open the Chooser and try to reselect the LaserWriter Select 310 printer, I get the same error message.

DISCUSSION -----

This issue is currently under investigation by Apple engineers. Apple has been able to reproduce the this issue when a LaserWriter Select 310 is connected to a Macintosh Performa 6400/200 and is turned off while the computer is starting up. In this case, the Macintosh Performa 6400/200 computer will not be able to see the printer until the computer is restarted.

Important Note

It only occurs on Macintosh Performa 6400/200 computers. Macintosh Performa 6400/180 computers are not affected by this issue.

Workaround

=====

The only workaround to this issue, at this time, is to make sure the LaserWriter Select 310 printer is powered on before powering on the computer. After the Macintosh Performa 6400/200 finishes starting-up, you can power the printer on or off at any time.

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Tech Info Library Article Number:20820



Tech Info Library

Power Macintosh 6400, 5400, 6500, 5500, 4400: Comparison (4/97)

Revised: 4/30/97
Security: Everyone

Power Macintosh 6400, 5400, 6500, 5500, 4400: Comparison (4/97)

Article Created: 20 January 1997
Article Reviewed/Updated: 30 April 1997

TOPIC -----

What are the differences and similarities among the Power Macintosh 6400, 5400, 6500, 5500, and 4400 series computers?

DISCUSSION -----

The table below describes the differences and similarities among the Power Macintosh 6400, 5400, 6500, 5500, and 4400 series computers.

IMPORTANT: This chart reflects Power Macintosh models available in the US ONLY.

Begin_Table

Power Macintosh model

Features	6400	5400	6500	5500	4400
Processor Type	PowerPC 603e	PowerPC 603e	PowerPC 603e	PowerPC 603e	PowerPC 603e
Processor Speed	180,200	120,180	225, 250	225	200
Cache	256K level-2 cache	256K level-2 cache	256K level-2 cache	256K level-2 cache	256K level-2 cache
RAM Configurations	16-136 MB 8 MB on logic board	16-136 MB 8 MB on logic board	16-128 MB 0 MB on logic board	16-128 MB 0 MB on logic board	0-160 MB 0 MB on logic board

RAM expansion	2 DIMM slots 168-pin 5- volt fast- paged DIMM	2 DIMM slots 168-pin 5- volt fast- paged DIMM	2 DIMM slots 168-pin 5- volt EDO DIMMs	2 DIMM slots 168-pin 5- volt EDO DIMMs	3 DIMM slots 168-pin 3.3 volt EDO DIMMs
System bus	64 bits 40 MHz	64 bits 40 MHz	64 bits 50 MHz	64 bits 50 MHz	64 bits 40 MHz
Video RAM	1 MB DRAM 	1 MB DRAM 	2 MB SGRAM 	2 MB SGRAM 	1-4 MB EDO DRAM,SDRAM, or SGRAM
Video Input	Optional card for video input, capture, overlay. Included with some configurations. Apple Video System				Third-party PCI card
Graphics Acceleration	None 	None 	2D and 3D hardware	2D and 3D hardware	2D hardware
Sound	8 or 16 bits/channel stereo in, stereo out SRS surround-sound mode 				8 or 16 bits/ channel stereo in, stereo out
Remote control	Built-in IR receiver for optional TV/FM tuner card				None
Form Factor	Tower	All-in-one	Tower	All-in-one	Modular
Floppy disk drive	1, internal 				
Zip drive	Some models	None 	1, internal 	None 	None
ADB ports	1				
Internal hard disk	1 (IDE)				
Size of internal hard disk	1.6 or 1.4 GB	1.6 GB 	2.0 or 3.0 GB	2.0 GB 	1.2 GB
Internal CD-ROM	1,8x-speed SCSI	1,4x or 8x SCSI	1,12x- speed SCSI	1, 12x- speed SCSI	1,8x-speed ATAPI
Internal SCSI expansion bay	1, for one 5.25-inch device	None 	1, for one 5.25-inch device	None 	None
External SCSI	1				

Communications slot	1, for optional modem or Ethernet configuration				
-----+-----+-----+-----+-----+-----					
Expansion slot	2 PCI slots for 7-inch cards	1 PCI slot for 7-inch cards	2 PCI slots for 7-inch cards	1 PCI slot for 7-inch cards	2 PCI slots. One for 7-inch cards. One for 12-inch cards.
-----+-----+-----+-----+-----+-----					
DMA I/O	10 DMA channels				
-----+-----+-----+-----+-----+-----					
Serial ports	2, LocalTalk and Geoport supported				
-----+-----+-----+-----+-----+-----					
End_Table					

Article Change History:

30 Apr 1997 - Reviewed Zip drive information for technical accuracy.

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20821



Tech Info Library

Mac OS 7.6: Not Enough Memory & MetroNub (1/97)

Revised: 3/19/97
Security: Everyone

Mac OS 7.6: Not Enough Memory & MetroNub (1/97)

=====

Article Created: 20 January 1997

TOPIC -----

After Installing Mac OS 7.6 on my Power Macintosh 8100 computer, I get an error about not enough memory to initialize the MP API. My system has 96 MB of RAM. What is this, and how much does it need?

DISCUSSION -----

This error message occurs if you have MetroNub 1.2 from MetroWerks installed. On the Code Warrior CD by MetroWerks, they have a document called "MP API FAQs", which is in their Multiprocessing SDK (Software Developer's Kit). MetroWerks states, "The MetroNub debugger extension must have the size specified in its 'sysz' resource increased to 2,580,000 bytes. Use ResEdit or Resourcer to do this."

Please refer to the CD-ROM disc mentioned above, or the System 7.6 Tech Note published by Developer Technical Support.

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Tech Info Library Article Number:20823



Tech Info Library

Mac OS 7.6: About Apple Remote Access Client Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About Apple Remote Access Client Read Me (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

This article is the About Apple Remote Access Client ReadMe file which comes with the Mac OS 7.6 installer.

DISCUSSION -----

Apple Remote Access Client for Macintosh Read Me

=====

This document provides late-breaking news about the Apple Remote Access Client that is not covered in the "Apple Remote Access Client User's Guide." You may need to refer to that guide to understand the use of several terms in this document, and you may want to print this document to keep with your user's guide.

Modems Supported by the Apple Remote Access Client

=====

Scripts that support most popular modems are provided on the Remote Access Client installation disks. The scripts include:

3Com Impact Analog 14.4
3Com Impact ISDN 56K
3Com Impact ISDN 64K
Apple Modem 2400
AT&T Dataport 288
AT&T KeepInTouch
Dayna CommuniCard 28800
Farallon Netopia 56K
Farallon Netopia 64K
GeoPort/Express Modem
GeoPort/Express Modem CNG
Global Village Gold/Silver/Mercury

Global Village Platinum
Hayes Accura 288
Hayes Optima 14.4
Hayes Optima 288
Megahertz CruiseCard 14.4
Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom MicroPorte 4232bis
Microcom QX/4232bis
Motorola 326xV34
Motorola BitSURFR 56K
Motorola BitSURFR 64K
Motorola Power/Lifestyle 28.8
Practical Peripherals V.34
Prometheus ProModem 144e
Prometheus ProModem 96
PSI PowerModem II
PSI PowerModem III/IV
Supra 144
Supra 288
TDK DF2814
Telebit QBlazer
Telebit T3000
Telebit Worldblazer
US Robotics Universal
Zoom V-series

Beginning with version 2.1 of the Apple Remote Access Client and the companion Personal Server product, modem scripts are no longer stored in the Extensions Folder. A new folder called "Modem Scripts" within the Extensions Folder is created by Apple Remote Access to hold modem scripts.

The Apple Remote Access Installer will move any existing scripts you may already have in your Extensions Folder to the new Modem Scripts folder in addition to placing scripts for all the modems listed above into the Modem Scripts folder.

Future remote access products from Apple will also use the Modem Scripts folder. However, there will be a transition period before other products are updated to use the new folder. Some existing products may install modem scripts into the Extensions Folder. If such a product is installed after Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the script.

You can use modem scripts included with the Apple Remote Access MultiPort Server (any version) with version 2.1 of Apple Remote Access Client. You can also use AppleTalk Remote Access version 1.0 modem scripts with version 2.1 of the Client, but certain new features, such as Ignore Dial Tone, Manual Dialing, and MNP 10 support, won't be available. Additionally, you will be able to use scripts from future Apple dial-up products with version 2.1 of Apple Remote Access. But, see the note below on some issues related to manual dialing.

Apple Remote Access and System 7.5.3

=====

The Read Me documents for System 7.5.3 and System Update 2.0 suggest that Apple Remote Access should be installed before System 7.5.3. This is not necessary. Beginning with version 2.1, Apple Remote Access should be installed after System 7.5.3.

Installing ARA X.25 Client over Apple Remote Access 2.1

=====

The Apple Remote Access X.25 Client installer places X.25 scripts into the Extensions folder. If you install the X.25 additions after installing Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the X.25 scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the scripts.

If you use the Apple Remote Access 2.1 installer to upgrade your existing Remote Access 2.0.1 and X.25 Client, the installer will move the scripts for you.

Compatibility with AppleTalk Remote Access 1.0

=====

Version 2.1 of the Apple Remote Access Client will successfully connect to both AppleTalk Remote Access 1.0 compatible servers and Apple Remote Access 2.x compatible servers. The compatibility setting in the connection document of earlier version 2.0 and 2.0.1 has been removed. Since connection to either style server is automatic, the setting is no longer necessary.

The next major upgrade to Apple Remote Access will no longer support ARA 1.0 clients or servers.

Using an MNP 10 Modem

=====

MNP 10 is an error-correction protocol that allows for more reliable data connections over cellular modems. Clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window puts MNP 10 modems into cellular mode. Do not click the "Use MNP 10 error correction in modem" checkbox to use MNP 10 over land lines.

To establish an MNP 10 connection, both your modem and the modem you're calling must support MNP 10; clicking the "Use MNP 10 error correction in modem" checkbox in the Remote Access Setup window is not by itself sufficient to establish an MNP 10 connection.

Manual Dialing

=====

The method used to do manual dialing in Apple Remote Access 2.0/2.0.1 has not worked well. Apple Remote Access presents a dialog asking you to dial, wait for the phone to ring, and then press OK. Often the user has to experiment to determine exactly when to press OK to dismiss the dialog.

To improve manual dialing, a new dialog has been incorporated into the modem

scripts installed along with version 2.1 of Apple Remote Access. Two dialogs are now displayed when doing manual dialing. This first dialog is still present to provide backwards compatibility with the wide variety of existing modem scripts. When using newer scripts, the first dialog box should be dismissed before dialing, and you will be prompted by the modem script when to actually dial the phone. If you are using a modem script not included with this product, you may have to experiment to determine if the first dialog box should be ignored.

Future remote access and dial-up products from Apple will require the new style scripts and will not present two dialog boxes.

Using the Redialing Feature =====

If the redialing option is selected, the Remote Access Client attempts redialing only when the phone number that has been dialed is busy. If the connection attempt fails for any other reason including a failed callback attempt, Remote Access stops redialing so that you can correct any problems.

If you use the Redialing option, set the "Time between retries" number to five seconds or greater. Anything less than five seconds may not give your modem sufficient time to reset.

When using the Redialing Alternate Number option, the main number is dialed once and then redialing sequence alternates between the alternate and main numbers.

Using DialAssist =====

If you are calling within a country with no city or area codes, and you encounter problems using DialAssist, try entering a space in the "Connect To City/Area Code" box in your connection document.

Serial Port Arbitration =====

When a Remote Access connection is established, Remote Access prevents other application programs from using the serial port selected in the Remote Access Setup control panel. Most programs will inform you that the port is in use.

Remote Access Client provides this port arbitration through a system extension called the Serial Port Arbitrator located in the Extensions folder. Some programs that use the serial port may not be compatible with this extension. If you suspect that a program is not compatible with the Serial Port Arbitrator:

- 1) Remove the Serial Port Arbitrator file from the Extensions folder.
- 2) Restart your Macintosh.
- 3) Try the program again.

NOTE: The Serial Port Arbitrator will not work on a Macintosh if Remote Access Client has not been installed.

High Speed Serial Connections

=====

Both Apple Remote Access Personal Server 2.1 and Client 2.1 support specifying a serial connection speed of 115,200 bps in a modem script. Not all Macintosh built-in serial ports support connection speed of 115,200 bps. Here is a list of Macintosh computers that do.

Centris/Quadra 660AV, Quadra 840AV
Macintosh Performa 61xx
Power Macintosh 61xx, 71xx, 72xx, 75xx, 76xx, 81xx, 85xx, 95xx
Workgroup Server 6150, 7250, 8150, 8550, 9150

In order to use the serial port at 115200 bps on one of these computers, you need a new serial extension called SerialDMA. System 7.5.3 or later incorporates this driver into the operating system.

If you use a modem script that specifies 115200 bps, and your computer does not support this data rate, Apple Remote Access will automatically fall back to 57600 bps.

Using a Local Printer

=====

If you are using a non-networked printer connected to the printer port of your Macintosh, you may get an error dialog when trying to initiate a connection or when trying to print while connected saying that one of your serial ports is already in use. You may need to select Remote Only in the Network Control Panel (AppleTalk Control panel for Open Transport-based machines).

Apple Remote Access Client and the Apple Internet Router

=====

Apple Remote Access Client should not be installed on the same Macintosh as the Apple Internet Router.

Using ARA Security Modules (like SecurID) with Virtual Memory

=====

There is an incompatibility between some ARA security modules (like SecurID) and Virtual Memory. This bug has been fixed in the latest system release (7.5.3).

Changes in version 2.1 of the Apple Remote Access Client

=====

Modem scripts have been moved to a new Modem Scripts folder within the Extensions Folder.

The compatibility option in the connection document is no longer necessary and has been removed.

The method of manual dialing has been changed. See the section above.

Interoperability with some non-Apple Remote Access Servers has been improved.

The installer has been upgraded from version 3.4 to version 4.0.3.

There is no longer a separate Remote Access Aliases extension.

The installer is now on a single high-density diskette.

A bug that caused machines with certain extensions to crash during boot has been fixed in the Serial Port Arbitrator.

Serial port rates of up to 115,200 bps are now supported in modem scripts. If the computer doesn't support 115,200, Apple Remote Access will use 57,600 bps instead.

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Tech Info Library Article Number:20824



Tech Info Library

Mac OS 7.6: About AppleShare 3.6.4 Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About AppleShare 3.6.4 Read Me (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

This article is the About AppleShare 3.6.4 ReadMe file.

DISCUSSION -----

About AppleShare 3.6.4

If you have AppleShare versions 3.6, 3.6.1, or 3.6.2, you should update to AppleShare 3.6.4 before installing Mac OS 7.6 over a network.

If you have an earlier version of AppleShare, you do not need to install AppleShare 3.6.4.

Installing AppleShare 3.6.4

- 1) Drag the AppleShare 3.6.4 icon to your closed System Folder icon.
- 2) In the dialog box that appears, click OK to place AppleShare in your Extensions folder.
- 3) In the next dialog box that appears, click OK to replace your older version of AppleShare with the newer one.
- 4) Restart your computer.
- 5) Connect to the server you're using to install Mac OS 7.6.
- 6) Double-click the Install Mac OS icon to install the software.

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Tech Info Library Article Number:20825



Tech Info Library

Mac OS 7.6: About CD Extras Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About CD Extras Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About CD Extras ReadMe file.

DISCUSSION -----

About CD Extras

This document includes brief descriptions of the software in the CD Extras folder. This Apple and third-party software extends the usefulness and power of Mac OS 7.6. Check the folders for each software product for more information about the software.

IMPORTANT: If you have questions about any third-party application programs in the CD Extras Folder, contact the software vendor directly. The telephone number or address for each vendor is located with the software program.

At Ease Updaters

Use these programs to update At Ease versions 2.0 or 2.01 to version 2.03, and to update At Ease for Workgroups version 3.0 to version 3.01.

QuickDraw 3D Extras

This folder includes sample 3D textures and models. It also includes a pre-release version of Cumulus 2.5, an image database system. You can use Cumulus to view all the images and textures included with the QuickDraw 3D Extras. The folder also includes the Gerbils game, to experiment with 3D images as you maneuver images of gerbils on a roller coaster.

HyperCard Player

You use the HyperCard Player to open HyperCard stacks. HyperCard stacks are arrangements of text, pictures, and other elements on sequential screens, or

cards. Some HyperCard stacks hold information; other stacks work like applications, requesting information from users and making calculations with that information.

MoviePlayer Extras

The MoviePlayer application, installed in your Apple Extras folder, plays QuickTime movies. The MoviePlayer Extras folder includes two "plug-in files"—Authoring Extras and Goodies, that add some extra features to the MoviePlayer application. MoviePlayer Extras also includes some sample QuickTime movies.

Other Extras

-
- Eric's Solitaire Sampler, a solitaire game by Delta Tao Software
 - Pointer Mode control panel, to ensure the pointer appears in screen captures
 - additional desktop patterns

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Tech Info Library

Mac OS 7.6: About Desktop Printing Read Me (1/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: About Desktop Printing Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About Desktop Printing ReadMe file.

DISCUSSION -----

Important Information About Desktop Printing

This document contains information about using the desktop printing feature on your computer. With desktop printing, a printer icon is created on your desktop whenever you select an Apple LaserWriter or StyleWriter printer in the Chooser. You can use these "desktop printer" icons to print documents and manage printing.

With desktop printing, you can

- print a document in the Finder by dragging it to a desktop printer icon
- select the default printer without opening the Chooser
- manage and schedule printing documents

Contents of this document

Creating Desktop Printers
Printing With a Desktop Printer
Selecting a Default Printer
Working With Desktop Printer Icons
Managing Printing
Turning Off Desktop Printing
Support and Compatibility Information
Troubleshooting
Desktop PrintMonitor Software Components

IMPORTANT: Desktop printing works with Apple StyleWriter printers, Apple LaserWriter printers, and many other PostScript printers. Desktop printing does not work with other types of printers and Fax Sender.

Creating Desktop Printers

To create a desktop printer, follow these steps:

- 1) Open the Chooser.
- 2) Select the print driver for the printer you are using.
- 3) Select the printer you want to use.
- 4) Close the Chooser.

When you close the Chooser, an icon for the printer appears on the desktop. The name of the icon is the name of the printer. The name of the printer also appears in the Printer menu to the left of the Guide menu and in the Desktop Printers item in the Apple menu.

After the desktop printer icon appears, you can move it to any location on your startup disk.

You can have as many desktop printers as you want. To create other desktop printers, you must open the Chooser, select the printer, and close the Chooser for each printer you want to use.

The last printer you select in the Chooser becomes the default printer. The default printer is used whenever you choose Print from the File menu. The desktop printer icon for the default printer has a bold outline. For other ways to select the default printer, see "Selecting a Default Printer" later in this document.

NOTE: If you use different versions of the LaserWriter 8 software to print to the same printer, you can create a desktop printer icon for each version of the LaserWriter software. For example, you might use LaserWriter driver version 8.3 for printing and version 8.2.2f for faxing. To create a desktop printer for each driver, select the LaserWriter 8.3 driver and your printer in the Chooser, then close the Chooser. Reopen the Chooser and select the LaserWriter 8.2.2f driver and your printer, then close the Chooser. To choose which version of the driver to use, change the default printer (see "Selecting a Default Printer"). To avoid confusion, rename the desktop printer icons to indicate which version of the printer software the icon uses.

Printing With a Desktop Printer

You use desktop printers to print documents from the Finder. Using desktop printers, you can print several documents at the same time, including documents created with different programs. (You can still print documents from within applications using the Print command in the File menu.)

To print documents with a desktop printer, follow these steps:

- 1) Select the icons of the documents you want to print.

2) Drag the documents to the icon of the desktop printer you want to use.

NOTE: When you drag a document to a desktop printer, that printer becomes the default printer.

The document opens and the Print dialog box appears.

3) Choose your printing options, then click the Print.

Selecting a Default Printer

The default printer is the printer you use when you choose Print from the File menu.

To change the default printer, you can do the following:

- Print documents from the Finder with a desktop printer icon.
- Select a desktop printer icon and choose Set Default Printer from the Printing menu.
- Choose the printer from the Printer menu that appears to the left of the Guide menu.
- Select the printer name using the Printing module in the Control Strip.
- Select a new printer in the Chooser.

NOTE: Changing the printer you are using may change how much information appears on a page of your document. If you change printers, check the formatting of your document.

Working With Desktop Printer Icons

Desktop printer icons show the status of the printer:

- Plain icon indicates a printer that is not currently chosen for printing.
- Default icon indicates the printer you have currently chosen to print on.
- Printing icon indicates a document is printing on this printer.
- Stopped icon indicates you have stopped the print queue.
- Error icon indicates there is an error on this printer. Double-click the icon to see a message.
- Disabled icon indicates this desktop printer is not available.

You can rename desktop printer icons, make aliases of them, and throw them away, just like other Finder icons.

NOTE: You can't throw away a desktop printer icon while the printer is printing

a document.

If you throw away the icon for the default printer, another desktop printer is automatically selected as the default printer. If you do not have another desktop printer another icon is automatically created for the desktop printer you are throwing away. To throw away the last desktop printer icon, you must select a printer in the Chooser that does not support desktop printing.

Managing Printing

If background printing is turned on for the printer you are using, you can use desktop printing to manage print jobs. You perform tasks with the Printing menu that appears when you select a desktop printer. You perform other tasks by using the desktop printer window that opens when you double-click a desktop printer icon.

To manage printing using the Printing menu:

The Printing menu appears to the right of the Special menu when you select a desktop printer icon.

Using the Printing menu you can do the following:

- Choose Start Print Queue to restart printing.

NOTE: You need to choose Start Print Queue to restart printing if you click the Stop Queue button in a printer alert message.

- Choose Stop Print Queue to stop printing all of your documents. The icon of the printer indicates that you have stopped printing.
- Choose Get Printer Info to see information about the printer. (Only available for some printers.)
- Choose Change Setup to change the setup of the printer. (Only available for some printers. You can change the setup of other printers using the Chooser.)
- Choose Show Manual Feed Alert to turn the manual alert on or off.
- Choose Set Default Printer to select the printer as the default printer, if it isn't selected already.

To manage printing using the desktop printer window:

Double-click a desktop printer icon to open its window.

The name of the document currently printing and status messages about the current print job appear in the upper box. The status messages can help you troubleshoot a printing problem.

When you are printing more than one document, a list of the print jobs appears

in the lower box. If this list is sorted by the Print Time column, it shows the order in which the documents will be printed.

Using the desktop printer window, you can do the following tasks:

- To change the sort order of the print job list, click the title of the column by which you want to sort. The column title by which the list is sorted is underlined. For example, to sort by the name of the document, click Document Name.

Note: Changing the sort order of the print jobs does not change the order in which they will print. To see that order, click the Print Time heading.

- To cancel printing a document, select the print job in the list and click the Remove button. You can also drag the print job from the window to the Trash icon on the desktop.

Note: These methods do not delete the document itself.

- To put printing a document on hold, select the print job in the list and click the Hold Job button. You can also put the document that's currently printing on hold by dragging it to the print job list.

- To resume printing a document, select the print job and click the Resume Job button.

- To print a document immediately, select the print job and put it on hold. Next, click the Set Print Time icon button and select Urgent in the dialog box that appears, then click OK. You can also drag the print job to the top of the print job list or to the area reserved for the currently printing job.

- To schedule printing, select a print job and click the Set Print Time button. In the Set Print Time dialog box, click At Time and set the time you want. Then click OK.

- To change the print order, drag the name of a print job up or down in the print job list.

- To print the document using another desktop printer, drag the print job to the icon of the other desktop printer. That printer becomes the default printer. You can only move a print job to another printer of the same type. For example, you can't move a print job from a LaserWriter printer to a StyleWriter printer.

- To stop printing all documents, hold down the Option and Shift keys and click the Hold Job button. You can also choose Stop Print Queue from the Printing menu.

- To start printing documents, hold down the Option and Shift keys and click the Resume Job button. You can also choose Start Print Queue from the Printing menu.

Turning Off Desktop Printing

If you don't want to use desktop printers, you can turn off Desktop PrintMonitor using the Extensions Manager control panel.

IMPORTANT: Before you turn off Desktop PrintMonitor, be sure that all documents have finished printing. If there are documents waiting to print that you do not want to print, you can cancel printing as described in the previous section on this document.

To turn off Desktop PrintMonitor, follow these steps:

- 1) Open the Extensions Manager control panel.
- 2) Click the boxes next to these extensions to remove the X:
 - Desktop PrintMonitor
 - Desktop Printer Extension
 - Desktop Printer Spooler
 - Desktop Printer Menu extensions
- 3) Click the close box to close the control panel.
- 4) If your computer has a Control Strip, drag the Printer Selector file from the Control Strip Modules folder in the System Folder to the Trash.
- 5) Restart your computer.

Support and Compatibility Information

- Some third-party printers do not support desktop printing. If no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the print driver that is compatible with Desktop PrintMonitor.

- When you choose Save or Open in an application and look at files and folders on the desktop, desktop printers appear in the list as if they are folders. Do not save documents in a desktop printer "folder." If you do, you will not be able to access the document in the Finder.

IMPORTANT: If you save a document in a desktop printer "folder," use the Save As command to save the document in a different location as soon as possible.

NOTE: You cannot remove a document that you save in a desktop printer icon. If you want to delete the document, throw away the desktop printer icon and select the printer in the Chooser again.

- Desktop PrintMonitor supports drag-and-drop printing for all files that cause the Print command in the File menu to become available. Since clipping files do not make the Print command available, they cannot be dragged to a desktop printer icon for printing.

- Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax Sender is fully functional when Desktop PrintMonitor is installed; however, it does not use Desktop PrintMonitor's features.

IMPORTANT: When you select Fax Sender in the Chooser, you will not have a default desktop printer until you select a printer icon and choose Set Default Printer from the Printing menu.

Troubleshooting Tips

You see an alert message with error numbers "-192" or "15."

Problem: After installing Desktop PrintMonitor and restarting your computer, you see error message "-192" or "15" when you try to open files or folders in the Finder. This may occur when the Now Startup Manager preferences file has become corrupted.

Solution: Hold down the Shift key while restarting your computer to turn off extensions. Then throw away the Now Startup Manager preferences file. Restart your computer normally.

IMPORTANT: Before you throw away the Now Startup Manager preferences file, you may want to write down your preferences.

You receive an alert message that the desktop printer cannot be found.

Problem: When you try to print, the spool file for the print job is moved to the Trash and an alert message appears saying that the desktop printer could not be found.

Solution 1: It's possible that the desktop printer icon is damaged. To fix this, drag the desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Solution 2: If your printer software is not published by Apple Computer or Adobe Systems, it may not be compatible with Desktop PrintMonitor. If this is the case, turn off Desktop PrintMonitor (as described earlier in this document) and use an older version of PrintMonitor.

The "Not enough memory" message appears after you drag files to a desktop printer icon.

Problem: When you drag documents created by different software applications to your desktop printer icon, a message appears that says there is not enough memory to continue.

Solution: Because the application used to create a document opens when you print the document, your computer must have enough random-access memory (RAM) available to open all of the programs for the documents you are printing. To resolve this situation, print your documents individually or in smaller groups.

The "Out of Paper" message remains after you add paper to the printer.

Problem: You are using a LaserWriter 300 and the "Out of Paper" message doesn't go away automatically after you add paper to the printer.

Solution: If you are using Desktop PrintMonitor with the LaserWriter 300 driver, the "Out of Paper" message will not go away automatically after you add paper to the printer. The only way to work around this problem is to turn off Desktop PrintMonitor as described earlier in this document and use an older version of PrintMonitor.

A document printed on a Color StyleWriter does not have the correct colors.

Problem: Documents printed on a Color StyleWriter do not have the correct colors after you put printing on hold and then resumed printing.

Solution: To avoid this problem, always resume printing on page one.

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Tech Info Library

Mac OS 7.6: About English Text-to-Speech Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About English Text-to-Speech Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About English Text-to-Speech ReadMe file.

DISCUSSION -----

Using the English Text-to-Speech Software.

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. One of the programs that can read to you is the SimpleText program, which comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

The instructions in this document tell you:

- what you need to use this software;
- how to install the software;
- how to try out the software using SimpleText;
- how to choose a standard (default) voice;
- some technical details;
- how to solve common problems.

What you need to use the English text-to-speech software.

To use the software, you need the following software and hardware.

- a Macintosh or Power Macintosh computer;
- version 6.0.7 or later of system software;
- at least 300 kilobytes of RAM in addition to what the rest of your system software takes;
- at least 5 megabytes of space available on your hard disk.

Installing the software.

To install the English text-to-speech software, follow these steps.

1. Print these instructions before you start. You will not be able to view them on screen during the installation.
2. If you have been using an earlier version of text-to-speech software, see the note for you at the end of this section.
3. Quit any programs you have been using.
4. While holding down the Shift key on the keyboard, choose Restart from the Special menu. Don't release the Shift key until you see the "Extensions Off" message on your screen.
5. To start the Installer program, double-click its icon. You can find the Installer program in the same place you found these instructions.
6. In the introductory screen that appears, click Continue.
7. In the next screen, click Install. The installation takes a few minutes.
8. When you see a message reporting that the installation was successful, click Restart.

After the computer restarts, you can start using the text-to-speech software. You can try it out using the instructions in the next section.

Note for users of PlainTalk 1.0: The improved version of MacinTalk Pro included with this text-to-speech software is intended to replace the old PlainTalk text-to-speech software. However it may not work with some computers that have a 68030 processor. If you have such a computer and want to keep using the old PlainTalk text-to-speech software, you should not use the standard Install procedure described in these steps. Instead, after step 6, choose Custom Install from the pop-up menu, select MacinTalk 2 or MacinTalk 3, then proceed with steps 7 and 8.

Trying out the text-to-speech software.

You can try out the text-to-speech software in the SimpleText program by following these steps.

1. Open any SimpleText document. Or, since this document is already open, you can do the remaining steps with it.
2. Click anywhere in the text to make sure nothing is selected.
3. Choose "Speak All" from the Sound menu. (If you cannot hear anything, you may have the sound turned all the way off. Check in the Sound or "Sound & Displays" control panel.)

4. If you want the computer to stop reading, choose Stop Speaking from the Sound menu.

You can also try the following:

- To read a portion of the file, select the words you want to read then choose Speak Selection from the Sound menu.
- To have the computer speak in a different voice, select a voice from the Voices sub-menu in the Sound menu, then choose the Speak All or Speak Selection command from the Sound menu.
- To use the text-to-speech features of other programs, see the instructions that came with those programs.

Choosing a standard (default) voice.

If you have system software version 7.0 or later, you can use the Speech control panel to choose your favorite voice to be the default voice for all your programs. (To use the Speech control panel on some black-and-white 68000 computers, like the Macintosh SE, you need to have system software 7.1 or later.) To set the default voice, follow these steps.

1. Open the Control Panels window by pulling down the Apple menu and choosing Control Panels.
2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu at the top of the Speech control panel and choose Voice.
4. To change the default voice, choose the voice you want from the Voice pop-up menu. To hear what the voice you chose sounds like, click the speaker button. If you're concerned about RAM usage, Agnes, Bruce, and Victoria take about 1,500 kilobytes of RAM; the rest take 300 kilobytes or less.
5. To change the rate at which the default voice speaks, move the slider.
6. Close the control panel.

Turning Talking Alerts on or off.

If you have system software version 7.0 or later, you can use the Speech control panel to turn the Talking Alerts feature on or off. When this feature is on, your Macintosh will speak the contents of alerts to you. (An alert appears, for example, when your printer runs out of paper while printing.) To turn the Talking Alerts feature on, follow these steps.

1. Open the Control Panels window by pulling down the Apple menu and choosing

Control Panels.

2. Open the Speech control panel by double-clicking its icon in the Control Panels window.
3. Open the Options pop-up menu at the top of the Speech control panel and choose Talking Alerts.
4. To have your Macintosh speak a phrase like "Alert!" or "Hey!" when an alert appears, click the "Speak the phrase" check box to put an X in it, and choose the phrase you want to be spoken from the adjacent pop up menu.
5. To have your Macintosh speak the content of an alert when one appears, click the "Speak the alert text" check box to put an X in it.
6. To adjust how long your Macintosh delays after an alert appears before speaking the alert text, adjust the slider beneath the "Speak the alert text" check box.
7. To test how Talking Alerts will behave with your chosen settings, click on the speaker icon to the right of the slider.

Whenever Talking Alerts is speaking the text of an alert, you can stop it by clicking the mouse or typing any key.

Technical details.

The software that enables your computer to speak has these components:

- Speech Manager, a system extension;
- one or more of these English speech synthesizers, depending on your hardware and software:
 - MacinTalk 2 for standard-quality speech,
 - MacinTalk 3 for high-quality speech,
 - MacinTalk Pro for highest-quality speech.
- several voice files, each identified with one particular synthesizer;
- the Speech control panel (if you have system software 7.0 or later).

The Installer installs the files that are appropriate for your system.

- If you have version 6.0.7 or 6.0.8 of system software on any Macintosh, these files are installed.
 - Speech Manager, in the System Folder;
 - MacinTalk 2, in the System Folder;
 - 9 voices, in the Voices folder, which is in the System Folder.
- If you have version 7.0 or later of system software on a Power Macintosh or on a Macintosh with a 68040 processor, the following files are installed.

- Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
 - MacinTalk 3 and MacinTalk Pro, in the Extensions folder;
 - 19 MacinTalk 3 voices, in the Voices folder, which is in the Extensions folder;
 - 3 MacinTalk Pro voices (Agnes, Bruce, and Victoria), also in the Voices folder.
- If you have version 7.0 or later of system software on a Macintosh with a 33 MHz or faster 68030 processor, the following files are installed.
 - Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
 - MacinTalk 3, in the Extensions folder;
 - 19 voices, in the Voices folder, which is in the Extensions folder.
 - If you have version 7.0 or later of system software on any other computer, the following files are installed.
 - Speech Manager, in the Extensions folder;
 - the Speech control panel, in the Control Panels folder;
(Note: On Macintosh SE computers, the Speech control panel requires version 7.1 or later of the system software)
 - MacinTalk 2, in the Extensions folder;
 - 9 voices, in the Voices folder, which is in the Extensions folder.

Troubleshooting (problems and solutions).

-
- My Macintosh won't speak.
 - Turn up the speaker volume in the Sound control panel.
 - Choose a voice that requires less random-access memory. The voices Agnes, Bruce, and Victoria take the most memory.
 - The Installer program says there's a problem with the hard disk.
 - Re-install your system software, then try installing the English text-to-speech software again.
 - The Installer program displays other error messages.
 - Make sure you restart the computer with extensions off, as described in "Installing the Software," above.
 - I had an older version of text-to-speech software, then did a custom installation of the new software, but some of my older voices disappeared.
 - The custom installation you chose erased the older version of the software that can use those voices. You can install newer versions of the voices by doing another custom installation of the new software to install MacinTalk 2 or MacinTalk 3 -- whichever you used to have. (If you're not sure which you had, you can install both.)

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Tech Info Library

Mac OS 7.6: About MacLinkPlus Read Me (1/97)

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Mac OS 7.6: About MacLinkPlus Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About MacLinkPlus Read Me file which comes with the Mac OS 7.6 CD-ROM disc.

DISCUSSION -----

For more information regarding MacLinkPlus, check out our World Wide Web page at <http://www.dataviz.com> or e-mail us at info@dataviz.com.

What is MacLinkPlus?

MacLinkPlus is file translation software which allows you to:

- Easily use DOS/Windows files on your Mac
- Convert Mac files into DOS/Windows files
- Convert between different Mac formats

When translating between different Mac and PC formats, such as Word Mac and WordPerfect for Windows, MacLinkPlus makes sure the file's original formatting remains intact (that is, bold, italics, graphics, etc.). Once a file is translated, you can actually use the file in the new application format (in this case WordPerfect for Windows) just as if it were originally created there! MacLinkPlus can convert between thousands of combinations of files, including word processing, spreadsheet, graphics and database formats.

Who needs MacLinkPlus?

-
- Anyone who needs to use files created in DOS or Windows applications
 - Anyone who needs to use files created in Macintosh applications different from the one they use (that is, you use Word Mac, but your colleagues use ClarisWorks or WordPerfect, etc.)

It's there when you need it - automatically!

Perhaps the best thing about MacLinkPlus is that you won't see it until you need it. Your Macintosh came with a System Extension called Macintosh Easy Open. When you double-click on a file that wasn't created by an application you have, Easy Open pops up choices of applications on your Mac you can open the file into with the help of MacLinkPlus file translation.

The MacLinkPlus QuickStart "card" included in the MacLinkPlus folder provides more information on the uses of MacLinkPlus.

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Mac OS 7.6: About MoviePlayer Extras Read Me (1/97)

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TOPIC -----

This article is the About MoviePlayer Extras ReadMe file.

DISCUSSION -----

What is MoviePlayer?

MoviePlayer is the default application for playing QuickTime movies on Mac OS-based computers. When you double click a QuickTime movie, the MoviePlayer program opens. MoviePlayer is automatically installed with Mac OS version 7.6 and later versions. You can find MoviePlayer in the Apple Extras folder.

What's in MoviePlayer Extras?

MoviePlayer Extras includes two "plug-in files"—Authoring Extras and Goodies. These files add some extra features to the MoviePlayer application. These extra features are useful for creating your own movies. Some of the added features include:

- editing a movie's text track
- adding or editing copyright information
- adding or switching to a different color table
- specifying track preloading

To utilize these and other authoring features, place the plug-in files in the same folder as MoviePlayer.

Sample QuickTime movies are also included. Double-click a movie to watch it.

Problems playing long movies?

MoviePlayer's application memory size is preset to 400K. This size should work well for short movies. If you find that playback of higher data-rate movies is

not smooth, increase MoviePlayer's minimum memory size. (First, quit the MoviePlayer application. Then select the MoviePlayer icon and choose Get Info from the File menu. Increase the number in the Minimum Size box.)

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Tech Info Library

Mac OS 7.6: About Multiprocessing Software Read Me (1/97)

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Mac OS 7.6: About Multiprocessing Software Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About Multiprocessing Software ReadMe file.

DISCUSSION -----

Important Information
About the Multiprocessing Software

This document provides information about the multiprocessing (MP) software included with Mac OS 7.6 and how to configure your computer properly to take advantage of multiprocessor performance. You use multiprocessing software to use two processors at the same time, which increases your computer's speed. Multiprocessing software is only installed on computers with more than one PowerPC processor.

CORRECTION: Mac OS 7.6 will install the MP Software folder into the Extensions folder on every PowerPC-based computer, no matter how many processors.

Turn off virtual memory and do not install RAM Doubler

Turn off virtual memory in the Memory control panel, and do not install Connectix RAM Doubler software. If virtual memory is turned on or RAM Doubler is installed, then your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To turn off virtual memory, open the Memory control panel. In the Virtual Memory section, click the Off button. Then restart your computer. For more detailed information about virtual memory, see the topics on memory in Mac OS Guide, available in the Guide menu.

Turn off hard disk sleep

Make sure that the hard disk sleep interval is set to "Never" in the Energy

Saver control panel. Otherwise, software applications designed to work with your multiprocessor computer may not work properly.

To set your hard disk sleep interval, do the following:

- 1) Open the Energy Saver control panel.
- 2) If necessary, click Show Details to make the additional options available.
- 3) Drag the top and bottom sliders as shown below.

If you wish, you can set a display sleep interval by dragging the middle slider. Display sleep works properly with multiprocessor-compatible software applications.

Important information about Document Auto-Save

The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Mac OS (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Mac OS Guide from the Guide menu when the Finder is active.

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Tech Info Library

Mac OS 7.6: About Open Transport 1.1.1 Read Me (1/97)

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Mac OS 7.6: About Open Transport 1.1.1 Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About Open Transport 1.1.1 ReadMe file which comes with Mac OS 7.6.

DISCUSSION -----

Introduction

This document contains information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), see the networking topics in Macintosh Guide, available in the Guide menu when the Finder is active. For additional technical information about Open Transport, see the "Open Transport Technical Info" file.

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Network interface options

Open Transport 1.1.1 supports PCI bus, NuBus, communications slot, and PC Card network interface cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For computers without expansion options, Open Transport 1.1.1 also supports a SCSI-attached network adapter. Third party network interface

options available for Open Transport include Fast Ethernet, ATM, and FDDI.

General compatibility

Open Transport is compatible with:

- existing applications that use AppleTalk as specified by Apple Computer, Inc.
- existing applications that use MacTCP as specified by Apple Computer, Inc.
- existing devices (such as printers) that you select in the Chooser
- existing NuBus network interface cards for the Mac OS

Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network without upgrading other computers on the network.

Apple product compatibility update

• At Ease version 2.x or 3.x may encounter problems when starting up with Open Transport. Apple has released an updater utility ("At Ease Basic OT Updater") on Apple Software Update sites on the Internet and selected online services. If you are using At Ease for Workgroups, you should upgrade to version 3.0.2.

• The Apple PCI Token Ring Card (M3904Z/A) requires Open Transport 1.1 or later. The Apple PCI Token Ring card is compatible with Power Macintosh 7500, 8500 and 9500 computers; it is not compatible with 7200/75 and 7200/90 computers.

• Apple LaserWriter Bridge and LocalTalk Bridge versions 2.1f2 or later are compatible with Open Transport.

• Apple Internet Mail Server 1.1 or later software is compatible with Open Transport 1.1 and later.

• Apple Remote Access (ARA) Multiport Server 2.1, ARA Client 2.0.1, and ARA Personal Server 2.0.1 are compatible with Open Transport 1.1 and later.

• Apple PCI-based Workgroup servers (Application, AppleShare, and Internet) are compatible with Open Transport 1.1.

• Computers running the current versions of Apple IP Gateway and AppleTalk Internet Router must not be updated to Open Transport; these products are based on classic networking. These products do, however, interoperate with computers using either classic or Open Transport networking. Apple has not yet announced plans regarding future versions of these products.

• Apple's MacTCP Ping is not compatible with Open Transport; no update is planned. MacPing from Dartmouth, available at <ftp://ftp.dartmouth.edu>, OTTool from Neon Software, available at <ftp://ftp.neon.com> and Mac TCP Watcher v2.0 from Peter N. Lewis & Stairways Software available at <ftp://ftp.share.com> are Open Transport-compatible alternatives.

• ZapTCP is not compatible with Open Transport.

Dialup network connectivity - TCP/IP

To connect to TCP/IP networks (including the Internet) using a modem, Open

Transport supports extensions known as "MDEVs." Serial Line Interface Protocol (SLIP) and Point to Point Protocol (PPP) connectivity are provided in this manner. Not all versions of all MDEVs are compatible with Open Transport 1.1 and later.

An Apple version of PPP 1.0, designed specifically to work with Open Transport, is provided with Mac OS 7.6. The following third-party MDEVs are also compatible with Open Transport. When properly installed, these MDEVs appear in the "Connect via" pop-up menu in the TCP/IP control panel.

- FreePPP - version 1.0.5 or later

FreePPP is shareware and can be found on the Internet, typically at "info-mac" mirror sites in the comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:

<<http://www.pht.com/info-mac/mirror-list.html>>

Some sites where FreePPP can be found currently include:

<<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>>, and
<<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>>.

FreePPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using FreePPP with virtual memory, either update to FreePPP 2.5 or turn virtual memory off when using FreePPP. The current version of FreePPP is 2.5rf.

- MacPPP - version 2.1.4 or later (MacPPP 2.5 is recommended)

MacPPP versions prior to 2.5 may experience problems when running with virtual memory turned on (including RAM Doubler). If you have problems using MacPPP with virtual memory, either update to MacPPP 2.5 or turn virtual memory off when using MacPPP.

- InterPPP - version 1.2.9 or later; InterPPP II - version 1.1 or later
InterPPP and InterPPP II are commercial software products. For availability and ordering information in the U.S., contact InterCon Systems at 800-468-7266 or 703-709-5500.

- MacSLIP - version 3.0.3 or later

MacSLIP is commercial software developed by Hyde Park Software. For availability and ordering information in the U.S., contact TriSoft at 800-531-5170 or 512-472-0744. For more details see the MacSLIP Web page at
<<http://www.zilker.net/~hydepark/>>

- Sonic PPP - version 1.0.2 or later

SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering information in the U.S., contact Sonic Systems at 408-736-1900 (voice) 408-736-7228 (fax). For more details see the Sonic Systems Web page at <<http://www.sonicsys.com/>>

- NTS PPP - 2.0 or later

NTS PPP is commercial software developed by Network Telesystems, Inc. For availability and ordering information in the U.S., contact Network Telesystems

at 408-523-8100 (voice) 408-523-8818 (fax). For more details see the Network Telesystems Web page at <<http://www.nts.com/>>

- SAT/SAGEM PPP - 1.02b1 or later

SAT/SAGEM PPP is commercial software developed by SAT/SAGEM. For availability and ordering information in the US, contact SAT/SAGEM at 408-446-8690 (voice) 408-446-9766 (fax). For more details see the SAGEM Web page at <<http://www.satusa.com/>>

- LeoTCP - 2.0.1 or later

LeoTCP is commercial software developed by Hermstedt GmbH. For availability and ordering information in the U.S., contact Hermstedt USA at 1-800-828-5522 (voice). In Europe contact Hermstedt GmbH at +49 621-76500 (voice) +49 621-7650100 (fax).

- T-Online CSLIP - version 1.0.3 or later

T-Online CSLIP is commercial software developed by Computer Consulting GbR. For availability and ordering information in Europe, contact format network & communication at 49 2206 95840. For more details, contact format network & communication at info@format.de.

- University of Michigan ISDN PPP - 2.0.6 or later

- OT/PPP - version 1.0f1c9 or later

In addition to these, there are a number of other MDEVs (examples include those from Pacer, FCR, and Tribe) which are indistinguishable from one another to Open Transport. When installed, these appear in the "Connect via" pop-up menu as "TCP/IP PPP."

Tips for SLIP and PPP configurations

- Some MDEVs are known to be incompatible with other MDEVs. If you experience problems, remove unused MDEVs so that only one MDEV is installed on your computer at a time.
- Users who dial into a TCP/IP network or Internet Service Provider (ISP) may have been assigned a router (gateway) address that is not a part of their local subnet. This was an accepted but technically invalid configuration for MacTCP. Open Transport users should not enter a value for the router address or subnet mask; Open Transport/TCP generates correct values for these fields automatically. In unusual circumstances, you can override the supplied values using the Administration mode of the TCP/IP control panel.
- If BootP is used over SLIP or PPP for interface configuration, and if BootP returns additional default router addresses, Open Transport will automatically add those addresses to the list of default routers.
- When Open Transport is installed on a computer that previously had MacTCP configured for a server configuration, the initial configuration method -- the selection in the "Configure" pop-up menu in the TCP/IP control panel -- is set for the use of a BootP server. This default may not be the appropriate choice for you; please verify.

- If your computer was previously configured for MacTCP "server" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

- 1) Open the TCP/IP control panel.
- 2) Choose Using PPP Server or Using SLIP from the Configure pop-up menu.
- 3) Close the TCP/IP control panel and save changes when prompted.
- 4) Try connecting again.

- If your computer was previously configured for MacTCP "manual" addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

- 1) Open the TCP/IP control panel.
- 2) Choose Manual from the Configure pop-up menu.
- 3) Verify that the correct IP address is entered in the Address field.
- 4) Close the TCP/IP control panel, and save changes when prompted.
- 5) Open the configuration utility supplied with your SLIP or PPP software, and verify that it also reflects the correct IP address in the appropriate location. Refer to the documentation supplied with your SLIP or PPP software for further information on how to enter an IP address, and how to save an updated configuration.
- 6) Try connecting again.

Note: In MacPPP's ConfigPPP control panel, this setting is entered in the IPCP dialog box. Refer to the documentation that came with MacPPP or FreePPP for additional information.

What's new in Open Transport 1.1.1 - general

- Memory management is improved. On PowerPC-based computers, memory is no longer fragmented. On 68030 or 68040 computers that turn on the "Load only when needed" option, memory will not unfragment for 2 minutes after a TCP application completes.
- Performance enhancements for opening and closing endpoints have been added. This is particularly visible on Mac OS computers that are busy Web servers.
- Open Transport now registers and unregisters CRM serial drivers.
- The NuBus version of the DOS Compatibility Card is compatible with Open Transport 1.1.1.
- Infrared-compatible versions of LocalTalk drivers are now installed on all models. Previously these drivers were only installed on portable computers.

What's new in Open Transport 1.1.1 - AppleTalk

- AppleTalk now properly handles Phase I RTMP packets on LocalTalk. This was causing problems using EtherPrint, TeleBridge, and other third-party forwarding technologies.

- Fixed a problem on a PowerBook Duo where AppleTalk would awaken from sleep on the wrong port when docking with an Ethernet MicroDock.
- Fixed a problem in ARA compatibility where Open Transport would sometimes not get the complete zone list from the server.
- Fixed some problems in ARA compatibility where a packet would not get routed properly, causing computers attached to the local cable of the server not to be visible to the ARA client.
- When using ADEVs, Open Transport requests a specific address from the ADEV. Some ADEVs return no error, but modify low memory locations to indicate a different address than that requested. Open Transport now picks up that different address and uses it (however, if the User Defined option is turned on, AppleTalk will not open).
- Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped. Use the AppleTalk Options control panel to fix the problem. Open the control panel, turn on the "Suppress router-related alerts" option, then close the control panel.

What's new in Open Transport 1.1.1 - TCP/IP

----- Server-specific fixes and enhancements

- The performance of opening and closing TCP endpoints has been improved. This improvement will be most noticeable on servers with a high volume of short-duration connections (such as Web servers).
- In OT 1.1, sometimes TCP connections could not be reused. Eventually a server application would not be able to accept incoming connections. This has been fixed.
- Fixed a problem where busy TCP servers sometimes accepted no new inbound connections for about 30 seconds every 4 minutes.
- Fixed a memory leak which occurred when Hosts files were used and TCP/IP was set to "load only when needed." Previously, Hosts file entries were not properly deleted from memory when TCP/IP unloaded.
- Introduced a better DNR cache limitation algorithm. Entries that haven't been used for 15 minutes can now be flushed whenever the DNR is heavily used.

Other TCP/IP fixes and enhancements

- Open Transport's MacTCP compatibility now honors the pushFlag parameter to TCPSend call. This is required for some legacy applications to correctly communicate with older, nonconforming hosts. However, no direct control of the TCP pushFlag is or will be provided through the native OT API.
- Entries in the Address and Alias caches now flush when they reach

their "time-to-die," and not when they exceed it. TCP/IP also no longer caches resource records with a 0 time to live.

- The DNR now more robustly supports service load-balancing strategies. It no longer maps directly between an alias and the IP address of the host being aliased.
- When dealing with DHCP servers, Open Transport now tries "full-size" packets first, then falls back to "short" packets.
- Fixed a problem with timer overflow on long DHCP leases. Previously, if the lease exceeded 24 days, then TCP/IP connectivity would be lost in a matter of hours.
- Fixed a problem that occurred when one end of a connection closes a "tcp" endpoint, while the other end simultaneously aborts the connection.
- Fixed a problem where a DNR SysInfo request will sporadically fail when a valid reply is mistakenly treated as having been truncated.
- Fixed a hang that occasionally occurred when flushing the DNR address cache.
- Fixed a problem where resolving a bad name sometimes returned no error, when in fact an error occurred.
- Fixed a hang that occurred with applications that use the TCPNoCopyRcv call through the MacTCP compatibility interface. This hang occurred when the MacTCP compatibility interface ran out of memory, either due to being given a small buffer by the application, or by receiving enough inbound data to fill most of the inbound buffer space.
- Fixed a memory leak when opening the resolver in MacTCP emulation mode.
- Open Transport 1.1.1 is compatible with NuBus Token Ring adapters. To ensure compatibility with existing NuBus Token-Ring drivers, Open Transport TCP/IP artificially imposes a MTU of 1500 bytes. This limit should be addressed in a future release.
- Open Transport's MacTCP emulation can now abort a connection where the underlying stream is blocked due to flow control. Applications using the native Open Transport API will have to issue an I_FLUSH ioctl before sending a disconnect when they want to disconnect/abort a flow-controlled connection.
- A new traceroute program for Open Transport/TCP, called "WhatRoute," is now available at <<http://crash.ihug.co.nz/~bryanc/>>. The latest version of Mac TCP Watcher (v2.0) <<ftp://ftp.share.com/peterlewis/>> also now supports traceroute.

Known limitations and other issues

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- The AppleTalk control panel displays separate printer and modem ports on the PowerBook 190. LocalTalk will only work correctly when the modem port is selected in the AppleTalk control panel.
 - The software that dims the screen of PowerBook Duo computers when the PowerBook is docked and idle is not compatible with Open Transport. Use a third-party screen saver instead of the Apple-provided module.
 - In some cases, on a PowerBook 190 configured to use the infrared port in the AppleTalk "Connect via" pop-up menu, networking services may become disabled following a sleep/wake or restart. If this happens, try putting the computer to sleep and waking it up again, or use the AppleTalk control panel to temporarily select the modem/printer port before switching back to the infrared port.
 - On a IIfx or a Quadra 950, Open Transport can only use the "compatible mode" setting in the Serial Switch control panel. Don't use the "faster mode" setting with LocalTalk.
 - On 68030 and 68040 computers, changes in AppleTalk configurations can cause systems running Meeting Maker 3.5 or 3.5.1 to crash. This can occur when changing AppleTalk links, turning AppleTalk off, or bringing Apple Remote Access connections up or down. This problem will occur on classic networking as well. Apple is working with ON Technology to resolve this problem.
 - Open Transport generally requires more memory (RAM) than MacTCP. To conserve memory, you might try some of the following:
 - Rename or re-order one or more third-party system extensions (INITs), to change the order in which memory is allocated when your computer starts up. If you use extensions from Global Village, try renaming those extensions so that they load last.
 - Especially on PowerPC-based computers, turn on virtual memory.
 - When TCP/IP is set to "Load only when needed" (in the control panel's Options window), "pinging" an Open Transport workstation will fail if TCP/IP is not currently being used. To make sure your computer is "pingable" at all times, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.
 - When TCP/IP is set to "Load only when needed" (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications don't cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the "Load only when needed" option (open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X) and restart your computer.
 - The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one. This should be addressed in a future release.
 - Generally, you should turn on the "Load only when needed" option in the TCP/IP

control panel when using a modem. If TCP/IP is always loaded, your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you weren't using it.

- If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.
- If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)
- If you are using Netscape, 16 MB or more of built-in memory (RAM) is recommended.
- Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder. Do not delete this file when installing or configuring Open Transport.
- You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.
- Claris EMailer version 1.1 v3 or later is compatible with Open Transport 1.1.1. Earlier versions of Claris EMailer may not be compatible with Open Transport's "Load only when needed" configuration option. If you experience a system crash 2-3 minutes after quitting EMailer, turn off the "Load only when needed" option. (Open the TCP/IP control panel and click the Options button, then click the "Load only when needed" checkbox to remove the X.)
- The current version of the MacTraceRoute Ethernet LAP does not work on computers running Open Transport.
- NFS/Share versions 1.4.4 or later are compatible with Open Transport.
- When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a Netware Configuration error message. To avoid this error, open the NetwareIP control panel and change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change Open Transport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control panel, click the Options button, and click the "Load only when needed" box to remove the X).
- eXodus 5.2.2 and later are compatible with Open Transport.
- Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport. Make sure you are using Anarchie 1.6 or later.
- If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet)

network, and there are devices on the local network with the same network number as devices on the remote network, the user won't be able to see the local devices. This problem can be fixed by installing a router. Another workaround is to clear the PRAM on the ARA computer. (Hold down the Control, Option, and P keys simultaneously while starting up the computer). Clearing PRAM causes the computer to start up with a new network number, which should not conflict with the remote network number.

- Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.
- MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the "reconnect" choice does not work correctly.
- The system will crash during launch of NetPresenz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.
- Current versions of VersaTerm SLIP are not compatible with Open Transport.
- Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to "Load only when needed" (in the control panel's Options window). Contact Sassafras for the latest revisions at <<http://www.sassafras.com>>.
- The combination of Open Transport 1.1.1, LocalTalk Bridge 2.1f2, Global Village Toolbox and GlobalFax extensions causes a crash. The workaround is to move the LocalTalk Bridge file to the Extensions folder, renaming it to "aLocalTalk Bridge." You can make an alias and rename the alias as desired. Put the alias wherever you want, including the Control Panels folder. This will allow the LocalTalk Bridge to load before Global Village and avoid the cause of the crash.
- To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.1.1.
- After installing Open Transport 1.1.1 over a network while using Classic AppleTalk, open the Open Transport 1.1.1 AppleTalk control panel. If you are not using an infrared device, open the "Connect via" pop-up menu and choose Serial Port.
- The current official release of the MPW shell will hang the system when used with virtual memory and Open Transport. When using the MPW shell and Open Transport, turn off virtual memory. The ETO #21 pre-release MPW shell, version 3.4.2b2, fixes this problem.

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Tech Info Library

Mac OS 7.6: About QuickDraw GX Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About QuickDraw GX Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About QuickDraw GX ReadMe file which comes with Mac OS 7.6.

DISCUSSION -----

About QuickDraw GX

This document includes information about new features of version 1.1.5 of QuickDraw GX, as well as tips and compatibility information. It also includes information about obtaining printer and fax drivers for use with QuickDraw GX. This document also contains information about using fonts with QuickDraw GX.

For the latest information about applications, utilities, fonts and printer drivers, see the Web site at <http://www.macos.apple.com/macos/tech.html>.

Compatibility Information
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QuickDraw GX and WorldScript II

Make sure that you are using WorldScript II version 7.2 or later.

QuickDraw GX and At Ease

Make sure that you are using At Ease version 2.0.3 or later.

Installing QuickDraw GX with the Power Macintosh Upgrade Card

When you install QuickDraw GX on a computer with the Power Macintosh Upgrade Card, make sure that the upgrade card is enabled before installing QuickDraw GX.

Manual Feed and the LaserWriter IISC GX Driver

When you print a manual feed job to a printer using the LaserWriter IISC GX driver, wait for the manual feed alert to appear before inserting the next page. If you insert the page before the alert appears, your printer will print the first page twice and then stop printing. Opening and closing the cover on your printer will clear it.

QuickDraw GX and Application Programs

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- In application programs which do not take advantage of QuickDraw GX, Tekton Plus appears as two fonts: Tekton Plus Regular and Tekton Plus RegularSC. Applications such as Adobe Illustrator, QuarkXPress, and Aldus PageMaker print characters from Tekton Plus RegularSC as Courier on PostScript printers.
 - If possible, do not use the QuickDraw GX Helper (to turn off desktop printing) with WordPerfect versions 3.0 and earlier. In WordPerfect, when you turn desktop printing off, the third item on the Apple menu (which corresponds to the first alphabetic item in the Apple Menu Items folder) opens. WordPerfect versions 3.1 and later are compatible with QuickDraw GX.
 - In PageMaker version 5.0, documents containing PICT files will print without the PICT files and an extra blank page may be printed at the end of some documents. To print correctly, hold down the Option key when you choose Print from the File menu.
 - To print on a PostScript printer using Insignia Solutions SoftPC and SoftWindows versions earlier than 1.0.2a, you must turn off desktop printing or use the Epson LQ-2500 output option. To turn off desktop printing, use the QuickDraw GX Helper (one of the QuickDraw GX Utilities). You can install the QuickDraw GX Utilities with the custom installation option of QuickDraw GX. SoftWindows versions 1.0.2a and later are compatible with QuickDraw GX.
 - Adobe Acrobat Reader versions earlier than 2.0.1 and all versions of Adobe Acrobat Exchange are incompatible with QuickDraw GX 1.1.5. A compatible version of the Acrobat Reader is available in the Utilities folder on the Mac OS 7.6 CD-ROM disc.
 - The substitution fonts included with Adobe Illustrator 5.5 and SuperATM are not compatible with QuickDraw GX 1.1.5. If you install QuickDraw GX 1.1.5 on a computer where these substitution fonts have already been installed, you will see this message: "The substitution fonts necessary for Acrobat and SuperATM are missing. Please re-install either software package." QuickDraw GX-compatible versions of these fonts are available as part of the Adobe Acrobat Reader, version 2.0.1, available in the Utilities folder on the Mac OS 7.6 CD-ROM disc.
 - You should print documents that use the Al-Nashir Al-Sahafi font (Arabic Design Studio) on raster (non-PostScript) printers. If you try to print an Al-Nashir Al-Sahafi document on a PostScript printers, no document will print.

QuickDraw GX Printer Driver Upgrade Information

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To print with QuickDraw GX, you need a QuickDraw GX printer driver for your printer.

- If you have an Apple printer, QuickDraw GX versions of your printer drivers are installed with QuickDraw GX.
- If you have a non-Apple printer, check with your Apple-authorized dealer or contact your printer vendor directly to obtain a GX driver for your printer. See the list below for vendor information.

CalComp

PostScript compatible printers from CalComp should work with the standard LaserWriter GX PostScript driver. If you have any problems using QuickDraw GX with CalComp products and are within the United States or Canada, call CalComp at 800-451-7568. Outside the United States or Canada, contact the office in your area as listed in an appendix of your printer manual.

Epson America

For information about Epson QuickDraw GX drivers, call the Epson End User Support Center at 1-800-922-8911.

GCC Technologies

For information about GCC QuickDraw GX drivers and upgrade information contact GCC Technical Support at one of these numbers:

Phone Number: 617-276-8620
Fax Number: 617-275-1115
CompuServe: 67004,2302
GEne: GCC.TECH
America OnLine: GCC TECH

GDT Softworks Inc.

For upgrade information about GDT Softworks products (PowerPrint 2.5, PowerPrint/GX 3.0, PowerPrint/LT 3.0, PowerPrint/NW 3.0, PLOTTERgeist 3.0, PowerPlot 2.0, PowerPlot/LT 2.0, StyleScript 2.0), contact GDT:

GDT Softworks Inc.
Customer Service Upgrades
4664 Lougheed Highway, Suite 188
Burnaby, BC V5C 6B7 Canada

Phone Number: 1-800-663-6222 or 604-291-9121
Fax Number: 604-291-9689
CompuServe: 72137,3246
Internet: customer_service@gdt.com

Hewlett-Packard

If you need Post-Sale Assistance, Technical Assistance, or if you have any kind of questions about H-P peripherals, contact the HP Computer Products Customer Support Center at 208-323-2551.

For users of Hewlett-Packard printers, the fastest way to get a QuickDraw GX printer driver is from one of these electronic online services:

CompuServe: HP Peripherals forum (HPPER)

Library 9

Internet: FTP to IP address 192.6.71.2

Name - Anonymous

Password - Send User Identification

HP Download Service: 208-344-1691

(modem settings: parity, N; data bits, 8; stop bits, 1)

To receive detailed instructions on accessing these online services, contact HP FIRST, Hewlett-Packard's document FAX retrieval service: Inside the U.S. and Canada: 1-800-333-1917 (Then press 1 for HP FIRST.) Outside the U.S. and Canada: 208-344-4809

To receive a disk with the QuickDraw GX printer driver, contact the HP Software Distribution Center at 303-339-7009. A nominal charge for materials and shipping applies.

Kodak

Call 1-800-CDKODAK for technical support. To update EKC drivers and print utilities, connect to CompuServe and 'go kodak'. In the Library menu, choose Browse. In the Browse sections, choose Kodak Printers. You can download these upgrades from CompuServe.

Lasermaster

For QuickDraw GX driver updates from Lasermaster, call Lasermaster Technical Support at 612-944-8509.

Lexmark International

Lexmark/IBM customers can get the latest QuickDraw GX drivers from:

Technical Support: 606-232-3000

Lexmark Bulletin Board: 606-232-5238

Internet: anonymous ftp at ftp.lexmark.com

CompuServe: Go Lexmark

Microspot

For information about MacPlot Raster GX and MacPlot Pen Plotter Professional GX drivers or upgrade information, contact the Sales Department:

Microspot

12380 Saratoga-Sunnyvale Road, Suite 6

Saratoga, CA 95070

Phone Number: 1-800-622-7568 (1-800-MACPLOT) or 408-257-4000
America Online: MICROSPOT1
CompuServe: 70274,3650

NEC Technologies

Contact NEC Technical Support at 800-388-8888 or use one of the following:
NEC Bulletin Board: 508-635-4706
Main Phone Number: 508-264-8000
Main FAX Number: 508-264-8673

QMS, Inc.

For assistance with QMS printers, drivers, and driver updates, call QMS Customer
Technical Assurance:
Phone Number: 205-633-4500
FAX Number: 205-633-3716

Seiko Instruments

QuickDraw GX is supported by Seiko Instruments for the ColorPoint PostScript
printer line with four drivers:

Printer Names	Required GX Driver
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ColorPoint PS, PSX or PSN	ColorPoint PS/PSX/PSN GX driver
ColorPoint PSE	ColorPoint PSE GX driver
ColorPoint PSH	ColorPoint PSH GX driver
ColorPoint PSF	ColorPoint PSF GX driver

All driver upgrades are free and are available now:
Technical Support Department: 1-800-553-5312 (inside USA)
Technical Support Department: 408-922-5800
Seiko Bulletin Board: 408-428-9810

SuperMac Technology

For the SuperMac ProofPositive and the SuperMac Splash, contact SuperMac
Technical Support at 1-800-541-7680.

Tektronix

In the US and Canada, call Customer Support at 1-800-835-6100 or use the
following:
Fax Number: 503-682-2980
Tektronix Bulletin Board: 503-685-4504
International Customers: Please contact your local Tektronix office

Xerox

Xerox offers QuickDraw GX printer drivers for Xerox DocuTech Network Publisher
Model 90 and Xerox DocuTech Network Publisher Model 135. For information on how
to obtain the driver, customers can send an electronic mail message to:

GX.Roch817@Xerox.com

QuickDraw GX Fax Information

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To fax with QuickDraw GX, you need a QuickDraw GX fax driver for your modem. Use the information below to contact the vendor about a fax driver for your modem.

Apple Telecom software

A version of Apple Telecom that supports GX is included with Mac OS 7.6.

Global Village

GlobalFax version 2.5 supports QuickDraw GX. If you purchase a modem that includes GlobalFax 2.5 software, it will automatically install the GlobalFax GX fax driver as part of the standard installation. If you are using an older version of GlobalFax software, you can buy a GlobalFax 2.5 Upgrade from Global Village by calling 1-800-736-4821 or 1-408-523-1036. For more information about GlobalFax software, check Global Village forums on the following online services:

America Online: global

CompuServe: go global

Global Village BBS: 415-390-8334

Web: <http://www.globalvillag.com>

Cypress Research

If you use Cypress Research FaxPro II, call 408-752-2700 and ask for Technical Support.

STF Technologies

For information about the FaxPrint GX printer driver, contact STF Customer Service:

Phone Number: 816-463-2021

Fax Number: 816-463-7958

Bulletin Board: 816-463-1131

CompuServe: 74740,1244 (Go STFtech)

America Online: STFtech

Using Fonts

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Type 1 Fonts Enabled During Installation

During installation, QuickDraw GX enables any Type 1 fonts found in the System Folder, the Fonts folder, or the Extensions folder. However, you must ensure that each Type 1 font family is in its own suitcase. The Installer will not

enable multiple font families contained in one suitcase.

Adobe Type Manager version 3.8.3

ATM version 3.8.3 is installed with this version of QuickDraw GX. ATM 3.8.3 includes native support for computers with PowerPC microprocessors.

Type 1 fonts will display and print properly only if ATM is installed and turned on. As with previous versions, ATM 3.8.3 rasterizes Type 1 font data from the POST resource in conventional outline font files (file type LWFN). In addition, ATM 3.8.3 rasterizes Type 1 font data from the 'sfnt' resource in suitcase files (file type FFIL). ATM 3.8.3 does not include font substitution capability.

Enabling Type 1 Fonts After Installation

You may need to enable Type 1 fonts after you install QuickDraw GX. To enable Type 1 fonts, use the Type 1 Enabler, one of the QuickDraw GX Utilities. Each Type 1 font family must be in its own suitcase before using the enabler.

To install the QuickDraw GX Utilities, use the custom installation option with QuickDraw GX. For more information, see your Mac OS installation manual.

The Type 1 Enabler supports only Type 1 fonts. If the Type 1 Enabler program encounters a suitcase containing Type 3 fonts, it displays the message "Contains a Type 3 font program" and does not enable the suitcase.

The Type 1 Enabler does not enable hybrid fonts. Old versions of Optima or ITC Eras fonts are hybrid fonts. If you are a registered owner of Optima or ITC Eras, call Adobe Systems Technical Support to obtain an upgrade to the non-hybrid versions of these families.

Removing Duplicate Fonts

To make sure that QuickDraw GX properly manages currently installed fonts, you should make sure you have no duplicate fonts installed in the System Folder. Remove any duplicates that you find.

Restoring Type 1 Fonts to Their Original State

If you remove QuickDraw GX from your system, you need to restore your Type 1 fonts. To restore Type 1 fonts, follow these steps:

- 1) Open the System Folder.
- 2) Open the Fonts folder.
- 3) Drag any suitcases that have been enabled to the Trash.
- 4) Open the •Archived Type 1 Fonts• folder.
- 5) Move the contents of the •Archived Type 1 Fonts• folder to the Fonts folder.
- 6) Drag the •Archived Type 1 Fonts• folder to the Trash.

Tips

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Envelope Paper Types and the LaserWriter GX Driver

The LaserWriter GX printer driver handles three types of No. 10 envelopes. However, each of the three types is designed for a different type of LaserWriter printer. Your choice of envelope should be based on how your printer feeds envelopes from the paper input tray:

- "Envelope - Center Fed" is for printers that feed the envelope in the center of the paper input tray.
- "Envelope - Edge Fed" is for printers that feed the envelope on the left edge of the paper input tray.
- "No. 10 Envelope" is for certain new printers (for example, the LaserWriter 16/1600PS) that use a different method of determining paper size.

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Tech Info Library Article Number:20833



Tech Info Library

Mac OS 7.6: About QuickDraw 3D Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About QuickDraw 3D Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About QuickDraw 3D ReadMe file which comes with Mac OS 7.6.

DISCUSSION -----

Important Information About QuickDraw 3D

QuickDraw 3D enables your Macintosh computer to display three-dimensional graphics using applications designed to take advantage of QuickDraw 3D. It also provides a common file format, called 3DMF (for "3D metafile"), for exchanging 3D documents, and acceleration services which support plug-and-play accelerator cards.

The following are required to install and run QuickDraw 3D:

- a PowerPC based computer with a minimum of 16 megabytes of memory (RAM)
- MacOS System 7.1.2 or later

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models, and textures that allow you to explore the 3D capabilities of your Macintosh:

- SimpleText version 1.3.1 and Scrapbook version 7.5.1. These applications allow you to open and interact with 3DMF models.
- A new Scrapbook File with sample 3DMF models.
- A number of 3DMF models provided by Model Masters and Viewpoint Datalabs International.
- Textures provided by Wraptures and Xaos Tools.

You can expect more applications using QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

QuickDraw 3D performance and image quality

For better performance, we recommend that Virtual Memory be turned off.

QuickDraw 3D has been optimized to display three-dimensional graphics of high quality. To display high-quality images, and obtain the best performance from your system, we recommend that you set your system to display thousands or millions of colors.

Troubleshooting

If you try to start an application that uses QuickDraw 3D and get the message "The application '<application name>' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions Folder, inside the System Folder:

- QuickDraw 3D
- QuickDraw 3D Accelerator
- QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you don't have enough memory to run the application. You may be able to open the application if you try the following:

- Quit other open applications.
- Reduce the amount of memory allocated to the application. This is done by:
 - selecting the application's icon in the Finder
 - choosing "Get Info..." from the File menu
 - typing a lower number in the boxes for Minimum Size and Preferred Size
- Install more memory (RAM).

If you are using a localized system, and you install this U.S. software, you will need to copy the "Scrapbook File" in the "QuickDraw 3D Folder" to the System Folder on your Macintosh. Otherwise, when you select the Scrapbook from the Apple menu, you will get an empty scrapbook. Note that this operation will replace any existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

Some of the sample models included with QuickDraw 3D, such as Big Ben and Red Hatchback, are highly detailed (they contain additional 3D modeling data such as vertex normals and surface UVs) and thus will require a larger amount of memory than the other supplied models. If you experience problems when opening these files from SimpleText, you should open only one file at a time.

How QuickDraw 3D uses memory

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D

are open, the library does not take up memory space (RAM). Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared library doesn't increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from "temporary memory." This memory shows up in the "About This Macintosh..." window as memory used by the System. When you quit the application, the memory becomes available, but the size shown in the "About This Macintosh..." window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed).

If you need to reinstall QuickDraw 3D

If you need to reinstall QuickDraw 3D, follow these steps:

- 1) Open the "QuickDraw 3D Install" folder and double-click the Installer icon.
- 2) After installing QuickDraw 3D, restart your computer.
- 3) If you want the items in the "QuickDraw 3D Extras" folder, drag the folder to the newly-created "QuickDraw 3D Folder" inside the "Apple Extras" folder.

Removing QuickDraw 3D

If you wish to remove QuickDraw 3D, follow these steps:

- 1) Open the "QuickDraw 3D Install" folder and double-click the Installer icon.
- 2) Choose Custom Remove from the pop-up menu.
- 3) Click the box next to each item to put a check in it.
- 4) Click Remove.
- 5) Restart your computer.

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Tech Info Library

Mac OS 7.6: About the 5XXX/6XXX Tester Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About the 5XXX/6XXX Tester Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About the 5XXX/6XXX Tester ReadMe file.

DISCUSSION -----

About the 5XXX/6XXX Tester

This document describes the 5XXX/6XXX Tester application. This application checks Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers for hardware problems that may cause the computer to freeze. The tester only works on Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers.

IMPORTANT: The Power Macintosh or Performa 6360 does not have this hardware problem. If you have a Power Macintosh or Performa 6360, you do not need to use the tester program.

If you are experiencing problems with your computer other than system freezing, you should contact an Apple-authorized service provider to obtain a full diagnostic test.

How to use the tester application

To use the tester application, double-click its icon.

After the tester has checked your computer, you'll see a message. If the message indicates that a problem has been found, contact an Apple-authorized service provider or Apple customer support to have your computer repaired. The necessary repairs are covered under a repair extension program.

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Tech Info Library Article Number:20835



Tech Info Library

Mac OS 7.6: About the Control Panels Folder Read Me (1/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: About the Control Panels Folder Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About the Control Panels Folder ReadMe file.

DISCUSSION -----

Mac OS 7.6
What's Inside the Control Panels Folder?

About this document

If you're curious about the contents of the Control Panels folder, this document provides a brief description of each control panel. You can use these descriptions to help determine which control panels you may need and which ones you may not need.

What is a control panel?

A control panel is a small piece of software that allows you to change your computer's settings to meet your needs. For example, you can change the pattern or color of your computer's desktop using the Desktop Patterns control panel.

You can use the Extensions Manager control panel to turn off any control panel you don't need on your computer.

Depending on the type of computer you have, the contents of your Control Panels folder may vary. You might also have control panels that were added by third-party applications. For complete instructions on using control panels, see Macintosh Guide, available in the Guide (question mark) menu when the Finder is the active program.

Apple Menu Options: You can turn the submenus available in the Apple menu (for recently used documents, programs and servers) on or off. You can also set the number of items that will appear in the menus.

AppleTalk: You can specify AppleTalk settings (such as connection port and zone) for use with Apple's Open Transport networking.

ATM: Makes your Type 1 fonts look sharp and clear at any point size—both on your screen and on paper. Improves the output of QuickDraw printers, such as the ImageWriter and StyleWriter series.

Auto Power On/Off: You can specify dates and times for your computer to automatically turn on or off, set a warning interval before turning off, and specify that your computer automatically restart after a power failure. Works only on computers that can be turned on from the keyboard (does not work on Macintosh PowerBook 500 models).

AutoRemounter: You can turn off the Losing Network Services message that appears when your PowerBook sleeps. You can also automatically reconnect your computer to any shared disks that were disconnected when your PowerBook went to sleep. Works on all Macintosh PowerBooks except models 100, 140, 145, 145B, and 170.

Button: You can disable the built-in volume and contrast buttons on the front of your computer. Useful in classroom situations with young students. Works on the Macintosh Performa and Macintosh LC 500 series of computers.

Cache Switch: You can turn processor caching on or off. For compatibility reasons, processor caching may need to be turned off for some applications. Works on computers with 68040 processors, such as the Macintosh Quadra, Macintosh Centris, and Performa 400/500 models.

Color: You can set the color of highlighted text and window borders.

CloseView: You can magnify your computer display for easier viewing.

ColorSync System Profile: Part of the ColorSync system that provides consistent color across various types of equipment (printers, scanners, monitors, and so on). In the control panel, you can view and select ColorSync profiles for the types of equipment you use.

Control Strip: You can display or hide the Control Strip, and specify a font for Control Strip menus. With the Control Strip, you can control a variety of settings directly from your desktop, such as sound volume, monitor resolution, file sharing, and so on.

Date & Time: You can set the date, time, and time zone on your computer. You can also set how dates and times are displayed.

Desktop Patterns: You can change the pattern or color of your computer's desktop.

Easy Access: You can press keys used in keyboard combinations one at a time (Sticky Keys), move the pointer using the numeric keypad (Mouse Keys), and set typing speed with audible response (Slow Keys).

Editor Setup: You can specify which OpenDoc parts to use for different kinds of

file formats.

Extensions Manager: You can turn your computer's system extensions on or off. Extensions include items in the Extensions folder, control panels, and other startup programs in the System Folder.

File Sharing Monitor: When file sharing is turned on, this control panel displays a list of users who are connected to your computer.

General Controls: You can set various options, including desktop hiding, Launcher visibility at startup, folder protection to prevent folders and files from being deleted, insertion point blinking rate, menu selection blinking, and the default folder that appears in the Save dialog box.

Keyboard: You can set the repeat rate and delay before repeat for your keyboard. Also lets you switch keyboard layouts.

Labels: You can customize the color and text of icon labels.

Launcher: You can open the Launcher window, where you can easily find and open programs. You can add items to the Launcher by placing an alias to your favorite applications, files, or folders in the Launcher Items folder in the System Folder.

Mac OS Open: You can customize the way documents are translated into alternate applications, so you can open a document when you do not have the application that was used to create the document.

Map: You can locate popular cities around the world, and display longitude and latitude coordinates and local time. Lets you set the location of your computer.

Memory: You can control memory settings, including disk cache, virtual memory, and RAM disk configuration. Do not remove this control panel if you use a RAM disk.

Monitors: You can set the number of colors or shades of gray that are displayed. Sets monitor resolution for multiple scan monitors. On some computers, the Monitors control panel is replaced by the Monitors & Sound control panel.

Monitors & Sound: A combined control panel that replaces the separate Sound and Monitors control panels. (It also replaces the Sound & Displays control panel.) You can use this control panel to specify information about monitors attached to your computer (for example, monitor resolution, monitor bit depth, monitor arrangement, and so on). You can also use this control panel to specify information about other audiovisual equipment attached to your computer (for example, audio CD players, VCRs, video cameras, external speakers, and so on.) Works on PowerPC-based computers with PCI slots.

Mouse: You can set the tracking speed and double-click speed for your mouse.

Numbers: You can control how numbers and currencies are displayed on your computer (for example, where decimal points appear).

PC Exchange: Allows your computer to read files from ProDOS and MS-DOS disks. You can specify the Mac OS application program used to open a DOS document. You can also use SyQuest and Bernoulli disks on your desktop.

PC Setup: You can set options for the DOS Compatibility Card. Works on all that support the DOS Compatibility Card.

Power Macintosh Card: Used with 68040-based Mac OS computers that have an expansion card with a PowerPC processor. You can select which processor to use. Works on all computers with a Power Macintosh Upgrade card.

PowerBook: You can set portable-specific items, including hard disk sleep, system sleep, and screen dimming. You can also set processor cycling and (on certain computers) reduced processor speed. Controls backlight intensity and built-in video. Works on all portable computers.

PowerBook Display: You can duplicate the images on your portable computer's display on an external monitor. Useful for controlling a presentation from your portable while displaying the presentation on a large room monitor. Works on Macintosh PowerBook 160, 165c, 180, 180c, 200, and 500 models.

PowerBook Setup: You can set a unique SCSI ID number for your portable computer for use with SCSI disk mode. You can also specify a Normal or Compatible modem setting for your PowerBook. Use Normal for communication applications that are compatible with the Macintosh Communications Toolbox. Use Compatible for communication applications that are not compatible with the Communications Toolbox. Works on all Macintosh PowerBook 200 and 500 models.

QuickTime Settings: You can set options for MIDI instruments, and set a CD to play automatically when inserted.

Screen: You can control brightness and contrast for a built-in monitor. Works on all computers with built-in monitors.

Serial Switch: Provides compatibility for some applications that use the printer or modem port. You can set the serial port option to Faster or More Compatible. Works on Macintosh IIfx and Macintosh Quadra 950 computers.

Sharing Setup: You can set file sharing options and specify a network name for your computer.

Sound: You can set the alert sound and volume and specify a sound input and sound output source for your computer. On PowerPC-based computers with PCI slots, this control panel is replaced by the Monitors & Sound control panel.

Speech: You can set options for hearing text read aloud by the computer. If you have Speakable Items software and a PlainTalk-compatible microphone, you can set options for giving spoken commands to the computer. Works on all Macintosh 660AV and 840AV computers. Also works on all computers with PowerPC microprocessors.

Startup Disk: You can select the disk used to start up your computer.

TCP/IP: You can specify TCP/IP settings for use with Apple's Open Transport networking.

Text: You can select from the text features for the script systems installed on your computer.

Trackpad: You can set how far the pointer moves when you move your finger on the trackpad, and how fast you double-click. Works on all Macintosh PowerBook 500/5000 models.

Users & Groups: You can specify who can access your computer's hard disk when file sharing is turned on.

Views: You can customize how information is displayed in Finder windows.

WindowShade: You can set whether to hide a window by clicking on its title bar.

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Tech Info Library Article Number:20836



Tech Info Library

Mac OS 7.6: About the Extensions Folder Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About the Extensions Folder Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About the Extensions Folder ReadMe file.

DISCUSSION -----

Mac OS 7.6
What's Inside the Extensions Folder?

About this document

If you're curious about the contents of the Extensions folder, this document provides a brief description of each extension. You can use these descriptions to help determine which extensions you may need and which ones you may not need.

What is an extension?

An extension is a small file that changes how your computer operates. Unlike a control panel, you typically do not have any direct interaction with an extension. An extension makes the appropriate changes when you start your computer and remains active until you shut down your computer.

Depending on the type of computer you have, the contents of your Extensions folder may vary. You might also have extensions that were added by third-party applications. You can use the Extensions Manager control panel to turn off any extension you don't need. Extensions with the letters "lib" in them are typically code libraries that may be used by multiple applications or system components. Turning off libraries may have unexpected effects. In general, you shouldn't turn off any extensions unless you know for certain what they're used for.

EM Extension: Used by the Extensions Manager control panel.

9500 Guide Additions: Adds step-by-step instructions for using features specific to the Power Macintosh 9500 to the on screen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

A/ROSE: Allows communication between your computer's main logic board and NuBus cards that run the Apple Real-Time Operating System. Examples of such NuBus cards include the Apple Token Ring 4.16 NB card and the Apple Serial NB card.

About Apple Guide: Provides information about how to use Apple's on screen help system. You can access About Apple Guide from the Guide (question mark) menu when the Finder is active.

Apple Built-In Ethernet and Apple Ethernet NB: Used by Open Transport to allow access to the built-in Ethernet port on your computer.

AppleCD Audio Player Guide: Provides step-by-step instructions for using the AppleCD Audio Player. You can access the AppleCD Audio Player Guide from the Guide (question mark) menu, after you install and open AppleCD Audio Player.

Apple CD-ROM: Enables your computer to use an Apple CD-ROM drive.

Apple Color Printer: Enables your computer to print documents on an Apple Color Printer.

Apple Color SW Pro CMM: Contains color-matching information used by ColorSync 2.0 to maintain consistent color between documents.

Apple Guide: Enables your computer to use Apple's on screen help system.

Apple Photo Access: Part of the CD-ROM software for viewing Kodak PhotoCDs.

AppleScriptLib: Provides native support for AppleScript on PowerPC-based computers.

AppleScript: Enables automation of repetitive tasks in applications that support it. Some applications, such as Apple on screen help, require AppleScript to work.

AppleShare: Gives you access to shared disks on the network.

AppleTalk ImageWriter: Enables your computer to print documents on a networked ImageWriter II.

AppleVision Guide Additions: Adds step-by-step instructions to Mac OS Guide about how to use AppleVision displays with your computer. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Assistant Toolbox: This is the base extension for AutoRemounter. AutoRemounter works on portable computers and allows file synchronization, battery management, and easy mobile computing. It also provides support for a persistent RAM disk and deferred printing. This extension may conflict with the LaserWriter Select 310 printer software to block printing. A solution is to turn off background

printing in the Chooser.

Audio CD Access: Lets you play audio CDs on your internal or external CD-ROM drive. Requires the AppleCD Audio Player or equivalent application to control the audio CD.

AV Guide Additions: Adds step-by-step instructions to Mac OS Guide about how to use AV monitors with your computer. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

AV Setup: Used to control AppleVision displays.

Caps Lock: Provides a visual indication of the state of the Caps Lock key on a portable computer. When Caps Lock is turned on, an "up" arrow appears in the menu bar next to the Guide (question mark) menu. (Not needed on Macintosh PowerBook 500 series computers.)

Clipping Extension: Lets you use the drag-and-drop feature to create clipping files on your desktop.

Color Picker: Presents a standard interface for color selection. Applications can use this tool to let you choose colors.

Color SW 2000 Series CMM: Color-matching information used by ColorSync to maintain consistent color between documents printed on a Color StyleWriter 2000 series printer and other color devices.

Color SW 2400: Enables your computer to print documents on a Color StyleWriter 2200 or Color StyleWriter 2400.

Color SW Pro: Enables your computer to print documents on a Color StyleWriter Pro.

ColorSync: Matches colors on your display with the closest matching colors on your printers, scanners, and other devices.

Desktop Printer Extension, Desktop Printer Spooler, Desktop PrintMonitor: All three of these files are necessary for the desktop printing feature to work. (With desktop printing, you can print documents by dragging their icons to printer icons.)

Energy Saver Guide Additions: Adds step-by-step instructions for using Energy Saver to the on screen help provided in Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

EtherTalk Phase 2: Lets you connect your computer to an Ethernet network.

File Sharing Extension: Enables your computer to share files and folders with other computers on your network.

Find File Extension: Lets you search for files and view the results in a single window. If you turn off this extension and choose Find from the File menu, you'll get the System 7.1 Find dialog box instead of the Find File window.

Finder Help: Provides Balloon Help support for the Finder.

Finder Scripting Extension: Allows you to use AppleScript to automate tasks in the Finder.

Foreign File Access: Enables your computer to work with CD-ROM discs whose contents don't use the standard Mac OS file system (for example, ISO 9660 or High Sierra formats).

Global Guide Files folder: Contains files used by the on screen help system. Some of these files may be used to provide help more than one application.

Graphics Accelerator: Provides video acceleration for the PCI video card.

High Sierra File Access: Part of the CD-ROM software that lets you view CDs with High Sierra file systems.

IIci/IIsi Monitors: Describes the capabilities of the built-in video card for the Macintosh IIci and IIsi. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

ImageWriter: Enables your computer to print documents on an ImageWriter or ImageWriter II connected to a serial port.

ImageWriter LQ: Enables your computer to print documents on an ImageWriter LQ connected to a serial port.

ISO 9660 File Access: Part of the CD-ROM software that lets you view CDs with ISO 9660 file systems.

LaserWriter 300: Enables your computer to print documents on a Personal LaserWriter 300, LaserWriter Select 300, or a Personal LaserWriter LS.

LaserWriter 8: (version 8.x) A PostScript level II print driver that enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter IISC: Enables your computer to print documents on a LaserWriter IISC connected to a SCSI port. Replaced by Personal LaserWriter SC.

LW Select 310: Enables your computer to print documents on a LaserWriter Select 310.

MacinTalk 3: Lets your computer read text documents in human-like voices.

Mac OS Guide: Contains step-by-step instructions for working in the Finder. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Monitors & Sound Guide Additions: Adds step-by-step instructions for using the

Monitors & Sound control panel to Mac OS Guide. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

My Speech Macros: Supports the Speech Macro Editor.

Network Extension: Lets you set Personal File Sharing from the Finder.

OpenDoc Libraries folder: Contains code libraries and other files that enable OpenDoc technology.

ObjectSupportLib: A library developers use to support AppleScript on computers with PowerPC microprocessors.

Open Transport Guide Additions: Adds step-by-step instructions for using Open Transport networking software to Mac OS Guide. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Open Tpt AppleTalk Library: Used by Open Transport for the AppleTalk communication protocol.

Open Tpt Internet Library: Used by Open Transport for the TCP/IP communication protocol.

Open Transport Library: Used by Open Transport.

OpenTptAppleTalkLib: Used by Open Transport for AppleTalk communication protocol.

OpenTptInternetLib: Used by Open Transport for the TCP/IP communication protocol.

OpenTransportLib: Used by Open Transport.

PB 500 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 500 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 190 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 190 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 2300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 2300 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 5300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 5300 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Personal LaserWriter SC: Enables your computer to print documents on a Personal LaserWriter SC or a LaserWriter IISC.

Portable StyleWriter: Enables your computer to print documents on a Portable

StyleWriter.

PowerBook Guide Additions: Adds PowerBook-specific topics to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PowerBook Monitors Extension: Describes the PowerBook built-in display. If you remove this file, your computer can still use the PowerBook video card and you can still select the number of colors your screen can display, but certain options (such as gamma settings) may not be available.

PowerPC Monitors Extension: Supports the AudioVision 14 monitor.

Printer Descriptions: Contains descriptions for all printers that use the LaserWriter 8 printer software.

Printer Share: Provides the ability to share non-network printers (for example, the StyleWriter II) across a network.

PrintingLib: Used by the desktop printing software.

PrintMonitor: Controls the printing process when background printing is activated.

Quadra AV Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Centris AV computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

Quadra Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Macintosh Centris computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

QuickTime: Provides built-in multimedia support for applications.

QuickTime PowerPlug: Provides native support of QuickTime for PowerPC-based computers when used in combination with QuickTime 2.0. This extension must be used in addition to QuickTime 2.0.

QuickTime Musical Instruments: Supports 30 Roland Standard MIDI sound samples that can be accessed by QuickTime applications with no additional MIDI equipment.

Scripting Additions: Extends the AppleScript language with special features, such as finding the date or time of day. With scripting additions installed, AppleScript acts as if these features are part of the language. Scripting additions are required only when a script uses them.

Serial (Built-In): Used by Open Transport to allow access to the built-in serial port on your computer.

Shared Library Manager: Provides native support for Open Transport.

Shortcuts: Explains common keyboard equivalents and other shortcuts to use in the Finder. You can access Shortcuts in the Guide (question mark) menu when the Finder is active.

SimpleText Guide: Provides step-by-step instructions for using SimpleText. You can access the SimpleText Guide from the Guide (question mark) menu, after you open SimpleText.

Speech Guide Additions: Adds step-by-step instructions for using speech recognition to the on screen help provided in Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

SOMobjects for Mac OS: Used by OpenDoc.

Speech Manager: Provides text-to-speech capabilities.

SR Monitor: Used to monitor and interpret speech.

Startup Tuner: Ensures correctly starting up from the disk selected in the Startup Disk control panel.

StyleWriter II: Enables your computer to print documents on a StyleWriter II. Replaced by StyleWriter 1200.

StyleWriter 1200: Enables your computer to print documents on a StyleWriter, StyleWriter II, or StyleWriter 1200.

SystemAV: Used for audio-video input.

System Speech Rules: Supports voices and speech dialects.

TokenTalk Phase 2: Used by the Apple Token Ring card.

TokenTalk Prep: Supports TokenTalk Phase II.

Tutorial Items: Provides instructions for learning basic skills on your computer. You can access the tutorial from the Guide (question mark) menu when the Finder is active.

Video Startup: Used by the Apple Video Player.

Voices folder: Includes voices your computer can use when reading text or speaking alert messages.

WorldScript Power Adapter: Supports language kit software on PowerPC-based computers. However, computers that use the Roman alphabet (English and French, for example), can still take advantage of performance and stability enhancements provided by the WorldScript Power Adapter.

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Tech Info Library

Mac OS 7.6: About the Extensions Folder Read Me (1/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: About the Extensions Folder Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About the Extensions Folder ReadMe file.

DISCUSSION -----

Mac OS 7.6
What's Inside the Extensions Folder?

About this document

If you're curious about the contents of the Extensions folder, this document provides a brief description of each extension. You can use these descriptions to help determine which extensions you may need and which ones you may not need.

What is an extension?

An extension is a small file that changes how your computer operates. Unlike a control panel, you typically do not have any direct interaction with an extension. An extension makes the appropriate changes when you start your computer and remains active until you shut down your computer.

Depending on the type of computer you have, the contents of your Extensions folder may vary. You might also have extensions that were added by third-party applications. You can use the Extensions Manager control panel to turn off any extension you don't need. Extensions with the letters "lib" in them are typically code libraries that may be used by multiple applications or system components. Turning off libraries may have unexpected effects. In general, you shouldn't turn off any extensions unless you know for certain what they're used for.

EM Extension: Used by the Extensions Manager control panel.

9500 Guide Additions: Adds step-by-step instructions for using features specific to the Power Macintosh 9500 to the on screen help provided in Macintosh Guide. You can access Macintosh Guide from the Guide (question mark) menu when the Finder is active.

A/ROSE: Allows communication between your computer's main logic board and NuBus cards that run the Apple Real-Time Operating System. Examples of such NuBus cards include the Apple Token Ring 4.16 NB card and the Apple Serial NB card.

About Apple Guide: Provides information about how to use Apple's on screen help system. You can access About Apple Guide from the Guide (question mark) menu when the Finder is active.

Apple Built-In Ethernet and Apple Ethernet NB: Used by Open Transport to allow access to the built-in Ethernet port on your computer.

AppleCD Audio Player Guide: Provides step-by-step instructions for using the AppleCD Audio Player. You can access the AppleCD Audio Player Guide from the Guide (question mark) menu, after you install and open AppleCD Audio Player.

Apple CD-ROM: Enables your computer to use an Apple CD-ROM drive.

Apple Color Printer: Enables your computer to print documents on an Apple Color Printer.

Apple Color SW Pro CMM: Contains color-matching information used by ColorSync 2.0 to maintain consistent color between documents.

Apple Guide: Enables your computer to use Apple's on screen help system.

Apple Photo Access: Part of the CD-ROM software for viewing Kodak PhotoCDs.

AppleScriptLib: Provides native support for AppleScript on PowerPC-based computers.

AppleScript: Enables automation of repetitive tasks in applications that support it. Some applications, such as Apple on screen help, require AppleScript to work.

AppleShare: Gives you access to shared disks on the network.

AppleTalk ImageWriter: Enables your computer to print documents on a networked ImageWriter II.

AppleVision Guide Additions: Adds step-by-step instructions to Mac OS Guide about how to use AppleVision displays with your computer. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Assistant Toolbox: This is the base extension for AutoRemounter. AutoRemounter works on portable computers and allows file synchronization, battery management, and easy mobile computing. It also provides support for a persistent RAM disk and deferred printing. This extension may conflict with the LaserWriter Select 310 printer software to block printing. A solution is to turn off background

printing in the Chooser.

Audio CD Access: Lets you play audio CDs on your internal or external CD-ROM drive. Requires the AppleCD Audio Player or equivalent application to control the audio CD.

AV Guide Additions: Adds step-by-step instructions to Mac OS Guide about how to use AV monitors with your computer. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

AV Setup: Used to control AppleVision displays.

Caps Lock: Provides a visual indication of the state of the Caps Lock key on a portable computer. When Caps Lock is turned on, an "up" arrow appears in the menu bar next to the Guide (question mark) menu. (Not needed on Macintosh PowerBook 500 series computers.)

Clipping Extension: Lets you use the drag-and-drop feature to create clipping files on your desktop.

Color Picker: Presents a standard interface for color selection. Applications can use this tool to let you choose colors.

Color SW 2000 Series CMM: Color-matching information used by ColorSync to maintain consistent color between documents printed on a Color StyleWriter 2000 series printer and other color devices.

Color SW 2400: Enables your computer to print documents on a Color StyleWriter 2200 or Color StyleWriter 2400.

Color SW Pro: Enables your computer to print documents on a Color StyleWriter Pro.

ColorSync: Matches colors on your display with the closest matching colors on your printers, scanners, and other devices.

Desktop Printer Extension, Desktop Printer Spooler, Desktop PrintMonitor: All three of these files are necessary for the desktop printing feature to work. (With desktop printing, you can print documents by dragging their icons to printer icons.)

Energy Saver Guide Additions: Adds step-by-step instructions for using Energy Saver to the on screen help provided in Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

EtherTalk Phase 2: Lets you connect your computer to an Ethernet network.

File Sharing Extension: Enables your computer to share files and folders with other computers on your network.

Find File Extension: Lets you search for files and view the results in a single window. If you turn off this extension and choose Find from the File menu, you'll get the System 7.1 Find dialog box instead of the Find File window.

Finder Help: Provides Balloon Help support for the Finder.

Finder Scripting Extension: Allows you to use AppleScript to automate tasks in the Finder.

Foreign File Access: Enables your computer to work with CD-ROM discs whose contents don't use the standard Mac OS file system (for example, ISO 9660 or High Sierra formats).

Global Guide Files folder: Contains files used by the on screen help system. Some of these files may be used to provide help more than one application.

Graphics Accelerator: Provides video acceleration for the PCI video card.

High Sierra File Access: Part of the CD-ROM software that lets you view CDs with High Sierra file systems.

IIci/IIsi Monitors: Describes the capabilities of the built-in video card for the Macintosh IIci and IIsi. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

ImageWriter: Enables your computer to print documents on an ImageWriter or ImageWriter II connected to a serial port.

ImageWriter LQ: Enables your computer to print documents on an ImageWriter LQ connected to a serial port.

ISO 9660 File Access: Part of the CD-ROM software that lets you view CDs with ISO 9660 file systems.

LaserWriter 300: Enables your computer to print documents on a Personal LaserWriter 300, LaserWriter Select 300, or a Personal LaserWriter LS.

LaserWriter 8: (version 8.x) A PostScript level II print driver that enables your computer to print documents on a PostScript printer connected to an AppleTalk network.

LaserWriter IISC: Enables your computer to print documents on a LaserWriter IISC connected to a SCSI port. Replaced by Personal LaserWriter SC.

LW Select 310: Enables your computer to print documents on a LaserWriter Select 310.

MacinTalk 3: Lets your computer read text documents in human-like voices.

Mac OS Guide: Contains step-by-step instructions for working in the Finder. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Monitors & Sound Guide Additions: Adds step-by-step instructions for using the

Monitors & Sound control panel to Mac OS Guide. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

My Speech Macros: Supports the Speech Macro Editor.

Network Extension: Lets you set Personal File Sharing from the Finder.

OpenDoc Libraries folder: Contains code libraries and other files that enable OpenDoc technology.

ObjectSupportLib: A library developers use to support AppleScript on computers with PowerPC microprocessors.

Open Transport Guide Additions: Adds step-by-step instructions for using Open Transport networking software to Mac OS Guide. You access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Open Tpt AppleTalk Library: Used by Open Transport for the AppleTalk communication protocol.

Open Tpt Internet Library: Used by Open Transport for the TCP/IP communication protocol.

Open Transport Library: Used by Open Transport.

OpenTptAppleTalkLib: Used by Open Transport for AppleTalk communication protocol.

OpenTptInternetLib: Used by Open Transport for the TCP/IP communication protocol.

OpenTransportLib: Used by Open Transport.

PB 500 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 500 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 190 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 190 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 2300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 2300 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PB 5300 Upgrade Guide Additions: Adds step-by-step instructions for using features specific to the PowerBook 5300 to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

Personal LaserWriter SC: Enables your computer to print documents on a Personal LaserWriter SC or a LaserWriter IISC.

Portable StyleWriter: Enables your computer to print documents on a Portable

StyleWriter.

PowerBook Guide Additions: Adds PowerBook-specific topics to Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

PowerBook Monitors Extension: Describes the PowerBook built-in display. If you remove this file, your computer can still use the PowerBook video card and you can still select the number of colors your screen can display, but certain options (such as gamma settings) may not be available.

PowerPC Monitors Extension: Supports the AudioVision 14 monitor.

Printer Descriptions: Contains descriptions for all printers that use the LaserWriter 8 printer software.

Printer Share: Provides the ability to share non-network printers (for example, the StyleWriter II) across a network.

PrintingLib: Used by the desktop printing software.

PrintMonitor: Controls the printing process when background printing is activated.

Quadra AV Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Centris AV computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

Quadra Monitors Extension: Describes the capabilities of the built-in video card for the Macintosh Quadra and Macintosh Centris computers. If you remove this file, your computer can still use the video card and you can still select the number of colors displayed on your monitor, but monitor options (such as gamma settings) may not be available.

QuickTime: Provides built-in multimedia support for applications.

QuickTime PowerPlug: Provides native support of QuickTime for PowerPC-based computers when used in combination with QuickTime 2.0. This extension must be used in addition to QuickTime 2.0.

QuickTime Musical Instruments: Supports 30 Roland Standard MIDI sound samples that can be accessed by QuickTime applications with no additional MIDI equipment.

Scripting Additions: Extends the AppleScript language with special features, such as finding the date or time of day. With scripting additions installed, AppleScript acts as if these features are part of the language. Scripting additions are required only when a script uses them.

Serial (Built-In): Used by Open Transport to allow access to the built-in serial port on your computer.

Shared Library Manager: Provides native support for Open Transport.

Shortcuts: Explains common keyboard equivalents and other shortcuts to use in the Finder. You can access Shortcuts in the Guide (question mark) menu when the Finder is active.

SimpleText Guide: Provides step-by-step instructions for using SimpleText. You can access the SimpleText Guide from the Guide (question mark) menu, after you open SimpleText.

Speech Guide Additions: Adds step-by-step instructions for using speech recognition to the on screen help provided in Mac OS Guide. You can access Mac OS Guide from the Guide (question mark) menu when the Finder is active.

SOMobjects for Mac OS: Used by OpenDoc.

Speech Manager: Provides text-to-speech capabilities.

SR Monitor: Used to monitor and interpret speech.

Startup Tuner: Ensures correctly starting up from the disk selected in the Startup Disk control panel.

StyleWriter II: Enables your computer to print documents on a StyleWriter II. Replaced by StyleWriter 1200.

StyleWriter 1200: Enables your computer to print documents on a StyleWriter, StyleWriter II, or StyleWriter 1200.

SystemAV: Used for audio-video input.

System Speech Rules: Supports voices and speech dialects.

TokenTalk Phase 2: Used by the Apple Token Ring card.

TokenTalk Prep: Supports TokenTalk Phase II.

Tutorial Items: Provides instructions for learning basic skills on your computer. You can access the tutorial from the Guide (question mark) menu when the Finder is active.

Video Startup: Used by the Apple Video Player.

Voices folder: Includes voices your computer can use when reading text or speaking alert messages.

WorldScript Power Adapter: Supports language kit software on PowerPC-based computers. However, computers that use the Roman alphabet (English and French, for example), can still take advantage of performance and stability enhancements provided by the WorldScript Power Adapter.

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Tech Info Library

About the Mac OS 7.6 Utilities Read Me (1/97)

Revised: 4/21/97
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About the Mac OS 7.6 Utilities Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the About the Mac OS 7.6 Utilities ReadMe file.

DISCUSSION -----

About the Mac OS 7.6 Utilities

This document contains information about the utilities provided with Mac OS 7.6.

5xxx/6xxx Tester

This program tests Performa and Power Macintosh 5200, 5300, 6200, and 6300 computers for a possible hardware problem. If you have a Performa or Power Macintosh 5200, 5300, 6200, or 6300 series computer, you should use the tester before installing Mac OS 7.6. See the document inside the Tester folder for instructions on using the tester.

IMPORTANT: The Power Macintosh or Performa 6360 does not have this hardware problem. If you have a Power Macintosh or Performa 6360, you do not need to use the tester program.

AppleShare software

If you have AppleShare software version 3.6, 3.6.1, or 3.6.2, you should upgrade to version 3.6.3 before installing Mac OS 7.6 over a network. See the document inside the AppleShare folder for instructions.

Disk First Aid

You use the Disk First Aid program to test and repair your hard disk.

To test a disk, follow these steps:

- 1) Open the Disk First Aid program.
- 2) In the screen that appears, click the icon of the disk you want to check.
- 3) Click Verify to test the disk for problems.

Drive Setup and HD SC Setup

You use the Drive Setup or HD SC Setup programs to update your disk driver or to reinitialize a disk. You should update the drivers on your hard disks before installing system software.

The following computers should use the Drive Setup program:

all computers with PowerPC microprocessors
Macintosh LC 580
Macintosh LC 630
Macintosh LC 630 DOS Compatible
Macintosh Quadra 630 series computers
Macintosh Performa 580 series computers
Macintosh Performa 630 and 640 series computers
PowerBook 150 series computers
PowerBook 190 series computers

All other computers should use HD SC Setup.

Note for PowerBook 150 owners: You do not need to update the driver for your internal hard disk. That driver is contained in your computer's ROM. If you try using either utility program to update the driver, nothing will happen.

Note for Quadra owners with a PowerPC Upgrade Card: Drive Setup does not work with your upgrade card. You can use HD SC Setup to update your driver or initialize a disk, but you need to turn off the PowerPC upgrade card before using HD SC Setup.

To update the disk driver with Drive Setup, follow these steps:

- 1) Open the Drive Setup program.
- 2) Click the disk whose driver you want to update.
- 3) Choose Update Driver from the Functions menu.

To update the disk driver with HD SC Setup, follow these steps:

- 1) Open the HD SC Setup program.
- 2) Click Drive until the "volume name" is the name of the disk whose driver you want to update.
- 3) Click Update.

WARNING: Before using Drive Setup or HD SC Setup to update your disk driver, make sure you turn off any disk protection software you may be using.

IMPORTANT: If the Update Driver command is dimmed, or if the disk name never appears when you click Drive, the problem disk is either not supported, or it's previously been updated with a non-Apple utility.

- If the disk isn't supported, check the instructions that came with your computer or disk to see if the manufacturer includes or recommends a disk utility, and use that utility to update the driver. To ensure a successful update, obtain the latest version of the utility.
- If you've updated or formatted the disk with a non-Apple utility, you'll need to use that utility again to perform the update. To ensure a successful update, obtain the latest version of the utility.

Adobe Acrobat Reader

With the Acrobat Reader, you can read and print documents saved in the Acrobat .pdf format. You don't need the the fonts or applications used to create these files; you only need the Acrobat Reader software.

To install the Acrobat Reader, double-click the Installer icon in the Acrobat folder.

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Tech Info Library

Mac OS 7.6: About the System Folder Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: About the System Folder Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the About the System Folder ReadMe folder.

DISCUSSION -----

Mac OS 7.6
What's Inside the System Folder?

About this document

If you're curious about the contents of the System Folder, this document provides a brief description of what's inside.

Depending on the type of computer you have, the contents of the System Folder may vary. You might also have items that were added by third-party applications.

Finder: Displays the desktop area, where you work with files and disks, and keeps track of your files.

Apple Menu Items folder: When you place an item (folder, application, or document) in this folder, it appears in the Apple () menu. To create submenus, you can place folders inside of folders.

Clipboard: Temporarily stores the last item you cut or copied from a document.

Control Panels folder: Contains individual control panels. You use control panels to adjust your computer's settings. See the "About the Control Panels" document in the Apple Extras folder for more information.

Control Strip Modules folder: Contains modules used by the Control Strip.

Editors: Contains OpenDoc part editors. Editors provide functionality to OpenDoc

parts, but you don't work with editors directly. To use an editor to create a document, double-click the editor's stationery icon. Your stationery icons are probably located in the Stationery folder on your hard disk.

Extensions folder: Contains individual extensions that modify the operation of your computer. Unlike a control panel, an extension works automatically, without your intervention. See the "About the Extensions Folder" document in the Apple Extras folder for more information.

Fonts folder: Contains font suitcases or individual font files. You can place up to 128 suitcase or font files in this folder. PostScript fonts are not included in the 128 file limit. Font suitcases can hold any number of font files, up to a limit of 16 MB.

Launcher Items folder: Contains files, folders, and applications that appear in the Launcher window.

Macsbug: A debugger used by programmers to help diagnose problems with programs, extensions, and so on. Unless you're programming, you don't need Macsbug.

Preferences folder: Contains preferences files created by individual applications. A preference file determines application settings.

PrintMonitor Documents folder: Stores information waiting to be printed.

Scrapbook: Stores items placed in the Scrapbook. (The Scrapbook is available in the Apple menu.)

Shutdown Items folder: Contains applications or scripts that run automatically when you shut down your computer. You can add or remove items from this folder.

Startup Items folder: Contains applications or scripts that run automatically when you start your computer. You can add or remove items from this folder.

System file: Contains some system-wide resources, such as sounds and keyboard layouts.

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Tech Info Library Article Number:20839



Tech Info Library

Mac OS 7.6: Desktop Patterns Information Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: Desktop Patterns Information Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the Desktop Patterns Information ReadMe file which comes with Mac OS 7.6.

DISCUSSION -----

About the Desktop Patterns Clipping Folder

What are Desktop Patterns?

Desktop Patterns allow you to change the pattern or color of your computer's desktop. Since you are using System 7.5, you already have Desktop Patterns installed in your Control Panels folder. The files in the Desktop Pattern Clippings folder provide additional patterns. To view any of these patterns, simply double-click its icon.

How can I install these Desktop Pattern clippings into my system?

To install any of the Desktop Pattern clippings, follow these steps:

- 1) Open the Desktop Pattern Clippings folder.
- 2) Open the Desktop Patterns control panel (in the Control Panels folder inside the System Folder).
- 3) Drag the desired Desktop Pattern clipping from the Desktop Pattern Clippings folder onto the pattern currently displayed in the Desktop Patterns control panel, and release the mouse button.

The Desktop Pattern clipping that you dragged now appears in the window of the Desktop Patterns control panel. You can choose it as your desktop pattern by clicking Set Desktop Pattern.

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Tech Info Library

Installing Mac OS 7.6 Read Me (1/97)

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Installing Mac OS 7.6 Read Me (1/97)

Article Created: 24 January 1997

TOPIC -----

This article is the Installing Mac OS 7.6 ReadMe file.

DISCUSSION -----

Installing Mac OS 7.6

This document describes how to install Mac OS 7.6. It includes compatibility information, instructions for the Install Mac OS application program, and basic installation troubleshooting.

For more detailed information, see the Mac OS 7.6 installation manual.

WARNING: PowerTalk is not compatible with Mac OS 7.6. After you install Mac OS 7.6, you won't be able to access your PowerTalk mail or catalogs, nor will you be able to use your keychain or other PowerTalk services. See the Mac OS 7.6 installation manual for more information.

IMPORTANT: OpenDoc, Cyberdog, and the LaserWriter 8.4 driver use a common piece of software called the CFM 68K Runtime Enabler. Apple has discovered a problem with the CFM 68K Runtime Enabler and is not including it with Mac OS 7.6. You cannot install OpenDoc, Cyberdog, and the LaserWriter 8.4 driver on computers with 68030 and 68040 microprocessors. (These items are included with Mac OS 7.6 for computers with PowerPC microprocessors.)

You may have applications that use the CFM 68K Runtime Enabler. Additional Apple products that use this software include Apple Telecom software, version 3.0 or later, and the Apple Media Tool. These applications will not work on computers with 68030 and 68040 microprocessors and Mac OS 7.6. However, since the problem exists independently of Mac OS 7.6, you should still install Mac OS 7.6 and not use applications or versions of applications that require the CFM 68K Runtime Enabler. Apple is working on a solution to this problem and will release a new version of the 68K Runtime Enabler as soon as possible.

Before you install
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- Start up your computer using the Mac OS 7.6 CD-ROM disc or the Mac OS 7.6 Install Me First floppy disk. See your installation manual for instructions.
- Although compatibility problems are not expected, you can ensure a smooth upgrade by checking with the manufacturers of any non-Apple software you use to make sure it is compatible with Mac OS 7.6. If you do experience a problem, see the troubleshooting chapter in your installation manual for more information on isolating compatibility problems.
- If you have a portable computer, make sure that the computer is plugged in.
- You cannot install this software onto a portable computer running in SCSI disk mode. (With SCSI disk mode, you connect your portable computer with a SCSI Disk Adapter cable to another computer and use the portable computer as an external hard disk.)

If you're installing over a network or can't start up with the Mac OS 7.6 disks, be sure to do the following:

- Turn off any installed disk security, virus protection, and screen saver programs before beginning. Also turn off At Ease software, if you have it installed.
- If you are installing on a portable computer, or a desktop computer with energy-saving software installed, set the computer so it will not go to sleep or shut down automatically. For instructions, see the documentation that came with your computer.
- If you have AppleShare Workstation software version 3.6, 3.6.1, or 3.6.2, you need to upgrade to version 3.6.4 before you can install Mac OS 7.6 over a network. This software is provided in the Utilities folder on the Mac OS 7.6 CD-ROM disc. Install this version of AppleShare before proceeding with the Mac OS 7.6 installation.

Compatibility information
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- MacTCP users should note network settings before installing Mac OS 7.6. MacTCP is removed when Mac OS 7.6 is installed. (Mac OS 7.6 includes the TCP/IP control panel instead.) If you are currently using MacTCP, you should note your current network settings (IP address, subnet mask, and so on) before installing Mac OS 7.6. After the installation, enter your network settings in the TCP/IP control panel.
- Computers with 68030 or 68040 processor upgrade cards. Computers upgraded to 68030 or 68040 with a processor upgrade card are not supported by Mac OS 7.6.

- Performa or Power Macintosh 5000 and 6000 series computers

Some Performa or Power Macintosh 5200 series, 5300 series, 6200 series and 6300 series models cannot use Mac OS 7.6 until a hardware problem is fixed. The repairs are covered under the Apple repair extension program. To see if your computer has this hardware problem, use the 5xxx/6xxx Tester utility in the Utilities folder on the CD before installing Mac OS 7.6.

IMPORTANT: The Power Macintosh or Performa 6360 does not have this hardware problem. If you have a Power Macintosh or Performa 6360, you do not need to use the tester program.

- Open Transport versions later than 1.1.1

Mac OS 7.6 installs Open Transport version 1.1.1. If you have a later version, you will need to reinstall it after installing Mac OS 7.6.

- Installing QuickDraw GX for use with a non-Apple printer

If you want to use QuickDraw GX with a non-Apple printer, you need to obtain a QuickDraw GX printer driver. You will not be able to use your non-Apple printer without a GX driver. Contact your printer vendor for details.

- Using the QuickDraw GX Installer when Adobe Acrobat is installed

If you use the QuickDraw GX Installer to either install or remove QuickDraw GX and your computer has Adobe Acrobat installed, Acrobat will display a message about missing fonts each time the computer is restarted. Reinstall Acrobat to stop the warning message.

- Installing Apple Remote Access client software when Open Transport PPP is already installed

Apple Remote Access installs older versions of modem scripts. If you install Apple Remote Access after Open Transport PPP, you'll see messages during the installation process. Respond that you want to use the newer versions of the modem scripts.

Using the Install Mac OS program

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To ensure a successful upgrade, you should use the Install Mac OS program to install the software. This program unifies the tasks recommended for a successful installation and simplifies the installation process. Be sure to follow all the steps on the Install Mac OS screen.

Update your hard disk drivers

Hard disks with drivers older than those included with System 7.5 might cause problems after installing Mac OS 7.6. Your computer might not start up, or you might not see the disk icons on the desktop. To avoid these and other potential problems, you should update your drivers.

To update your hard disk drivers, click the button for step 2 on the Install Mac OS screen. Read the dialog box that appears. You can't use the disk utilities provided by Apple if:

- You don't have an Apple computer, or you don't have an Apple hard disk. Check the instructions that came with your computer or hard disk to see if the manufacturer includes or recommends a disk utility, and use that utility to perform the update. Make sure to get the latest version of the disk utility (an old utility will install an old driver).
- You've previously used a non-Apple disk utility to format your disk or update the driver. You'll need to use that utility again to perform the update. Make sure to get the latest version of the disk utility (an old utility will install an old driver).
- You have a PowerBook 150 and no external drives attached to the computer. The driver for the PowerBook 150's internal hard disk is in the computer's ROM and doesn't need to be updated.

Otherwise, click Continue.

If you see an Update Driver button: Select a hard disk, then click Update Driver. Repeat this step for each hard disk attached to your computer.

If you don't see an Update Driver button: Click Drive until the "volume name" is a hard disk attached to your computer. Then click Update. Repeat this step for each hard disk attached to your computer.

Select a disk for installation

Click the button for step 3 on the Install Mac OS screen. Use the pop-up menu to choose the disk on which you want to install Mac OS 7.6.

For a typical installation, you need about 70 MB of disk space available on the disk you select. To install a minimal system, you need about 40 MB; to install all the optional software, you need about 120 MB.

Install the software

Click the button for step 4 on the main Install Mac OS screen. You'll see a list of software products.

Basic system software is automatically installed. On computers with PowerPC processors, OpenDoc and OpenDoc Essentials are also automatically installed. You can also choose to install the following software products. (Recommended choices are preselected.)

- QuickDraw 3D, to view and manipulate 3D images on your computer. Only computers with PowerPC microprocessors can use QuickDraw 3D.
- MacLinkPlus translators, to open documents created in applications you don't have with appropriate applications you do have, including DOS and Windows documents. (These translators work with the Mac OS Easy Open control panel.)
- Apple Remote Access client software, to connect to a remote computer (such as your computer at work) using a modem. (The remote computer must have ARA server software installed.)
- Cyberdog, an application to access the Internet. Cyberdog requires the PowerPC microprocessor.
- Open Transport PPP software, to connect to the Internet using a modem.

- English text-to-speech software, to have your computer read text and alert messages.
- QuickDraw GX, for enhanced printing and typographical capabilities.

For more information about these components, see the What's New chapter of your installation manual.

Click Start to install the software you selected.

Note for expert users: To perform a custom installation, click the Customize button in the Software Installations window. For more information, see the chapter on installing in the Mac OS 7.6 manual.

Update to Mac OS 7.6 manual for Custom Installation: The Mac OS 7.6 Custom install has three options for the type of system software you can install:

- Universal system for any supported computer
- System for this computer
- Minimum system for any supported computer

Only one of these items should be selected at a time.

Troubleshooting suggestions

=====

Some Apple-branded disks manufactured by third parties, including the Apple 365 MB external hard disk, are not supported by the Apple disk utilities. If your disk cannot be updated with the Apple utilities, you'll need to use a third-party disk utility to update the driver.

If you see a message that your disk has problems and cannot be repaired, turn off file sharing if it is on, then try installing again. If that doesn't work, try using another disk-repair utility. If you don't have another utility, or if that utility also doesn't work, you may need to reinitialize the disk. Copy all your files to another disk first, as reinitializing erases the disk. For more information about reinitializing, see the manual that came with your computer.

If you experience problems during installation, be sure to start up with the Mac OS 7.6 CD-ROM disc or the Mac OS 7.6 Install Me First floppy disk. See your Mac OS 7.6 installation manual for instructions.

If you're installing over a network, or if you have a non-Apple CD-ROM drive and can't start up with the CD, turn off all extensions that weren't provided with your system software. Then restart the computer.

- With System 7.5 or later, you can open the Extensions Manager control panel and choose System 7.5.x in the Sets pop-up menu, then restart the computer.
- If you're using an earlier version of system software, drag any non-Apple extensions out of your Extensions folder in the System Folder, then restart the computer. If you need to use non-Apple devices during installation, retain only those extensions. (Examples include video drivers, alternative input devices, network card drivers, and removable media.) If you don't know where a particular extension came from, select its icon, then choose Get Info from the File menu.

..TIL20841-Installing_Mac_OS_7-6_Read_Me_1-97_(TA36397).pdf

Apple extensions all have "© Apple Computer, Inc" in the Version section of the Get Info box.

See the troubleshooting chapter in your installation manual for additional suggestions.

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Tech Info Library Article Number:20841



Tech Info Library

Mac OS 7.6: OT 1.1.1 Technical Info Read Me (1/97)

Revised: 3/19/97
Security: Everyone

Mac OS 7.6: OT 1.1.1 Technical Info Read Me (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

This article is the OT 1.1.1 Technical Info ReadMe file which is found with the Mac OS 7.6 installer.

DISCUSSION -----

Open Transport 1.1.1 Technical Information

This document contains technical information about Open Transport that may be useful to network managers and administrators. You do not need to read this document in order to use Open Transport.

Contents

=====

Introduction

Files added by the Open Transport installer

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- Use of parameter RAM

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- Local Hosts file support
- MacTCP "server" addressing support
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- PPP connectivity

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Introduction

=====

Open Transport is modern networking and communications system software for the Mac OS. It is based on industry standards and brings a new level of networking connectivity, control, and compatibility to Mac OS computers, while preserving built-in support for easy-to-use networking. Open Transport 1.1.1 is compatible with system software version 7.5.3, 7.5.5 and later, as well as versions 7.1, 7.1.1, and 7.1.2.

For more important information about system requirements, compatibility, and known incompatibilities and limitations, read the About Open Transport 1.1.1 document.

Files Added by the Open Transport Installer

=====

Open Transport installs the AppleTalk and TCP/IP control panels into the Control Panels folder inside the System Folder of your startup disk. The Open Transport Installer also adds the following files to the Extensions folder inside the System Folder:

Shared Library Manager

Shared Library Manager PPC

These extensions implement a shared library mechanism on 68K and PowerPC Mac OS computers, respectively. Both extensions are required on PowerPC-based computers in order to support both emulated and native shared libraries.

OpenTransportLib

Open Transport Library

These shared libraries implement core Open Transport services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptAppleTalkLib

Open Tpt AppleTalk Library

These shared libraries implement Open Transport AppleTalk services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptInternetLib

Open Tpt Internet Library

These shared libraries implement Open Transport TCP/IP services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

Open Transport 68K Library

This shared library implements core Open Transport services on 68030- and 68040-based computers.

Open Tpt ATalk 68K Library

This shared library implements Open Transport AppleTalk services on 68030- and 68040-based computers.

Open Tpt Inet 68K Library

This shared library implements Open Transport TCP/IP services on 68030- and 68040-based computers.

Open Transport AppleTalk Features

=====

Static and dynamic AppleTalk address allocation

Open Transport AppleTalk supports static assigned (manually administered) protocol addresses as well as the dynamic addressing provided by AppleTalk Address Resolution Protocol (AARP). Static addressing allows AppleTalk nodes to be managed using the protocol address as a unique and stable identifier.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently—either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict when a new dynamic node acquires an address assigned to manually-addressed node that is not connected or is off line. Administrators can enforce the addressing policy for a subnet by locking the addressing mode. As a precaution, Open Transport AppleTalk checks for duplicate protocol addresses on the LAN even when static addressing is configured.

Use of parameter RAM

Under classic AppleTalk, AppleTalk's on/off state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name are saved in persistent memory (parameter RAM) for reuse at startup. To ensure backward compatibility, this information is still stored and retrieved on systems using Open Transport AppleTalk. However, the following differences are found with Open Transport:

- At startup, Open Transport reads the current AppleTalk configuration file to determine if AppleTalk should be turned on or off. This value overrides the value saved in parameter RAM. The user is not explicitly notified when this occurs.
- If the network interface specified in the current AppleTalk configuration file is locked and the specified port is not available or cannot be initialized, Open Transport will not automatically switch the port back to LocalTalk. Instead, AppleTalk will remain off. The user sees a dialog box with this information.

Open Transport TCP/IP Features

=====

Open Transport brings a workstation-class implementation of TCP/IP protocols to Mac OS. As with MacTCP, Open Transport TCP/IP is a full 32-bit stack. Open Transport TCP/IP adds support for:

- dynamic path MTU discovery, for more efficient network use in heterogeneous network topologies
- Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol.
- IP multicast, for participation as an MBone client for applications written to the native Open Transport API
- simultaneous TCP connections for applications written to the native Open Transport API are limited only by installed memory and processor power, for increased functionality as an Internet or other TCP/IP network server
- a new, more robust and standards-compliant domain name resolver (a caching stub DNR)
- support for developer access to raw IP services, as well as TCP and UDP
- Ethernet Version 2.0 and IEEE 802.3 framing, for better interoperability with a wider range of TCP/IP hosts
- implicit and explicit domain name search paths, for increased control of domain name resolution
- use of multiple IP routers with fail-over, for increased robustness in mission-critical applications
- TCP wildcard source port assignments start at 2048, increasing from that point.

DHCP server support

Apple's implementation conforms to the current versions of the applicable specification documents (RFCs). To date, Open Transport TCP/IP has been tested with the following DHCP server implementations:

- Competitive Automation (URL: <http://www.join.com>)
- FTP Software (URL: <http://www.ftp.com>)
- Hewlett Packard HP-UX (URL: <http://www.hp.com>)
- Microsoft Windows NT Advanced Server (URL: <http://www.microsoft.com>)
- Silicon Graphics (URL: <http://www.sgi.com>)
- Sun Solaris and SunOS (URL: <http://www.sun.com>)
- TGV (URL: <http://www.tgv.com>)

DHCP address lease support

Open Transport TCP/IP supports DHCP address leases. Open Transport TCP/IP automatically attempts to renew any address lease that reaches its renewal interval (by default, the renewal interval is reached when the lease is halfway completed). The renewal interval may be configured to a different value by making changes to the configuring DHCP server. Renewal is attempted regardless of how many times the lease has already been renewed. Lease rebinding is also supported. Should an interface's IP address lease expire, the interface is closed down. Open Transport TCP/IP does not currently support the DHCP Client ID option or the DHCPINFORM message, nor will it currently try to use the remainder of a previous but unexpired lease upon rebooting.

Windows NT advanced server support

With Open Transport 1.1 and later, Mac OS clients are interoperable with the Windows NTAS DHCP server on LAN links. However, Mac OS clients cannot acquire configuration information from an NT DHCP server across a dialup (PPP) link because there is not yet an accepted industry standard for DHCP over dialup. The NT implementation is based on proprietary Microsoft extensions. Mac OS clients cannot acquire configuration information nor register with a Microsoft WINS server. WINS is also dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support).

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group. Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge

Macintosh clients running versions of Open Transport prior to 1.1 could experience some interoperability problems due to other significant differences between the Microsoft implementation and that of a typical UNIX-based server.

BootP support

Open Transport 1.1 and later fully supports Bootstrap Protocol (BootP). Versions of Open Transport prior to 1.1 failed to accept a BootP Reply sent to the unicast (subnet broadcast) address, (for example, xxx.xxx.xxx.255. Replies sent to the all-nets broadcast address (for example, 255.255.255.255) were handled properly. Also, earlier versions of Open Transport required that the BootP gateway be zero hops away.

Local Hosts file support

Open Transport TCP/IP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is normally stored in the Preferences folder in the active System Folder. When Open Transport TCP/IP is initialized, it reads the Hosts file (if any). As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Open Transport TCP/IP is more stringent regarding the content and format of the Hosts file than was MacTCP, which permitted violation of the FQDN requirement

for <domain-name>. For instance, the format:

```
charlie          A          128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain search lists in Open Transport/TCP ("charlie" could potentially exist in any or all of the configured domains). To accomplish the same effect, use this format instead:

```
charlie          CNAME      myhost.mydomain.edu
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu, and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A entries must use fully qualified domain names.

You can create a Hosts file with any text editor or word processor (the Hosts file must be stored in text format). If you use a Hosts file, keep it as short as possible, and include only entries that will be accessed frequently. This reduces the memory required to cache the DNS information and minimizes the need to maintain and update Hosts files as system information changes.

Open Transport TCP/IP automatically uses a Hosts file stored the Preferences folder of the active System Folder. If no Hosts file is found in the Preferences folder, Open Transport TCP/IP searches the active System Folder for a Hosts file. You can specify a particular Hosts file to use with a specific configuration. For example, one Hosts file might be set up for a user connecting via Ethernet, and another set up for when that user connects via modem.

For additional information about the Hosts file design of the Open Transport Domain Name Resolver, see the document "Apple Open Transport Reference Q&A." The latest version of the Q&A is available on the Internet at <ftp://seeding.apple.com/ess/public/opentransport/>.

MacTCP "server" addressing support

Open Transport TCP/IP supports both Bootstrap Protocol (BootP) and Reverse Address Resolution Protocol (RARP) configuration methods. MacTCP Server mode addressing was a combination of BootP and RARP. When Server mode was selected, MacTCP used BootP to attempt to acquire an IP address. If that failed, MacTCP tried RARP. Whichever protocol was successful was stored as a preference, and was used first the next time the computer started up. In Open Transport, you must choose BootP or RARP explicitly.

MacTCP "dynamic" addressing

Open Transport does not support MacTCP "dynamic" addressing. MacTCP dynamic mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set up a Macintosh-only standalone TCP/IP network. Use of this dynamic addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Open Transport TCP/IP supports the industry standard DHCP.

MacIP support

MacIP is a protocol specification developed for carrying TCP/IP traffic on AppleTalk-only networks, originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services.

Use of MacIP typically requires a gateway, which strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are sent back to the MacIP end-node, the gateway replaces the AppleTalk encapsulation. MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network.

Open Transport supports MacIP in the TCP/IP control panel. Once selected, TCP/IP data is encapsulated in AppleTalk packets, and is sent through the selected network interface.

PPP connectivity

PPP (Point to Point Protocol) connectivity for Open Transport is currently based on the use of third-party software extensions known as "MDEVs." Early versions of these extensions may not be compatible with Open Transport. For information about MDEV compatibility, see the Open Transport 1.1 Read Me document.

Memory Requirements

Open Transport provides many new features and capabilities to Mac OS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors contributing to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC code. PowerPC code is typically larger (but also faster).
- Open Transport provides "mixed-mode" applications support, making it possible for both PowerPC native and 680x0 applications to use native networking on PowerPC-based computers.
- Open Transport includes both the new implementations of networking and the libraries required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces.

- Open Transport requires less memory on systems with virtual memory enabled. Classic networking has about the same memory requirements regardless of the VM setting.
- Open Transport is based on the cross-platform standard STREAMs environment, which requires more memory than classic networking.

The difference in memory requirements depend upon the configuration of your computer. Some examples of base memory requirements include:

Begin_Table

Computer System	Virtual Memory	Classic AppleTalk & MacTCP	Open Transport
PowerPC-based	On	350K to 450K	200KB
PowerPC-based	Off	350K to 450K	up to 1.2MB
680x0-based	Off	350K to 450K	700KB to 800KB

End_Table

Application Compatibility Guidelines

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Apple has defined three levels of interoperability with Open Transport. The first, "Open Transport Compatible," is used to describe network applications originally developed for "classic" AppleTalk or MacTCP programming interfaces that now take advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the Open Transport control panels. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

"Open Transport Ready" applications have adopted the new Open Transport APIs. They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport-ready applications benefit from the new control panels and may also realize a significant performance boost when running on PowerPC-based computers.

The highest category of interoperability is "Open Transport Enhanced." In addition to adopting the new Open Transport APIs and being Power PC native, these applications can be dynamically configured to support AppleTalk, TCP/IP, or serial communication.

Applications that rely on undocumented APIs or examine private data structures in AppleTalk or MacTCP may not be fully compatible with Open Transport. Updated versions of these software products will be required for full compatibility.

Performance

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Open Transport is designed to take advantage of the PowerPC processor. For maximum performance, however, networking applications must also take advantage of the PowerPC processor, and should adopt the new Open Transport programming interfaces.

In general, current Mac OS networking applications are written for the 680x0 processor and use the "classic" (680x0-based) networking programming interfaces. These applications can still be used with Open Transport, and may perform somewhat better. Networking applications that are PowerPC-native but not Open Transport-ready may yield better performance, but still fall short of the maximum potential performance because they make use of Open Transport backward compatibility rather than its full capabilities.

Performance improvements will be greater with protocols that use larger datagram sizes. For example, TCP/IP users will see greater improvements than AppleTalk users, because AppleTalk has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor.

Overall performance also depends on the amount of RAM available. Larger packet sizes and higher throughput place increased demand on the buffering system of Open Transport. If Open Transport becomes low on memory, throughput decreases to accommodate the limitation.

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Tech Info Library Article Number:20842



Tech Info Library

LaserWriter 16/600 PS: Stairstep Pattern w/ Solaris (1/97)

Revised: 1/24/97
Security: Everyone

LaserWriter 16/600 PS: Stairstep Pattern w/ Solaris (1/97)

=====

Article Created: 22 January 1997

TOPIC -----

I have setup the printer queue for my LaserWriter 16/600 PS on my workstation running Solaris 2.5.1. The output is staggered down the page, looking like a stairstep. How can I correct this?

DISCUSSION -----

You will need to make some modifications to the way the printer queue is setup on the LaserWriter 16/600 PS printer.

Step 1

Recreate the print queue, but use the print server as:
<hostname>!text

Example: printer name lw16, use lw16!text as the print queue

Step 2

Set the printer in the autoselect mode

Text is delivered to the remote queue "text" on remote server "lw16." The text's line feed problem solved because the remote queue "text" handles carriage returns properly. PostScript ignores white space, so any files sent to this queue will be functionally unaffected when PostScript RIPs.

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Tech Info Library Article Number:20843



Tech Info Library

Mac OS 7.6: Multiprocessing Software Q & A (1/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: Multiprocessing Software Q & A (1/97)

Article Created: 24 January 1997

TOPIC -----

This article provides answers to common questions about the multiprocessing software which comes with Mac OS 7.6.

DISCUSSION -----

Question: Is the MP Software needed on Mac OS computers with only one processor?

Answer: It is not required for the computer to function. However, applications which use some multi-processing API (application programming interface) calls may crash if the MP Software folder is removed, whether or not the computer has more than one processor. The MP kernel allocates tasks to available processors. So on single-processor systems all tasks go to the one and only processor. On multi-processor systems tasks can be sent to any slave processor.

Question: Why does the "About multiprocessing software" document say that the software is only installed on computers with more than one processor?

Answer: The document is in error. The software will install on all PowerPC-based Mac OS computers.

Question: What are the repercussions of removing the software on a single-processor machine?

Answer: In the future, more and more applications will become multi-processor aware and therefore will start to use Apple's MP API's. If the MP libraries are not present, a multi-processor aware application may crash or fail to launch.

Question: I get the message "The MP library could not be completely initialized

due to insufficient memory" when my computer is starting up with System 7.6.
Why?

Answer: You have the MetroNub debugger extension installed from Metroworks Code Warrior. The Code Warrior documentation advises - "The MetroNub debugger extension must have the size specified in its 'sysz' resource increased to 2,580,000 bytes. Use ResEdit or Resourcer to do this."

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Tech Info Library Article Number:20844



Tech Info Library

Mac OS 7.6: Processor Upgrade Card Compatibility (2/97)

Revised: 2/18/97
Security: Everyone

Mac OS 7.6: Processor Upgrade Card Compatibility (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 18 February 1997

TOPIC -----

Which processor upgrade cards work with Mac OS 7.6?

DISCUSSION -----

Mac OS 7.6 is not recommended for a 68030-based computer with a 68040 upgrade card installed. If Mac OS 7.6 is installed on a computer with this configuration, it will exhibit problems starting up.

The performance improvements implemented in System 7.5 update 2.0 (7.5.3) specifically for 68030-based computers, can cause cache flushing problems on the 68040 upgrade card when Mac OS 7.6 is installed. There is no workaround to user Mac OS 7.6 with these upgrade cards installed. System 7.5.x users can startup in 24 bit mode with Virtual Memory turned off, turn off the cache of their 68040 cards, and still see benefit from their upgrade card.

Although Apple has not done extensive testing, cards which only increased the speed of an existing processor should work. For example, a 33 MHz 68040 upgrade card in a 25 MHz 68040 computer, or a 33 MHz or 40 MHz 68030 upgrade card in Macintosh IIci class computers. These cards should work correctly with Mac OS 7.6.

This article was published in the 24 January 1997 "Information Alley."

Article Change History:
18 Feb 1997 - Added Information Alley notation.

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Tech Info Library Article Number:20845



Tech Info Library

Mayo Clinic Family Health CD-ROM Disc Issue (1/97)

Revised: 1/24/97
Security: Everyone

Mayo Clinic Family Health CD-ROM Disc Issue (1/97)

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Article Created: 24 January 1997

TOPIC -----

I have a Performa 6360/6400 computer and I received the Mayo Clinic Family Health CD-ROM disc with the computer. Here are two things I noticed when using this Compact Disc.

- After I install the Family Health application and launch it without the Compact Disc in the CD-ROM drive, I get the following message, "Please insert the Health Disk 2.0 CD in drive F: before running the program."
- When using the Family Health application, after doing the following steps, I get a Type 11 error or a system freeze:

- 1) Install Mayo Clinic Family Health Application from the CD.
- 2) Run the program
- 3) Click on the splash screen movie to continue and click OK on the disclaimer
- 4) Click General
- 5) Click Staying Well
- 6) Click Controlling Stress
- 7) Click Keeping your Stress Under Control
- 8) A type 11 error or system freeze occurs

Does Apple and IVI Publishing know about this, and are there any known fixes or workarounds for this?

DISCUSSION -----

Yes, this is a known issue. Apple has reported these Mayo Clinic Family Health CD v2.0 issues to IVI Publishing this titles developer. This title currently ships with the Macintosh Performa 6360 and 6400 computers.

To avoid the "Please insert the Health Disk 2.0 CD in drive F: before running the program." message, make sure you have the compact disc in the CD-ROM drive

before launching the Family Health application.

For the latest information regarding these issues, contact IVI Publishing at:

IVI Publishing

Phone: (612) 996-6300

Internet: <http://www.ivl.com>

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Tech Info Library Article Number:20846



Tech Info Library

Modem Setup Packages for Newton 2.0: Read Me (1/97)

Revised: 1/24/97
Security: Everyone

Modem Setup Packages for Newton 2.0: Read Me (1/97)

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Article Created: 24 January 1997

TOPIC -----

This article is the Modem Setup Packages for Newton 2.0 ReadMe file.

DISCUSSION -----

What are Modem Setup Packages?

Modem setup packages enable a MessagePad to configure and operate non-Apple modems. It contains definitions of modem capabilities and sets of command/initialization strings. Each modem or class of modems has its own modem setup package. Once installed on a MessagePad 120 or 130 with Newton 2.0 OS, the package appears in the modem portion of Prefs in Extras.

Installing Modem Setups

Install one or more modem setups using Newton Backup Utility, Newton Connection Kit, or Newton Package Installer.

Using Modem Setups

To select a modem setup, follow these steps:

- 1) Tap Extras to open the Extras Drawer, then tap Prefs (if you don't see Prefs, choose All Icons from the popup at the top of the Extras screen)
- 2) Tap Modem.
- 3) Tap Connect using
A list of modem setups installed on your MessagePad appears.
- 4) Tap your choice in the list.

To remove a modem setup, follow these steps:

- 1) Tap Extras to open the Extras Drawer, then tap Prefs (if you don't see Prefs, choose All Icons from the popup at the top of the Extras screen)
- 2) Tap Modem.
- 3) Tap Remove Setup.

A list of modem setups installed on your MessagePad appears.

4) Tap the modem setup you want to remove from the list.

A message appears telling you the selected modem setup was removed.

Modem Compatibility Disclaimer

While a sample of each modem was tested by Apple, modem manufacturer specifications are subject to change without notice, resulting in potential incompatibilities. Accordingly, Apple Computer, Inc. cannot guarantee the operability of any individual modem and will not be liable for damages resulting from the use of this information. Please contact the modem manufacturer for additional information.

Troubleshooting

If you receive error messages when using a modem for the first time, either the Newton cannot see the modem or the commands it is sending are not recognized. Open the modem portion of Prefs in Extras and verify that the appropriate port (Serial Port vs. PC Card) and modem setup is selected. If the problem persists, try using each of the other available modem setups (modems often have similar setup strings and capabilities). If none of the other modem setup work, contact the modem manufacturer or check www.newton.info.apple.com to see if other modem setups are available.

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Tech Info Library Article Number:20847



Tech Info Library

IVI Publishing (1/97)

Revised: 1/24/97
Security: Everyone

IVI Publishing (1/97)

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Article Created: 24 January 1997

IVI Publishing

7500 Flying Cloud Drive
Minneapolis, MN 55344-3739

612-996-6300

Internet: <http://www.ivi.com>

Company Profile:

IVI Publishing publishes interactive multimedia software titles, initially on CD-ROM, with a focus on health and medical information.

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Tech Info Library Article Number:20848



Tech Info Library

PowerBook 2300: Cannot Startup From Partitioned Drive (1/97)

Revised: 1/29/97
Security: Everyone

PowerBook 2300: Cannot Startup From Partitioned Drive (1/97)

Article Created: 21 January 1997
Article Reviewed/Updated: 29 January 1997

TOPIC -----

I have two PowerBook 2300c (Duo) series computers both of which have partitioned hard drives. Neither one of them starts up properly since I used Drive Setup 1.2.2 which came with System software 7.6 to update the driver on one hard drive and to partition the other.

- On one of these computers I had previously partitioned the hard drive into multiple volumes with a version of Drive Setup prior to version 1.2. It started up fine until I updated the hard disk driver using Drive Setup 1.2.2.
- On the other computer I did not partition or update the hard drive with an earlier version of Drive Setup before I partitioned the hard drive into multiple volumes using Drive Setup 1.2.2.

What is wrong with Drive Setup 1.2.2? How can I partition these hard drives into two or more startup volumes each?

DISCUSSION -----

Issue

When the ATA hard disk driver is installed by Drive Setup 1.2, 1.2.1, and 1.2.2 * you can no longer change from which partition you want your computer to start up. One of two things may happen:

- 1) The Startup Disk control panel beeps when a partition icon is clicked in the Startup Disk window. Startup Disk control panel does not accept any attempts to change the setting that determines which disk is to be the startup disk.
- 2) In other instances, you do not hear a beep when a partition icon is clicked in the Startup Disk window. The Startup Disk control panel does accept your attempts to change the startup disk setting, but the setting is not saved.

Because the startup disk/partition selection cannot be changed, even if there are usable System Folders on multiple partitions, there is no way for your computer to start up from the other partitions.

If you partition a PowerBook 2300c hard drive with Drive Setup 1.2.x, or you update a previously partitioned PowerBook 2300c hard drive with Drive Setup 1.2.x, you will have this problem.

Workaround

One workaround is to update the hard disk driver with Drive Setup 1.0.5. It is not necessary to reformat or reinitialize the hard drive. All you have to do is open Drive Setup 1.0.5, select the internal hard drive, and select Update Driver.

* Note: Drive Setup 1.2.2 allows you to update a volume even when Password Security installed and activated. It also fixes an issue which caused the drive to sometimes spin up and then down again before going to sleep or shutting down. If you use Drive Setup 1.0.5 instead of 1.2.2, you will lose these enhancements.

This article appeared in the 27 January 1997 issue of the Information Alley.

Article Change History:

29 Jan 1997 - Reworded for clarity and searchability.

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Tech Info Library Article Number:20849



Tech Info Library

PowerBook 1400 HD Updater Read Me File

Revised: 1/24/97
Security: Everyone

PowerBook 1400 HD Updater Read Me File

Article Created: 17 January 1997

TOPIC -----

This article is the Readme file for the PowerBook 1400 HD Updater.

DISCUSSION -----

Important Information About the PowerBook 1400 HD Updater

This document describes the PowerBook 1400 HD Updater. You may want to print this document for reference.

What Is the PowerBook 1400 HD Updater?

The PowerBook 1400 HD Updater is designed to provide a reference file that may not have been copied on the hard disk of some Macintosh PowerBook 1400 series computers. The reference file is not needed for normal operation of the PowerBook.

However, a disk utility program, such as Disk First Aid, looks for the reference file. If the file is not on the hard disk and you use Disk First Aid or another disk utility, you will see a message reporting that the hard disk is not an HFS volume and can't be checked by the program. (The message may be somewhat different with a disk utility other than Disk First Aid.)

Who Needs to Use the Updater?

If the reference file is not on your computer's hard disk, you should use the PowerBook 1400 HD Updater to copy the file on the disk. To determine whether you need to use the Updater, follow these steps.

- Checking Your Hard Disk

1. Locate Disk First Aid (in the Utilities folder on your hard disk) and open it by double-clicking its icon.

2. Click the icon of the hard disk to select it.
3. If you see a message that you can't repair the startup disk, click OK. (You want to verify the disk, which can be done on the startup disk.)
4. Click Verify.
5. If you see a message "This drive is not an HFS disk," you need to use the PowerBook 1400 HD Updater. (If a status message appears reporting the progress of verification, you do not need to use the Updater. You can click Stop to end the verification process.)

- Using the PowerBook 1400 HD Updater

-
1. Copy the Updater to your computer's hard disk.
 2. Double-click the Updater's icon to open it. The Updater automatically copies the reference file on your hard disk.
 3. Click OK to quit the Updater.

It's a good idea to check your hard disk after using the Updater. To do this, run Disk First Aid and select the Verify option. If Disk First Aid reports a problem, follow the instructions on the screen. You can also use the Drive Setup program (in the Utilities folder) to check the hard disk. See "Testing Your Hard Disk" in Chapter 7 of the manual for your computer for more information about testing the drive.

Using the Updater will not cause any problem if the reference file is already on the hard disk.

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Tech Info Library Article Number:20850



Tech Info Library

PowerBook 1400: Mac OS 7.6 Why Separate Monitors & Sound? (1/97)

Revised: 2/10/97
Security: Everyone

PowerBook 1400: Mac OS 7.6 Why Separate Monitors & Sound? (1/97)

Article Created: 21 January 1997
Article Reviewed/Updated: 10 February 1997

TOPIC -----

Why do I have three control panels for controlling the display and sound on my PowerBook 1400 computer after installing Mac OS 7.6?

DISCUSSION -----

Issue

The Mac OS 7.6 installer incorrectly installs two additional control panels, 'Monitors' and 'Sound' on PowerBook 1400 series computers if you choose the Easy Install option, and are installing over an existing System Folder. You only need the one control panel, 'Monitors and Sound'. You can throw the other two away. All of these control panels work, but only the one which controls both the Monitors and Sound is needed.

If you are creating a new System folder (clean install) and you choose the Easy Install option, the Mac OS 7.6 installer incorrectly installs two separate control panels: 'Sound' and 'Monitors.', NOT the one 'Monitors and Sound'.

Resolution

To get the correct Monitors and Sound control panel, you must perform a Custom Installation in which you specifically select the desired control panel.

This article was published in the Information Alley on 10 February 1997.

Article Change History:
10 Feb 1997 - Added keyword.

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Tech Info Library Article Number:20851



Tech Info Library

PowerBook 1400: Minimum & Full Set Same Number Of Disks? (2/97)

Revised: 2/14/97
Security: Everyone

PowerBook 1400: Minimum & Full Set Same Number Of Disks? (2/97)

=====

Article Created: 21 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

I have a PowerBook 1400 series computer. I ran Floppy Disk Maker to create backup floppy disks of the System Software. Why do Minimum Set and the Full Set use the same number of disks? Shouldn't the Minimum Set have fewer disks?

DISCUSSION -----

Apple's Floppy Disk Maker utility was designed for all Macintosh computers, not just the Powerbook 1400 series computers.

* Floppy Disk Maker's Minimum Set only makes images of the contents of the System Software Images folder in the Disk Images folder.

* Floppy Disk Maker's Full Set makes disks for every folder in the Disk Images folder. On other Macintosh computers this may include additional support files in other folders.

Since the only disk images in the PowerBook 1400 series computers' Floppy Disk Maker folder are the System disk images, both the Minimum and Full sets are the same.

This article was published in the Information Alley on 13 February 1997.

Article Change History:
13 Feb 1997 - Added keyword.

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Tech Info Library Article Number:20852



Tech Info Library

Power Macintosh 7300 Series: Description (2/97)

Revised: 4/21/97
Security: Everyone

Power Macintosh 7300 Series: Description (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 7300 series computers.

DISCUSSION -----

The Apple Power Macintosh 7300 series combines affordability, high performance, and upgradability to provide an ideal system for small and medium-size businesses, for home offices, and for running productivity applications in organizations of any size. Based on high-performance RISC technology, the Power Macintosh 7300 series models feature a 180- or 200-megahertz PowerPC 604e processor mounted on a removable card for easy and inexpensive upgrade to faster processor cards (as available).

The three industry-standard Peripheral Component Interconnect (PCI) high-performance expansion slots on the Power Macintosh 7300 series let you customize these computers easily to meet your needs more precisely. You can find PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 7300 system to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install a PC Compatibility Card from Apple in one of the system's PCI slots--and switch instantly between computing environments.

Connecting your Power Macintosh 7300 series computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors. If you install an optional PC Compatibility Card, you can connect from both the card and the Macintosh logic board simultaneously, for incredibly versatile networking capabilities. And if you're interested in multimedia, you'll be glad to know that the Power Macintosh 7300 series features a 12x-speed CD-ROM drive.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The

Power Macintosh 7300 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access--including the Apple Internet Connection Kit and America Online.

So whether you need power and expandability for everyday number crunching, office productivity, or an innovative multimedia project--or want a fast, easy way to get started with the Internet--the Apple Power Macintosh 7300 series computers offer the features you need, with room to grow at an affordable price.

Features

=====

High performance

- * 180-MHz or 200-Mhz MHz PowerPC 604e processor
- * Built-in floating-point processor and 64K cache
- * Standard 256K level 2 cache

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 12x--speed CD-ROM drive
- * 16-bit stereo audio input and output
- * 64-bit VRAM subsystem

Expandability

- * Removable processor card allows easy upgrades
- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional 3.5-inch storage device
- * Up to 512 MB of RAM
- * Up to 4 MB of VRAM

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via either of two optional PC Compatibility Cards from Apple
- * Comes with all of the software required for Internet access

System 7.5.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

* Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

Power Macintosh 7300/166 (AVAILABLE IN EUROPE AND JAPAN ONLY)

Order No. M4946LL/A

* Power Macintosh 7300/166 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2GB hard disk drive, and an internal 12x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 7300/180

Order No. M5542LL/A

* Power Macintosh 7300/180 computer with 16 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2GB hard disk drive, and an internal 12x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Power Macintosh 7300/200

Order No. M5543LL/A

* Power Macintosh 7300/200 computer with 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2GB hard disk drive, and an internal 12x-speed CD-ROM drive. Includes keyboard and mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Optional Enhancements

* GeoPort Telecom Adapter Kit

Order No. M5438LL/A

* PC Compatibility Card Solutions

- PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

- PC Compatibility Card with 100-MHz 586 processor

Order No. M4091LL/A

* Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Feb 1997 - Changed status distribution.

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Tech Info Library Article Number:20853



Tech Info Library

Power Macintosh 7300 Series: Technical Specifications (2/97)

Revised: 3/19/97
Security: Everyone

Power Macintosh 7300 Series: Technical Specifications (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7300 series computers.

DISCUSSION -----

Processor

=====

- * 180- or 200-MHz PowerPC 604e microprocessor
- * Integrated floating-point unit and 64K cache
- * Processor is mounted on a removable card for easy upgrades

Memory

=====

- * 16 MB or 32 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- * 4 MB of ROM
- * Standard 256K level 2 cache

Disk drives

=====

- * Internal 2 GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
- Accepts high-density 1.4MB disks and 800K disks
- Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 12x-speed CD-ROM drive
- * Expansion bay for additional 3.5-inch hard disk

Interfaces

=====

- * Three PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and

GeoPort cables

- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal/external Fast SCSI bus (up to 10MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
- 16-bit audio
- Up to 44.1-kHz sampling rate
- * DB-15 connector for monitor

Graphics support

=====

- * 2 MB of VRAM, expandable to 4 MB
- * 64-bit data path to VRAM
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,024- by 768-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony (Requires GeoPort Telecom Adapter)

=====

- * 28.8-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Includes keyboard and ADB Mouse II

Electrical requirements and compliance

=====

- * Line voltage: 100 to 125/220 V AC, RMS single phase
- * Frequency: 50 to 60 Hz, single phase
- * Power: 150 W maximum, not including display

ADB power requirements

=====

- * Maximum current draw for all devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

=====

- * Height: 6.15 in. (15.6 cm)
- * Width: 14.37 in. (36.5 cm)
- * Depth: 16.93 in. (43.0 cm)
- * Weight: 22 lb. (9.97 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

13 Feb 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20854



Tech Info Library

Power Macintosh 7600/200 Series: Description (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 7600/200 Series: Description (2/97)

=====

Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 7600/200 series computer.

Note: This product is available in Japan ONLY.

DISCUSSION -----

If you need a computer that offers increased performance and expandability for your business, the Power Macintosh 7600/200 is an ideal choice. With a 200-megahertz PowerPC 604e RISC processor on a removable card that can be easily swapped out for a card containing an even more powerful processor (as available), the Power Macintosh 7600/200 gives you all the advantages of PowerPC technology now—with plenty of room to grow later. Built-in video-input capability, high-resolution graphics, 12x-speed CD-ROM drive, and CD-quality stereo sound add new excitement to everyday business projects. And because the Power Macintosh 7600/200 optimizes the transfer of video data, it's an ideal system for videoconferencing.

The three industry-standard Peripheral Component Interconnect (PCI) high-performance expansion slots on the Power Macintosh 7600/200 let you customize this computer easily to meet your needs more precisely. You can find PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 7600/200 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install a PC Compatibility Card from Apple in one of the system's PCI slots—and switch instantly between computing environments. In addition, connecting your Power Macintosh 7600/200 computer to an Ethernet network is easy, because it includes both AAUI and 10BASE-T connectors.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The

Power Macintosh 7600/200 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access—including the Apple Internet Connection Kit and America Online.

Whether you are selecting a computer for a large corporation or a single-person home office, the Power Macintosh 7600/200 system offers PowerPC performance, upgradability, and advanced multimedia features to give you the versatility you need for professional computing.

Features

=====

High performance

- * 200-MHz PowerPC 604e processor
- * Built-in floating-point processor and 64K cache
- * 256K level 2 cache

Communications and multimedia

- * 24-bit composite and S-video input
- * 64-bit VRAM graphics subsystem
- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 12x-speed CD-ROM drive
- * 16-bit stereo audio input and output

Expandability

- * Removable processor card allows easy upgrades
- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bay for additional 3.5-inch hard disk drive

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide
- * Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

* Power Macintosh 7600/200

Order No. M4947LL/A

Power Macintosh 7600/200 computer with 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 1.2 GB hard disk drive, and internal 12x-speed CD-ROM drive, and a PlainTalk microphone. Includes keyboard and mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Optional Enhancements

=====

* PC Compatibility Card Solutions

- PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

- PC Compatibility Card with 100-MHz 586 processor

Order No. M4091LL/A

* GeoPort Telecom Adapter Kit

Order No. M5438LL/A

* Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Feb 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20855



Tech Info Library

Power Macintosh 7600/200 Series: Technical Specifications (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 7600/200 Series: Technical Specifications (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 7600/200 series computer.

Note: This product is available in Japan ONLY.

DISCUSSION -----

Processor

- * 200-MHz PowerPC 604e microprocessor
- * Integrated floating-point unit and 64K cache
- * Processor is mounted on a removable card for easy upgrades

Memory

- * 32 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- * 4 MB of ROM
- * 256K level 2 cache

Disk drives

- * Internal 2 GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
- * Accepts high-density 1.4MB disks and 800K disks
- * Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 12x-speed CD-ROM drive
- * Expansion bay for additional 3.5-inch hard disk

Interfaces

- * Composite connectors (RCA phono jacks) for composite video input

- * S-video input connector
- * Internal digital audio/video (DAV) connector for video compression/decompression card
- * Three PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10 MB/s)
- * External SCSI bus (up to 5 MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * RCA phono jacks for line-level stereo audio input and output
- * Mini jacks for stereo audio input and output
- * All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- * DB-15 connector for monitor

Video capabilities

- * Real-time video play through of up to 640 by 480 pixels with NTSC; 768 by 576 pixels with PAL and SECAM
- * Up to 320- by 240-pixel capture at 15 frames per second with NTSC
- * Maximum capture size of 640 by 480 pixels with NTSC

Graphics support

- * 2 MB of VRAM, expandable to 4 MB
- * Fast 64-bit data path to VRAM
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony

- * 28.8-Kbps modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speaker phone and answering-machine capability

Note: Requires GeoPort Telecom Adapter

Clock/calendar

- * Custom integrated circuit with long-life battery

Keyboard and mouse

- * Includes keyboard and ADB Mouse II

Electrical requirements and compliance

- * Line voltage: 100 to 1225/220 to 240 V AC, RMS single phase
- * Frequency: 50 to 60 Hz, single phase
- * Power: 150 W maximum, not including display ADB power requirements

- * Maximum current draw for all devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

- * Height: 6.15 in. (15.6 cm)
- * Width: 14.37 in. (36.5 cm)
- * Depth: 16.93 in. (43.0 cm)
- * Weight: 22 lb. (9.97 kg)

Environmental requirements

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

13 Feb 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20856



Tech Info Library

Power Macintosh 8600/200 Series: Description (2/97)

Revised: 3/19/97
Security: Everyone

Power Macintosh 8600/200 Series: Description (2/97)

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Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 8600/200 series computer.

DISCUSSION -----

If your profession demands a high-performance, expandable computer that's optimized for complex work with media and other demanding tasks, choose the Power Macintosh 8600/200 system. This high-performance computer includes built-in video-in and video-out capabilities in an innovative new design. It includes features that make it an ideal choice for in-house publishing, media authoring, and technical applications. And because its processor is mounted on a removable card for easy and inexpensive upgrade to faster processor cards (as available), you can protect your investment for the future.

The new tower design of the Power Macintosh 8600/200 provides incredibly easy system access for upgrades and servicing, new security features, and a built-in Iomega Zip drive for fast, easy storage or backup. In addition, built-in near-broadcast-quality video-input/output capabilities, high-resolution graphics, an AV-capable hard disk drive, a 12x-speed CD-ROM drive, and CD-quality stereo sound add vitality to professional projects and--with Apple's QuickTime software--make media authoring easy.

The three industry-standard Peripheral Component Interconnect (PCI) high-performance expansion slots on these systems let you customize them easily to meet your needs more precisely. You can find PCI cards for a variety of uses, including graphics, storage, and high-speed networking. And if you want to use your Power Macintosh 8600/200 to run MS-DOS and Windows applications as well as software written for the Macintosh, you can install a PC Compatibility Card from Apple in one of the PCI slots--and switch instantly between computing environments. In addition, connecting your Power Macintosh 8600/200 computer to an Ethernet network is easy because it includes both AAUI and 10BASE-T0

connectors.

Today, more and more computer users are discovering the wealth of information and communications resources and opportunities offered by the Internet. The Power Macintosh 8600/200 makes it easy to get involved in this rapidly expanding community, because it comes with all of the software you need for easy Internet access.

The Power Macintosh 8600/200: exceptional performance for media authoring or any work with video, audio, or graphics--to enhance your creativity.

Features

=====

High performance

- * 200-MHz PowerPC 604e processor
- * Built-in Iomega Zip drive
- * Built-in floating-point processor and 64K cache
- * 256K level 2 cache on a DIMM
- * Built-in graphics acceleration

Communications and multimedia

- * 64-bit VRAM graphics subsystem
- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 12x-speed CD-ROM drive
- * 16-bit stereo audio input and output
- * 24-bit composite and S-video input and output
- * Support for speech-recognition and text-to-speech capabilities
- * Optimized for QuickTime Conferencing software

Expandability

- * Removable processor card allows easy upgrades
- * Three industry-standard PCI expansion slots
- * SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bays for additional storage devices (3.5-inch and 5.25-inch)

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5.5 software

- * Makes working with different applications consistent, so they're easier to

learn and use

- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide
- * Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

* Power Macintosh 8600/200

Order No. M5453LL/A

Power Macintosh 8600/200 computer with 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 2 GB hard disk drive, an internal 12x-speed CD-ROM drive, an internal Iomega Zip drive, and a PlainTalk microphone. Includes keyboard and mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Optional Enhancements

* GeoPort Telecom Adapter Kit

Order No. M5438LL/A

* PC Compatibility Card Solutions

- PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

- PC Compatibility Card with 100-MHz 586 processor

Order No. M4091LL/A

* Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20857



Tech Info Library

Power Macintosh 8600/200 Series: Technical Specifications (2/97)

Revised: 4/21/97
Security: Everyone

Power Macintosh 8600/200 Series: Technical Specifications (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 28 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 8600/200 series computer.

DISCUSSION -----

Processor

- * 200-MHz PowerPC 604e microprocessor
- * Integrated floating-point unit, 64K cache, and three integer units
- * 50-MHz system bus
- * Processor is mounted on a removable card for easy upgrades

Memory

- * 32 MB of RAM, expandable to 512 MB via 8 DIMM sockets
- * 4 MB of ROM
- * 256K level 2 cache

Disk drives

- * Internal 2 GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
- * Accepts high-density 1.4MB disks and 800K disks
- * Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 12x-speed CD-ROM drive
- * Integrated Iomega Zip drive for fast, easy storage or backup
- * Expansion bays for additional storage devices (3.5- or 5.25-inch)

Interfaces

- * Three PCI expansion slots compatible with PCI 2.0-compliant cards

- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10MB/s)
- * External SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * RCA phono jacks for line-level stereo audio input and output
- * Mini jacks for stereo audio input and output
- * All sound ports support 16-bit audio and up to 44.1-kHz sampling rate
- * DB-15 connector for monitor
- * Composite connectors (RCA phono jacks) for composite video input and output
- * S-video input and output connectors
- * Internal digital audio/video (DAV) connector for video compression/decompression cards

Video capabilities

- * 24-bit video input
- * Real-time video playthrough of up to 640 by 480 pixels with NTSC; 768 by 576 pixels with PAL and SECAM
- * Up to 320- by 240-pixel capture at 25 frames per second with NTSC (with 2GB drive)
- * Maximum capture size of 640 by 480 pixels with NTSC
- * 24-bit video output
- * Support for NTSC and PAL
- * Convolution for flicker reduction at all bit depths

Graphics support

- * 2 MB of VRAM, expandable to 4 MB
- * Fast 64-bit data path to VRAM
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony

- * 28.8-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Note: Requires GeoPort Telecom Adapter

Clock/calendar

- * Custom integrated circuit with long-life battery

Keyboard and mouse

- * Includes keyboard and ADB Mouse II

Electrical requirements and compliance

- * Line voltage: 100 to 240 V AC, RMS single phase, automatically configured
- * Frequency: 50 to 60 Hz, single phase
- * Power: 390 W maximum, not including display ADB power requirements
- * Maximum current draw for all devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

- * Height: 17.3 in. (44.0 cm)
- * Width: 9.7 in. (24.6 cm)
- * Depth: 17.3 in. (44.0 cm)
- * Weight: 35.0 lb. (15.9 kg)

Environmental requirements

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

- 13 Feb 1997 - Changed distribution status.
- 28 Feb 1997 - Corrected power out rating.

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Tech Info Library Article Number:20858



Tech Info Library

Power Macintosh 9600 Series: Description (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 9600 Series: Description (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 9600 series computers.

DISCUSSION -----

The Apple Power Macintosh 9600/200MP and 9600/200 computers are the top of the line in speed, performance, expandability, and upgradability, which is tremendous news for publishers--particularly those who are working with advanced color--as well as for multimedia professionals and engineers.

The Power Macintosh 9600/200MP computer is a multiprocessor system with two 200-megahertz PowerPC 604e chips, which provides simple, but powerful performance improvements for applications that take advantage of its multiprocessing capabilities. The Power Macintosh 9600/200 features a single 200-megahertz PowerPC 604e processor.

Both Power Macintosh 9600 systems make use of a new tower design that provides incredibly easy system access for upgrades and servicing, and new security features. In addition, a number of noted developers of graphics, video, and scientific/technical applications for the Mac OS are revamping their programs specifically to take advantage of the multiprocessing capabilities of the Power Macintosh 9600/200MP. These capabilities can provide significant performance improvements in processor-intensive applications such as color, publishing, video-editing, and 3D modeling.) If you want to run MS-DOS and Windows applications--you can install a PC Compatibility Card from Apple in one of the system's many PCI slots--and switch instantly between the computing environments.

With six expansion slots that support the industry-standard high-performance Peripheral Component Interconnect (PCI) architecture, these two systems are also the most customizable, expandable Macintosh computers available today. What's

more, these systems also include a 12x-speed CD-ROM drive for fast, easy access to CD-ROM-based materials.

On the communications front, these computers support both 10BASE-T and AUI Ethernet connections. And they include all of the software you need for easy Internet access.

So whether you're involved in publishing, multimedia, or engineering--or simply want an incredibly powerful, expandable, and versatile Macintosh computer--one of the Power Macintosh 9600 systems is sure to meet your needs.

Features

=====

High performance

- * One or two 200-MHz PowerPC 604e processors
- * Built-in floating-point processor and 64K cache
- * 512K level 2 cache

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort and LocalTalk cables
- * 12x--speed CD-ROM drive
- * 16-bit stereo audio input and output
- * Support for speech-recognition and text-to-speech capabilities

Expandability

- * Removable processor card allows easy upgrades
- * Six industry-standard PCI expansion slots
- * Dual-channel SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bays for additional storage devices (3.5-inch and 5.25-inch)

Compatibility

- * Includes 10BASE-T and AUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via optional PC Compatibility Cards
- * Comes with all of the software required for Internet access

System 7.5.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide

* Includes MacLinkPlus file translation software from DataViz

Ordering Information

=====

* Power Macintosh 9600/200MP

Order No. M4952LL/A

Power Macintosh 9500/200MP computer with 32MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 4GB hard disk drive, an internal 12x-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

* Power Macintosh 9600/200

Order No. M5456LL/A

Power Macintosh 9500/200 computer with 32MB of RAM, a built-in 1.4MB Apple SuperDrive floppy disk drive, an internal 4GB hard disk drive, an internal 12x-speed CD-ROM drive, and a PlainTalk microphone. Includes mouse; system software version 7.5.5 or later; Internet access software; complete setup, learning, and reference documentation; and limited warranty.

Optional Enhancements

* GeoPort Telecom Adapter Kit

Order No. M5438LL/A

* PC Compatibility Card Solutions

- PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

- PC Compatibility Card with 100-MHz 586 processor

Order No. M4091LL/A

* Apple QuickDraw 3D Accelerator Card

Order No. M4333LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20859



Tech Info Library

Power Macintosh 9600 Series: Technical Specifications (2/97)

Revised: 2/28/97
Security: Everyone

Power Macintosh 9600 Series: Technical Specifications (2/97)

Article Created: 24 January 1997
Article Reviewed/Updated: 28 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 9600 series computers.

DISCUSSION -----

Processor

- * One 200-MHz PowerPC 604e microprocessor (Power Macintosh 9600/200)
- * Two 200-MHz PowerPC 604e microprocessors (Power Macintosh 9600/200MP)
- * One 233-MHz PowerPC 604e microprocessor (Power Macintosh 9600/233)
- * Integrated floating-point unit and 64K cache
- * 50-MHz high-speed system bus
- * Processor is mounted on a removable card for easy upgrades

Memory

- * 32 MB of RAM, expandable to 768 MB via 12 DIMM sockets
- * 4 MB of ROM
- * 512K level 2 cache

Disk drives

- * Internal 4 GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4 MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 12x-speed CD-ROM drive
- * Expansion bays for additional storage devices (3.5- or 5.25-inch)

Interfaces

- * Six PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and GeoPort cables
- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10MB/s)
- * External SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
- * DB-15 connector for monitor (on accelerated graphics card)

Graphics support (configured through accelerated graphics card)

- * 4 MB of VRAM
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony

- * 28.8-Kbit/s modem support
- * V.17 fax support
- * GeoPort Fax and GeoPort Telephony software included
- * Speakerphone and answering-machine capability

Note: Requires GeoPort Telecom Adapter

Clock/calendar

- * Custom integrated circuit with long-life battery

Keyboard and mouse

- * Includes keyboard and ADB Mouse II

Electrical requirements and compliance

- * Line voltage: 100 to 125/200 to 240 V AC, RMS single phase, automatically configured
- * Frequency: 50 to 60 Hz, single phase
- * Power: 390 W maximum, not including display ADB power requirements
- * Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

- * Height: 17.3 in. (44.0 cm)
- * Width: 9.7 in. (24.6 cm)
- * Depth: 17.3 in. (44.0 cm)
- * Weight: 35.0 lb. (15.9 kg)

Environmental requirements

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

Article Change History:

13 Feb 1997 - Changed distribution status.

28 Feb 1997 - Corrected power rating.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20860



Tech Info Library

Iomega Zip Drive: Purpose of Iomega Guest (5/97)

Revised: 5/5/97
Security: Everyone

Iomega Zip Drive: Purpose of Iomega Guest (5/97)

=====

Article Created: 24 January 1997
Article Reviewed/Updated: 5 May 1997

TOPIC -----

I have a Macintosh computer which included an Iomega Zip drive, and I would like to know why I would need to use the Iomega Guest application, and how to do so.

DISCUSSION -----

Iomega Guest is a utility that allows you to temporarily use a Zip drive on a Macintosh computer without having to install the Iomega Driver in the System Folder. Running Iomega Guest provides the same access to your Zip drive as having the Iomega Driver permanently installed as an extension--it allows you to read files from a Zip disk, write files to a Zip disk, and run the Tools or other software from your Zip disks. The only difference is that when using the Guest program to provide access to your Zip drive, the Iomega Driver does not load automatically each time you start or restart the Macintosh.

Why use Iomega Guest?
=====

There are many reasons to use Iomega Guest:

- * If you want to use a portable Zip drive on multiple computers, but you do not want to install the full Iomega software package.
- * If you want to start your Macintosh computer with the extensions disabled, but you still want access to your Zip drive. This is particularly useful when troubleshooting.
- * If you do not want to install the Iomega Driver permanently in order to reduce the chances of extension conflicts.

How to use Iomega Guest
=====

* To use the Guest program on your own computer, for instance if you have installed Iomega software but are starting your computer with the extensions disabled, simply open the Iomega Tools folder and double-click the Guest icon.

NOTE: You must have the drive connected to the computer before running Guest. Also, the Iomega driver is not installed permanently on a Macintosh computer using this connection method.

Alternative to loading Iomega Guest

=====

An alternative to loading Guest is to simply to have a Macintosh formatted Zip disk inserted when you start your computer. Macintosh-formatted Zip disks contain a driver which will automatically run when the computer starts. To use this simply alternative:

Step 1

Insert a Macintosh formatted Zip disk into the Zip drive.

Step 2

Start the computer following your normal startup procedures.

Step 3

Once your Macintosh has started with the Zip disk inserted, you will be able to use your drive just like any other removeable drive on your system.

NOTE: The Iomega driver is not installed permanently on a Macintosh using this connection method.

Troubleshooting

=====

* The following message may appear when you are attempting to run the Iomega Guest utility, "The driver version 5.0.1 is loaded and ready to run your drive(s)." This message generally indicates that the Iomega Driver is already loaded. Since the Iomega Driver is already loaded, you do not need to use the Iomega Guest utility. In this case, you need only to close the message dialog box and access the Zip drive.

Note: This information comes directly from the online Iomega Guest Help manual, which was included with your Macintosh computer.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Article Change History:

05 May 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20861



Tech Info Library

Jenson Tools Inc.

Revised: 1/24/97
Security: Everyone

Jenson Tools Inc.

=====

Article Created: 24 January 1997

Jenson Tools Inc.

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Phoenix, AZ 85044-5399
U.S.A.

800-426-1194 or 602-968-6231 (Main Phone)

800-366-9662 or 602-438-1690 (Main FAX)

Internet: <http://www.jensontools.com>

Company Profile: Tools, specializing in test equipment, tool kits, cases, telecom , LAN, wire, cable, soldering, static control, and workbenches.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20862



Tech Info Library

Mac OS 7.6: Printer Control Strip Module Dimmed (1/97)

Revised: 1/24/97
Security: Everyone

Mac OS 7.6: Printer Control Strip Module Dimmed (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

I performed a "clean" installation of Mac OS 7.6, selecting all options including QuickDraw GX. I created a desktop printer through the Chooser, but my Control Strip Module Printer Selector is dimmed. Why doesn't it show me the printers I have created and chosen?

DISCUSSION -----

The control strip is for non-QuickDraw GX printers. If you want to use the Control Strip to select and change printers, you must turn off QuickDraw GX and restart your computer. Once you have restarted, you must select your printer using the Chooser. This creates a new desktop printer, which does not use the QuickDraw GX technology. You can use the Control Strip module to change or select this printer.

Note

The QuickDraw GX desktop printer icon, will have an 'X' over it once you disable QuickDraw GX.

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Tech Info Library Article Number:20864



Tech Info Library

Newton OS 2.0: CSTW 2200 Printing Errors with Some Apps (1/97)

Revised: 1/24/97
Security: Everyone

Newton OS 2.0: CSTW 2200 Printing Errors with Some Apps (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

I am using a Color StyleWriter 2200 printer with my Newton 2.0 device. Sometimes I get an error when printing stating the Newton device has lost contact with the printer.

DISCUSSION -----

This happens because there is a partial incompatibility between the Color StyleWriter 2200 and printing from some third-party Newton applications. Not all Newton Applications are affected. Apple Computer, Inc. does not currently have a fix for this issue.

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Tech Info Library Article Number:20867



Tech Info Library

QuickTime Conferencing: Can't Upgrade to Apple VideoPhone (1/97)

Revised: 1/24/97
Security: Everyone

QuickTime Conferencing: Can't Upgrade to Apple VideoPhone (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

Our company purchased the QuickTime Conferencing Kit and now would like to upgrade to the Apple VideoPhone software. Where can we get this upgrade? What differences are there between upgrading to Apple VideoPhone Lite and the software purchased with the Apple VideoPhone Kit?

DISCUSSION -----

Apple Media Conference (bundled with the QuickTime Conferencing Kit) has been replaced by Apple VideoPhone as the software used for audio and video conferencing. Currently, there is not an official upgrade for Apple Media Conference, other than downloading Apple VideoPhone Lite from:
[http:// qtc.quicktime.apple.com](http://qtc.quicktime.apple.com).

Apple VideoPhone Lite is essentially the same application as Apple VideoPhone bundled with the Apple VideoPhone Kit. The biggest difference between Apple VideoPhone and Apple VideoPhone Lite is the H.263 video codec (compression/decompression) extension. In addition to the new codec, there are some additional pieces of software including Apple Internet Dialer, Apple Internet Status, and Apple Guide support.

About the H.263 Codec
=====

The H.263 codec improves overall performance and error recovery when using low-bandwidth dial-up connections. However, H.263 may be used over other networking standards to improve performance and reduce network use.

H.263 adds several resolutions in addition to those supported under H.261. Supported resolutions include CIF (352x288) and QCIF (Quarter Common Interchange Format, 176x144) - both part of H.261, as well as SQCIF (Sub-QCIF, 128x96), 4CIF (704x576), and 16CIF (1408x1152) resolutions.

More information on the H.263 ITU Recommendation may be found on the Internet.
The International Telecommunications Union (ITU) website (<http://www.itu.ch>)
provides information on the H.263 standard.

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Tech Info Library Article Number:20868



Tech Info Library

LaserWriter 8.4.x: Type 15 Errors With Desktop Printing (1/97)

Revised: 1/24/97
Security: Everyone

LaserWriter 8.4.x: Type 15 Errors With Desktop Printing (1/97)

=====

Article Created: 24 January 1997

TOPIC -----

When I try to print, I get Type 15 errors when I have Desktop Printing on. I am using the LaserWriter 8.4.x printer drivers.

DISCUSSION -----

I get error type 15's and/or multiple printer icons when printing with LaserWriter 8.4.x with Desk top Printing turned on.

DISCUSSION -----

When you remove or disable the AppleScript and Finder Scripting extension, when Desktop Printing is on, you will either get Type 15 errors, or multiple Desktop Printer icons.

The AppleScript and Finder Scripting extension are used by the LaserWriter 8.4.x and desktop printing software.

How to Correct
=====

Step 1

Force quite the Finder (command-option-escape).

Step 2

Restart with Extension off.

Hold down the Shift key after the startup chime to turn off extensions.

Step 3

Drag all icons with an X to the Trash.

Step 4

Choose Empty Trash from the Special menu.

Step 5

Reinstall AppleScript and Finder Scripting Extensions.

Use your original Mac OS disks or CD disc to reinstall these extensions.

Step 6

Restart your computer.

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Tech Info Library Article Number:20869



Tech Info Library

Mac OS 7.6 and PowerPC Interrupt Extension (1/97)

Revised: 3/19/97
Security: Everyone

Mac OS 7.6 and PowerPC Interrupt Extension (1/97)

=====

Article Created: 25 January 1997

TOPIC -----

Is the PowerPC Interrupt Extension a part of Mac OS 7.6?

DISCUSSION -----

The PowerPC Interrupt Extension is no longer a separate extension in Mac OS 7.6, it is now part of the OS. If the extension is installed on a computer running System 7.5.5, the extension will be removed during the Mac OS 7.6 installation.

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Tech Info Library Article Number:20872



Tech Info Library

V-Twin Information Access Toolkit (1/97)

Revised: 1/25/97
Security: Everyone

V-Twin Information Access Toolkit (1/97)

=====

Article Created: 25 January 1997

TOPIC -----

This article provides a summary of V-Twin and the URL for more information.

DISCUSSION -----

V-Twin is the code name for the information access toolkit developed in the Apple Research Labs (formerly known as ATG). V-Twin provides fast and efficient text indexing and search for use by a variety of applications. Eventually, Apple believes V-Twin will enable a new generation of "content-aware" applications.

Additional information can be found on the internet at the following URL:

<http://www.atg.apple.com/research/tech/V-Twin/default.html>.

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Tech Info Library Article Number:20873



Tech Info Library

PC Compatibility Card: Cannot Share Memory with Mac OS (1/97)

Revised: 1/27/97
Security: Everyone

PC Compatibility Card: Cannot Share Memory with Mac OS (1/97)

=====

Article Created: 27 January 1997

TOPIC -----

Can I share memory on the PC Compatibility Card with the Mac OS, or do I need to add memory to both the PC Compatibility Card and Mac OS computer?

DISCUSSION -----

Unlike the DOS Compatibility Cards, you cannot share memory with the Mac OS on the PC Compatibility Cards. You must add memory to both the PC Compatibility Card and the Mac OS computer.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20875



Tech Info Library

Mac OS 7.6: No Classic AppleTalk Support (1/97)

Revised: 1/27/97
Security: Everyone

Mac OS 7.6: No Classic AppleTalk Support (1/97)

=====

Article Created: 27 January 1997

TOPIC -----

I installed Mac OS 7.6 and when I run the Network Software Selector a dialog reports, "You have selected Classic AppleTalk for your network services. Classic AppleTalk is not supported on your CPU. Open Transport will be used instead." Does Classic AppleTalk work with Mac OS 7.6?

DISCUSSION -----

Open Transport 1.1.1 is installed as a standard part of Mac OS 7.6 on every system. Classic networking is no longer an option, therefore the Network Software Selector switch is no longer included and will not function properly.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20876



Tech Info Library

Macintosh Performa 6400: Read Me (1/97)

Revised: 1/27/97
Security: Everyone

Macintosh Performa 6400: Read Me (1/97)

=====

Article Created: 27 January 1997

TOPIC -----

This article contains the ReadMe file for the Macintosh Performa 6400 series computer.

DISCUSSION -----

Contents

=====

Tips

- Improving Video Capture
- Using the QuickTake 150 Camera

Troubleshooting

- Problems Turning on your Computer
- Printing Problems
- Performance Problems
- Problems with Sound
- Networking and File Sharing Problems
- Problems Using a RAM disk
- Problems with Programs Freezing or Quitting Unexpectedly
- Problems Using Infrared Features

Compatibility Problems

- Ethernet Cards
- Japanese and Chinese Language Kits
- QuarkXPress
- SAM Virus Detection
- STF PowerFax PE

Important Information About Virtual Memory

Important Information About Document Auto-Save

- Other Document-Saving Products
- Self-Dismissing Dialogs

Important Information About Macintosh PC Exchange

- Apple File Exchange and Macintosh PC Exchange
- AutoDoubler
- Compressed PC Disks and Files
- Working With Disks Containing Multiple Partitions
- Working with DOS-Format SCSI Removable Media Devices
- Working with DOS-Format SCSI Hard Disk Drives
- Tips and Problems

Tips

====

Improving Video Capture

You can increase the speed of video capture by taking one or more of the following actions:

- * Turn off virtual memory in the Memory control panel.
- * Turn off AppleTalk. (You can quickly turn AppleTalk on or off with the Control Strip, or use the Chooser instead.)
- * Reduce the size of the capture window. (160x120 is the best size; also, 320x240 is good.)
- * Do not run programs other than the capture application while capturing video.
- * Turn off the Menubar Clock in the Date & Time control panel.
- * Turn off all unnecessary extensions. Do not turn off QuickTime. (Use the Extensions Manager control panel to turn off extensions; then restart your computer.)
- * Make sure that your hard disk has enough free space to record. If you notice a decline in performance, use a disk optimizer to improve your disk's efficiency.

Using the QuickTake 150 Camera

For best results, use the QuickTake Image Access control panel to look at images in the camera and transfer them to your Macintosh. This method is faster and more reliable than using the PhotoFlash program.

Troubleshooting

=====

IMPORTANT For more troubleshooting information on the problems described below and on other topics, refer to Macintosh Guide (available in the Guide menu when the Finder is active) and the manuals that came with your computer.

Problems Turning on your Computer

When you turn on your computer, a disk icon with a blinking question mark

appears in the middle of the screen. Then after a moment, your computer starts up normally. Your computer is having difficulty locating the startup disk with the system software. (This minor problem can occur if you have reset your parameter RAM.) To correct the problem, do the following:

1. Open the Apple menu and choose Control Panels.
2. Open the Startup Disk control panel.
3. Select your startup disk in the window that appears.
4. Close the Startup Disk control panel window.

Printing Problems

Your system freezes or experiences other problems when printing on a LaserWriter Select 300 or 310 printer. This problem can occur when you attempt to print and your printer is not connected properly to your computer. Trying to cancel printing in the Print Monitor will not solve the problem and may either produce a flashing error message or cause your computer's performance to slow down.

Check to make sure your printer is connected to your computer. If you see a message with a Continue button, click Continue. Normal printing is resumed.

You have trouble printing on a StyleWriter or StyleWriter II printer. Use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver; it is not compatible with PowerPC-based computers.

You have trouble printing with Apple PhotoFlash. Make sure that you have designated a printer in the Chooser. After doing so, open the File menu and choose the Print command.

You can't use the "Print Later" option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the "Print Later" option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension and restart your computer.

To turn off the Assistant Toolbox extension:

1. Open the Apple menu and choose Control Panels.
2. Open the Extensions Manager control panel.
3. In the list of extensions, click next to the Assistant Toolbox extension to remove the checkmark.
4. Restart your computer.

You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer. This problem can occur when the amount of memory Stickies uses is set below 150K. Try increasing the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

Performance Problems

You see a message that not enough memory is available. This problem can occur

for several reasons. For detailed tips on memory-related problems, refer to both the troubleshooting information in the manuals that came with your computer, and to the information on memory in Macintosh Guide (available in the Guide menu when the Finder is active).

If this problem occurs after you have opened the Extensions folder in the System Folder and scrolled through a long list of extensions, you can restore normal performance by restarting your computer.

Problems with Sound

When you play back sound you've recorded, you notice clicks, pops, or skips. This problem can occur if you have virtual memory turned on while you're recording sound. Turn off virtual memory before recording. For instructions on turning off virtual memory, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Adjusting the volume slider in Apple Video Player and other sound applications does not affect the volume, or it turns the volume all the way up or all the way down (allowing no in-between settings). This problem occurs on some newer models that handle sound differently from some older application programs. You can use the system sound settings to adjust the volume. Follow these steps:

1. Open the Apple menu and choose Control Panels.
2. Open the Monitors & Sound control panel.
3. Click the Sound button.
4. Use the volume or level slider (whichever is available) to adjust the sound volume.

Hypercard version 2.3.3 or earlier does not record sound properly on your computer. Other sound recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within Hypercard 2.3.

Networking and File Sharing Problems

IMPORTANT For information about Open Transport, see the information on networking in Macintosh Guide. For information about networking in general, see the Performa user's manual that came with your computer. Additional information about Open Transport is on your hard disk in a separate folder.

AppleShare displays incorrect information for large drives. If you use File Sharing to share a disk larger than 2 gigabytes (GB), some older computers connected to your computer may display an incorrect size for the disk in the Get Info box. (Get Info reports the disk to be 2 GB in size, even if it is larger.)

Since these older computers do not support the larger drives, they also cannot report correct information about the drives. (Computers with System 7.5 display correct information.)

You can't reconnect to a server. If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu, you get a message that the disk could not

be opened because you do not have enough access privileges or because the server can't be found on the network. To reconnect to the server:

1. Close any open files. If any of your files contain changes that need to be saved, use the Save As command to save them on an available disk.
2. Choose the server from the Recent Servers item in the Apple menu.
3. If necessary, replace the files on the server with the ones you saved on an available disk when the server was not available.

You see zones and/or servers listed in the Chooser, but the network cable is not connected to the computer. This problem can occur if you disconnect the network cable from the back of your computer while the Chooser is open. Be sure to shut down your computer before disconnecting a network cable.

You have problems using AppleShare Server Software version 4.1 or 4.2. AppleShare server software versions 4.1 and 4.2 are not intended for use with PCI-based computers, such as the Macintosh 5400, 7200, 7500, 8500, and 9500 computers. If you attempt to use AppleShare server software version 4.1 or 4.2 with these models, you may experience problems.

Problems Using a RAM disk

You see a message that your RAM disk is unreadable. Under some circumstances you may see the following message after setting up a RAM disk:

"This disk is unreadable by this Macintosh. Do you want to initialize the disk?"
(Important: This message applies to the RAM disk, not to your hard disk, which will not be initialized.)

Decrease the size of the RAM disk. If you see the message again, decrease the size again. Continue to decrease in small amounts until the message no longer appears.

Problems with Programs Freezing or Quitting Unexpectedly

MoviePlayer quits unexpectedly. Using MoviePlayer 2.1, you can play a movie at double (2X) size. You cannot present a movie (that is, play the movie on a second monitor) at double size. Presenting a movie at 2X size results in the Movie Player quitting without warning.

Wiggleworks freezes, quits unexpectedly, or won't produce sound. Wiggleworks 1.0 requires special software, Macintalk Pro, to produce sound. The version of Macintalk Pro that comes with Wiggleworks is not compatible with your computer. After installing Wiggleworks, you need to drag a newer version of Macintalk Pro (version 1.4 or later) to the Extensions folder (inside your System Folder).

There are two ways to obtain Macintalk Pro version 1.4:

- * Install PlainTalk from the Apple Extras folder. PlainTalk includes Macintalk Pro version 1.4, which is placed in the Extensions folder when you install PlainTalk.

- * Download Macintalk Pro from Apple Computer's America Online or Internet sites.

Refer to the service and support information that came with your computer for information about connecting to Apple's online sites.

If you are unable to obtain Macintalk Pro version 1.4, you can order it from Apple by phone. Refer to the service and support information that came with your computer for the phone number you should call.

Note: Your computer comes with Macintalk 3. Wiggleworks 1.0 does not work with Macintalk 3. To hear sound with Wiggleworks you must have Macintalk Pro version 1.4 in your Extensions folder, but it is not necessary to remove Macintalk 3.

Maple V quits unexpectedly when you change your monitor resolution. This can occur if you use the Control Strip to change the monitor resolution while the Maple V program is active. Use the Monitors & Sound control panel instead of the Control Strip to change screen resolution. For instructions on using the Monitors & Sound control panel, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

When you try to install Adobe Premiere Deluxe, the mouse freezes. This can occur if you have virtual memory turned on and AppleTalk active when you try to install Adobe Premiere Deluxe. Turn off virtual memory and make AppleTalk inactive before installing. For instructions, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

This problem does not occur if you select Adobe Premiere 4.2 installation instead of Adobe Premiere Deluxe.

Problems Using Infrared Features

Farallon AirPath(TM) v1.0 and Apple IR File Exchange don't work on your computer. Also, Farallon AirDock(TM) and other infrared devices are not detected through a serial port that has been selected in the AppleTalk control panel, nor has the string "(IR)" been appended to the port name. Infrared (IR) features are not fully supported on desktop computers running system software version 7.5.3. An AirDock(TM) connected to a selected AppleTalk serial port will, in most cases, operate normally (though forwarding features are disabled). This lets you connect to the desktop system using Personal File Sharing. These problems do not occur on PowerBook computers, and will be corrected on desktop computers in a future update.

Compatibility Problems

===== Ethernet Cards

* The Ethernet CS II Card requires Open Transport software. To use Open Transport, open the Network Software Selector application in the Apple Extras folder, and select Open Transport networking. Then use the AppleTalk and TCP/IP control panels to set up networking with the Ethernet CS II Card. (Do not use the Network and MacTCP control panels.)

* MacIPX is not supported currently by Open Transport and therefore does not work with the Ethernet CS II Card or with any Ethernet PCI card.

* The currently shipping versions of Apple IP Gateway and AppleTalk Internet Router are not compatible with Open Transport.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

QuarkXPress

To use QuarkXPress with System 7.5.3 on a PowerPC-based computer, you must upgrade to QuarkXPress version 3.32.

SAM Virus Detection

SAM (Symantec AntiVirus for Macintosh) version 4.0 does not work with System Software version 7.5.3. To use SAM, you must obtain SAM version 4.0.6 or later from Symantec Corporation.

Note: The first time you restart your computer after installing SAM, the screen may be only partially redrawn (with a rectangular area missing) after you dismiss the SAM startup message. This screen problem only occurs once after you install SAM.

STF PowerFax PE

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for PowerPC-based computers (often called a "native" application program), turning on virtual memory lets your application use less memory.

Your computer comes with virtual memory turned off. With virtual memory turned on, a PowerPC-based program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual

memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?" and "Tips for PowerPC-based computers."

For best performance, try setting virtual memory to no more than 150% of the memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

If virtual memory is turned on and you notice performance problems (such as unusually slow computer response) when using certain application programs, you may want to turn off virtual memory.

To improve performance, you can also install more memory (RAM) in your computer. See the Performa user's manual that came with your computer for more information.

Important Information About Document Auto-Save

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The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

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Apple File Exchange and Macintosh PC Exchange

The Apple File Exchange software is not compatible with your Macintosh model. Macintosh PC Exchange provides an easier method for accessing DOS and Apple II ProDOS disks on a MacOS-based computer.

AutoDoubler

To use AutoDoubler with Macintosh PC Exchange, you must first open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a MacOS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use Macintosh PC Exchange to mount the MacOS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both MacOS- and DOS-format partitions, Macintosh PC Exchange will recognize only the MacOS partition. In addition, Macintosh PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use Macintosh PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use Macintosh PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a MacOS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple MacOS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for Macintosh PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, click the device's icon to select it and choose Put Away from the File menu. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use either the disk setup and partitioning software that came with the SCSI controller card installed in your PC or the one that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, Macintosh PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

* A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on

your computer.

* Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:20882



Revised: 1/27/97
Security: Everyone

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TOPIC -----

DISCUSSION -----

Begin_Table

End_Table

Tech Info Library Article Number:20883



Tech Info Library

Macintosh Performa 6400/200 Zip: Supported Memory Types (2/97)

Revised: 2/13/97
Security: Everyone

Macintosh Performa 6400/200 Zip: Supported Memory Types (2/97)

Article Created: 27 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains important information about installing memory in some Macintosh Performa 6400 computers.

Note: This information was included in a document included with these computers titled, "Update: New Information About DRAM Installation."

DISCUSSION -----

This update contains information you need to know if you decide to add random access memory (RAM) to your computer. It replaces information about dynamic RAM (DRAM) specifications in the user's manual in the Technical Information booklet for your computer. If you don't need the information immediately, save it with your user's manual so that you'll have it if you ever decide to install additional DRAM in your computer.

Your computer has Extended Data Output (EDO) DRAM Dual Inline Memory Modules (DIMMs), not the fast-paged-mode DIMMs referred to in the user's manual and in the Technical Information booklet for your computer. To take advantage of the faster RAM access time of the EDO DRAM DIMMs already in your computer, DIMMs installed later should be 64-bit wide, 168-pin 5-volt (V) buffered EDO DRAM DIMMs, with 60-nanosecond (ns) RAM access time or faster, and a 1K or 2K refresh count.

Fast-paged-mode will be the default speed, if fast-paged-mode DIMMs are mixed with EDO DIMMS.

Fast-paged-mode DIMMs slower than 60 nanosecond are not recommended.

The Single Inline Memory Modules (SIMMs) from older Macintosh computers are not compatible with your computer and should not be used.

DIMMs that require a 4K refresh count should not be used, either.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20885



Tech Info Library

Power Macintosh 5500 & 6500: Supported Graphics Modes (4/97)

Revised: 4/28/97
Security: Everyone

Power Macintosh 5500 & 6500: Supported Graphics Modes (4/97)

Article Created: 27 January 1997
Article Reviewed/Updated: 28 April 1997

TOPIC -----

This article contains a description of the video memory and 2D and 3D graphics acceleration support in the Power Macintosh 5500 and 6500 series computers.

DISCUSSION -----

The logic board in the Power Macintosh 5500 and 6500 series computers has the following built-in video and graphics capabilities:

- * ATI 3D RAGE II 64-bit graphics and multimedia accelerator (ATI264GT graphics controller (see description below))
- * 2 MB of synchronous graphic RAM (SGRAM)
- * Hardware acceleration of 2D QuickDraw graphics and video to speed up scrolling text and graphics and screen redraw operations
- * Hardware acceleration of video for full screen, full motion, TV-quality playback of Cinepak and MPEG1 QuickTime movies
- * Bilinear hardware interpolation and scaling
- * Accelerated 3D QuickDraw rendering up to 6 times that of software-only rendering
- * Real-time 3D shaded object manipulation, animation, and virtual world navigation
- * Includes 16-bit Z buffer for hidden texture surface removal
- * Provides six perspectively correct texture-mapping functions
- * Alpha blending, transparency, and fog effects
- * Flat and Gouraud shading
- * Video textures and video lighting

ATI264GT Graphics Controller

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The ATI264GT graphics controller contains the logic for the video display. It includes the following functions:

- * Display memory controller, built-in drawing coprocessor, video scaler, color space converter, clock generator, and true color palette video DAC (digital-to-analog converter)
- * Video CLUT (color lookup table)
- * Hardware graphics acceleration with a 16-bit Z-buffer
- * Accelerates QuickDraw 3D rendering up to 6 times that of software-only acceleration
- * True color palette DAC supporting pixel clock rates to 135 MHz for 1280 by 1024 resolution at 75 Hz
- * Graphics and video line buffer for superior video scaling and playback quality
- * Hardware cursor up to 64 x 64 x 2
- * DCC1 and DDC2B plug-and-play monitor support
- * Supports synchronous graphics RAM (SGRAM) at up to 67 MHz memory clock, providing a bandwidth up to 536 MB per second
- * Graphics control accessible through the QuickDraw , QuickDraw 3D, QuickDraw 3D RAVE, and QuickTime components APIs

A separate data bus handles data transfers between the ATI264GT IC and the display memory. The display memory data bus is 64 bits wide, and all data transfers consist of 32 bits at a time. The ATI264GT IC breaks each 64-bit data transfer into several pixels of the appropriate size for the current display mode--4, 8, 16, 24, or 32 bits per pixel.

The ATI264GT IC uses several clocks. Its transactions are synchronized with the PCI bus. Data transfers from the frame-buffer RAM are clocked by the MEM_CLK signal, which runs at 67 MHz. Data transfers to the CLUT and the video output are clocked by the dot clock, which has a different rate for different display monitors.

The 2D graphics accelerator is a fixed-function accelerator for rectangle fill, line draw, polygon fill, panning/scrolling, bit masking, monochrome expansion, and scissoring.

Video Memory & QuickDraw 3D Acceleration

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The display memory on the Power Macintosh 5500 and 6500 computers is separate from the main memory. The display memory consists of 2 MB of 12-nanosecond (ns) SGRAM devices configured to make a 64-bit data bus. The display memory cannot be expanded. The display data generated by the computer can have pixel depths of 8, 16, or 32 bits for monitors up to 832 by 624 pixels, 8 or 16 bits for larger monitors up to 1152 by 870 pixels, and 8 bits for monitors supporting 1280 by 1024 pixels. Data from the video input module is always stored and transferred at 16 bits per pixel. The video frame buffers support live video in a 320-by-240 pixel frame at 30 frames per second.

Although the display modes up to 1152 by 870 at 16 bits of resolution are supported, the largest supported display size is useful for standard 2D applications. For 3D applications, the 2 MB of video memory space is used differently, which restricts the useful display size and supported bit depth.

For example, QuickDraw 3D uses double buffering if the hardware supports it. Double buffering immediately reduces the available video memory for application

use. In addition, 3D applications that use a Z buffer for hidden texture removal have even less space available for caching textures to increase graphics rendering speed.

To get the most performance out of 3D applications in the 2 MB of video memory, the display mode size should be reduced. A 512 by 384 display mode is provided specifically for increasing the available memory space for texture caching to improve 3D graphics rendering speed.

Hardware acceleration for 3D applications is not provided for all of the supported 2D display modes. Refer to the tables below for specific information.

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Power Macintosh 6500 Video Input and Graphics Acceleration Display Modes
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Begin_Table

Display Resolution	Pixel Depth	Vertical Scan Rate	Video Input	QuickDraw 2D Acceleration	QuickDraw 3D Acceleration
512 x 384	8	70 Hz	Yes	Yes	No
512 x 384	16,32	70 Hz	Yes	Yes	Yes
640 x 480	8	60,67,72,75,85 Hz	Yes	Yes	No
640 x 480	16	60,67,72,75,85 Hz	Yes	Yes	Yes
640 x 480	32	60,67,72,75,85 Hz	Yes	Yes	Depends on application window size
640 x 870	16	75 Hz	Yes	Yes	No
800 x 600	8,32	56,60,72,75,85 Hz	Yes	Yes	No
800 x 600	16	56,60,72,75,85 Hz	Yes	Yes	Depends on application window size
832 x 624	8,32	75 Hz	Yes	Yes	No
832 x 624	16	75 Hz	Yes	Yes	Depends on application window size
1024 x 768	8,16	60,70,75 Hz	Yes	Yes	No
1152 x 870	16	75 Hz	Yes	Yes	No

1280 x 980	8	75 Hz	Yes	Yes	No
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End_Table					

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Power Macintosh 5500 Video Input and Graphics Acceleration Display Modes

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Begin_Table

Display Resolution	Pixel Depth	Vertical Scan Rate	Video Input	QuickDraw 2D Acceleration	QuickDraw 3D Acceleration
=====+=====+=====+=====+=====+=====					
640 x 480	8	60,67 Hz	Yes	Yes	No
-----+-----+-----+-----+-----+-----					
640 x 480	16	60,67 Hz	Yes	Yes	Yes
-----+-----+-----+-----+-----+-----					
640 x 480	32	60,67 Hz	Yes	Yes	Depends on application window size
-----+-----+-----+-----+-----+-----					
800 x 600	8,32	60,72 Hz	Yes	Yes	No
-----+-----+-----+-----+-----+-----					
800 x 600	16	60,72 Hz	Yes	Yes	Depends on application window size
-----+-----+-----+-----+-----+-----					
832 x 624	8,32	75 Hz	Yes	Yes	No
-----+-----+-----+-----+-----+-----					
832 x 624	16	75 Hz	Yes	Yes	Depends on application window size
-----+-----+-----+-----+-----+-----					
1024 x 768	8,16	60 Hz	Yes	Yes	No
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End_Table

Article Change History:

28 Apr 1997 - Updated 6500 video support information.

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20886



Tech Info Library

AppleShare Print Server 3.0.3 Rev. B: Read Me (1/97)

Revised: 1/27/97
Security: Everyone

AppleShare Print Server 3.0.3 Rev. B: Read Me (1/97)

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Article Created: 27 January 1997

TOPIC -----

This article is the AppleShare Print Server 3.0.3 Rev. B ReadMe file.

DISCUSSION -----

This Read Me document provides important information about AppleShare Print Server 3.0.3 Rev. B. You may want to print this Read Me document and keep it with your "AppleShare Server Administrator's Guide."

Using Disk Cache with AppleShare Print Server

Depending on how you use AppleShare Print Server, you may notice an improvement in performance by adjusting the server computer's disk cache size. System 7 is shipped with disk cache on automatically and set to 32K for every megabyte of available RAM. You may wish to experiment with higher settings. (You adjust the cache size in the Memory control panel.)

If you change the size of the disk cache, be sure to restart the server computer after changing the setting for the new size to take effect.

Running AppleShare Print Server with Virtual Memory Turned On

It is possible to run AppleShare Print Server 3.0.3 Rev. B software with virtual memory turned on; however, doing so is not recommended. If you choose to run the software with virtual memory turned on, you will likely notice a decrease in server performance. See the manuals that came with your server computer for more information on using virtual memory.

Problems Fixed in 3.0.3 Rev. B

This version fixes a problem with AppleShare Print Server 3.0, 3.0.1, and 3.0.2. Specifically, printing large graphics files could cause connections to the print server to be dropped prematurely.

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Tech Info Library Article Number:20887



Tech Info Library

Indian Language Kit: Description & Specifications (2/97)

Revised: 2/13/97
Security: Everyone

Indian Language Kit: Description & Specifications (2/97)

Article Created: 28 January 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the description and technical specifications for the Indian Language Kit.

DISCUSSION -----

The Apple Indian Language Kit is an easy way to add Hindi, Sanskrit, Gujarati, Marathi, Punjabi, and Nepalese text to your documents. It contains the necessary software to work with Devanagari, Gurmukhi, and Gujarati scripts in applications on your Apple Macintosh or other Mac OS-compatible computer.

You can use the Indian Language Kit for a variety of business, educational, and personal projects. It works best with applications that support the Apple WorldScript technology. You can even use it to view ISCII-compatible Indian language sites on the World Wide Web.

After a simple installation process, you can switch effortlessly between the computer's main language and any of the languages supported by this kit, using any application that supports styled text. You can use more than one Indian language in a single document. By installing additional Apple Language Kits, you can also incorporate other languages (such as Japanese, Chinese, and Arabic) in the same document.

The Indian Language Kit includes Apple TrueType fonts that display and print high-quality Devanagari, Gurmukhi, and Gujarati characters at any size. Documents can be printed on both QuickDraw and PostScript printers. If you use a QuickDraw GX application with the kit you will be able to access additional advanced typography features supported by the Apple QuickDraw technology.

The kit comes with a selection of keyboard layouts accompanied by a reference card. The default Inscript layout, developed in India to answer the special

needs of Indian languages, permits all the Indian scripts to be typed in a common way. For users who prefer a phonetic romanized-input option, a QWERTY keyboard layout is also provided for each language.

Features

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Versatile multilingual capabilities

- * Install as many language kits as you need on a single Mac OS-based system
- * Switch between languages easily
- * Combine different languages in the same document
- * Take advantage of superior typography features provided by QuickDraw GX applications

Comprehensive, high-quality fonts

- * Three Apple TrueType fonts for high-quality on-screen and printed characters
- * Support for QuickDraw and PostScript printers
- * Full compatibility with QuickDraw GX technology

Ease of use

- * Simple, customizable installation process
- * Choice of keyboard layouts for easy text entry
- * Keyboard quick-reference card

Compatibility

- * Supports the Inscript keyboard layout for Indian text entry
- * Supports the ISCII (Indian Script Code for Information Interchange) standard defined by the Bureau of Indian Standards (IS 13194 : 1991)
- * Is compatible with any localized version of the Mac OS (version 7.5 or later) and with other Apple Language Kits
- * Works with Apple's WorldScript technology

Technical Specifications

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TrueType fonts

- * Devanagari MT
- * Gurmukhi MT
- * Gujarati MT

Keyboard layouts

- * Devanagari (Inscript)
- * Devanagari (QWERTY)
- * Devanagari/Nepali
- * Gurmukhi (Inscript)
- * Gurmukhi (QWERTY)
- * Gujarati (Inscript)

* Gujarati (QWERTY)

Extras (accessory software)

* Devanagari Shikshak 1.0 (a typing tutor to learn the INSCRIPT keyboard)
* Hindi Learning Stack 1.0 (a HyperCard program to get started learning the Devanagari alphabet)

Application compatibility

The Indian Language Kit is based on the Apple WorldScript technology, and works best with applications that take advantage of WorldScript.

These programs include:

* HyperCard from Apple Computer
* LightningDraw GX from Lari Software
* ReadySetGo! GX from Modular Software
* Nisus Writer from Nisus Software
* PhotoShop ME from Adobe Systems
* WorldWrite from World Software

Note: Apple has tested only a limited number of applications, therefore this list is not intended to be comprehensive. Many applications that do not employ WorldScript software technology may provide limited functionality and allow input of Indian characters.

Standards support

* Supports the Indian Script Codr for Information Interchange (ISCII) standard defined by the Bureau of India Standards (13194:1991).

System requirements

* An Apple Macintosh, Power Macintosh, PowerBook, or other Mac OS-compatible system
* 5 MB of RAM
* Mac OS version 7.5 or later
* An Apple SuperDrive floppy disk drive or a CD-ROM drive (CD-ROM drive required to access certain accessory software; see Ordering Information)
* One or more applications that support WorldScript technology
* To take advantage of the kit's QuickDraw GX features, QuickDraw GX software and one or more applications that use QuickDraw GX features

Ordering Information

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Indian Language Kit

Order No. 440000U

* 1.4MB floppy disks and one CD-ROM containing:
- Indian Language Kit software
- SimpleText software
- Extras (on CD-ROM only)
- LaserWriter driver software (on CD-ROM only)
* Indian Language Kit User's Manual

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Article Change History:

13 Feb 1997 - Changed distribution status.

07 Feb 1997 - Updated with latest version of information.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20891



Tech Info Library

AppleShare Workstation 3.6.5 Read Me (1/97)

Revised: 1/28/97
Security: Everyone

AppleShare Workstation 3.6.5 Read Me (1/97)

Article Created: 28 January 1997

TOPIC -----

This article is the AppleShare Workstation 3.6.5 ReadMe file.

DISCUSSION -----

Contents

Changes from AppleShare Workstation 3.6.2
Changes from AppleShare Workstation 3.6.3 & 3.6.4
System Software recommendations

Changes from AppleShare Workstation 3.6.2

• AppleShare Workstation 3.6.2 was modified to allowed the user to change his or her password during alias resolution. This modification caused two problems:

- Utilities (such as virus-protection utilities) that patch GetResource could cause AppleShare Workstation software to crash when opening an alias that required a password.
- The system could hang if a background application performed file I/O while an alias that required a password was being opened.

For AppleShare Workstation 3.6.3, this modification was removed. It will be re-implemented in a future version of AppleShare Workstation software.

• A conflict with applications that quit the Finder, notably the Apple Installer, was fixed.

Changes from AppleShare Workstation 3.6.3 & 3.6.4

• AppleShare Workstation 3.6.3 and 3.6.4 differ only in the bundle bit being set on the

AppleShare extension.

- AppleShare Workstation 3.6.5 fixes some internal version strings that were not updated with 3.6.4.

System Software recommendations

- Computers running system software prior to 7.5.1 should run AppleShare Workstation 3.5.
- Computers running system software 7.5.1 or later should run AppleShare Workstation 3.6.5.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20893



Tech Info Library

Network Server 500 or 700: Configure PPP Server in AIX (1/97)

Revised: 1/28/97
Security: Everyone

Network Server 500 or 700: Configure PPP Server in AIX (1/97)

=====

Article Created: 28 January 1997

TOPIC -----

This article describes configuring a simple PPP Server in AIX 4.1.4 on an Apple Network Server 500, or 700.

DISCUSSION -----

To configure a simple PPP Server on an Apple Network Server 500 or 700 running AIX 4.1.4, follow the steps below:

Step 1

Create a tty for your serial port with login enabled, rts or cts flow control, and a serial port rate at 38400 for modem that are over 14400 kbps. Use smitty devices or type this shell command:

```
mkdev -c tty -t 'tty' -s 'rs232' -p 'sa0'
```

This command will create the tty on serial port 1.

Step 2

Add this line in your Devices file in the "/etc/uucp" directory.

Direct tty0 - any direct

Be sure to save the file with the "w!" in vi because the file is read only and then exit with "wq" when finished.

Step 3

Type smitty ppp and go to link control configuration, go to add a link configuration.

```
1 server
0 client
0 demand ( available only on AIX 4.2)
1 interface
1 hdlc
```

Leave the rest at default values.

Step 4

Go to smitty addpppserver

- a) fill in local address (your local system IP address)
- b) starting remote address (your remote address for the peer)
- c) number of addresses (1)

Step 5

Start the PPP subsystem through smitty or type

```
/etc/ppp/mkppp -start 'both'
```

Step 6

When you login, the .profile should contain:

```
exec /usr/sbin/pppattachd server
```

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20894



Tech Info Library

LaserWriter Select Series: Printing Light on Half of Page 1/97

Revised: 1/28/97
Security: Everyone

LaserWriter Select Series: Printing Light on Half of Page 1/97

=====

Article Created: 28 January 1997

TOPIC -----

I have a LaserWriter Select 360 printer, which is printing light on one-half of the page. I replaced the toner cartridge, but that did not correct the light printing.

DISCUSSION -----

On the LaserWriter Select 300, LaserWriter Select 310, and LaserWriter Select 360 printers this problem can occur when there is a build-up of toner on the glass inside the printer.

The laser beam passes through a window in the printer chassis before striking the photosensitive drum within the toner cartridge. The window is in a long narrow slit directly behind the toner cartridge. If toner build-up occurs on this window, printouts exhibit a faded inconsistent look, similar to the appearance of a toner cartridge at the end of its life. The faded appearance is often more pronounced on the left side of the page.

How to Correct Image Fading

=====

Step 1

Remove the toner cartridge.

Step 2

Wipe the front surface of the glass with a lint free cloth.

Step 3

Replace the toner cartridge.

Step 4

Print a startup page.

If the print quality does not change, the problem is not with the window.

Step 5

Replace the toner cartridge with a known good cartridge.

If the problem does not go away, your printer needs to be examined by an Apple service technician.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20895



Tech Info Library

PC Compatibility Card and IMS Video (1/97)

Revised: 1/29/97
Security: Everyone

PC Compatibility Card and IMS Video (1/97)

=====

Article Created: 29 January 1997

TOPIC -----

I have a Power Macintosh 7200/120 with a PC Compatibility card and an IMS Twin Turbo Video card installed. If I am using built-in video, the PC Setup control panel allows for configuration of my 20-inch display. If I am using the IMS video card, the PC Setup control panel only allows configuration of a 640 x 480 display. What could be causing this?

DISCUSSION -----

When a PC Compatibility card is present, the correct video driver to use with the IMS Twin Turbo video card is version 3.6. Older versions of the driver may not provide full functionality for the display you are using.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20899



Tech Info Library

Performa 6400/6360 & GeoPort Modem: Data/Fax Arbitration (1/97)

Revised: 1/31/97
Security: Everyone

Performa 6400/6360 & GeoPort Modem: Data/Fax Arbitration (1/97)

Article Created: 30 January 1997

TOPIC -----

I cannot get the data/fax arbitration to work correctly on a Macintosh Performa 6400 or 6360 with a GeoPort modem. What should I do?

DISCUSSION -----

1. Open the Express Modem control panel and verify the Express Modem is turned on.
2. From the General Settings pop-up menu, choose "Advanced Options." Make sure that unknown calls are selected to be transferred to the Voice application.
3. Open AppleFax and verify that the Receive Faxes option is in the ON position.
4. Open Megaphone and choose Preferences from the File menu.
5. From the Topics pop-up menu, choose Mailboxes. Ensure that "Allow Megaphone Voice Messaging" is enabled.
6. From the Topics pop-up menu, choose Incoming Calls. Ensure that "Come to Front When Ringing" is chosen.

This should suffice to allow the computer to automatically arbitrate between fax and voice calls.

Note that Megaphone must always be open for this feature to work.

If the above steps did not resolve your issue, you may have a software conflict. Please review the Tech Info Library articles listed below. They provide general guidance on how to troubleshoot extension conflicts.

Note that certain types of third-party performance enhancement utilities which

modify the system at a low level can modify system performance enough that some features may not work correctly.

REFERENCES

The online Apple Technical Info Library at <<http://til.info.apple.com>> - use the search string "TECHINFO-0017768" to locate the article "System SW Clean Restore:Macintosh Performa Computers w/CD."

The online Apple Technical Info Library at <<http://til.info.apple.com>> - use the search string "TECHINFO-0015926" to locate the article "System 7.5: Troubleshooting Extension Conflicts

The online Apple Technical Info Library at <<http://til.info.apple.com>> - use the search string "TECHINFO-0014343" to locate the article "Troubleshooting Macintosh System 7 INIT Conflicts."

This article was published in the Information Alley on 31 January 1997.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20901



Tech Info Library

Newton 2.x OS: Known Windows Serial Connection Issues (1/97)

Revised: 1/30/97
Security: Everyone

Newton 2.x OS: Known Windows Serial Connection Issues (1/97)

Article Created: 30 January 1997

TOPIC -----

This article provides information on known Windows serial connection issues.

DISCUSSION -----

On some Windows-based computers, customers with Newton OS 2.x units may experience serial connection problems with the Newton Backup Utility for Windows 1.0 and the Newton Package Installer 2.0. Users may experience the following symptoms:

Newton Backup Utility for Windows 1.0

- * does not establish a connection to the unit
- * drops connections to the unit
- * completes backs up but does not create the backup file
- * will not install a package onto a storage card
- * experiences random serial connection failures

Newton Package Installer 2.0

- * does not establish a connection to the unit
- * drops connections to the unit
- * will not install a package onto a storage card
- * experiences random serial connection failures

Products with Revised Serial Driver

The following products incorporate a revised serial driver in the Windows host software that do not exhibit these symptoms

- * Newton Backup Utility for Windows 1.0.1

- * Newton Press for Windows 1.0

- * Newton Connection Utilities for Windows 1.0 (This product is currently a beta product and not supported by Apple's support staff).

Also, the following products are intended for Newton 1.x units and are not affected by this issue

- * Newton Connection Kit for Windows 1.x and 2.x

- * Newton Package Installer for Windows 1.1

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Tech Info Library Article Number:20902



Tech Info Library

Mac OS 7.6 and Connectix Speed Doubler Issue (1/97)

Revised: 1/30/97
Security: Everyone

Mac OS 7.6 and Connectix Speed Doubler Issue (1/97)

=====

Article Created: 30 January 1997

TOPIC -----

This article describes an issue between Mac OS 7.6 and Connectix Speed Doubler.

DISCUSSION -----

Some versions of Connectix Speed Doubler are not compatible with Mac OS 7.6. If you are using Speed Doubler version 1.3.1 or earlier, you should update to version 1.3.2. If you are using version 2.0, you should update to version 2.0.1. You should disable Speed Doubler until you can update your Speed Doubler software. Speed Doubler Updaters and more information on this problem are available from Connectix on the World Wide Web at:

<http://www.connectix.com/connect/upda.spee.html>

You may also call Connectix at 800-839-3632 for more information, or if you have any additional questions.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20903



Tech Info Library

Mac OS 7.6: Netscape Navigator Freezes (1/97)

Revised: 3/19/97
Security: Everyone

Mac OS 7.6: Netscape Navigator Freezes (1/97)

=====

Article Created: 30 January 1997

TOPIC -----

This article describes a situation where Netscape Navigator may fail with Mac OS 7.6 if the Shared Library Manager extension is turned off by the Extensions Manager control panel.

DISCUSSION -----

The Shared Library Manager extension is needed on PowerPC processor-based computers, and when this extension is turned off, Netscape Navigator v3.0 freezes after it attempts to access a URL (uniform resource locator). Occasionally, Netscape will load a URL or two and freeze within the next minute or so.

Also, the description in Extensions Manager control panel, in the Item Information section, of the Shared Library Manager is not correct. This description incorrectly states, "... Needed if your computer is using Open Transport and has a 68020, 68030, or 68040 processor."

The two extensions, Shared Library Manager PPC and Shared Library Manager, are both needed for a PowerPC processor-based Mac OS computer.

This article appeared in the 31 January 1997 issue of the Information Alley.

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Tech Info Library Article Number:20904



Tech Info Library

Apple MessagePad: Finding Windows Serial 9600 driver (1/97)

Revised: 1/31/97
Security: Everyone

Apple MessagePad: Finding Windows Serial 9600 driver (1/97)

=====

Article Created: 31 January 1997

TOPIC -----

I removed the Serial 9600 driver from my Newton 2.x OS device, and did not have a backup of my data. I would like to reinstall the Serial 9600 driver. Where can I get this driver it?

DISCUSSION -----

The Serial 9600 driver is not available separately. However, it is included in the following products listed below, which are available on the Apple Software Updates sections online.

+=====+	
Product name	Online Filename
+=====+	
Newton Backup Utility 1.0.1	NBU101EN.ZIP
+-----+	
Handwriting Instructor and Tour	TOUR_HWI.ZIP
+-----+	
Newton Package Installer 2.0	WINNPI2.EXE
+=====+	

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20905



Tech Info Library

MegaPhone: Type 11 Error With GeoPort Software (2/97)

Revised: 2/3/97
Security: Everyone

MegaPhone: Type 11 Error With GeoPort Software (2/97)

=====

Article Created: 3 February 1997

TOPIC -----

If the Telephone Manager is turned off on a Macintosh Performa computer which has an internal GeoPort modem, Megaphone fails with a type 11 error when it is launched. Why?

DISCUSSION -----

This issue is unique to the GeoPort software. When a Macintosh Performa 6400/200 computer with the Global Village software was tested, the dialog states that the Telephone Lib file could not be found, and exits from the application.

Cypress Research has been notified and they will fix it in an upcoming version of MegaPhone.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20906



Tech Info Library

Newton Connct Kit for Windows: Limited Windows 95 Support (1/97)

Revised: 1/31/97
Security: Everyone

Newton Connct Kit for Windows: Limited Windows 95 Support (1/97)

=====

Article Created: 31 January 1997

TOPIC -----

Is the Newton Connection Kit for Windows supported under Windows 95?

DISCUSSION -----

The Newton Connection Kit for Windows was originally written for Windows 3.1x, and it was only tested under Windows 3.1x. Although it has not been qualified for use under Windows 95, informal usage indicates that it functions properly.

Although it is not officially supported under Windows 95, Apple recommends customers run Newton Connection Kit for Windows 2.0.3, which is the latest version of this software.

This article appeared in the 31 January 1997 issue of the Information Alley.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20907



Tech Info Library

Pwr Mac 6360/Performa 6400: Pulse Dialing Does Not Work (3/97)

Revised: 3/3/97
Security: Everyone

Pwr Mac 6360/Performa 6400: Pulse Dialing Does Not Work (3/97)

=====

Article Created: 31 January 1997
Article Reviewed/Updated: 3 March 1997

TOPIC -----

I cannot use pulse dialing to fax from the Apple Telecom software. It always defaults to tone dialing.

DISCUSSION -----

Apple is aware of the issue. However, at this time there are no known workarounds, and there is no date estimates when this will be corrected in the Telecom software.

Article Change History:
03 Mar 1997 - Added current information.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20909



Tech Info Library

Apple Telecom 3.1: Fax Sender GX sends Reduced Size Fax (2/97)

Revised: 2/3/97
Security: Everyone

Apple Telecom 3.1: Fax Sender GX sends Reduced Size Fax (2/97)

=====

Article Created: 3 February 1997

TOPIC -----

I have a Macintosh Performa 6360 and a Macintosh Performa 6400 with the internal GeoPort modem. I have updated my Apple Telecom software with the 3.1.1 updater from Apple's Software Updates web site, and installed QuickDraw GX 1.1.5. Now when I send a fax from some of my word processing applications using Fax Sender GX, I notice that the faxed pages are reduced to about 20% of their actual size. How can I correct this?

DISCUSSION -----

Some word processing applications do not support QuickDraw GX. Fax Sender GX (part of Apple Telecom 3.1) allows you to fax from QuickDraw GX-savvy applications when QuickDraw GX is installed. Applications that support QuickDraw GX do not experience this reduction problem when printing through Fax Sender GX.

In order to avoid this reduction problem, you can temporarily disable QuickDraw GX by disabling the QuickDraw GX extension using the Extensions Manager control panel. After restarting your computer, you can select the regular Fax Sender driver in the Chooser and fax normally.

This article appeared in the 3 February 1997 issue of the Information Alley.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20910



Tech Info Library

Performa 6400: No Difference Between System files (2/97)

Revised: 2/4/97
Security: Everyone

Performa 6400: No Difference Between System files (2/97)

=====

Article Created: 4 February 1997

TOPIC -----

Is there any difference between the System suitcase on the Performa 6400 GVC (691-1109-A) Restore All Software and the one in the Hard Disk files folder on the CD?

DISCUSSION -----

No, there are no differences between the two files.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20911



Tech Info Library

LW 8.4.x: Type 11 Error When Setup Used With ATM 4.0 (2/97)

Revised: 2/4/97
Security: Everyone

LW 8.4.x: Type 11 Error When Setup Used With ATM 4.0 (2/97)

Article Created: 4 February 1997

TOPIC -----

I am using the LaserWriter 8.4.1 printer software and just installed Adobe Type Manger (ATM) 4.0. Now when I select the LaserWriter icon and select Setup, I either get a Type 11 error or my computer "freezes".

DISCUSSION -----

This can occur with any combination of LaserWriter 8.4.x and ATM 4.0 when setting up a printer for the first time. Once a LaserWriter has gone through Setup in Chooser, successive Setups of that printer work properly.

This issue should be resolved in a future version of the LaserWriter driver software. Until then, you can use one of the workarounds listed below.

Workarounds

- Disable ATM 4.0 before setting up a LaserWriter for the first time in Chooser.
- Use the LaserWriter 8.3.4 software. Versions of the LaserWriter driver earlier than 8.4 do not exhibit this issue.
- Use LaserWriter 8.4.2. Although susceptible to this issue, results are better when using the LaserWriter 8.4.2 with ATM 4.0 software.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20912



Tech Info Library

Performa 6400: Location of GeoPort AT Modem Commands (2/97)

Revised: 2/4/97
Security: Everyone

Performa 6400: Location of GeoPort AT Modem Commands (2/97)

=====

Article Created: 04 February 1997

TOPIC -----

I have purchased a Macintosh Performa 6360 with the internal GeoPort modem. After checking through all of the Read Me documents and hard copy documentation, I cannot locate the AT modem command set references. Where can I find this information?

DISCUSSION -----

Performa 6360 and 6400 computers shipped without an AT Command Set reference booklet. This command set is available on Apple Software Updates as part of the "Geoport-EM 3.1.1 Update" disk set. Macintosh Performa 6360/6400 users are encouraged to update their software to this version or later. After installing the update, you will find to reference booklet in the "Telecom Documents" folder on your hard disk. This document is called "AT Command Set (US) 33.6.pdf". This document is in the Adobe Acrobat PDF file format.

These articles can help you locate the software update mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article appeared in the 4 February 1997 issue of the Information Alley.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20914



Tech Info Library

Performa 6360: No Difference Between System files (2/97)

Revised: 2/4/97
Security: Everyone

Performa 6360: No Difference Between System files (2/97)

=====

Article Created: 4 February 1997

TOPIC -----

Is there any difference between the System suitcase on the Performa 6360 GP (691-1210-A) Restore All Software and the one in the Hard Disk files folder on the CD?

DISCUSSION -----

No, there are no differences between the two files.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20915



Tech Info Library

Mac OS Up-To-Date: Information With Order Form (4/97)

Revised: 4/16/97
Security: Everyone

Mac OS Up-To-Date: Information With Order Form (4/97)

Article Created: 4 February 1997
Article Reviewed/Updated: 16 April 1997

TOPIC -----

This article contains the information in the Mac OS Up-To-Date order form, however, this article does not include the order form itself. Fulfillment coupons and more information are available through the following means:

- Telephone
 - Mac OS Up-to-Date Customer Service 1 (800) 335-9258
(7 a.m. - 8 p.m. Mountain time)
- AppleFax at 1 (800) 462-4396
 - document no. 11438 (fulfillment coupon)
 - document no. 11437 (list of qualifying computers)
- Worldwide Web
 - <http://www.macos.apple.com/macos/releases.html>

DISCUSSION -----

Apple Computer and the participating Mac OS licensees have created the Mac OS Up-To-Date program for customers who purchase a qualifying new Mac OS computer that does not have the latest version of the Mac OS installed. This program allows them to upgrade to the latest version of the Mac OS for \$9.95 U.S. Dollars (USD).^{*} Just complete and send in this order form, along with a copy of your dated itemized sales receipt. See "Terms and Conditions" for program details. Your order must be postmarked or faxed within 180 days of your purchase, so order your upgrade now!

^{*} U.S. customers add appropriate state sales tax; Canadian customers add 7% sales tax.

Terms and Conditions

-
- This program begins by offering Mac OS 7.6 (U.S. English version only) to customers who purchase a qualifying computer on or after December 7, 1996. Mac OS updates, which may currently be downloaded from Apple World Wide Web sites, are not included in this program. Future Mac OS releases may be provided through this program; however, Apple reserves the right to change or discontinue this program at any time.
 - This offer is good only in the U.S. (50 states and the District of Columbia) and Canada, and valid only in accordance with the terms set forth on this certificate.
 - Void where prohibited by law, or where restricted.
 - This offer is available only with the purchase of a qualifying Mac OS computer. See "Qualifying Computers" for information on how to determine if your model qualifies.
 - This program entitles the purchaser to the latest retail U.S. English version of the Mac OS that was publicly available from Apple Computer at the time of purchase, or that was released within 30 days after purchase.
 - To receive your upgrade, you must complete the applicable order form and provide a photocopy of a dated, itemized invoice or packing slip indicating the model number(s) of the system(s) purchased. Completed order form, payment, and dated proof of purchase must be postmarked or faxed within 180 days of purchase; send to the address or fax number listed on order form.
 - Allow 6 to 12 weeks for delivery via UPS or First Class Mail.
 - Lost, late, or misdirected mail, and fax errors are not the responsibility of Apple Computer or The Hibbert Group.
 - Keep a copy of the Terms and Conditions as well as your completed order form for your records.
 - Every effort has been made to ensure that the information in this order form is accurate. Apple is not responsible for printing errors.
 - Apple reserves the right to change the Terms and Conditions of this offer at any time without notice.
 - No refunds or returns will be allowed in this program.
 - This offer is not valid in conjunction with any other Mac OS offer.
 - This offer is limited to one CD upgrade kit per qualifying computer purchased.
 - If any computer in your order does not qualify, your entire order will be returned to you along with any payment you provided.

Qualifying Computers

A Mac OS-compatible computer qualifies for this program if it was sold by Apple Computer, Inc., or a participating licensed manufacturer of Mac OS-compatible computers and either did not include the version of the Mac OS that was current at the time of purchase or a new release of the Mac OS was made available by Apple Computer within 30 days after purchase. The combination of your date of purchase and the computer model number is used to determine whether your order qualifies for this program. See below for an example of a model number. Visit the Mac OS Up-To-Date web site at <http://www.macos.apple.com/macos/releases/fulfillment.html> for more information, including how to determine your computer's model number.

Multiple Qualifying Computers on a Single Invoice

If you purchase multiple qualifying systems on a single invoice, you may either (1) purchase a Single-User CD Upgrade Kit for each qualifying system, at a cost of \$24.00 each plus appropriate sales tax;* or (2) purchase fewer Single-User CD Upgrade Kits and request the Right to Copy for the remaining qualifying systems. For example, if you purchased 11 qualifying systems on a single invoice, you might choose to purchase 2 Single-User Upgrade Kits at a total cost of \$48.00 plus applicable sales tax* and request the Right to Copy for the remaining 9 qualifying systems.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20916



Tech Info Library

Performa 6360/6400: Apple Fax & Cover Page Problems (2/97)

Revised: 2/4/97
Security: Everyone

Performa 6360/6400: Apple Fax & Cover Page Problems (2/97)

Article Created: 4 February 1997

TOPIC -----

I have a Performa 6360 & 6400 with an internal Geoportmodem installed. I am using the Apple Fax software that is included with my Performa to send faxes from various applications. I have updated my software using the Apple Telecom 3.1.1 Updater.

I have noticed some errors with the Sample, Standard and Homemade cover pages. Some of the text in the <Recipient Name> field is either missing or showing in the wrong place within the field on the imaged or sent fax. Specifically, the zip code appears after the street name and the state does not appear at all. Also, when using the calling card feature, I notice that my calling card number appears in the <Recipient Fax Number> field on the imaged or sent fax.

Are there any known workarounds for these issues? Will this be investigated?

DISCUSSION -----

Apple is aware of these issues with the fax Cover Pages and is working to correct them in a future release of Apple Telecom software.

At this time, there are no known workarounds for the zip code appearing in the wrong place and state not appearing at all in the <Recipient Name> field. For the issue with the calling card being printed in the <Recipient Fax Number> field, users can open the cover page using the Apple Fax application and delete the <Recipient Fax Number> field entirely.

Modified fax cover sheets with the <Recipient Fax Number> field deleted are available through Apple Software Update sites.

The latest version of the Apple Telecom updater software is version 3.1.1. It is available through all Apple Software Update sites.

These articles can help you locate the software updates mentioned here:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.
- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

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Tech Info Library Article Number:20917



Tech Info Library

Mac OS Up-To-Date: Qualifying Computers (1/97)

Revised: 2/4/97
Security: Everyone

Mac OS Up-To-Date: Qualifying Computers (1/97)

Article Created: 4 February 1997

TOPIC -----

This article describes the Mac OS Up-To-Date qualifying computers as of January 20, 1997.

DISCUSSION -----

The following manufacturers are currently participating in the Mac OS Up-To-Date program. See the Mac OS Up-To-Date Terms and Conditions on your order form for full details on how to qualify. For information on how to obtain an order form visit the Mac OS Up-To-Date site on the World Wide Web at:
<http://www.macos.apple.com/macos/releases/fulfillment.html>, or call Mac OS Up-To-Date Customer Service at 800-335-9258.

Apple Computer
=====

PowerBook

Model	Number	Description
M5287LL/A	PowerBook	1400cs/117
M5292LL/A	PowerBook	1400cs/117
M4856LL/A	PowerBook	1400c/117
M5576LL/A	PowerBook	1400c/133

Performa

Model	Number	Description
M4110LL/A	Macintosh Performa	5200CD
M4237LL/A	Macintosh Performa	5200CD (Ed. Adv.)
M4107LL/A	Macintosh Performa	5215CD
M4094LL/A	Macintosh Performa	6116CD
M4100LL/A	Macintosh Performa	6200CD

M4105LL/A	Macintosh Performa 6216CD
M4102LL/A	Macintosh Performa 6218CD
M4104LL/A	Macintosh Performa 6220CD
M4103LL/A	Macintosh Performa 6230CD
M4727LL/A	Macintosh Performa 6290
M4957LL/A	Macintosh Performa 6320
M5319LL/A	Macintosh Performa 6360
M5167LL/A	Macintosh Performa 6400/180
M5168LL/A	Macintosh Performa 6400/200
M5609LL/A	Macintosh Performa 6400/200 VEE
M5797LL/A	Macintosh Performa 6400/200 32MB
M5783LL/A	Macintosh Performa 6400/200 Small Biz

Power Macintosh

Model	Number Description
M3947LL/A	Power Macintosh 5200/75
M4982LL/A	Power Macintosh 5260/100
M5233LL/A	Power Macintosh 5260/120
M4781LL/A	Power Macintosh 5400/120
M5162LL/A	Power Macintosh 5400/180 16MB/1.2GB/8X
M5686LL/A	Power Macintosh 5400/180 24MB/1.6GB/L2/8X/Enet
M5823LL/A	Power Macintosh 5400/200
M5427LL/A	Power Macintosh 6400/200
M4628LL/B	PowerMac 7200/120
M5443LL/A	PowerMac 7200/120 (PC Compat)
M5346LL/A	PowerMac 7600/132
M5347LL/A	PowerMac 8500/150
M5348LL/A	PowerMac 8500/180
M5349LL/A	PowerMac 8500/180
M5385LL/A	PowerMac 9500/200
M5389LL/A	PowerMac 9500/200
M5397LL/A	PowerMac 9500/200
M5399LL/A	PowerMac 9500/180 MP

DayStar Digital

=====

Genesis

Model Number	Description
001879	Genesis MP 300
001886	Genesis MP 360+
002166	Genesis MP 400+ full tower
001985	Genesis LT 400+ mini-tower
	Note: Early models were named the Genesis MP 400+ mini-tower
001718	Genesis MP 528
001404	Genesis MP 528
001381	Genesis MP 528
001725	Genesis MP 600
001619	Genesis MP 600
001916	Genesis MP 720+

001923 Genesis MP 800+

Motorola

=====

StarMax

Model Number	Description
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ADT-3160	StarMax 3000/160 (Desktop or Minitower)
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ADT-3180	StarMax 3000/180 (Desktop or Minitower)
----------	---

ADT-3200	StarMax 3000/200 (Desktop or Minitower)
----------	---

AMT-3240	StarMax 3000/240 Minitower
----------	----------------------------

ADT-4160	StarMax 4000/160 (Desktop or Minitower)
----------	---

ADT-4200	StarMax 4000/200 (Desktop or Minitower)
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UMAX Computer Corp.

=====

SuperMac

Model Number	Description
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S91803228DP	SuperMac S900 DP/180
-------------	----------------------

S92253228	SuperMac S900/225
-----------	-------------------

S92003228	SuperMac S900/200
-----------	-------------------

S91803228	SuperMac S900/180
-----------	-------------------

S91501626	SuperMac S900/150
-----------	-------------------

J71802428	SuperMac J700/180
-----------	-------------------

J71501626	SuperMac J700/150
-----------	-------------------

C62402428	SuperMac C600/240
-----------	-------------------

C62001628	SuperMac C600/200
-----------	-------------------

C61801618	SuperMac C600/180
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C51601618	SuperMac C500/160
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Tech Info Library Article Number:20918



Tech Info Library

Optical Access International (2/97)

Revised: 2/5/97
Security: Everyone

Optical Access International (2/97)

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Article Created: 5 February 1997

Optical Access International

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FTP: [ftp.oai.com](ftp://ftp.oai.com) (user: anonymous)
BBS: 617-937-0698

Company Profile:

Optical Access International (OAI) is a high technology company which focuses on the cutting edge of optical technology for microcomputer mass storage. OAI is a leader in CD-ROM networking systems, providing a complete line of CD-ROM server hardware and software products for workgroup, departmental, and enterprise-wide solutions.

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Tech Info Library Article Number:20919



Tech Info Library

Optical Access CD Tower: Can't Use Apple CD Extension (2/97)

Revised: 2/5/97
Security: Everyone

Optical Access CD Tower: Can't Use Apple CD Extension (2/97)

=====

Article Created: 5 February 1997

TOPIC -----

I recently updated the Mac OS software on my Apple Workgroup Server 6150 computer, and now CD-ROM discs placed in the Optical Access CD-ROM Tower are not recognized. Why?

DISCUSSION -----

The Optical Access CD/Maxtete 4X CD-ROM Tower from Optical Access International requires its own software to work properly. Apple included the Optical Access CD-ROM Tower as part of the Library Research server bundle.

The Workgroup Server 6150 shipped with the Apple CD-ROM extension disabled and the proper software installed. Whenever you reinstall or upgrade the Mac OS, the Apple CD-ROM extension is enabled. This allows you to use the internal CD-ROM drive in the Apple Workgroup Server 6150, but since the Apple CD-ROM extension loads before the Optical Access CD-ROM software you cannot use the Optical Access CD/Maxtete 4X CD-ROM Tower.

Note:

If you start your computer with a Mac OS system software CD-ROM disc in the internal Workgroup Server drive, you will not be able to use the CD-ROM tower since its software does not load off the system software disc.

Turning Off Apple CD-ROM Extension

=====

Step 1

Open the Extensions Manager control panel.

Step 2

Locate the Apple CD-ROM extension.

Step 3

Click on the Apple CD-ROM extension to disable it.

Note:

Depending on which version of the Mac OS is installed this step varies slightly. You will either have a check next to the extension indicating it is active, or an 'x' indicating it is active. Make sure either the check mark or 'x' is removed next to the Apple CD-ROM extension.

Step 4

Close the Extension Manager control panel.

Step 5

Restart your computer.

You can use your Optical Access CD Tower. However, will not be able to use the internal Workgroup Server CD-ROM drive.

If you need additional help with the Optical Access CD Tower, contact Optical Access International.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20920



Tech Info Library

AppleFax: Can't Print Legal-Sized Fax Documents (2/97)

Revised: 2/5/97
Security: Everyone

AppleFax: Can't Print Legal-Sized Fax Documents (2/97)

=====

Article Created: 5 February 1997

TOPIC -----

I have a legal-sized fax that I received using AppleFax. When I print it, it is truncated, and I cannot view the entire fax, even if I use legal-sized paper. How can I print the entire fax?

Note:
Apple Fax is installed as part of the Apple Telecom Software.

DISCUSSION -----

This issue is currently being investigated by Apple Computer Inc. Until a permanent solution is found, you can use one of the workarounds listed below.

Workarounds
=====

Change the Scale

Step 1

Choose Page Setup from the File Menu.

Step 2

Change the Scale to 80 percent.

Step 3

Click OK.

Step 4

Print the fax.

Save as a PICT

Step 1

Choose Save AS from the File Menu.

Step 2

Save the fax as a PICT file.

Step 3

Print the document using SimpleText.

This article appeared in the 5 February 1997 issue of the Information Alley.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20921



Tech Info Library

CD Control Strip: Isn't Installed w/ Clean Install (2/97)

Revised: 2/5/97
Security: Everyone

CD Control Strip: Isn't Installed w/ Clean Install (2/97)

=====

Article Created: 5 February 1997

TOPIC -----

I just did a clean install of 7.5.3 on my PowerBook 1400 and noticed that the CD Strip was not installed. I performed a complete install and it still is not there. How can I get it back?

DISCUSSION -----

The CD Strip is on the PowerBook 1400 CD-ROM System Software disc. It is located in the Install Apple Extras folder. You can install the CD Strip module by dragging it to the Control Strip Modules folder, which is located inside the System folder.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20922



Tech Info Library

LaserWriter 12/640 PS: Configuring TCP/IP for Text or PCL (2/97)

Revised: 2/5/97
Security: Everyone

LaserWriter 12/640 PS: Configuring TCP/IP for Text or PCL (2/97)

Article Created: 5 February 1997

TOPIC -----

I am trying to print a PCL file to my LaserWriter 12/640 PS printer from my UNIX workstation. Every time I try, it does not print the file correctly. I can print PostScript files correctly. Why?

DISCUSSION -----

When Apple Computer shipped the LaserWriter 12/640 PS printer, the TCP/IP port interpreter was set for PostScript only. You need to change this to either PCL or Autoselect.

Determining TCP/IP Configuration

Step 1

Print a startup page.

Step 2

Look at the upper right corner for the TCP/IP field.

The TCP/IP field has the interpreter's setting.

Changing the TCP/IP Configuration

=====

If the LaserWriter 12/640 PS printer has either a Mac OS or Windows computer attached, you can use the Apple Printer Utility (Mac OS), or LaserWriter Utility for Windows software to change the interpreter to either Autoselect or PCL.

If you do not have a Mac OS or Windows computer connected to the LaserWriter 12/640 PS, follow these steps to set the printer to autoselect:

Step 1

Configure your UNIX workstation to print PostScript as described in its manual.

Step 2

Ensure the LaserWriter 12/640 PS communication switch is depressed (this is the normal setting).

Step 3

Change the setting using PostScript. Below is PostScript code to the printer to change the settings.

```
%=====
% Begin PostScript code
%
%!PS
(%LPR_NV%) <</Interpreter /AutoSelect >> setdevparams
%
% End PostScript code
%=====
```

Step 4

Restart the printer.

Resetting the LaserWriter 12/640 PS to PostScript Only

To reset the printer to PostScript only, follow these steps

Step 1

Press and hold the communications switch, so it is in the up position.

Step 2

Restart the printer.

Step 3

Release the communications switch.

The LaserWriter 12/640 PS TCP/IP port is now set to PostScript.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20923



Tech Info Library

LaserWriter 8.4.x: Doesn't Support Custom Page Sizes (2/97)

Revised: 2/5/97
Security: Everyone

LaserWriter 8.4.x: Doesn't Support Custom Page Sizes (2/97)

=====

Article Created: 5 February 1997

TOPIC -----

After upgrading to LaserWriter 8.4.x from LaserWriter 8.3.4, I can no longer select a custom page size in my Page Setup dialog. I am printing to an imagesetter which supports various paper sizes, and have been able to input custom page sizes with prior versions of the LaserWriter 8 printer driver. What is wrong?

DISCUSSION -----

As of LaserWriter 8.4, support for custom page sizes was removed from the LaserWriter 8 printer driver. This feature was not implemented well, so it was removed. There are plans to incorporate custom page sizes again in later releases of the LaserWriter 8 printer driver using a new and improved user interface.

Workarounds

=====

- Use the Adobe PS Printer driver
- Use the LaserWriter 8.3.4 printer driver.

This article appeared in the 5 February 1997 issue of the Information Alley.

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Tech Info Library Article Number:20924



Tech Info Library

Mac OS 7.6 Checks For Defective L2 Cache (2/97)

Revised: 2/5/97
Security: Everyone

Mac OS 7.6 Checks For Defective L2 Cache (2/97)

=====

Article Created: 5 February 1997

TOPIC -----

This article describes an issue when a dialog informs a user that they have defective hardware.

DISCUSSION -----

Mac OS 7.6, because Open Transport is required, has a "sniffer routine" which checks for the presence of defective L2 cache. If defective hardware is discovered, a dialog is displayed informing the user that a hardware issue was detected and repairs are necessary. The required repairs are covered under the Apple Repair Extension Program.

For more information see Technical Information Library article, "Macintosh 5200/5300/6200/6300: Using Open Transport".

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Tech Info Library Article Number:20925



Tech Info Library

PowerBook: Modem/Ethernet PC Card Not Recognized (2/97)

Revised: 2/5/97
Security: Everyone

PowerBook: Modem/Ethernet PC Card Not Recognized (2/97)

=====

Article created: 5 February 1997

TOPIC -----

I just did a clean install of my system software and now when I insert my Global Village Platinum Pro modem/Ethernet PC card, I get the following message.

"The correct software you need to use the PC Card in the Lower PC Card slot is not installed. Do you want to eject the card now?"

I thought that the system software came with the necessary software to recognize modem cards. Why am I getting this message?

DISCUSSION -----

The system software does include software which enables it to use standard Type II modem cards. However, the Global Village Platinum Pro and other "combo" cards need additional software to be recognizable by the PowerBook computer.

"Combo" or combination cards include cards that have functionality in addition to being a modem, such as Ethernet. These cards require additional software to be recognized by the computer even if you are just using the modem and not using the Ethernet or other capabilities. In addition to Global Village, some examples of the other vendors making these types of cards are Farallon, Dayna and Asante.

To resolve this situation, you simply need to install the software that came with your PC card. After you install the necessary software the card should be functional again.

This article was published in the Information Alley on 5 February 1997.

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Tech Info Library Article Number:20926

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Tech Info Library

TITLE

Macintosh Infrared: Is It IrDA Compatible?

Article ID: 20928
Created: 2/6/97
Modified: 6/16/99

TOPIC

Does the built-in infrared technology used in the PowerBook 190, 1400, 2400, 3400, 5300, PowerBook G3 and G3 Series, and iMac support the IrDA (Infrared Data Association) standard? If so, can I use them to communicate with my Newton MessagePad or other IrDA device?

DISCUSSION

PowerBook 190, 5300, and 1400

The PowerBook 190, 5300, and 1400 series computers are not IrDA-compliant. Hence, these computers will not work with third-party devices which are IrDA compliant, such as some of Apple's MessagePad devices and some Hewlett Packard printers. Instead, these products use a protocol named IRTalk.

The infrared implementation used in these PowerBook computers is designed to share information with other infrared-equipped PowerBook computers and the Farallon Air Dock (a wireless LocalTalk file sharing solution). The Apple IR File Exchange transfer rate is 230.4kbs, the same as LocalTalk.

PowerBook 3400, PB 2400, and PowerBook G3 and G3 Series

The PowerBook 2400, 3400, G3 and G3 Series computers are IrDA compliant. Additionally, they have the option to switch to the IRTalk protocol via the Infrared Control Panel. These computers can communicate with other IRTalk-capable devices (such as other PowerBook computers), using either the IrDA or IRTalk protocol.

Note: PowerBook G3 Series computers support IrDA 1.1 with speeds up to 4 Mbps.

While the PowerBook 2400, 3400, G3 and G3 Series computers have the hardware necessary to communicate with other IrDA compliant devices such as the Apple eMate 300 or the Newton MessagePad 2000, at this time Apple does not have a software solution to communicate with them.

For information about whether the 2400, 3400, G3 and G3 Series computers can communicate with other IrDA compliant devices, contact the manufacturer of the device.

iMac

There are several versions of the iMac computer. The first two versions (referred to as revision A and revision B) were colored Bondi Blue. The next version (referred to as revision C) was introduced in January 1999 and came in five different colors.

Revision A and B iMac computers support IrDA, but not IRTalk. Revision C iMac computers do not support infrared communication of any type.

For additional information see the following articles:

- Tech Info Library Article 30707: "[Macintosh: Printing to a PostScript Printer via IrDA](#)"
- Tech Info Library Article 30861: "[PowerBook: Printing to an IrDA Printer](#)"
- Tech Info Library Article 58012: "[iMac: Infrared Communications](#)"

For general information on IrDA, see <http://www.irda.org>

PowerBook G3 Series (Bronze Keyboard)

PowerBook G3 Series computers are IrDA compliant. This is the first PowerBook model which does not support IrTalk. Any older PowerBook model, which can only communicate with IrTalk, will not be able to connect to the PowerBook G3 Series (Bronze Keyboard) models.

Note: See PowerBook 3400, PB 2400, and PowerBook G3 and G3 Series information listed above.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read Tech Info Library article 24604: "[PowerBook G3, G3 Series: Identifying Different Versions](#)"

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: General Topics

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Tech Info Library

PowerBook Infrared: Is It IrDA Compatible? (5/97)

Revised: 5/2/97
Security: Everyone

PowerBook Infrared: Is It IrDA Compatible? (5/97)

Article Created: 6 February 1997
Article Reviewed/Updated: 2 May 1997

TOPIC -----

Does the built-in infrared technology used in the PowerBook 190, 5300, 1400, and 3400 series computers support the IrDA (Infrared Data Association) standard?

Can I use the infrared port on my PowerBook 190, 5300, 1400, or 3400 series computer to communicate with my Hewlett Packard IrDA Printer, or to a Newton MessagePad with an infrared port?

DISCUSSION -----

PowerBook 190, 5300, and 1400

PowerBook 190, 5300, and 1400 series computers are not IrDA-compliant. Hence, these computers do not work with third-party devices which are IrDA compliant.

The infrared implementation used in these PowerBook computers is designed to share information with other infrared-equipped PowerBook computers and the Farallon Air Dock (a wireless LocalTalk filesharing solution). The Apple IR File Exchange transfer rate is 230.4kbs, the same as LocalTalk.

The PowerBook 190, 5300, and 1400 series computers do not use the same infrared technology as some of Apple's MessagePad devices and some Hewlett Packard printers, which need IrDA support to communicate. Instead, these PowerBooks use a protocol named IRTalk.

PowerBook 3400 Series

The PowerBook 3400 series computers are IrDA compliant. Additionally, they have the option to switch to the IRTalk protocol by using the Infrared Control Panel.

PowerBook 3400 computers can therefore communicate with other IRTalk-capable devices (such as other PowerBooks) using the IRTalk protocol.

PowerBook 3400 computers have the hardware necessary to communicate with other IrDA compliant devices such as the Apple eMate 300 or the Newton MessagePad 2000. At this time Apple does not have a software solution to communicate with the Newton 2000 and eMate 300 through IrDA.

For information about whether or not a PowerBook 3400 can communicate with HP printers, contact Hewlett Packard. For information about whether PowerBook 3400 computers can communicate with other IrDA compliant devices, contact the manufacturer of the device.

This article was published in the Information Alley on 28 February 1997.

Article Change History:

02 May 1997 - Updated 3400 information for technical accuracy.

28 Feb 1997 - Added keyword.

26 Feb 1997 - Reworded for clarity.

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Tech Info Library Article Number:20928



Tech Info Library

MAE 3.0: Obtaining Volume or Multiple License Keys (1/97)

Revised: 2/6/97
Security: Everyone

MAE 3.0: Obtaining Volume or Multiple License Keys (1/97)

Article Created: 6 February 1997

TOPIC -----

This article describes the procedure for obtaining a volume (multiple) license keys for Macintosh Application Environment (MAE) 3.0. The process differs from previous versions of MAE.

DISCUSSION -----

Users who order a volume license for the MAE 3.0 from Claris will receive these two important items:

- The "Volume License Agreement" from Claris. This document is NOT inside the product package, and has code number which is needed for a volume license.
- The MAE product package which contains the MAE 3.0 software and documentation on a CD-ROM disc, plus two important paper documents. There is only one distributed software product which is identical for single user and volume user licenses. Below is a description of the two paper documents inside the package:
 - "About MAE 3.0 License Keys" which broadly describes how an administrator should decide to install the license keys, and how the keys are obtained from the license vendor, Globetrotter. The reverse side of this document contains contact information for product support.
 - "MAE 3.0 License Registration" which is filled out and Faxed to the license registration Fax system. This document has a sticker with a unique single-user authorization code that is the only code necessary to obtain a single-user license key.

Both single-license users and volume administrators must submit the "MAE 3.0 License Registration" form to the license vendor, Globetrotter, to obtain a

valid and permanent single-user MAE 3.0 license key file.

In addition to the unique single-user authorization code attached to the "MAE 3.0 License Registration" form, volume users must also supply the Claris' "Volume License Agreement" code number to the "MAE 3.0 License Registration".

While a soft copy of the Registration form is provided in Adobe Acrobat format on the compact disc, neither license, nor volume agreement code number is entered. Both must be entered in by the applicant along with other requested information.

Licensing is controlled by flex-lm software from Globetrotter. All license keys are issued by Globetrotter only in response to a Fax or e-mail (preferred) submission. Turn around time for license key files may be one business day when e-mail is used.

IMPORTANT: The volume license applicant must supply the Claris Volume License Agreement code number. If this is not done, Globetrotter will correctly issue only a single-user license, regardless of the quantity entered in the number of licenses requested field.

NOTE: If an applicant desires to implement more than a single license key file for his licensees, then the applicant must supply information about the distribution desired. For example, a fifty user license might be broken down as a group of twenty and thirty individual licenses. This would let thirty users have exclusive access, and an additional twenty 'floating' licenses.

NOTE: If individual licenses are to be run locally on the user's workstation, then the individual host ids of these machines must also be provided for correct key generation.

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Tech Info Library Article Number:20929



Tech Info Library

LW 12/640 PS: Can't Get Legal-Sized Pages Printed Face-Up (2/97)

Revised: 2/7/97
Security: Everyone

LW 12/640 PS: Can't Get Legal-Sized Pages Printed Face-Up (2/97)

=====

Article Created: 7 February 1997

TOPIC -----

We have a LaserWriter 12/640 PS and are unable to select the face-up output tray when we print Legal-sized pages. When I attempt to select the Face-Up tray in the Print dialog, it is dimmed. We have tried various versions of LaserWriter 8 printer driver including the latest v8.4.2, and have also tried this with and without a duplexer. Is this a supported feature with Legal-sized pages?

DISCUSSION -----

The LaserWriter 12/640 PS User's Guide on page 184 "Selecting the output tray" states:

Note: You cannot direct the output to face-up when duplex printing. You cannot direct U.S. legal-size paper to the face-up output."

The face-up tray cannot accommodate a legal-sized page. Because of this, it was decided that limiting the face-up tray for use with legal-sized pages would be a more elegant solution than having the paper fall off the tray.

This article appeared in the 7 February 1997 issue of the Information Alley.

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Tech Info Library Article Number:20930



Tech Info Library

Pwr Macintosh 7300, 8600,9600: Support EDO Memory? (2/97)

Revised: 2/24/97
Security: Everyone

Pwr Macintosh 7300, 8600,9600: Support EDO Memory? (2/97)

Article Created: 7 February 1997
Article Reviewed/Updated: 24 February 1997

TOPIC -----

I heard that the Power Macintosh 7300, 8600, and 9600 series computers ship with EDO memory installed. Does this mean these computers support EDO memory?

DISCUSSION -----

Although the Power Macintosh 7300, 8600, and 9600 series computers do ship with EDO (Extended Data Out) memory installed, these computers are not EDO compatible.

The memory controller of these computers does not support EDO memory. Instead, the EDO memory in these computers functions as FPM (Fast Paged Mode) memory.

Article Change History:
24 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20931



Tech Info Library

The Hindi Learning Stack: Read Me (2/97)

Revised: 2/13/97
Security: Everyone

The Hindi Learning Stack: Read Me (2/97)

Article Created: 7 February 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains the ReadMe file for the Hindi Learning Stack v1.0, which is included with the Indian Language Kit.

DISCUSSION -----

This document provides information for installing and using the Hindi Learning Stack. In particular, it explains the following

- What is the Hindi Learning Stack?
- Hindi Learning Stack 1.0 Contents
- System Requirements
- Installing the Hindi Learning Stack
- Running the Hindi Learning Stack
- Using the Hindi Learning Stack
- Hindi Learning Stack Games

What is the Hindi Learning Stack?

=====

The Hindi Learning Stack 1.0 is a Hypercard application. It helps to teach the Hindi alphabet, especially to children. It also contains three games aimed at testing alphabet recognition skills.

the Hindi Learning Stack 1.0 contents

=====

the Hindi Learning Stack 1.0 consists of the following files:

- Hindi Learning Stack 1.0
- Hindi Learning Stack
- Gaayab!!
- Hindi Learning Stack 1.0 Read Me

System Requirements

=====

The Hindi Learning Stack 1.0 requires

- Macintosh Computer (Power Macintosh or 68K system)
- System 7.5 or better
- Color or gray scale monitor capable of atleast 256 colors / grays
- Display resolution of 640 by 480 pixels or better
- At least 6.5 MB of available RAM

Installing the Hindi Learning Stack

=====

To install the Hindi Learning Stack, drag the the Hindi Learning Stack 1.0 folder from Indian Language Kit CD on to your hard disk.

Running the Hindi Learning Stack

=====

Open the Hindi Learning Stack 1.0 folder and double-click on the Hindi Learning Stack 1.0 icon. A poem and background music will play while a welcome screen is being displayed. Click on the Hindi Learning Stack screen to continue. You will see the parrot (Sonu) and the girl (Monu) flying across the screen. Sonu and Monu will lead you to the first alphabet card.

Using the Hindi Learning Stack

=====

The Hindi Learning Stack has two sections - Alphabet Teacher and the Games.

Alphabet Teacher

Alphabet teacher takes you through a series of alphabetical cards and teaches you the Hindi alphabets.

Each alphabet card has the following buttons at the bottom:

1. Left button - Goes to the previous alphabet card.
2. Music button - Toggles the background music on or off.
3. Help button - Gives a brief description of all buttons.
4. Games button - Plays Hindi Learning Stack games.
5. Main menu - Shows the main menu of all letters in the alphabet. Click on any letter to go directly to that particular alphabet card.
6. Right button - Goes to the next alphabet card.

Each alphabet card teaches two or three related alphabets. It includes the letter itself, simple words beginning with the alphabet and pictures of familiar objects. When you come into any alphabet card, Sonu will pronounce the letters of that card for you. Repeat the pronunciation by clicking on the letter or the word again. Try clicking on the picture objects or on Monu.

Hindi Learning Stack Games

The Hindi Learning Stack includes the following three games

1. Talking Tree Game (Batooni Paed)
2. Card game (Bataon to Jaane)
3. Find the missing alphabet game (Gaayab))

- Talking Tree game: You can play this game at three levels. The first level is

simple. It displays a tree with 5 letters. You will be asked to click on a particular letter. Click on the letter that Sonu asks you to select. You receive 2 points for every correct answer, reflected in your final score. Levels 2 and 3 will display a tree with 10 letters. Be careful in level 3! You will lose 2 points for every wrong guess. Sonu will repeat the letter to be selected when you click on the repeat button. If you find it difficult to pick the right letter, click on the clue button and the Hindi Learning Stack will flash the alphabet card with the correct letter.

- Flashcards game: The Hindi Learning Stack will display 3 pictures for you. You will be asked to identify the picture for the letter or word displayed. You get 2 points for every correct guess.

- Find The Missing Letter game: The Hindi Learning Stack will display a sequence of letters, with one letter missing. Sonu will also give you five likely answers. You are expected to identify the missing letter.

After completing one round, the Hindi Learning Stack will start a new round for you. You may also click on the right arrow at any time to discard the current round and start a new round.

To finish using the Hindi Learning Stack application, click on the door icon in main menu or press <Command> + Q keys.

Article Change History:

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20933



Tech Info Library

Devanagari Typing Shikshak: Read Me (2/97)

Revised: 2/14/97
Security: Everyone

Devanagari Typing Shikshak: Read Me (2/97)

=====

Article Created: 7 February 1997
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article contains the Readme file for the Devanagari Typing Tutor, which is included with the Indian Language Kit.

DISCUSSION -----

Installation

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To install, drag the file Devanagari Typing Shikshak on to your hard disk. Make sure that the Indian Language Kit is installed prior to launching the tutor.

Minimal System Requirements

=====

- * Macintosh Computer (PowerPC or 68K)
- * Indian Language Kit 1.0
- * Monitor capable of 640 x 480 pixels or better

Features

=====

The Shikshak teaches you to type using the Inscript keyboard (default keyboard layout for Indian languages).

The Shikshak organizes lessons in "practice sessions" and "drills." Before you begin a lesson, read the introduction which describes the keys, their location and the fingers you need to use to type them. The Shikshak shows a preview of the key to be typed. The key is shown highlighted. If the key to be typed is a shifted one, shift is also highlighted.

Once you have completed practicing keystrokes, you will be shown words to type, formed with the keys you have learned. The Shikshak beeps when an incorrect key is entered.

Once the drill is complete, a dialog box showing the accuracy and speed during the lesson is displayed.

Use the "View" menu option to navigate between the lessons. The "Next" and "Prev" menu items take you to the next or previous lesson from the current one. The "Go To..." menu item allows you direct access to any lesson of Shikshak.

Use the navigation buttons, "Next Lesson" and "Prev Lesson" (same as Next and Prev menu option), to go to the next or previous lesson from the current one. The "Start Drill" button ends the practice and starts the drill. Choose "Restart Drill" to start the drill again.

The keyboard shown in the Shikshak depicts the Apple Extended keyboard. Some keys are positioned differently on various Apple keyboards. One such key is the backslash (\) key, positioned above the return key in the Extended keyboard. It is situated to the right of the space bar on Apple standard keyboards.

The Inscript keyboard provides various conjuncts on the shifted number row of the keyboard. The conjuncts are covered in the lessons which teach the required keys. These conjuncts can be typed using the individual letters which make them or using the shifted number key directly.

Extensions Compatibility

=====

The Typing Shikshak has known incompatibilities with the Aaron extension. The most prominent is the disappearing of text in the drills. This incompatibility is not consistent.

Keys not covered by the Shikshak

=====

Some keys of the Inscript keyboard have not been covered in this Shikshak. These keys are used in southern scripts or are not used very often in Devanagari. These letters, as per their ISCII reference are:

Vowel Sign O (southern scripts)
Vowel Sign AWE (Devanagari script)
Vowel Sign E (southern scripts)
Vowel O (southern scripts)
Vowel AYE (Devanagari script)
Vowel Sign AYE (Devanagari script)
Vowel RI
Consonant NGA
Vowel AWE (Devanagari script)
Consonant Hard Ra (southern script)
Vowel E (southern script)
Consonant NA (Tamil)
Consonant ZHA (Tamil & Malayalam)
Consonant Hard LA
Consonant JYA (Bengali, Assamese & Oriya)

Article Change History:

14 Feb 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20934



Tech Info Library

System 7.5.x Troubleshooting (2/97)

Revised: 2/7/97
Security: Everyone

System 7.5.x Troubleshooting (2/97)

Article Created: 7 February 1997

TOPIC -----

This article provides troubleshooting tips to help solve problems with System 7.5 Update 2.0 and a Mac OS-based computer.

DISCUSSION -----

Print this document This document contains troubleshooting information that you may need when the computer is not turned on. For reference, keep a printed copy of this document near your computer. To print this document, open the File menu and choose Print.

Contents

This document provides information about what to do if your computer freezes:

- when the "happy Macintosh" icon appears during startup
- while system software extensions are being loaded during startup
- after startup as the Finder is being started
- while the computer is turned on but not being used (idle)
- when starting, using, or quitting an application program
- when printing from an application program

Before You Read This Document

It is a good idea to try to pinpoint when the freezes or hangs you experience with your computer first began to occur. For instance, if you installed additional memory in your computer and the freezes or hangs began to occur after that, the problems are likely to have something to do with the memory or the way it was installed. Two other actions that sometimes cause problems are connecting a new SCSI device to your computer (the device, its cable, or its SCSI ID number may cause problems), or installing new software (the software may contain

incompatibilities or need more memory than is actually available).

Other Sources Of Troubleshooting Information

Besides this document and online services, there are several other good sources of troubleshooting information:

- User's manual. See the troubleshooting section of the user's manual that came with your computer for detailed troubleshooting instructions.
- Macintosh Guide. Open the Guide menu and choose Macintosh Guide. (The Guide menu is under the question mark near the upper right corner of your screen). Click the Index button in Macintosh Guide, and choose a topic from the index.
- Apple Technical Information Library (TIL). The TIL can be found on several online services including America Online and Compuserve, and Apple Computer's Internet web site @ <http://www.info.apple.com/>.

The Computer Freezes When The Happy Macintosh Icon Appears During Startup

When the computer first starts up you see a smiling "happy Macintosh" icon. (If you see a "sad" icon or one with a question mark, refer to the user's manual that came with your computer.) If the computer freezes while the happy Macintosh icon is on the screen, follow the steps below.

- 1) Remove any SCSI or serial devices attached to your computer:
 - Turn the computer off by pressing the power switch on the back of the computer.
 - Disconnect any devices attached to the computer's external SCSI and serial (printer and modem) ports.
 - Wait 7-10 seconds. This allows time for the hard disk drive to stop spinning.
 - Turn the computer on by pressing the power switch on the back of the computer.
- 2) If the computer starts up successfully, try the following:
 - Shut down the computer and plug the devices back in one at a time. The problem may be with one of the devices. Restart after each device to identify which one is causing the problem.
 - Refer to the user's manual that came with the computer for more information about SCSI devices, and refer to the devices' manuals and manufacturers.
- 3) If after unplugging all SCSI and serial devices the computer continues to freeze at the "happy Macintosh" icon, try the following:
 - Start up from a CD-ROM disc that contains system software for your computer, or a Disk Tools floppy disk. Then run Disk First Aid to make sure that the hard disk is OK.
 - Test the hard disk using Apple HD SC Setup or Drive Setup (whichever came with your computer).

Refer to the user's manual that came with your computer for instructions on starting from a CD-ROM disc or Disk Tools disk and using Disk First Aid, Apple HD SC Setup, or Drive Setup.

If the computer does not start up successfully after you test the hard disk, perform a clean installation of system software. Follow the instructions for doing a clean installation in the Troubleshooting section of the user's manual that came with your computer (for Power Macintosh 5200/5300 LC computers), or in the Macintosh Performa CD booklet (Performa computers).

If the computer still freezes during startup after a clean installation of system software, or if it freezes at the "happy Macintosh" icon while starting up from the compact disc or Disk Tools floppy disk, take the computer to an Apple-authorized service provider.

Computer Freezes While System Software Extensions Are Loading

During startup a line of icons "march" across the bottom of your screen. These icons represent the system software extensions being loaded (started) on your computer. If the computer freezes at this point in the startup, follow the steps below.

- 1) Remove any SCSI or serial devices attached to your computer:
 - Turn the computer off by pressing the power switch on the back of the computer.
 - Disconnect any devices attached to the computer's external SCSI and serial (printer and modem) ports.
 - Wait 7-10 seconds. This allows time for the hard disk drive to stop spinning.
- 2) Turn off all unnecessary system software extensions:
 - Open the Special menu and choose Restart while holding down the space bar. The Extensions Manager control panel opens.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously while holding down the space bar. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)
 - Open the "Sets" pop-up menu and choose "System 7.5.3" or "System 7.5" (whichever is available).
 - Open the Special menu and choose Restart.
- 3) If the computer starts up successfully, try the following:
 - Open the Apple menu and choose Control Panels.
 - Double-click the Extensions Manager to open it. In the list of extensions only the ones required for system software version 7.5.3 are turned on (marked with a check mark); the rest are turned off (disabled).
 - The problem may be with an extension or control panel that is not compatible with your computer. Try turning on each of the disabled extensions, restarting after each extension, to identify which one is causing the problem. (To turn on an extension, click to put a check mark next to it.)

For more information about incompatible extensions and other software, refer to the user's manual that came with your computer or contact the company that supplies the software.

If the computer does not start up successfully after you follow steps 1-3 above, perform a clean installation of system software. Follow the instructions for doing a clean installation in the Troubleshooting section of the user's manual that came with your computer (for Power Macintosh 5200/5300 LC computers), or in the Macintosh Performa CD booklet (Performa computers).

If the computer still freezes during startup after a clean installation of system software, take the computer to an Apple-authorized service provider.

IMPORTANT: Before you plug your SCSI or serial devices back into the computer, be sure the computer is shut down and turned off.

The Computer Freezes As The Finder Is Being Loaded

During startup the Finder (the program that runs your computer and keeps its activities organized) is loaded after the line of icons representing your computer's system software extensions have finished "marching" across the screen. If the computer freezes at this point in the startup, follow these steps:

- 1) Turn off all unnecessary system software extensions:
 - Open the Special menu and choose Restart while holding down the space bar. The Extensions Manager control panel opens.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously while holding down the space bar. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)
 - Open the "Sets" pop-up menu and choose "System 7.5.3" or "System 7.5" (whichever is available).
 - Open the Special menu and choose Restart.
- 2) If the computer starts up successfully, try the following:
 - Open the Apple menu and choose Control Panels.
 - Double-click the Extensions Manager to open it. In the list of extensions only the ones required for system software version 7.5.3 are turned on (marked with a check mark); the rest are turned off (disabled).
 - The problem may be with an extension or control panel that is not compatible with your computer. Try turning on each of the disabled extensions, restarting after each extension, to identify which one is causing the problem. (To turn on an extension, click to put a check mark next to it.)

For more information about incompatible extensions and other software, refer to the Troubleshooting section of the user's manual that came with your computer or contact the company that supplies the software.

3) If the computer still freezes as the Finder is being loaded, try the following:

- Open the Special menu and choose Restart while holding down the Option key. The Extensions Manager control panel opens.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously while holding down the Option key. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)

If the computer still does not start up successfully, perform a clean installation of system software. Follow the instructions for doing a clean installation in the Troubleshooting section of the user's manual that came with your computer (for Power Macintosh 5200/5300 LC computers), or in the Macintosh Performa CD booklet (Performa computers).

If the computer still freezes during startup after a clean installation of system software, take the computer to an Apple-authorized service provider.

The Computer Freezes While It Is Turned On But Not Being Used

1) Turn off all unnecessary system software extensions:

- Open the Special menu and choose Restart while holding down the space bar. The Extensions Manager control panel opens.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously while holding down the space bar. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)
- Open the "Sets" pop-up menu and choose "System 7.5.3" or "System 7.5" (whichever is available).

2) Remove any screen saver programs:

- Double-click the System Folder (on the hard disk) to open it.
- Check to see if any screen savers are in the System Folder. The screen saver programs may be inside the Control Panels folder or the Extensions folder.
- Temporarily disable or remove any screen saver programs. Some incompatible screen savers can cause freezes. For more information about incompatible software, refer to the user's manual that came with your computer and contact the company that supplies the screen saver.
- Open the Special menu and choose Restart.

If the computer still freezes when it is not in use perform a clean installation of system software. Follow the instructions for doing a clean installation in the Troubleshooting section of the user's manual that came with your computer (for Power Macintosh 5200/5300 LC computers), or in the Macintosh Performa CD booklet (Performa computers).

If the computer still freezes during startup after a clean installation of system software, take the computer to an Apple-authorized service provider.

Computer Freezes When An Application Is Being Started, Used, Or Quit

This problem can occur when an application program needs more memory than its actually available, or when a program is incompatible with the computer's system software.

- 1) Check to see how much available memory your computer has:
 - Open the Special menu and choose Restart.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)
 - After the computer starts up, open the Apple menu and choose About This Macintosh.
 - Make a note of the number next to "Largest Unused Block." This is the amount of available memory on the computer.
- 2) Check to see how much memory the application program requires:
 - Click the icon for the application program you are trying to open or use.
 - Open the File menu and choose Get Info.
 - Check the Memory Requirements box. In order to open and run properly, the computer's available memory must be greater than the number next to "Minimum size" in the Memory Requirements box.
- 3) If necessary, make more memory available for the program:
 - To learn how to make more memory available for a program, look for help in Macintosh Guide. Open the Guide menu and choose Macintosh Guide. (The Guide menu is under the question mark near the upper right corner of your screen).
 - Click the Index button in Macintosh Guide, and choose "memory" in from the index. The help topics appear on the right. The "How do I" help topics contain the information you need, particularly the topics regarding making more memory available, changing the memory a program uses, and using hard disk space as memory.
- 4) If the computer still freezes when you use the program, turn off all unnecessary system software extensions:
 - Open the Special menu and choose Restart while holding down the space bar. The Extensions Manager control panel opens.
(If you can't open the Special menu, press the Command, Control, and Power keys simultaneously while holding down the space bar. The Command key is marked with a "curly" icon, and the Power key is marked with a triangle.)
 - Open the "Sets" pop-up menu and choose "System 7.5.3" or "System 7.5" (whichever is available).
 - Open the Special menu and choose Restart.
- 5) If the computer still freezes when you use the program, turn off the Modern Memory Manager or 32-bit addressing:
 - Open the Apple menu and choose Control Panels.
 - Double-click the Memory control panel to open it.
 - Turn off the Modern Memory Manager (for Power Macintosh computers) or 32-bit addressing (for earlier Macintosh computers).

Some older programs may not be compatible with these options. If the program works with these options turned off, contact the company that supplies the program for a more recent version.

If the computer still freezes when you open or use the program, the program may not be compatible with your computer. Check the manuals that came with the program or contact the company that supplies the program to determine if the program is compatible with your computer.

The Computer Freezes When Printing From An Application

First, follow all the instructions under "The computer freezes when an application program is being started, used, or quit," above.

If the computer still freezes when printing, follow the additional steps below.

- 1) If the problem only occurs during Background Printing, increase the Memory Requirements for the PrintMonitor program:
 - Double-click the System Folder (on the hard disk) to open it.
 - Double-click the Extensions folder (inside the System Folder) to open it.
 - Click the PrintMonitor program to highlight it.
 - Open the File menu and choose Get Info.
 - In the Memory Requirements box, increase the number next to "Minimum size" to at least 160.

Note: You can also try turning on virtual memory. See the instructions earlier in this document for opening Macintosh Guide and learning about virtual memory.

- 2) If the computer still freezes when printing, turn off Background Printing:
 - Open the Apple menu and choose the Chooser.
 - In the upper left box in the Chooser, click the software for your printer (for example, "LaserWriter 8") to highlight it.
 - Under Background Printing on the right side of the Chooser, click the Off button.

If the computer still freezes when printing, the print driver may not be compatible with the application or system software. Check the manuals that came with the printer documentation or contact the manufacturer of the printer to determine if the print driver is compatible with your computer.

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Tech Info Library Article Number:20935



Tech Info Library

LaserWriter Pro 810: Set, Define, Change Usage (2/97)

Revised: 2/7/97
Security: Everyone

LaserWriter Pro 810: Set, Define, Change Usage (2/97)

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Article Created: 7 February 1997

TOPIC -----

I am using the maintenance port on the LaserWriter Pro 810 to change some of the settings. However, when I issue the SET commands, power off the printer, then power it back on, the commands are not retained. Why?

DISCUSSION -----

When using the Remote Console Facility (RCF), there are three different commands you need to use; SET, DEFINE, and CHANGE.

SET

Temporary change. Commands entered using the SET command are lost when the printer reinitialized.

DEFINE

Permanent change, effective when the printer is reinitialized.

CHANGE

Permanent change, effective immediately.

In your example, the DEFINE or CHANGE command may be more appropriate if the change needs to be permanent.

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Tech Info Library Article Number:20937



Tech Info Library

Mac OS 7.6 CD and Computers With 8 MB RAM (2/97)

Revised: 2/7/97
Security: Everyone

Mac OS 7.6 CD and Computers With 8 MB RAM (2/97)

=====

Article Created: 7 February 1997

TOPIC -----

Mac OS 7.6 CD's packaging and manual list the memory requirements as, "8 MB installed RAM, with an additional 8 MB through installed RAM or Virtual Memory."

DISCUSSION -----

The memory requirements as listed on the packaging and manual are correct. However, an optional installation of QuickDraw 3D requires at least 16 MB of installed memory. The Apple Internet Connection Kit 1.2, included with the Mac OS 7.6 CD, requires at least 12 MB of installed memory. Therefore, if you install some of the software included on the Mac OS 7.6 CD, you will need more than 8 MB installed RAM.

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Tech Info Library Article Number:20938



Tech Info Library

Mac OS 7.6: Wacom Tablet (2/97)

Revised: 2/7/97
Security: Everyone

Mac OS 7.6: Wacom Tablet (2/97)

=====

Article Created: 7 February 1997

TOPIC -----

This article describes running Mac OS 7.6 with a Wacom Tablet.

DISCUSSION -----

If you install Mac OS 7.6 on your computer with a Wacom tablet, make sure you have the latest Wacom driver version 2.5.1 and remove the OpenTpt Serial Arbitrator from your system. Wacom has an extension called SerialDMA which replaces the OpenTpt Serial Arbitrator.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20939



Tech Info Library

Wacom Technology, Corp.

Revised: 4/8/97
Security: Everyone

Wacom Technology, Corp.

=====

Article Created: 7 February 1997
Article Reviewed/Updated: 8 April 1997

Wacom Technology, Corp.

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America Online forum: Wacom
Compuserve email: 74130,2626
Compuserve forum: WACOM

Company Profile:

Wacom graphic tablets provide artists, illustrators, and design professionals the way to illustrate, paint, or manipulate imagery on a computer.

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Tech Info Library Article Number:20940



Tech Info Library

Indian Language Kit: Troubleshooting (2/97)

Revised: 2/13/97
Security: Everyone

Indian Language Kit: Troubleshooting (2/97)

Article Created: 7 February 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

This article contains troubleshooting suggestions for the Indian Language Kit. These tips were taken from the Indian Language Kit User's Manual.

DISCUSSION -----

1) I can't work in the Indian language of my choice with my usual application program.

Your application program may not be compatible with WorldScript I or QuickDraw GX. If it is not, it won't automatically switch to an Indian language font when you select an Indian language keyboard, or it may not let you see the fonts in the font menu.

To make sure your application program is compatible with WorldScript I and QuickDraw GX, consult the program's manufacturer or the dealer from whom you purchased the program.

2) I see odd characters that I can't read in some of my file and folder names.

The font your system uses for file and folder names does not contain any Indian language characters. Open the Views control panel and choose an Indian language from the "Font for views" pop-up menu.

3) I changed my Views control panel to an Indian language font, but I still see odd characters in my Application menu.

The Application menu is unaffected by the changes you make in the Views control panel. However, the icons that appear in the Application menu next to each program's name will help you identify your Indian Language programs.

4) I can't edit an Indian language file or folder name.

You may have the wrong keyboard selected in the Keyboards menu. Open the Keyboards menu and select the right keyboard for your language.

5) Ever since I installed the Indian Language Kit, I haven't been able to work with some of my other application programs, even in Roman.

This problem may be caused by insufficient memory. However, if you are sure your computer has enough memory, the program may be due to incompatibility between non-Roman scripts and a particular application program. Try registering that application as an English language application. To do this, use the Language Register program in the Extras folder on the disk where you installed the Indian Language Kit. If you still have problems working with the application, you may have to deactivate the Indian Language Kit to use with the application. You can do so by disabling the WorldScript I extension in the Extensions Manager control panel.

6) After I installed the Indian Language Kit, unwanted keyboard layouts appeared in my Keyboards menu. How do I remove them?

Open the System file in the System Folder, select the unnecessary keyboard layouts, and drag them to the Trash or to a temporary folder.

7) When I open the Keyboards menu, my Indian language keyboards are not highlighted, so I cannot choose them.

You don't have a text field currently open that supports these keyboard layouts. Open SimpleText or any text field you would use for your Indian languages, and the Indian language options will be highlighted along with the other keyboard options in your Keyboards menu.

8) When I open the Font menu, I see several different fonts listed for each Indian language. Which font should I use?

After you install the Indian Language Kit, your Font menus contain at least two fonts for each Indian Language. These fonts have different suffix--for example, Devanagari MTS and Devanagari MT. You should use the MT version of each Indian language font. (Do not use the MTS version; MTS fonts use Chicago as their associated Roman font and have no bold style).

Furthermore, if you have QuickDraw GX installed, you will see some additional fonts at the top of the Font menu that begin with a period (.)--for example: .Devanagari Mt. Do NOT use these fonts.

The following list shows the fonts that you should NOT use. (You cannot remove these fonts from your Font menu.)

.Devanagari MT X
.Devanagari MT X (Bold)
.Gujarati MT X
.Gujarati MT X (Bold)
.Gurmukhi MTX
.Gurmukhi MTX (Bold)
Devangari MTS
Gujarati MTS
Gurmukhi MTS

Article Change History:
13 Feb 1996 - Changed distribution status.

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Tech Info Library Article Number:20941



Tech Info Library

Apple Language Kits: Scripts & Languages Supported (2/97)

Revised: 2/13/97
Security: Everyone

Apple Language Kits: Scripts & Languages Supported (2/97)

Article Created: 7 February 1997
Article Reviewed/Updated: 13 February 1997

TOPIC -----

What different scripts and languages are supported by the various Apple Language Kits?

DISCUSSION -----

Begin_Table

Language Kit	Script	Languages
Arabic & Persian	Arabic	Arabic, Persian
Chinese	Simplified Chinese	Simplified Chinese
	Traditional Chinese	Traditional Chinese
Cyrillic	Cyrillic	Russian, Ukranian,
		Bulgarian, Serbian,
		Macedonian, Belorussian
Hebrew	Hebrew	Hebrew
Indian	Devanagari	Hindi, Marathi, Nepali,
		Sanskrit
	Gujarati	Gujarati
	Gurmukhi	Punjabi
Japanese	Japanese	Japanese
Korean	Korean	Korean

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End_Table

Article Change History:
13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20942



Tech Info Library

AIX: White Screen After Typing xinit Command (2/97)

Revised: 2/10/97
Security: Everyone

AIX: White Screen After Typing xinit Command (2/97)

=====

Article Created: 10 February 1997

TOPIC -----

When trying to start CDE, I typed the command below, from the user manual, and got a white screen:

```
xinit /usr/dt/bin/dtlogin
```

What happened, and how do I exit?

DISCUSSION -----

You are in X-windows. You can exit X-windows by pressing the key sequence control-alt-delete. (The delete key is the one above the return key.) This will kill the X-server and the prompt should appear.

If you are defaulting to a command line login, the "xinit /usr/dt/bin/dtlogin" command will take you to CDE. However, if you enter the login from CDE and pick the command line login option, you must type exit at the command line to return to CDE.

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Tech Info Library Article Number:20943



Tech Info Library

PowerBook 3400 Series: Description (2/97)

Revised: 2/14/97
Security: Everyone

PowerBook 3400 Series: Description (2/97)

Article Created: 10 February 1997
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article contains a description of the Macintosh PowerBook 3400 series computers which includes the PowerBook 3400/180, 3400/200, and 3400/240 models.

DISCUSSION -----

Overview
=====

The Apple Macintosh PowerBook 3400 series takes Apple's most acclaimed feature -- ease of use -- and combines it with desktop-level performance, state-of-the-art multimedia, and quick and easy communications capabilities. These systems are the optimal choice for mobile professionals who want access to top-of-the-line notebook computer technology.

Macintosh PowerBook 3400 systems sport the fastest processors ever offered in a PowerBook computer. With their 180-, 200-, or 240-megahertz PowerPC 603e processor with 256K level 2 cache, they rival desktop computer performance. In fact, they rival desktop capabilities in a number of other areas as well.

For example, these systems' multi-media capabilities allow mobile professionals not only to give presentations on the road or in the office, but also to create media-rich presentations whenever and wherever they want. The Macintosh PowerBook 3400 series features a 12.1-inch active-matrix display, 6x- or 12x-speed CD-ROM drive (most configurations), 16-bit video-out capability, video-in with zoomed video, and unique four-speaker sound system.

Communications is the other key concern of mobile professionals, and the PowerBook 3400 series is equally strong in this area. Featuring built-in Ethernet and high-speed, 33.6-kilobit-per-second modem capabilities (most configurations), this series offers the communications efficiency that makes staying in touch quick and easy. In fact, these advanced portables provide the

flexibility to use the appropriate communications technology at any given site and in any given situation'whether that involves connecting to an organizational intranet, logging onto the Internet, or downloading information from a remote server.

In short, with its unparalleled combination of performance, multimedia capabilities, and built-in communications technology, the Macintosh PowerBook 3400 series gives you the power to do virtually anything you want to do with a computer -- anywhere.

Features

=====

High performance

- * Brings the fastest processor technology ever to a PowerBook system, with a 180-, 200-, or 240-MHz PowerPC 603e processor and 256K level 2 cache
- * Features industry-standard PCI architecture
- * Uses lithium-ion battery technology for light weight and long battery life

State-of-the-art multimedia

- * Features a large, 12.1-inch (diagonal) active-matrix SVGA display that supports thousands of colors
- * Offers outstanding video capabilities, including graphics acceleration through its PCI-based video controller
- * Provides an ideal environment for creating and presenting complex multimedia content
- * 180- and 200-MHz systems Include a removable, internal CD-ROM drive (most configurations); 240-MHz systems include a 12x-speed CD-ROM drive
- * Comes with four built-in speakers with active crossover for rich sound quality
- * Features 16-bit stereo sound input/output ports and integrated microphone

Advanced communications capabilities

- * Provides built-in Ethernet and modem (most configurations) for fast, versatile networking and communications capabilities
- * Comes with built-in 1-megabit IrDA infrared technology for easy, wireless LAN access and file sharing with similarly equipped systems

Flexible expansion options

- * Offers one RAM expansion slot for memory enhancement up to 144 MB
- * Accommodates two Type II PC Cards or one Type III PC Card for additional networking, storage, and modem options
- * Features an expansion bay for the floppy disk drive, CD-ROM drive, or third-party solutions such as a second hard disk drive, magneto-optical drive, or Zip drive

Bundled productivity software

- * Includes Claris Organizer and WebWhacker (an "offline browsing tool"), as well

as demo and game programs

- * Comes with Apple Internet Connection Kit
- * Provides software for remote access and cross-platform compatibility
- * Features Apple Location Manager software, which allows you to easily switch system settings that vary by location (printer, networking, and so on)

Ordering Information

=====

Macintosh PowerBook 3400c/180

Order No. M4596LL/A

- * PowerBook 3400c/180 computer with 180-MHz PowerPC 603e processor, 16 MB of RAM, built-in 1.4 MB Apple SuperDrive, and internal 1.3 GB hard disk drive

Macintosh PowerBook 3400c/180

Order No. M4597LL/A

- * Same as Order No. M4596LL/A, but with 6x-speed CD-ROM drive, built-in 10BASE-T Ethernet, and 33.6-Kbps modem

Macintosh PowerBook 3400c/200

Order No. M4595LL/A

- * Same as Order No. M4597LL/A, but with 200-MHz PowerPC 603e processor and 2 GB hard disk drive

Macintosh PowerBook 3400c/240

Order No. M5550LL/A

- * Same as Order No. M4595LL/A, but with 240-MHz PowerPC 603e processor, 12x-speed CD-ROM drive, and 3 GB hard disk drive

* Note: All systems also ship with a battery and AC adapter; Mac OS 7.6; complete setup, learning, and reference documentation; Apple Internet Connection Kit software; Apple Remote Access software; cross-platform compatibility software (PC Exchange, Mac OS Easy Open, DataViz MacLinkPlus/Easy Open translators); and a limited warranty

Accessories

Rechargeable Battery for Macintosh PowerBook 3400 Series

Order No. M5146

6x-speed CD-ROM Module for Macintosh PowerBook 3400 Series

Order No. M5139

16MB Memory Expansion Card for Macintosh PowerBook 3400 Series

Order No. M5141

45-watt AC Adapter for Macintosh PowerBook 1400 and 3400 series

Order No. M4895

Note: Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

Begin_Table

PowerBook 3400 Series Model Comparison Chart

=====

PowerBook Model Order No. -----	3400c/180 M4596LL/A -----	3400c/180 M4597LL/A -----	3400c/200 M4595LL/A -----	3400/240 M5550LL/A -----
Processor speed	180 MHz	180 MHz	200 MHz	240 MHz
16 MB of RAM	yes	yes	yes	yes
256K level 2 cache	yes	yes	yes	yes
12.1-inch active-matrix SVGA display	yes	yes	yes	yes
Apple SuperDrive 1.4 MB floppy disk drive	yes	yes	yes	yes
Hard disk drive	1.3 GB	1.3 GB	2 GB	3 GB
CD-ROM drive	no	6x-speed	6x-speed	12x-speed
10BASE-T Ethernet	no	yes	yes	yes
33.6-Kbps modem	no	yes	yes	yes

End_Table

Article Change History:

14 Feb 1997 - Changed distribution status.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20944



Tech Info Library

PowerBook 3400 Series: Technical Specifications (2/97)

Revised: 4/21/97
Security: Everyone

PowerBook 3400 Series: Technical Specifications (2/97)

=====

Article Created: 10 February 1997
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article contains the technical specifications for the Macintosh PowerBook 3400 series computers which includes the PowerBook 3400/180, 3400/200, and 3400/240 models.

DISCUSSION -----

Technical Specifications
=====

Microprocessor

- * 180-, 200-, or 240-MHz PowerPC 603e; 256K level 2 cache

Memory

- * 16 MB of RAM, expandable to 144 MB

Storage

- * Apple SuperDrive 1.4 MB floppy disk drive
- * Internal 1.3 GB, 2 GB, or 3 GB hard disk drive
- * 6x-speed CD-ROM drive module (most configurations);
12x-speed CD-ROM (3400c/240 system)

Display

- * 12.1-in. (diagonal) active-matrix color SVGA display
- * Resolution: 800 by 600 pixels
- * 1 MB of VRAM supports 8-bit color video output to 21-inch monitor; supports thousands of colors on smaller monitors in SVGA mode
- * Includes hardware-based graphics acceleration

Expansion capabilities

- * One memory expansion (RAM) slot
- * Slots for two Type II PC Cards or one Type III PC Card
- * Expansion bay for floppy disk drive, 6x-speed or 12x-speed CD-ROM drive, or third-party storage or back-up solutions; also supports all of the Macintosh PowerBook 190 and 5300 series expansion bay modules

Battery

- * Lithium ion (LiIon: 32-watt hour)
- * Average life: 2 to 4 hours, depending on environment
- * Also supports nickel-metal-hydride (NiMH) battery technology

Ports

- * Apple Desktop Bus (ADB) port
- * Serial (RS-422) port
- * VGA video-out port
- * SCSI port can accommodate six external devices
- * Infrared technology port (IrDA compliant)
- * Power adapter port
- * Stereo sound input/output ports
(16-bit, CD-quality stereo input/output)

Networking and communications

- * Built-in 10BASE-T Ethernet (most configurations)
- * Built-in 33.6-Kbps modem (most configurations)
- * Built-in infrared technology supports AppleTalk protocols and 1 Mb IrDA standard

Security

- * Security slot for locking to stationary object
(requires third-party security cable)
- * Password security software

Sound

- * Four built-in speakers with active crossover
- * 16-bit, CD-quality stereo input/output
- * Integrated microphone

Keyboard

- * Built-in full-size keyboard with 76 (U.S.) or 77 (ISO) keys, including 12 function keys

Apple trackpad

- * Solid-state Apple trackpad provides precise cursor control; sensing of

movement and acceleration can be easily adjusted through a control panel;
supports tap, double-tap, and drag capabilities

Electrical requirements

- * Line voltage: 100 to 220 volts AC
- * Frequency: 50 to 60 Hz

Environmental requirements

- * Operating temperature: 50 degrees to 104 degrees F
(10 degrees to 40 degrees C)
- * Storage temperature: -13 degrees to 140 degrees F
(-25 degrees to 60 degrees C)
- * Relative humidity: 20 percent to 90 percent noncondensing
- * Operating altitude: 0 to 10,000 feet (0 to 3,048 meters)
- * Maximum storage altitude: 20,000 feet (6,300 meters)

Size and weight

- * Height: 2.4 inches (6.1 cm)
- * Width: 11.5 inches (29.2 cm)
- * Depth: 9.5 inches (24.1 cm)
- * Weight: 7.2 pounds (3.2 kg) with floppy disk drive installed;
7.4 pounds (3.3 kg) with CD-ROM module;
6.9 pounds (3.1 kg) with PC Card carrying case installed

Ordering Information

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Order No. M4596LL/A

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Macintosh PowerBook 3400c/200

Order No. M4595LL/A

- * Same as Order No. M4597LL/A, but with 200-MHz PowerPC 603e processor and 2 GB hard disk drive

Macintosh PowerBook 3400c/240

Order No. M5550LL/A

- * Same as Order No. M4595LL/A, but with 240-MHz PowerPC 603e processor,

12x-speed CD-ROM drive, and 3 GB hard disk drive

* Note: All systems also ship with a battery and AC adapter; Mac OS 7.6; complete setup, learning, and reference documentation; Apple Internet Connection Kit software; Apple Remote Access software; cross-platform compatibility software (PC Exchange, Mac OS Easy Open, DataViz MacLinkPlus/Easy Open translators); and a limited warranty

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CD-ROM drive	no	6x-speed	6x-speed	12x-speed

10BASE-T Ethernet	no	yes	yes	yes
33.6-Kbps modem	no	yes	yes	yes

End_Table

Article Change History:

14 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20945



Tech Info Library

Mac OS Computers on a TCP/IP Network (2/97)

Revised: 2/10/97
Security: Everyone

Mac OS Computers on a TCP/IP Network (2/97)

Article Created: 10 February 1997

TOPIC -----

I just purchased a Mac OS-based computer. I am hooking up to my Ethernet network and want to communicate with other computers that are not running the Mac OS. The computers on my network use TCP/IP. I setup my TCP/IP control panel but I do not see any zones in the chooser. Also, when I click on AppleShare in the chooser, I do not see any computers.

DISCUSSION -----

Without adding third-party software to your Mac OS computer, the information you see in the chooser is for computers which communicate with the AppleTalk protocol. For example, if you click AppleShare in the chooser, it looks for other computers on your network that are using the AppleTalk protocol and are "AFP" (Apple Filing Protocol) services. An AFP service may be another Mac OS computer using personal file sharing, an AppleShare file server, or any server that communicates using AppleTalk that provides AFP services.

If the computers on your network use TCP/IP, there are other ways to "see" the these computers using third-party software. Some of the utilities you may use include (but are not limited to) MacTCP Ping, MacTCP watcher, MacPing. These utilities let you "ping" another IP addresses on the network.

NOTE: ping is a command which sends simple TCP/IP packets to a computer to determine whether or not the computer is functioning on the network.

Many TCP/IP computers exchange files using FTP (file transfer protocol). If computers on your network use ftp, your Mac OS computer can use third-party software like Fetch to exchange files.

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Tech Info Library Article Number:20946



Tech Info Library

AIX: .profile Not Sourced in CDE (2/97)

Revised: 2/10/97
Security: Everyone

AIX: .profile Not Sourced in CDE (2/97)

=====

Article Created: 10 February 1997

TOPIC -----

I just installed CDE on AIX and my .profile is not being sourced "run" when I login to CDE.

DISCUSSION -----

When CDE starts a shell, it will no longer source .profile. It will source .dtprofile located in the same directory as your .profile.

If you would like your .profile to be sourced, you need to uncomment the last line in you .dtprofile by removing the "#" from the line:

```
DTSOURCEPROFILE=true
```

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Tech Info Library Article Number:20947



Tech Info Library

Keep It Simple Systems, Co. (2/97)

Revised: 2/11/97
Security: Everyone

Keep It Simple Systems, Co. (2/97)

=====

Article Created: 11 February 1997

Keep It Simple Systems, Co. (a division of CreateCo)

32 S. Ewing
Suite #330
Helena, MT 59601

800-327-6882 (SALES)
406-442-3559 (MAIN)
406-442-3434
406-449-8946 (FAX)

e-mail: kiss4@aol.com

web site: http://WildWestWeb.com/Public/Kiss_Home_Main.html

Company Profile:

Makers of the PowerCover, a solar panel designed for the 1400 series BookCover which boosts battery life up to 45 percent. Can also recharge the battery externally at 10 percent.

Also makes the Sun Runner and other solar chargers for use with portable and handheld computers, as well as many other electronic devices. Their Solar chargers will run or recharge portables made by Apple, Compaq, IBM, Toshiba, and many others.

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Tech Info Library Article Number:20948



Tech Info Library

Power Macintosh 4400/200: Memory Expansion (3/97)

Revised: 3/5/97
Security: Everyone

Power Macintosh 4400/200: Memory Expansion (3/97)

Article Created: 11 February 1997
Article Reviewed/Updated: 5 March 1997

TOPIC -----

What type of memory is supported in the Power Macintosh 4400 series computers?

DISCUSSION -----

The Power Macintosh 4400/200 computer does not have any DRAM memory soldered on the logic board. All RAM expansion is provided by DIMMs installed in any of the three 168-pin DIMM sockets. DRAM expansion slot 1 supports single-bank DIMMs (a maximum of 32 MB). DRAM expansion slots 2 and 3 support both single-bank and dual-bank DIMMs (a maximum of 64 MB per slot with dual-bank DIMMs). A total of 160 MB of DRAM is supported.

The RAM expansion slots accept the following DIMM types:

- * 168-pin 3.3-volt EDO (Extended Data Out) DIMMs
- * 64-bit wide
- * Acceptable DIMM sizes include 8, 16, 32, and 64 MB.

IMPORTANT: The Power Macintosh 4400/200 uses 3.3-volt EDO DIMMs, which are NOT compatible with the Macintosh Performa 6400 and Power Macintosh 5500 and 6500 computers. Although these other computers also may support the use of EDO DIMMs, they require 5-volt EDO DIMMs.

Also, the Power Macintosh 4400 does NOT support the use of Fast-Page-Mode (FPM) memory.

For additional information about EDO memory and its benefits, using the search string, "edo and memory" to locate a related article titled, "Power Macintosh Computers: Using FPM, EDO, SDRAM, & SGRAM."

Article Change History:

05 Mar 1997 - Corrected reference to other Tech Info Library article.

13 Feb 1997 - Changed distribution status.

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Tech Info Library Article Number:20949



Tech Info Library

COM One Video & Data Communications (2/97)

Revised: 2/21/97
Security: Everyone

COM One Video & Data Communications (2/97)

=====

Article Created: 11 February 1997

COM One Video & Data Communications

11 parc de Marticot
33610 Cestas
France

(33) 5 56 78 84 00 (Phone)
(33) 5 56 78 84 78 (Fax)

Company Profile:

They make the MC217 and MC218 PC modem cards which can be used in some Macintosh PowerBook computers. The MC217 is a 14.4 kbps data/fax PC card and the MC218 is a 28.8 kbps data/ 14.4 kbps fax PC Card. An update is available from the COM One for the MC218 which upgrades it to a 33.6 kbps data modem.

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Tech Info Library Article Number:20950



Tech Info Library

PC Compatibility Card: Drive Container Size Limit (2/97)

Revised: 2/25/97
Security: Everyone

PC Compatibility Card: Drive Container Size Limit (2/97)

=====

Article Created: 11 February 1997
Article Reviewed/Updated: 25 February 1997

TOPIC -----

When I create a 2 GB drive container for use with the PC Compatibility Card, the PC crashes and other problems occur. If the drive container is only 500 MB, everything works fine. What is wrong?

DISCUSSION -----

Only drive containers that are 1023 MB or less are supported. Any drive container larger than 1023 MB could cause your machine to crash when it is in the PC environment.

This article was published in the Information Alley on 25 February 1997.

Article Change History:
25 Feb 1997 - Added keyword.

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Tech Info Library Article Number:20951



Tech Info Library

Open Transport AppleTalk: Needs Assistant Toolbox v1.3 (2/97)

Revised: 3/19/97
Security: Everyone

Open Transport AppleTalk: Needs Assistant Toolbox v1.3 (2/97)

=====

Article Created: 11 February 1997

TOPIC -----

This article discusses an incompatibility between Open Transport AppleTalk and early versions of the Assistant Toolbox turning off AppleTalk when you restart your computer.

DISCUSSION -----

Open Transport is incompatible with all Assistant Toolbox versions prior to version 1.3. If you are using Mac OS 7.5.x and AppleTalk is off every time you restart your computer, check the version of Assistant Toolbox installed in your Extensions folder. You can install Assistant Toolbox v1.3 using the System 7.5 Update 2.0 Custom Install option.

If you need help checking the version number, see the section Checking the Assistance Toolbox Version.

If you are using Mac OS 7.6 or later, Assistant Toolbox is built into Mac OS 7.6, so you do not have to check the version. However, if you have a version of Assistant Toolbox installed with Mac OS 7.6, throw it away.

Checking the Assistant Toolbox Version
=====

Step 1

Open the System folder.

Step 2

Open the Extension folder.

Step 3

Click once on the Assistant Toolbox extension.

Step 4

Select Get Info from the File menu (CMD-I).

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Tech Info Library Article Number:20953



Tech Info Library

Open Transport Access to AppleTalk Network Alert (2/97)

Revised: 2/12/97
Security: Everyone

Open Transport "Access to AppleTalk Network" Alert (2/97)

=====

Article Created: 12 February 1997

TOPIC -----

Since installing Open Transport, we have users getting intermittent messages indicating that access to their AppleTalk network has become unavailable. Subsequently they get a similar message indicating that access to their AppleTalk network has become available. What generates these messages?

DISCUSSION -----

These are messages are generated when a Macintosh computer is unable to communicate with its router. This usually indicates a routing device on the network which is not configured properly, or marginal network wiring. In either case, network administrators will need to investigate and resolve the root cause.

As an interim measure to reduce occurrences of these alert messages, the AppleTalk Options control panel can be installed. This control panel has the option to suppress router related alerts. It is intended for use by ISDN users who have connections which go up and down as needed by network traffic.

CAUTION: The AppleTalk Options control panel should not be used as a long term solution for Macintosh computers receiving router alerts on routed networks.

The AppleTalk Options control panel can be found in the Open Transport Extras folder with Open Transport 1.1.1 and later.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20954



Tech Info Library

Power Macintosh 7300, 8600, 9600: Read Me Part 1 (2/97)

Revised: 3/19/97
Security: Everyone

Power Macintosh 7300, 8600, 9600: Read Me Part 1 (2/97)

Article Created: 13 February 1997

TOPIC -----

This article contains Part 1 of the ReadMe file for the Power Macintosh 7300, 8600, and 9600 series computers.

DISCUSSION -----

This document provides information about your Power Macintosh computer that could not be included in your user's manual or in online help.

Contents

=====

Tips

- Improving Video Capture
- Improving the Quality of Audio CD Recordings
- Allocating More Memory to Application Programs
- Using the Recent Documents Command in the Apple Menu
- Installing Acrobat Reader Software from the System Software CD
- Reinstalling or Removing Zip Drive Software
- Removing the 9600 Graphics Accelerator
- Installing and Removing PCI Cards

Important Information About Desktop Printing

- Creating Desktop Printers
- Printing With a Desktop Printer
- Selecting a Default Printer
- Working With Desktop Printer Icons
- Managing Printing
- Turning Off Desktop Printing
- Support and Compatibility Information
- Troubleshooting Tips

Tips

====

Improving Video Capture

To increase the speed and quality of video captures on Power Macintosh models that support video capture, follow these guidelines:

- * Turn off virtual memory in the Memory control panel.
- * In the Monitors & Sound control panel, set the color depth to Millions. (The Millions setting may not be available until you select a smaller screen resolution setting first.)
- * Turn off AppleTalk. (You can quickly turn AppleTalk on or off with the Control Strip, or use the Chooser instead.)
- * Turn off the Menubar Clock in the Date & Time control panel.
- * Turn off all unnecessary extensions. Do not turn off QuickTime. (Use the Extensions Manager control panel to turn off extensions; then restart your computer.)
- * If you have installed Apple VideoPhone, remove the "QTCCComponentDV" extension from the Extensions folder inside your System Folder, and then restart. (The "QTCCComponentDV" video digitizer extension is optimized for video conferencing, but your Power Macintosh contains equivalent software that is optimized for video capture.)
- * Do not run programs other than the capture application while capturing video.
- * Reduce the size of the capture window. (160x120 is the best size; also, 320x240 is good.)
- * Make sure that your hard disk has enough free space to record. If you notice a decline in performance, use a disk optimizer to improve your disk's efficiency.
- * Make sure that the application program you use for capturing video has enough extra memory allocated for one second of video at the size and bit depth that you are using to record. For example, to record 30fps at 320x240 in millions of colors requires at least 4500K (4.5 MB) free in the application partition. About This Macintosh (in the Apple menu) lets you estimate memory usage.
- * Do not allocate all of the available memory to the capture application. When your capture application is running, you should have an unused block size of at least 500K in About This Macintosh.

When working with applications that support adjusting video and sound settings, the following settings allow the highest video capture performance:

- * Use the Component Video video compressor. Do not use post-compression.
- * Set sound input sampling to 16 bits, stereo, and 44.1KHz. Do not use a sound compressor.

Improving the Quality of Audio CD Recordings

You can use the AppleCD Audio Player and SimpleSound (both available in the Apple menu) to record from an audio CD to a file on disk. If your recordings

sound distorted when you play them, try lowering the volume level in the AppleCD Audio Player and record the sound again.

Usually, you should get acceptable results when the volume is set to about the middle level. However, you may want to experiment with different volume settings; because audio CDs are recorded at various sound levels, individual CDs may require a different setting for optimal recording.

Allocating More Memory to Application Programs

If you are having new problems with application programs reporting that they do not have enough memory, System 7.5.5 may require programs to use an additional 23K of memory. To fix the problem:

1. Quit the program if it is open.
2. Click the program's icon to select it.
3. Open the File menu and choose Get Info.
4. In the Info window, increase the value in the "Preferred size" box by 23.
5. Close the window.

Using the Recent Documents Command in the Apple Menu

You can easily open any of your most recently used documents by choosing the Recent Documents command in the Apple menu, then choosing a document from the submenu. However, this feature can increase the time it takes to open some applications. This occurs because the recent-documents tracking includes all files that are opened--even those opened by an application as part of its launch sequence (such as drop-in filters used by desktop publishing packages). You can reduce the increased opening time by turning off the recent-documents tracking. You can either:

- * turn off "recent documents" tracking in the Apple Menu Options control panel
- * turn off Apple Menu Options in the Extensions Manager

Installing Acrobat Reader Software from the System Software CD

To install Acrobat Reader software from the system software CD onto your hard disk, make sure that the system software CD that came with your computer is not the startup disk. Then locate the Acrobat Reader folder on the CD and follow the installation instructions.

Note: To make sure that the system software CD is not the startup disk, shut down your computer. Then start up the computer while pressing the eject button on the CD-ROM drive (the disc is ejected). After the computer restarts, reinsert the CD and install the Acrobat Reader software.

Reinstalling or Removing Zip Drive Software

Some Power Macintosh models come with an internal Zip drive. Normally when you insert a Zip disk into this drive, an icon for the Zip disk appears on the Macintosh desktop. If an icon for the inserted disk does not appear on the desktop, the Iomega Driver in your System Folder may be missing or damaged. You can reinstall the Iomega Driver by following these steps:

1. Insert the system software CD-ROM disc that came with your computer.
2. Open the Iomega Tools folder in CD Extras folder on the CD-ROM disc.
3. Drag the Iomega Driver icon to the System Folder icon on your hard disk.

One or more alert messages may appear. One will ask if you want to store the Iomega Driver in your Extensions folder, and another may ask if you want to replace a file that already exists.

4. Click the OK button in these alert messages.
5. Eject the CD-ROM disc. (Select the disc icon and choose Put Away from the File menu.)
6. Restart your computer.
7. Try inserting a Zip disc again.

Though only some Power Macintosh models include an internal Iomega Zip drive, your model includes Iomega software on your hard disk, even if your model does not come with a Zip drive.

If your Power Macintosh model does not include a Zip drive, you can remove this software if you wish. (Or you may also wish to keep this software in case you later purchase and connect a Zip drive.) Removing the software frees up disk space and makes your computer start up slightly faster. If you ever need to reinstall the Iomega software, it is available on the CD-ROM disc that comes with your computer.

To remove the Iomega software, drag the following icons to the Trash:

- * Iomega Driver (located in the Extensions folder inside your System Folder)
- * Iomega Tools folder (located in the Apple Extras folder)

Removing the 9600 Graphics Accelerator

When you turn on your computer, icons appear along the bottom of the screen to indicate which system software extensions are being loaded during startup. On Power Macintosh 7300, 7600, and 8600 models, this extension may appear with a red "X" through it.

This "9600 Graphics Accelerator" extension file is only required for use on Power Macintosh 9600 models that contain the optional video card. If you are using a Power Macintosh other than the 9600 model, you can delete this extension file if you wish. To delete the "9600 Graphics Accelerator" extension (located in the Extensions folder inside your System Folder), drag its icon to the Trash.

Installing and Removing PCI Cards

Your Power Macintosh User's Manual contains detailed instructions about installing peripheral component interconnect (PCI) expansion cards. Follow these instructions carefully when installing a PCI card. To avoid damaging the PCI slot when you install or remove a PCI card, do the following:

- * Do not rock the card from side to side; instead, press or pull the card straight into or out of the slot.

* Do not physically insert or remove two cards at the same time; insert or remove each card individually.

Important Information About Desktop Printing

=====

This document contains information about using the desktop printing feature on your computer.

With desktop printing, a printer icon is created on your desktop whenever you select an Apple LaserWriter or StyleWriter printer in the Chooser. You can use these "desktop printer" icons to print documents and manage printing.

With desktop printing, you can

- * print a document in the Finder by dragging it to a desktop printer icon
- * select the default printer without opening the Chooser
- * manage and schedule printing documents

IMPORTANT Desktop printing works with Apple StyleWriter printers, Apple LaserWriter printers, and many other PostScript printers. Desktop printing does not work with other types of printers and Fax Sender.

Creating Desktop Printers

To create a desktop printer, follow these steps:

1. Open the Chooser.
2. Select the print driver for the printer you are using.
3. Select the printer you want to use.
4. Close the Chooser.

When you close the Chooser, an icon for the printer appears on the desktop. The name of the icon is the name of the printer. The name of the printer also appears in the Printer menu to the left of the Guide menu and in the Desktop Printers item in the Apple menu.

After the desktop printer icon appears, you can move it to any location on your startup disk.

You can have as many desktop printers as you want. To create other desktop printers, you must open the Chooser, select the printer, and close the Chooser for each printer you want to use.

The last printer you select in the Chooser becomes the default printer. The default printer is used whenever you choose Print from the File menu. The desktop printer icon for the default printer has a bold outline. For other ways to select the default printer, see "Selecting a Default Printer" later in this document.

Note: If you use different versions of the LaserWriter 8 software to print to the same printer, you can create a desktop printer icon for each version of the LaserWriter software. For example, you might use LaserWriter driver version 8.4.1 for printing and version 8.2.2f for faxing. To create a desktop printer

for each driver, select the LaserWriter 8.4.1 driver and your printer in the Chooser, then close the Chooser. Reopen the Chooser and select the LaserWriter 8.2.2f driver and your printer, then close the Chooser. To choose which version of the driver to use, change the default printer (see "Selecting a Default Printer"). To avoid confusion, rename the desktop printer icons to indicate which version of the printer software the icon uses.

Printing With a Desktop Printer

You use desktop printers to print documents from the Finder. Using desktop printers, you can print several documents at the same time, including documents created with different programs. (You can still print documents from within applications using the Print command in the File menu.)

To print documents with a desktop printer, follow these steps:

1. Select the icons of the documents you want to print.
2. Drag the documents to the icon of the desktop printer you want to use.

Note: When you drag a document to a desktop printer, that printer becomes the default printer.

The document opens and the Print dialog box appears.

3. Choose your printing options, then click the Print.

Selecting a Default Printer

The default printer is the printer you use when you choose Print from the File menu.

To change the default printer, you can do the following:

- * Print documents from the Finder with a desktop printer icon.
- * Select a desktop printer icon and choose Set Default Printer from the Printing menu.
- * Choose the printer from the Printer menu that appears to the left of the Guide menu.
- * Select the printer name using the Printing module in the Control Strip.
- * Select a new printer in the Chooser.

Note: Changing the printer you are using may change how much information appears on a page of your document. If you change printers, check the formatting of your document.

Working With Desktop Printer Icons

Desktop printer icons show the status of the printer.

You can rename desktop printer icons, make aliases of them, and throw them away, just like other Finder icons.

Note: You can't throw away a desktop printer icon while the printer is printing a document.

If you throw away the icon for the default printer, another desktop printer is automatically selected as the default printer. If you do not have another desktop printer another icon is automatically created for the desktop printer you are throwing away. To throw away the last desktop printer icon, you must select a printer in the Chooser that does not support desktop printing.

Managing Printing

If background printing is turned on for the printer you are using, you can use desktop printing to manage print jobs. You perform tasks with the Printing menu that appears when you select a desktop printer. You perform other tasks by using the desktop printer window that opens when you double-click a desktop printer icon.

To manage printing using the Printing menu

The Printing menu appears to the right of the Special menu when you select a desktop printer icon.

Using the Printing menu you can do the following:

- * Choose Start Print Queue to restart printing.

Note: You need to choose Start Print Queue to restart printing if you click the Stop Queue button in a printer alert message.

- * Choose Stop Print Queue to stop printing all of your documents. The icon of the printer indicates that you have stopped printing.

- * Choose Get Printer Info to see information about the printer. (Only available for some printers.)

- * Choose Change Setup to change the setup of the printer. (Only available for some printers. You can change the setup of other printers using the Chooser.)

- * Choose Show Manual Feed Alert to turn the manual alert on or off.

- * Choose Set Default Printer to select the printer as the default printer, if it isn't selected already.

To manage printing using the desktop printer window

Double-click a desktop printer icon to open its window.

The name of the document currently printing and status messages about the current print job appear in the upper box. The status messages can help you troubleshoot a printing problem.

When you are printing more than one document, a list of the print jobs appears in the lower box. If this list is sorted by the Print Time column, it shows the order in which the documents will be printed.

Using the desktop printer window, you can do the following tasks:

- * To change the sort order of the print job list, click the title of the column by which you want to sort. The column title by which the list is sorted is underlined. For example, to sort by the name of the document, click Document Name.

Note: Changing the sort order of the print jobs does not change the order in which they will print. To see that order, click the Print Time heading.

- * To cancel printing a document, select the print job in the list and click the Remove button. You can also drag the print job from the window to the Trash icon on the desktop.

Note: These methods do not delete the document itself.

- * To put printing a document on hold, select the print job in the list and click the Hold Job button. You can also put the document that's currently printing on hold by dragging it to the print job list.

- * To resume printing a document, select the print job and click the Resume Job button.

- * To print a document immediately, select the print job and put it on hold. Next, click the Set Print Time icon button and select Urgent in the dialog box that appears, then click OK. You can also drag the print job to the top of the print job list or to the area reserved for the currently printing job.

- * To schedule printing, select a print job and click the Set Print Time button. In the Set Print Time dialog box, click At Time and set the time you want. Then click OK.

- * To change the print order, drag the name of a print job up or down in the print job list.

- * To print the document using another desktop printer, drag the print job to the icon of the other desktop printer. That printer becomes the default printer. You can only move a print job to another printer of the same type. For example, you can't move a print job from a LaserWriter printer to a StyleWriter printer.

- * To stop printing all documents, hold down the Option and Shift keys and click the Hold Job button. You can also choose Stop Print Queue from the Printing menu.

- * To start printing documents, hold down the Option and Shift keys and click the Resume Job button. You can also choose Start Print Queue from the Printing menu.

Turning Off Desktop Printing

If you don't want to use desktop printers, you can turn off Desktop PrintMonitor using the Extensions Manager control panel.

IMPORTANT Before you turn off Desktop PrintMonitor, be sure that all documents have finished printing. If there are documents waiting to print that you do not want to print, you can cancel printing as described in the previous section on this document.

To turn off Desktop PrintMonitor, follow these steps:

1. Open the Extensions Manager control panel.
2. Click the boxes next to these extensions to remove the X:
 - * Desktop PrintMonitor
 - * Desktop Printer Extension
 - * Desktop Printer Spooler
 - * Desktop Printer Menu extensions
3. Click the close box to close the control panel.
4. If your computer has a Control Strip, drag the Printer Selector file from the Control Strip Modules folder in the System Folder to the Trash.
5. Restart your computer.

Support and Compatibility Information

* Some third-party printers do not support desktop printing. If no desktop printer icon is created after you select your printer in the Chooser, it is likely that your printer does not support Desktop PrintMonitor. Please contact the vendor of your printer to see if there is a version of the print driver that is compatible with Desktop PrintMonitor.

* When you choose Save or Open in an application and look at files and folders on the desktop, desktop printers appear in the list as if they are folders. Do not save documents in a desktop printer "folder." If you do, you will not be able to access the document in the Finder.

IMPORTANT If you save a document in a desktop printer "folder," use the Save As command to save the document in a different location as soon as possible.

Note: You cannot remove a document that you save in a desktop printer icon. If you want to delete the document, throw away the desktop printer icon and select the printer in the Chooser again.

* Desktop PrintMonitor supports drag-and-drop printing for all files that cause the Print command in the File menu to become available. Since clipping files do not make the Print command available, they cannot be dragged to a desktop printer icon for printing.

* Apple's Fax Sender software is not supported by Desktop PrintMonitor. Fax

Sender is fully functional when Desktop PrintMonitor is installed; however, it does not use Desktop PrintMonitor's features.

IMPORTANT When you select Fax Sender in the Chooser, you will not have a default desktop printer until you select a printer icon and choose Set Default Printer from the Printing menu.

Troubleshooting Tips

Problem: When you try to print, the spool file for the print job is moved to the Trash and an alert message appears saying that the desktop printer could not be found.

Solution 1: It's possible that the desktop printer icon is damaged. To fix this, drag the desktop printer icon to the Trash and reselect the printer in the Chooser. A new desktop printer icon will be created.

Solution 2: If your printer software is not published by Apple Computer or Adobe Systems, it may not be compatible with Desktop PrintMonitor. If this is the case, turn off Desktop PrintMonitor (as described earlier in this document) and use an older version of PrintMonitor.

Problem: When you drag documents created by different software applications to your desktop printer icon, a message appears that says there is not enough memory to continue.

Solution: Because the application used to create a document opens when you print the document, your computer must have enough random-access memory (RAM) available to open all of the programs for the documents you are printing. To resolve this situation, print your documents individually or in smaller groups.

Problem: You are using a LaserWriter 300 and the "Out of Paper" message doesn't go away automatically after you add paper to the printer.

Solution: If you are using Desktop PrintMonitor with the LaserWriter 300 driver, the "Out of Paper" message will not go away automatically after you add paper to the printer. The only way to work around this problem is to turn off Desktop PrintMonitor as described earlier in this document and use an older version of PrintMonitor.

Problem: Documents printed on a Color StyleWriter do not have the correct colors after you put printing on hold and then resumed printing.

Solution: To avoid this problem, always resume printing on page one.

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Tech Info Library Article Number:20955



Tech Info Library

Power Macintosh 7300, 8600, 9600: Read Me Part 2 (2/97)

Revised: 4/21/97
Security: Everyone

Power Macintosh 7300, 8600, 9600: Read Me Part 2 (2/97)

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Article Created: 13 February 1997

TOPIC -----

This article contains Part 2 of the ReadMe file for the Power Macintosh 7300, 8600, and 9600 series computers.

DISCUSSION -----

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Troubleshooting

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For more troubleshooting information on the problems described below and other topics, refer to Macintosh Guide online help (available in the Guide menu when the Finder is active) and the manual that came with your computer.

Printing Problems

Problem: You have trouble printing on a StyleWriter or StyleWriter II printer.

Solution: If you use a StyleWriter or StyleWriter II printer with your computer, use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver.

Problem: You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer.

Solution: This problem can occur when the amount of memory Stickies uses is set below 150K. Try increasing the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide, available from the Guide menu when the Finder is active. To locate the Stickies application program so you can increase its memory, open the System Folder, then look in the Apple Menu Items folder (inside the System Folder).

Problems with Sound

Problem: When you play back sound you've recorded, you notice clicks, pops, or skips.

Solution: This problem can occur if you have virtual memory turned on while you're recording sound. Turn off virtual memory before recording. For instructions on turning off virtual memory, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Problem: Adjusting the volume slider in Apple Video Player and other sound applications does not affect the volume, or turns the volume all the way up or all the way down (no in-between settings).

Solution: This problem occurs on some newer models that handle sound differently from some application programs. You can use the system sound settings to adjust the volume. Follow these steps:

1. Open the Apple (*) menu and choose Control Panels.

2. Open the Monitors & Sound control panel.
3. Click the Sound button.
4. Use the volume or level slider (whichever is available) to adjust the sound volume.

Problem: Your program requires the Sound control panel to set sound options.

Solution: Some application programs that use sound require the Sound control panel, an older control panel that has been replaced on your computer by the Monitors & Sound control panel.

The Sound control panel is located in the Apple Extras folder on your hard disk and in the CD Extras folder on the system software CD that came with your computer. To install it, drag it to the System Folder on your hard disk and then restart your computer.

Note: You can also install the Sound control panel by doing a custom installation of system software. For instructions, refer to the information on doing a custom installation in the Troubleshooting chapter of the manual that came with your computer. When the Custom Install dialog box appears, click "Sound control panel" in the list, then click Install.

Networking and File Sharing Problems

Problem: AppleShare displays incorrect information for large drives.

Solution: If you use File Sharing to share a disk larger than 2 gigabytes (GB), some older computers connected to your computer may display an incorrect size for the disk in the Get Info box. (Get Info reports the disk to be 2 GB in size, even if it is larger.) Because these older computers do not support the larger drives, they also cannot report correct information about the drives. (Computers with System 7.5 display correct information.)

Problem: You can't reconnect to a server.

Solution: If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu, you get a message that the disk could not be opened because you do not have enough access privileges or because the server can't be found on the network. Before you can reconnect to the server, you must close any open files. If you need to save work in a file, use Save As to save it on a different disk.

Problem: You have problems using AppleShare Server Software version 4.1 or 4.2.

Solution: AppleShare server software versions 4.1 and 4.2 are not intended for use with PCI-based computers, including Power Macintosh 7300, 7600, 8600, and 9600 computers. If you attempt to use AppleShare server software version 4.1 or 4.2 with these models, you may experience problems.

Problems Using a RAM disk

Problem: You see a message that your RAM disk is unreadable.

Solution: Under some circumstances you may see the following message after setting up a RAM disk:

"This disk is unreadable by this Macintosh. Do you want to initialize the disk?"
(Important: This message applies to the RAM disk, not to your hard disk, which

will not be initialized.)

Decrease the size of the RAM disk. If you see the message again, decrease the size again. Continue to decrease in small amounts until the message no longer appears.

Compatibility Problems

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Adobe Premiere

Turn off virtual memory, make AppleTalk inactive, and restart your computer prior to installing Adobe Premiere Deluxe. Otherwise the mouse may freeze during installation. You turn off virtual memory in the Memory control panel. You make AppleTalk inactive in the Chooser or in the AppleTalk control panel. For instructions, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Aladdin DesktopTools

One feature of Desktop Shortcut, a component of the Aladdin Desktop Tools 1.0.2, is known to fail. If Shortcut is installed, when you are in an Open or Save dialog box, normally you can click in any window in the Finder. The files/folders in that window will then appear in the Standard File Dialog box's scrolling list. To work around this problem, navigate using the Shortcut Menu icon. Aladdin Systems <<http://www.aladdinsys.com>> has been contacted about this problem and expects to release an update in the future to address the issue.

Apple PC Compatibility Card

If you purchase and install an Apple PC Compatibility Card and the PC Compatibility Software version 1.5 on a Power Macintosh 7300, you should reinstall the PC Exchange software from the CD-ROM disc that came with your Power Macintosh. The PC Compatibility Software includes PC Exchange 2.0.7, which is not compatible with Power Macintosh 7300 models.

The system software CD-ROM disc that came with your computer contains PC Exchange 2.0.5, which is compatible with Power Macintosh 7300 models. The features that were added to PC Exchange 2.0.7 are now part of other system software components, so you will not lose any features or functionality by installing the older 2.0.5 version of PC Exchange.

To install PC Exchange 2.0.5, do the following:

1. Follow the instructions in your user's manual to perform a custom installation of system software.
2. When you see the Custom Install dialog box that lists all the available system components, click the triangle next to the "Compatibility Software" listing, and click the checkbox next to PC Exchange.
3. Follow the remaining custom installation steps in your user's manual to complete the installation.
4. You may see an alert warning that you are replacing a newer version with older software. Click the "Older" button to proceed with the installation of the older version of PC Exchange.

AppleShare and Connectix Speed Copy

There is an incompatibility between AppleShare Workstation software version 3.6.1 and Connectix Speed Copy (part of Speed Doubler version 1.1 or earlier). Use the Extensions Manager to turn off Speed Copy before you install this system software version, and contact Connectix to get the latest version of Speed Doubler. (You can contact Connectix at <http://www.connectix.com>, 415-571-5100, or 800-950-5880.)

Conflict Catcher

When using Conflict Catcher, a disabled extension may be moved to the top level of your hard disk. If this happens and you try to turn on the extension in the Extensions Manager control panel, you will not be able to turn it on, even though it appears in the list. To fix this problem, drag the desired extension into the "Extensions (Disabled)" folder (in the System Folder) before using the Extensions Manager.

Energy Saver control panel

The Energy Saver control panel is known to interrupt the play of audio CDs if "Shutdown instead of sleep" is selected. To avoid this problem, uncheck "Shutdown instead of sleep" in the Energy Saver control panel.

FWB Hard Disk ToolKit

If you are using a Power Macintosh model with an internal Zip drive and Hard Disk ToolKit is installed, you may see an alert message stating that the Iomega driver could not load because another driver is already controlling the drive. To prevent this message from appearing, do the following:

1. Open the Hard Disk ToolKit Extension Configuration application.
2. Turn off the "Check All SCSI Addresses" option.
3. Turn on individual checking for each SCSI ID except for SCSI ID number 5, which is the default SCSI ID for the Zip drive.
4. Restart your computer.

Hypercard 2.3.3 or earlier

The Hypercard Audio Palette does not record sound properly. To correct the problem, update to Hypercard 2.3.5, or use another sound recording application program such as SimpleSound to record sounds and then import them into Hypercard. You can download a Hypercard 2.3.5 updater from the Apple World Wide Web site <<http://www.apple.com>> or America Online. It will update Hypercard 2.3 or later to version 2.3.5.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version

1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

Microsoft Office

If you are using Microsoft Office 4.2.1, you may need the "Office 4.2x Update For Power Mac" version 1.0.1 extension, and the "Microsoft Office Manager Updater" version 4.2.1c. These files are available from the Microsoft World Wide Web site at <<http://www.microsoft.com>>. Download the MC1164.HQX and MOMUPDAT.HQX files.

Motorola Math Library and Connectix Speed Copy 1.3.1

There is a known incompatibility when these two products are used at the same time: the Motorola Math Library and Connectix Speed Copy 1.3.1 (part of Speed Doubler 1.3.1). If you have both of these items in the System Folder, Speed Copy 1.3.1 cannot be used. In order to use Speed Copy, remove the Motorola Math Library from the Extensions folder and restart your computer.

Novell Netware

The Ethernet Compatibility extension version 1.0.3 is installed with this system software to fix a problem in the system shutdown code that affected PCI computers connected to certain networks, such as Novell Netware. A side effect of this fix is a two-minute delay in shutting down the computer.

QuarkXPress

To use QuarkXPress on a PowerPC-based Macintosh computer, you must upgrade to QuarkXPress version 3.3.2 (or later).

Sagem GeoPort ISDN Adapter 1.0

There is a known incompatibility with the Sagem GeoPort ISDN Adapter 1.0, resulting in the inability to use the GeoPort ISDN Adapter. Sagem has been contacted about this problem and is working on a solution. For more information, visit the Sagem web site at <http://www.satusa.com>.

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory lets your application use less memory.

With virtual memory turned on, a Power Macintosh program uses less memory than

when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems (such as your computer's responses seeming unusually slow) using certain application programs, you may want to turn off virtual memory.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. For best performance, try setting virtual memory to no more than 150% of the random-access memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

To improve performance, you can also add memory (RAM) to your computer. See the user's manual that came with your computer for more information.

Important Information About Document Auto-Save

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The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When an application is incompatible with Document Auto-Save, it will either not automatically quit, or it displays alerts or dialog boxes which Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave no documents open that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel to sleep instead of shutting down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide (question mark) menu, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. For best results, use the document-saving features of only one control panel or

extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

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Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a MacOS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the MacOS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both MacOS- and DOS-format partitions, PC Exchange will recognize only the MacOS partition. In addition, PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a MacOS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple MacOS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or

DOS-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

* A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your computer.

* Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:20956



Tech Info Library

7.5.5 SCSI Server Update Read Me (4/97)

Revised: 4/23/97
Security: Everyone

7.5.5 SCSI Server Update Read Me (4/97)

Article Created: 13 February 1997
Article Reviewed/Updated: 23 April 1997

TOPIC -----

This article is the 7.5.5 SCSI Server Update ReadMe file.

DISCUSSION -----

7.5.5 SCSI Server Update

This extension has been created to resolve a bug that could cause a server to hang when a client computer performed a find file search on a server volume. This extension is only for use on PowerPC Apple Workgroup Servers running AppleShare 4.2.x and System 7.5.5.

This is intended for use with PowerPC NuBus- and PCI-based Workgroup Servers, AppleShare 4.2.x, System Software version 7.5.5, and Open Transport 1.1.1. They have undergone extensive testing and together are fully compatible. Installation of the PowerPC Interrupt Extension is also recommended.

NOTE: 7.5.5 SCSI Server Update is designed for use only with System 7.5.5, and only with Apple Workgroup Servers. Customers with computers that are not Apple Workgroup Servers will receive no benefit from installing this extension.

IMPORTANT:

It is important that the instructions provided in this document are followed in the order written. If you encounter problems with this installation, you may have to perform a clean System Software installation and reinstall all of the listed software in the order presented below.

Instructions for installing 7.5.5 SCSI Server Update 1.0

1) As a precaution, Apple recommends performing a complete backup of the server

volumes with a third-party backup utility before installing this patch.

2) Locate your "Workgroup Server Software" CD-ROM disc. Boot the Macintosh or Workgroup Server from the bootable CD by holding down the C-key while the server is starting up. You can verify that the CD is the boot volume by checking for its icon in the uppermost position on the desktop.

3) Use the Disk First Aid program to verify and, if necessary, repair all volumes. Disk First Aid should be run from the CD (located in the Utilities folder on most System Software CD-ROM discs). Do not install this patch if any drive cannot be repaired.

4) Install the Mac OS System Software 7.5.5 Update.

If you do not have this patch, you can download it from
<http://www.info.apple.com/swupdates/>

The software is located at the following path:

US

Macintosh
System

NOTE: Please read the Read Me files that are included with all system software patches to ensure installation is performed correctly. Note that "SCSI Update 1.0" requires Mac OS 7.5.5 to be running on the computer.

5) Install Open Transport 1.1.1 if it is not already installed. Use Network Software Selector to switch over to Open Transport. (This is located in your Apple Extras folder.)

6) Install the 7.5.5 SCSI Server Update extension by dragging it to a closed System Folder. Click OK when asked to place the extension in the Extensions folder.

7) Install the PowerPC Interrupt Extension by dragging it to a closed System Folder. The extension will automatically be placed in the Extensions folder.

If you do not have this extension, you can download it from
<http://www.info.apple.com/swupdates/>

The software is located at the following path:

US

Macintosh
System
Other_System

8) Restart the server.

9) Proceed with the regular launching of the AppleShare File Server application.

IMPORTANT:

If you have any problems with any of the above steps, please call the AppleAssist Technical Support center for help. The number to call is in your Apple Service documentation included with your server.

Article Change History:

23 Apr 1997 - Added key words to make lookup eaiser.

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Tech Info Library Article Number:20958



Tech Info Library

System 7.5.5 & AppleShare 4.2.1 Compatibility (2/97)

Revised: 2/14/97
Security: Everyone

System 7.5.5 & AppleShare 4.2.1 Compatibility (2/97)

Article Created: 13 February 1997
Article Reviewed/Updated: 14 February 1997

TOPIC -----

This article is the System 7.5.5 and AppleShare 4.2.1 compatibility notice.

DISCUSSION -----

- For PowerPC Nubus- and PCI-based Apple Workgroup Servers, AppleShare 4.2.1, Mac OS 7.5.5, and Open Transport 1.1.1 have undergone extensive testing and together are fully compatible.
- For PowerPC Desktop Computers compatible with the retail version of AppleShare 4.2.1, AppleShare 4.2.1, Mac OS 7.5.5, and Open Transport 1.1.1 have undergone extensive testing and together are fully compatible.
- An extension named 7.5.5 SCSI Server Update has been created to resolve a bug that could cause a server to hang when a client computer performed a Find File operation on a server volume.
- This extension is only for use on PowerPC Apple Workgroup Servers and compatible PowerPC Desktop Computers running AppleShare 4.2.1 and Mac OS 7.5.5.
- The 7.5.5 SCSI Server Update has been rolled into Mac OS 7.6.
- For customers who need to run Mac OS 7.5.5 and AppleShare 4.2.1 on PowerPC Workgroup Servers, Apple requires that customers update their servers with the following software in this order:

- 1) Mac OS 7.5.5 Update,
- 2) Open Transport 1.1.1,
- 3) 7.5.5 SCSI Server Update, and
- 4) PowerPC Interrupt Extension

Where are these Updates located?

All of the following Updates can be found at the following URL:
<http://www.info.apple.com/swupdates>

The "7.5.5 SCSI Server Update" path:
US

Macintosh
Networking-Communications
AppleShare

The "PowerPC Interrupt Extension" path:
US

Macintosh
System
Other_System

The "AppleShare 4.2->4.2.1 Updater" path:
US

Macintosh
Networking-Communications
AppleShare

Article Change History:
14 Feb 1997 - Updated article with additional information.

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Tech Info Library Article Number:20959



Tech Info Library

Mac OS 7.6 & ATI's Xclaim VR Card (3/97)

Revised: 3/10/97
Security: Everyone

Mac OS 7.6 & ATI's Xclaim VR Card (3/97)

=====
Article Created: 13 February 1997
Article Reviewed/Updated: 10 March 1997

TOPIC -----

After Installing Mac OS 7.6, the computer freezes at startup. I have an ATI Xclaim VR card installed.

DISCUSSION -----

When using the Xclaim VR card from ATI Technologies with Mac OS 7.5.3 or Mac OS 7.6, you should remove the Graphics Accelerator extension that is installed.

Article Change History:
10 Mar 1997 - Added Information about Mac OS 7.5.3.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20960



Tech Info Library

Indian Language Kit: Includes New Key Caps Application (2/97)

Revised: 2/13/97
Security: Everyone

Indian Language Kit: Includes New Key Caps Application (2/97)

=====

Article Created: 13 February 1997

TOPIC -----

When I installed the Indian Language Kit it appears that a new version of the Key Caps desk accessory was installed in the Apple menu. Why?

DISCUSSION -----

The Indian Language Kit includes an updated version (beyond the version included with Mac OS 7.6) of the Key Caps desk accessory to provide better support of Indian languages. This new Key Caps is an application which can be launched from anywhere on your hard disk.

During installation of the Indian Language Kit, the installer automatically places Key Caps in the Apple Menu if an item already exists there with the name "Key Caps." On computers with a non-English version of Mac OS (which would not have an item called "Key Caps") the new Key Caps application is installed in the Apple Extras folder. You can drag it into the Apple Menu Items folder within the active System Folder if you want it to appear in the Apple Menu. You can also safely remove the localized version of the Key Caps desk accessory.

If you remove the Indian Language Kit, Key Caps will not be deleted. You can delete Key Caps manually by locating it in the Apple Menu Items folder inside the System Folder (or from wherever you placed it on your hard drive) and dragging it to the Trash. However, there is no need to do so because you can continue to use this version of Key Caps even without the Indian Language Kit installed.

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Tech Info Library Article Number:20961



Tech Info Library

Power Macintosh 5500 & 6500: Read Me Part 1 (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 5500 & 6500: Read Me Part 1 (2/97)

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Article Created: 13 February 1997

TOPIC -----

This article contains Part 1 of the ReadMe file for the Power Macintosh 5500 and 6500 series computers.

DISCUSSION -----

This document provides information about your Power Macintosh computer that could not be included in your user's manual or in online help.

Contents

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Tips

- Improving 3D Performance
- Improving Video Capture
- Improving the Quality of Audio CD Recordings
- Allocating More Memory to Application Programs
- Using the Recent Documents Command in the Apple Menu
- Installing Acrobat Reader Software from the System Software CD
- Reinstalling or Removing Zip Drive Software
- Installing and Removing PCI Cards

Tips

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Improving 3D Performance

To increase 3D graphics performance on Power Macintosh models that include built-in hardware acceleration, follow these guidelines:

- * Make sure that the applications you are using support QuickDraw 3D.
- * Turn off virtual memory in the Memory control panel.
- * Hide the control strip in the Control Strip control panel.

- * Set the monitor Color Depth to Thousands and set the Resolution to 640x480, 67Hz in the Monitors & Sound control panel.

Improving Video Capture

To increase the speed and quality of video captures on Power Macintosh models that support video capture, follow these guidelines:

- * Turn off virtual memory in the Memory control panel.
- * In the Monitors & Sound control panel, set the color depth to Thousands.
- * Turn off AppleTalk. (You can quickly turn AppleTalk on or off with the Control Strip, or use the Chooser instead.)
- * Turn off the Menubar Clock in the Date & Time control panel.
- * Turn off all unnecessary extensions. Do not turn off QuickTime. (Use the Extensions Manager control panel to turn off extensions; then restart your computer.)
- * If you have installed Apple VideoPhone, remove the "QTCComponentDV" extension from the Extensions folder inside your System Folder, and then restart. (The "QTCComponentDV" video digitizer extension is optimized for video conferencing, but your Power Macintosh contains equivalent software that is optimized for video capture.)
- * Do not run programs other than the capture application while capturing video.
- * Reduce the size of the capture window. (picture quality is improved in smaller windows)
- * Make sure that your hard disk has enough free space to record. If you notice a decline in performance, use a disk optimizer to improve your disk's efficiency.
- * Make sure that the application program you use for capturing video has enough extra memory allocated for one second of video at the size and bit depth that you are using to record. For example, to record 30fps at 320x240 in thousands of colors requires at least 4500K (4.5 MB) free in the application partition. About This Macintosh (in the Apple menu) lets you estimate memory usage.
- * Do not allocate all of the available memory to the capture application. When your capture application is running, you should have an unused block size of at least 500K in About This Macintosh.

When working with applications that support adjusting video and sound settings, the following settings allow the highest video capture performance:

- * Use the Component Video video compressor. Do not use post-compression.
- * Set sound input sampling to 16 bits, stereo, and 44.1KHz for the highest quality. Do not use a sound compressor.

Improving the Quality of Audio CD Recordings

You can use the AppleCD Audio Player and SimpleSound (both available in the Apple menu) to record from an audio CD to a file on disk. If your recordings sound distorted when you play them, try lowering the volume level in the AppleCD

Audio Player and record the sound again.

Usually, you should get acceptable results when the volume is set to about the middle level. However, you may want to experiment with different volume settings; because audio CDs are recorded at various sound levels, individual CDs may require a different setting for optimal recording.

Allocating More Memory to Application Programs

If you are having new problems with application programs reporting that they do not have enough memory, System 7.5.5 may require programs to use an additional 23K of memory. To fix the problem:

1. Quit the program if it is open.
2. Click the program's icon to select it.
3. Open the File menu and choose Get Info.
4. In the Info window, increase the value in the "Preferred size" box by 23.
5. Close the window.

Using the Recent Documents Command in the Apple Menu

You can easily open any of your most recently used documents by choosing the Recent Documents command in the Apple menu, then choosing a document from the submenu. However, this feature can increase the time it takes to open some applications. This occurs because the recent-documents tracking includes all files that are opened--even those opened by an application as part of its launch sequence (such as drop-in filters used by desktop publishing packages). You can reduce the increased opening time by turning off the recent-documents tracking. You can either:

- * turn off "recent documents" tracking in the Apple Menu Options control panel
- * turn off Apple Menu Options in the Extensions Manager

Installing Acrobat Reader Software from the System Software CD

To install Acrobat Reader software from the system software CD onto your hard disk, make sure that the system software CD that came with your computer is not the startup disk. Then locate the Acrobat Reader folder on the CD and follow the installation instructions.

Note: To make sure that the system software CD is not the startup disk, shut down your computer. Then start up the computer while pressing the eject button on the CD-ROM drive (the disc is ejected). After the computer restarts, reinsert the CD and install the Acrobat Reader software.

Reinstalling or Removing Zip Drive Software

Some Power Macintosh models come with an internal Zip drive. Normally when you insert a Zip disk into this drive, an icon for the Zip disk appears on the Macintosh desktop. If an icon for the inserted disk does not appear on the desktop, the Iomega Driver in your System Folder may be missing or damaged. You can reinstall the Iomega Driver by following these steps:

1. Insert the system software CD-ROM disc that came with your computer.

2. Open the Iomega folder in CD Extras folder on the CD-ROM disc.
3. Drag the Iomega Driver icon to the System Folder icon on your hard disk.

One or more alert messages may appear. One will ask if you want to store the Iomega Driver in your Extensions folder, and another may ask if you want to replace a file that already exists.

4. Click the OK button in these alert messages.
5. Eject the CD-ROM disc. (Select the disc icon and choose Put Away from the File menu.)
6. Restart your computer.
7. Try inserting a Zip disc again.

Though only some Power Macintosh models include an internal Iomega Zip drive, your model includes Iomega software on your hard disk, even if your model does not come with a Zip drive.

If your Power Macintosh model does not include a Zip drive, you can remove this software if you wish. (Or you may also wish to keep this software in case you later purchase and connect a Zip drive.) Removing the software frees up disk space and makes your computer start up slightly faster. If you ever need to reinstall the Iomega software, it is available on the CD-ROM disc that comes with your computer.

To remove the Iomega software, drag the following icons to the Trash:

- * Iomega Driver (located in the Extensions folder inside your System Folder)
- * Iomega folder (located in the Apple Extras folder)

Installing and Removing PCI Cards

Your Power Macintosh User's Manual contains detailed instructions about installing peripheral component interconnect (PCI) expansion cards. Follow these instructions carefully when installing a PCI card. To avoid damaging the PCI slot when you install or remove a PCI card, do the following:

- * Do not rock the card from side to side; instead, press or pull the card straight into or out of the slot.
- * Do not physically insert or remove two cards at the same time; insert or remove each card individually.

For more information, see the file "Power Mac Read Me - Part 2."

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Tech Info Library Article Number:20962



Tech Info Library

Power Macintosh 5500 & 6500: Read Me Part 2 (2/97)

Revised: 2/13/97
Security: Everyone

Power Macintosh 5500 & 6500: Read Me Part 2 (2/97)

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Article Created: 13 February 1997

TOPIC -----

This article contains Part 2 of the ReadMe file for the Power Macintosh 5500 and 6500 series computers.

DISCUSSION -----

Important Information
For Your Power Macintosh Computer - Part 2

Contents

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Troubleshooting

- A Note on Troubleshooting Software
- Printing Problems
- Problems with Sound
- Networking and File Sharing Problems
- Problems Using a RAM disk
- Problems using a Zip Drive

Compatibility Problems with Added Software

- Adobe Premiere
- Aladdin DesktopTools
- Apple PC Compatibility Card
- Apple Video Phone
- Apple Video Player
- AppleShare and Connectix Speed Copy
- Conflict Catcher
- Energy Saver control panel
- Japanese and Chinese Language Kits
- Microsoft Office
- Motorola Math Library and Connectix Speed Copy 1.3.1

- QuarkXPress
- Sagem GeoPort ISDN Adapter 1.0

Important Information About Virtual Memory

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Important Information About Document Auto-Save

- Other Document-Saving Products
- Self-Dismissing Dialogs

Important Information About Macintosh PC Exchange

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- Compressed PC Disks and Files
- Working With Disks Containing Multiple Partitions
- Working with DOS-Format SCSI Removable Media Devices
- Working with DOS-Format SCSI Hard Disk Drives
- Tips and Problems

Troubleshooting

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A Note on Troubleshooting Software

Many of the tips for troubleshooting software require you to know the version number of the application or system component you're working with. If you have more than one version of the item, the higher number is the more recent version. Before you begin troubleshooting, follow these steps to try determining the item's version number:

- * In the Finder, select the file in question.
- * Open the File menu and select the Get Info menu item.

The information displayed about the file frequently includes the item's version number.

For more troubleshooting information on the problems described below and other topics, refer to Macintosh Guide online help (available in the Guide menu when the Finder is active) and the manual that came with your computer.

Printing Problems

You have trouble printing with Apple PhotoFlash. Make sure that you have designated a printer in the Chooser. After doing so, open the File menu and choose the Print command.

You can't use the "Print Later" option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the "Print Later" option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension and restart your computer.

To turn off the Assistant Toolbox extension:

1. Open the Apple (*) menu and choose Control Panels.

2. Open the Extensions Manager control panel.
3. In the list of extensions, click next to the Assistant Toolbox extension to remove the checkmark.
4. Restart your computer.

Problems with Sound

Problem: When you play back sound you've recorded, you notice clicks, pops, or skips.

Solution: This problem can occur if you have virtual memory turned on while you're recording sound. Turn off virtual memory before recording. For instructions on turning off virtual memory, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Problem: Your program requires the Sound control panel to set sound options.

Solution: Some application programs that use sound require the Sound control panel, an older control panel that has been replaced on your computer by the Monitors & Sound control panel.

The Sound control panel is located in the Apple Extras folder on your hard disk and in the CD Extras folder on the system software CD that came with your computer. To install it, drag it to the System Folder on your hard disk and then restart your computer.

Note: You can also install the Sound control panel by doing a custom installation of system software. For instructions, refer to the information on doing a custom installation in the Troubleshooting chapter of the manual that came with your computer. When the Custom Install dialog box appears, click "Sound control panel" in the list, then click Install.

Networking and File Sharing Problems

Problem: AppleShare displays incorrect information for large drives.

Solution: If you use File Sharing to share a disk larger than 2 gigabytes (GB), some older computers connected to your computer may display an incorrect size for the disk in the Get Info box. (Get Info reports the disk to be 2 GB in size, even if it is larger.) Because these older computers do not support the larger drives, they also cannot report correct information about the drives. (Computers with System 7.5 display correct information.)

Problem: You can't reconnect to a server.

Solution: If you unexpectedly lose a connection to a server on which you have items in use, and then choose the server from the Recent Servers item in the Apple menu, you get a message that the disk could not be opened because you do not have enough access privileges or because the server can't be found on the network. To reconnect to the server:

1. Close any open files. If any of your files contain changes that need to be saved, use the Save As command to save them on an available disk.
2. Choose the server from the Recent Servers item in the Apple menu.
3. If necessary, replace the files on the server with the ones you saved on an available disk when the server was not available.

Problem: You have problems using AppleShare Server Software version 4.1 or 4.2.
Solution: AppleShare server software versions 4.1 and 4.2 are not intended for use with PCI-based computers, including Power Macintosh 5500 and 6500 computers. If you attempt to use AppleShare server software version 4.1 or 4.2 with these models, you may experience problems.

Problems Using a RAM disk

Problem: You see a message that your RAM disk is unreadable.
Solution: Under some circumstances you may see the following message after setting up a RAM disk:

"This disk is unreadable by this Macintosh. Do you want to initialize the disk?"
(Important: This message applies to the RAM disk, not to your hard disk, which will not be initialized.)

Decrease the size of the RAM disk. If you see the message again, decrease the size again. Continue to decrease in small amounts until the message no longer appears.

Problems using a Zip Drive

Problem: You startup your Power Macintosh from a Zip cartridge (which contains a System Folder) and you get an error message instructing you to insert the Zip cartridge, even though it is already inserted.

Solution: This is a problem caused by an incompatibility between the Zip software and the Energy Saver control panel. You may work around this problem by creating an Energy Saver preferences file:

1. Click the Cancel button in the error dialog box.
2. Select Control Panels under the Apple Menu and select the Energy Saver control panel.
3. Choose your Energy Saver settings or if they are ok, select Quit from the File menu.

Your Zip cartridge will now startup without the error message.

Compatibility Problems with Added Software

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Adobe Premiere

Turn off virtual memory, make AppleTalk inactive, and restart your computer prior to installing Adobe Premiere Deluxe. Otherwise the mouse may freeze during installation. You turn off virtual memory in the Memory control panel. You make AppleTalk inactive in the Chooser or in the AppleTalk control panel. For instructions, refer to Macintosh Guide, available from the Guide menu when the Finder is active.

Aladdin DesktopTools

One feature of Desktop Shortcut, a component of the Aladdin Desktop Tools 1.0.2, is known to fail. If Shortcut is installed, when you are in an Open or Save dialog box, normally you can click in any window in the Finder. The

files/folders in that window will then appear in the Standard File Dialog box's scrolling list. To work around this problem, navigate using the Shortcut Menu icon. Aladdin Systems <<http://www.aladdinsys.com>> has been contacted about this problem and expects to release an update in the future to address the issue.

Apple PC Compatibility Card

If you purchase and install an Apple PC Compatibility Card, you must use PC Setup software version 1.5.4 or a more recent one. Older PC Setup software will not function properly in this Power Macintosh. To get an updated version of the software, first check for it on Apple's World Wide Web site: www.apple.com. Look under the item Product Information. If you do not find the software there, check with an Apple-authorized retailer and the Service and Support information that came with your computer.

Apple Video Phone

If the Self View window is completely covered by any window, the receiver on the other end of the Apple Video Phone connection will not get any picture. Make sure the Self View window is not covered by anything.

If you move the Self View window so it is partially off the bottom of the display, the window will turn black. Moving the Self View window so it is completely seen on the display will restore the window.

Apple Video Player

If you move the video window so it is partially off the bottom of the display, the video in the window may become distorted. Moving the video window back so it is completely on the display will restore the video.

Some TV or video sources may have "lines" appear at the top of the video window. These "lines" are a normal part of the video signal and are not due to any video problems. A TV set normally does not show the entire picture so these lines are hidden. Apple Video Player always displays the entire picture.

AppleShare and Connectix Speed Copy

There is an incompatibility between AppleShare Workstation software version 3.6.1 and Connectix Speed Copy (part of Speed Doubler version 1.1 or earlier). Use the Extensions Manager to turn off Speed Copy before you install this system software version, and contact Connectix to get the latest version of Speed Doubler. (You can contact Connectix at <http://www.connectix.com>, 415-571-5100, or 800-950-5880.)

Conflict Catcher

When using Conflict Catcher, a disabled extension may be moved to the top level of your hard disk. If this happens and you try to turn on the extension in the Extensions Manager control panel, you will not be able to turn it on, even though it appears in the list. To fix this problem, drag the desired extension into the "Extensions (Disabled)" folder (in the System Folder) before using the Extensions Manager.

Energy Saver control panel

The Energy Saver control panel is known to interrupt the play of audio CDs if "Shutdown instead of sleep" is selected. To avoid this problem, uncheck "Shutdown instead of sleep" in the Energy Saver control panel.

FWB Hard Disk ToolKit

If you are using a Power Macintosh model with an internal Zip drive and Hard Disk ToolKit is installed, you may see an alert message stating that the Iomega driver could not load because another driver is already controlling the drive. To prevent this message from appearing, do the following:

1. Open the Hard Disk ToolKit Extension Configuration application.
2. Turn off the "Check All SCSI Addresses" option.
3. Turn on individual checking for each SCSI ID except for SCSI ID number 5, which is the default SCSI ID for the Zip drive.
4. Restart your computer.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

Microsoft Office

If you are using Microsoft Office 4.2.1, you may need the "Office 4.2x Update For Power Mac" version 1.0.1 extension, and the "Microsoft Office Manager Updater" version 4.2.1c. These files are available from the Microsoft World Wide Web site at <<http://www.microsoft.com>>. Download the MC1164.HQX and MOMUPDAT.HQX files.

Motorola Math Library and Connectix Speed Copy 1.3.1

There is a known incompatibility when these two products are used at the same time: the Motorola Math Library and Connectix Speed Copy 1.3.1 (part of Speed Doubler 1.3.1). If you have both of these items in the System Folder, Speed Copy 1.3.1 cannot be used. In order to use Speed Copy, remove the Motorola Math Library from the Extensions folder and restart your computer.

QuarkXPress

To use QuarkXPress on a PowerPC-based Macintosh computer, you must upgrade to QuarkXPress version 3.3.2 (or later).

Sagem GeoPort ISDN Adapter 1.0

There is a known incompatibility with the Sagem GeoPort ISDN Adapter 1.0, resulting in the inability to use the GeoPort ISDN Adapter. Sagem has been contacted about this problem and is working on a solution. For more information, visit the Sagem web site at <http://www.satusa.com>.

Important Information About Virtual Memory

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Virtual memory (VM) is a feature of the Macintosh that lets you use part of your hard disk as additional memory. If you are using an application program designed especially for Power Macintosh computers (often called a "native" application program), turning on virtual memory lets your application use less memory.

With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

If you notice performance problems (such as your computer's responses seeming unusually slow) using certain application programs, you may want to turn off virtual memory.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide (question mark) menu, and click the Memory topic area. For best performance, try setting virtual memory to no more than 150% of the random-access memory (RAM) installed in your computer, or no more than 50% of your currently available hard drive space, whichever number is lower. For example, if your computer has 16 MB of RAM and your hard drive has 50 MB of available space, set virtual memory to a maximum of 24 MB (this is 150% of your 16 MB of RAM, and less than 50% of the available space on your hard drive).

To improve performance, you can also add memory (RAM) to your computer. See the user's manual that came with your computer for more information.

Important Information About Document Auto-Save

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The Energy Saver control panel contains a feature named "Document Auto-Save." The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), we cannot guarantee that Document Auto-Save will be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When an application is incompatible with Document Auto-Save, it will either not automatically quit, or it displays alerts or dialog boxes which

Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, we recommend that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave no documents open that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel to sleep instead of shutting down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide (question mark) menu, and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse button or press the space bar.

Important Information About Macintosh PC Exchange

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a MacOS-based computer, you must decompress the files and save them to a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use PC Exchange to mount the MacOS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both MacOS- and DOS-format partitions, PC Exchange will recognize only the MacOS partition. In addition, PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that are less than 32 megabytes.

You can use PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a MacOS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple MacOS, DOS, or

ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, drag the device's icon to the Trash. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use the disk setup and partitioning software that came with the SCSI controller card installed in your PC or that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

* A "Sad Mac" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring,

manually eject removable media cartridges from their drives before you turn on your computer.

* Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:20963



Tech Info Library

Indian Language Kit: Gujarati QWERTY Keyboard Change (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Gujarati QWERTY Keyboard Change (2/97)

=====

Article Created: 14 February 1997

TOPIC -----

I am trying to type a Viraam character using the Indian Language Kit. According to the Indian Language Kit User's Guide, the Viraam should be the default period (full-stop) on the Period key. However, it appears that the period (.) is the default. How can I type a Viraam?

DISCUSSION -----

The Gujarati QWERTY keyboard underwent a minor change after the Indian Language Kit User's Guide was printed so there is an error in the manual. Instead of the Viraam as the default period (full-stop) on the Period key, the period (.) is the default. Viraam can be typed by holding down the Option key and pressing the Period key.

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Tech Info Library Article Number:20965



Tech Info Library

Indian Language Kit: Which Scripts & Languages Supported? (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Which Scripts & Languages Supported? (2/97)

Article Created: 14 February 1997

TOPIC -----

What scripts and languages are supported by the Indian Language Kit?

DISCUSSION -----

The different languages on your computer are supported by software known as the script system. A script system makes a character set available for a particular language, tells your computer which characters to display when you type, specifies the direction of text flow, and provides other information such as sort order, date, time, number, and currency formats. If you are working in English on your computer, your system uses the Roman script.

If you are working in an Indian language, your system uses one of the Indian scripts provided by this kit. The script system generates the complex combinations of characters used in Indian languages in response to different sequences of keystrokes.

The Indian Language Kit supports several North Indian scripts. These scripts have letters representing consonants and vowel sounds. Many North Indian scripts depict words with a bar above all of the letters in the word. Also, when two consonants are joined together, a composite letter--a consonant conjunct--is formed. So, although there are a relatively small number of letters, there may be many more consonant conjuncts for a particular script.

The Indian Language Kit supports three North Indian scripts. Devanagari, Gurmukhi, and Gujarati. The same script can be used by several languages if they share most of the same characters and behaviors. For example, Devanagari is used for four languages: Hindi, Marathi, Nepali, and Sanskrit. Gurmukhi for the Punjabi language; and Gujarati for the Gujarati language. So, the Indian Language Kit supports three different scripts and six different Indic languages.

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Tech Info Library Article Number:20966



Tech Info Library

Indian Language Kit: Using Different Keyboard Layouts (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Using Different Keyboard Layouts (2/97)

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Article Created: 14 February 1997

TOPIC -----

I installed the complete version of the Indian Language Kit, but I am not sure which keyboard layout I should use. What is the differences among the several different layouts?

DISCUSSION -----

The Indian Language Kit offers two different layouts--Inscript and QWERTY--for each of the three Indian language scripts it presently supports (Devanagari, Gujarati, and Gurmukhi). An additional layout, Nepalese, is also provided for the Devanagari script only. Choose the layout according to the script and language you are using.

Inscript

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The default layout--Inscript--is available for all three scripts. Inscript uses the ISCII (Indian Script Code for Information Interchange) character set and is used for "normal" or phonetic typing. It is generally accepted as the standard Indian language keyboard layout as defined by an Indian standards organization in the Indian Government. It is optimized to be the fastest form of keyboard input for each script.

Using the Inscript layout, the computer combines these characters to form the large number of conjuncts used in Indian languages. This means that when you are typing in an Indian language, you do not have to search for the correct half-character sets to form a conjunct. When you type a certain sequence of consonants and vowels, the computer automatically generates the required character. Using the Inscript layout you can type the words according to how they sound, rather than how they finally appear on your screen. The computer automatically reorders vowels and consonants to produce the desired words in all three languages.

The default (Inscript) keyboard layouts for all three Indian language scripts

also support the Roman script when you hold down the Option key.

QWERTY

=====

The QWERTY keyboard layouts place Indian language characters on a QWERTY keyboard, in positions that correspond to Roman characters with similar pronunciation. They also provide a set of Roman numerals in the Option position. QWERTY is used primarily for Romanized typing.

Note that the QWERTY keyboard layout is used in the United States and displays the top-left keys on the keyboard in that order--Q W E R T Y. The Indian Language Kit currently does not provide a way to customize the layouts for AZERTY (French), QWERTZ (German and Swiss-French), QZERTY (Italian) or any other transliterated layout. Instead, use the Typing Tutor, included in the CD-ROM disc, to learn the Inscript keyboard.

Nepali

=====

The Nepali keyboard layout is used only with the Devanagari script and is compatible with the mechanical keyboard layout used in Nepal. The Nepali layout was added for Nepali users used to the traditional Nepali typewriters and is simply a rearrangement of the other Devanagari layouts.

Layout Installation

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If you install all the keyboards in the Indian Language Kit, they appear in this order in your Keyboards menu:

- Devanagari
- Devanagari QWERTY
- Nepali
- Gurmukhi
- Gurmukhi QWERTY
- Gujarati
- Gujarati QWERTY

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Tech Info Library Article Number:20967



Tech Info Library

Indian Language Kit: Fonts Appear Garbled (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Fonts Appear Garbled (2/97)

=====

Article Created: 14 February 1997

TOPIC -----

I recently installed the Indian Language Kit on my Power Macintosh 8100 computer, and I have realized that when I switch keyboard layouts the fonts appear garbled. What could be causing this?

DISCUSSION -----

This issue may occur on any NuBus-based Power Macintosh computers that are using system software older than Mac OS 7.6. This was noted in the Indian Language Kit Read Me file, and the solution is to switch to a keyboard layout of another language and then switch back to the desired keyboard layout.

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Tech Info Library Article Number:20968



Tech Info Library

Indian Language Kit: Don't Use Certain Fonts (2/97)

Revised: 2/14/97
Security: Everyone

Indian Language Kit: Don't Use Certain Fonts (2/97)

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Article Created: 14 February 1997

TOPIC -----

I have the Indian Language Kit installed on my computer, and I am confused by the number of fonts that are now appearing in the Font menu of my applications. Which fonts should I be using?

DISCUSSION -----

After installing the Indian Language Kit, your Font menus contain at least two fonts for each Indian Language. These fonts have different suffix--for example, Devanagari MTS and Devanagari MT. You should use the MT version of each Indian language font. (Do not use the MTS version; MTS fonts use Chicago as their associated Roman font and have no bold style).

Furthermore, if you have QuickDraw GX installed, you will see some additional fonts at the top of the Font menu that begin with a period (.) For example, you may see a font listed with the name ".Devanagari MT X" Do NOT use this or similar fonts. Instead, select the font "Devanagari MT."

For technical reasons, these fonts cannot be hidden, and in future versions of the Indian Language Kit, we hope these fonts will not be visible. In the meantime, follow these suggestions for choosing the proper font.

** The following list shows the fonts that you should NOT use. (You cannot remove these fonts from your Font menu.)

* On any computer with the Indian Language Kit installed, do NOT use these fonts:

Devanagari MTS
Gujarati MTS
Gurmukhi MTS

* Additionally, if you have QuickDraw GX installed, these additional fonts may

appear, which you should NOT use:

- .Devanagari MT X
- .Devanagari MT X (Bold)
- .Gujarati MT X
- .Gujarati MT X (Bold)
- .Gurmukhi MTX
- .Gurmukhi MTX (Bold)

** The fonts that you SHOULD use in conjunction with the Indian Language Kit:

- Devanagari MT
- Gujarati MT
- Gurmukhi MT

** Also, if you are using third-party fonts, you should note that the Indian Language Kit only supports non-Apple fonts which are both ISCII and WorldScript compliant.

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Tech Info Library Article Number:20969



Tech Info Library

Mac OS 7.6: Seeing Duplicate System Folders (2/97)

Revised: 2/17/97
Security: Everyone

Mac OS 7.6: Seeing Duplicate System Folders (2/97)

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Article Created: 14 February 1997

TOPIC -----

I recently performed a clean system installation of Mac OS 7.6. When I restarted the computer I saw a duplicate system folder. Clicking around in the window made the duplicate system folder disappear but after another restart, the duplicate was back. What is wrong?

DISCUSSION -----

Mac OS 7.6 and earlier versions of the Mac OS, like 7.5.x, are not the cause of this behavior. If you have installed Desktop Printing and have not selected a printer in the Chooser, double system folders may appear. This is a Desktop Printer issue.

To correct this, select a printer in the Chooser and a duplicate system folder should not reappear.

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Tech Info Library Article Number:20970



Tech Info Library

Power Macintosh: About Using Your CD-ROM Drive (2/97)

Revised: 2/14/97
Security: Everyone

Power Macintosh: About Using Your CD-ROM Drive (2/97)

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Article Created: 14 February 1997

TOPIC -----

This article contains the Read Me file, "About Using Your CD-ROM Drive", which is included with Power Macintosh 5500 and 6500 computers.

DISCUSSION -----

CD-ROM Sound and Vibration

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Your computer comes with a 12-speed (12x) CD-ROM drive, one of the fastest speeds available. The 12x CD-ROM drive reads CD-ROM discs very quickly, but because of the drive's high rotation speed, you may hear unanticipated sounds coming from it.

During CD start Up and long searches

For example, when you insert a CD disc into the CD-ROM drive, you may notice a few seconds of sound that makes you think either the disc is loose in the drive or something inside the computer has come into contact with the spinning disc. This sound may also occur occasionally when the drive scans the disc for data. If you hear it, do not be concerned. The sound is normal and the disc remains undamaged.

During regular CD-ROM operation

Today's high-speed CD-ROM drives normally cause a certain amount of sound and vibration. However, there are also some cases in which a CD-ROM disc label has artwork that causes the disc's weight to be slightly off-center. Occasionally, this uneven distribution of weight coupled with the high rotation speed of your CD-ROM drive can cause a disc to wobble in the drive and cause vibration. If your CD-ROM drive does begin to vibrate, you don't need to do anything special; continue to use the CD-ROM disc as you normally would. The vibration damages neither the CD-ROM disc nor the computer.

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Tech Info Library Article Number:20971



Tech Info Library

Power Macintosh 4400/200: Read Me (2/97)

Revised: 2/14/97
Security: Everyone

Power Macintosh 4400/200: Read Me (2/97)

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Article Created: 14 February 1997

TOPIC -----

This article contains the Read Me file for the Power Macintosh 4400/200 computer.

DISCUSSION -----

This document provides late-breaking information that could not be included in your user's manual.

Contents

=====

Tips

- Installing Peripheral Component Interconnect (PCI) Cards

Troubleshooting

- Printing Problems
- Performance Problems
- Problems with Sound
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- DOS Compatibility Cards
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- Compressed PC Disks and Files
- Working With Disks Containing Multiple Partitions
- Working with DOS-Format SCSI Removable Media Devices
- Working with DOS-Format SCSI Hard Disk Drives
- Tips and Problems

Tips

====

Installing Peripheral Component Interconnect (PCI) Cards

Some PCI cards must be installed in a particular slot in your computer. Consult the PCI card's user's manual, Read Me file, or the card manufacturer to determine if the card you are installing must be installed in a certain slot.

Troubleshooting

IMPORTANT The troubleshooting information in this Read Me file supplements the information provided in Macintosh Guide (available in the Guide menu when the Finder is active) and the manuals that came with your computer.

Printing Problems

You have trouble printing on a StyleWriter or StyleWriter II printer. Use the StyleWriter 1200 printer driver that came installed on your computer. Do not install your older StyleWriter driver; it is not compatible with PowerPC-based computers.

You can't use the Print Later option with a non-networked printer. If you have the Assistant Toolbox extension installed on your computer and you want to use the Print Later option when printing on a non-networked printer, you must turn off the Assistant Toolbox extension and restart your computer.

To turn off the Assistant Toolbox extension:

1. Open the Apple (*) menu and choose Control Panels.
2. Open the Extensions Manager control panel.

3. In the list of extensions, click next to the Assistant Toolbox extension to remove the checkmark.
4. Restart your computer.

You see a low-memory warning when you print Stickies on a StyleWriter, StyleWriter II, or StyleWriter 1200 printer. This problem can occur when the amount of memory Stickies uses is set below 150K. Increase the amount of memory available to Stickies. For instructions on changing the memory a program uses, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

Performance Problems

You see a message that not enough memory is available. This problem can occur for several reasons. For detailed tips on memory-related problems, refer to both the troubleshooting information in the manuals that came with your computer and to the information on memory in Macintosh Guide (available in the Guide menu when the Finder is active).

If this problem occurs after you have opened the Extensions folder in the System Folder and scrolled through a long list of extensions, you can restore normal performance by restarting your computer.

Microsoft applications such as Microsoft Word, PowerPoint, or Microsoft Excel display messages that not enough memory is available and that you need to increase the size of memory available. Try quitting all applications before launching Microsoft applications. If this does not work, then try turning on virtual memory. The documentation that came with your computer and Macintosh Guide (available in the Guide menu when the Finder is active) contain more information about virtual memory.

Problems with Sound

HyperCard version 2.3.3 or earlier does not record sound properly on your computer. Other sound-recording application programs, including SimpleSound and the Sound control panel, can record sounds that you can import and play within HyperCard 2.3.

Some application programs that use sound require the Sound control panel, an older control panel that has been replaced on your computer by the Monitors & Sound control panel.

You can install the Sound control panel by doing a custom installation of system software. For instructions, refer to the information on doing a custom installation in the Troubleshooting chapter of the manual that came with your computer. When the custom dialog box appears, click "Sound control panel" in the list, then click Install.

Problems with Energy Saver

When using Energy Saver, if you schedule a startup time for your computer of 24 hours (or more) after the scheduled shutdown time, the computer may not start up at the scheduled time.

To solve this problem, after you change the scheduled shutdown or startup time, click the "Sleep Setup" button in the Energy Saver control panel.

Problems Using a RAM Disk

You notice performance problems when using a RAM disk. Make sure the RAM disk size is not set to 100% or you may experience performance problems.

Problems with Programs Freezing or Quitting Unexpectedly

Maple V quits unexpectedly when you change your monitor resolution. This can occur if you use the Control Strip to change the monitor resolution while the Maple V program is active. Use the Monitors & Sound control panel instead of the Control Strip to change screen resolution. For instructions on using the Monitors & Sound control panel, refer to Macintosh Guide (available in the Guide menu when the Finder is active).

When you try to install Adobe Premiere Deluxe, the mouse freezes. This can occur if you have virtual memory turned on and AppleTalk active when you try to install Adobe Premiere Deluxe. Turn off virtual memory and make AppleTalk inactive before installing. For instructions, refer to Macintosh Guide (available from the Guide menu when the Finder is active).

This problem does not occur if you select Adobe Premiere 4.2 installation instead of Adobe Premiere Deluxe.

Problems with Monitors

You have difficulty choosing a video resolution that works well. To select the best video resolution to use with your monitor and computer, use the Control Strip displayed in the bottom left corner of your screen. (If the Control Strip is not visible, display it by choosing Control Strip from the Control Panels submenu in the Apple menu.) The recommended resolutions are listed in a plain font. The resolutions listed in italics may not work with your hardware.

Compatibility Problems

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DOS Compatibility Cards

PCSetup is an application program that comes with DOS Compatibility Cards. PCSetup version 1.5 or earlier may not work with your computer.

If you have the DOS Compatibility Card sound cables installed, the output from the audio will be reversed.

CDPlusGraphics

Your computer displays error messages when you use the CDPlusGraphics application to play a CD-ROM disc that contains both sound and graphics. The graphics tracks of CD+G discs and MIDI tracks of CD+MIDI discs cannot be played

on the internal CD-ROM drive in your computer. (However, the audio tracks of these CDs can be played.) To play CD+G and CD+MIDI discs, use an external SCSI CD-ROM drive.

At Ease for Workgroups 3.0 and 3.0.1

If you are using a version of At Ease prior to 3.0.2, do not remove the At Ease ATA Extension from your Extensions folder. (This extension prevents the "Lock startup volume" checkbox from being available.) If you are using At Ease 3.0.2 or later or you are not using At Ease at all, you may remove the At Ease ATA Extension.

Ethernet Cards

The Ethernet CS II Card requires Open Transport software. To use Open Transport, open the Network Software Selector application in the Apple Extras folder and select Open Transport networking. Then use the AppleTalk and TCP/IP control panels to set up networking with the Ethernet CS II Card. (Do not use the Network and MacTCP control panels.)

MacIPX is not supported currently by Open Transport and therefore does not work with the Ethernet CS II Card or with any Ethernet PCI card.

The currently shipping versions of Apple IP Gateway and AppleTalk Internet Router are not compatible with Open Transport.

Shut down your computer before you connect or disconnect network cables from your computer.

If multiple network cards are installed, the AppleTalk Control Panel identifies the cards as A1, B1 or C1; slot A1 is the middle (PCI) slot, slot B1 is the top (PCI) slot, and slot C1 is the bottom (communication) slot.

External Modem Port

The installation of any internal modem in the communication slot will disable the external modem port. You can configure the printer port for an equivalent use after turning AppleTalk off.

Japanese and Chinese Language Kits

To use the Japanese Language Kit with your computer, you must install version 1.2 or later. In the United States, you can obtain an upgrade by calling Claris at 1-800-293-6617.

To use the Chinese Language Kit with your computer, make sure you use version 1.1.1 or later. To install the Chinese Language Kit version 1.1.1, follow these three steps:

1. Install the WorldScript Updater 1.0.
2. Install the Chinese Language Kit version 1.0 or 1.1.
3. Install the Chinese Language Kit Updater to update your software to version 1.1.1.

IMPORTANT: Be sure to follow the steps in the order shown.

STF PowerFax PE

If you use PowerTalk Direct Dialup Mail and have trouble sending a fax, it may be because both Direct Dialup and STF PowerFax PE are set to auto-answer. To turn off STF auto-answer, open the STF Setup window and set 'n' to "never" (in the "Answer on 'n' rings" section).

Emagic Logic Version 2.0.1

In order to use Emagic Logic version 2.0.1 and similar applications, the MIDI Manager extension may need to be installed.

PCI Video Cards

In order to use the Targa 2000 card, you must install it in slot A1 and turn virtual memory off. Refer to Macintosh Guide (available from the Guide menu when the Finder is active) for more information about turning virtual memory off.

In order to use the Media 100qx card, you must install it in slot A1 and turn virtual memory off. Refer to Macintosh Guide (available from the Guide menu when the Finder is active) for more information about turning virtual memory off. Also note that this card has special configuration requirements -consult the card's manufacturer to configure your system for best performance.

You may experience problems with other video capture cards on your computer. Please contact the card's manufacturer for instructions.

Important Information About Virtual Memory

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With virtual memory turned on, a Power Macintosh program uses less memory than when virtual memory is turned off. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change. That is because turning on virtual memory allows the program to use memory more efficiently.

For information on how to turn virtual memory on and off, choose Macintosh Guide from the Guide menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?" and "Tips for PowerPC-based computers." Also, refer to the user's manual that came with your computer.

Important Information About Document Auto-Save

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The Document Auto-Save feature in the Energy Saver control panel automatically quits all open applications during an idle or scheduled shutdown, and saves changes to any open documents in each application. Since there are literally thousands of applications available for the Macintosh (with new ones always arriving), Apple cannot guarantee that Document Auto-Save will be compatible with every application. When Document Auto-Save is incompatible with an application, the application will not automatically quit and the computer will

not be shut down.

If you intend to turn Document Auto-Save on, monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before a scheduled shutdown is to occur. You can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Macintosh Guide from the Guide menu when the Finder is active and choose the Energy Saving topic area.

Other Document-Saving Products

There are conflicts when non-Apple document-saving control panels or extensions are used in conjunction with Energy Saver's Document Auto-Save. Examples of such products are NowSave and SuperBoomerang. For best results, use the document-saving features of only one control panel or extension.

Self-Dismissing Dialogs Boxes

Under some rare conditions, the Energy Saver control panel may continuously dismiss dialog boxes if the Document Auto-Save feature unexpectedly fails during an idle or scheduled shutdown. (Whenever a dialog box appears, it is dismissed as if you have pressed the Return key.) To return things to normal, simply click the mouse or press the Space bar.

Important Information About Macintosh PC Exchange

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AutoDoubler

Before you use AutoDoubler with Macintosh PC Exchange, you must open the AutoDoubler control panel and turn off the "Show DD on Compressed Files" option from the DD menu.

Compressed PC Disks and Files

Macintosh PC Exchange does not work with DOS-format floppy disks or SCSI hard disks that have been compressed using Stacker or other DOS or Windows disk-compression utilities. Before transferring compressed DOS files to a Mac OS-based computer, you must decompress the files and save them on a noncompressed DOS-format floppy disk.

Working With Disks Containing Multiple Partitions

If a SCSI hard disk or removable media cartridge has been formatted to contain multiple partitions, you can use Macintosh PC Exchange to mount the Mac OS-, DOS-, or ProDOS-format partitions as individual volumes on the Macintosh desktop. If the disk contains both Mac OS- and DOS-format partitions, Macintosh PC Exchange will recognize only the Mac OS partition. In addition, Macintosh PC Exchange will recognize ProDOS-format partitions only on SCSI hard disks that

are less than 32 megabytes.

You can use Macintosh PC Exchange to erase existing individual partitions on a SCSI hard disk or removable media cartridge if they have the same format. However, you cannot use Macintosh PC Exchange to reformat and resize individual partitions contained on the disk. Nor can you format a Mac OS-format hard disk or removable media cartridge as a DOS-format disk. To resize or reformat multiple Mac OS, DOS, or ProDOS partitions, you need to use third-party software designed for partitioning hard disks and removable media cartridges.

Working with DOS-Format SCSI Removable Media Devices

In order for Macintosh PC Exchange to recognize any SCSI removable media device, you must turn on the device and eject any cartridges before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

The Eject Disk command is unavailable when you are working with removable media devices. To unmount and eject a removable media cartridge, click the device's icon to select it and choose Put Away from the File menu. Once the device has spun down and the red light goes out, you can manually eject the cartridge from the drive. To access a removable media cartridge that has been ejected, simply reinsert the cartridge in the drive.

When initializing and formatting Bernoulli and SyQuest cartridges on a DOS or DOS-compatible computer, use either the disk setup and partitioning software that came with the SCSI controller card installed in your PC or the one that came with your Bernoulli or SyQuest device. (Do not use the MS-DOS FDISK command.) Also, use the MS-DOS FORMAT command to format a newly initialized removable media cartridge on a DOS or DOS-compatible personal computer (PC) before you copy DOS files onto it.

When you initialize a removable media cartridge on a DOS or DOS-compatible PC, you must fully partition, initialize, and erase the cartridge using the software that came with your SCSI controller card or removable media drive. If you do not, Macintosh PC Exchange may not recognize the new DOS-format partitions on that cartridge.

Working with DOS-Format SCSI Hard Disk Drives

In order for Macintosh PC Exchange to recognize a SCSI hard disk drive, you must turn on the drive before you turn on your computer.

Do not install the device driver software that came with your removable media device. Instead, open the Macintosh PC Exchange control panel, click the Options button, select your SCSI device from the list, and then restart your computer. Macintosh PC Exchange will install its own device driver for that SCSI device.

When initializing and formatting an external SCSI hard disk connected to a DOS or DOS-compatible PC, use the MS-DOS FDISK command or the disk setup and partitioning software that came with the SCSI controller card installed in your PC. In addition, you should use the MS-DOS FORMAT command to format and erase the disk before you copy DOS files to a new SCSI hard disk connected to a PC.

Tips and Problems

* A "sad Macintosh" icon may appear on your screen at startup if a removable media cartridge has been left in the drive. To keep this problem from occurring, manually eject removable media cartridges from their drives before you turn on your computer.

* Macintosh PC Exchange cannot recognize SCSI hard disks, removable media devices, or drive container files that contain more than one gigabyte of disk space.

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Tech Info Library Article Number:20972



Tech Info Library

Performa 6400/6360/GeoPort: How to Remove Modem Software (2/97)

Revised: 2/19/97
Security: Everyone

Performa 6400/6360/GeoPort: How to Remove Modem Software (2/97)

Article Created: 15 February 1997
Article Reviewed/Updated: 19 February 1997

TOPIC -----

I have a Macintosh Performa 6360 or 6400 series computer that ships with a GeoPort Telecom Adapter

I want to remove the modem software from the System Folder. How do I do this?

DISCUSSION -----

NOTE: Not all Performa 6400 series computers ship with GeoPort internal modems. To determine what type of modem you have, search for Tech Info Library article "Macintosh Performa 6400: Which Modem is Included?". If you have a Global Village modem, search for Tech Info Library article "Performa 6400/GVC: How to Remove Modem Software".

IMPORTANT:

Do not use this article if you do not have a Performa 6360 or 6400 series computer.

Do not use this article for guidance on how to deal with Apple Telecom 2.x or earlier.

How to Remove Modem Software

There are three operational components to the "modem software": the modem software, the fax software, and a few support files for Megaphone.

If you are installing a new, external, voice capable modem, you should normally remove all three components in order to ensure there are no conflicts with your new modem.

This discussion is mainly concerned with software that modifies the operation of

the computer each time you start up. You will also need to remove the Megaphone folder from the Applications folder, and the Apple Telecom folder from the top (root) level of the hard disk -- be sure that Application Folder Protection is turned off in the General Controls control panel. If you throw away the latter folder, you will risk deleting any received faxes, as well as the only software which is capable of reading those faxes.

Also, there are a number of modem and communications utilities provided to support ClarisWorks, America Online (AOL), and the Apple Internet Connection Kit (AICK). These utilities are not modem specific, and should work with any type of modem.

Modem Software

Since the GeoPort Telecom Adapter is a software-based modem, there is basic modem software that lets the modem card serve as a modem. If you wish to remove this software, remove the following files:

Control Panels

- Express Modem

Extensions

- Apple Telecom Modem
- Express Modem Tool
- GeoPort for Power Macintosh
- GeoPort Serial Driver
- GeoPort Telecom Adapter
- GeoPort Telephone Tool
- GeoPort/Express Modem
- GeoPort/Express Modem CNG

Preferences

- Express Modem Preferences

Fax Software

The next major package is the fax software. The fax software is comprised of the following files:

Apple Menu Items

- Apple Telecom Status

Extensions

- AddressBookLib.ppc
- Apple Fax Gateway
- Fax Extension
- Fax Sender
- Fax Sender GX
- Log Extension
- Modem Scripts
 - GeoPort/Express Modem
 - GeoPort/Express Modem CNG
- Scripting Additions

Received fax folder

Mimetics

- EasyReader Fax
- Neuroneye
- UK Dictionary
- US Dictionary

Preferences

- Fax Extension Preferences

System suitcase (free in System Folder):

- Bell Telephone (sound resource)
- Electronic Telephone

CAUTION:

Do not throw away the System suitcase. Open the system suitcase and remove the sound files, if desired. If you move the System suitcase out of the System Folder, the computer will not start correctly the next time you start up.

Megaphone Software

The last major package is Megaphone. This support software is as follows:

At Ease Items

- At Ease Setups
 - Parents
 - MegaPhone
 - MegaPhone 2.0 Tour

Control Panels

- MegaDial

Extensions

- ANSI C++ PPC Lib
- CRC TelePort TelTool
- Cypress
 - MegaDial Files
 - MegaDial Locations
 - MegaDial Resources
- MegaPhone Menu
- MWRuntimeLib
- Telephone Manager Extension

Launcher Items

- MegaPhone II
 - Learning
 - MegaPhone 2.0 Tour

NOTE: Apple only supports the bundled version of Megaphone with the modem which was shipped with the computer. Even if you purchase an external voice-capable modem, this version of Megaphone may not work with it. If the external modem did

not come with its own telephony software, contact Cypress Research Corporation for compatibility and purchasing information.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

19 Feb 1997 - Added Apple Fax information.

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Tech Info Library Article Number:20973



Tech Info Library

Performa 6400/GVC: How to Remove Modem Software (2/97)

Revised: 2/19/97
Security: Everyone

Performa 6400/GVC: How to Remove Modem Software (2/97)

Article Created: 15 February 1997
Article Reviewed/Updated: 19 February 1997

TOPIC -----

I have a Macintosh Performa 6400 series computer that ships with a Global Village Platinum V modem. I want to remove the modem software from the System Folder, how do I do that?

DISCUSSION -----

NOTE: Not all Performa 6400 series computers have a Global Village modem. To determine the type of modem you have, search for Tech Info Library article "Macintosh Performa 6400: Which Modem is Included?". If you have a GeoPort modem, search for Tech Info Library article "Performa 6400/6360/ GeoPort: How to Remove Modem Software".

IMPORTANT:

Do not use this article for guidance on removing modem software from any other Performa computer bundled with Global Village software. The Performa 6400 includes no Global Village software, even if it comes with a Global Village modem, so the information below cannot be used for other systems. Search for Tech Info Library article "How to Remove Global Village Software" instead.

Do not use this article for guidance for dealing with Apple Telecom 2.x or earlier software.

How to Remove Modem Software

There are actually two operational components to the modem software: the fax software, and a few support files for Megaphone.

If you are installing a new, external, voice capable modem, you should normally remove all components of the bundled software in order to ensure there are no conflicts with your new modem.

This discussion is mainly concerned with software that modifies the operation of the computer each time you start up. You will also need to remove the Megaphone folder from the Applications folder, and the Apple Telecom folder from the top (root) level of the hard disk -- be sure that Application Folder Protection is turned off in the General Controls control panel. If you throw away the latter folder, you will risk deleting any received faxes, as well as the only software which is capable of reading those faxes.

Also, there are a number of modem and communications utilities provided to support ClarisWorks, America Online (AOL), and the Apple Internet Connection Kit (AICK). These utilities are not modem specific, and should work with any type of modem.

Fax Software

The first major package is the fax software. The fax software is comprised of the following files:

Apple Menu Items

- Apple Telecom Status

Control Panels

- MegaDial

Extensions

- AddressBookLib.ppc
- Apple Fax Gateway
- Apple Personal Modem
- Fax Extension
- Fax Sender
- Fax Sender GX
- Log Extension
- Scripting Additions
 - Received fax folder

Mimetics

- EasyReader Fax
- Neuroneye
- UK Dictionary
- US Dictionary

System suitcase (free in System Folder):

- Bell Telephone (sound resource)
- Electronic Telephone

CAUTION:

Do not throw away the System suitcase. Open the system suitcase and remove the sound files, if desired. If you move the System suitcase out of the System Folder, the computer will not start correctly the next time you start up.

Megaphone Software

The last major package is Megaphone. This support software is as follows:

At Ease Items

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Parents

MegaPhone

MegaPhone 2.0 Tour

Control Panels

MegaDial

Telephone Setup

Extensions

ANSI C++ PPC Lib

CRC Address Book Extension

CRC TelePort TelTool

Cypress

MegaDial Files

MegaDial Locations

MegaDial Resources

MegaPhone Menu

MWRuntimeLib

Telephone Manager Extension

Launcher Items

MegaPhone II

•Learning

MegaPhone 2.0 Tour

NOTE: Apple only supports the bundled version of Megaphone with the modem which was shipped with the computer. Even if you purchase an external voice capable modem, this version of Megaphone may not work with it. If the external modem did not come with its own telephony software, contact Cypress Research Corporation for compatibility and purchasing information.

This article is one of many available through the Apple Fax center. For a complete list of available Fax documents, search the Tech Info Library for Apple Fax Document Index or call the Apple Fax line at 1-800-505-0171 and select document number 20000 (Apple Fax - Document Index - Product Support Literature). The Apple Fax center is available free of charge 24 hours a day, 7 days a week.

Article Change History:

19 Feb 1997 - Added Apple Fax information.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20974



Tech Info Library

Apple Network Server: Viewing the AIX Boot Log (2/97)

Revised: 2/21/97
Security: Everyone

Apple Network Server: Viewing the AIX Boot Log (2/97)

=====

Article Created: 15 February 1997
Article Reviewed/Updated: 21 February 1997

TOPIC -----

How can I view the boot log on AIX 4.x?

DISCUSSION -----

The boot log on AIX 4.X can be view by typing the command:

```
alog -o -t boot
```

There may be more information than can fit in one screen, so you might want to try the command below and then press the space bar to the next screen:

```
alog -o -t boot | more
```

This information may prove useful if AIX stops during the boot process. You can boot AIX from the installation CD-ROM disc and enter the maintenance mode to view the boot log.

This article was published in the 21 February 1997 "Information Alley."

Article Change History:
21 Feb 1997 - Added Info Alley information.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20975



Tech Info Library

GeoPort & EM Updater: Change History (2/97)

Revised: 2/19/97
Security: Everyone

GeoPort & EM Updater: Change History (2/97)

=====

Article Created: 15 February 1997
Article Reviewed/Updated: 19 February 1997

TOPIC -----

This article is a brief description of the GeoPort and Express Modem Updater change history.

DISCUSSION -----

3.0 - Added V.34 functionality, up to 28.8 kbps, for GeoPort hardware running on a Power Macintosh computer and fixed minor bugs. Based on Apple Telecom 3.0.3 (ships in Japan only).

3.1 - Implemented up to 33.6 kbps connection speeds on GeoPort hardware running on a Power Macintosh computer, and fixing a memory fragmentation issue with the software. This update was never posted because it was superseded by 3.1.1

3.1.1 - Fixed the installer script. The installer was removing the old GeoPort Extension on a Macintosh Quadra AV computer, but not installing the new one.

This article was published in the 19 February 1997 "Information Alley."

Article Change History:
19 Feb 1997 - Added Info Alley information.

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Tech Info Library Article Number:20976



Tech Info Library

Open Transport/PPP: Error Codes (2/97)

Revised: 2/15/97
Security: Everyone

Open Transport/PPP: Error Codes (2/97)

Article Created: 15 February 1997

TOPIC -----

This article provides a listing of the Open Transport/PPP (OT/PPP) error codes found in the Users Manual, pp. 62-63.

DISCUSSION -----

- 7102: OT/PPP did not load properly at system start up.
- 7103: OT/PPP could not set up a port.
- 7104: OT/PPP is out of memory.
- 7105: The requested action is not supported.
- 7106: One or more resources are missing from OT/PPP's installed files.
- 7107: The Remote Access Connections file is not compatible with the installed version of OT/PPP.
- 7108: An action requiring a connection was requested when there was no connection.
- 7109: The connection attempt or established connection was terminated by the user.
- 7110: The user name is unknown.
- 7111: The password is invalid.
- 7112: An unexpected error with no useful information has occurred.
- 7113: One or more of the installed OT/PPP files is damaged.
- 7114: The requested action could not be performed because OT/PPP was busy.
- 7115: The OT/PPP logical port is in an unknown state.
- 7116: The OT/PPP logical port is in an invalid state.
- 7117: The OT/PPP logical port has detected an invalid serial protocol.
- 7118: Login is disabled for the given user.
- 7120: The server administrator requires the user to enter a password.
- 7122: OT/PPP could not initialize Open Transport.
- 7123: The requested action could not be performed because OT/PPP is not fully initialized yet.
- 7124: TCP/IP is inactive and cannot be loaded.
- 7125: TCP/IP is not yet configured.
- 7126: PPP is not selected as the TCP/IP interface in the current TCP/IP

configuration.

- 7128: The requested PPP protocol was rejected by the PPP peer.
- 7129: PPP authentication failed.
- 7130: PPP negotiation failed.
- 7131: PPP was disconnected locally.
- 7132: The PPP peer disconnected unexpectedly.
- 7133: The PPP peer is not responding.
- 7134: The OT/PPP log file is not open.
- 7135: The OT/PPP log file is already open.
- 7136: The OT/PPP log entry could not be retrieved.
- 7138: OT/PPP can not locate the active System Folder.
- 7139: OT/PPP can not locate its Preferences folder.
- 7140: There is a preexisting file using an OT/PPP type or creator.
- 7141: There is a preexisting folder using an OT/PPP folder name and location.
- 7142: The Remote Access Connections file is not open.
- 7144: An unknown PPP control protocol type was received.
- 7145: PPP received a packet with an invalid length.
- 7146: PPP received a negotiable option with an invalid value.
- 7147: PPP received a negotiable option with invalid flags.
- 7148: PPP ran out of memory while negotiating with the peer.
- 7152: PPP encountered an error with no useful information.
- 7153: PPP is in an invalid state.
- 7163: The user canceled the password entry dialog.
- 7164: The user did not respond to the password entry dialog in time.
- 7165: An unknown Open Transport serial port was referenced.
- 7166: The OT/PPP logical port is not configured.
- 7167: No AppleTalk services endpoints are available.
- 7168: The user canceled the modem script ASK or the Manual Dialing dialog.

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Tech Info Library Article Number:20977



Tech Info Library

AIX: Recovering From an Unknown root Password (2/97)

Revised: 2/17/97
Security: Everyone

AIX: Recovering From an Unknown root Password (2/97)

=====

Article Created: 17 February 1997

TOPIC -----

User entered root password with ergonomics keyboard in install_assist after installing operating system and password is not what user entered on the keyboard. So he does not know what the root password is.

DISCUSSION -----

Switch server key to the maintenance mode with the AIX installation CD and boot into maintenance mode or do a hard reset. Then access the rootvg from the CD and start a shell. You can modify the "/etc/security/passwd" file with vi by removing the encrypted password after the "=", leave the rest of the information in tack and save the file.

The root section of the passwd file should look similar to this:

```
root:
    password =
    lastupdate =
    flags =
```

Before you shutdown the server type:

```
sync; sync; sync
```

and press return.

To restart the server, press the reset button and move the key to the normal mode.

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Tech Info Library Article Number:20978



Tech Info Library

The ForeFront Group, Inc. (2/97)

Revised: 2/17/97
Security: Everyone

The ForeFront Group, Inc. (2/97)

=====

Article Created: 17 February 1997

The ForeFront Group, Inc.

1330 Post Oak Blvd.
Suite 1300
Houston, TX 77056

800-475-5831: Sales

713-961-1101: Corporate

713-961-1101 Customer Support

Company Profile:

ForeFront (NASDAQ: FFGI) develops and markets Internet software that enables individuals and organizations to be more productive with information.

ForeFront's line of desktop productivity and groupware collaboration products includes:

WebSeeker, an advanced search engine unifier WebWhacker, the leading content delivery and offline browsing application WebPrinter, a unique product that turns computer files and Web pages into booklets ClickBook, transforms single-sided documents into professional booklets and brochures GrabNet, an intuitive and graphical bookmarking tool RoundTable, a multimedia, real time Internet and intranet conferencing program.

ForeFront's line of PC and Networking Tools includes:

Rescue Data Recovery, The Troubleshooter, The CNE Self Study Course, The Alert Card, DrivePro, The Discovery Card, LAN Certify, The Micro House Technical Library, PocketPOST, The Anti-Virus Survival Kit, WinSafe, WinFix, and A+.

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Tech Info Library Article Number:20979



Tech Info Library

MacPlay (2/97)

Revised: 2/17/97
Security: Everyone

MacPlay (2/97)

=====

Article Created: 17 February 1997

MacPlay (a division of Interplay)

16815 Von Karman Ave.
Irvine, CA 92606

714-553-6655 Main

714-252-2822 FAX

714-553-6678 Customer Service

800-INTERPLAY Sales

Websites:

Interplay: <http://www.interplay.com/interplay.html>

MacPlay: <http://www.macplay.com/>

MacPlay Tech Support: <http://www.macplay.com/website/buglist2.html>

e-mail:

MacPlay Tech Support e-mail: macplay@interplay.com

Company Profile:

Interplay Productions is a world-wide consumer software publisher and developer, producing entertainment and educational software for IBM, Windows '95TM, Macintosh, and 100% compatible computers as as for SEGA SaturnTM and the Sony PlaystationTM.

MacPlay is a division of Interplay Productions devoted solely to providing state-of-the-art entertainment and educational programs for the Macintosh consumer. Created in 1993, MacPlay is the #1 publisher of Macintosh entertainment software in North America.

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Tech Info Library Article Number:20980



Tech Info Library

LC 580: CD-ROM Disc Not Mounting, Will Boot Off CD (2/97)

Revised: 2/18/97
Security: Everyone

LC 580: CD-ROM Disc Not Mounting, Will Boot Off CD (2/97)

=====

Article Created: 17 January 1997

TOPIC -----

The Macintosh LC 580 will boot off the backup CD-ROM but will not mount CD-ROM discs after restarting. If booting up with the backup CD-ROM, it mounts but will not eject and gives a -50 error.

DISCUSSION -----

The Macintosh LC 580 shipped with two different CD-ROM drives. Here is how this happened, the original LC 580 shipped with a double speed AppleCD 300i plus; later the LC 580 was revised and shipped with a quad spin AppleCD 600i. The faster CD-ROM drive requires a newer version of the AppleCD driver. The backup compact discs shipped with the revised LC 580 computer has this updated driver software.

Users may have many LC 580 computers, some with double speed drives and others with quad speed drives. If this happens the user will have two kinds of backup compact discs. Neither the computer, nor the backup CD-ROM disc indicate on their exteriors what version they are for. The user may have a backup CD-ROM disc and a computer that says LC 580 but the CD-ROM software on the backup disc may not work.

The AppleCD 300i drive's product code is CR-8004x. The AppleCD 600i drive's product code is CR-8005x.

If you have System 7.5.x or PC Exchange, you can use the PC Exchange control panel to determine which version of the CD-ROM drive you have in your computer. Follow the steps below:

Step 1

Open the PC Exchange control panel.

Step 2

Click Options in the lower right corner.

Step 3

If no compact disc is mounted, the drive make and CD-ROM product code will be listed under the Device Name section of the PC Exchange Options Window. As noted above, the AppleCD 300i drive will have a product code of CR-8004x. The AppleCD 600i drive will have a product code of CR-8005x.

A user will be able to boot a computer with a quad speed CD drive with a double speed backup compact disc to install system software, however, this compact discs will not mount once booted off the hard disk. The user needs to use the updated version of the drivers which are on the quad speed backup compact disc, which will install the newer CD-ROM Setup application. The newer version of the driver will NOT be installed if only the System 7.5 installer is run from this newer compact disc. The CD-ROM setup program must be installed as well.

The versions of the backup compact disc can be distinguished by their part numbers. The older, double speed versions of the compact disc are:

Version 1.0.1 part number 691-0462-B

Version 1.1 part number 691-3305-A

The newer, quad speed version of the compact disc is:

Version 1.1 part number 691-0793-A (has CD-ROM Setup v5.1.1)

If the customer cannot find the newer version, then the CD-ROM setup for the 600i can be fulfilled to them via SRF:

690-2961-A Disk CD-ROM Set from SRF 600i AAC-0010660

or sent via AAC Fulfillment:

D225 CD ROM Setup 5.1.1 (800K)

During the startup process, the computer checks all available SCSI volumes, including the CD-ROM drive. If the CD-ROM disc contains the ".AppleCD" driver, it will be loaded and used by the computer to access the CD-ROM drive in lieu of the CD-ROM software that would have loaded off the hard disk. If the CD-ROM disc has the drivers for a double speed drive it will load those drivers even if there is a quad speed drive. The boot process will force the drive to mount the CD-ROM disc even with the wrong version of the driver.

This causes the -50 error, which indicates that the internal parameters being used to eject the compact disc are incorrect. You should be able to eject the CD-ROM disc if you restart the computer again, and press the eject button on the CD-ROM drive before the computer displays "Welcome to Macintosh".

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Tech Info Library

Using Apple Printer Drivers W/Third Party Applications (2/97)

Revised: 2/17/97
Security: Everyone

Using Apple Printer Drivers W/Third Party Applications (2/97)

=====

Article Created: 17 February 1997

TOPIC -----

Why do I have a different Print dialog box when using certain applications such as Adobe Pagemaker? There are print options that I would like to invoke but they don't appear in the dialog box. Is there a way to force my applications to use the Apple version of the printer driver?

DISCUSSION -----

As you have suggested, certain applications use custom printer drivers. These drivers use their own dialogs to set print options. To customize print jobs from applications that use custom printer drivers, consult the accompanying documentation.

For Adobe and many other third party applications, holding down the option key while selecting the Print menu item signals the application to use the Apple version of the printer driver rather than the application's custom printer driver.

Some fax software, such as that from Global Village, recognizes the option key being held down when selecting the Print menu item. In that case, the fax software is invoked rather than the Apple printer driver. Contact the software publisher for information on working around this issue.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:20982



Tech Info Library

PC Compatibility Card: Supporting Desktop Print Spooling (2/97)

Revised: 2/18/97
Security: Everyone

PC Compatibility Card: Supporting Desktop Print Spooling (2/97)

=====

Article Created: 17 February 1997

TOPIC -----

I have a PC Compatibility Card in my Macintosh. I am trying to print a Postscript file to my LaserWriter Select 310 while in the PC environment. The file is successfully spooled to the desktop printer folder on my Macintosh but then I get an error -7057 or an error -7805. What is wrong?

DISCUSSION -----

The -7075 error is "AppleTalk is not active". The error -7085 is "an unknown printer".

Desktop Printing software uses the LaserWriter 8.4 driver to perform the download of the print job to the printer. The LaserWriter 8.4 driver does not support serial printers. There are two solutions.

SOLUTION ONE

=====

You can disable Desktop Printing by disabling the following files:

Desktop Printer Extension
Desktop Printer Spooler
Desktop PrintMonitor

The Extensions Manager can be used to disable these files without removing them from your system, thereby allowing you to re-enable Desktop Printing in the future.

SOLUTION TWO

=====

Use Epson emulation when printing from the PC. The PC Compatibility Card User's Manual contains information on how to set PC Compatibility Card printer options.

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Tech Info Library Article Number:20983



Tech Info Library

Apple QuickTake 200: Extending Battery Life (2/97)

Revised: 2/18/97
Security: Everyone

Apple QuickTake 200: Extending Battery Life (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

Is there any way to extend the life of the batteries in the Apple QuickTake 200 camera?

DISCUSSION -----

Here are several tips for extending the battery life.

- Use lithium batteries. These will give about twice the life of alkaline batteries.
- Use the clip on viewfinder and place the camera in the Battery-saving mode. The Battery-saving mode turns on the LCD screen for 5-8 seconds after you take a picture, allowing you to review the picture before the screen goes back to sleep.
- Use the Auto-Power-Off function. This turns the camera off after it is not used for two minutes.
- When you connect the QuickTake 200 camera to a computer, use the optional AC Adapter.

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Tech Info Library Article Number:20984



Tech Info Library

Apple QuickTake 200: Product Description (2/97)

Revised: 2/18/97
Security: Everyone

Apple QuickTake 200: Product Description (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

This article contains the Apple QuickTake 200 product description.

DISCUSSION -----

Overview
=====

Given its many advanced capabilities, you'll probably be surprised to find that working with the Apple QuickTake 200 is strikingly similar to using your favorite traditional camera. But this sophisticated device offers many more ways of communicating with images.

In fact, this high-performance digital camera provides a wealth of flexible, versatile options for sharing your images with others, such as slide shows, presentations, television viewings, real-time videoconferencing, and even live Internet transmissions. And this advanced digital camera features an extremely compact, lightweight design that makes it easy to take with you virtually anywhere you want to go.

The QuickTake 200 provides an integrated LCD display that enables you to preview each potential picture easily and accurately. It also offers convenient removable storage capabilities and impressive image quality: It comes with a 2MB SmartMedia storage card that can accommodate as many as 20 high-quality images, 30 standard-quality images, or a combination—with clear 640- by 480- pixel resolution and in more than 16 million colors.

But the real fun of taking pictures lies in sharing them with others— an area in which the QuickTake 200 truly shines. Of course, you can always simply view your digital images on a computer screen or include them in documents. Or you can enhance your images on a computer, place the results back into the camera, and conveniently show them to friends and colleagues even when you're on the road. Apple's unique Camera Access software makes advanced capabilities such as these

not only possible, but simple.

Perhaps the most appealing quality of the QuickTake 200 is that it provides a complete solution for an entire range of digital imaging functionality. It even comes with a video cable—so, for example, you can use it to show relatives your latest vacation pictures right on their television screen. And the versatile image-capture capabilities of the QuickTake 200 make it an ideal tool to add images to your Internet web site.

In short, Apple's QuickTake 200 digital camera complements your Mac OS-based computer by offering a wide range of incredibly easy, and enjoyable ways to communicate your ideas visually.

Features

=====

Impressive image quality

- Provides clear 24-bit VGA images at resolutions of up to 640 by 480 pixels in more than 16 million colors
- Includes automatic white-balance feature to ensure the best possible image quality for both indoor and outdoor photography
- Takes advantage of Apple's ColorSync color-matching technology

Vivid, versatile LCD display

- Takes the guesswork out of selecting the precise images you want to capture by providing accurate, real-time preview
- Lets you review up to nine stored images simultaneously, so you can select the ones you want and delete the rest to save space
- Supports a slide-show mode that lets you cycle through images at timed intervals

Convenient, high-capacity storage

- Stores images on included 2MB removable storage card (SmartMedia); additional cards may be purchased separately
- Allows for simple, direct uploading of images from SmartMedia cards into any Mac OS-based computer equipped with PC Card slots, through an optional adapter
- Captures images in JPEG—and allows you to save them in TIFF, PICT, and EXIF formats—to share images with both Mac OS and Windows users

Flexible, simple image-capture options

- Lets you capture images in either of two modes: high quality and standard quality
- Features automatic exposure with a range of capabilities
- Offers three focal ranges—close-up, portrait, and landscape

Multiple image editing and sharing capabilities

- Comes with Apple's Camera Access software for fast, easy image uploading to a computer
- Includes bundled software that lets you easily and flexibly personalize captured images
- Makes it easy to enhance your e-mail memo, print document, computer-based presentation, or Internet web site with digital images captured on your QuickTake 200 using popular software

System Requirements

- A Macintosh computer with a 68040 or later processor, with 16MB of RAM and 24MB of available space on the hard disk drive; or a Power Macintosh computer with 16MB of RAM and 24MB of available space on the hard disk drive
- System software version 7.5 or later
- A CD-ROM drive
- A display that supports thousands or millions of colors is recommended for optimal viewing.

Ordering Information

Apple QuickTake 200 Digital Camera Order No. M5705LL/A

- QuickTake 200 digital camera for Mac OS users
- One QuickTake 2MB SmartMedia Card
- Clip-on optical viewfinder
- Video cable for connecting to standard NTSC television (where available) • Third-party bundled software (Adobe PhotoDeluxe 1.0, Adobe PageMill 2.0, PictureWorks NetCard 1.0)
- QuickTake software (includes Camera Access, QuickTime IC system extension and drivers)
- Serial cable for connecting camera to your Mac OS computer
- Four AA lithium batteries
- Hand strap
- QuickTake 200 User's Guide

Optional QuickTake AC Adapter Order No. M5707LL/A

-
- Lets you power your QuickTake 200 digital camera using AC power

Optional QuickTake 4MB SmartMedia Card Order No. M5708G/A

- Allows you to store as many as 40 high-quality images or 60 standard-quality images

Please check with your local reseller for the availability of other third-party QuickTake 200 accessories.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20985



Tech Info Library

Apple QuickTake 200: Technical Specifications (2/97)

Revised: 2/18/97
Security: Everyone

Apple QuickTake 200: Technical Specifications (2/97)

Article Created: 18 February 1997

TOPIC -----

This article contains the Apple QuickTake 200 technical specifications.

DISCUSSION -----

Technical Specifications
=====

Image Resolution

- 640 by 480 pixels (all images); high-quality and standard-quality modes

Color Resolution

- 24-bit color

Storage

- Space for 20 high-quality images, 30 standard-quality images, or a combination on included 2MB SmartMedia Card (additional cards may be purchased separately)

Electronic Shutter Speeds

- 1/4 to 1/5000 second

Aperture Settings

- f2.2 to f8.0; user-selectable

Focus Capabilities

- Fixed focus

Focus Range

- Focus-free lens (38mm equivalent) with three focal ranges:
 - Close-up: 3.5 to 5 inches (9 cm to 13 cm)
 - Portrait: 17 to 35 inches (45 cm to 90 cm)
 - Standard: ~3 feet to infinity (0.9 m to infinity)

LCD Viewing Panel

- 1.8-inch panel on back side; provides live preview-ing at 30 frames per second; frame-by-frame play-back mode (3-, 5-, or 10-second intervals; review of up to nine images)

Power

- Runs on four AA lithium batteries
- Power-saving mode turns off the LCD to extend battery life
- Includes connector for optional AC adapter

Connectivity

- Built-in serial interface with appropriate cable for connection to Mac OS-based computers
- NTSC video output and video cable

Image Viewing/sharing Options

- Direct connection to any Mac OS-based computer
- Video connection to any standard television (NTSC) or VCR
- 9-up image display
- Auto-presentation mode

File Formats

- PICT, JPEG, TIFF, EXIF

Other Features

- 10 second self-timer
- Tripod mount

Software

- QuickTake Camera Access software
- PhotoShop Acquire Compatible Plug-in

Third-party Bundled Software

- Adobe PhotoDeluxe 1.0, to enhance images
- Adobe PageMill 2.0, to create web pages with images
- PictureWorks NetCard 1.0, to create Internet "picture postcards"

Size and Weight

=====

- Height: 3.0 in. (7.6 cm)
- Width: 5.1 in. (13.0 cm)
- Depth: 1.9 in. (4.8 cm)
- Weight: 8.5 oz. (241 g)

System Requirements

=====

- A Macintosh computer with a 68040 or later processor, with 16MB of RAM and 24MB of available space on the hard disk drive; or a Power Macintosh computer with 16MB of RAM and 24MB of available space on the hard disk drive
- System software version 7.5 or later
- A CD-ROM drive
- A display that supports thousands or millions of colors is recommended for optimal viewing.

Ordering Information

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Apple QuickTake 200 Digital Camera Order No. M5705LL/A

- QuickTake 200 digital camera for Mac OS users
 - One QuickTake 2MB SmartMedia Card
 - Clip-on optical viewfinder
 - Video cable for connecting to standard NTSC television (where available) •
- Third-party bundled software (Adobe PhotoDeluxe 1.0, Adobe PageMill 2.0, PictureWorks NetCard 1.0)
- QuickTake software (includes Camera Access, QuickTime IC system extension and drivers)
 - Serial cable for connecting camera to your Mac OS computer
 - Four AA lithium batteries
 - Hand strap
 - QuickTake 200 User's Guide

Optional QuickTake AC Adapter Order No. M5707LL/A

- Lets you power your QuickTake 200 digital camera using AC power

Optional QuickTake 4MB SmartMedia Card Order No. M5708G/A

- Allows you to store as many as 40 high-quality images or 60 standard-quality images

Please check with your local reseller for the availability of other third-party QuickTake 200 accessories.

..TIL20986-Apple_QuickTake_200-Technical_Specifications_2-97.pdf

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:20986



Tech Info Library

QuickTake 200: Difficulty Downloading Pictures to Camera (2/97)

Revised: 2/18/97
Security: Everyone

QuickTake 200: Difficulty Downloading Pictures to Camera (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

I am trying to download pictures from my QuickTake 200 to my computer, but the software states it cannot find the camera. Why?

DISCUSSION -----

You need to check the following items.

- Make sure the QuickTake 200 is set to the Computer mode on the mode dial.
- Make sure Apple QuickTake 200 extension is installed in the Extensions folder, located inside your System folder.

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Tech Info Library Article Number:20987



Tech Info Library

Apple Media Tool 2.0: Creating an Automated Slide Show (2/97)

Revised: 2/18/97
Security: Everyone

Apple Media Tool 2.0: Creating an Automated Slide Show (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

I am trying to create a project in AMT 2.0 that acts like an automated slide show. I want it to go from one screen to next every 30 seconds with no user interaction. How can I do this?

DISCUSSION -----

In Apple Media Tool 2.0 you can achieve this by creating on each screen an object with a certain duration. For example, you might use your bg pict file and give it a duration of 30 seconds.

On screen 1, set an "after display" event, with command to "start" the object with the duration.

Set a "finished" event for that object, with a link command to bring you to the next screen.

Each screen should have an object with a duration, some event to start the object, and another "Finished" event that will link to the new screen.

In Apple Media Tool 2.1, a new feature called Timer Object with an On Time event can be used for the same purpose. See the Apple Media Tool 2.1 addendum for instructions on using this new feature.

This article appeared in the 18 February 1997 issue of the Information Alley.

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Tech Info Library Article Number:20988



Tech Info Library

Network Assistant & Copying Invisible Files (2/97)

Revised: 2/18/97
Security: Everyone

Network Assistant & Copying Invisible Files (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

This article describes which invisible files Network Assistant can be copied from a hard disk.

DISCUSSION -----

Network Assistant, part of the Apple Network Administrator Toolkit (ANAT), will not copy invisible files at the root (first) level of the hard disk. This includes the desktop folder, trash, temporary items folder, and others.

Network Assistant can copy invisible files that are not at the root level of the hard disk.

This article was published in the 18 February 1997 "Information Alley."

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Tech Info Library Article Number:20990



Tech Info Library

Apple MessagePad 2000: Technical Specifications (2/97)

Revised: 2/18/97
Security: Everyone

Apple MessagePad 2000: Technical Specifications (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

This article contains the Apple MessagePad 2000 technical specifications.

DISCUSSION -----

Technical Specifications
=====

Newton Intelligence
Newton Recognition Architecture

- * Recognizes handwriting-printed, cursive, or a mixture of the two-with the assistance of a 93,000-word, built-in word list
- * Lets you add words to the built-in word list
- * Includes four pop-up keyboards: typewriter, numeric, phone, and time/date
- * Recognizes graphics and symmetrical objects

Newton Communications Architecture

- * Provides built-in support for serial communications, external keyboard, PC Card modems, sending and receiving faxes, and e-mail
- * Provides a single interface for modular, object-oriented communications services
- * Supports new communications capabilities through its modular design
- * Supports Group 3 and Class II fax machines

Intelligent Assistance Architecture

- * Helps users complete repetitive tasks including communications, scheduling, finding, and reminding
- * Contains smart defaults that anticipate your needs, saving you time in entering data
- * Integrates data from different built-in applications
- * Supports third-party extensions

Newton Hardware Architecture

- * StrongARM 110 RISC processor at 161.9 MHz
- * Apple custom system chip set
- * 5MB RAM (1MB of DRAM, 4MB of Flash RAM)
- * 8MB of mask ROM
- * Low-power, transfective 4.9 in. by 3.3 in. (129.8 mm by 83.2 mm) LCD display with EL backlight (480 by 320 pixels at 100 dpi, with 16-level grayscale)
- * Nonglare resistive tablet and pen
- * Two Type II PC Card slots
- * Newton InterConnect external port supporting:
 - Serial RS-422-compatible serial connections or LocalTalk
 - Serial modem interface
 - Power in and out
 - Audio in and out (line level)
 - Autodock support
- * One internal serial slot supporting:
 - Serial RS-422-compatible serial connections or LocalTalk
 - Serial modem interface
 - Serial keyboard (option)
 - Power in and out
 - Audio in and out (line level)
- * Dual-mode infrared transceiver for wireless data transfer at up to 115 Kbits/s (IrDA mode) and 38.4 Kbits/s (ASK mode) within 3.28 ft. (1 m)
- * Keyboard (included with some configurations)
- * Built-in speaker
- * Built-in microphone
- * Fast charge for optional Newton Rechargeable Battery Pack that charges in 1 hour when not operating
- * Optional external Newton 9W Power Adapter for unit operation or fast charging of Newton Rechargeable Battery Pack
- * Protective removable screen lid
- * Integral pen storage

Communications capabilities

- * Communicates via e-mail or taps into online services and the Internet or an

intranet with an optional wired or wireless modem card and included software

- * Faxes using optional fax modem (automatic cover-page generation, post-formatting)
- * Supports a variety of serial, parallel, IrDA, and network printers
- * Receives and stores wireless messages and pages using optional messaging cards
- * Beams notes, name cards, appointments, and packages using high-speed infrared technology
- * Automatically dials phone calls with assistance from intelligent auto-dialing (DTMF or modem dialing)*
- * Connects to cellular or GSM phones for wireless data and fax communications with optional PC Modem Card

Size and weight

=====

- * Height: 1.1 in. (27.5 mm)
- * Width: 4.7 in. (118.7 mm)
- * Depth: 8.3 in. (210.3 mm)
- * Weight: 1.4 lb. (0.64 kg) with alkaline batteries

Operating environment

=====

- * Temperature: 32° to 104° F (0° to 40° C)
- * Storage temperature: -4° to 117° F (-20° to 60° C)
- * Transit temperature: -4° to 149° F (-20° to 70° C) for up to 72 hours
- * Relative humidity: 5% to 95% noncondensing

Power requirements

=====

- * Power adapter
 - Universal, 100 to 240 V AC, 50/60 Hz
 - Four adapter plug configurations:
 - U.S., U.K., Europe, and Australia
- * Newton 9W Power Adapter (optional) uses 9W batteries
- * Battery type: AA (LR6) alkaline or NiMH battery pack
- * Built-in fast charger for optional NiMH battery pack
- * Power sources: four AA alkaline batteries (included), optional Power Adapter, or optional NiMH Rechargeable battery pack

Computer connectivity requirements

=====

- * Works with PC-compatible computers with 80386DX or later processors (80486 recommended) running Windows 3.1 or later

* Works with Mac OS-based computers with 68030 or later processors and system software version 7.1 or later

Printer support

=====

* Offers built-in printer support for Apple LaserWriter Plus (and other PostScript-equipped LaserWriter printers), Personal LaserWriter LS, and Personal LaserWriter 300, as well as StyleWriter printers and Hewlett-Packard DeskWriter printers

* Works with the Hewlett-Packard LaserJet 5MP and DeskJet 340 through IrDA

* Works with most popular PC printers including the Hewlett-Packard LaserJet II and DeskJet 500; Canon BubbleJet 10e; and Epson LQ, Action, and FX printers using the optional Newton Print Pack

Fax machine support

=====

* Supports Group 3 and Class II fax machines

Accessories

=====

* The MessagePad 2000 with Newton 2.1 operating system is compatible with most accessories available for the MessagePad 130 with Newton 2.0 operating system. Please see the MessagePad Accessories data sheet for detailed information.

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Tech Info Library Article Number:20991



Tech Info Library

Apple eMate 300: Product Description (2/97)

Revised: 2/18/97
Security: Everyone

Apple eMate 300: Product Description (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

This article contains the product description for the Apple eMate 300.

DISCUSSION -----

General Information

=====

Designed for Education By Educators

The Apple eMate 300 is the first of a new class of affordable mobile computer that works as a companion to Mac OS- and Windows software-based computers in a Distributed Learning Environment (see back page). Developed in collaboration with educators to meet the specific needs of education, the eMate 300's unique industrial design is rugged enough to withstand the rigors of being carried, shared, and used in a variety of environments. The eMate 300 is easily portable for even the youngest students-it weighs only 4 pounds and is small enough to fit in a backpack. And it lets users enter data by keyboard, or with a stylus, so students can work the way that's best for them.

The eMate 300 features the powerful and easy-to-use Newton operating system. It comes with built-in software applications that are important for learning-including word processing, drawing, spreadsheet, a graphing calculator, address book, calendar functions, and more. In addition, the eMate 300 can take advantage of hundreds of applications that have been developed for Newton 2.0, as well as applications designed specifically for education.

Gives More Students Access to the Technology They Need

While there are more computers in the classroom today than ever before, there are still not enough to go around. At an affordable price and with personalized workspace for multiple students, the eMate 300 makes technology accessible to a greater number of students than is possible with desktop computers.

Allows Students to Learn Wherever Learning Takes Them

The versatile functionality of the eMate 300 lets students do the majority of their critical learning wherever it's most appropriate-in the classroom, in libraries, in a lab, outdoors, or at home. With its incredibly long battery life and backlit screen that displays the width of a full written page, the eMate 300 makes it possible for students to work wherever they want, for as long as they want.

Easy Communication and Networking

Robust communications capabilities make the eMate 300 an especially useful tool in a Distributed Learning Environment. Students can share data and files they create on the eMate 300, with both Mac OS-and Windows software-based computers.* By doing preliminary work on the eMate 300 and then enhancing it on a desktop computer, students can use the eMate 300 as a perfect companion to the computers that already exist in the classroom or at home. The serial port, Newton InterConnect Port, and PC Card slot makes it easy to print, share, and backup any work done on the eMate 300. TCP/IP capabilities-the protocol of the Internet-give students access to materials on the World Wide Web, and lets them send and receive e-mail so they can conduct research and keep on top of lessons. And with built-in infrared technology, the eMate 300 lets educators and students "beam" their work to one another for quick, easy file sharing.

* note: cables not included.

What is a Distributed Learning Environment?

A Distributed Learning Environment provides learning for anyone, anytime, anywhere. It extends the reach of learning from the classroom to the library, lab, home, local communities, and the world. In the best Distributed Learning Environments, educators and students are able to take full advantage of a range of technology to make the extended learning environment more meaningful, effective, and engaging.

Four Elements for Successful Learning

Apple's support of the Distributed Learning Environment concept is based on its commitment to four critical elements of successful learning experiences:

- Information access.
Students and teachers need convenient access to information no matter where it resides.
- Communication and collaboration.
Students and teachers need to be able to communicate and collaborate with other students, colleagues, and experts, anytime, anywhere.
- Multisensory experiences.
Students and teachers need multimedia tools for understanding and expression, in addition to traditional educational methods, to help them communicate ideas in the way that is most appropriate to the task and compatible with diverse learning styles.

- Convenient, mobile tools.

Students and teachers need personal learning materials (pencils, books, calculators, etc.) that are convenient, creative, and mobile support tools.

Building on schools' investments

As learning extends from the classroom to the home, local community, and the world, students and educators require a range of technology tools. Many schools already have some of the core technology components of a Distributed Learning Environment.

- Desktop computers-either Mac OS- or Windows software-based. This includes multimedia computers that are dedicated to letting students experience powerful, creative, multi-sensory learning by integrating text, video, sound, and graphics in their work.
- Peripheral products-such as printers, scanners, and digital cameras.
- Networks-which could range from a simple connection to a printer, to a local network of personal computers, to a connection to a server.
- Affordable, mobile computer technologies-that function as a personal companion to existing desktop technologies in the classroom, school, and home.

Until now, few schools have had all of the core components of a Distributed Learning Environ-ment because low-cost, mobile technologies were not available. Now, the missing technology link in supporting the learning process is found in the Apple eMate 300-the first in a new class of truly affordable, mobile computers that act as companions and extensions to schools' existing desktop computers.

Giving more students access to the technology they need

The Apple eMate 300 fulfills the vision of a Distributed Learning Environment. It is an affordable mobile computer that lets teachers create a learning environment in which students have the appropriate tools to gather data, access the information they need, express their thoughts, communicate with one another, and collaborate on solving problems. Designed in collaboration with leading educators all across the country, the eMate 300 is the perfect companion to existing technology in the classroom, school, or home, with capabilities that make it an excellent tool of discovery and productivity. It is lightweight and rugged, and comes with built-in applica-tions and communications capabilities that let students work anyplace, anytime. What's more, it's available at a price that makes it possible to provide more students than ever access to the technology they need to get their work done and acquire skills that prepare them for lifelong success.

Key Features:

The Apple eMate 300

=====

Built-in applications:

- Word processor, drawing program, spreadsheet, graphing calculator, address book, calendar functions and more

Power and speed:

- 25-MHz ARM 710a RISC processor
- High-speed infrared (IrDA) port for transferring data wirelessly at up to 115 kilobits per second within 3.3 feet (1 meter)

Memory and storage:

- 3MB of RAM (1MB of DRAM and 2MB of flash memory); 8MB of ROM

Display:

- 480- by 320-pixel gray-scale LCD with back-lighting; displays up to 16 shades of gray

Sound:

- Built-in speaker and sound input/output ports

Expansion:

- PC Card slot for Type I, Type II, or Type III PC Cards (PCMCIA)
- Slots for upgrading software, operating system, and memory
- Serial port for connecting to printers and AppleTalk networks
- Newton InterConnect serial port for LocalTalk and RS-232-compatible serial connections, modem, power input/output, sound input/output, and automatic docking to personal computers*

* note: cables not included.

Size, weight and battery:

- Dimensions: 12.0 by 11.4 by 2.1 inches (305 by 290 by 53 millimeters)
- Weight: 4 pounds (1.8 kilograms)
- Battery: Up to 28 hours of continuous use without recharging, depending on usage

Printer support:

- Works with the following Apple printers: Personal LaserWriter LS, Personal LaserWriter 300, and StyleWriter printers; PostScript-equipped LaserWriter printers
- Works with most popular PC printers using the optional Newton Print Pack.

Information about Apple Education products and services can also be found on the Internet at <http://education.apple.com/>

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Tech Info Library Article Number:20992



Tech Info Library

Apple MessagePad 2000: Product Description (2/97)

Revised: 2/18/97
Security: Everyone

Apple MessagePad 2000: Product Description (2/97)

=====

Article Created: 18 February 1997

TOPIC -----

This article contains the Apple MessagePad 2000 product description.

DISCUSSION -----

MessagePad 2000 with Newton 2.1 Operating System

Description

=====

Now, with the Apple MessagePad 2000 handheld computer, you don't have to lug a heavy laptop around anymore. That's because this small wonder weighs under a pound and a half, yet puts all the business applications you need—word processor, spreadsheet, datebook, contacts, and to-do lists—at your fingertips.

Slip a modem into one of its two PC Card slots, and you can send and receive e-mail and faxes, and connect to the Internet or an intranet. You can even pair the MessagePad 2000 with your cellular phone or wireless modem, and connect from virtually anywhere.

In terms of speed, the new StrongARM processor in the MessagePad 2000 allows it to run up to 10 times faster than any previous model. It also includes more memory. The backlit screen—larger than that of any other MessagePad—displays sharp graphics in 16 levels of gray at 100 dots per inch. And the internal microphone and speaker allow you to record and playback voice notes.

The MessagePad 2000 includes all the cables and software you need to connect to your Mac OS- or Windows software-based computer. It lets you import and export data for use with most popular personal computer software programs, and make backups.

But probably the best news for busy professionals on the move is that the MessagePad 2000 can deliver over 24 hours of continuous battery life. So no

matter where or how you're traveling, the MessagePad 2000 is the smart choice for staying connected, and for putting critical information at your fingertips when you need it.

Features

=====

Built-in organization functions

- * Includes business software programs: word processor, e-mail, World Wide Web browser, and spreadsheet
- * Allows freeform notes, outlines, lists, and phone logs
- * Helps you plan activities using the calendar, and manage priorities using the To Do List
- * Includes customizable name and address files
- * Offers productivity tools such as time-zone maps, a calculator, and currency exchange

Built-in communications

- * Includes Internet access through TCP/IP, PPP, SLIP, PAP, and CHAP protocols, and a World Wide Web browser
- * Imports and exports data, installs software, and backs up files with your personal computer using the included Newton Connection Utilities
- * Can send and receive faxes and electronic mail using an optional wired or wireless modem
- * Prints formatted letters and notes using Apple printers, IrDA printers, and serial or parallel printers with the optional Print Pack
- * Lets you beam notes, messages, packages, schedules, and business cards via built-in infrared communications
- * Assists you in making phone calls, finding information, and sending and receiving e-mail and faxes

Expandable Functions

=====

- * Contains two slots for PC Card peripherals such as modems, pagers, wireless communicators, and storage cards
- * Includes a serial port for connecting to personal computers, printers, the Newton Keyboard, or external modems

* Supports a variety of third-party productivity, finance, time and billing, and information management software

Accessories

=====

* The MessagePad 2000 with Newton 2.1 operating system is compatible with most accessories available for the MessagePad 130 with Newton 2.0 operating system. Please see the MessagePad Accessories data sheet for detailed information.

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Tech Info Library Article Number:20993



Tech Info Library

AIX 4.x: Sending Mail to Hosts You Cannot Ping (2/97)

Revised: 2/19/97
Security: Everyone

AIX 4.x: Sending Mail to Hosts You Cannot Ping (2/97)

=====

Article Created: 19 February 1997

TOPIC -----

With my Apple Network Server running AIX 4.x, I am unable to send mail to hosts that I cannot ping. Is there a way to do this?

DISCUSSION -----

With AIX 4.x, by default you are not able to send mail to hosts you cannot ping on the Internet. To enable sendmail, to forward mail to hosts that cannot be pinged, you will need to uncomment the "OK MX" statement in your "/etc/sendmail.cf" file. In other words, remove the # symbol before the "OK MX" statement. Below is an example showing what that section of the sendmail.cf file should look like.

```
# You may use any combination of these, although it is recommended that
# you specify MB if MR is specified. For example, "OK MG MX" would enable
# the use of Mail Group and Mail Exchanger resource records.
#
# The default is not to use a name server for resolving recipients.
#
OK MX
```

```
# Name of the codeset for Japanese network.
# Sendmail will convert mail from/to the codeset of a locale to/from
# the codeset of the network specified with this option.
# Note: The OObcodeset option must also be set when using the Obcodeset
# option.
# Obcodeset
```

This is the only modification you need to make. For this change to take effect, you need to rebuild the sendmail configuration database and refresh the sendmail subsystem. The commands below are an example of how to do this:

```
/usr/sbin/sendmail -bz  
refresh -s sendmail
```

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Tech Info Library Article Number:20995



Tech Info Library

Open Transport Client & DHCP Update (3/97)

Revised: 3/10/97
Security: Everyone

Open Transport Client & DHCP Update (3/97)

Article Created: 19 February 1997

TOPIC -----

How can we force Open Transport clients to re-acquire their DHCP (Dynamic Host Configuration Protocol) configuration? We want to be assured that when a change is made on the DHCP server that the change is propagated to the client in a timely fashion. Windows 95 includes the ability to cancel and re-acquire DHCP leases in its WINIPCFG utility and we would like something similar for Macintosh computers.

DISCUSSION -----

Open Transport clients release their DHCP address lease whenever the TCP/IP stack becomes inactive. This can be accomplished by:

- Restarting the Macintosh
- Select "Make TCP/IP Inactive" in TCP/IP Options of the TCP/IP control panel. You must save the changes after closing the TCP/IP control panel and wait two minutes for the timers to release the current TCP/IP sessions. Then select "Make TCP/IP Active" in the TCP/IP Options of the TCP/IP control panel. Once again save the changes after closing the TCP/IP control panel.

NOTE: User Mode in the TCP/IP control panel must be Advanced or Administrative. TCP/IP Options button is not available in Basic mode.

When the TCP/IP stack becomes active again, it contacts the DHCP server for configuration information and will acquire any changes made at the server.

This article was published in the 19 February 1997 "Information Alley."

Article Change History:

10 Mar 1997 - Made minor typographical correction.

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Tech Info Library Article Number:20996



Tech Info Library

AIX: Backspace Does Not Work in Command Shell Utility (2/97)

Revised: 2/19/97
Security: Everyone

AIX: Backspace Does Not Work in Command Shell Utility (2/97)

=====

Article Created: 19 February 1997

TOPIC -----

The command shell utility supplied with the AIX on the Apple Network Server does not let the user use the back space key.

DISCUSSION -----

The easiest solution is after the user has a command shell login, type:

```
set -o emacs
```

This will correct backspace key mapping.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:20997



Tech Info Library

Desktop Patterns: Pattern Settings Stored In System File (2/97)

Revised: 2/20/97
Security: Everyone

Desktop Patterns: Pattern Settings Stored In System File (2/97)

=====

Article Created: 20 February 1997

TOPIC -----

Where are the desktop and utility pattern settings configured by the Desktop Patterns application stored? I've tried copying the Desktop Pattern Prefs file from the Preferences folder from one computer in my lab to another, but on startup none of them assume the desktop pattern of the original computer.

DISCUSSION -----

The collection of patterns from which you may choose is stored in the Desktop Pattern Prefs file. You can transport one collection of patterns between computers by moving this file alone.

The desktop and utility pattern choices you make with the Desktop Pattern application are written directly to the 'ppat' resource of the System suitcase. These pattern choices can be altered with the Desktop Patterns application; an AppleScript, QuicKeys, or Frontier script designed to perform the same function; or by using a resource editor like ResEdit and modifying the 'ppat' system resource.

The Desktop Patterns application is a component of System 7.5 and later and is located in the Control Panels folder.

WARNING:

This article refers to using ResEdit to alter your system software. Apple Computer, Inc., is not liable for any damage done to your software through the use of ResEdit to alter the software. The Apple Assistance Center phone representatives (at 800-SOS-APPL) do not provide technical support for ResEdit. It is supported by APDA. For contact information on APDA, search the Tech Info Library under "APDA".

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Tech Info Library Article Number:20999



Tech Info Library

PowerBook 3400 Series: Questions & Answers (2/97)

Revised: 2/24/97
Security: Everyone

PowerBook 3400 Series: Questions & Answers (2/97)

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Article Created: 20 February 1997

TOPIC -----

This article contains the following frequently asked questions (FAQ) about the PowerBook 3400 series computers and answers to those questions.

- 1) Can the PowerBook 3400 Series CD install Mac OS 7.6 onto my desktop Power Macintosh computers?
- 2) Can I install Mac OS 7.6 (the general release) onto my PowerBook 3400 series computer?
- 3) Question: When I "Get Info" from the File menu on the System File in my PowerBook 3400 computer's System Folder it says it is version 7.5.3. Is this a mistake? I thought it was supposed to be running Mac OS 7.6.
- 4) Will I be able to install newer Macintosh system software versions and/or Mac OS updates onto my PowerBook 3400 series computer?
- 5) Question: Why do I get a dialog box when I restart my machine stating that, "QuickTime MPEG Extension did not load. It requires the Thread Manager extension or ThreadsLib extension (version 2.1.5 or later)"?
- 6) Why does my PowerBook 3400 series computer sometimes freeze/hang when I cancel a software installation?
- 7) Why can I not print some of the user manuals (.pdf files) any more? They used to print with no trouble.
- 8) Why does the sound from the right speaker of my PowerBook 3400 computer sound louder than the sound from the left speaker when I'm using the built-in modem that came with the computer?
- 9) Why can I not use the Speed access part of Speed Doubler version 2.x with System 7.6?

DISCUSSION -----

1) Question: Can the PowerBook 3400 Series CD install Mac OS 7.6 onto my desktop Power Macintosh computers?

Answer: No, the PowerBook 3400 series CD is specifically intended for use the PowerBook 3400 series of computers only. Although some past model-specific CDs have allowed installation on other computers, the PowerBook 3400 Series CD installer is set up to install only onto PowerBook 3400 series computers.

2) Question: Can I install Mac OS 7.6 (the general release) onto my PowerBook 3400 series computer?

Answer: No, the PowerBook 3400 series computers require additional software that is available only from the version of Mac OS 7.6 that shipped with these computers. The General Release of Mac OS 7.6 does not contain this *software*.

Note: The PowerBook 3400 Enabler among several other files is not included in the general release version of Mac OS 7.6 and the PowerBook cannot operate properly without this file.

3) Question: When I "Get Info" from the File menu on the System File in my PowerBook 3400 computer's System Folder it says it is version 7.5.3. Is this a mistake? I thought it was supposed to be running Mac OS 7.6.

Answer: The version number in the Get Info window is correct. The PowerBook 3400 series computers are running a version of Mac OS 7.6 that was created especially for the PowerBook 3400 series computers. Although the "packaging" is a little different, the operating system itself is the same with some specific files added for this computer.

For the technically inclined: The same code is being executed at run time, but on the PowerBook 3400 series computers, the newer system code runs from the PowerBook 3400 Enabler file rather than from the System File.

4) Question: Will I be able to install newer Macintosh system software versions and/or Mac OS updates onto my PowerBook 3400 series computer?

Answer: Yes, when Apple releases an update to the system software, you should be able to install it on your PowerBook 3400 series computer.

5) Question: Why do I get a dialog box when I restart my machine stating that, "QuickTime MPEG Extension did not load. It requires the Thread Manager extension or ThreadsLib extension (version 2.1.5 or later)"?

Answer: It is possible that you have removed or altered the pre-installed System

folder that was installed on your PowerBook 3400 series computer. If you have installed just the system software required (Mac OS 7.6 for PowerBook 3400 series), the Thread Manager extension is deleted because the functionality was rolled into the system file. Unfortunately, a newer version of the Thread Manger extension is needed by the QuickTime MPEG software. To remedy the situation, reinstall the QuickTime MPEG software. The QuickTime MPEG installer is available on the PowerBook 3400 Series CD in the Apple Extras folder.

6) Question: Why does my PowerBook 3400 series computer sometimes freeze/hang when I cancel a software installation?

Answer: It is possible that this freeze could be caused by having an old version of the ObjectSupportLib file installed. There are some third party applications that install an older version of ObjectSupportLib file in to the Extensions Folder. The older versions can cause the computer to hang when the Finder is restarted. This is a general system software issue, not one specific to the PowerBook 3400 series computers. The correct version that you need is ObjectSupportLib version 1.1.8. This version is installed by the PowerBook 3400 System Software Installer.

7) Question: Why can I not print some of the user manuals (.pdf files) any more? They used to print with no trouble.

Answer: The pre-installed software bundle on the PowerBook 3400 series computers is set up so that you can print and view Adobe Acrobat files. If you choose to erase the bundle and install just the system software, you have to install Adobe Acrobat Reader as well in order to view and print the .pdf manual files. The Adobe Acrobat Reader installer is located in the Install Applications folder on the CD.

8) Question: Why does the sound from the right speaker of my PowerBook 3400 computer sound louder than the sound from the left speaker when I'm using the built-in modem that came with the computer?

Answer: When the modem portion of the internal dual Ethernet/33.6 modem card is in use (online) or is waiting for a fax call it will attenuate (decrease the output to) the left channel sound level by 50 percent. This happens because the modem only drives the left channel and it is connected to the sound circuitry when the modem software is active. The balance control in the Monitors & Sound control panel may be used to restore the sound balance if desired during modem use.

9) Question: Why can I not use the Speed access part of Speed Doubler version 2.x with System 7.6?

Answer:

****IMPORTANT NOTE:**** This information comes from a Connectix press release, the makers of Speed Doubler.

There is a problem which is usually triggered by using the Find function within the Mac OS Finder. Usually, the result is that the display within the Find results dialog box is missing the found information. Sometimes, after using Find, if you move, delete, or create new files. This problem can result in disk directory corruption.

Because of the potential seriousness of this issue, Connectix recommends that all customers using Mac OS 7.6 with Speed Doubler 2.0 do one of the following things:

- 1) Update to Speed Doubler version 2.0.1 - download from the web at:
<http://www.connectix.com/connect/update.html>

-OR-

- 2) Turn off "Faster Disk Performance" in the Speed Doubler 2.0 Control Panel.

If you are using Speed Doubler version 1.x and Mac OS 7.6, you should remove your Speed Access extension entirely.

This article was published in the Information Alley on 20 February 1997.

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Tech Info Library Article Number:21000



Tech Info Library

PowerBook 3400 Series: Questions & Answers (4/97)

Revised: 4/21/97
Security: Everyone

PowerBook 3400 Series: Questions & Answers (4/97)

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Article Created: 20 February 1997
Article Reviewed/Updated: 11 April 1997

TOPIC -----

This article contains the following frequently asked questions (FAQ) about the PowerBook 3400 series computers and answers to those questions.

- 1) Can the PowerBook 3400 Series CD install Mac OS 7.6 onto my desktop Power Macintosh computers?
- 2) Can I install Mac OS 7.6 (the general release) onto my PowerBook 3400 series computer?
- 3) Question: When I "Get Info" from the File menu on the System File in my PowerBook 3400 computer's System Folder it says it is version 7.5.3. Is this a mistake? I thought it was supposed to be running Mac OS 7.6.
- 4) Will I be able to install newer Macintosh system software versions and/or Mac OS updates onto my PowerBook 3400 series computer?
- 5) Question: Why do I get a dialog box when I restart my machine stating that, "QuickTime MPEG Extension did not load. It requires the Thread Manager extension or ThreadsLib extension (version 2.1.5 or later)"?
- 6) Why can I not print some of the user manuals (.pdf files) any more? They used to print with no trouble.
- 7) Why does the sound from the right speaker of my PowerBook 3400 computer sound louder than the sound from the left speaker when I'm using the built-in modem that came with the computer?
- 8) Why can I not use the Speed access part of Speed Doubler version 2.x with System 7.6?
- 9) Can I add RAM to a PowerBook 3400 computer the same way it is added in a

PowerBook 1400 - stacked on top of each other? Can I use RAM made for a PowerBook 5300 in a PowerBook 3400?

DISCUSSION -----

1) Question: Can the PowerBook 3400 Series CD install Mac OS 7.6 onto my desktop Power Macintosh computers?

Answer: No, the PowerBook 3400 series CD is specifically intended for use the PowerBook 3400 series of computers only. Although some past model-specific CDs have allowed installation on other computers, the PowerBook 3400 Series CD installer is set up to install only onto PowerBook 3400 series computers.

2) Question: Can I install Mac OS 7.6 (the general release) onto my PowerBook 3400 series computer?

Answer: No, the PowerBook 3400 series computers require additional software that is available only from the version of Mac OS 7.6 that shipped with these computers. The General Release of Mac OS 7.6 does not contain this *software*.

Note: The PowerBook 3400 Enabler among several other files is not included in the general release version of Mac OS 7.6 and the PowerBook cannot operate properly without this file.

3) Question: When I "Get Info" from the File menu on the System File in my PowerBook 3400 computer's System Folder it says it is version 7.5.3. Is this a mistake? I thought it was supposed to be running Mac OS 7.6.

Answer: The version number in the Get Info window is correct. The PowerBook 3400 series computers are running a version of Mac OS 7.6 that was created especially for the PowerBook 3400 series computers. Although the "packaging" is a little different, the operating system itself is the same with some specific files added for this computer.

For the technically inclined: The same code is being executed at run time, but on the PowerBook 3400 series computers, the newer system code runs from the PowerBook 3400 Enabler file rather than from the System File.

4) Question: Will I be able to install newer Macintosh system software versions and/or Mac OS updates onto my PowerBook 3400 series computer?

Answer: Yes, when Apple releases an update to the system software, you should be able to install it on your PowerBook 3400 series computer.

5) Question: Why do I get a dialog box when I restart my machine stating that, "QuickTime MPEG Extension did not load. It requires the Thread Manager extension or ThreadsLib extension (version 2.1.5 or later)"?

Answer: It is possible that you have removed or altered the pre-installed System folder that was installed on your PowerBook 3400 series computer. If you have installed just the system software required (Mac OS 7.6 for PowerBook 3400 series), the Thread Manager extension is deleted because the functionality was rolled into the system file. Unfortunately, a newer version of the Thread Manger extension is needed by the QuickTime MPEG software. To remedy the situation, reinstall the QuickTime MPEG software. The QuickTime MPEG installer is available on the PowerBook 3400 Series CD in the Apple Extras folder.

6) Question: Why can I not print some of the user manuals (.pdf files) any more? They used to print with no trouble.

Answer: The pre-installed software bundle on the PowerBook 3400 series computers is set up so that you can print and view Adobe Acrobat files. If you choose to erase the bundle and install just the system software, you have to install Adobe Acrobat Reader as well in order to view and print the .pdf manual files. The Adobe Acrobat Reader installer is located in the Install Applications folder on the CD.

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Answer: When the modem portion of the internal dual Ethernet/33.6 modem card is in use (online) or is waiting for a fax call it will attenuate (decrease the output to) the left channel sound level by 50 percent. This happens because the modem only drives the left channel and it is connected to the sound circuitry when the modem software is active. The balance control in the Monitors & Sound control panel may be used to restore the sound balance if desired during modem use.

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- 1) Update to Speed Doubler version 2.0.1 - download from the web at:

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-OR-

- 2) Turn off "Faster Disk Performance" in the Speed Doubler 2.0 Control Panel.

If you are using Speed Doubler version 1.x and Mac OS 7.6, you should remove your Speed Access extension entirely.

9) Question: Can I add RAM to a PowerBook 3400 computer the same way it is added in a PowerBook 1400 - stacked on top of each other? Can I use RAM made for a PowerBook 5300 in a PowerBook 3400?

The PowerBook 3400 does NOT support "piggy-back" RAM cards like those that can be used in a PowerBook 1400. All PowerBook 3400 configurations ship with 16 MB soldered on the logic board and one open memory slot for expansion. A single card of up to 128 MB in size can be put in the slot for a total of up to 144 MB of RAM.

RAM cards designed for a PowerBook 5300 are not compatible with the PowerBook 3400. The connector for the RAM expansion card on a PowerBook 3400 logic board is rotated 180 degrees from that of the PowerBook 5300.

This article was published in the Information Alley on 20 February 1997.

Article Change History:

11 Apr 1997 - Edited for technical accuracy.
03 Mar 1997 - Added info about RAM.
26 Feb 1997 - Updated info about ObjectSupportLib file.

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Tech Info Library Article Number:21000



Tech Info Library

Mac OS: System Software Naming Convention (2/97)

Revised: 2/20/97
Security: Everyone

Mac OS: System Software Naming Convention (2/97)

=====

Article Created: 20 February 1997

TOPIC -----

What do I call the system software which operates Macintosh or Mac OS-compatible computers?

DISCUSSION -----

- For versions 7.5.5 and earlier, refer to "System" and version,
Example: System 7.5.3
- For versions 7.6 and later, refer to "Mac OS" and version,
Example: Mac OS 7.6

This article was published in the 20 February 1997 "Information Alley."

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Tech Info Library Article Number:21001



Tech Info Library

PowerBook 3400 Series: General Usage Tips (2/97)

Revised: 2/24/97
Security: Everyone

PowerBook 3400 Series: General Usage Tips (2/97)

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Article Created: 21 February 1997

TOPIC -----

The following article contains some general tips for using your PowerBook 3400 series computer. Topics covered include the following:

- * Infrared Related Information
- * Media Bay-Related Information
- * PC Card-Related Information
- * Serial Port Related Information
- * Video/Graphics Related Information

DISCUSSION -----

Infrared Related Information

=====

* For best performance when using the infrared networking capabilities (IrDA) of the PowerBook 3400 series computers turn ON Virtual Memory.

* GeoPort modems and IrTalk do not work together. In other words, you should not attempt to transfer files over IrTalk while using a GeoPort modem.

Media Bay-Related Information

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Hot Swapping Devices

It is critical for PowerBook 3400 series computer owners to understand that they should NEVER remove the media bay device when it is in use. Any time that the light is on or flashing, the media bay device should not be removed. Failure to heed this warning can result in a system crash and/or data loss.

Problem

The computer freezes/hangs when a CD is placed into the CD tray.

Resolution

If you put a CD into the CD-ROM drive tray and only partially close it, the CD-ROM drive attempts to scan the CD, but it cannot, so the system may hang.

If the CD remains in this position, after restarting you will see a blank gray screen instead of "Welcome to Macintosh" dialog because the CD is interfering with the startup process. To get out of this situation, the CD must either be removed, or completely inserted. Then you can restart the computer in the regular fashion.

Problem

Vibration of the CD-ROM drive

Resolution

All higher speed CD-ROM drives are sensitive to unbalanced CDs. The reason is that the speed at which the CD is rotating is fast enough that even the slightest bit of extra weight (like excessive silkscreen ink on one half of the CD or an address-type label on one side of the CD) will cause the CD to make a rattling sound.

Because of this sensitivity of these high speed CD-ROM drives it is very important for you to refrain from placing labels onto your CDs.

* Note: This is not a PowerBook 3400 computer-specific issue. This information applies to all high-speed CD-ROM drives.

PC Card-Related Information

=====

Existing multi-function cards (for example, combined modem and networking cards) may not work in PowerBook 3400 computers if you do not install a new/updated software driver from the developer of the that specific third party PC card.

Network-Related Information

=====

Problem

User cannot see zones when connected to a network using Ethernet.*

Resolution

One reason this may happen is that the user's Node ID is no longer valid. If this is the case, you can perform the following steps to make the network zones accessible:

1. Open the AppleTalk Control Panel.
2. Select User Mode from the Edit menu.
3. Click the Advanced radio button (to get into the advanced user mode) and click OK.
4. Click the User defined check box.
5. Find out from your network administrator what the network range numbers are.
6. Select a Network number within the network range that is displayed.
7. Select a different Node ID (between 1 and 256)
8. Close the control panel and Save changes.
9. Sometimes you may get a dialog box at this point stating that the Node ID is in use by someone else. In this case, you need to select a different Node ID. Repeat steps 7 and 8 until a valid number is selected (usually once or twice).

* Note: This is not a PowerBook 3400 specific issue. This situation could occur on any Macintosh or Power Macintosh computer.

Serial Port Related Information =====

The PowerBook 3400 series of computers has the same serial chip as Power Macintosh 5400 and 6400 series computers, hence they may encounter some of the same serial port related issues.

If you have a serial device that does not function properly with your PowerBook 3400 series computer, you should contact the vendor of that device for more information. It is possible that the manufacturer of your serial device may have written a new software driver for Mac OS 7.6 or the specifically for the PowerBook 3400 computer.

Video/Graphics Related Information =====

Question: When I start up with an AppleVision monitor* connected to my PowerBook 3400 series computer, the display on the external monitor is not centered at first. Then, during the startup process, the image on the screen jumps and is correctly centered. Is my PowerBook computer or my AppleVision display defective? What is going on?

Answer: No, your PowerBook computer and your display are working fine. What you are seeing is a correction to the timing that is being driven from your PowerBook computer to your external display.

At startup, the timing that is driven to a display when it is in simulscan mode is not exactly what the monitor expects. Once the system starts to load, the timing adjusts so that it is centered correctly on your screen.

There is nothing wrong with your PowerBook computer or monitor. This anomaly will not damage your PowerBook computer or monitor. You could use the horizontal and vertical controls on the monitor to adjust the initial screen so that it is centered, but it is not necessary.

* Note: This could happen with other VGA or Apple displays as well, but only in the 800x600, 60Hz (Simulscan) timing.

Problem

An external VGA device is not working properly with a PowerBook 3400 series computer.

Information

PowerBook 3400 series computers sense external multi-sync VGA displays by detecting whether or not pin 11 on the video connector is grounded. Most VGA monitor manufacturers are compliant with the VESA specification and they do ground this pin. However, some devices do not have this pin grounded.

By using a VGA->Macintosh adapter along with the Macintosh->VGA adapter (supplied with your PowerBook 3400 series computer) it is possible to get the 640x480x67hz mode to work, but you will not be able to access the VGA modes (800x600 and 1024x768).

NOTE: For more information about using a third-party VGA display with your PowerBook 3400 series computer, you should contact the vendor who manufactures and supports that display.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

This article was published in the Information Alley on 21 February 1997.

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Tech Info Library Article Number:21003



Tech Info Library

Color LW 12/600 PS: Successful Transparency Printing (2/97)

Revised: 2/21/97
Security: Everyone

Color LW 12/600 PS: Successful Transparency Printing (2/97)

=====

Article Created: 21 February 1997

TOPIC -----

What suggestions do you have for printing transparencies on the Color LaserWriter 12/600 PS and 12/660 PS? I regularly experience transparency jams that I would like to eliminate.

DISCUSSION -----

In order to optimize the print quality when printing transparencies the Color LaserWriter 12/600 PS and 12/660 PS require a special transparency material.

The Color LaserWriter uses a photosensor to detect the presence of the special transparencies by looking for a white paper tape strip at the leading edge of the transparency. When the white tape strip is detected the printer enters into the transparency mode. If standard transparencies are used (which do not contain the white tape strip) or if the transparency is not placed correctly into the printer, then a paper jam error is displayed on the status panel.

Before assuming that a hardware failure has occurred with the printer consult the Color LaserWriter 12/600 PS user's manual and review the following precautions to reduce jamming problems when printing on transparencies:

- Use only transparencies designed for use with the Color LaserWriter 12/600 PS (Apple part number M3876G/A).
- DO NOT print transparencies from the 250 sheet cassette, print only from the multipurpose tray.
- Insert Color LaserWriter transparencies into the multi-purpose tray with the white tape strip facing up and oriented so that the white tape strip end of the transparency enters the printer first. Note: Some Apple transparencies may have the word Apple printed on the white tape strip.

Carefully following these steps will help ensure problem-free printing.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

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Tech Info Library Article Number:21004



Tech Info Library

LaserWriter Utilities for Windows: Models Supported (2/97)

Revised: 2/22/97
Security: Everyone

LaserWriter Utilities for Windows: Models Supported (2/97)

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Article Created: 22 February 1997

TOPIC -----

I want to change the configuration of a LaserWriter from my PC. Can you tell me which LaserWriters are supported by the Apple LaserWriter Utility for Windows and which LaserWriters are supported by the Apple Printer Utility for Windows?

DISCUSSION -----

Here is a listing of the printers supported by the two utilities:

Apple LaserWriter Utility for Windows

- LaserWriter 12/640 PS
- LaserWriter 16/600 PS
- LaserWriter Pro 630
- LaserWriter Pro 600
- LaserWriter Select 360

NOTE: Future monochrome LaserWriters that offer printing from the PC environment will be supported by the Apple LaserWriter Utility.

Apple Printer Utility for Windows

- Color LaserWriter 12/600 PS
- Color LaserWriter 12/660 PS

NOTE: Future color LaserWriters that offer printing from the PC environment will be supported by the Apple Printer Utility.

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Tech Info Library Article Number:21006



Tech Info Library

AMT 2.1.1 Titles for Windows Are 16-bit Applications (2/97)

Revised: 2/24/97
Security: Everyone

AMT 2.1.1 Titles for Windows Are 16-bit Applications (2/97)

=====

Article Created: 24 February 1997

TOPIC -----

Will the titles I create with Apple Media Tool (AMT) 2.1.1 for the Windows platform be 16- or 32-bit applications?

DISCUSSION -----

AMT Titles for the Windows platform are still 16-bit applications. This is so both Windows 3.1 and Windows 95 can be supported.

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Tech Info Library Article Number:21007



Tech Info Library

Power Macintosh 9600/233: Specifications (2/97)

Revised: 2/24/97
Security: Everyone

Power Macintosh 9600/233: Specifications (2/97)

Article Created: 24 February 1997

TOPIC -----

This article contains the technical specifications for the Power Macintosh 9600/233 computer.

DISCUSSION -----

Processor

=====

- * 233-MHz PowerPC 604e microprocessors
- * Integrated floating-point unit and 64K cache
- * Processor is mounted on a removable card for easy upgrades

Memory

=====

- * 32 MB of RAM, expandable to 768 MB via 12 DIMM sockets
- * 4 MB of ROM
- * 512K level 2 cache

Disk drives

=====

- * Internal 4GB Fast SCSI hard disk
- * Internal Apple SuperDrive floppy disk drive
 - Accepts high-density 1.4MB disks and 800K disks
 - Reads, writes, and formats Macintosh, Windows, MS-DOS, OS/2, and ProDOS disks
- * Internal 12x-speed CD-ROM drive
- * Expansion bays for additional storage devices—four 5.25-inch removable bays, three internal bays (open bays vary with configurations)

Interfaces

=====

- * Six PCI expansion slots compatible with PCI 2.0-compliant cards
- * Two high-speed DMA serial (RS-232/RS-422) ports compatible with LocalTalk and

GeoPort cables

- * 10BASE-T and AAUI-15 Ethernet connectors; optional PC Compatibility Cards provide multinode support for simultaneous network connections
- * Internal Fast SCSI bus (up to 10MB/s)
- * External SCSI bus (up to 5MB/s)
- * Apple Desktop Bus (ADB) expansion port
- * Mini jacks for stereo audio input and output
- * DB-15 connector for monitor (on accelerated graphics card)

Graphics support (configured through accelerated graphics card)

=====

- * 4 MB of VRAM
- * Support for display resolutions of up to 1,600 by 1,200 pixels with Apple Multiple Scan 20 Display
- * Support for display resolutions of up to 1,280 by 1,024 pixels
- * 24-bit color up to 1,152- by 870-pixel resolution
- * Refresh rate of up to 75 Hz

GeoPort telephony (Requires GeoPort Telecom Adapter Kit)

=====

- * 28.8-Kbit/s modem support
- * V.17 fax support
- * Speakerphone and answering-machine capability

Clock/calendar

=====

- * Custom integrated circuit with long-life battery

Keyboard and mouse

=====

- * Includes AppleDesign keyboard and ADB Mouse II

Electrical requirements and compliance

=====

- * Line voltage: 100 to 125/200 to 240 V AC, RMS single phase, automatically configured
- * Frequency: 50 to 60 Hz, single phase
- * Power: 390 W maximum, not including display

ADB power requirements

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- * Maximum current draw for all ADB devices: 500 mA (a maximum of three ADB devices is recommended)
- * Mouse draws 10 mA
- * Keyboard draws 25 to 80 mA (varies with keyboard used)

Size and weight

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- * Height: 17.3 in. (44.0 cm)
- * Width: 9.7 in. (24.6 cm)
- * Depth: 17.3 in. (44.0 cm)
- * Weight: 35.0 lb. (15.9 kg)

Environmental requirements

=====

- * Operating temperature: 50 to 104 degrees F (10 to 40 degrees C)
- * Storage temperature: -40 to 116 degrees F (-40 to 47 degrees C)
- * Relative humidity: 5% to 95% noncondensing
- * Maximum altitude: 10,000 ft. (3,048 m)

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Tech Info Library Article Number:21008



Tech Info Library

Power Macintosh 9600/233: Description (2/97)

Revised: 2/24/97
Security: Everyone

Power Macintosh 9600/233: Description (2/97)

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Article Created: 24 February 1997

TOPIC -----

This article contains the description for the Power Macintosh 9600/233 computer.

DISCUSSION -----

The Apple Power Macintosh 9600/233 system is--quite simply--the highest-performance Macintosh available today. In addition, because this computer features the innovative tower design that characterizes the 9600 line, it makes system access for upgrades or other servicing a stunningly simple process. So whether you're a publishing professional, a multimedia master, or simply someone who enjoys existing on technology's cutting edge, you'll find that this sophisticated system can help you do exactly what you want to do--easily, effectively, and extraordinarily efficiently.

The efficiency comes from the new level of processing speed that the Power Macintosh 9600/233 adds to the versatile built-in capabilities and flexible expansion options that earned the earlier systems in this series their reputation for excellence. Expressly designed to meet the needs of the most demanding users, the Power Macintosh 9600/233 features a 233-megahertz PowerPC 604e processor--the current top of the line for this advanced, RISC-based processor series. And the out-standing processor performance is backed by the kinds of features that the most discerning users value most--such as a 12x-speed CD-ROM drive for fast, easy access to CD-ROM-based materials, and, in particular, the outstanding flexibility afforded by six industry-standard, high-performance Peripheral Component Interconnect (PCI) expansion slots. (This flexibility includes the option of configuring the system to provide hardware-level compatibility with the PC world with the addition of either of two PC Compatibility Cards available from Apple.)

The growing movement toward Internet/intranet technology is making communications capabilities increasingly important, and the Power Macintosh 9600/233 not only supports both 10BASE-T and AUI Ethernet connections, but also

comes with a complete, comprehensive set of Internet access software.

So if you need--or simply want--a Macintosh system that's optimized for high performance and versatile capabilities, the Power Macintosh 9600/233 is the system for you.

Features

=====

Top-of-the-line performance

- * 233-MHz PowerPC 604e processor
- * Built-in floating-point processor and 64K cache
- * 512K level 2 cache
- * Accelerated graphics card

Communications and multimedia

- * Two high-speed serial ports compatible with GeoPort devices and LocalTalk cables
- * 12x-speed CD-ROM drive
- * 16-bit stereo audio input and output
- * Support for speech-recognition and text-to-speech capabilities

Expandability

- * Removable processor card allows easy upgrades
- * Six industry-standard PCI expansion slots
- * Dual-channel SCSI connector for hard disks, CD-ROM drives, and other SCSI devices
- * Internal expansion bays for additional storage devices (3.5-inch and 5.25-inch)

Compatibility

- * Includes 10BASE-T and AAUI Ethernet connectors
- * Supports Open Transport networking software (TCP/IP and AppleTalk)
- * Runs 680x0 Macintosh applications as well as applications accelerated for Power Macintosh computers
- * Reads Mac OS, Windows, MS-DOS, OS/2, and ProDOS floppy disk formats
- * Runs MS-DOS and Windows applications via either of two optional PC Compatibility Cards from Apple
- * Comes with all of the software required for Internet access

System 7.5.5 software

- * Makes working with different applications consistent, so they're easier to learn and use
- * Allows easy customization of your Macintosh to reflect the way you work
- * Provides active assistance in learning new features with Apple Guide
- * Includes MacLinkPlus file translation software from DataViz

Ordering Information

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Power Macintosh 9600/233

Order No. M5883LL/A

* Power Macintosh 9600/233 computer with 32 MB of RAM, a built-in 1.4 MB Apple SuperDrive floppy disk drive, an internal 4GB hard disk drive, an internal 12x-speed CD-ROM drive, and a PlainTalk microphone. Includes keyboard; mouse; system software version 7.5.5 or later; Internet access soft-ware; complete setup, learning, and reference documentation; and

PC Compatibility Card Solutions

* PC Compatibility Card with Pentium 100-MHz processor

Order No. M4092LL/A

* PC Compatibility Card with 100-MHz 586 processor

Order No. M4091LL/C

GeoPort Telecom Adapter Kit

Order No. M5438LL/A

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:21009



Tech Info Library

CFM-68k Runtime Enabler 4.0b1 Public Beta Read Me (2/97)

Revised: 2/24/97
Security: Everyone

CFM-68k Runtime Enabler 4.0b1 Public Beta Read Me (2/97)

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Article Created: 24 February 1997

TOPIC -----

This article is the CFM-68k Runtime Enabler Public Beta 4.0b1 ReadMe file.

DISCUSSION -----

CFM-68k Runtime Enabler Public Beta

Apple has made available the CFM-68k Runtime Enabler v4.0b1 extension for testing purposes. It is critical that you read this document before choosing to install this beta software. If you do choose to accept the risk of running this beta software, it is important that you carefully follow the installation instructions listed at the end of this document.

WARNING:

The CFM-68k Runtime Enabler v4.0b1 is "beta software"; it is not the finished version of CFM-68k Runtime Enabler v4.0. This software has been provided for test purposes only and is not supported by Apple Computer.

WARNING:

The CFM-68k Runtime Enabler v4.0b1 extension is provided on an as-is basis. It is not warranted to be free from errors. It may cause significant problems with your computer and with other software you have installed.

WARNING:

Because this software is not warranted to be free from errors, you should not use it on any computer which is used for mission critical functions. You should also not use on any computer which contains data you consider irreplaceable. Should you choose to use this software, Apple Computer is not liable for any damages which may result.

WARNING:

Do not use the CFM-68k Runtime Enabler v4.0b1 extension with versions of the ObjectSupport Lib extension earlier than 1.2. Version 1.2 of the

ObjectSupportLib extension is included with this software.

WARNING:

Do not use Cyberdog v 1.2, 1.2.1, or 2.0 Alpha with this extension. There is an incompatibility between these versions of Cyberdog and the 4.0 version of the CFM-68k Runtime Enabler. This problem will be fixed in an upcoming version of Cyberdog which Apple expects to release shortly. When it is released, you can download it from the Cyberdog page at <http://cyberdog.apple.com>.

IMPORTANT:

The CFM-68k Runtime Enabler v4.0b1 extension will expire on May 1, 1997.

Support and Feedback

Technical Support: Do NOT call Apple technical support or the Apple Assistance Center with questions, comments, or problem reports about the CFM-68k Runtime Enabler v4.0b1.

Providing Feedback to Apple: If you wish to provide Apple with feedback about this beta software, a link to the feedback form can be found at <http://www.macos.apple.com/macos/cfm/cfmbeta.html>. Apple does not guarantee any response to messages you send. No technical support for the CFM-68k Runtime Enabler v4.0b1 extension is available.

Frequently Asked Questions

What is the CFM-68k Runtime Enabler extension? This extension allows applications to share code libraries on computers using a 680x0 processor. A shared code library is a file which contains common programming routines. By using shared libraries, applications can reduce their memory requirements.

What version of system software is required? You must have at least System 7.1 installed to use this software. This software also works with System 7.5, System 7.5.1, System 7.5.2, System 7.5.3, System 7.5.5, and Mac OS 7.6.

What is the problem with the CFM-68k Runtime Enabler extension? In late November, Apple announced a bug in the CFM-68k Runtime Enabler extension. This bug could cause random crashes and hangs, resulting in application instability and potential loss of data. Because of the potential seriousness of these problems, Apple has recommended that customers disable the extension.

What happens when the extension is disabled? If the CFM-68k Runtime Enabler extension is disabled, software which requires it will no longer run. This includes OpenDoc, Cyberdog, LaserWriter 8.4, the Apple Media Tool, AOL 3.0, and Microsoft Internet Explorer 3.0.

Does this updated CFM-68k Runtime Enabler v4.0b1 extension fix this bug? Apple has reasonable expectations that this extension fixes the bug. It has undergone significant testing for Apple to determine that it is reasonably stable. However, keep in mind that this is beta software, and has not completed all of Apple's quality testing.

When will Apple release the final version of this extension? Apple expects to release the final version in mid-March. No guarantee is given, however, that Apple will meet this ship date.

ObjectSupportLib version 1.2 is included with this software. Is this also beta software? No. ObjectSupportLib is officially released software. It is not beta software. Apple includes this software to install along with the CFM-68k Runtime Enabler v4.0b1 because of problems using older versions of ObjectSupportLib with the CFM-68k Runtime Enabler.

My computer uses a PowerPC processor. Should I install this software? No. Computers using a PowerPC processor do not need this extension. It is only for computers using the 680x0 processor.

How can I tell if my computer has a 680x0 processor? If your Macintosh model number is three digits long, then typically it has a 680x0 processor. For example, the Quadra 950, PowerBook 520, and Performa 600CD all have a 680x0 processor. By contrast, the Power Macintosh 6100, PowerBook 1400, and Perform 6320 all have a PowerPC processor.

Installation Instructions

You must install two extensions to use this software. Follow these instructions carefully.

1. If you have any critical data on your hard disk, you should back it up before installing this software.
2. Make sure you are in the Finder by clicking on the application menu in the upper-right corner of your screen and selecting Finder.
3. Locate your System folder and double-click it to open it.
4. Double-click on your Extensions folder to open it.
5. If the extension " CFM-68k Runtime Enabler" (note that this begins with a space) exists in your Extensions folder, drag it to the trash.
6. If the extension "ObjectSupportLib" exists in your system folder, drag it to the trash.
7. Close your Extensions window and System folder window.
8. Locate the folder "CFM-68k beta software" and double-click it to open it.
9. Select the extensions " CFM-68k Runtime Enabler" (note that this begins with a space) and "ObjectSupportLib" in the "CFM-68k beta software" folder and drag them over your System folder. Click OK when asked if you want to put them in your Extensions folder.
10. Restart your computer.

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Tech Info Library Article Number:21010



Tech Info Library

Power Macintosh Computers: Some Don't Support Mac OS 7.6 (3/97)

Revised: 3/13/97
Security: Everyone

Power Macintosh Computers: Some Don't Support Mac OS 7.6 (3/97)

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Article Created: 24 February 1997
Article Reviewed/Updated: 13 March 1997

TOPIC -----

I recently purchased a Power Macintosh 8600/200 computer, and I attempted to install Mac OS 7.6 on it. However, a dialog box appeared stating that the new OS was not supported on this computer. How can I use Mac OS 7.6 on this computer?

DISCUSSION -----

The recently introduced Power Macintosh computers ship with either System 7.5, version 7.5.3 (Power Macintosh 4400/200) or System 7.5, version 7.5.5 (Power Macintosh 5500, 6500, 7300, 8600, and 9600 series computers).

None of these systems support Mac OS 7.6, and Mac OS 7.6 will NOT install on Power Macintosh 4400, 5500, 6500, 7300, 8600, or 9600 computers.

Instead, a coupon was included in the box will to allow you to upgrade to the "upgrade to 7.6" once it becomes available. The cost of the upgrade is \$9.95 (the cost of shipping/handling) plus any applicable sales tax.

IMPORTANT: If the coupon included with your computer states that the price is \$24, this is incorrect. Revised coupons with the new, lower price are expected to be available very shortly.

If you have one of these computers and would like to obtain a Mac OS Up-to-Date Coupon contact one of the following sources:

- Mac OS Up-to-Date Customer Service: 1-800-335-9258
- AppleFax: 1-800-462-4396 (You should order a Fulfillment Coupon (doc. # 11438) and a List of Qualifying Computer (doc. # 11437).
- WorldWide Web: <<http://www.macos.apple.com/macos/releases.html>>

This article was published in the 13 March 1997 "Information Alley."

Article Change History:

13 Mar 1997 - Added Information Alley statements.

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Tech Info Library Article Number:21011



Tech Info Library

Power Macintosh 5400/200: Description (2/97)

Revised: 2/24/97
Security: Everyone

Power Macintosh 5400/200: Description (2/97)

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Article Created: 24 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 5400/200.

DISCUSSION -----

The Power Macintosh 5400/200 is a convenient, highly economical, all-in-one system. It combines high-performance features designed to enhance productivity with multimedia capabilities and Internet access tools that make using technology to improve the educational experience easier than ever before.

The Power Macintosh 5400/200 Color System includes Power Macintosh 5400/200 (24/1.6GB/256K L2 cache) with built-in 15-inch (12.8-inch diagonal viewable image size) multiple-scan color display, 8x-speed CD-ROM drive, built-in Ethernet, stereo speakers, microphone, AppleDesign Keyboard, and mouse.

Enhance the Educational Experience-and Productivity

=====

Innovative educators know that students learn best when they're actively engaged-and multimedia learning activities are uniquely engaging. With its high-quality stereo sound, advanced color display, and built-in 8x-speed CD-ROM drive, the Apple Power Macintosh 5400/200 makes it easy to take advantage of the wealth of existing educational multimedia materials on CD-ROM, as well as to develop multimedia projects of your own. In fact, this powerful computer even lets you install optional video-input/output capabilities and comes with a bay that can accommodate an optional TV/FM radio tuner¹, so you can easily opt to further enhance the teaching and learning experience through multimedia. In addition, with its 200-megahertz PowerPC 603e processor, the Power Macintosh 5400/200 brings high performance to educational computing. And this processing speed is complemented by the system's built-in Ethernet connection, for high-speed networking.

Easy Access to the Internet

=====

Speaking of networking, every day, more and more schools are discovering the educational value of access to the Internet-with its vast wealth of informational resources and communications opportunities. The Power Macintosh 5400/200 makes it easy to join their ranks, because it comes with a CD containing all the software you need for Internet access. (Modem or direct connection to the Internet is required. Access fees from Internet service provider are extra.) So you and your students can use this computer to do everything from "surfing the net" for news on current events to using Internet-based electronic mail and bulletin boards to collaborate on projects with geographically distant peers. It can even run Apple's innovative Cyberdog software, which lets you tailor access to the Internet to enhance its educational utility-for example, by creating computer-based curriculum materials that contain actual live links to appropriate web sites.

Flexible Expansion Capabilities to Take You into the Future

=====

To accommodate educators' future concerns, the Power Macintosh 5400/200 features the Peripheral Component Interconnect (PCI) expansion bus architecture, which makes it easier-and more affordable-than ever to customize your system for optimal utility. For example, you could add Avid Cinema-a package that consists of a PCI card, accompanying software, and connector cables-which enables simple, straightforward video creation and editing on the desktop. The possibilities are nearly limitless-and they're growing, because more PCI cards are becoming available all the time.

The Power Macintosh 5400/200-everything you need in an educational computer, at an economical price.

Macintosh Advantages

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Because they're so easy to set up, learn, use, and expand, Macintosh computers let schools accomplish more, in less time and with less effort, than other computers. And Power Macintosh computers offer new levels of performance and advanced applications.

It's a Great Value

The Power Macintosh 5400/200 is Apple's economical, all-in-one computer designed expressly for education. This flexible, convenient workstation can help schools get more out of their computing budgets in the short term, while providing room to grow in the future. You should also keep in mind that, over the long term, Macintosh computers consistently cost less than PCs because they require less training, maintenance, and support.²

Schools Can Do More with Macintosh

Like all Macintosh computers, the Power Macintosh 5400/200 runs thousands of applications, including productivity, reference, resource, and administration tools. You can do more with Macintosh computers because more top-rated education software runs on Macintosh.³

It's Easy to Use

Because the Power Macintosh 5400/200 features an all-in-one design that makes it incredibly easy to set up, you can start using it to do productive work as soon as you take it out of the box. And it's easy to learn to use new applications, because all Macintosh software works in the same intuitive fashion.

It's Ideal for Multimedia

The Power Macintosh 5400/200 has advanced multi-media features built in-so you can get involved with every aspect of this exciting new technology. Teachers and students can take advantage of the built-in multi-media capabilities to create compelling presentations as well as to work with existing multimedia courseware.

Features

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Power and Speed

-
- * 200-MHz PowerPC 603e processor
 - * Standard 256K level 2 cache
 - * Built-in high-speed Ethernet connection (twisted-pair)

Memory and Storage

-
- * 24 MB of RAM, expandable to 136 MB (8 MB on the logic board and two DIMM slots, one occupied by a 16 MB DIMM)
 - * Apple SuperDrive floppy disk drive (reads and writes Mac OS, Windows, DOS, OS/2, and ProDOS files)
 - * Internal 1.6GB IDE hard disk drive
 - * Internal tray-loading 8x-speed SCSI CD-ROM drive

Display

-
- * 15-inch (12.8-inch diagonal viewable image size) multiple-scan color display
 - * 1 MB dedicated video RAM
 - * Supports 640 by 480 pixels and 800 by 600 pixels at 16 bits (thousands of colors)
 - * Supports 832 by 624 pixels at 8 bits (256 colors)
 - * 0.28-mm dot pitch

Expansion

-
- * PCI slot (accommodates industry-standard 6.88-inch/short cards)
 - * Optional Multimedia Features
 - * Optional video-out connector for connecting to an LCD projection panel or a second monitor
 - * Optional video-in card, so you can record video from a camcorder, VCR, or laserdisc
 - * Expansion bay included for optional TV/FM radio tuner

..TIL21012-Power_Macintosh_5400-200-Description_2-97_(TA36533).pdf

* Avid Cinema card and software for simple, straightforward digital video creation and editing on the desktop (available Spring 1997)

Features Built into Every Macintosh

=====

Usability

- * Runs thousands of Macintosh applications, including most top-rated curriculum programs and administrative software, as well as hundreds of applications optimized to take advantage of PowerPC processor technology
- * Is easy to set up, learn, use, and expand

System Software

- * Includes Apple Guide, Drag and Drop, AppleScript, Macintosh PC Exchange, Macintosh Easy Open, and more

Networking

- * Built-in AppleTalk networking
- * File sharing without a dedicated server

Ordering Information

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Power Macintosh 5400/200 (24/1.6GB/256K L2 cache) with built-in 15-inch (12.8-inch DVIS) multiple-scan color display, 8x-speed CD-ROM drive, Ethernet networking, stereo speakers, microphone, AppleDesign Keyboard, and mouse.

Order No. M5823LL/A

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Tech Info Library Article Number:21012



Tech Info Library

Power Macintosh 5500/225: Description (2/97)

Revised: 2/24/97
Security: Everyone

Power Macintosh 5500/225: Description (2/97)

Article Created: 24 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 5500/225.

DISCUSSION -----

The Power Macintosh 5500/225 is a convenient, innovative all-in-one system. It combines high-performance features designed to enhance productivity with state-of-the-art multimedia capabilities and Internet access tools to offer a combination of performance, convenience, and outstanding value.

The Power Macintosh 5500/225 Color System includes Power Macintosh 5500/225 (32/2GB/256K L2 cache) with built-in 15-inch (12.8-inch diagonal viewable image size) multiple-scan color display, 12x-speed CD-ROM drive, built-in Ethernet, video-capture card, NTSC TV video-out connector, stereo sound, microphone, AppleDesign Keyboard, and mouse.

Come Up to a New Level of All-In-One Performance

All-in-one computers have always been convenient-and often economical-but today they're reaching new levels of performance. The advanced Apple Power Macintosh 5500/225 features one of the most powerful processors ever made available in a system developed for education: a 225-megahertz PowerPC 603e. This processing speed is complemented by the system's built-in Ethernet connection, for high-speed networking. And to ensure that the Power Macintosh 5500/225 can continue to meet your needs in the future, it offers an industry-standard PCI expansion slot.

Next-Generation Multimedia

Educational multimedia has been an Apple stronghold for years-ever since instructors first learned the educational value of its unique ability to engage students in the process of learning. The

Power Macintosh 5500/225 builds on Apple's legacy in this area by providing several innovative features designed to further enhance your multimedia capabilities. For example, it provides built-in 2D and 3D graphics acceleration, as well as a 12x-speed CD-ROM drive. In addition, the 5500/225 features a new kind of video-out capability-TV video-out, which allows for easy and instant connection to any video-in NTSC television. It also comes with a standard built-in video-in card and optional TV/FM radio tuner capabilities. And on the audio side, built-in stereo speakers offer rich digital sound quality.

Easy Access to the Internet

=====

In addition to multimedia, the other hot topic in education is the Internet. Every day, more and more schools are discovering the educational value of this amazing information and communications resource. The Power Macintosh 5500/225 makes it easy to join the ranks of the Internet world, because it comes with a CD containing all the software you need for Internet access. (Modem or direct connection to the Internet is required. Access fees from Internet service provider are extra.) You and your students can use this computer to do everything from "surfing the net" for news on current events to using Internet-based electronic mail and bulletin boards to collaborate on projects with geographically distant peers. It can even run Apple's innovative Cyberdog software, which lets you tailor access to the Internet to enhance its educational utility-for example, by creating computer-based curriculum materials that contain actual live links to appropriate web sites.

The Power Macintosh 5500/225-the next generation of advanced capabilities in a convenient, affordable all-in-one computer.

Macintosh Advantages

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Because they're so easy to set up, learn, use, and expand, Macintosh computers let schools accomplish more, in less time and with less effort, than other computers. And Power Macintosh computers offer new levels of performance and advanced applications.

It's a Great Value

The Power Macintosh 5500/225 is the next generation in Apple's economical, all-in-one computer line designed expressly for education. This flexible, convenient workstation can help schools get more out of their computing budgets in the short term, while providing room to grow in the future. You should also keep in mind that, over the long term, Macintosh computers consistently cost less than PCs because they require less training, maintenance, and support.

Schools Can Do More with Macintosh

Like all Macintosh computers, the Power Macintosh 5500/225 runs thousands of applications, including productivity, reference, resource, and administration tools. You can do more with Macintosh computers because more top-rated education software runs on Macintosh.

It's Easy to Use

Because the Power Macintosh 5500/225 features an all-in-one design that makes it incredibly easy to set up, you can start using it to do productive work as soon as you take it out of the box. And it's easy to learn to use new applications, because all Macintosh software works in the same intuitive fashion.

It's Ideal for multimedia

The Power Macintosh 5500/225 has advanced multimedia features built in-so you can get involved with every aspect of this exciting new technology. Teachers and students can take advantage of the on-board 2D/3D graphics acceleration and built-in video-input/output and sound capabilities to create compelling presentations, as well as to work with existing multimedia courseware.

Features

=====

Power and Speed

- * 225-MHz PowerPC 603e processor
- * Standard 256K level 2 cache
- * Powerful 50-MHz system bus architecture
- * Built-in high-speed Ethernet connection (twisted-pair)

Memory and Storage

- * 32 MB of RAM, expandable to 128 MB
- * Two DIMM slots (one occupied by a 32 MB DIMM)
- * Apple SuperDrive floppy disk drive (reads and writes Mac OS, Windows, DOS, OS/2, and ProDOS files)
- * Internal 2GB IDE hard disk drive
- * Internal tray-loading 12x-speed SCSI CD-ROM drive

Display

- * 15-inch (12.8-inch diagonal viewable image size) multiple-scan color display
- * 2 MB dedicated video RAM
- * Supports 2D/3D onboard video acceleration
- * Supports 640 by 480, 800 by 600, and 832 by 624 pixels at 24 bits (millions of colors)
- * Supports 1,024 by 768 pixels at 16 bits (thousands of colors)
- * 0.28-mm dot pitch

Expansion

- * PCI slot (accommodates industry-standard 6.88-inch/short cards)

Multimedia Features

- * TV video-out for connecting directly to any NTSC television with video-in
- * Video-in card, so you can record video from a camcorder, VCR, or laserdisc

Optional Multimedia Features

- * TV/FM radio tuner
- * Avid Cinema card and software for simple, straightforward digital video creation and editing on the desktop (available spring 1997)

Features Built into Every Macintosh

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Usability

- * Runs thousands of Macintosh applications, including most top-rated curriculum programs and administrative software, as well as hundreds of applications optimized to take advantage of PowerPC processor technology
- * Is easy to set up, learn, use, and expand

System Software

- * Includes Apple Guide, Drag and Drop, AppleScript, Macintosh PC Exchange, Macintosh Easy Open, and more

Networking

- * Built-in AppleTalk networking
- * File sharing without a dedicated server

Ordering Information

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Power Macintosh 5500/225 (32/2GB/256K L2 cache) with built-in 15-inch (12.8-inch DVIS) multiple-scan color display, 12x-speed CD-ROM drive, twisted-pair Ethernet networking, video-capture card, NTSC TV video-out connection, stereo speakers, microphone, AppleDesign Keyboard, and mouse.

Order No: M5761LL/A

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Tech Info Library Article Number:21013



Tech Info Library

Power Macintosh 6500/225 & 6500/250: Description (2/97)

Revised: 4/21/97
Security: Everyone

Power Macintosh 6500/225 & 6500/250: Description (2/97)

Article Created: 24 February 1997

TOPIC -----

This article contains a description of the Power Macintosh 6500/225 and 6500/250.

DISCUSSION -----

The Power Macintosh 6500/225 and 6500/250 represent a new look in Apple Education computers: a space-saving modular tower design that combines superior-quality performance features designed to enhance productivity with state-of-the-art multimedia capabilities and Internet access tools to let you enjoy the advantages that top-of-the-line technology can bring to teaching and learning.

The Power Macintosh 6500/250 includes Power Macintosh 6500/250 (32/3GB/256K L2 cache) with IomegaZip drive, 12x-speed CD-ROM drive, built-in Ethernet, video-capture card, NTSC TV video-out connector, stereo sound, microphone, AppleDesign Keyboard, and mouse. (Monitor sold separately.)

Enjoy the State of the Art in Educational Computing Performance

Interested in a high-performance computer series that truly bridges the gap between the convenient all-in-one systems designed specifically for education and the flexible, modular desktop computers that are frequently used in businesses and universities? These advanced computers provide exactly that. And you can choose the precise display you want from the range of exciting solutions available from Apple. The Apple Power Macintosh 6500 series systems feature the most powerful processors ever offered by Apple in a system for education: a 225- or 250-megahertz PowerPC 603e. This processing speed is complemented by the built-in Ethernet connection for high-speed networking. To ensure that you can configure them to meet your needs in the future, the Power Macintosh 6500 series systems offer two industry-standard PCI expansion slots, a 2GB or 3GB hard disk, and an Iomega Zip drive that uses 100MB removable cartridges for easy file

sharing, transfer, and backup. And the two models in this series are designed to give you flexible purchase options: the Power Macintosh 6500/225 provides high-end performance for productivity tasks and multimedia activities, while the Power Macintosh 6500/250 adds advanced multimedia capabilities.

Next-Generation Multimedia

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Educational multimedia has been an Apple stronghold for years-ever since instructors first learned the educational value of its unique ability to engage students in the process of learning. The Power Macintosh 6500 series builds on Apple's legacy in this area by providing several innovative features. For example, both systems offer built-in 2D and 3D graphics acceleration, as well as a 12x-speed CD-ROM drive. In addition, the Power Macintosh 6500/250 features a new kind of video-out capability-TV video-out, which allows for easy and instant connection to any video-in capable NTSC television. It also comes with a built-in video-in card and optional TV/FM radio tuner capabilities. And on the audio side, when you plug in external speakers, the built-in speaker becomes a subwoofer.

Easy Access to the Internet

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In addition to multimedia, the other hot topic in education is the Internet. Every day, more and more schools are discovering the educational value of this amazing information and communications resource. The Power Macintosh 6500 series systems come with a CD containing all the software you need for Internet access. (Modem or direct connection to the Internet is required. Access fees from Internet service provider are extra.) You and your students can use these computers to do everything from "surfing the net" for news on current events to using Internet-based electronic mail and bulletin boards to collaborate on projects with geographically distant peers. They can even run Apple's innovative Cyberdog software, which lets you tailor access to the Internet to enhance its educational utility-for example, by creating computer-based curriculum materials that contain actual live links to appropriate web sites.

The Power Macintosh 6500 series-the next generation of advanced educational computing capabilities in a flexible, modular tower design.

Macintosh Advantages

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Because they're so easy to set up, learn, use, and expand, Macintosh computers let schools accomplish more, in less time and with less effort, than other computers. And Power Macintosh computers offer new levels of performance and advanced applications.

It's a great value.

The Power Macintosh 6500 series systems are flexible, modular workstations that take schools to the cutting edge of educational technology today, while providing room to grow in the future. You should also keep in mind that, over the long term, Macintosh computers consistently cost less than PCs because they require less training, maintenance, and support.

Schools can do more with Macintosh.

Like all Macintosh computers, the Power Macintosh 6500 series systems run thousands of applications, including productivity, reference, resource, and administration tools. You can do more with Macintosh computers because more top-rated education software runs on Macintosh.

It's easy to use.

Because the Power Macintosh 6500 series features a space-saving modular tower design along with Apple's famed plug-and-play ease of connection, you can choose to purchase the Apple display that fits your needs-while resting assured that you can simply plug it in and get started computing right away. And it's easy to learn to use new applications, because all Macintosh software works in the same intuitive fashion.

It's ideal for multimedia.

Both systems in the Power Macintosh 6500 series have advanced multimedia features built in-so you can get involved with every aspect of this exciting new technology. And the Power Macintosh 6500/250 features built-in video-in, as well as a new kind of video-out that lets you connect to an NTSC television with video-in. Teachers and students can take advantage of the built-in multimedia capabilities to create compelling presentations, as well as to work with existing multimedia courseware.

Features

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Power and Speed

- * 225- or 250-MHz PowerPC 603e processor
- * Standard 256K level 2 cache
- * Powerful 50-MHz system bus architecture
- * Built-in high-speed Ethernet connection (twisted-pair)

Memory and Storage

- * 32 MB of RAM, expandable to 128 MB
- * Two DIMM slots (one occupied by a 32MB DIMM)
- * Apple SuperDrive floppy disk drive (reads and writes Mac OS, Windows, DOS, OS/2, and ProDOS files)
- * Internal 2GB IDE hard disk drive (6500/225)
- * Internal 3GB IDE hard disk drive (6500/250)
- * Internal tray-loading 12x-speed CD-ROM drive
- * Iomega Zip drive for easy file sharing, transfer, or backup

Display

- * Supports all Apple displays currently being sold, as well as many displays from third parties
- * 2 MB dedicated video RAM
- * Supports 2D/3D onboard video acceleration
- * Supports 640 by 480, 800 by 600, and 832 by 624 pixels at 24 bits (millions of

colors)

- * Supports 1,024 by 768 pixels at 16 bits (thousands of colors)

Expansion

- * Two PCI slots (accommodates industry-standard 6.88-inch/short cards)

Multimedia Features

- * Built-in TV video-out for connecting directly to any NTSC television with video-in (Power Macintosh 6500/250 only)
- * Video-in card, so you can record video from a camcorder, VCR, or laserdisc (Power Macintosh 6500/250 only)

Optional Multimedia Features

- * Expansion bay for optional TV/FM radio tuner
- * Subwoofer audio capabilities-when external speakers are connected
- * Avid Cinema card and software for simple, straightforward digital video creation and editing on the desktop (available Spring 1997)

Features Built into Every Macintosh

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Usability

- * Runs thousands of Macintosh applications, including most top-rated curriculum programs and administrative software, as well as hundreds of applications optimized to take advantage of PowerPC processor technology
- * Is easy to set up, learn, use, and expand

System Software

- * Includes Apple Guide, Drag and Drop, AppleScript, Macintosh PC Exchange, Macintosh Easy Open, and more

Networking

- * Built-in AppleTalk networking
- * File sharing without a dedicated server

Ordering Information

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- * Power Macintosh 6500/225 (32/2GB/256K L2 cache) with 12x-speed CD-ROM drive, 100 MB Iomega Zip drive, Ethernet networking, stereo sound, microphone, AppleDesign Keyboard, and mouse. Monitor sold separately.

Order No: M5606LL/A

- * Power Macintosh 6500/250 (32/3GB/256K L2 cache) with 12x-speed CD-ROM drive, 100 MB Iomega Zip drive, Ethernet networking, video-capture card, NTSC TV video-out connection, stereo sound, microphone, AppleDesign Keyboard, and mouse. Monitor sold separately.

Order No: M5607LL/A

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Tech Info Library Article Number:21014



Tech Info Library

Macintosh Performa 6400: Apple Video Player Shows No Video(2/97)

Revised: 4/21/97
Security: Everyone

Macintosh Performa 6400: Apple Video Player Shows No Video(2/97)

Article Created: 24 February 1997
Article Reviewed/Updated: 25 February 1997

TOPIC -----

I have a Macintosh Performa 6400/200 with the Avid Cinema bundle. When I have the Apple Video Player application open and I am trying to capture video from a VCR, I hear the sound coming through the computer, but it does not play any video through. I either get a black screen or a still picture. If I choose Freeze, it will capture and display the current frame, but if I Unfreeze it, that image just stays there until I select Freeze again.

When trying to record video with Apple Video Player, I have received a -9402 error and sometimes the application quits with a "fatal error." What might be causing these problems?

DISCUSSION -----

Issue

The symptoms you are experiencing most likely the result of a conflict between the Apple Video Player application and the Avid Cinema Extension.

This situation can occur whether you are viewing from video tape or when you are using Apple Video Player to view the signal from a TV Tuner card.

These symptoms only appear if your display is set to 256 colors. The Apple Video Player application works as is expected when the display is set to Thousands of colors.

Details

The Macintosh Performa 6400 computer always digitizes in 16-bit mode. The problem arises when Apple Video Player tries to downsample from 16-bit to 8-bit. This is the root of the conflict between the Apple Video Player and the Avid Cinema Extension.

The built-in video in the Macintosh Performa 6400 only provides enough Video RAM (VRAM) for 256 colors at the 832x624 resolution. Because of the amount of VRAM your computer has, you need to change the resolution setting to 640x480 at 16-bit to make Apple Video Player work properly.

Workarounds

1) Change your display setting to Thousands of Colors by selecting this option in your Monitor & Sound control panel.

- or -

2) Disable the Avid Cinema Extension by de-selecting* it in your Extensions Manager control panel.

* NOTE: You will need to re-enable the Avid Cinema Extension before using the Avid Cinema application again.

For more information on other Cinema related issues, refer to the Tech Info Library article titled "Avid Cinema 1.0: Issues and Workarounds" (article number TECHINFO-0020614).

This article was published in the Information Alley on 25 February 1997.

Article Change History:

25 Feb 1997 - Added keyword.

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Tech Info Library Article Number:21015



Tech Info Library

Apple Internet Connection Kit: AppleGuide Files (3/97)

Revised: 3/11/97
Security: Everyone

Apple Internet Connection Kit: AppleGuide Files (3/97)

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Article Created: 11 March 1997

TOPIC -----

I installed Apple Internet Connection Kit (AICK) 1.2. Before, I could use AppleGuide from the Apple Internet Dialer's Help menu to obtain usage information about AICK, now, I cannot do this. Yet I notice that there is a folder called "Guide Files" in the Internet Connection Kit folder. What gives?

DISCUSSION -----

Generally, for Guide files to be recognized, they must be in the same folder as the application they are to be used with.

AICK 1.1.5 comes with a solitary Guide file, "Apple Internet Conn Kit Guide." This was pre-installed in the Internet Connection Kit folder, at the same level as Apple Internet Dialer version 1.1.3.

AICK 1.2 comes with six Guide files. These are located in the Guide Files folder, which is in the Internet Connection Kit folder. They provide more information about how the various Internet clients which come with AICK 1.2 work. The files are:

- Apple Internet Conn Kit Guide
- NewsWatcher Guide Additions
- Emailer Guide Additions
- Navigator Guide Additions
- Fetch Guide Additions
- Telnet Guide Additions

To use these files, move them to the same folder as the Apple Internet Dialer. To access them, open the Apple Internet Dialer and choose "Apple Internet Connection Kit Guide" from the Help menu (the question mark in the top right corner of the screen). To see the various product categories, click on the Topics button, once AppleGuide launches.

..TIL21016-Apple_Internet_Connection_Kit-AppleGuide_Files_3-97_(TA36535).pdf

NOTE: Do not move the Guide Additions into the various client folders (for example, don't move the Navigator Guide Additions into the Netscape folder). They are designed for use with the Apple Internet Conn Kit Guide file, which can only be read by the Apple Internet Dialer.

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Tech Info Library Article Number:21016



Tech Info Library

AppleTalk: How do I Create Zones? (2/97)

Revised: 2/24/97
Security: Everyone

AppleTalk: How do I Create Zones? (2/97)

=====

Article Created: 24 February 1997

TOPIC -----

My AppleShare File Server documentation refers to AppleTalk zones in several places. How do I set up zones with AppleShare? Will this improve network performance?

DISCUSSION -----

AppleTalk Zones are created by AppleTalk routers, like the Apple Internet Router, to divide devices on one or more networks up into logical groups. For example, these groups can be geographical like the "third floor" or departmental like the "sales department." When no router is present, all devices are considered to be on the same zone.

AppleTalk Zones, in themselves, do not alleviate network traffic on a single network. To improve performance on a heavily-used network, consider dividing the network into two separate networks, and use routers and zones, if desired, to let devices on the two separate networks continue communicating with each other.

More information on setting up zones and networks with routers should be available in the router's documentation.

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Tech Info Library Article Number:21020



Tech Info Library

Mac OS-Based Computers Not Responding to Ping (2/97)

Revised: 2/25/97
Security: Everyone

Mac OS-Based Computers Not Responding to Ping (2/97)

=====

Article Created: 25 February 1997

TOPIC -----

I cannot ping a Mac OS-based computer from my PC until I run a TCP application on the Mac OS computer. I am trying to monitor when these computers are running, however, the users generally do not use TCP applications. How do I get the TCP/IP stack to initialize on startup?

DISCUSSION -----

For Open Transport

If Open Transport is being used, it can be configured to always have the protocol stack active by following the steps below:

- 1) Open the TCP/IP control panel.
- 2) Choose User Mode in the Edit menu, or use the keyboard shortcut Command-U.
- 3) Select Advanced or Administration and click OK.
- 4) Click the Options button in the TCP/IP control panel.
- 5) Select Active and deselect Load only when needed, then click OK.
- 6) Close the TCP/IP control panel and save changes.

For MacTCP

If Classic networking is being used, the protocol stack is only active when an application requiring MacTCP is active. The workaround is to have an application which uses MacTCP launch at startup by placing an alias of the application in the Startup Items folder inside the System Folder.

This article was published in the 25 February 1997 "Information Alley."

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Tech Info Library Article Number:21021



Tech Info Library

Interex (2/97)

Revised: 2/25/97
Security: Everyone

Interex (2/97)

=====

Article Created: 25 February 1997

Interex

8447 East 35th Street, North
Wichita, KS 67226-1344

512-346-2119 Austin Production Office
800-513-9744 Technical Support
316-636-5544 Sales Line

Company Profile:

Sells Power Macintosh cache, recently redesigned for full compatibility with the 7500 line, under the XLR8 brand name. 256K Cache and 512K cache for the 7200, 7500, 8500.

Note: Interex does not take customer orders at their corporate site. Their products can be purchased through a variety of mail order catalogs.

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Tech Info Library Article Number:21022



Tech Info Library

PC Compatibility Card: Specialty Cable Pinouts (2/97)

Revised: 2/25/97
Security: Everyone

PC Compatibility Card: Specialty Cable Pinouts (2/97)

Article Created: 25 February 1997

TOPIC -----

This article lists the pinouts for the 7-Inch and 12-Inch PCI-based Apple PC Compatibility Cards specialty cable. This cable connects the DOS Compatibility Card to display devices. The article also has the pinouts for the card's on board 15-pin gameport.

DISCUSSION -----

Begin_Table

DB26 Connector Pin Assignments

=====

Pin number	Signal	Description
-----	-----	-----
1	MAC HSYNC	Macintosh horizontal synchronize
2, 4, 6, 8	GND	Logic ground
3	MAC BLUE	Macintosh blue signal
5	SENSE0	Sense line 0
7	BLUE OUT	Blue output from PCI card
9	HSYNC OUT	Horizontal synchronize output from PCI card
10	MAC CSYNC	Macintosh contrast synchronize
11, 13, 15,	GND	Chassis ground
17, 21, 24	GND	Chassis ground
12	MAC GREEN	Macintosh green signal
14	SENSE1	Sense line 1
16	GREEN OUT	Green output from PCI card
18	CSYNC OUT	Contrast synchronize output from PCI card
19	MAC VSYNC	Macintosh vertical synchronize
20	MAC RED	Macintosh red signal
22	CABLE DET L	Cable detect low
23	SENSE2	Sense line 2
25	RED OUT	Red output from PCI card

26 VSYNC OUT Vertical synchronize output from PCI card

DB15 Gameport Connector Pin Assignments

=====

Pin number	Signal	Description
-----	-----	-----
1, 8, 9	+5 V +5 V	power input
2	JOYF0 O	Joystick F0 output
3	JRC0 O A	x-axis control
4, 5	GND	Chassis ground
6	JRC1 O A	y-axis control
7	JOYF1 O	Joystick F1 output
10	JOYF2 O	Joystick F2 output
11	JRC2 O B	x-axis control
12	MIDI OUT O	MIDI output
13	JRC3 O B	y-axis control
14	JOYF3 O	Joystick F3 output
15	MIDI IN O	MIDI input output

End_Table

For more details, please refer to the Developer note which can be found at on the World Wide Web at the following URL
ftp://ftp.apple.com/devworld/Technical_Documentation/Developer_Notes/Peripherals/12%267_PC_Compatibility_Cards.sit.hqx

This article was published in the Information Alley on 25 February 1997.

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Tech Info Library Article Number:21023



Tech Info Library

Speech Control Panel: Voices Not Showing Up (2/97)

Revised: 2/26/97
Security: Everyone

Speech Control Panel: Voices Not Showing Up (2/97)

=====

Article Created: 26 February 1997

TOPIC -----

I downloaded Victoria High Quality and Victoria Small voices from the web, unstuffed the files, put them in the Voice Folder in the Extensions Folder, and restarted my computer. The Speech control panel Voice Menu does not list these two files, yet they are in the correct location. I'm using a Power Macintosh 9500 with Mac OS 7.6 and Speech 1.5. Why is this happening?

DISCUSSION -----

The solution to the Speech voices issue can be understood with some explanation. There are three different types of voices that can be in the Voices folder and three corresponding synthesizers -- each synthesizer works with a different voice type. The three synthesizers, MacinTalk 2, MacinTalk 3, and MacinTalk Pro, all work through the Speech Manager.

For a voice to be supported or active, the corresponding synthesizer needs to be installed in the Extensions folder for that voice type. The voices available at the Web site, Agnes, Bruce and Victoria, are MacinTalk Pro voices and require the MacinTalk Pro synthesizer to be present. The icons of the speech synthesizers and matching voices have a small character (2, 3, or P) in the lower right corner of the icon to designate their type. This supplies a visual aid in identifying the matching voice and synthesizer types. If the voice file has a generic document icon, then the corresponding synthesizer is not present on the disk.

You can run the Mac OS 7.6 installer and custom install just the MacinTalk Pro synthesizer from the English Text-to-Speech 1.5 install package. The base Mac OS 7.6 installation does not add MacinTalk Pro voices, but the Text-to-Speech installer will when appropriate. You can do this by either running the top level "Install Mac OS" application, and choosing customize for just the English Text-to-Speech package, or by opening the English Text-to-Speech folder of the Software Installers folder and running just that one installer.

..TIL21024-Speech_Control_Panel-Voices_Not_Showing_Up_2-97_(TA36542).pdf

For additional information search for Tech Info Library article, "Mac OS 7.6:
About English Text-to-Speech Read Me."

This article was published in the 26 February 1997 "Information Alley."

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Tech Info Library Article Number:21024



Tech Info Library

PowerBook 3400: Why The Volume Control Button May Not

Revised: 2/28/97
Security: Everyone

PowerBook 3400: Why The Volume Control Button May Not Work(2/97)

=====

Article Created: 26 February 1997
Article Reviewed/Updated: 28 February 1997

TOPIC -----

I have noticed that when I am running some programs (for example; Dark Forces, Hexen and Abuse), that the hardware volume control (the button above the keyboard) does not affect the sound. However, when quitting the game, the new volume is set.

DISCUSSION -----

This is an issue with these specific applications, not with the PowerBook computer or the operating system. Owners of Macintosh Performa and other desktop Macintosh and Power Macintosh computers have had to deal with these types of issues for a while.

The volume control problem is caused by applications that do not allow background processing. This situation occurs more often with games because the processor speed they require to run properly.

Pressing the volume buttons actually generates events that the system processes. Since the game does not allow background processes to run, the events are either not processed or remain in the queue until you quit the game.

The only choice you have is to change the volume through some other means. Sometimes the game applications have volume control as one of their options.

This article was published in the Information Alley on 26 February 1997.

Article Change History:
28 Feb 1997 - Added keyword.

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Tech Info Library Article Number:21025



Tech Info Library

QuickTime MPEG Extension: Read Me Document (2/97)

Revised: 2/26/97
Security: Everyone

QuickTime MPEG Extension: Read Me Document (2/97)

=====

Article Created: 26 February 1997

TOPIC -----

This article contains the ReadMe document included with the QuickTime MPEG extension.

DISCUSSION -----

Introduction

=====

The QuickTime MPEG extension works directly with QuickTime to provide complete playback and control of MPEG movies. After you've installed the extension, each time you open an MPEG movie, QuickTime automatically imports the content of the MPEG movie into a QuickTime movie as a single MPEG track. The MPEG track contains the video and audio streams of the MPEG movie.

Note:

The QuickTime MPEG extension does not contain a compressor component. You cannot use the QuickTime MPEG extension to compress a QuickTime movie to an MPEG file.

System Requirements

=====

To install and use the QuickTime MPEG extension, you must have the following:

- A Power Macintosh computer
- QuickTime 2.5 or later (available at <http://quicktime.apple.com/sw/>)
- Approximately 2.5 megabytes (MB) of free memory per MPEG bitstream (for optimal playback)

Installing the Software

=====

The QuickTime MPEG Installer places the QuickTime MPEG extension in your System Folder. It also installs the MoviePlayer application in a new QuickTime folder on your local hard disk. The MoviePlayer application can be used to play QuickTime content as well as MPEG files. The Installer also installs Thread Manager 2.1.5. This version of the Thread Manager is required to use the QuickTime MPEG Extension.

To install the software, follow these steps:

1. Double-click the Installer icon to open it.
2. Read the message that appears, then click Continue.
3. In the window that appears, read the software license agreement, then click Agree.
4. In the dialog box that appears, make sure Easy Install is selected in the pop-up menu. Then click Install.

Note that by installing the software, you accept the terms of the license agreement.

5. When the installation is complete, click Restart.

Using the Software

=====

- Playback performance depends on your model of computer. A Power Macintosh 7100/80Mhz/601 gets approximately 10-12 fps at a window size of 320 x 240, while a Power Macintosh 8500/120MHz/604 gets approximately 24 fps at a window size of 320 x 240.

- For best performance, make sure your sound is set to 44.1 kHz, 16-bit stereo and your video monitor is set to 256 or thousands of colors. Turn virtual memory and RAM Doubler off.

- Some MPEG files are encoded at 15 or at 7.5 fps instead of the normal 30. If your file appears to be playing much too fast, rename the file ".m15" and/or ".m75" and see if either of those speeds looks correct. For example, rename the file "movie.mpg" to "movie.m15" or "movie.m75."

- After you've installed the QuickTime MPEG extension, you can use the QuickTime Plug-In v1.1 (available at <http://quicktime.apple.com/sw/>) to play back MPEG movies within your Web browser application (such as Netscape Navigator).

- Blacklining is intentional. With large window sizes, blacklining saves CPU cycles. If you want to turn blacklining off, enable High Quality mode. While you're playing a movie in MoviePlayer, choose Get Info from the Movie menu. Choose the MPEG track from the left pop-up menu. Choose High Quality from the right pop-up menu and close the Info window. Blacklining should now be turned off.

- The QuickTime MPEG extension only supports layer II audio streams.

- To play a .DAT file from a CDi or a Video CD, you must open the file from within MoviePlayer by choosing Open from the File menu. Dragging and dropping the file onto your hard drive or onto the MoviePlayer icon will result in an error. Double-clicking the file will also result in an error.
- If you have a MPEG hardware decoder card you must remove the QuickTime MPEG Extension from your Extensions folder to use your card. The QuickTime MPEG Extension will disable your card while it is in your Extensions folder.
- You can find the latest versions of the QuickTime MPEG extension and other QuickTime software at the QuickTime (WWW) Software site, located at the following address: <http://quicktime.apple.com/sw/>

Known Problems

=====

- Non-Apple CD drivers may have problems reading CDi and Video CD discs. We are working with third-party CD-ROM vendors to solve this problem.
- CDi and Video CDs with dual audio tracks encoded in the separate stereo channels may play one track out of each speaker. We are working to fix this problem in a future release. Please use the MoviePlayer Get Info (Command-I) option to access the MPEG track. Choose Volume, and adjust the pan control all the way to the left or the right.
- ClarisWorks' Text Preview extension (installed by ClarisWorks 3.0 and 4.0) interferes with the MPEG file preview. When you open an MPEG file, the Open dialog box displays text symbols rather than a movie clip in the preview window.
- Use Save As, not Save, when you are saving changes to a raw MPEG bitstream from MoviePlayer. Using Save results in an error message.
- Apple Video Player does not play the sound in an MPEG movie (sound only or video-and-sound).
- The MPEG version of Return To Zork does not play properly with the QuickTime MPEG extension. This title's MPEG movies are tuned to specifics of a hardware decompressor.
- The Performa 6205CD may hang when playing long (CDi or Video CD) movies. We are working to solve this problem.
- Some third-party audio boards interfere with synchronization. If you are having synchronization problems and have your sound output from a device other than the internal sound out, try changing to the internal sound device.
- Video CDs with audio tracks are encoded in such a way that the Audio CD Access extension prevents you from seeing the MPEG movies. Remove the Audio CD Access extension, restart your computer, and you should be able to see the MPEG movies on such a disc.

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Tech Info Library Article Number:21026



Tech Info Library

Apple QuickTake 200: Read Me Document (2/97)

Revised: 2/26/97
Security: Everyone

Apple QuickTake 200: Read Me Document (2/97)

=====

Article Created: 26 February 1997

TOPIC -----

This article contains the QuickTake 200 Software ReadME document.

DISCUSSION -----

About the QuickTake 200 Software

=====

This file includes important information about using your QuickTake 200 camera and the Camera Access software. Because this information is not included in the documentation accompanying the product, you may want to print it. To do so, choose Print from the File menu.

Installing the Software

=====

Install the Apple QuickTake 200 software before installing PictureWorks NetCard, Adobe PhotoDeluxe, or Adobe PageMill.

Using Video-in

=====

- Your computer must be compatible with Apple Video Player to use the Camera Access Video-in function. Some CPUs require specific settings. Check your computer user's manual.
- If you have a hardware play-thru video system (for example, Power Macintosh 6100AV, 7100AV, or 8100AV or Macintosh LC 630), video play-thru cannot be turned off via "Video Playthru Off During Record" in the Video-In menu.

Recording a Movie or Video

=====

- When recording with compression, you might need to hold down the mouse button longer to stop the recording process. (In most instances, a click will stop the process.)
- Sound is not supported.

Editing Movie Files

=====

When copying and pasting a movie frame into another movie within the Camera Access software, do not resize the source movie frame. (Resizing will distort the images.)

PowerBook 500 Series

=====

- Set the PowerBook Setup in the Control Panel to Compatible and then launch Camera Access.
- Don't use the Sleep command or close the PowerBook cover while the camera is connected to the Powerbook. This will cause your system to freeze.

Using the QuickTake Plug-ins

=====

- To use the Apple QuickTake 200 plug-in with PhotoDeluxe, drag a copy of the plug-in from the Goodies folder to the Plug-ins folder of the PhotoDeluxe application.
- The QuickTake 200 plug-in is compatible with Photoshop 3.0 and later; it is not compatible with PhotoFlash.
- You can open only one thumbnail at a time. (Even when multiple thumbnails are selected, only the first one will open.)

Closing the QuickTake 200 Panel

=====

When your camera is not connected to your computer, close the QuickTake 200 panel. Leaving it open will slow down your mouse response.

Creating Floppy Disks From the CD-ROM

=====

1. Open the "QuickTake 200 disk image" folder.

2. Click the Disk Copy icon.
3. Click the "Make a Floppy" button.
4. Select QuickTake 200 Software.image.

A message appears: "Please insert a floppy disk." The disk is erased and reformatted, and the QuickTake software is copied onto the disk. A second message appears: "Build floppy operation completed successfully."

5. Click Quit.

Your floppy disk can now be used to install the software.

IMPORTANT:

Don't drag the file onto the Disk Copy icon. You must follow the above procedure.

AppleTalk =====

It is recommended that you turn off AppleTalk when using a 68K CPU (Non-Power Macintosh computer). (Open the Chooser and turn off AppleTalk.)

Using Open Transport =====

It is recommended that you use the Modem port for Camera connection when configuring the port using OpenTransport.

Performa 6420 AV =====

When using Avid Cinema Extension, you should set the Monitor control panel to 32,000 colors (16 bits). Turn off the Avid Cinema Extension when you set to 256 colors.

Printing and Downloading Camera Images Simultaneously =====

There is a conflict in communication when trying to print and open an image from the camera at the same time in a 68K machine. If this problem occurs, please wait until printing is complete, then try opening the image again.

TIFF File Format

=====

Camera Access does not support compressed TIFF files.

Power-Off Problem

=====

On extremely rare occasions, the QuickTake 200 camera might not power off. If this happens, disconnect the camera from the optional AC power adapter. Open the battery door to reset the camera.

Technical Support for Adobe PhotoDeluxe and Adobe PageMill

=====

- For Adobe PhotoDeluxe support, call 206-628-5726.
- For Adobe PageMill support, call 206-628-5731.

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Tech Info Library Article Number:21027



Tech Info Library

Apple VideoPhone: Read Me (2/97)

Revised: 2/26/97
Security: Everyone

Apple VideoPhone: Read Me (2/97)

=====

Article Created: 26 February 1997

TOPIC -----

This article contains the ReadMe file for Apple VideoPhone.

DISCUSSION -----

About Apple VideoPhone 1.5.1

=====

Apple VideoPhone is a new program for Power Macintosh computers that allows you to audio conference with any CoolTalk user on the Internet, whether they are using a Power Macintosh computer, or other platforms supported by Netscape CoolTalk. Apple VideoPhone takes advantage of Apple's QuickTime Conferencing technology and the built-in sound capabilities of Power Macintosh computers.

Apple VideoPhone also allows you to conference using live video in addition to audio with other Power Macintosh computers using the MovieTalk protocol. In this mode you can also conference with multiple parties.

Farallon Timbuktu Pro is a program that can be used with Apple VideoPhone to allow users to share applications in real time while conferencing.

For updates or more information about Apple VideoPhone and QuickTime Conferencing, check out our web site at: <http://qtc.quicktime.apple.com/>

Hardware Requirements

=====

- * Power Macintosh computer
- * 16 megabytes of RAM
- * PlainTalk microphone
- * Access to a TCP/IP based network
- * A video source such as the QuickTime Conferencing Camera 100 (optional)
- * External speakers (optional)

Note: If using Apple VideoPhone in conjunction with Netscape Navigator 3.0 or

later, it is recommended that you have at least 24 megabytes of RAM.

Software Requirements

=====

- * System 7.5.3 or later (System 7.5.5 strongly recommended)
- * QuickTime 2.5
- * OpenTransport 1.1.1 or later

Installation Tips

=====

The Apple VideoPhone installer checks for the correct versions of System Software, QuickTime and OpenTransport before it allows installation of Apple VideoPhone. All the required software can be downloaded from the Internet at the following locations:

Apple's software update web site: start at <http://info.apple.com/swupdates/> and log on to one of the FTP sites.

America Online: use the keyword applecomputer

CompuServe: on the GO APLSUP forum

Important Information About Version 1.5.1 of Apple VideoPhone

=====

* You will see warnings if you are trying to install Apple VideoPhone 1.5.1 on a computer that already has a 1.0.x, 1.1 or 1.4 version of QuickTime Conferencing installed. Apple VideoPhone 1.5.1 is not designed to support the QuickTime Conferencing H.320/ISDN Card. If you still wish to install Apple VideoPhone on a computer with the QuickTime Conferencing H.320/ISDN Card installed, you must remove the "QTCSound" file from the Extensions folder inside your System Folder before proceeding with the install. Previous versions of Apple Media Conference or Connectix VideoPhone may not function optimally after installing Apple VideoPhone 1.5.1.

* You may experience a problem with some Internet Service Providers (ISP) where your modem connection is periodically dropped. The symptoms of this are that audio and video stops updating, but the application does not close. If this occurs, it is best to quit Apple VideoPhone, disconnect from the ISP, reset your modem, reset your PPP connection, and then relaunch Apple VideoPhone.

* You may notice that Apple VideoPhone automatically redials your ISP a few minutes after the ISP has dropped your modem connection. This is normal if you have configured your Apple VideoPhone preferences to register you on a 411 Directory Server. Apple VideoPhone periodically tries to contact the server, and will try to re-establish the ISP connection if it was closed while the Apple VideoPhone was launched. Unfortunately, you will not be able to make or receive calls once an ISP connection has dropped until you have followed the steps in the paragraph above. To avoid unattended ISP connections, it is best to quit the Apple VideoPhone application before disconnecting from an ISP.

* Using CoolTalk with the RT24 audio compressor is not recommended between two machines connected via ethernet unless they have a router between them. In some cases, users may experience problems resulting from heavy usage in this configuration. Connecting via Internet link (either modem or direct connection) is not a problem.

* Apple VideoPhone is designed to work with MacPPP 2.5.1. Users of other versions of PPP, including MacPPP 2.5 (included with OpenTransport 1.1.1 in the Extras Folder), FreePPP and OT-PPP may experience problems unless they make sure that MacPPP 2.5.1 is selected in the TCP/IP Control Panel before dialing an ISP to use Apple VideoPhone.

Special Information for Power Macintosh 7300, 7600, 8600 and 9600 computers

Apple VideoPhone Lite 1.5.1 installs compression software and extensions that are specifically for video conferencing. If you wish to use other applications that capture video (such as Adobe Premiere or Avid Cinema) use an extension manager to temporarily disable the extensions or follow the instructions below:

- 1) Open the Extensions Folder within your System Folder.
- 2) Select the following files:

- Apple GSM Codec 1.0
- H.261 1.0.4 PowerMac
- H.263 1.0.3 PowerMac
- QTCCoMpoNentDV 2.0

3) Drag them out of the Extension folder and save in a folder outside of the System Folder.

4) Restart.

5) You are now ready to capture video in another application.

6) To use Apple VideoPhone again, place these extensions back into the Extensions folder and restart your computer.

Setup

=====

The Apple VideoPhone installer creates a new folder on your hard drive called "Apple VideoPhone." Look inside this folder for the Apple VideoPhone application icon.

* If using externally powered speakers, it is recommended that you use RCA-style connectors to connect to the left and right audio (the ones marked CD) on the back of the speakers, not to the Audio-in port (the stereo miniplug marked with the Mac icon). This will avoid a problem where low-level audio is cut off.

* The preferences file is now located in the Preferences folder inside the System Folder, in a folder called "Apple VideoPhone." If you have installed over a previous version of Apple VideoPhone, consider copying your old preferences file out of the application folder into this new folder. Most of your preferences will be retained if you do this.

* Connectix Color QuickCam users may experience problems when taking snapshots. Download the "Color QuickCam 2.1a Updater" from the Connectix web site at <http://www.connectix.com/>.

* Apple VideoPhone is not intended for use on a computer running router software.

Launching

=====

* Do not try to launch this version of Apple VideoPhone with less than 3.5 megabytes of available RAM.

* If you wish to transmit a picture of yourself, copy a snapshot into a graphics editor and save it as a PICT file.

* If your preferences are configured to connect to a 411 Directory Server which is unavailable because you don't have access, the server is not running or the server already has the maximum number of connected users, you may receive an error -7974 on launch. If this happens, try launching again. To select another server, it is best to select the server in the preferences dialog, quit the application and relaunch. The 411 Directory Server at live.netscape.com is often busy.

Note: If your ISP assigns a different IP address every time you connect (dynamic addressing) you will need to notify parties of your current IP address before they can call you. Your IP address appears in your TCP/IP Control Panel. In some cases, the address may not update until you actually use an IP service, such as trying to place a CoolTalk call. The 411 Directory Server tries to alleviate the limitations of dynamic addressing. If available, static addressing is preferable.

* Apple VideoPhone checks for an available TCP/IP network. Before you launch Apple VideoPhone, you must configure and activate your TCP/IP Control Panel. If you have a direct Internet connection consult with your network administrator to make sure you have the correct IP address, subnet mask and domain name service information. If you are using a modem or ISDN terminal device, configure your TCP/IP to dial your Internet access account via PPP. Apple VideoPhone will initiate the call on launch if PPP is configured correctly.

* Before you launch Apple VideoPhone, it is recommended that you turn off Virtual Memory (VM) in the Memory Control Panel. VM is NOT recommended for use with any QuickTime application using real time video. On certain Macintosh computers you will not be able to send video unless you turn off virtual memory.

* You may notice that application memory isn't being released promptly after you quit Apple VideoPhone. If this is a problem uncheck the "Load only when needed" checkbox in the options dialog in the TCP/IP Control Panel.

Connecting

=====

* You must allow enough time for a complete disconnection before you try to connect again. Apple VideoPhone currently requires several seconds to completely disconnect from a conference. If you try to connect (or someone tries to connect to you) before you have completely disconnected, you may experience problems. It is best to wait at least 10 seconds between connections.

* Multiparty conferences and maximum sized (2X) video windows require more memory to function well. If you plan to use these features, increase the Memory Requirements Preferred size by at least 1000k per additional party and relaunch

the Apple VideoPhone. To edit Memory Requirements do the following:

- quit Apple VideoPhone (if launched)
- go to the Finder
- select the Apple VideoPhone icon by clicking on it once
- select "Get Info" in the "File" menu
- increase the value in the "Preferred size" box by the required amount
- close the Get Info window
- launch Apple VideoPhone

* You may experience problems calling a person to whom you are already connected.

* Auto answer doesn't work with Apple VideoPhone in the background and Movie Player running in Presentation mode.

* It is possible to access Netscape's 411 Directory Server from a web page. The URL is <http://live.netscape.com/>. The first time you use it, you will be asked by Navigator to pick an application to launch. Be sure to select Apple VideoPhone. You will experience difficulty if you select the Conferencing Helper Application included with Apple VideoPhone. For more information about the proper use of the Conferencing Helper Application, see "Using Conferencing Helper Application" section later in this document.

Audio

=====

* If you are using CoolTalk settings to audio conference, and you see a dialog box notifying you that you don't have the correct type of audio compressors, you can download the audio compressor from Netscape's FTP site at:

<ftp://ftp.netscape.com/pub/cooltalk/mac/netscapeGSMCodecInstaller.hqx>

* When conferencing with a CoolTalk user on a PC, you may find that you cannot hear audio sent by the PC. Some PC sound cards do not support full-duplex sound. Try clicking on the "Hold" button on the Mac side when you want to hear audio from the PC. This will temporarily block the Mac from sending sound. You will have to deselect "Hold" on the Mac when you want to talk. You can also try adjusting the silence sensor in the sound level meter. Asymmetric connections, where one computer is connected to a relatively fast network and the other computer is using a 28.8 modem connection may experience the same problem.

* Full-duplex audio is not supported on the Performa 6320. You will not be able to talk and listen at the same time.

Video

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* When using the H.263 video compressor, you will not be able to resize your self-view window to the largest (2X) size.

* Apple VideoPhone does not run well on multiple monitor configurations. For best results, arrange all Apple VideoPhone video windows on the monitor that is connected to the AV subsystem of your computer.

* Apple VideoPhone may not run properly in videoconferencing mode if launched when Apple Video Player is already running, or if the 1.0 extensions for the Avid Cinema Card are enabled. Quitting Apple Video Player and/or temporarily disabling the Avid Cinema extensions will enhance the video performance of Apple VideoPhone.

Collaboration

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* Video windows within the Timbuktu Pro window will not update unless you select the Timbuktu Pro preference to bypass QuickDraw, however, this will increase network traffic and may have an undesirable effect on video quality.

* Some applications will run very slowly over a Timbuktu Pro connection.

Using Conferencing Helper Application

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The Apple VideoPhone installer places the Conferencing Helper Application inside a folder called "Extras" in the Apple VideoPhone folder. The Conferencing Helper Application can be used to enable Apple VideoPhone to be launched as a helper application from a web page. Netscape Navigator 2.0 or later is pre-configured to recognize the QuickTime Conferencing mime type. For instructions on how to configure other web browsers, consult the instructions on the QuickTime Conferencing Home Page. Additionally, it is recommended that you configure the Macintosh Easy Open control panel by disabling "Always show dialog box" and enabling "Auto pick if only one choice."

The QuickTime Conferencing Home Page

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To find out about the latest QuickTime Conferencing software updates, information, announcements, live broadcast events, questions, answers, and related products, point your web browser at:

<http://qtc.quicktime.apple.com/>

QuickTime Conferencing and Firewalls

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At those sites with Internet firewalls such as corporations, universities or other large institutions it may be necessary to configure the firewall so that QuickTime Conferencing applications can use certain features. This is typically not a problem for Internet Service Providers. Contact your network administrator to send the following information.

* To allow MovieTalk calls to be sent and received at an Internet site, allow outgoing and incoming TCP traffic on port 458.

* To allow MovieTalk media streams to flow outwards through the firewall, allow outgoing UDP traffic with static port 458 and with dynamic port values greater than or equal to 7000.

* To allow MovieTalk media streams to flow in through the firewall, allow incoming UDP traffic with static port 458 and with dynamic port values greater than or equal to 7000.

* To allow CoolTalk to access the 411 Directory Services, allow incoming TCP traffic on port 6499.

* To allow CoolTalk calls to be sent and received at an Internet site, permit outgoing and incoming TCP traffic on port 6500.

* To allow CoolTalk audio streams to flow in through the firewall, allow incoming UDP traffic with a static port of 13000.

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Tech Info Library Article Number:21029



Tech Info Library

Clr StyleWriter 2400, 2500: Vertical Lines Appear Jagged (2/97)

Revised: 2/27/97
Security: Everyone

Clr StyleWriter 2400, 2500: Vertical Lines Appear Jagged (2/97)

=====

Article Created: 27 February 1997

TOPIC -----

When using the High Performance Black Ink cartridge, my Color StyleWriter 2500 (or Color StyleWriter 2400) printer produces jagged vertical lines. However, printing from the color cartridge looks fine. How can I eliminate this?

DISCUSSION -----

The design of the High Performance Black Ink cartridge with its many ink nozzles lets it rapidly print several pages per minute. If the cartridge does not mount so that the ink nozzles are perpendicular to the leading edge of the paper, then jagged lines can result. In order to maintain optimal print quality when using the High Performance Black Ink cartridge, it must be perfectly seated in the printer. Insert the high performance black cartridge in the printer and then move the blue cartridge locking lever up and down several times. DO NOT touch the printhead cartridge when performing this action or the cartridge will not remain properly aligned. This procedure has been very successful in minimizing jagged lines and is recommended for all customers when installing ink cartridges.

If the results are still not acceptable, it may be necessary to use one of the workarounds below which have been successful during testing.

1) Print using the Glossy paper mode which is available in the print dialog box under the 'paper type' settings. This mode will change the way the ink is laid down on the paper and as a result minimize the jagged vertical lines.

2) Print using the color ink cartridge. This helps eliminate the jaggedness because the number of ink nozzles that print black ink in one pass is significantly reduced. The frequency of the jagged lines increases, but their length decreases, making the lines appear nearly straight.

This article was published in the 27 February 1997 "Information Alley."

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Tech Info Library Article Number:21031



Tech Info Library

GeoPort & Express Modem Updater 3.1.1 Read Me (2/97)

Revised: 2/27/97
Security: Everyone

GeoPort & Express Modem Updater 3.1.1 Read Me (2/97)

=====

Article Created: 27 February 1997

TOPIC -----

This article is the GeoPort & Express Modem Updater 3.1.1 ReadMe file.

DISCUSSION -----

Your package includes a software updater for use with the following configurations:

GeoPort Telecom Adapter and one of the following Macintosh models:

- Performa 6360 and all PowerPC processor-based Macintosh and Performa models, except Power Macintosh and Performa 5200, 5300, 6200, 6300 series

GeoPort Telecom Adapter II and one of the following Macintosh models:

- Performa 6360 and all PowerPC processor-based Macintosh and Performa models, except Power Macintosh and Performa 5200, 5300, 6200, 6300 series

GeoPort Internal Modem and one of the following computers:

- Performa 5400 series, 6400 series, and 6360

IMPORTANT:

To use the GeoPort Telecom Adapter II in the United States, Canada, or Japan, version 3.1 or later of Apple Telecom Software is required. To use the GeoPort Telecom Adapter II in all other countries or GeoPort Internal Modem in all countries, version 3.0 or later of Apple Telecom is required. To use the original GeoPort Telecom Adapter with the Power Macintosh 7200 series, 7500 series, 7600 series, 8500 series, and 9500 series, version 3.0 or later of Apple Telecom Software is recommended.

Apple PowerBook Duo 14.4 Modem (internal) and one of the following Macintosh models:

- PowerBook Duo 2300c

Apple PowerBook Express Modem II Card (internal) and one of the following Macintosh models:

- PowerBook 520, 520c, 540, 540c (with a PowerPC processor upgrade)

Note: Some models are not available in all geographic areas.

For the remainder of this document, the term GeoPort Telecom Adapter refers to all GeoPort products: GeoPort Telecom Adapter, GeoPort Telecom Adapter II, and GeoPort Internal Modem.

What this update provides

For Power Macintosh users with GeoPort Telecom Adapter

This update provides support for V.34 protocols, which allow data transfer at speeds up to 33.6 Kbps. Depending on line conditions and the capabilities of the remote modem, your connection speeds may be lower. Common data transfer speeds will be between 16.8 Kbps and 24 Kbps, although they may be higher or lower.

For Express Modem users

This update provides software improvements, but does not provide any speed increase to the Express Modem. For System 7.5.5 users, it is recommended that you install this update.

LocalTalk compatibility with GeoPort Telecom Adapter

If you are using a GeoPort Telecom Adapter on a Power Macintosh 7200 series, 7500 series, 7600 series, 8200 series, 8500 series, or 9500 series, you must disable LocalTalk. To do this, disconnect any LocalTalk devices attached to the printer port (serial devices can remain attached).

Sleep (Power Macintosh and Performa models)

Some Macintosh desktop models, including Power Macintosh 7200 series, 7500 series, 7600 series, 8200 series, 8500 series, or 9500 series, Power Macintosh and Performa 5400 series, 6400 series and Performa 6360, support the Sleep feature to conserve energy. If you select "Sleep" from the Special Menu available on these models while there is an active GeoPort connection, the GeoPort Telecom Adapter will disconnect the call without warning.

Connection (CCL) scripts for Apple Remote Access

Use the following connection script with Apple Remote Access:

GeoPort/Express Modem

This file is installed in both the Extensions folder inside the System Folder and in the Modem Scripts folder inside the Extensions folder. It is installed in

two places to support all versions of Apple Remote Access.

An additional, optional connection script, named "GeoPort/Express Modem CNG," is installed in the same two places. When you use this optional script, the GeoPort Telecom Adapter or Express Modem transmits data calling tones after dialing. Data calling tones allow the remote machine to detect automatically that an incoming call is a data modem call. If you are dialing into a system that supports data, fax and voice calls (such as another GeoPort Telecom Adapter), you should select this connection script in the Apple Remote Access Setup control panel.

Communication settings

If you are using a terminal emulator or communications program that supports the Apple Communications Toolbox, you should select the "Express Modem Tool" from the connection settings menu item. This tool's default settings will always try to establish connections at the highest possible speed with error correction and compression enabled.

Using RAM Doubler

If you are using RAM Doubler from Connectix with Apple Telecom software, you should use RAM Doubler version 1.6.2 or later.

Troubleshooting

Clicking sound from GeoPort Telecom Adapter

If your computer freezes, the GeoPort Telecom Adapter can lose its connection with your computer and may generate a rapid clicking sound. This sound is a temporary side-effect of the lost connection. To stop the clicking, unplug the adapter for a few seconds or restart your computer.

Installing the updater

To install the GeoPort & Express Modem Updater

1. Turn on your computer.

2. Double-click the Installer icon.

An introductory dialog appears.

3. Click Continue.

The Easy Install dialog box appears. Easy Install automatically detects the Macintosh model you are using and installs the software you need.

4. Make sure the hard disk indicated is where you want to install the software. If the wrong disk name appears, click the Switch Disk button until the disk you want appears.

5. Click Install.

A message informs you when the installation is complete. You need to restart your computer in order to use your newly installed software.

6. Click Restart to restart your computer and activate the software.
7. The Installer places a new version of the Express Modem control panel in the Control Panels folder inside the System Folder. Be sure to verify the settings before starting to use your modem software.

What goes where

When you install the software using the Easy Install option of the Installer program, the following files and resources relating to the GeoPort Telecom Adapter or Express Modem are installed on your hard disk.

Hard Disk:

- GeoPort/Express Modem Read Me

Hard Disk: System Folder: Control Panels:

- Express Modem

Hard Disk: System Folder: Extensions:

- AudioTuneUp (GeoPort/Power Macintosh 9500 series with System 7.5.2 only)
- Apple Telecom Modem
- Express Modem Tool
- GeoPort for Power Macintosh (GeoPort configurations only)
- GeoPort Serial Driver (GeoPort configurations only)
- GeoPort Telecom Adapter (GeoPort configurations only)
- GeoPort Telephone Tool (GeoPort configurations only)
- GeoPort/Express Modem (Apple Remote Access CCL script)
- GeoPort/Express Modem CNG (optional Apple Remote Access CCL script, with calling tone)
- Serial Extension (GeoPort and 6100/7100/8100 series only)
- Serial (Built-in) version 1.2.2 (GeoPort/5400/6400 series and 6360 only)
- Shared Library Manager (GeoPort configurations only)
- Shared Library Manager PPC (GeoPort configurations only)
- Telephone Manager Extension (GeoPort configurations only)

Hard Disk: System Folder: Extensions: Modem Scripts

- GeoPort/Express Modem (Apple Remote Access CCL script)
- GeoPort/Express Modem CNG (optional Apple Remote Access CCL script, with calling tone)

Hard Disk: System Folder: System:

- Bell Telephone (sound resource)
- Electronic Telephone (sound resource)

Where to look for Apple Telecom software updates

For the latest updates, visit Apple Computer's World Wide Web site at:
<http://www.apple.com/>

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Tech Info Library Article Number:21033



Tech Info Library

AppleTalk Router: Differences, Seed & Non-Seed Ports (2/97)

Revised: 2/27/97
Security: Everyone

AppleTalk Router: Differences, Seed & Non-Seed Ports (2/97)

=====

Article Created: 27 February 1997

TOPIC -----

What is the difference between a seed port and a non-seed port on an AppleTalk router?

DISCUSSION -----

In order for routers to perform their role of routing traffic to its intended destination, they must know the identity of each network segment on the network. In the case of a LocalTalk segment, this identity is established by a network number. In the case of EtherTalk or TokenTalk segments, the identity is established by a range of contiguous network numbers known as a network range. For each network segment on an AppleTalk network, at least one router must supply the network number or range that uniquely identifies the segment.

Zone names are also linked to network segments, but do not have to be unique. This allows network segments at different locations to encompass logical groups of users. For instance, a zone named "Sales Support" could span several floors in a building with a number of network segments joined by routers.

A seed port is defined as a router port configured with a network number or network range and a zone name or zone list that identifies the network segment it is attached to. Every network segment on an extended network will have at least one router seed port active to supply its identity. A network segment may have more than one router supplying seed information, but if this is the case, each of these must absolutely agree on the information being supplied or chaos will result. Some, but not all, routers will generate alerts on startup if they detect conflicting seed information on a network segment.

A non-seed port is defined as a router port configured to obtain the network number or network range and a zone name or zone list, that identifies the network segment it is attached to from a seed router port attached to the same network segment. When a non-seed port is activated, it queries the network segment for configuration information which gets supplied in the form of a reply

from a seed router on the same segment.

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Tech Info Library Article Number:21034



Tech Info Library

Apple Internet Router and TCP/IP (2/97)

Revised: 2/27/97
Security: Everyone

Apple Internet Router and TCP/IP (2/97)

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Article Created: 27 February 1997

TOPIC -----

Will the Apple Internet Router route TCP/IP between network segments? What about the IP Wide Area Extension?

DISCUSSION -----

The Apple Internet Router is an AppleTalk-only router. It will not route any other protocol, including TCP/IP.

The Apple Internet Router AppleTalk/IP Wide Area Extension provides a method for tunnelling AppleTalk traffic between two AppleTalk routers across a TCP/IP-only backbone network segment. This is accomplished by encapsulating AppleTalk packets inside of TCP/IP packets. The IP Wide Area Extension does not route TCP/IP, it rather provides a way to join AppleTalk LANs using a TCP/IP wide area link.

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Tech Info Library Article Number:21035



Tech Info Library

Network Assist: Not Authorized to Launch Message (2/97)

Revised: 2/27/97
Security: Everyone

Network Assist: Not Authorized to Launch Message (2/97)

=====

Article Created: 27 February 1997

TOPIC -----

When I try to launch Network Assistant, I get the following At Ease message:
"You aren't authorized to use this application. Contact your At Ease Administrator for more information." What is wrong?

DISCUSSION -----

This can happen if the specific workstation also has Network Assistant installed. In this case, if the user logs into At Ease as a regular user or as a Workgroup Administrator without explicit Network Assistant privileges (the default is to deny these), they will get this message.

This is a security feature of At Ease. The user will need to log back into At Ease as an At Ease Administrator or Workgroup Administrator (If Network Assistant privileges have been added). If they are neither an Administrator nor a Workgroup Administrator with Network Assistant privileges, they should contact their Network Administrator to get their privileges edited. This is done by opening the <user name> from within At Ease Administration, selecting "Privileges", and selecting Network Assistant privileges.

IMPORTANT: A user will be able to launch At Ease Administration, Network Assistant Security, or User and Group Manager without getting this message.

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Tech Info Library Article Number:21036



Tech Info Library

QuickTime for Windows: Troubleshooting Tips (2/97)

Revised: 2/27/97
Security: Everyone

QuickTime for Windows: Troubleshooting Tips (2/97)

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Article Created: 27 February 1997

TOPIC -----

This article contains error messages and problems related to installation and how to resolve them. This information is extracted from Apple's Developer Technote 1074.

DISCUSSION -----

Troubleshooting QuickTime For Windows

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For most installation problems you should first check the QTW version that is installed. If it is a version earlier than 2.1.2, you should try upgrading first. This resolves a lot of installation problems. The interactive way to determine the installed version of QuickTime for Windows is to run Movie Player (player.exe in the Windows directory) and click on Help -- About Movie Player.

The current version of QuickTime is available from the QuickTime web site at www.quicktime.apple.com or from the online Apple Software updates at <http://info.apple.com/swupdates>.

Errors During Installation

=====

- If the installer reports an error indicating that it can't write to a file or that the file is being shared by another application, reboot the system. You may want to try bypassing the startup documents by holding down the shift key or by starting in Windows 95 "safe mode".
- If the installer reports an error during the "modifying .INI files" stage, the problem is that your WIN.INI file is too big. The QTW installer calls Windows' SetProfileString(), which fails if Win.ini is larger than 32KB. This is most commonly caused by the file becoming clogged with hundreds of lines of

PostScript font declarations or something similar.

The workaround is to rename WIN.INI to something else, then install QuickTime for Windows. This creates a new WIN.INI that has just a few lines in it. You can then use a text editor to move those lines to the appropriate sections near the beginning of the big .INI file. Delete the small WIN.INI and rename the big file back to WIN.INI.

- A corrupted directory could cause installation problems. Run the Scandisk utility included with DOS and Windows 95. Windows 3.x users must exit to DOS to run Scandisk.

An Error During Re-Install

=====

Sometimes when you do a re-install using the "Reinstall QuickTime" icon you may receive an error message saying that the QTINSTAL.EXE file is missing. If you look for this file, you will find that it really is missing! Because this is your executable installer file, you need to re-install from the original installation location (CD-ROM, network server, diskette, etc.)

Fixing Audio Break-up Problems

=====

Some audio cards and drivers use a large amount of CPU time. This can cause break-up of the audio accompanied by poor video performance. The original SoundBlaster Pro, for example, has problems when the total audio data rate exceeds 22050 bytes per second. To improve performance, the audio data rate can be limited by the use of several settings in the QTW Control Panel's More|Audio screen. Here are two ways to limit the rate to 22050:

Step 1

For mono audio at 22050 bytes per second, set:

Sample Rate Requested hz: 22050

Sample Depth: 8 bit

Channels: Mono

OR

Step 2

For stereo audio at 22050 bytes per second, set:

Sample Rate Requested hz: 11025

Sample Depth: 8 bit

Channels: Stereo

NOTE:

Automatic Rate Adjustment should only be selected if your only performance problem is the audio slowly drifting out of synch with the video. To save these settings, click Close, and restart Windows before retesting performance.

Audio-Video Synchronization Problems

=====

QTW 2.1.2 contains an automatic-audio-rate-adjustment feature which was meant to correct audio playback problems on systems that contain an ESS sound chip. While this goal is usually achieved, on some systems undesirable side-effects such as high-pitched sound may occur.

The solution to this problem (when it occurs) is as follows:

- 1) Go to the QuickTime Control Panel and select More--Audio.
- 2) Change the Sample Rate-Requested hz: to "default".
- 3) Make sure that Automatic Rate Adjustment is selected.
- 4) Click Close, and then restart Windows (to be on the safe side).
- 5) Play the calibration movie, SAMPLE.MOV, from the Windows directory.
This recalibrates the sound chip.
- 6) Exit Movie Player and go back to the QuickTime Control Panel.
- 7) Select More|Audio and deselect Automatic Rate Adjustment.
- 8) Click Apply, and then Close. Sound should now be fine.

Encountering DynaLink Errors

=====

A Dynalink error may occur if, for some reason, there are older versions of QTW files installed. This would only occur in 16-bit QTW.

To resolve this problem, you should first try reinstalling QTW 2.1.2, making sure that you select the Check for Existing Versions option during installation. See the Installation Dialogs section of this Note for more details.

If the problem still occurs, you are probably running an application from a read-only volume, such as a CD-ROM, which has an older version of QTW on it. Your only option at this point is to uninstall QTW 2.1.2 (see the section Un-installing QuickTime for Windows). Then you can install your application from the CD-ROM which will install the required early version of QTW.

Fixing Video Draw Problems

=====

If QuickTime for Windows doesn't recognize or falsely recognizes the display board, or if you simply suspect that your problems are related to drawing the Movie image on the screen, you need to change the Video Draw Method. The recommended way to do this is with the QuickTime Control Panel; however, it can also be done by editing the QTW.INI file.

To do this from the Control Panel, follow these steps:

- 1) Select More--Video--Draw Method from the QuickTime Control Panel.
- 2) Change the Optimization to: Driver.
- 3) Click Close, and restart Windows (to be on the safe side).
- 4) If that doesn't work, try the other Optimizations. They are listed in order

of speed (fastest to slowest), so try the faster ones first.

Editing the QTW.INI file, however, is not recommended. The reason is that it's easy to get it wrong. The only time you might have to do this is if your video is so messed up that you can't even bring up the Control panel without crashing. In that case, you need to edit the QTW.INI file.

To do this by editing the QTW.INI file, add or change the [Video] section of QTW.INI to read:

```
[Video]
Optimize=Driver
```

This is how you fix 16-bit QTW. To fix 32-bit QTW, you change the Section name from [Video] to [Video 32]. If 'Driver' doesn't work, try 'BMP', 'RAW', and 'DIB'.

MPEG and QuickTime for Windows =====

Currently, there are no known MPEG boards that work with QTW. In the past, the REALmagic MPEG boards did work with QTW; the latest REALmagic boards, however, do not. Those users with old REALmagic boards may be able to play MPEG videos through QTW, but only under the following configuration:

- Windows 3.1
- One of the discontinued REALmagic boards: ReelMagic, REALmagic Lite, or REALmagic Rave
- The discontinued REALmagic driver, version 2.01.

Most users will not have this configuration and, therefore, must play MPEG videos using the application or method provided with their MPEG board.

Because there was support for MPEG through QTW in the past, versions of QTW 2.0.0 - 2.1.0 associate .MPG files with the QuickTime Movie Player. This means that when you open a .MPG file, Movie Player will launch and attempt to play the MPEG video. Now that MPEG support for QTW is no longer available, Movie Player will still launch but display a message stating that QuickTime cannot play this video. The problem was fixed in QTW 2.1.1 by removing the .MPG file association.

This file association problem in the earlier versions led some hardware manufacturers to ask their customers not to install QuickTime or applications that install QuickTime. These manufacturers are not aware of the fix. Thus, any users concerned about installing QTW because their computer manufacturer recommends against it should feel safe to install QTW 2.1.2 and applications that install QTW 2.1.1 or later.

Steps to Ensure That an Old Installer Doesn't Associate .MPG Files With QuickTime =====

If you are installing an application that installs a version of QTW earlier than version 2.1.1, you should follow the steps below to ensure that the old installer doesn't associate .MPG files with QuickTime:

- 1) Check the current file association for .MPG files and make a note of it.
- 2) Install QTW 2.1.2.
- 3) Install the application.
- 4) Check the file association for .MPG files again.
- 5) If the file association for .MPG files was not changed, you are done. If it has changed, proceed to step 6.
- 6) Change the .MPG file association back to what it was in step 1 (see your Windows manual or below if you are unsure how to do this).
- 7) Reinstall QTW 2.1.2 since it was overwritten by an older version.

The reason this series of steps works is because when the application's installer attempts to install the older version of QTW in step 3 above, the installer will see that there is already a newer version installed and skip the QTW part of its installation. However, there is a possibility that the application's installer was not written to notice that a newer version of QuickTime was already installed and, as a result, the older version of QTW will be installed. This is what would cause the .MPG file association to be changed in step 4 from what it originally was in step 1. You can then correct the problem by changing the .MPG file association back to what it was and then reinstalling QTW 2.1.2.

Variations in Methods for Changing .MPG File Association

=====

The method for changing the .MPG file association will vary depending of the version of Windows being used. For Windows 3.1, in the File Manager, you need to select Association from the File menu. For Windows 95, you need to open an explorer window and select Options from the View menu. Then, you click on File Type and edit the file association.

NOTE:

If the file association for .MPG files was changed by an earlier installation of QTW, installing QTW 2.1.1 or 2.1.2. will not restore the file association back to what it originally was. Thus, .MPG files will continue to launch QuickTime, even with the new version installed. You need to manually correct the file association using the method described above. If you don't know what the original .MPG file association was, you need to contact your MPEG vendor to get it.

Un-Installing QuickTime for Windows

=====

QuickTime for Windows v2.1.2 has an un-installer that works with Windows 95 and Windows NT. It does not work, however, with Windows 3.1.

There are several reasons why you may want to un-install QTW 2.1.2. For example,

you may want to free up disk space, or you may need to run an application from a CD-ROM that requires an older version of QTW. You should not uninstall QTW to free up memory because, when QTW is not being called, it is not loaded into memory at all and therefore does not use any unnecessary overhead.

If you must uninstall QTW 2.1.2 and you're using Windows 3.1, remove all files in the Windows directory and Windows System directory with the date of 8/27/96 and time stamp of 2:12:00AM. The only file you do not want to delete is the 2.1.2 installer file, so that you can reinstall QTW 2.1.2 in the future. This is the safest way to manually uninstall QTW.

Follow these steps to manually un-install QTW:

- 1) In the File Manager, go to the Windows directory.
- 2) Select View--Sort by date
- 3) Click and select the first file with the date of 8/27/96 and time stamp of 2:12:00AM.
- 4) Shift-Click the last file in the list with the same date and time stamp so that all files with this date and time stamp are highlighted.
- 5) Control-Click on the QTINSTAL.EXE file so that you don't remove the 2.1.2 installer. This file should no longer highlighted after you Control-Click. NOTE: For 32-bit, it's QT32INST.EXE, not QTINSTAL.EXE.
- 6) Delete the highlighted files.
- 7) Repeat steps 1 through 6 for the Windows System directory but skip step 5, since the QTINSTAL.EXE file doesn't exist in this directory.

This article appeared in the 27 February 1997 issue of the Information Alley.

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Tech Info Library Article Number:21037



Tech Info Library

Network Server: Determining Filesystem Usage (2/97)

Revised: 2/27/97
Security: Everyone

Network Server: Determining Filesystem Usage (2/97)

=====

Article Created: 27 February 1997

TOPIC -----

How can I determine how full filesystems are on an Apple Network Server?

DISCUSSION -----

Typing the following command in an AIX command shell will return the number of blocks, number of blocks free, and percent used in each mounted filesystem.

```
df -k
```

As a general rule of thumb, any filesystem more than 90% full should be expanded to avoid potential problems. A full filesystem can result in a server crash.

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Tech Info Library Article Number:21038



Tech Info Library

QuickTime for Windows: Control Panel Tips (2/97)

Revised: 2/28/97
Security: Everyone

QuickTime for Windows: Control Panel Tips (2/97)

Article Created: 28 February 1997

TOPIC -----

This article describes some QuickTime for Windows Control Panel tips.

DISCUSSION -----

The QuickTime Control Panel is useful to verify your setup. You can also use it to customize your installation. The Tech Info Library Article titled "QuickTime for Windows: Troubleshooting Tips" provides examples of when you may want to modify the QuickTime Control Panel.

Here are some QuickTime Control Panel tips.

Tip #1

Click the Verify Setup button from the QuickTime Control Panel.

This either verifies a successful installation with a message No Problems Found, or it displays any missing files designating an unsuccessful installation.

Tip #2

Do not use the Apply button when you've made modifications to the QuickTime Control Panel.

The Apply button writes changes to the QTW.INI file, but will not take effect until after the Control Panel is closed. Therefore, it is better to use the Close button, which asks you if you want to apply your changes if you have, in fact, made changes. When you select Yes, the modifications are actually applied and the Control Panel is closed at the same time.

Tip #3

Restart Windows after making modifications to the QuickTime Control Panel,

especially if you were having problems.

This ensures that changes you made are available when you start the Movie Player.

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Tech Info Library Article Number:21039



Tech Info Library

ADB Devices: Power Requirements Cause Intermittent Failure 4/97

Revised: 4/18/97
Security: Everyone

ADB Devices: Power Requirements Cause Intermittent Failure 4/97

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Article Created: 28 February 1997
Article Reviewed/Updated: 18 April 1997

TOPIC -----

I have been having problems with my PowerBook 5300 ADB devices. I have a mouse, keyboard, and an AppleVision 1710AV display connected. Is there a limit to how much power ADB devices should use? I have replaced my PowerBook logic board and I'm not sure if connecting too many ADB devices is causing the problem.

DISCUSSION -----

There should be no way that the ADB +5V line on the PowerBook 5300 can be "blown out" by connecting too many ADB devices. There is protection circuitry that shuts the ADB +5vdc lines off when the load is exceeded. The protection circuitry is reset when the ADB load is removed.

When too many ADB devices are connected and the current load is too high, to protect the PowerBook the ADB power turns off. The connected ADB devices will stop working when this protection circuitry activates and shuts the ADB power off. When this happens, the ADB devices need to be physically disconnected to reactivate the +5vdc ADB line in the PowerBook. Once the devices have been disconnected and after a few minutes, the protection circuitry on the PowerBook 5300 is reset and the ADB +5 volt line reactivated.

If you connect enough devices to exceed the 200ma ADB specification for the PowerBook 5300, you may think there is a problem with the computer. This may seem like the case when the ADB current draw activates the protection circuitry, and the power is turned off since the external devices stop working.

The PowerBook 5300 ADB supply current and keyboard/mouse current requirements are shown in the charts below. The ADB current of other Apple models is available in technical specifications section of the Tech Info Library. You can locate your specific model by searching for specsht and the Macintosh model you own.

Device	ADB current
PowerBook 5300	Can supply 200mA maximum to connected ADB devices.
Apple Desktop Bus Mouse II	80mA
Apple Design Keyboard (M2980)	under 200mA
Apple Extended Keyboard (M3501)	85mA
Apple Keyboard II (M0487)	100mA

The AppleVision 1710 Display draws different amounts of ADB current based on its power or operating status. An AppleVision 1710 Display powers on when the following conditions exist: the AC switch is on, the display is plugged in, and there are active video signals on the video connector. Even when the display is plugged in and the power switch is on, as long as there is no video signal the display is not powered on.

These are typical ADB values for the AppleVision 1710 and AppleVision 1710AV Displays; variation from unit to unit may be 10%.

Display Device	ADB current AC power off	ADB current AC power on
AppleVision 1710	50mA	0mA
AppleVision 1710AV	100mA	1mA

A keyboard and mouse can reliably be attached to a PowerBook 5300 depending on which keyboard is attached. When also attaching an AppleVision 1710 or AppleVision 1710AV display, it is recommended that you only use the Keyboard II or Extended Keyboard. Under circumstances where the total current for the ADB devices exceeds the 200mA specification for the PowerBook 5300, the ADB +5vdc power may shut off. This disables the ADB devices, such as the mouse and keyboard, but it does not permanently harm the PowerBook 5300.

If you have a question about whether devices will work if they are all connected, you can connect them as an experiment to see if they will work. If the devices do not work because the power requirements are greater than the PowerBook 5300 specification, the ADB devices should be disconnected. Only the configuration that has a total load less than 200ma should be used, but the PowerBook 5300 ADB will not get "blown out" by testing a particular

configuration.

When the PowerBook has been activated, taken out of sleep, or powered up, the AppleVision 1710 and AppleVision 1710AV Display will be activated by the video signal from the PowerBook and the display will power up. Once the display image is active, the ADB current draw from the AppleVision Display will drop close to zero. When the display is powered up, the only current draw on the ADB line is that of the other devices attached to the ADB line, such as a mouse or keyboard.

This article appeared in the 28 February 1997 issue of the Info Alley.

Article Change History:

18 Apr 1997 - Minor edit for clarity.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21042



Tech Info Library

OpenDoc Essentials and TextEditor Object (2/97)

Revised: 2/28/97
Security: Everyone

OpenDoc Essentials and TextEditor Object (2/97)

Article Created: 28 February 1997

TOPIC -----

I installed just the Mac OS 7.6 basics on my computer, which includes OpenDoc and the OpenDoc Essentials; I did not install anything else. When I double-click the AppleDraw Stationary, the "A" button for creating a text area is grayed out. Why?

DISCUSSION -----

The AppleDraw OpenDoc Editor Component is looking for a "Text Editor" Editor Component and can not find one. Therefore you can not create or edit text objects, you can view them only.

Solutions and Workarounds

- Install CyberDog, which will install as part of the CyberDog Editors a text editing editor component, letting you create, edit, and view text objects.
- Visit the OpenDoc Web Site, <<http://opendoc.apple.com/>> and look for a freeware/shareware (F) and commercial (C) text editor components.

The following are examples, and are NOT supported by Apple Telephone Support. This is a partial list, and more are being developed.

(F) BBEdit Lite (OpenDoc)	< http://www.barebones.com/ >
(C) Corda Technologies TextBox	< http://www.corda.com/ >
(C) Digital Harbor WAV	< http://www.dharbor.com/ >
(C) Nisus(r) Writer	< http://www.nisus-soft.com/ >
(C) Claris "ClarisWorks"	< http://www.claris.com/ >

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Tech Info Library Article Number:21044



Tech Info Library

PowerBook Computers: How Cold Temperatures Affect Them (3/97)

Revised: 3/4/97
Security: Everyone

PowerBook Computers: How Cold Temperatures Affect Them (3/97)

Article Created: 3 March 1997
Article Reviewed/Updated: 4 March 1997

TOPIC -----

How can a cold environment affect a PowerBook computer's Power Manager?

DISCUSSION -----

Issue

When a PowerBook computer's Lithium backup battery is exposed to cold temperatures it may cause the PowerBook computer to not keep time or not power on.

Description

A PowerBook computer's Power Manager and Parameter RAM (PRAM) are maintained by the backup battery when the PowerBook computer is either Shut Down or in Sleep mode.

The backup battery used in PowerBook computers is a Lithium battery which behaves differently compared to other battery types in both low-voltage and cold temperature situations.

Lithium batteries when exposed to a cold environment (less than 45 degrees Fahrenheit or 7 degrees Celsius) may either stop sending voltage completely or they may "pulse" full voltage. This inadequacy or inconsistency of voltage sent from the backup battery can corrupt the PRAM and/or Power Manager of a PowerBook computer.

Solution

A PowerBook computer which has recently been exposed to a cold environment (such as the trunk of a car, in a classroom at a school which may not be heated overnight, and so on) should be placed in a warm environment where it can be

warmed to room temperature (more than 50 degrees Fahrenheit or 10 degrees Celsius) before you attempt to power it on.

If the PowerBook computer still does not power on after being allowed to warm up, you should reset the ***Power Manager***. Each model of PowerBook computer has different methods for doing this. For more information on resetting the Power Manager for your PowerBook computer model see the Tech Info Library article 0014449, titled "PowerBook: Resetting Power Manager".

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

Power Manager Reset procedures for all of the Macintosh PowerBook computers will permanently remove a RAM disk, if present, and all of its contents.

*** WARNING ***** WARNING ***** WARNING ***** WARNING ***** WARNING ***

This article was published in the Information Alley on 5 March 1997.

Article Change History:
04 Mar 1997 - Added keyword.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21045



Tech Info Library

PowerBook 3400: Incompatible With FM Radio Extension (3/97)

Revised: 3/4/97
Security: Everyone

PowerBook 3400: Incompatible With FM Radio Extension (3/97)

=====

Article Created: 3 March 1997
Article Reviewed/Updated: 4 March 1997

TOPIC -----

The extension "FM Radio Extension" causes a crash on PowerBook 3400 series computers if it is present when the computer starts up.

DISCUSSION -----

The FM Radio Extension is installed by the TV/FM Software v1.5.3 (or 1.5.4) which comes with the TV/FM Tuner card. There is no reason that this software should be installed on a PowerBook computer since the TV/FM Tuner card cannot be installed in a PowerBook computer.

If you think you may have installed this extension and your PowerBook computer is now crashing while starting up, follow these steps:

Step 1

Restart the computer with the Shift key held down*.

Step 2

After the computer has started up, open the System Folder

Step 3

Open the Extensions folder

Step 4

Remove the "FM Radio Extension" from the Extensions folder.

Step 5

Restart the computer. The PowerBook will restart normally after removing the extension.

* NOTE: The Extensions Manager (accessed by holding down space bar at startup) will not recognize the FM Radio Extension, so you must start up with the Shift key held down which turns off all extensions.

This article was published in the Information Alley on 7 March 1997.

Article Change History:

04 Mar 1997 - Added keyword.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21046



Tech Info Library

Workgroup Server System & Network Software Compatibility (5/97)

Revised: 5/2/97
Security: Everyone

Workgroup Server System & Network Software Compatibility (5/97)

Article Created: 3 March 1997
Article Reviewed/Updated: 2 May 1997

TOPIC -----

Can you tell me which versions of System Software/Mac OS and server software are supported on the various models of Workgroup Servers (WGS)?

DISCUSSION -----

The following list details the server Workgroup server model and type, server software, and Mac OS versions that are supported, and not supported.

These Configurations Are Tested And Supported

68K* Workgroup Server, AppleShare 4.0.2, System 7.1, Classic Networking

PPC** Workgroup Server, AppleShare 4.2.1, Mac OS 7.6, OpenTransport 1.1.1

PPC Workgroup Server, AppleShare 4.2.1, Mac OS 7.6, OpenTransport 1.1.2

PPC Workgroup Server, AppleShare 4.2.1, System 7.5.5, OpenTransport 1.1.1
(with System 7.5.5 SCSI Server Update and PPC Interrupt Extension)

PPC Workgroup Server, AppleShare 4.2.1, System 7.5.5, OpenTransport 1.1.2
(with System 7.5.5 SCSI Server Update and PPC Interrupt Extension)

PPC Workgroup Server, AppleShare 4.2.1, System 7.5.5, Classic Networking
(with System 7.5.5 SCSI Server Update and PPC Interrupt Extension)

PPC Workgroup Server, AISS 2.x, Mac OS 7.6, OpenTransport 1.1.1
(with System 7.5.5 SCSI Server Update and PPC Interrupt Extension)

PPC Workgroup Server, AISS 2.x, Mac OS 7.6, OpenTransport 1.1.2
(with System 7.5.5 SCSI Server Update and PPC Interrupt Extension)

These Configurations Are Supported, But Not Tested

68K Workgroup Server, AppleShare 4.0.2, System 7.5.3, Classic Networking

These Configurations Are Not Supported

68K Workgroup Server, AppleShare 4.0.2, System 7.5.5, Classic Networking

68K Workgroup Server, AppleShare 4.0.2, System 7.5.5, OpenTransport 1.1.1

68K Workgroup Server, AppleShare 4.0.2, System 7.5.5, OpenTransport 1.1.2

68K Workgroup Server, AppleShare 4.0.2, Mac OS 7.6, OpenTransport 1.1.1

68K Workgroup Server, AppleShare 4.0.2, Mac OS 7.6, OpenTransport 1.1.2

Notes

- The 68K (or 680x0-based) Workgroup Servers include: the Workgroup Server 60, Workgroup Server 80, Centris 610, and Quadra 800.

- The PPC (Power PC-based) Workgroup Servers include: 6150, 7250, 8150, 8550, 9150.

- Mac OS 7.6.1 is not supported for use with AppleShare servers.

This article was published in the Information Alley on 3 March 1997.

Article Change History:

02 May 1997 - Added Mac OS 7.6.1 statement.

04 Mar 1997 - Added keyword.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21047



Tech Info Library

PowerBook 500: Sound Manager 3.2.1 Static When Recording (3/97)

Revised: 3/4/97
Security: Everyone

PowerBook 500: Sound Manager 3.2.1 Static When Recording (3/97)

=====

Article Created: 3 March 1997
Article Reviewed/Updated: 4 March 1997

TOPIC -----

I have a PowerBook 520 computer, running System Software version 7.5.5. I just upgraded my QuickTime to version 2.5. Now when I record a sound through the Sound Control Panel, all that gets recorded is static. It did not do this before I upgraded to QuickTime 2.5. What is wrong?

DISCUSSION -----

Issue

There is a conflict between non-PowerPC 500 series PowerBook computers and Sound Manager version 3.2.1, which comes as part of the QuickTime 2.5 installation package.

Workaround

Remove the Sound Manager 3.2.1 extension from the Extensions folder, restart the computer, then record the sound.

This issue does not affect PowerBook 500 series computers that have been upgraded to PowerPC-processors with either Apple's or Newer Technologies' PowerPC upgrade cards.

This article was published in the Information Alley on 4 March 1997.

Article Change History:
04 Mar 1997 - Added keyword.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21048



Tech Info Library

Mac OS 7.6: Incorrect Message With Custom Remove (2/97)

Revised: 3/3/97
Security: Everyone

Mac OS 7.6: Incorrect Message With Custom Remove (2/97)

=====

Article Created: 3 March 1997

TOPIC -----

When I custom remove software using the Install Mac OS application on the Mac OS 7.6 CD-ROM disc, I receive a message saying the software was installed correctly. Was the software removed?

DISCUSSION -----

The software was indeed removed. A bug in the "Install Mac OS" application causes the installed correctly message to appear. If you remove the software using the Mac OS 7.6 Installer (found in the Software Installers folder in the Mac OS 7.6 folder on the Mac OS 7.6 CD-ROM), you will receive the correct message when you custom remove software.

This article was published in the 3 March 1997 "Information Alley."

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21049



Tech Info Library

PowerBook 3400: Starts From System CD By Default (3/97)

Revised: 3/4/97
Security: Everyone

PowerBook 3400: Starts From System CD By Default (3/97)

=====

Article Created: 3 March 1997
Article Reviewed/Updated: 4 March 1997

TOPIC -----

I have a Powerbook 3400 series computer which starts up with the System Software CD as the startup volume if the CD is in the CD-ROM drive when the computer starts up. Is this normal?

DISCUSSION -----

Yes, this is the normal and correct response to having the System CD inserted during the startup (boot) process in these computers. When the computer ships from the factory the Startup Disk Control panel is pre-configured with the CD-ROM as the default startup drive. This is only apparent when the PowerBook 3400 series System CD is actually inserted in the CD-ROM drive.

Resetting Parameter RAM (PRAM) will not disable this default startup setting. In order to disable this default open the Startup Disk Control Panel and select the hard drive as the startup drive.

This article was published in the Information Alley on 6 March 1997.

Article Change History:
04 Mar 1997 - Added keyword.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21050



Tech Info Library

Mac OS 7.6: Printers Aren't Appearing in Chooser (3/97)

Revised: 3/3/97
Security: Everyone

Mac OS 7.6: Printers Aren't Appearing in Chooser (3/97)

=====

Article Created: 03 March 1997

TOPIC -----

After installation of Mac OS 7.6 the Chooser window no longer shows any printers. How can I get my list of printers back?

DISCUSSION -----

It appears that you have inadvertently installed QuickDraw GX, which in turn disables all non-QuickDraw GX printers. If you use the Extensions Manager to disable the GX printer driver, the Chooser will be empty. Installing QuickDraw GX improperly may cause Type 1 Errors in the Finder.

Please follow the instructions from the Tech Info Library article titled "QuickDraw GX: How to Remove".

The QuickDraw GX 1.1.5 Installer is located in the "Software Installers" folder on the Mac OS 7.6 CD-ROM.

This article appeared in the 3 March 1997 issue of the Information Alley.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21053



Tech Info Library

9600 Graphics Accelerator extension: Why Is It There? (3/97)

Revised: 3/10/97
Security: Everyone

9600 Graphics Accelerator extension: Why Is It There? (3/97)

=====

Article Created: 3 March 1997
Article Reviewed/Updated: 10 March 1997

TOPIC -----

I have a Power Macintosh 7300. When I start up my computer and watch the screen as the extensions load, I see a large red X through the icon of one of the extensions. The extension is named "9600 Graphics Accelerator". Is there something wrong? Do I need this extension on my Power Macintosh 7300?

DISCUSSION -----

There is nothing wrong. The file, named "9600 Graphics Accelerator", will do no harm. You may safely remove it from your Power Macintosh 7300 if you wish.

The 9600 Graphics Accelerator extension was included as part of a standard bundle of system software which was installed on Power Macintosh 7300, 7600 (Japan only), 8600, and 9600 systems at the factory. On systems that don't need this extension, a red X will be displayed across the extension's icon when the system starts up. The 9600 Graphics Accelerator extension will not be loaded, and there is no harm done.

Future versions of this system software bundle will not exhibit this behavior.

This article was published in the 10 March 1997 "Information Alley."

Article Change History:
10 Mar 1997 - Added Info Alley information.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21056



Tech Info Library

Find File Does Not Have Enough Memory (2/97)

Revised: 3/3/97
Security: Everyone

Find File Does Not Have Enough Memory (2/97)

=====

Article Created: 3 March 1997

TOPIC -----

When attempting to do a simple file name search with Find File I get a "not enough memory" message. I have 40 MB of physical RAM, virtual memory is off, and the operating system is taking up about 10 MB of RAM. Prior to getting this error, I had set the find file desktop pattern to the blue plaid pattern in the desktop patterns control panel. I decided to remove the desktop pattern from Find File, and the not enough memory message went away. How can change the pattern in Find File and have enough memory?

DISCUSSION -----

Using a desktop pattern on the Find File utility does use a bigger portion of Find File's available memory. To workaroud this, increase the memory for the Find File utility because it is actually an application.

To increase the memory for Find File:

Step 1

Make sure you have Quit the Find File utility.

Step 2

Open the Apple Menu Items folder in the System Folder

Step 3

Highlight the Find File utility and select Get Info from the File menu

Step 4

Increase the Preferred memory size to 560.

Step 5

Close the Find File Info window.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21057



Tech Info Library

Energy Saver: Saving Preferences (3/97)

Revised: 4/21/97
Security: Everyone

Energy Saver: Saving Preferences (3/97)

=====

Article Created: 3 March 1997
Article Reviewed/Updated: 4 March 1997

TOPIC -----

My Energy Saver software doesn't appear to be working properly. I used the Energy Saver control panel to schedule a specific shutdown time. The computer shuts down automatically, but not at the time I designate. What's wrong?

DISCUSSION -----

The Energy Saver software is not saving your request correctly. This can occur if the control panel is closed while displaying the "Scheduled Startup & Shutdown" options in Energy Saver's window. There is a workaround. Follow these steps to ensure your startup and shutdown settings are saved:

STEP ONE

Open the Energy Saver control panel. Set startup and shutdown times for the computer as desired.

STEP TWO

Click the "Sleep Setup" button in the Energy Saver control panel window.

STEP THREE

Close the Energy Saver control panel.

This issue will be addressed in a future revision of the system software.

Article Change History:
04 Mar 1997 - Edited for clarity.

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Tech Info Library

Apple Network Server: Setup & Config a PPP Client In AIX (2/97)

Revised: 3/10/97
Security: Everyone

Apple Network Server: Setup & Config a PPP Client In AIX (2/97)

Article Created: 4 March 1997
Article Reviewed/Updated: 10 March 1997

TOPIC -----

This article describes how to setup a PPP client and then configure it for AIX on an Apple Network Server.

DISCUSSION -----

Follow the steps below:

Step 1

Add this line to your '/etc/uucp/Devices' file:

Direct tty0 - 38400 direct

Step 2

Create a tty on serial port 1.

NOTE: Be sure to create the tty with rtc/cts flow control and speed 38400.

The following command will create a tty1 on serial port 1:

```
mkdev -c tty -t tty -s rs232 -p sa1 -w s1 -a speed=38400 -a flow_disp=rts
```

Step 3

Edit the 'rc.net' file (located in the '/etc' directory) and turn on IP forwarding by adding this to the last line:

```
no -o ipforwarding=1
```

NOTE: You can type this on the command line, but you will have to type it at

system reboot, so you can put this command in the 'rc.net' file once.

Step 4

Type "smitty ppp" and select Link Control Configuration and add a link using the sample below will work in most cases.

Begin_Table

LINK Configuration

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

	[Entry Fields]
PPP subsystem name	[new]
max server connections	[1]
max client connections	[1]
max demand connections	[1]
max ip interfaces	[2]
max async hdlc attachments	[2]
mrui	[]
async character map	[]
negotiate MRU	yes
negotiate async map	yes
negotiate protocol compression	yes
negotiate address control compression	yes
force authentication	no
chap interval	[]

End_Table

The settings above should let you setup an additional PPP interface in case you choose to setup a PPP server.

Step 5

Start the PPP subsystem by typing the following command:

```
startsrc -s pppcontrold
```

Step 6

Modify your '/etc/ppp/dial_out.example'

All you need to add is name, password, and phone number.

Step 7

Run the dialer script from the '/etc/ppp' directory

```
./dial_out.example
```

Step 8

Wait for a connection and set your default route.

```
route add 0 gateway_address
```

Debugging Information

You can use the 'syslog' file for debugging, this file displays on the root console when activated. You need to modify the 'syslog.conf' file to display debugging information by un-commenting this line in the '/etc/syslog.conf' file:

```
*.debug                /dev/console
```

For this change to become active, you have to refresh the syslogd subsystem by typing:

```
refresh -s syslogd
```

NOTE: We have found it best to use two xwindows for the debugging process. The first window opened can be the console and all debug messages will be sent to it. To use xwindows, exit to command line login from the options button of the dtlogin. At the command line, type "xinit".

Sample Dialer Script

Begin_Table

Below is an example of a dialer script:

```
startsrc -s pppcontrold          # Start the pppcontrold subsystem
sleep 5
USER=ppp                        # User ID
PASSWORD=ppp                    # Password
NUMBER=xxx-xxx-xxxx             # Internet Provider phone number
CHATFILE=./chatfile
cat << EOF > $CHATFILE
\"\"
at
OK
atdt$NUMBER
CONNECT
\"\"
ogin
$USER
ssword
$PASSWORD
EOF
/usr/sbin/pppattachd client $TTY connect /usr/sbin/pppdial -v -f $CHATFILE
sleep 40                        # Wait 40 to establish connection
route add 0 xxx.xx.xx.x         # Set the default gateway
```

End_Table

This article was published in the 6 March 1997 "Information Alley."

Article Change History:

10 Mar 1997 - Added Info Alley information.

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Tech Info Library Article Number:21060



Tech Info Library

Apple Media Tool 2.1.1: Sound Conversion to WAV Fails (3/97)

Revised: 3/5/97
Security: Everyone

Apple Media Tool 2.1.1: Sound Conversion to WAV Fails (3/97)

=====

Article Created: 4 March 1997

TOPIC -----

I am using the AMT Converter, which came with Apple Media Tool 2.1.1, to convert AIFF sound files to WAV sound files. However, the conversion fails and the log reports "...Unknown Error". This fails with both 8-bit and 16-bit AIFF files.

DISCUSSION -----

When you install Apple Media Tool 2.1.1, QuickTime 2.5 is installed. The issue you are experiencing is related to an incompatibility with QuickTime 2.5 and the AMT Converter. In order to convert AIFF sound files into WAV sound files, remove QuickTime 2.5 and install QuickTime 2.1. When you do use the older version of QuickTime, you can successfully convert the sound files.

This article appeared in the 4 March 1997 issue of the Information Alley.

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Tech Info Library Article Number:21061



Tech Info Library

Eiger Labs, Inc. (3/97)

Revised: 3/4/97
Security: Everyone

Eiger Labs, Inc. (3/97)

=====

Article Created: 4 March 1997

Eiger Labs, Inc.

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Sunnyvale, CA 94086

General: 800-463-4437
Local: 408-774-3456
Fax: 408 774-3444
BBS: 408 774-3441 (14.4, 8-N-1)

Worldwide Web Site: <http://www.eigerlabs.com/>

Company Profile:
Manufacturer of PC Card storage, multimedia, connectivity and communications products.

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Tech Info Library Article Number:21062



Tech Info Library

LaserWriter Driver 8.4.2: Change in New Version (3/97)

Revised: 3/4/97
Security: Everyone

LaserWriter Driver 8.4.2: Change in New Version (3/97)

=====

Article Created: 4 March 1997

TOPIC -----

What are the new changes in the LaserWriter 8.4.2 driver that is installed with Mac OS 7.6?

DISCUSSION -----

LaserWriter driver version 8.4.2 had one single fix relating only to Adobe's PageMaker v6.0 and v6.01:

1) A problem was resolved where one extra blank page was printed at the end of every print job.

The updated version of Desktop PrintMonitor v2.0.2 also shipping with LaserWriter 8.4.2 in System 7.6 has a couple of fixes as well. They are:

1) Error type 15 and/or -192 occurring on Mac OS computers with a PowerPC card. These errors only occurred when trying to create, open, or print to a desktop printer.

2) Finder getting confused when a folder's directory ID matches that of the PrintMonitor Documents folder. Finder may not display that folder or its contents, and other strange behavior may occur with that specific folder.

This article appeared in the 4 March 1997 issue of the Information Alley.

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Tech Info Library Article Number:21063



Tech Info Library

Apple CD-ROM Software 5.3.2 Read Me (3/97)

Revised: 3/4/97
Security: Everyone

Apple CD-ROM Software 5.3.2 Read Me (3/97)

=====

Article Created: 4 March 1997

TOPIC -----

This article contains the ReadMe document included with Apple CD-ROM software version 5.3.2.

DISCUSSION -----

About Apple CD-ROM Version 5.3.2

This file includes important information about Apple CD-ROM version 5.3.2, software that lets you use an Apple CD-ROM drive with your Macintosh computer. You need system software version 7.1 or later of the Macintosh Operating System (Mac OS) to use this software. Because this information is not included in the documentation accompanying the product, you may want to print it. To do so, choose Print from the File menu.

Installation Instructions

IMPORTANT The full instructions below assume you have an Apple CD-ROM installation disk. If, instead, you're downloading the Apple CD-ROM software from an online service, follow step 1, below. Next, copy the software onto your hard disk and double-click the Installer icon to start the Installer. Then follow steps 5 through 9.

To install this extension, follow these steps:

1. While holding down the Shift key, choose Restart from the Special menu and continue to hold the key down until you see a message. When a message on the screen tells you that the extensions are off, release the Shift key.

When you restart the Macintosh after you install Apple CD-ROM version 5.3.2, the extensions will turn on again.

2. Make sure the Apple CD-ROM installation disk is locked.

3. Insert the Apple CD-ROM installation disk into a disk drive.

If you can't see the Installer icon, double-click the disk icon to open it.

4. To start the Installer program, double-click its icon.

5. In the Welcome dialog box that appears, click Continue.

After a moment, the Install dialog box appears.

IMPORTANT When you started the Installer, it checked to make sure you have what you need to use the software. If you're missing anything, you'll now see a message that tells you what you need. You won't be able to install the software until you correct the problem. If a dialog box says you don't have the correct system software, you can purchase a new version of system software from an Apple-authorized dealer.

6. Make sure the disk named in the Destination Disk box is the one on which you want to install the software. If it's not, click Switch Disk until the correct disk name appears.

7. Click the Install button.

The Installer takes a few moments to calculate what needs to be done and then begins to install files.

8. Follow the instructions on the screen until the installation is complete.

9. When you see a message reporting that installation was successful, click Restart to restart your Macintosh.

The Apple CD-ROM software is now installed on the hard disk.

Improvements to the Software

Version 5.3.2

For CD Extra discs, the Apple CD-ROM software mounts both the HFS and ISO partitions (if present), allowing AppleCD Player to locate and use the CD Extra data regardless of what partition it is on.

Version 5.3.1

Previously you may have received occasional error messages when scanning (fast-forwarding) between tracks in shuffle and program modes. This problem has been corrected in version 5.3.1.

Version 5.3

The Apple CD-ROM software supports all current Apple CD-ROM drives.

Version 5.2

The Apple CD-ROM software now supports ATAPI CD-ROM drives, such as those used in the Macintosh PowerBook 1400.

Previously system errors could occur when a shared CD-ROM drive was accessed by a client computer. This has been corrected in version 5.2.

Previously the CD-ROM drive may have gone into sleep mode while playing an audio CD. This problem has been corrected in version 5.2.

Version 5.1.7

The Apple CD-ROM software now works with 6x-speed CD-ROM drives.

Version 5.1.6

The Apple CD-ROM software now works with Apple PC Compatibility Cards for PCI-based Macintosh computers.

Version 5.1.5

If you have an Apple CD-600 drive and were using Apple CD-ROM version 5.1, you may have had intermittent problems playing the Peter and the Wolf CD. In version 5.1.5, this problem has been corrected.

Previously a Photo CD with more than 30 sessions would not start up properly. Now a Photo CD of up to 50 sessions (the theoretical maximum number of sessions on a Photo CD) will start properly.

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Updated January 20, 1997

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Tech Info Library Article Number:21064



Tech Info Library

PowerBook 3400: Ethernet/Modem Card Questions (5/97)

Revised: 5/2/97
Security: Everyone

PowerBook 3400: Ethernet/Modem Card Questions (5/97)

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Article Created: 4 March 1997
Article Reviewed/Updated: 2 May 1997

TOPIC -----

Is the modem that came with my PowerBook 3400 series computer made by Apple or Asante? Who supports it? If I had bought a PowerBook 3400 series computer that did not come with this modem, could I buy it later from Apple?

Do I have to use the "dongle" even if I'm not using Ethernet?

Tell me about the phone cord supplied with the computer for this pre-installed, internal modem. Do I have to use this one? Can I not use just a regular phone cord like I have at my house? What will happen if I use a four-wire cord?

Does the internal modem that comes with the PowerBook 3400 support cellular communications?

DISCUSSION -----

Modem Technical Support

The combination Ethernet/modem card included in most PowerBook 3400 series computer configurations in US and Canada (and in all configurations sold in Japan) is actually produced by Asante. However, it is sold as an Apple-labeled (not Asante-labeled) part when it is included in a PowerBook 3400 series configuration. Apple is responsible for all service and support for these configurations.

If US or Canadian customers purchase a PowerBook 3400 series computer without the internal Ethernet/modem card included, Apple does not supply this card as a stand-alone item for later purchase. However, the card can be purchased from Asante. When sold by Asante, the card is Asante-labeled (marked as such on the card) and supported by Asante, not by Apple.

The Ethernet/Modem Adapter

You do not need to use the Ethernet/modem adapter (dongle) which is supplied with your PowerBook 3400 series computer if you are using only one function at a time. Either a modem cord or a 10BaseT Ethernet cord can be plugged into the single port on the back panel of the computer. The port will recognize the type of cable that is plugged into it and it will act accordingly. The adapter is only needed if you want both Ethernet and modem at the same time.

The Phone Cord

The phone cord supplied with PowerBook 3400 series computers is a two-wire (single-line) phone cord in which only the center two pins are connected. The cord has a label on it instructing you to use only a two-wire (single-line cord) for the PowerBook 3400 series internal modem. If you lose or break the cord it should be replaced with a two-wire cord (available at most electronic stores).

If you use a four-wire phone cord, in most cases, it will work just fine. However, it is recommended that you use the two-wire cord because, if the telephone outlet plug to which you connect the cord carries two phone lines, including a second phone line over the outer pins of the RJ-11, the second phone line will be connected to the Ethernet circuit.

Although this should cause no permanent damage, the second phone line will be taken "off hook" and may cease to function properly while the phone cord is plugged into the PowerBook 3400 computer. If when you plug in your modem your other phone line stops working, check to make sure you are using a two-wire (single-line) phone cord.

A four-wire phone cord should work fine with the Ethernet/modem adapter (dongle). The dongle only has two pins which hook up to the wires on the phone jack. A four-wire phone cord will not take the second line "off hook", but you cannot access the second line from your PowerBook 3400 series computer if you use this type of cord.

Cellular Communications

The PowerBook 3400 series computer's internal modem card does not support cellular communications. Future versions of the card may support cellular communications. Asante is looking at possibly supporting cellular with the next revision of the card. They have made no commitment on when that card may be available.

This article was published in the Information Alley on 5 March 1997.

Article Change History:

02 May 1997 - Added cellular communications section.

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Tech Info Library Article Number:21065



Tech Info Library

CyberDog 1.2.x: APOP Password Authentication (3/97)

Revised: 3/4/97
Security: Everyone

CyberDog 1.2.x: APOP Password Authentication (3/97)

=====

Article Created: 4 March 1997

TOPIC -----

I have configured CyberDog to retrieve my mail from my company's POP mail server. However, when I click the "Check" button, an error occurs. A dialog box states, "Could not complete the requested action for unknown reasons." What is wrong?

DISCUSSION -----

This error is pretty non-descriptive, but one of the reasons this error will occur is the mail server is configured to use APOP password authentication. With APOP, the password is sent to the mail server in an encrypted form rather than in clear text.

Currently, 1.2.x versions of CyberDog do not support APOP password authentication. The user must ask their mail administrator to disable the APOP requirement for their account.

NOTE: CyberDog 2.0, when released, will support APOP password authentication, as demonstrated in the currently available CyberDog 2.0b1 beta software. Users can download this version from the CyberDog Home Page at <http://cyberdog.apple.com/>. Note that beta versions of software are not supported by AppleAssist.

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Tech Info Library Article Number:21066



Tech Info Library

About Getting Started With Cyberdog 1.2 (3/97)

Revised: 3/4/97
Security: Everyone

About Getting Started With Cyberdog 1.2 (3/97)

=====

Article Created: 4 March 1997

TOPIC -----

This article describes the Getting Started With Cyberdog 1.2 user's manual, including where to find it and how to read it with Adobe Acrobat Reader.

DISCUSSION -----

The Getting Started With Cyberdog 1.2 user's manual describes how to use Cyberdog to explore the World Wide Web, use e-mail, use Internet services such as Telnet, access AppleShare volumes from the browser, and create cyberdocuments. The manual is located in the Cyberdog Information folder on the Mac OS 7.6 CD-ROM disc. (The Cyberdog Information folder is located in the Additional Mac OS Information folder, which is in the Mac OS 7.6 Information folder.)

You must use the Adobe Acrobat Reader program to read this manual on your computer's monitor screen. You can also use the Acrobat Reader program to search for specific text in the manual or to print a copy of the manual.

Installing the Acrobat Reader

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To install the Acrobat Reader:

1. Insert the Mac OS 7.6 CD.
2. Open the Adobe Acrobat Reader folder in the Utilities folder and follow the installation instructions in the file named "Installing Acrobat Reader."

Viewing The Manual

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To view the manual, double-click the manual's Portable Document Format (PDF) icon. The PDF file is located on the Mac OS 7.6 CD, in the "Additional Mac OS Information" folder within the "CyberDog Information" folder. It can also be downloaded from the Cyberdog web site at <http://cyberdog.apple.com/>

The Acrobat Reader program requires more than 3.5 megabytes of memory for proper operation. Two error messages may appear if Acrobat Reader does not have enough memory to open a document. The first message states that the Adobe Type Manager (ATM) couldn't be installed because it requires more memory or additional system software resources. When you click OK to dismiss the message, a second message appears stating that ATM version 3.6 or newer must be installed and that Acrobat Reader is quitting.

Usually, the reinstallation process recommended by these messages is not necessary. Instead, try making more memory available by quitting other applications that are running on your computer. Then attempt to reopen the PDF document.

Using the Acrobat Reader

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If you want more information about using the Acrobat Reader:

- Read the Acrobat Reader On-line Guide (open the file called "Help-Reader.pdf" in the Help folder, located in the Adobe Acrobat Reader folder) for detailed information about using Acrobat Reader.
- Read the file called "Installing Acrobat Reader" (located in the Adobe Acrobat Reader folder in the Utilities folder) for the latest troubleshooting information on the Acrobat Reader, as well as for important information about installing the Acrobat Reader software.

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Tech Info Library Article Number:21067



Tech Info Library

Apple Internet Connection Kit 1.2: Read Me (3/97)

Revised: 3/5/97
Security: Everyone

Apple Internet Connection Kit 1.2: Read Me (3/97)

=====

Article Created: 5 March 1997

TOPIC -----

This article is the Apple Internet Connection Kit (AICK) 1.2: ReadMe file.

DISCUSSION -----

Important information about the Apple Internet Connection Kit 1.2

Before you install the Apple Internet Connection Kit, please read the following information.

Getting Help For Installing and Using Your Apple Internet Connection Kit

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Apple will assist you with the installation and setup of the Apple Internet Connection Kit. Our specially trained telephone support staff can assist you with information on:

- Installation
- Registration
- Configuration

Once you have selected and registered with an Internet service provider (ISP), the provider will be able to assist you with:

- Basic product use
- Application questions or issues
- Billing issues
- Connection questions and problems

Please contact the respective third-party companies regarding any questions or support issues with the following applications:

- Netscape Navigator
- Claris EMailer
- Fetch
- NCSA Telnet
- NewsWatcher

If you are accessing the Internet via a LAN connection, contact your network administrator for help with setting up the Apple Internet Connection Kit.

Telephone support is available Monday through Friday (excluding holidays) from 6 a.m. to 6 p.m. Pacific Standard Time. In Canada, hours are 8 a.m. to 8 p.m. Eastern Standard Time. For the appropriate phone number to call for support, see the support materials that came with your product.

Technical information and product updates for the Apple Internet Connection Kit are available on the Internet at <http://aick.apple.com>.

Apple also provides an excellent online reference source for technical information: the Apple Tech Info Library. You can search through thousands of articles on Apple products, past and present, updated regularly by Apple Support personnel. The Apple Tech Info Library (TIL) is available on the Internet (<http://www.info.apple.com/til.html>), AppleLink (Support -> Tech Info Library), and CompuServe (GO APLTIL).

System Requirements

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- Power Macintosh or Macintosh computer with a 68030 microprocessor or greater
- System 7.5.1 or later; if you have System 7.5.2, you must upgrade to System 7.5.3 or later (System 7.5.3 and System 7.5.5 are included on the Internet Connection Kit CD)
- MacTCP (2.0.6 or later) or Open Transport (1.1 or later)
- 12 megabytes (MB) of random-access memory (RAM), 16 megabytes is recommended. If you have less than you 16 megabytes of RAM, you must turn on virtual memory (VM); see Macintosh Guide for details about how to use VM.
- 25 megabytes (MB) of hard disk space

Installing and Setting Up the Apple Internet Connection Kit

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Make sure you've quit all open applications before you install the Apple Internet Connection Kit.

To install the Apple Internet Connection Kit on your hard drive, insert the Internet Connection Kit CD (or the first floppy disk if installing from floppies). Next, double-click the 'Installer' icon and then follow the instructions on your screen. When installation is complete, click the 'Apple Internet Dialer' icon in the Launcher window and follow the instructions that appear on-screen.

If you already have Netscape Navigator, Fetch, MacTCP or PPP installed on your computer before you install the Apple Internet Connection Kit, a 'Backup Folder' will be created. This folder will contain a document titled 'Restoring Backup Items' with instructions about restoring these files.

If You Already Have an Internet Service Provider

To connect to the Internet using an account you already have with an ISP, choose the Set Up Existing Account command in the Provider menu. You may need to call your ISP to obtain some setup information that is requested in the sequence of panels that appear.

Problems While Creating a New Account

When you create a new account with an ISP by using the Apple Internet Dialer, the Dialer will gather some personal information from you (such as your name and address) and then it will connect to the registration server and open Netscape Navigator. (The registration server is the host computer your Macintosh initially connects to and offers you a list of service providers to choose from.) If your network connection drops (that is, for some reason "breaks") while you are trying to create an account, or there is some problem you encounter with the registration server, you need to quit the Netscape Navigator application. Once you quit, the Apple Internet Dialer will offer you the option to cancel or continue the process of creating a new account. Click Continue to try to create a new account again immediately, or click Cancel and try later.

NOTE: Do not change the phone number that you see in the "Connect to Internet Registration Server" dialog box of the Apple Internet Dialer. If you erase the number inadvertently, you can retype the number in the Number text box. In the United States and Canada, the number is 1-800-247-5067. Outside the United States and Canada, contact your local Apple representative or dealer.

Adding or Modifying Modem Information

If your modem is not listed in the Modem pop-up menu in the Apple Internet Dialer, you can add or modify information about your modem. Please refer to the "Adding or Modifying Modem Information" section in chapter 3 of the printed "Getting Started" manual (and also located inside the 'Documentation' folder on the Internet Connection Kit CD).

Choosing a Modem Port When Using a PowerBook Computer With a PC Card Modem

To choose the modem port when you use a PC card modem, choose the slot ("Upper PC Card slot" or "Lower PC Card slot") that the card is in from the Port pop-up menu in the Apple Internet Dialer.

Each time you remove the card (whether you move the card to a different slot or reinsert the card in the same slot as before), you must reselect the modem port as described in the previous paragraph. To move the card to a different slot, you must quit the Apple Internet Dialer before you move the card.

Using or Deselecting the Launcher

The Launcher window provides an easy way to open programs and other items; you click a Launcher button once to open the item it represents. The Launcher is set to open automatically after you've installed the Apple Internet Connection Kit.

If you don't want to use the Launcher interface for accessing the applications in the kit, open the General Controls control panel and deselect (remove the X) the "Show Launcher at startup time" option.

Saving Internet Service Provider Account Information

You will be asked to write down your user name and password after creating an account with an ISP. You can write the information down on paper, or you can retain this information on your computer by following these steps:

1. Press Command-Shift-3 to take a screen shot of what is on your monitor screen; the screen shot will be saved on your hard drive with the name "Picture 1," and the file can be opened with many applications, including SimpleText.
2. Select the image and copy it into your Scrapbook.

If you forget to write the information down, you will need to contact your ISP to get that information, should you need it. Apple will not be able to assist you with recapturing this information.

Backing Up Your Internet Service Provider Information

Once you have successfully created an account with an ISP, it is recommended that you back up the preferences and settings in case you need to restore them. You can do this by opening the Apple Internet Dialer and selecting Back Up Provider Information from the File menu.

Restoring Your LAN Configuration

If you inadvertently installed the Dialup configuration over your existing Internet LAN configuration, you can restore your settings by following the steps provided in one of the sections below, as appropriate for your MacTCP or your Open Transport system:

If you have MacTCP:

1. Open the 'Internet Connection Kit' folder.
2. Open the folder called 'Backup Folder'.
3. Copy the 'MacTCP Prep' file from the 'Backup Folder' into the 'Preferences' folder inside your System Folder.
4. Restart your machine.

If you have Open Transport:

1. Open the 'TCP/IP' control panel.
2. Choose Configurations from the File menu.
3. In the list of configurations, click Default to highlight it (if it isn't already).

4. Click the Make Active button.
5. Close the 'TCP/IP' control panel.

Connecting to a News Server for the First Time

Connecting to a news server for the first time or switching ISPs can take from one minute to more than 20 minutes, depending on your ISP's configuration. If there is a large number of newsgroups to download from your ISP's news server, the initial connection time could be quite lengthy. Subsequent connections are likely to be much quicker.

Using Open Transport

Open Transport version 1.1 or later is required for use with the Apple Internet Connection Kit. If your computer came with System 7.5.3 or later installed, you already have Open Transport 1.1 or later. If you have a version of system software earlier than System 7.5.3, you can use the System 7.5 Update 2.0 (located on the Internet Connection Kit CD in the 'Mac OS Updates' folder) to install Open Transport version 1.1.

NOTE: It is recommended that you relaunch the Apple Internet Dialer once you have registered with an ISP. Otherwise you may encounter problems the first time Netscape Navigator is launched. This is not necessary for MacTCP users.

Using System 7.5.2

The Apple Internet Connection Kit does not work with System 7.5.2. Please upgrade to System 7.5.3 or System 7.5.5 (located on the Internet Connection Kit CD in the 'Mac OS Updates' folder) before installing this product.

Using Netscape 2.0

The Installer will place Netscape 3.0 on your disk without removing Netscape 2.0. If you decide to use Netscape 2.0 instead of Netscape 3.0, you will not be able to register with a new ISP using the Apple Internet Dialer because Netscape 2.0 is incompatible with the updated system software that has been installed. You should only attempt to use Netscape 2.0 if you have already established an account with an ISP and do not wish to create a new account.

Using Telnet 2.6

The NCSA Telnet 2.6 application will not operate correctly unless you have created an account with an Internet service provider or you have set up your LAN connection.

Using the Correct Version of MacPPP

The Apple Internet Connection Kit requires MacPPP version 2.5.1 or later. If you have a version of MacPPP earlier than version 2.5.1 installed on your machine, you should replace it with the version provided in your package. The Apple Internet Connection Kit Installer does this for you automatically. Older versions of MacPPP, including MacPPP 2.1.4 and 2.2, are not compatible with the Apple Internet Connection Kit and should not be used. Other implementations of

PPP are not supported.

To find out what version of MacPPP you have, open the 'Extensions' folder inside your System Folder. Click the icon for the 'PPP extension', and choose Get Info from the File menu.

Using SLIP Software

The Apple Internet Dialer is configured to use the MacPPP software that is included with this kit. InterSLIP software is included with the Apple Internet Connection Kit as a convenience, but it will not work with the Apple Internet Dialer. If you need to use a SLIP connection, contact your Internet service provider for instructions on setting up and configuring your system using SLIP software.

Troubleshooting Insufficient Memory Messages

If you are attempting to run several Internet applications simultaneously and you see a message indicating that your system does not have enough memory to run an application (or if you see an insufficient memory message the first time you attempt to use the Apple Internet Dialer), you can try one of the following:

- Close all unnecessary applications.
- Turn on virtual memory (VM); see Macintosh Guide for details about how to use VM.
Note: For best performance, never set VM to more than twice the amount of physical RAM (if you have a 12 MB system, VM should be no more than 24 MB).
- Install more RAM.

What Is Installed in Your System Folder?

After doing an Easy Install, the Apple Internet Connection Kit puts the following items in various places in your System Folder:

- Apple Guide 2.0.2
- ATM Font Database
- ObjectSupportLib 1.1.1 (AppleScript document)
- PPP 2.5.1 (MacPPP) extension and (if necessary) PPP Preferences (Preferences folder)
- MacTCP 2.0.6, MacTCP Prep, MacTCP TokenRing extension, Hosts file (all are installed only if you do not have OpenTransport)
- Internet Config extension and Internet Config Preferences
- Internet Dialer Folder (Preferences folder)
 - Modem Information
 - Internet Dialer Prefs
 - reg server
- Launcher 2.8, and Launcher Preferences
- Netscape preferences (Preferences folder)
- Additional fonts

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Tech Info Library Article Number:21069



Tech Info Library

Cyberdog 1.2.1: Read Me File (3/97)

Revised: 3/5/97
Security: Everyone

Cyberdog 1.2.1: Read Me File (3/97)

Article Created: 5 March 1997

TOPIC -----

This article contains the Read Me document for Cyberdog 1.2.1.

DISCUSSION -----

About Cyberdog 1.2.1

What is Cyberdog?

Cyberdog is a suite of Internet components that allows you to browse the World Wide Web, receive and send e-mail, read articles from Usenet newsgroups, browse AppleTalk zones and servers, exchange files with FTP, and log into other computers with Telnet. Cyberdog provides tight integration between these components, and with other OpenDoc applications. Cyberdog also allows you to customize your use of the Internet. These capabilities make Cyberdog more appropriate for Internet-savvy users.

System Requirements

Cyberdog requires a Power Macintosh and at least 16 megabytes of memory. (If less than 16mb of RAM is installed in your computer, use the Memory control panel to turn on Virtual Memory and set the amount of memory to 16M.) Cyberdog also requires System 7.5.3 or later, OpenDoc version 1.1 or later, and MacTCP 2.0.4 or later or Open Transport 1.1 or later with TCP/IP installed and configured.

IMPORTANT Install OpenDoc 1.1 or later before installing Cyberdog.

Connection Requirements

Cyberdog requires that you have Internet connectivity through either a dial-up connection with an Internet Service Provider (ISP), or a local area network (LAN) with an Internet connection. Before using Cyberdog, check that you have

such service. If not, you can use the Apple Internet Connection Kit to register and configure your computer with an ISP, contact an ISP directly, or contact your network administrator.

Using the Mail System

To use the Cyberdog mail system you will need an SMTP/POP3 account from your ISP or your network Intranet services group. If you do not already have a mail account, you will need to obtain one. Once Cyberdog has been installed, set up a connection to your mail server by selecting the "Mail & News Setup" item from the Mail/News menu.

If you are currently using Internet Config 1.2 or later and have set up your mail account, your Cyberdog mail connection will already be configured. If you already use Internet Config, please make sure you upgrade to version 1.2 or later.

QuickTime

To play movies and sounds in Cyberdog you need to have QuickTime version 2.1 or later installed.

Reporting Problems

To report problems with Cyberdog 1.2.1, please consult our Feedback Web Page at [<http://cyberdog.apple.com/feedback.html>](http://cyberdog.apple.com/feedback.html)

Important Notes

For a complete list see

[<http://cyberdog.apple.com/br/releasenotes.html>](http://cyberdog.apple.com/br/releasenotes.html)

1. Enclosures sent to users of Claris EMailer and America Online must be sent in Plain Text mode (as opposed to Rich Text) in order for the enclosures to be received correctly.
2. Plain Text enclosures are sent in the binhex format.
3. Cyberdog 1.2.1 Cyberbuttons are not compatible with previous versions of Cyberdog. Users of earlier versions of Cyberdog will have to upgrade to use them.

The Cyberdog Web Site

[<http://cyberdog.apple.com/>](http://cyberdog.apple.com/)

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Tech Info Library Article Number:21071



Tech Info Library

AppleTalk Options Control Panel: Read Me (3/97)

Revised: 3/5/97
Security: Everyone

AppleTalk Options Control Panel: Read Me (3/97)

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Article Created: 5 March 1997

TOPIC -----

This article is the AppleTalk Options Control Panel ReadMe file.

DISCUSSION -----

AppleTalk Options Control Panel Read Me

IMPORTANT: Do not use the AppleTalk Options control panel unless instructed to do so by your network administrator. AppleTalk Options control panel is an unsupported utility developed by Apple Computer, Inc. and requires OT 1.1.1b6 or a later release of Open Transport. Future releases of Open Transport (version 1.5 and later) will provide this capability without requiring this separate control panel.

About the AppleTalk Options Feature

This feature allows a user to suppress unwanted router-related alerts.

Why Suppress Router-Related Alerts?

Some Ethernet-ISDN bridges used for remote LAN-to-LAN connectivity drop the connection when there is no active data transfer, and dial on demand when there is information to be transferred. If a user's local network does not include an AppleTalk router, a message appears each time the connection is dropped. Use the AppleTalk Options control panel to prevent the alerts from being displayed.

Disabling the Router-Related Alerts Feature

To install and use the AppleTalk Options control panel, follow these steps:

1. Drop the AppleTalk Options control panel onto a closed System Folder.
2. Open the Control Panels folder from the Apple menu.
3. Open the AppleTalk Options control panel.
4. To eliminate unwanted alerts, click the "Suppress router-related alerts" checkbox to put a check in it.
5. Close the AppleTalk Options control panel.
6. Either turn AppleTalk off and on, or reboot your system in order for your setting to take effect.

Re-Enabling the Router-Related Alerts Feature

To revert to the normal Open Transport mode, uncheck the "Suppress router-related alerts" check box in the control panel and reboot your system.

WARNING: Simply removing the control panel from your Control Panels folder does not re-enable the alerts. You must uncheck the "Suppress router-related alerts" checkbox in the control panel.

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Tech Info Library Article Number:21072



Tech Info Library

MacPPP 2.5 Read Me for Open Transport 1.1 (3/97)

Revised: 3/5/97
Security: Everyone

MacPPP 2.5 Read Me for Open Transport 1.1 (3/97)

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Article Created: 5 March 1997

TOPIC -----

This article is the MacPPP 2.5 ReadMe file for Open Transport 1.1.

DISCUSSION -----

Introduction

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MacPPP allows you to use a modem (or ISDN terminal adapter) to connect to Internet services using Point-to-Point Protocol (PPP). Version 2.5 of MacPPP is fully compatible with Open Transport TCP/IP. You should replace any previous versions of MacPPP (particularly versions 2.0.1 or 2.2.0) with version 2.5.

MacPPP includes three files:

- PPP is an extension file that adds PPP capability to the Open Transport TCP/IP control panel.
- ConfigPPP is a utility program you use to set up your PPP options.
- This Read Me document.

MacPPP 2.5 is included here as a convenience for customers who have previously obtained versions of MacPPP from another source. This distribution does not include technical support from Apple Computer, Inc. MacPPP is not part of Open Transport.

Other Point-to-Point Protocol Software

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FreePPP

FreePPP is another extension providing Point-to-Point Protocol connectivity. FreePPP 1.0.4 (or later) is compatible with Open Transport.

To obtain the latest version of FreePPP, refer to the FreePPP World Wide Web home page at <http://www.rockstar.com/ppp.html> for more information.

Commercial PPP Software

If you prefer to use a commercially supported implementation of PPP, contact one of the third party developers listed in the Open Transport Read Me document, or purchase a copy of the Apple Internet Connection Kit. Technical support for MacPPP is provided as part of the kit.

Changes in MacPPP

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MacPPP 2.5 is compatible with Virtual Memory.
Versions of MacPPP prior to 2.1.2SD were not compatible with Open Transport.

Installing MacPPP

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Before you install

Remove all copies of PPP from the Extensions folder inside the System Folder of your startup disk. Also remove all copies of ConfigPPP from the Control Panels folder inside the System Folder of your startup disk.

Installing MacPPP

To install MacPPP, follow these steps:

1. Drag the PPP icon to the icon of your System Folder (not to the open System Folder window). A dialog box appears asking if you want to move PPP to the Extensions folder.
2. Click OK. PPP is placed in the Extensions folder inside your System Folder.
3. Drag the ConfigPPP icon to the icon of your System Folder (not to the open System Folder window). A dialog box appears asking if you want to move ConfigPPP to the Control Panels folder.
4. Click OK. ConfigPPP is placed in the Control Panels folder inside your System Folder.
5. Choose Restart from the Special menu. When your computer starts up again, PPP is installed.

Setting Up MacPPP

If you previously used a version of MacPPP, your PPP preferences are still in effect with MacPPP 2.5. To set up or change your PPP preferences:

- Copy a previous version of the PPP Preferences file to the Preferences folder in the System Folder of your startup disk.

-OR-

- Open ConfigPPP and choose the settings you want to use.

If you have the Apple Internet Connection Kit, you can use the Apple Internet Dialer to set up MacPPP.

For more information about setting up and using MacPPP or FreePPP, see the documentation that came with your original copy of these software packages. You may also find useful information on the Internet, in such newsgroups as comp.mac.sys.comm.

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Tech Info Library Article Number:21073



Tech Info Library

Remote Only 2.1 Read Me for Open Transport 1.1 (3/97)

Revised: 3/5/97
Security: Everyone

Remote Only 2.1 Read Me for Open Transport 1.1 (3/97)

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Article Created: 5 March 1997

TOPIC -----

This article is the Remote Only 2.1 ReadMe file for Open Transport 1.1.

DISCUSSION -----

Introduction

Remote Only 2.1 is an extension that allows you to turn on AppleTalk networking when both the printer port and the modem port on your computer are already in use (for example, for a serial printer and a modem). Without this extension installed, you cannot use an application that requires AppleTalk to be active at the same time your computer is connected to a modem and a serial printer.

For example, if your computer has two serial ports and you use one for a modem and the other for a StyleWriter printer, Remote Only allows you to use an application such as NetPresenz (which requires AppleTalk) without disconnecting either the modem or the printer.

The Remote Only extension is compatible with both "classic" AppleTalk software (the Network control panel) and Open Transport software (the AppleTalk control panel). If you use classic networking, Remote Only appears as an icon in the Network control panel. If you use Open Transport, Remote Only appears in the "Connect via" pop-up menu in the AppleTalk control panel.

Installing Remote Only

To install Remote Only, follow these steps:

1. Drag the Remote Only icon to the System Folder icon on your startup disk (not the open System Folder window). A dialog box appears asking if you want to move Remote Only to the Extensions folder.
2. Click OK. Remote Only is placed in the Extensions folder inside your

System Folder.

3. Choose Restart from the Special menu. When your computer starts up again, Remote Only is installed.

Activating Remote Only in the Network control panel

To activate Remote Only if you use classic AppleTalk software (the Network control panel), follow these steps:

1. Open the Network control panel.
2. Click the Remote Only icon.
3. Close the Network control panel. You can now turn on AppleTalk in the Chooser while using your computer's serial ports for other functions.

Activating Remote Only in the AppleTalk control panel

To activate Remote Only if you use Open Transport (the AppleTalk control panel), follow these steps:

1. Open the AppleTalk control panel.
2. Choose Remote Only from the "Connect via" pop-up menu.
3. Close the AppleTalk control panel.
4. In the dialog box that appears, click OK to save the change you made. You can now turn on AppleTalk while using your computer's serial ports for other functions.

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Tech Info Library Article Number:21074



Tech Info Library

TCP/IP Options Control Panel Read Me (3/97)

Revised: 3/5/97
Security: Everyone

TCP/IP Options Control Panel Read Me (3/97)

Article Created: 5 March 1997

TOPIC -----

This article is the TCP/IP Options Control Panel ReadMe file.

DISCUSSION -----

TCP/IP Options Control Panel Read Me

IMPORTANT: Do not use the TCP/IP Options control panel (previously called TCP/IP Path Discovery Control control panel) unless instructed to do so by your network administrator. TCP/IP Options is an unsupported utility developed by Apple Computer, Inc. It allows you to modify Open Transport/TCP's default behavior to disable the "Path MTU Discovery" feature and provide compatibility with certain third-party applications. (The one most commonly encountered is ATEX's MacText, a software terminal emulator for the ATEX/SysDeco Standard/Advanced Display Terminal.) Future releases of Open Transport (version 1.5 and later) will automatically disable Path MTU Discovery when appropriate. When you upgrade to Open Transport 1.5 or later, be sure to delete the TCP/IP Options control panel.

About the Path MTU Discovery Feature

Path MTU Discovery is an Internet standard implemented and automatically enabled in Open Transport/TCP. (This standard is not implemented in MacTCP.) Here's how it works:

- Unless a packet size is larger than the MTU for a network, Open Transport/TCP sets the "don't fragment" bit in an IP datagram header on transmission.
- When presented with a "don't fragment" packet that cannot be forwarded without fragmentation with the MTU size, intermediate routers send back an "ICMP can't fragment" error (required by current RFCs).
- When an "ICMP can't fragment" error is sent back, Open Transport/TCP moves to

the next smaller MTU size for that path, sets the "don't fragment" bit, and re-sends the packet. This process automatically results in using the largest supported MTU size for off-subnet traffic.

The standards document that describes Path MTU Discovery is available on the Internet at <http://ds.internic.net/rfc/rfc1191.txt>.

Why disable the Path MTU Discovery feature?

Path MTU Discovery works by sending datagrams with the "don't fragment" bit set. Some older routers don't handle this bit properly. Disabling Path MTU Discovery prevents the use of the "don't fragment" bit and may allow connections through older routers.

The TCP/IP Options control panel lets you disable the Path MTU Discovery feature to support older network routers which don't return the "ICMP can't fragment" error. Disabling the feature provides the same behavior as MacTCP. (Note that disabling the feature may introduce a performance penalty in some network configurations.)

WARNING: Misuse of the TCP/IP Options control panel may prevent Open Transport TCP/IP from operating properly.

Disabling the Path MTU Discovery feature

To install and use the TCP/IP Options control panel, follow these steps:

1. Drop the TCP/IP Options control panel onto a closed System Folder.
2. Open the Control Panels folder from the Apple menu.
3. Open the TCP/IP Options control panel.
4. To disable the path discovery feature to support older routers, click the "Disable IP path MTU discovery" checkbox to put a check in it.
5. Close the TCP/IP Options control panel.
6. Reboot your system in order for your setting to take effect.

Re-enabling the Path MTU Discovery feature

To revert to the normal Open Transport TCP/IP mode, uncheck the "Disable IP path MTU discovery" check box in the control panel and reboot your system.

WARNING: Simply removing the control panel from your Control Panels folder does not re-enable the IP path MTU discovery feature. You must uncheck the "Disable IP path MTU discovery" checkbox in the control panel.

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Tech Info Library Article Number:21075



Tech Info Library

Macintosh Performa 6400, 6360: Why Apple Video Player? (3/97)

Revised: 3/5/97
Security: Everyone

Macintosh Performa 6400, 6360: Why Apple Video Player? (3/97)

=====

Article Created: 5 March 1997

TOPIC -----

I have a Macintosh Performa 6360 or 6400 series computer. There is an application available under my Apple menu named Apple Video Player. When I select it, it indicates that the necessary video hardware is missing. Should I have gotten something else with my computer?

DISCUSSION -----

No. The Apple Video Player software is provided so as to easily support the Apple Video System, Apple TV/Video System, or Apple TV/FM Radio System (which requires the Apple Video System). These are available as options that can be added to your computer system.

If the computer you are using does not have the necessary hardware installed, Apple Video Player software will present the error message you described.

You may get a similar error message if you add the Apple TV Tuner card or Apple TV/FM Radio System without having the Apple Video System card properly installed.

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Tech Info Library Article Number:21076



Tech Info Library

PC Setup Unimplemented Trap, Error Message (3/97)

Revised: 3/5/97
Security: Everyone

PC Setup Unimplemented Trap, Error Message (3/97)

=====

Article Created: 5 March 1997

TOPIC -----

After installing Mac OS 7.6 and PC Compatibility 1.5 software, everything was working fine. However, after installing Open Transport PPP 1.0 and restarting my computer, I get this error message, "Sorry, a System Error Occurred. PC Setup, Unimplemented Trap." What is wrong?

DISCUSSION -----

During the installation process, the PC Setup preferences file was corrupted. To resolve this, you need to throw the PC Setup preferences file in the Trash, empty it, and restart your computer. A new PC Setup preferences file will be created with default settings.

This article was published in the 5 March 1997 "Information Alley."

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Tech Info Library Article Number:21078



Tech Info Library

PowerMac 180MHz Processor Upgrade Card: Models Supported (3/97)

Revised: 3/5/97
Security: Everyone

PowerMac 180MHz Processor Upgrade Card: Models Supported (3/97)

=====

Article Created: 5 March 1997

TOPIC -----

I have seen references made that the Power Macintosh 180MHz Processor Upgrade Card (M5458LL/A) is only supported in Power Macintosh 8500 series computers. Is this correct?

DISCUSSION -----

No. Some of the initial information incorrectly stated that the 180MHz Processor Upgrade Card was for "Power Macintosh 8500 series." However, the Power Macintosh 180MHz Processor Upgrade Card (M5458LL/A) is supported in the Power Macintosh 7500, 7600, 8500 and 9500 series.

Part numbers mentioned in this article are accurate as of this writing. Before ordering, verify that they are still correct as they are subject to change.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21079



Tech Info Library

LaserWriter 8.x: Apple Printers Paper Tray Options (3/97)

Revised: 3/5/97
Security: Everyone

LaserWriter 8.x: Apple Printers Paper Tray Options (3/97)

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Article Created: 5 March 1997

TOPIC -----

I do not understand all the paper tray options I have using the LaserWriter 8.x printer driver. Could you explain these.

DISCUSSION -----

This article provides an outline of paper tray usage with the LaserWriter 8.x printer driver and Apple LaserWriter printers. There are many possible settings, all of which are interdependent, so paper tray behavior is not as straightforward as it appears. Most of the examples given are with the LaserWriter Pro 630 or LaserWriter 16/600 PS printers since they have the most paper tray options. With respect to localized printers and/or drivers, you would substitute references to the "Letter" page size in this article with your country's default such as "A4".

- PAGE SETUP - To use a specific paper tray, the paper size selected in Page Setup must match the paper size in the tray you want to use.

Note:

The only way to change the paper size for the Multipurpose tray is through the Apple Printer Utility. The paper sizes for other trays are either set automatically (such as specific Letter size cassette), or by setting paper guides within the tray.

- MANUAL SELECTION - If you choose a specific paper source in the Print dialog, such as Cassette (500 Sheets), that specific tray is used -- given that the above condition on PAGE SETUP has been met.

- AUTO SELECT - If Auto Select is chosen (as the Paper Source in the Print dialog), you are NOT GUARANTEED that your print job will print from any specific paper tray (except with use of the "Installed and Preferred" option outlined below). You are telling the driver to print your job on any paper tray that has

the same page size as you've selected in Page Setup. Usually, Auto Select prints your job from the 250 sheet cassette. Here is the typical order of paper tray priority when Auto Select is chosen as the Paper Source:

1. Cassette (250 Sheets)
2. Multipurpose Tray
3. Cassette (500 Sheets)
4. Envelope Feeder

- **INSTALLED AND PREFERRED** - If "Installed and Preferred" is chosen for the 500 sheet cassette (in the Chooser-Setup-Configure dialog), this makes the 500 sheet cassette the very first paper tray choice. Auto Select **MUST** be chosen as the Paper Source in the Print dialog for this to work. The typical order of paper tray priority changes to:

1. Cassette (500 Sheets)
2. Cassette (250 Sheets)
3. Multipurpose Tray
4. Envelope Feeder

This **ONLY** affects the computer that the change is made on. There is no way to make the change affect all computers that print to the printer, except for:

- Changing every computer to have the "Installed and Preferred" setting,

or

- Downloading PostScript code to the printer (as outlined below).

- **AUTOMATIC TRAY SWITCHING** - When Automatic Tray Switching is enabled, the paper source switches automatically to another tray with the same paper size if the paper source you selected in the Print dialog runs out of paper. The typical order of paper tray priority for Automatic Tray Switching will follow the priority list in either **AUTO SELECT** or **INSTALLED AND PREFERRED** above.

Prior to LaserWriter driver 8.4, Automatic Tray Switching was enabled by simply switching it ON using the LaserWriter Utility or the Apple Printer Utility. Starting with LaserWriter 8.4, an extra step is now required: You also need to select the "Error Handling" pane in the Print dialog and click on "Switch to another cassette with same paper size."

- **POSTSCRIPT** - There are PostScript code fragments in the TIL that when downloaded, allow you to manually set a "default" paper tray. That paper tray is used if Auto Select is chosen as the Paper Source in the Print dialog. It is **STRONGLY ADVISED NOT** to use this method unless absolutely necessary, as it may confuse others using the printer.

There have been many unnecessary and costly service calls to customers thinking that their printer was defective when the problem was merely the default paper tray had been changed. A very good example of this is changing the default tray to the Multipurpose Tray. If the tray has no paper, the paper out LED illuminates and unknowing users will check the 250 sheet cassette instead (since it's usually default). Seeing that there is paper in the 250 sheet cassette,

they report the printer as a malfunction.

- ENVELOPE FEEDER - If your LaserWriter has an envelope feeder, you must select an envelope page size in Page Setup AND have "Envelope Feeder" chosen as the paper source in the Print dialog. If both of these conditions are NOT met, then paper will be pulled from the default paper tray (such as the Cassette (250 Sheets)).

NOTE:

There is an issue with the LaserWriter 16/600 PS that even without having an envelope page size selected in Page Setup, "Envelope Feeder" can be chosen as a paper source.

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Tech Info Library Article Number:21080



Tech Info Library

Avid Cinema: Static at Bottom of Screen (3/97)

Revised: 3/6/97
Security: Everyone

Avid Cinema: Static at Bottom of Screen (3/97)

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Article Created: 6 March 1997

TOPIC -----

I have seen a single line of static at the bottom of videos created using Avid Cinema, and sometimes I may see a vertical line of static on the left side of the image. Do you have any information on why this is happening?

DISCUSSION -----

Anomalies, noise, or static in digitized video can be caused by any of the following:

- Video head noise from a VHS player
- Faulty or low-quality cables
- Faulty digitizing hardware

When digitizing from VHS, you will almost always see some noise at the bottom of the video window. This noise originates on the tape. It is not visible on a television screen because TV screens crop the very bottom and top of the picture. Other video editing programs such as Premier will crop this area as well, although we believe you can set the application to not crop at all.

With Avid Cinema, the picture is never cropped so the noise is always visible. However, the noise will not be apparent if the video is printed back out to tape -- the noise is hidden by the way the TV crops the image. The noise will remain if the final product is a QuickTime movie. The image is not clipped before output to QuickTime.

This article was published in the 7 March 1997 "Information Alley."

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Tech Info Library Article Number:21081



Tech Info Library

Workgroup Server 9150/120: Drive Setup Compatibility (3/97)

Revised: 3/7/97
Security: Everyone

Workgroup Server 9150/120: Drive Setup Compatibility (3/97)

=====

Article Created: 7 March 1997

TOPIC -----

I have a Workgroup Server 9150/120. The version of Drive Setup (1.2.2) that comes with System 7.6 gives an error message "Cannot be used with this Macintosh" when trying to launch the Drive Setup.

I used version 1.0.5 of Drive Setup and everything worked fine. What's happening?

DISCUSSION -----

Apple Engineering has been notified of this situation. They will work toward a solution, possibly in a future release of Drive Setup. In the meantime, version 1.0.5 of Drive Setup is the accepted alternative.

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Tech Info Library Article Number:21083



Tech Info Library

PowerBook 1400 Series: Maximum RAM Allowed (3/97)

Revised: 3/7/97
Security: Everyone

PowerBook 1400 Series: Maximum RAM Allowed (3/97)

=====

Article Created: 7 March 1997

TOPIC -----

I have a PowerBook 1400 with 40 megabytes of memory and would like to add more memory to it. I would like to add another 32 megabytes, bringing the total memory up to 72 megabytes.

The technical specifications state that the PowerBook 1400 supports a maximum of 64 megabytes of memory. Will there be any adverse effect if I attempt an upgrade to 72 megabytes?

DISCUSSION -----

The maximum amount of total memory supported by Apple in the PowerBook 1400 is 64Mb. Individual cards may contain up to a maximum of 48Mb of DRAM.

Any combination of RAM, including the DRAM soldered to the main logic board (8Mb), the DRAM installed by Apple in the Apple factory slot (4Mb or 8Mb), and User installable RAM cards must not exceed a total of 64Mb of RAM.

Using combinations of RAM that go over the specified 64Mb limit is not supported by Apple Computer and may result in random errors.

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Tech Info Library Article Number:21085



Tech Info Library

Mac OS 7.6: IDE Drives and Internal HD Format (3/97)

Revised: 4/21/97
Security: Everyone

Mac OS 7.6: IDE Drives and Internal HD Format (3/97)

=====

Article Created: 7 Mar 1997

TOPIC -----

While running the Mac OS 7.6 Installer a message appears saying the application is unable to update the driver because the drive is not partitioned -- "This media is not partitioned, unable to update the driver." What's happening?

DISCUSSION -----

This happens only when the drive has been formatted with the Internal HD Format program included on 580 Series, 630 Series, 5200 Series, and 6200 series computers. (For a list of computers with IDE drives, see the article titled "Macintosh Desktop & PowerBook Computers: IDE Hard Drive" in the Tech Info Library.)

The solution is to back up the hard drive and reinitialize (low level format) it with Drive Setup 1.2.2. Drive Setup 1.2.2 is located on the Mac OS 7.6 CD-ROM in the Utilities folder. Note that reinitializing will result in the loss of all information on the hard drive, so performing the backup operation is critical.

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Tech Info Library Article Number:21086



Tech Info Library

Apple Media Tool 2.x: Creating Custom Palettes (3/97)

Revised: 3/10/97
Security: Everyone

Apple Media Tool 2.x: Creating Custom Palettes (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

I would like to use a custom palette in Apple Media Tool (AMT) 2.x so that my 256-color images look their best. I know that AMT supports custom palettes, but I cannot seem to get them to work. How do you create custom palettes?

DISCUSSION -----

In AMT 2.x, each screen could have a custom palette. Apple Media Tool uses the palette of the media object that is the farthest back position on the screen. This is the first item in the list in the objects miniwindow.

Here are the steps to creating a custom palette:

Step 1

Create your media object with custom palette in the graphics application of your choice.

Step 2

Place a media object with the custom palette in the farthest back position. If your image needs to be in the foreground, create another object with the same palette, and place it in the farthest position. You can set the dimensions of this object to "0,0" if you do not want the object visible.

Step 3

Select the option "use custom palettes" in Runtime Setup Preferences.

Custom palettes are only used when the application is saved as a runtime object, and not as an Apple Media Tool project.

This article appeared in the 10 March 1997 issue of the Information Alley.

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Tech Info Library Article Number:21090



Tech Info Library

Performa 6360/6400: PhotoDeluxe User Guide Error (3/97)

Revised: 3/10/97
Security: Everyone

Performa 6360/6400: PhotoDeluxe User Guide Error (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

This article discusses an error in the Adobe PhotoDeluxe User's Guide.

DISCUSSION -----

The Adobe PhotoDeluxe User's Guide pages 8-9 refers to a number of items which should be on the PhotoDeluxe CD, but are missing.

These include:

- * The trial version of DiAMAR Interactive's Better Photography
- * Berkeley System's After Dark
- * MetaTool's Special Effects.
- * Acrobat Reader

Where can these items be located?

Acrobat Reader is pre-installed on the computer's hard disk. The other items have not been licensed for inclusion with the PhotoDeluxe software included with the Performa 6360/6400 computer.

They are included with the PhotoDeluxe bundle sold by Adobe or they can be purchased separately from their respective manufacturers.

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Tech Info Library Article Number:21093



Tech Info Library

Hangul Jojung Control Panel: What Does It Do? (3/97)

Revised: 3/10/97
Security: Everyone

Hangul Jojung Control Panel: What Does It Do? (3/97)

Article Created: 10 Mar 1997

TOPIC -----

What does the Hangul Jojung control panel do?

DISCUSSION -----

Here is an explanation of what can be done with the Hangul Jojung control panel.
There are 2 options on the control panel:

1) Delete key - This gives users the option of forcing non-WorldScript savvy applications that attempt to delete 2-byte text one byte at a time to delete text 2 bytes at a time. At first glance, this may appear to conflict with the Delete by Jamo option in the Power Input Method (PIM). The PIM option is for text being processed by the input method before it is passed to an application. The Hangul Jojung control panel setting is the opposite. It is for text already entered into a document. The Hangul Jojung control panel simply forces an application to receive one or two Deletes every time the user types one Delete. The only time this is really needed is when using Asian languages in applications which aren't WorldScript II savvy.

2) 1 or 2 byte PostScript printing. Users of printer-resident 2-byte Korean PostScript fonts need to set this option in order to embed PostScript data in PostScript files. It affects users who have printer-resident fonts that are genuine two-byte encoded. (Without the Hangul Jojung control panel, printing is done assuming one-byte fonts.) Users who have this problem will immediately see a performance increase when the Hangul Jojung control panel is installed. Users with no PostScript fonts, just Apple's TrueType fonts included in the Korean, Japanese and Chinese language kits should receive no benefit nor side effects from having the Hangul Jojung control panel installed.

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Tech Info Library Article Number:21094



Tech Info Library

PC Compatibility Card: Serial Port Speed (3/97)

Revised: 3/12/97
Security: Everyone

PC Compatibility Card: Serial Port Speed (3/97)

Article Created: 10 March 1997
Article Reviewed/Updated: 12 March 1997

TOPIC -----

I have a PC Compatibility Card and want to know what the maximum speed of the serial port is.

DISCUSSION -----

All the PCI-Based PC Compatibility Cards are limited to 19,200 bps serial port speeds when using MS-DOS or Windows. However, testing has shown that 9600 bps is the maximum speed you should expect while maintaining the most reliable connection.

This limitation is the result of the UARTS used, lack of hardware handshaking in the PC environment, and other design factors.

In the Mac OS you do not have these same limitations.

Article Change History:
12 Mar 1997 - Added reliable connection information.

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Tech Info Library Article Number:21095



Tech Info Library

QuickTake 200: Read Me for PowerBook Incorrect (3/97)

Revised: 3/10/97
Security: Everyone

QuickTake 200: Read Me for PowerBook Incorrect (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

I have setup my PowerBook 500 computer to compatible like the QuickTake readme document stated, but I cannot get the images to download.

DISCUSSION -----

The Read Me document is incorrect. You need to set the PowerBook Setup control panel to NORMAL, not COMPATIBLE.

The Read Me document will be updated to reflect this change at a later date.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21096



Tech Info Library

Apple QuickTake 200: Read Me Document (3/97)

Revised: 3/10/97
Security: Everyone

Apple QuickTake 200: Read Me Document (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

This article contains the Apple QuickTake 200 Readme Document.

DISCUSSION -----

About the QuickTake 200 Software

This file includes important information about using your QuickTake 200 camera and the Camera Access software. Because this information is not included in the documentation accompanying the product, you may want to print it. To do so, choose Print from the File menu.

Installing the Software

Install the Apple QuickTake 200 software before installing PictureWorks NetCard, Adobe PhotoDeluxe, or Adobe PageMill.

Using Video-in

- Your computer must be compatible with Apple Video Player to use the Camera Access Video-in function. Some CPUs require specific settings. Check your computer user's manual.
- If you have a hardware play-thru video system (for example, Power Macintosh 6100 AV, 7100 AV, or 8100 AV or Macintosh LC 630), video play-thru cannot be turned off via "Video Playthru Off During Record" in the Video-In menu.

Recording a Movie or Video

- When recording with compression, you might need to hold down the mouse button longer to stop the recording process. (In most instances, a click will stop the process.)

- Sound is not supported.

Editing Movie Files

When copying and pasting a movie frame into another movie within the Camera Access software, do not resize the source movie frame. (Resizing will distort the images.)

PowerBook 500 Series

- Set the PowerBook Setup in the Control Panel to NORMAL and then launch Camera Access.

NOTE:

In the Read Me document that ships with the QuickTake 200, it states the control panel should be set to Compatible. That information is incorrect. This article has been updated with the correct information.

- Don't use the Sleep command or close the PowerBook cover while the camera is connected to the Powerbook. This will cause your system to freeze.

Using the QuickTake Plug-ins

- To use the Apple QuickTake 200 plug-in with PhotoDeluxe, drag a copy of the plug-in from the Goodies folder to the Plug-ins folder of the PhotoDeluxe application.
- The QuickTake 200 plug-in is compatible with Photoshop 3.0 and later; it is not compatible with PhotoFlash.
- You can open only one thumbnail at a time. (Even when multiple thumbnails are selected, only the first one will open.)

Closing the QuickTake 200 Panel

When your camera is not connected to your computer, close the QuickTake 200 panel. Leaving it open will slow down your mouse response.

Creating Floppy Disks From the CD-ROM

1. Open the "QuickTake 200 disk image" folder.
2. Click the Disk Copy icon.
3. Click the "Make a Floppy" button.
4. Select QuickTake 200 Software.image.

A message appears: "Please insert a floppy disk."The disk is erased and reformatted, and the QuickTake software is copied onto the disk. A second message appears: "Build floppy operation completed successfully."

5. Click Quit.

Your floppy disk can now be used to install the software.

IMPORTANT Don't drag the file onto the Disk Copy icon. You must follow the above procedure.

AppleTalk

It is recommended that you turn off AppleTalk when using a 68K CPU. (Open the Chooser and turn off AppleTalk.)

Using Open Transport

It is recommended that you use the Modem port for Camera connection when configuring the port using OpenTransport.

Performa 6420 AV

When using Avid Cinema Extension, you should set the Monitor control panel to 32,000 colors (16 bits). Turn off the Avid Cinema Extension when you set to 256 colors.

Printing and Downloading Camera Images Simultaneously

There is a conflict in communication when trying to print and open an image from the camera at the same time in a 68K machine. If this problem occurs, please wait until printing is complete, then try opening the image again.

TIFF File Format

Camera Access does not support compressed TIFF files.

Power-Off Problem

On extremely rare occasions, the QuickTake 200 camera might not power off. If this happens, disconnect the camera from the optional AC power adapter. Open the battery door to reset the camera.

Technical Support for Adobe PhotoDeluxe and Adobe PageMill

- For Adobe PhotoDeluxe support, call 206-628-5726.
- For Adobe PageMill support, call 206-628-5731.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21097



Tech Info Library

PowerBook 3400: Video Out Specifications (3/97)

Revised: 3/18/97
Security: Everyone

PowerBook 3400: Video Out Specifications (3/97)

Article Created: 10 March 1997
Article Reviewed/Updated: 17 March 1997

TOPIC -----

This article describes the PowerBook 3400 built-in video out specifications.

DISCUSSION -----

The PowerBook 3400 computer has a 16-bit video out VGA connector built into the backplane for an external video monitor. The connector is standard DB9/15 for use with VGA or SVGA monitors.

You can connect a VGA or SVGA monitor all the way up to a 21" monitor with 1024 x 768 resolution projected in 256 colors (8-bit). Video projection devices can also be attached via the VGA connector.

Video Adapter

An optional video adapter allows the user to connect a standard Apple video cable to the computer. The adapter is similar to another video adapter used with older Macintosh PowerBooks. The adapter is granite colored and enables the PowerBook 3400 computer to recognize a wider range of monitor types. The Apple part number for the new adapter is 590-0289-A.

Video Ram

The PowerBook 3400 ships with 1MB of VRAM which enables it to support up to 16 bits per pixel on most monitors, and up to 8 bits per pixel on larger monitors.

NOTE: The video ram (VRAM) is not upgradeable.

Colors Supported

16 bit (thousands) at 640x480
16 bit (thousands) at 800x600

8 bit (256) at 832x624
8 bit (256) at 1024x768

Video Mirroring

There is no video mirroring control panel/strip. If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Examples: When connected to a 17" Multiscan monitor:

640x480 67Hz - Thousands of colors (external monitor available only)
800x600 60Hz - Thousands of colors (Simulscan "Mirroring")
800x600 75Hz - Thousands of colors (external monitor available only)
832x624 75Hz - 256 colors (external monitor available only)
1024x768 70Hz - 256 colors (external monitor available only)

Begin_Table

Monitor Pixel Depths

The following table lists the pixel depths supported for each type of monitor.

Monitor type	Resolution	Bits per pixel
-----	-----	-----
12-inch color	512 by 384	1, 4, 8, 16, 24
12-inch monochrome	640 by 480	1, 4, 8
13-inch and 14-inch color	640 by 480	1, 4, 8, 16
VGA and SVGA	640 by 480*	1, 4, 8, 16
SVGA	800 by 600	1, 4, 8, 16
SVGA	1024 by 768	1, 4, 8
Full-page monochrome	640 by 870	1, 4, 8
Full-page color	640 by 870	1, 4, 8
16-inch color	832 by 624	1, 4, 8
Apple 15-inch multiple scan	640 by 480	1, 4, 8, 16
Apple 15-inch multiple scan	800 by 600*	1, 4, 8, 16
Apple 15-inch multiple scan	832 by 624	1, 4, 8
Apple 17-inch multiple scan	640 by 480	1, 4, 8, 16
Apple 17-inch multiple scan	800 by 600*	1, 4, 8, 16
Apple 17-inch multiple scan	832 by 624	1, 4, 8
Apple 17-inch multiple scan	1024 by 768	1, 4, 8
Apple 20-inch multiple scan	640 by 480	1, 4, 8, 16
Apple 20-inch multiple scan	800 by 600*	1, 4, 8, 16
Apple 20-inch multiple scan	832 by 624	1, 4, 8
Apple 20-inch multiple scan	1024 by 768	1, 4, 8
NTSC TV monitor	512 by 384*	1, 4, 8, 16, 24
NTSC TV monitor	640 by 480	1, 4, 8, 16
PAL TV monitor	640 by 480*	16 only
PAL TV monitor	768 by 576	1, 4, 8, 16

End_Table

Notes:

- 1) The computer does not provide a display with 2 bits per pixel.
- 2) An asterisk (*) indicates the startup resolution. Other resolutions can be selected using the Monitors control panel or the control strip.
- 3) For multiple scan monitors, The table indicates the default resolution with an asterisk. For example, when first connected to the computer, an SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.
- 4) When connected to a non-multiscan monitor you will only get the external monitor at the set resolution.

Example: Apple 16" monitor 832 by 624 75Hz - 256 colors

This article was published in the 18 March 1997 "Information Alley."

Article Change History:

17 Mar 1997 - Changed distribution status.

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Tech Info Library Article Number:21098



Tech Info Library

PowerBook 3400: Battery Recondition Software (3/97)

Revised: 3/10/97
Security: Everyone

PowerBook 3400: Battery Recondition Software (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

Why does the PowerBook 3400 ship with the Battery Recondition software when the Lithium Ion battery does not require reconditioning?

DISCUSSION -----

The Battery Recondition software is included because the PowerBook 3400 can use a PowerBook 5300 or 190 Nickel Metal Hydride battery, which does require occasional reconditioning.

When a customer tries to use the Battery Recondition software on a PowerBook 3400 containing a Lithium Ion battery, the customer will get a message stating that it is not necessary.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21099



Tech Info Library

PowerBook 1400: 1400 Demo Processor speed (3/97)

Revised: 3/10/97
Security: Everyone

PowerBook 1400: 1400 Demo Processor speed (3/97)

=====

Article Created: 10 March 1997

TOPIC -----

I just purchased a Powerbook 1400/133mHz. When I run the "PowerBook 1400 Demo" from my hard drive and click on "SPECS", it states I have a 117mHz processor? Have I been given the wrong unit?

DISCUSSION -----

The "PowerBook 1400 Demo" is merely an interactive presentation to show the features of the 1400. It is not intended to be a diagnostic tool or system profiler. Most likely, the presentation was written before the 133 mHz processors were part of the 1400 product line.

To confirm the speed of your processor, you may run Apple System Profiler, available with Mac OS 7.6 or online at Apple Software Updates.

Updates URL: <http://horton.austin.apple.com/SWSearching.html>

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21100



Tech Info Library

Apple TV/FM Radio System Requires Video-In Card (3/97)

Revised: 3/11/97
Security: Everyone

Apple TV/FM Radio System Requires Video-In Card (3/97)

=====

Article Created: 11 March 1997

TOPIC -----

I just installed an Apple TV/FM Radio System, but I keep getting a message saying it is not installed. I checked it over and I'm sure I installed it correctly. What could be wrong?

DISCUSSION -----

The Apple TV/FM Radio System (M4586LL/A) requires a Macintosh Performa or Power Macintosh computer with a video-in card. The video-in card is required even if only the FM Radio Player is used. If the video-in card is not installed, the FM Radio Player will display an error message saying, "The FM radio is not installed in this Macintosh."

While some Macintosh Performa and Power Macintosh computers come with a video-in card pre-installed (for example, the Power Macintosh 5400/120) most of these computers require the purchase of the Apple Video System (M2894LL/D or later).

This article was published in the Information Alley on 12 March 1997.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21102



Tech Info Library

Troubleshooting Hard Drives: When To Reformat (3/97)

Revised: 4/21/97
Security: Everyone

Troubleshooting Hard Drives: When To Reformat (3/97)

Article Created: 11 March 1997

TOPIC -----

While troubleshooting a hard drive problem, when might it be necessary to reformat (initialize) a hard drive?

DISCUSSION -----

Reformatting a hard drive (also called "initializing") is only necessary when a disk utility, such as Disk First Aid, finds a problem that it is not able to repair. Formatting is also required when partitioning a hard drive. Formatting a hard drive is not necessary while troubleshooting a software problem.

If hard drive failure is suspected, start the computer from the Disk Tools floppy disk or Apple Macintosh CD that came with the computer, and run the Disk First Aid program. If Disk First Aid does not find any problems, or finds problems that it is able to repair, there is no need to reformat the drive.

If Disk First Aid finds problems and says that it is not able to repair them, a third party disk repair utility may be able to repair the drive. If you do not have access to these utilities, or they are not able to repair the drive, then you should back up all of the files on the hard drive and reformat it.

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Tech Info Library Article Number:21103



Tech Info Library

Mac OS 7.6 & Macintosh TV Compatibility (3/97)

Revised: 3/11/97
Security: Everyone

Mac OS 7.6 & Macintosh TV Compatibility (3/97)

=====

Article Created: 11 March 1997

TOPIC -----

I just updated my Macintosh TV from System 7.5.5 to Mac OS 7.6, and now the TV Setup control panel does not work. I did a clean install of Mac OS 7.6 and also selected the Mac OS 7.6 Base extension set in Extensions Manager. I am using version 1.0.2 of the TV Setup control panel. I can open the control panel, but if I try to select an option I get a Finder bus error. If I switch to the TV I get no video.

Is the Macintosh TV compatible with Mac OS 7.6?

DISCUSSION -----

Mac OS 7.6 installs the Apple Video Player application and the Video Startup extension. The Video Startup extension is not compatible with the TV Setup control panel used to control the TV functions on the Macintosh TV. Either deselect the Video Startup extension in the Extensions Manager control panel, or drag Video Startup from the Extensions folder to the Trash.

The Macintosh TV does not need the Apple Video Player or Video Startup extension. The Apple Video Player may also be dragged to the Trash from the Apple Extras folder.

This article was published in the 11 March 1997 "Information Alley."

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21104



Tech Info Library

Configuring TCP/IP on an Apple Network Server (3/97)

Revised: 3/11/97
Security: Everyone

Configuring TCP/IP on an Apple Network Server (3/97)

=====

Article Created: 11 March 1997

TOPIC -----

This article describes configuring TCP/IP on an Apple Network Server running AIX.

DISCUSSION -----

The recommended time to configure TCP/IP on system running AIX is during initial software installation with Install Assist. However, if TCP/IP needs to be configured later, the following steps can be followed:

Step 1

Logout of the AIX Desktop (CDE).

Step 2

Use the Options button at the AIX login window to begin a command line login. Be sure to hit the enter or return key so that you receive a login prompt.

Step 3

Login as root.

Step 4

Execute the following command to open the TCP/IP configuration window:

```
smit tcpip
```

Step 5

Press the Enter or Return key to select Minimum Configuration & Startup.

Step 6

Select the interface to be configured (commonly en0).

Step 7

Complete the TCP/IP configuration by completing the Entry Fields. Use arrow keys to move between fields. Once the entry fields are complete, press Enter or Return.

NOTE: Do not set START now to "yes".

Step 8

Press the F10 key to exit TCP/IP configuration.

Step 9

Check the contents of the '/etc/hosts' file by entering the following command:

```
more /etc/hosts
```

The end of the file should have a line for loopback exactly as follows:

```
127.0.0.1      localhost      loopback      # loopback lo0 name/address
```

It should also have an entry for your hostname similar to this:

```
192.14.4.16    spoetzl    <----your hostname; should contain one entry
```

If either of these lines are incorrect, the '/etc/hosts' file needs to be edited using vi to correct it before proceeding.

Step 10

Shutdown and reboot the server by entering the following command:

```
shutdown -Fr
```

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Tech Info Library Article Number:21105



Tech Info Library

Mac OS 7.6: System Requirements (3/97)

Revised: 3/11/97
Security: Everyone

Mac OS 7.6: System Requirements (3/97)

Article Created: 11 March 1997

TOPIC -----

What are the system requirements for installing Mac OS 7.6?

DISCUSSION -----

The following computers can install Mac OS 7.6:

- Computers with PowerPC microprocessors
- Computers with 68040 microprocessors
- Computers with "32-bit clean" 68030 microprocessors. All computers with 68030 microprocessors are 32-bit clean except the Macintosh SE/30, Macintosh IIX, and the Macintosh IICx.

In addition, to install Mac OS 7.6, a computer must have at least 8 MB of RAM (random-access memory). If your computer has less than 16 MB of built-in RAM, you must use virtual memory. (Mac OS 7.6 automatically turns on virtual memory when you install it.)

To install the recommended software, you need about 70 MB of free space on your hard disk. To install all the optional components, you may need up to 120 MB of disk space; if you install just the minimum set of system software, you may only need 40 MB. The exact amount of space needed varies for different computer models and hard disk sizes.

This article was published in the 12 March 1997 "Information Alley."

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Tech Info Library Article Number:21106



Tech Info Library

UMAX Technologies (3/97)

Revised: 3/12/97
Security: Everyone

UMAX Technologies (3/97)

=====

Article Created: 12 March 1997

UMAX Technologies

3353 Gateway Blvd
Fremont, CA 94538

Phone : 510-651-9488
FAX : 510-651-8834
Technical Support : 510-651-4000
BBS : 510-651-2550
Fax Back : 800-286-6186
internet: <http://www.umax.com>

Product: supplier of scanners, and Mac OS compatible computers.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21108



Tech Info Library

QuickTake 200: Lens made of Optical Quality Plastic (3/97)

Revised: 3/12/97
Security: Everyone

QuickTake 200: Lens made of Optical Quality Plastic (3/97)

=====

Article Created: 12 March 1997

TOPIC -----

Is the lens used in the Apple QuickTake 200 digital camera made of optical glass or plastic?

DISCUSSION -----

The Apple QuickTake 200 digital camera, like many other cameras built today, is manufactured using optical quality plastic.

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Tech Info Library Article Number:21109



Tech Info Library

AIX 4.1.4, 4.1.4.1, & 4.1.5: File size Limits (3/97)

Revised: 3/14/97
Security: Everyone

AIX 4.1.4, 4.1.4.1, & 4.1.5: File size Limits (3/97)

=====

Article Created: 12 March 1997
Article Reviewed/Updated: 14 March 1997

TOPIC -----

I'm interested in moving a database application from an RS-6000 to a Apple Network Server 700. One of my database files, however, is approaching (and will soon exceed) 2 GB in size.

My application support provider informs me that I will require AIX 4.2 or greater in order to handle a file of this size. Is this true or will AIX 4.1.4.X do the job? Is there a patch or do I have to wait to for AIX 4.2 release for the Apple Network Server 700?

DISCUSSION -----

The AIX 4.1.4, 4.1.4.1, and 4.1.5 file system data structure is based on the 32-bit addressing scheme, pointers, data blocks, and so on. Therefore 2 to the 31 power which is about 2 GB, is the maximum file size allowed.

AIX 4.2 will support 64 bit addressing, and at that time the maximum file size will greatly exceed the 2GB limit. In order to support file size over 2 GB, you need to wait for AIX 4.2.

The 'ulimit' command can be used to set or examine the resource limits including the file size. The example below, would set the maximum file size to 4,194,304 blocks (512 Bytes/block) which is 2GB, the limit:

```
ulimit -f 4194304
```

If you set ulimit -f to this value, the it will show "unlimited" which is the maximum. The default file size is set to 2,097,151 blocks (1 GB).

This article was published in the 14 March 1997 "Information Alley."

Article Change History:

14 Mar 1997 - Added Information Alley statements.

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Tech Info Library Article Number:21110



Tech Info Library

AIX: FixDist Tool and Electronic Fix Distribution (3/97)

Revised: 3/12/97
Security: Everyone

AIX: FixDist Tool and Electronic Fix Distribution (3/97)

=====

Article Created: 12 March 1997

TOPIC -----

This article describes FixDist Tool and Electronic Fix Distribution for AIX running on an Apple Network Server.

DISCUSSION -----

FixDist Tool and Electronic Fix Distribution for AIX on Apple Network Server.

<ftp://fixdist.support.apple.com/> 130.43.6.8

Downloading Fixes

This site contains all AIX patches which are specific to the Apple Network Servers as well as all other AIX patches that will work on the Apple Network Server.

Apple provides a number of mirrored sites on the Internet where you may freely download Apple Software Updates. Due to the size of the archive contained in the [fixdist.support.apple.com](ftp://fixdist.support.apple.com) server, the Apple Software Updates archives do not mirror this site.

Though we do not guarantee all fixes will be immediately made available, we will try to make them available as soon as possible.

For more information on Apple Software Updates not specific to the Apple Network Server, please visit

<http://www.info.apple.com/>
or
<ftp://ftp.info.apple.com/>

NOTE: Do not download AIX patches for the Apple Network Servers from the IBM

servers! This fixdist server should be your only source for these patches.

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Tech Info Library Article Number:21111



Tech Info Library

Newton OS 2.1: No Desktop connection Using IrDA (3/97)

Revised: 3/12/97
Security: Everyone

Newton OS 2.1: No Desktop connection Using IrDA (3/97)

=====

Article Created: 12 March 1997

TOPIC -----

The Dock application on the MessagePad 2000 and the eMate 300 list an option to connect to my desktop computer using IrDA. This is also mentioned in the MessagePad 2000 User's Manual (p.128) and the eMate User's Manual (p.160). How can I connect to my desktop unit using IrDA?

DISCUSSION -----

The IrDA option appears within the DOCK application on both the eMate 300 and MP2000. Although there is support in the Newton OS for IrDA connections, currently there is no support for this in the Newton Connection Utilities or any other connectivity application. Apple currently has no plans for implementing this feature into the Newton Connection Utilities.

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Tech Info Library Article Number:21112



Tech Info Library

PowerBook 3400 & Open Transport 1.1.2 Incompatibility (3/97)

Revised: 4/21/97
Security: Everyone

PowerBook 3400 & Open Transport 1.1.2 Incompatibility (3/97)

=====

Article Created: 12 March 1997

TOPIC -----

I installed Open Transport (OT) 1.1.2 on my PowerBook 3400 computer. All seemed well until the computer went into sleep mode and then it froze. I have been able to reproduce this several times. What is wrong?

DISCUSSION -----

There are some incompatibilities between Open Transport 1.1.2 and the PowerBook 3400 computer. We were able to reproduce freezing by repeatedly switching between IRTalk and Printer/Modem port in the AppleTalk control panel.

We suggest you reinstall Open Transport 1.1.1. There are no fixes in Open Transport 1.1.2 that apply to the PowerBook 3400 computer.

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Tech Info Library Article Number:21113



Tech Info Library

Apple MessagePad Devices: Power Adapter Compatibility (3/97)

Revised: 3/13/97
Security: Everyone

Apple MessagePad Devices: Power Adapter Compatibility (3/97)

=====

Article Created: 13 March 1997

TOPIC -----

The Apple MessagePad 2000 and the Apple eMate 300 ship with a different AC power adapter than previous MessagePad models. Are the original power adapters compatible with the MessagePad 2000 and the eMate 300? Are the new power adapters compatible with earlier MessagePad models?

DISCUSSION -----

The original Newton Power Adapter was designed for the original MessagePad, MessagePad 100, MessagePad 110, MessagePad 120, and MessagePad 130 models.

The Newton 9W Power Adapter was introduced with the Apple MessagePad 2000 and the Apple eMate 300 and is recommended for these models. The Newton 9W Power Adapter is included with the Apple eMate 300, and is offered as an option with the Apple MessagePad 2000.

The original power adapters are compatible with the Apple MessagePad 2000 and the Apple eMate 300. However, the Newton 9W Power Adapter that ships with the Apple MessagePad 2000 and eMate 300 are designed to provide a fast recharge (1-2 hours). The original Newton Power Adapter works on these models, but charges at a slower rate (2-3 hours).

The new power adapters are compatible with earlier MessagePad models. The Newton 9W Power Adapter that ships with the Apple MessagePad 2000 and Apple eMate 300 charges the previous Apple MessagePad models in half the original time.

Note:

The 9W Power Adapter does not reduce the recharge time in the Apple MessagePad 100, whose rechargeable battery recharges in the same amount of time with either adapter.

This article appeared in the 13 March 1997 issue of the Information Alley.

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Tech Info Library Article Number:21114



Tech Info Library

Macintosh On Microsoft NetBEUI/NetBIOS Networks (3/97)

Revised: 3/13/97
Security: Everyone

Macintosh On Microsoft NetBEUI/NetBIOS Networks (3/97)

=====

Article Created: 13 March 1997

TOPIC -----

Is there software available for my Macintosh that would allow it to participate in Microsoft NetBEUI/NetBIOS networks with file, print and message services?

DISCUSSION -----

Yes. Thursby Software Systems offers one such solution, named DAVE.

DAVE is a software solution that enables Apple Macintosh users to participate in Microsoft networks with file, print and message services. DAVE is installed directly on the Macintosh computer and provides Macintosh users the ability to mount shared directories on Windows NT (Server and Workstation), Windows 95 and Windows for Workgroups computers.

DAVE performs all communications using the industry standard protocol TCP/IP with a NetBIOS driver that is fully RFC 1001/1002 compliant and supports Windows Internet Name Server (WINS). All services are implemented using the Common Internet File System (CIFS) protocol. CIFS is an enhanced extension of the desktop cross-platform protocol for distributed file sharing called Server Message Block (SMB).

Utilizing CIFS and X/Open protocol standards, DAVE gives Macintosh users simultaneous read and write access to files stored on remote computers without first requiring users to download or copy the files to a local drive. Using the Chooser, users mount systems and browse for resources both in their own workgroup and in other workgroups. Mounting is very similar to AppleShare but uses no AppleTalk protocols.

DAVE negotiates dialects up to and including NT LM 0.12. It provides direct integration with Services for Macintosh and NTFS by using the same format for storing Apple resource and finder information on NT servers. By using DAVE with Remote Access Services (RAS), Macintosh users can access NT servers from remote dial-up locations, sharing files and accessing numerous applications over an

organization's intranet and the internet.

DAVE is implemented as a modular set of Macintosh drivers, extensions and applications that can be tailored to the needs of the individual Macintosh user. The NetBIOS driver can be configured using DHCP for simpler network management.

FILE AND PRINT SERVICES

DAVE provides the Macintosh user with the interface environment they are accustomed to. Downloading or copying files to a local drive is not necessary when running DAVE. Using the Macintosh Chooser, users can mount multiple shared directories on Windows NT, Windows 95 and Windows for Workgroups computers. Macintosh applications can then manipulate files directly over the network.

The print gateway works with PostScript print drivers and spools print jobs on Windows systems that are configured to share printers. Printers appear in the Macintosh user's Chooser window. The gateway supports Adobe compliant PPD configurations and handles PostScript query jobs that conform to Adobe document structuring conventions.

MESSAGE SERVICE

The Message Tool gives users the ability to compose and send messages. The Message Listener is an 'init' which loads at startup to receive messages. Message reception can be disabled and enabled by the user. The Message Listener is useful for notifying users of changes in server status and print job completion. NT administrators can use this service to broadcast messages to their users.

SECURITY

DAVE uses encrypted passwords and works with both LanManager and Windows NT passwords.

Begin_Table

DAVE FEATURES

- * Client file services
- * Client print services
- * Message Tool
 - o User controlled
 - o Pop-up message windows for the SMB messaging service
 - o Compose and send messages
- * Internet and intranet access
- * NetBIOS Driver
 - o Control Panel to configure and monitor operation of NetBIOS driver
 - o Fully RFC 1001/1002
 - o WINS compatible and configurable with DHCP
- * Supports 68K and PPC Macintosh, Mac OS 7.5.x
- * Supports at least 10 mounts
- * Supports FAT and NTFS file systems

- * Uses the Apple File System Manager
- * Supports aliases
- * Supports browsing for resources in Chooser
- * Integration with Services for Macintosh
- * Supports encrypted passwords
- * Provides Unicode names for Windows NT
- * Apple Open Transport Native
- * Compatible with MacTCP
- * Supports multiple remote printers
- * RAS support for mobile access via PPP
- * RAS connection only utilized when user accessing remote files

MACINTOSH SYSTEM REQUIREMENTS

- * Any Macintosh with a 68020 or higher processor
- * MacOS 7.5.x with a minimum of 8 megabytes of RAM
- * Apple's MacTCP or Open Transport TCP/IP
- * Any hardware required to run TCP/IP

MICROSOFT NETWORK REQUIREMENTS

- * At least one of the following systems
 - o Windows NT Server or Workstation V3.51 or later
 - o Windows 95
 - o Windows for Workgroups V3.11 with a Microsoft TCP/IP driver

End_Table

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:21115



Tech Info Library

GeoPort Modem: Slowing It To 14.4 Kbps (3/97)

Revised: 3/13/97
Security: Everyone

GeoPort Modem: Slowing It To 14.4 Kbps (3/97)

=====

Article Created: 13 Mar 1997

TOPIC -----

I have a GeoPort modem, which I am attempting to use with Apple Telecom software version 3.1. I need to slow my modem to 14.4 Kbps. How do I do this?

DISCUSSION -----

Add the command ATSt110=1 to your initialization string. This will disable V.34 (28.8/33.6 Kbps) protocols and allow the modem to negotiate either V.32 (9600 baud) or V.32 bis (14.4 Kbps) protocols only.

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Tech Info Library Article Number:21116



Tech Info Library

AT Command Reference: Erratum (4/97)

Revised: 4/1/97
Security: Everyone

AT Command Reference: Erratum (4/97)

Article Created: 13 March 1997
Article Reviewed/Updated: 1 April 1997

TOPIC -----

I have a copy of the AT Command Reference, which I downloaded from one of Apple's Software Update locations. I need to slow my GeoPort modem to 14.4 Kbps. I am confused by the presentation for the S110 register on page 17, which states the following:

S110 Modulation Selector

0 V32/V32bis enabled, V34/34 (33.6) disabled
1 V32/V32bis enabled, V34/34 (33.6) disabled
2 Full modulation set available
7 V34 (33.6) only enabled

The descriptions for the first two settings seem identical. Should they be?

DISCUSSION -----

There is an error in the documentation. The first two items should read:

0 V32 enabled, V32bis disabled, V34/34 (33.6) disabled
1 V32/V32bis enabled, V34/34 (33.6) disabled

To elaborate:

V32 = 9600 baud protocols
V32bis = 14.4 Kbps protocols
V.34 = 28.8 Kbps protocols. Recently, this standard was upgraded to include 33.6 Kbps protocols; Apple Telecom software version 3.1 or newer will support these protocols on Power Macintosh computers.

As an example, passing the command AT S110=0 to the modem will turn on 9600 baud only.

Passing the command AT\$110=1 will allow the modem to adjust speed to 9600 or 14.4 Kbps as necessary, and will turn off 28.8 or 33.6 Kbps performance.

These articles can help you locate the AT Command Reference document mentioned in this article:

"Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

"Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the 21 March 1997 "Information Alley."

Article Change History:

01 Apr 1997 - Made correction for technical accuracy.

21 Mar 1997 - Added Information Alley statement.

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Tech Info Library Article Number:21117



Tech Info Library

PC Compatibility Card: Gets Multiple Resolutions In Win95 (3/97)

Revised: 3/19/97
Security: Everyone

PC Compatibility Card: Gets Multiple Resolutions In Win95 (3/97)

Article Created: 14 March 1997
Article Reviewed/Updated: 19 March 1997

TOPIC -----

I have a PCI-based Power Macintosh computer with a PC Compatibility Card and an Apple multiple scan monitor. I am running Windows 95 in the PC environment. I am able to get multiple video resolutions in the Macintosh environment, but in the PC environment, the only resolution available is 640x480. How do I get Windows 95 to do higher resolutions?

DISCUSSION -----

In order to get more than 640x480 resolution in Windows 95, you need to install the updated Windows 95 video driver software that comes with the PC Compatibility Card and select the proper display type for your monitor. Both of these changes are done in the Display control panel in Windows 95.

To install the updated video drivers for Windows 95:

- 1) Insert the PC Utilities CD into the CD-ROM drive
- 2) In Windows 95, open the Display control panel
- 3) Click on the tab labeled 'Settings'
- 4) Click on 'Change Display Type'. If the Adapter Type shows up as 'ATI mach64 (macxw4)(DirectDraw)', you have already installed the update driver and do not need to reinstall it. Skip to the section below about selecting your monitor type.
- 5) For 'Adapter Type', click on 'Change...'
- 6) Click on 'Have Disk...'
- 7) type in 'E:\video\win95'
- 8) Select 'ATI mach64 PCI (macxw4)(DirectDraw)' and click 'OK'

To select the proper display type for an Apple monitor:
<instructions are in 12" PC Compat Card manual, chapter 4, pp80-82>

This article was published in the 18 March 1997 "Information Alley."

Article Change History:

19 Mar 1997 - Added Information Alley statement.

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Tech Info Library Article Number:21118



Tech Info Library

Mac OS: Third-Party Software and Hardware Guide (3/97)

Revised: 3/14/97
Security: Everyone

Mac OS: Third-Party Software and Hardware Guide (3/97)

=====

Article Created: 14 March 1997

TOPIC -----

This article provides information on locating third-party hardware and software Mac OS-based computer products. Much of this information was formerly provided by Redgate Communications. Is there an alternative that provides a comprehensive listing of products than what is typically found in reseller catalogs?

DISCUSSION -----

Apple has the Mac OS Software & Hardware Guide web site on the Internet which features over twelve thousand third-party Macintosh products in one online location. The web site also contains information on purchasing specialized Mac OS software that cannot be purchased through standard sales channels, such as scientific and technical applications. Anyone can access the web site directly at:

<<http://www.macsoftware.apple.com/>>

This web site features a search engine which locates products by name, vendor, and/or keywords. It also has a link which lets vendors submit new product information, or update existing product information in a timely manner.

This article was published in the 14 March 1997 "Information Alley."

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Tech Info Library Article Number:21119



Tech Info Library

A/UX and exportFS: Using With NFS (3/97)

Revised: 3/14/97
Security: Everyone

A/UX and exportFS: Using With NFS (3/97)

=====

Article Created: 14 March 1997

TOPIC -----

I want to use exportFS to NFS mount a Macintosh directory for sharing data. The Macintosh directory has spaces in the name which export can use, and the \ and " characters are reserved for other operations in the /etc/exports file. How can I export this directory?

DISCUSSION -----

Create a symbolic link (ln -s) for that directory, called shared_data or equivalent name, that is one with no spaces. Then export the symbolic link instead of the original directory.

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Tech Info Library Article Number:21121



Tech Info Library

Dispatcher Software: Virtual Memory Issue (3/97)

Revised: 3/24/97
Security: Everyone

Dispatcher Software: Virtual Memory Issue (3/97)

Article Created: 15 March 1997
Article Reviewed/Updated: 19 March 1997

TOPIC -----

I have an Apple Color OneScanner attached to my Macintosh computer. I am encountering problems when using the Dispatcher software that came with the scanner. If virtual memory is turned on, Dispatcher will crash with a type 1 error as soon as I begin a prescan. If I turn virtual memory off, everything works OK. How can I use Dispatcher with virtual memory turned on?

DISCUSSION -----

The behavior you describe may also occur with HyperScan and Ofoto scanner software. Further, the behavior is not limited to the Apple Color OneScanner; it may occur with other Apple scanners as well. In all cases, the solution is the same.

There is a new version of the Scanner extension that addresses this issue. Its name is Dispatcher-Ofoto Drvr 4.2, and it has been posted to Apple Software Update locations. With the new extension, you will be able to use Dispatcher without having to turn off virtual memory.

The new extension may be used with the following scanner software:

- Dispatcher software version 2.0 (or newer)
- HyperScan
- Ofoto 2.0.1 (or newer).

These articles can help you locate the Scanner extension mentioned in this article:

- "Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

- "Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software updates, Apple support information, and a subset of the Apple Tech Info Library.

This article was published in the 24 March 1997 "Information Alley."

Article Change History:

24 Mar 1997 - Add Information Alley statement.

19 Mar 1997 - Added HyperScan, Ofoto and other scanners to discussion.

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Tech Info Library Article Number:21123



Tech Info Library

HyperCard 2.x: Using The Dial Command (3/97)

Revised: 3/19/97
Security: Everyone

HyperCard 2.x: Using The Dial Command (3/97)

=====

Article Created: 19 March 1997

TOPIC -----

I'm trying to use HyperCard 2.x's dial command to operate my modem, as described in the manual. I'm using the command:

dial "2551212" with modem "ATS0=0DT"

My GeoPort modem picks up and starts to dial, but then hangs up after 3 numbers. What's happening?

DISCUSSION -----

Starting with HyperCard 2.1, a new global property named "dialingTime" controls the amount of time the serial port will be kept open after a dial command. By default, this is set to 3 seconds. You can increase the time, as shown in the following sample script:

```
on mouseUp
    set the dialingTime to 600 -- (600 ticks = 10 seconds)
    dial "2551212" with modem "ATS0=0DT"
end mouseUp
```

For more information about the AT modem commands which can be used with your modem, consult your modem documentation.

This article was published in the 19 March 1997 "Information Alley."

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21125



Tech Info Library

CFM-68K Runtime Enabler 4.0: Final Version Read Me (3/97)

Revised: 3/19/97
Security: Everyone

CFM-68K Runtime Enabler 4.0: Final Version Read Me (3/97)

=====

Article Created: 19 March 1997

TOPIC -----

This article is the CFM-68K Runtime Enabler final version, "How to Install CFM-68K" Read Me file.

DISCUSSION -----

Update: CFM-68K Runtime Enabler final version now available for download!

Apple Computer has released version 4.0 of the CFM-68K Runtime Enabler extension. This extension fixes a problem with earlier versions of this extension which could result in application instability and loss of data. Because of the potential quality impact of this problem, Apple strongly recommends that customers with earlier versions of this extension upgrade to version 4.0.

To determine what version of the extension you have installed on your computer, perform the following steps:

- 1) Open your hard drive by double clicking it.
- 2) Open your System Folder by double clicking it.
- 3) Open you Extensions Folder by double clicking it.
- 4) Select the " CFM-68K Runtime Enabler" file. Note that this file begins with a space.
- 5) Choose Get Info from the File menu.
- 6) The version number is listed next to the Version heading.
- 7) If the version number is less than 4.0, you should replace the

extension with version 4.0, using the following directions.

(This is not part of the Read Me file. NOTE: If you are using CFM-68K Runtime Enabler 4.0b1 Beta software, you should replace the extension with version 4.0.)

- 8) Select the file ObjectSupportLib and Choose Get Info from the File menu.
- 9) If the version number of the file is less than 1.2, you need to replace it with the newer version.
- 10) Drag ObjectSupportLib and CFM-68K Runtime Enabler from your Extensions folder onto your Desktop. If you had previously removed the CFM-68K Runtime Enabler, then drag only ObjectSupportLib onto your Desktop. The ObjectSupportLib file must be out of your Extensions folder, but cannot be thrown away or replaced because it is in use. After you restart your computer, you can drag the ObjectSupportLib file from the Desktop to the Trash.
- 11) Locate the folder "CFM-68K 4.0 folder" and double-click it to open it.
- 12) Drag the two files " CFM-68K Runtime Enabler" (note this begins with a space), and "ObjectSupportLib" into the Extensions folder in your System Folder. Important: Dragging these files onto the System Folder itself may not route them to the correct location. Both need to be in the Extensions folder.
- 13) Restart your computer.
- 14) Verify that you have the correct versions installed by repeating steps 1 through 9.
- 15) Drag the older versions of the files from your desktop to the Trash.

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Tech Info Library Article Number:21126



Tech Info Library

MessagePad Devices: Cables needed for Windows Connections (3/97)

Revised: 3/21/97
Security: Everyone

MessagePad Devices: Cables needed for Windows Connections (3/97)

=====

Article Created: 20 March 1997

TOPIC -----

I need to know how I can obtain a cable for my Apple MessagePad, so I can use it with my Windows computer.

DISCUSSION -----

Newton software only supports serial connections, so depending on the type of serial port on your Windows PC, you these cables:

DB-9 Serial Port on your Windows PC

922-0565 "Cable, PC Connect"

922-0675 "Cable, PC Adaptor, DB9/DB25, black"

DB-25 Serial Port on your Windows PC

922-0565 "Cable, PC Connect"

The PC Connect cable is a DIN-8 to DB25 cable. The DIN-8 Connector is the port used on the Apple MessagePad. The PC Adaptor is a DB25 to DB9 cable that goes on the end of the PC Connect cable.

You can purchase these cables from an Apple Service Center, or you can use any compatible third-party cable.

This article was published in the 21 March 1997 "Information Alley."

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21127



Tech Info Library

QuickTake 200: Problems Installing Adobe Software (3/97)

Revised: 3/24/97
Security: Everyone

QuickTake 200: Problems Installing Adobe Software (3/97)

=====
Article Created: 21 March 1997
Article Reviewed/Updated: 24 March 1997

TOPIC -----

On the initial CD-ROM discs containing Adobe PhotoDeluxe and Adobe PageMill 2.0, there was a problem with the serial number printed on the CD jacket for PhotoDeluxe. There are also problems installing the software. This article contains the workarounds for the problems.

DISCUSSION -----

Adobe PhotoDeluxe Serial Number Issue
=====

The serial number printed on the CD-ROM jacket is incorrect.

If the printed the serial number begins with HEWxxxxxxxxxxxx-xxx

The correct serial number is: HFWxxxxxxxxxxxx-xxx (Note the second character is different)

Installation Problems with Adobe PageMill & PhotoDeluxe
=====

When customers try launching either the Adobe PageMill installer or Adobe PhotoDeluxe installer icons at the root level, they will hear a beep once and the installer will not open. The workaround is listed below.

Adobe PageMill

Step 1

Open the Adobe PageMill 2.0 folder

Step 2

Open the Adobe PageMill 2.0 folder

Step 3

Open the Disk 1 folder

Step 4

Launch the Install Adobe PageMill icon.

Adobe PhotoDeluxe

Step 1

Open the Adobe PhotoDeluxe folder

Step 2

Open the Install Adobe PhotoDeluxe folder

Step 3

Open the Install-Disk 1 folder

Step 4

Launch the Adobe PhotoDeluxe Installer icon.

Adobe's technical support staff has been informed of the workarounds and Apple is currently replacing the CD-ROM discs, so customers get a working CD-ROM Disc out of the box.

This article was published in the 24 March 1997 "Information Alley."

Article Change History:

24 Mar 1997 - Added Information Alley statement.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21129



Tech Info Library

Where Are OT/PPP Control Panel Settings Stored? (4/97)

Revised: 4/2/97
Security: Everyone

Where Are OT/PPP Control Panel Settings Stored? (4/97)

=====

Article Created: 1 April 1997
Article Reviewed/Updated: 2 April 1997

TOPIC -----

Where are the Open Transport/PPP control panel settings stored?

DISCUSSION -----

The configuration information entered through the PPP control panel are stored in the Remote Access Connections document (System Folder:Preferences:Remote Access:Remote Access Connections). Removal of this file clears all PPP control panel preferences including saved configurations and connect scripts.

Modem scripts used by OT/PPP are stored in the same location as ARA modem scripts, (System Folder:Extensions:Modem Scripts).

Modem control panel settings are stored in the Modem Preferences file (System Folder: Preferences: Modem Preferences).

This article was published in the 2 April 1997 "Information Alley."

Article Change History:
02 Apr 1997 - Added Information Alley statement.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21132



Tech Info Library

PowerBook 1400: No Caps Lock Extension With Mac OS 7.6 (4/97)

Revised: 4/1/97
Security: Everyone

PowerBook 1400: No Caps Lock Extension With Mac OS 7.6 (4/97)

=====

Article Created: 1 April 1997

TOPIC -----

I just installed Mac OS 7.6 on my PowerBook 1400 and now when I press the Caps Lock key the icon does not appear in the menu bar. How do I get the icon back?

DISCUSSION -----

By default, the Mac OS 7.6 installer does not install the Caps Lock extension (which enables the menu bar icon), however, the extension can be custom installed. To custom install the Caps Lock extension with the Mac OS 7.6 Installer, follow the steps below:

- 1) Insert the Mac OS 7.6 CD.
- 2) Open the Software Installers folder on the CD. You may need to scroll down to see the Software Installers folder.
- 3) Open the Mac OS 7.6 folder.
- 4) Double click the Installer icon.
- 5) Click Continue... .
- 6) Click Agree.
- 7) Choose Custom Install from the pop-up menu ("Easy Install" is the default choice).
- 8) Click on the triangle next to Mobility.
- 9) Check the box next to Caps Lock.
- 10) Click Install.
- 11) When the installer has finished, restart the PowerBook and the Caps Lock icon will show up in the menu bar whenever the Caps Lock key is activated.

NOTE: Some PowerBook 1400 computers shipped with Mac OS 7.6 installed, and they may not have the Caps Lock extension in the Extensions folder. In these cases, follow the same steps above to install the Caps Lock extension, but use the PowerBook 1400 System CD that comes with the computer instead of the Mac OS 7.6 CD.

This article was published in the 1 April 1997 "Information Alley.

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Tech Info Library Article Number:21133



Tech Info Library

Power Macintosh 7200, 7500 & 7600: Changing Fan Speed (4/97)

Revised: 4/3/97
Security: Everyone

Power Macintosh 7200, 7500 & 7600: Changing Fan Speed (4/97)

=====

Article Created: 02 April 1997

TOPIC -----

Customer says he has noticed the Power PC 7600 fan speed apparently increases with changes in temperature. When the case is removed, the fan speed appears to decrease. Is this normal opperation?

DISCUSSION -----

The change in the speed of the fan is normal. The power supply used in the Power Macintosh 7200/7500/7600 enclosure contains a fan speed control circuit. The circuit is designed to monitor the temperature of two critical heatsinks used in the power supply and as the temperature of those heatsinks rises and lowers, the speed of the fan is adjusted to compensate for the change in temperature.

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Tech Info Library Article Number:21134



Tech Info Library

PC Compatibility Card: 80 Character Text File Printing (4/97)

Revised: 4/3/97
Security: Everyone

PC Compatibility Card: 80 Character Text File Printing (4/97)

=====

Article Created: 3 April 1997

TOPIC -----

When printing ASCII or Epson LQ-2500 print jobs from the PC environment to a PostScript printer, the print out will be cut off halfway through the 77th column.

DISCUSSION -----

This is a known issue with the way PC Print Spooler converts ASCII or Epson print jobs into PostScript. Apple expects this to be resolved in the next release of the PC Setup software.

Workarounds

- Print to a QuickDraw-based printer.
- In the DOS environment print to a file. Then open the file in a Windows-based word processing application like NotePad, WordPad, or Word and then print. Since Windows has its own PostScript driver, it will generate the PostScript, and PC Print Spooler will not have to modify this print job because it is already in PostScript. This workaround is fine if you can print to a file, however, some applications will not let you do this.
- Adjust the AUTOEXEC.BAT file by following these steps:
 - Step 1
Open the PC Setup control panel
 - Step 2
Select COM1 to be "New Text File..." and give the file a name.
 - Step 3
Add the following line to AUTOEXEC.BAT:

```
mode lpt1=com1
```

This will redirect LPT1 output to COM1. Since COM1 will be saved as a file, you will have the ASCII text file in the Macintosh environment.

Step 4

To activate the port redirection, restart the PC environment for the new AUTOEXEC.BAT to be loaded or retype the above line at the command prompt.

Step 5

From the Macintosh environment, open the text file with a text editor or word processing application. SimpleText will work, but you will need to change the font size to 10 point to get 80 columns.

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Tech Info Library Article Number:21135



Tech Info Library

Mac OS 7.6 and QuickTime Issue (4/97)

Revised: 4/30/97
Security: Everyone

Mac OS 7.6 and QuickTime Issue (4/97)

=====

Article Created: 3 April 1997
Article Reviewed/Updated: 30 April 1997

TOPIC -----

This article describes an issue between Mac OS 7.6 and QuickTime.

DISCUSSION -----

A bug in the memory manager can cause a system crash when running Mac OS 7.6 and applications using QuickTime. Although this issue can be encountered using any application which uses QuickTime, it will most likely be encountered during memory intensive tasks such as compressing QuickTime movies in high end video editing programs. Increasing the memory allocation for the video application may help avoid this, but the best way to avoid this problem is to upgrade to Mac OS 7.6.1, which fixes this bug.

Note: this problem only occurs only with Mac OS 7.6. It does not occur with System 7.5.5 or earlier versions of system software, nor does it occur in Mac OS 7.6.1 or later.

Article Change History:
30 Apr 1997 - Added information about Mac OS 7.6.1.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21136



Tech Info Library

Apple Video Player: Radio Sound Only (4/97)

Revised: 4/4/97
Security: Everyone

Apple Video Player: Radio Sound Only (4/97)

=====

Article Created: 04 April 1997

TOPIC -----

When the Apple Video Player and Apple FM Radio are both open, you will only hear the audio from the radio even when the TV is the foreground process.

DISCUSSION -----

You can watch TV and listen to the radio at the same time, but the radio sound takes precedence. To hear the TV, make sure you have quit the Apple FM Radio application. To do so, click the FM Radio window to make it active, then choose Quit from the File menu.

NOTE: The radio sound doesn't work if Video or S-Video is selected in the Apple Video Player application (even if that application isn't currently open). Open the Apple Video Player application and choose Show Controls from the Windows menu. Click the video screen icon (the second button down on the left). Choose TV as your video source. You can then quit the Apple Video Player application. Now when you open the Apple FM Radio application, you will hear radio.

This article was published in the 7 April 1997 "Information Alley."

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21138



Tech Info Library

PC Compatibility Card: At Ease 3.x Errors (4/97)

Revised: 4/4/97
Security: Everyone

PC Compatibility Card: At Ease 3.x Errors (4/97)

=====

Article Created: 04 April 1997

TOPIC -----

I get several memory related error messages when using my PC Compatibility card, with At Ease 3.0.1, in a Power Macintosh 9500/132 with System 7.5.3.

One of the errors reads: "There is not enough memory to open the 'PC Clipboard' application. You will not be able to transfer the clipboard contents between the Macintosh and PC. Try quitting an open application."

Whenever I try to print from the PC Environment nothing prints out. If I switch to the Mac environment I get the following error: "There is not enough memory to open the 'PC Print Spooler' application. Files printed from the PC will be printed when more memory becomes available."

I've got 80MB installed in my Power Macintosh 9500 and I have tried raising and lowering the memory to both PC Print Spooler and PC Clipboard with no change.

If I switch to a user in At Ease that has full Finder access, then I do not get these errors. I do get similar errors in the restricted Finder. In some cases I won't get the error, but nothing will print until I log out.

DISCUSSION -----

In order to have Windows Clipboard and printing support when running At Ease, the PC Clipboard and PC Print Spooler applications need to be added to the list of user applications.

When they are added, they will show up on the At Ease panel like any other application. No damage can result from clicking on either PC Clipboard or PC Print Spooler. PC Clipboard will launch and automatically quit. PC Print Spooler will launch and a status window will appear. Users can change the preferences in PC Print Spooler.

Once PC Print Spooler is running (whether through printing or clicking on its

icon in a panel) it will always become the foreground application when switching between Windows and the Mac OS. Users must either select Quit from the File menu or change to At Ease under the Application Menu.

If you do not wish to add PC Print Spooler to a user's At Ease screen, any jobs printed will print when the user logs out. There is no need to log in to the Finder to print. PC Print Spooler will startup and run at the login screen, printing any previously queued jobs.

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Tech Info Library Article Number:21141



Tech Info Library

PC Compatibility Card: Card And Cable Pinouts (4/97)

Revised: 4/16/97
Security: Everyone

PC Compatibility Card: Card And Cable Pinouts (4/97)

Article Created: 8 April 1997
Article Reviewed/Updated: 16 April 1997

TOPIC -----

This article describes the video loopback cable that comes with the PC Compatibility cards, and provides pinouts for the cable and the card.

DISCUSSION -----

The Apple PC Compatibility cards come bundled with a three-headed video loop-back cable (part number 922-2216). The cable allows the routing of both the PC video signal and the Macintosh video signal to a single monitor.

Listed below are the pinouts for the 26-pin video connector and the 15-pin connector on the card, and the pinouts for the three-headed video loop-back cable:

Begin_Table

VIDEO CONNECTOR

=====

Pin	Signal	Description
1	MAC HSYNC	Macintosh horizontal sync.
2,4,6,8	GND	Logic ground
3	MAC BLUE	Macintosh blue signal
5	SENSE0	Sense line 0
7	BLUE OUT	Blue output from PCI card
9	HSYNC OUT	Horiz. sync. output from PCI card
10	MAC CSYNC	Macintosh contrast sync.
11,13,15,17,21,24	GND	Chassis ground
12	MAC GREEN	Macintosh green signal
14	SENSE1	Sense line 1

16	GREEN OUT	Green output from PCI card
18	CSYNC OUT	Contrast sync. out from PCI card
19	MAC VSYNC	Macintosh vertical sync.
20	MAC RED	Macintosh red signal
22	CABLE DET L	Cable detect low
23	SENSE2	Sense line 2
25	RED OUT	Red output from PCI card
26	VSYNC OUT	Vertical sync. out from PCI card

JOYSTICK PORT

=====

Pin	Signal

1,8,9	VCC I/O
2	JOYF 0
3	JRC 0
4,5	GROUND
6	JRC 1
7	JOYF 1
10	JOYF 2
11	JRC 2
12	MIDI OUT
13	JRC 3
14	JOYF 3
15	MIDI IN

Frame Ground (threaded screw holders used to attach cable)

VIDEO 'Y' CABLE PINOUTS, 26-PIN END TO PC COMPAT. CARD

=====

Pin	Signal

1	MAC HSYNC
2	HSYNC RETURN
3	MAC BLUE
4	MAC BLUE RETURN
5	SENSE 0
6	BLUE OUT RETURN
7	BLUE OUT
8	HSYNC OUT RETURN
9	HSYNC OUT
10	MAC CSYNC
11	CSYNC RETURN
12	MAC GREEN
13	GREEN RETURN
14	SENSE 1
15	GREEN OUT RETURN

16	GREEN OUT
17	CSYNC OUT RETURN
18	CSYNC OUT
19	MAC VSYNC
20	MAC RED
21	RED RETURN
22	CABLE DET
23	SENSE 2
24	RED OUT RETURN
25	RED OUT
26	VSYNC OUT

VIDEO 'Y' CABLE PINOUTS, 15-PIN END TO MAC VIDEO

=====

Pin	Signal

1	RED RETURN
2	MAC RED
3	MAC CSYNC
4	SENSE 0
5	MAC GREEN
6	GREEN RETURN
7	SENSE 1
9	MAC BLUE
10	SENSE 2
11	MAC SYNC RETURN
12	MAC VSYNC
13	MAC BLUE RETURN
14	CABLE DETECT
15	MAC HSYNC

VIDEO 'Y' CABLE PINOUTS, 15-PIN END TO MONITOR

=====

Pin	Signal

1	RED OUT RETURN
2	RED OUT
3	CSYNC OUT
4	SENSE 0
5	GREEN OUT
6	GREEN OUT RETURN
7	SENSE 1
9	BLUE OUT
10	SENSE 2
11	CSYNC OUT RETURN
12	VSYNC OUT

13	BLUE OUT RETURN
14	HSYNC OUT RETURN
15	HSYNC OUT

End_Table

Article Change History:

16 Apr 1997 - Additional pinouts.

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Tech Info Library Article Number:21142



Tech Info Library

Macintosh Computers: Printer Port Reset (4/97)

Revised: 4/9/97
Security: Everyone

Macintosh Computers: Printer Port Reset (4/97)

=====

Article Created: 04 April 1997

TOPIC -----

Whenever I try to select the Printer Port in my Chooser, for my serial printer, I keep getting a message saying "port in use", or "port currently in use by another application", or "port already in use". Why am I getting these messages and how can I release the port from whatever application is using it?

DISCUSSION -----

If the printer port has been in use by a QuickTake camera or by AppleTalk, then the serial printer is not going to work from the Printer Port until the port is reset.

You can reset the printer port by:

1). Selecting AppleTalk Inactive in the Chooser and restarting. If, after restart, AppleTalk shows "inactive" but you are still getting this message, your next step would be to reset the parameter RAM.

2) Resetting Parameter RAM (PRAM)

Restart the Macintosh and when you hear the startup sound, hold down the COMMAND-OPTION-R-P keys and continuing to hold the keys until the computer has "chimed" four times. AppleTalk will be "active" after this procedure so you will need to make it "inactive" in the Chooser and restart again.

3) If the Chooser shows AppleTalk "inactive" but you are still getting the "port in use" message your next step is to select the Imagewriter printer driver in the Chooser, then select the Printer Port.

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Tech Info Library Article Number:21145



Tech Info Library

Half-Height Drive: Physical Dimensions (4/97)

Revised: 4/9/97
Security: Everyone

Half-Height Drive: Physical Dimensions (4/97)

=====

Article Created: 09 April 1997

TOPIC -----

What are the physical dimensions of the half-height drives?

DISCUSSION -----

A typical 3.5-inch low-profile (1-inch high) HDA, also known as "half height", has the following physical dimensions.

Physical dimensions:

Height 1 inch
Width 4 Inches
Length 5.75 Inches

Other form factors in popular use on the Macintosh line are full-height drives, meant for use on the earliest all-in-one Macintoshes and the third-height drives supported by the mounting brackets used in the Workgroup Servers like the Power Macintosh 8550.

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Tech Info Library Article Number:21147



Tech Info Library

PowerBook 1400:Target Disk Mode & Internal CD drive (4/97)

Revised: 4/9/97
Security: Everyone

PowerBook 1400:Target Disk Mode & Internal CD drive (4/97)

=====

Article Created: 09 April 1997

TOPIC -----

The media bay CD-ROM drive for the PowerBook 1400 does not mount when the PowerBook is placed in Target Disk Mode. Is there something wrong?

DISCUSSION -----

There is nothing wrong with the comptuer. The media bay CD-ROM drive does not support Target Disk Mode. An external CD-ROM drive can be used in the SCSI chain with the appropriate termination.

For more information on SCSI/Target Disk Mode, please see the following Tech Info Library articles:

"PowerBook: Miscellaneous Frequently Asked Questions"

"PowerBook: Which Models Support SCSI Disk Mode"

"PowerBook: SCSI Disk Mode and Termination"

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21148



Tech Info Library

PC Compatibility Card: No Video W/ 3rd Party Video Card (4/97)

Revised: 4/10/97
Security: Everyone

PC Compatibility Card: No Video W/ 3rd Party Video Card (4/97)

=====

Article Created: 10 April 1997

TOPIC -----

I am having trouble using the 7" and 12" PC Compatibility Card along with a 3rd party video card.

When the 3rd party video card is installed into a Power Macintosh and the PC Compatibility Card and Mac video are daisy chained into one display the monitor does not work.

Under this same configuration, if I then attach two separate monitors (example: 17" monitor attached to PC Compatibility Card and a 14, 17 or 20" monitor attached to the 3rd party video card), everything is okay. Both sides display fine.

Why is this occurring?

DISCUSSION -----

The design of certain 3rd party video cards omits the ground signal on pin 14 of the DB-15 connector on their video cards. The PC Compatibility Card checks for ground on pin 14 to determine if a monitor/video card is connected.

The system won't exhibit this behavior when using two monitors because the monitor is grounding the signal on pin 14 of the PC Card video connector.

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Tech Info Library Article Number:21150



Tech Info Library

PC Compatibility Card: Support For Audio Input (4/97)

Revised: 4/10/97
Security: Everyone

PC Compatibility Card: Support For Audio Input (4/97)

=====

Article Created: 10 April 1997

TOPIC -----

Can I use my external microphone to provide audio input to my PC Compatibility Card?

DISCUSSION -----

No. The PC Compatibility Card supports CD and MIDI audio input only.

Copyright 1997, Apple Computer, Inc.

Tech Info Library Article Number:21151



Tech Info Library

Apple DOS And PC Compatibility Cards: Where Is BIOS? (4/97)

Revised: 4/14/97
Security: Everyone

Apple DOS And PC Compatibility Cards: Where Is BIOS? (4/97)

=====

Article Created: 10 April 1997
Article Reviewed/Updated: 14 April 1997

TOPIC -----

This article describes the Basic Input/Output System (BIOS) on the DOS Compatibility Card and the PC Compatibility Card.

DISCUSSION -----

The BIOS code is actually stored as a resource in the PC Setup control panel and loaded into CMOS on the card when the booted. Because of this design, it is possible to update the BIOS by installing a new BIOS resource into the PC Setup control panel.

The CMOS on the card is volatile. Therefore, every time the Macintosh is shut down the CMOS on the card is erased. Note that just shutting down the PC or restarting the Macintosh is not sufficient to drain CMOS. The Macintosh must be completely powered off. Also note that it may take several minutes for the memory to be lost. When the Macintosh is powered up again, the CMOS is restored by the PC Setup control panel.

There is no user support for changing BIOS settings, such as adding password protection and the like. If you were able to actually look at the settings you would see that there are no drives. Further, if you were to change the BIOS so that drive A: is a floppy and drive C: is something else, the floppy drive would not work and the PC might not boot.

This article was published in the 14 April 1997 "Information Alley."

Article Change History:
14 Apr 1997 - Added Information Alley statement.

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Tech Info Library

LaserWriters: Drivers for Windows 95 and Windows 3.1 (4/97)

Revised: 4/10/97
Security: Everyone

LaserWriters: Drivers for Windows 95 and Windows 3.1 (4/97)

=====

Article Created: 10 April 1997

TOPIC -----

What Apple LaserWriter printer drivers available for Windows 95 and Windows 3.1?

DISCUSSION -----

The drivers in the following list are included with Windows 95 and are supported by Microsoft.

Begin_Table

LaserWriter Pro 810
LaserWriter Pro 630
LaserWriter Pro 600
LaserWriter Select 360
LaserWriter IIf
LaserWriter IIg
LaserWriter IInt
LaserWriter IIntx
Personal LaserWriter NT (listed as LaserWriter Personal NT)
Personal LaserWriter NTR
LaserWriter Plus
LaserWriter

Also Available for download from the Internet for Windows 95:

LW Win 95 4.2 (Oct 96) which contains:

Color LaserWriter 12/660 PS
Color LaserWriter 12/600 PS
LaserWriter 12/40 PS
LaserWriter 16/600 PS
LaserWriter Pro 600

LaserWriter Pro 630
LaserWriter Select 360

WINDOWS 3.1, 3.0

The drivers in the following list are included with Windows 3.1 and are supported by Microsoft.

LaserWriter IInt
LaserWriter IIntx
LaserWriter Plus
LaserWriter

Also Available for download from the Internet for Windows 3.1:

LW Win 3.1 3.0.8 (Oct 96) which contains:

Color LaserWriter 12/660 PS
Color LaserWriter 12/600 PS
LaserWriter 12/640 PS
LaserWriter 16/600 PS
LaserWriter Select 360
LaserWriter Pro 600
LaserWriter Pro 630

LW Pro 810 For Windows (Jan 95, Windows 3.1)

LW Select 310 For Win: (Nov 8, 1994, Windows 3.1 and 3.0)

LW SW for Win 1.0.2 (Nov 94) which contains:

WIN30DRV Directory Windows 3.0 printer drivers

LW_NTR.WPD Personal LaserWriter NTR
LWPRDM3.WPD LaserWriter Pro 600 with 8 MB at 300 dpi, PhotoGrade Off
LWPRDM3P.WPD LaserWriter Pro 600 with 8 MB at 300 dpi, PhotoGrade On
LWPRDM6.WPD LaserWriter Pro 600 with 8 MB at 600 dpi
LWPRD_3.WPD LaserWriter Pro 600 with 4 MB at 300 dpi
LWPRW_3.WPD LaserWriter Pro 630 at 300 dpi, PhotoGrade Off
LWPRW_3P.WPD LaserWriter Pro 630 at 300 dpi, PhotoGrade On
LWPRW_6.WPD LaserWriter Pro 630 at 600 dpi
LWSEL310.WPD LaserWriter Select 310

WIN31DRV Directory Windows 3.1 printer drivers

LW_NTR.WPD Personal LaserWriter NTR
LWPRODM3.WPD LaserWriter Pro 600 with 8 MB at 300 dpi
LWPRODM6.WPD LaserWriter Pro 600 with 8 MB at 600 dpi
LWPRODR.WPD LaserWriter Pro 600 with 4 MB at 300 dpi
LWPROWT3.WPD LaserWriter Pro 630 at 300 dpi
LWPROWT6.WPD LaserWriter Pro 630 at 600 dpi
LWSEL310.WPD LaserWriter Select 310

PLW NTR For Windows (Nov 94) which contains:

WIN30DRV Directory Windows 3.0 printer drivers

LW_NTR.WPD Personal LaserWriter NTR

LWPRDM3.WPD	LaserWriter Pro 600 with 8 MB at 300 dpi, PhotoGrade Off
LWPRDM3P.WPD	LaserWriter Pro 600 with 8 MB at 300 dpi, PhotoGrade On
LWPRDM6.WPD	LaserWriter Pro 600 with 8 MB at 600 dpi
LWPRD_3.WPD	LaserWriter Pro 600 with 4 MB at 300 dpi
LWPRW_3.WPD	LaserWriter Pro 630 at 300 dpi, PhotoGrade Off
LWPRW_3P.WPD	LaserWriter Pro 630 at 300 dpi, PhotoGrade On
LWPRW_6.WPD	LaserWriter Pro 630 at 600 dpi
WIN31DRV Directory Windows 3.1 printer drivers	
LW_NTR.WPD	Personal LaserWriter NTR
LWPRODM3.WPD	LaserWriter Pro 600 with 8 MB at 300 dpi
LWPRODM6.WPD	LaserWriter Pro 600 with 8 MB at 600 dpi
LWPRODR.WPD	LaserWriter Pro 600 with 4 MB at 300 dpi
LWPROWT3.WPD	LaserWriter Pro 630 at 300 dpi
LWPROWT6.WPD	LaserWriter Pro 630 at 600 dpi

End_Table

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Tech Info Library Article Number:21153



Tech Info Library

MessagePad 2000: Hard Reset When Changing Batteries (4/97)

Revised: 4/14/97
Security: Everyone

MessagePad 2000: Hard Reset When Changing Batteries (4/97)

Article Created: 11 April 1997
Article Reviewed/Updated: 14 April 1997

TOPIC -----

When I insert my batteries into my MessagePad 2000, I receive the message:

"Do you want to erase data completely?" [Yes][No]

If I tap "yes", I receive the message:

"All your data will be lost. Do you want to continue?" [OK][Cancel]

What is this message, and why does it appear?

DISCUSSION -----

This message is part of the "hard reset" process, which is used to erase all data and information in the MessagePad's internal memory. For more information on hard resets, see page 230 of your MessagePad 2000 User's Guide.

The message appears because the power switch is down while the Newton MessagePad "cold boots". A cold boot occurs when the MessagePad is started after a period without power. The two most likely situations are as follows:

1) No AC adaptor, no batteries. Insert AC adaptor. The MessagePad 2000 will turn itself on automatically. If the switch is depressed within the first few seconds, then the "cold boot" process will display the "hard reset". Users should refrain from using the power switch for about 5 seconds after inserting the AC adaptor to prevent the hard reset message from appearing. The unit does not boot any sooner if you use the switch.

2) No AC adaptor, no batteries. Insert batteries. The MessagePad 2000 will remain off, and will cold boot when the power switch is depressed. However, if you hold the power switch, the cold boot process will display the "hard reset."

There are other, more esoteric cold boot situations as well. Remember to avoid holding down on the power switch.

This behavior is identical to previous MessagePad models, but the MessagePad 2000 has a power switch that is easier to reach, increasing the likelihood of displaying the "hard reset" message.

If you have accidentally erased your MessagePad, you can reload the bundled applications from the "Backup Disks" and you can restore personal data you have backed up with Newton Connection Utilities.

In order to reduce customer confusion, Newton Systems Group will add an addendum to the MessagePad 2000 box that states:

Resetting your MessagePad or installing batteries

When you do a software reset or you slide down and hold the Power switch after installing batteries, a message may appear asking if you want to erase your data completely. Tap No and your MessagePad will restart without erasing any information.

For more information about software resets, see the section, "Resetting the MessagePad" in the MessagePad 2000 User's Manual. For more information on installing batteries, please see "Appendix A: Installing and Replacing Batteries" in the MessagePad 2000 User's Manual.

This article was published in the 14 April 1997 "Information Alley."

Article Change History:

14 Apr 1997 - Edited for clarity.

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Tech Info Library Article Number:21155



Tech Info Library

QuickTime VR for Windows: Component File Versions (4/97)

Revised: 4/11/97
Security: Everyone

QuickTime VR for Windows: Component File Versions (4/97)

=====

Article Created: 11 April 1997

TOPIC -----

I sometimes get errors and crashes when using QuickTime VR for Windows. Some of the Windows error messages are "General Protection Fault", "Program Error Occurred", or "Segmentation Fault". These errors sometimes show up when using QuickTime VR in an Apple Media Tool project running on Windows. What's wrong?

DISCUSSION -----

An older version of the QuickTime VR component file is being used with a newer version of QuickTime for Windows. To correct the problem, you will need a copy of the QuickTime VR component file that matches the version of QuickTime for Windows loaded on your PC.

The QuickTime VR component file is called QTVRW.QTC for the 16-bit version.

If you are using Windows 95, you can use the "Properties" command to check the QTVRW.QTC file's version number. The QTVRW.QTC file may be located in the C:\WINDOWS\SYSTEM directory, with your application, or both. Be sure to verify that your disk does not contain multiple copies of this file.

Version 1.0.3.10 of QTVRW.QTC is available for download from <http://quicktime.apple.com> and should be used with QuickTime for Windows 2.1.2.

If you experience this behavior with QTVRW.QTC 1.0, try reinstalling QuickTime for Windows version 2.0.3.

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Tech Info Library Article Number:21159



Tech Info Library

Newton Internet Enabler: Overview (4/97)

Revised: 4/14/97
Security: Everyone

Newton Internet Enabler: Overview (4/97)

=====

Article Created: 14 April 1997

TOPIC -----

This article offers an overview of the Newton Internet Enabler.

DISCUSSION -----

The Newton Internet Enabler (NIE version 1.0) - TCP/IP provides capabilities for the Newton 2.0 platform. Use and knowledge about this product is covered and bound by the terms of the license you will need to execute with Apple Computer, Inc.

NIE v1.0 offers:

- Support for TCP and UDP protocols
- over PPP and SLIP
- domain name resolver
- dialer with scripting capability

NIE v1.0 enables dial-up access to an Internet Service Provider (ISP) or any IP-based solution, including web browsers or POP/SMTP mail. Enclosed with the packages you will also find sample code and reference documentation. Please be sure to read the release notes for issues that may arise using NIE 1.0.

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Tech Info Library Article Number:21160



Tech Info Library

System 7.6: Compatibility With Deck II v2.5 (4/97)

Revised: 4/15/97
Security: Everyone

System 7.6: Compatibility With Deck II v2.5 (4/97)

=====

Article Created: 15 apr 1997

TOPIC -----

This article discusses compatibility between Mac OS 7.6 and version 2.5 of DECK II software.

DISCUSSION -----

Users experiencing problems using DECK II v2.5 software with Mac OS 7.6 should update their DECK II software. Macromedia, the publisher of the software, has posted DECK II version 2.5.3 to their software update site(s).

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library Article Number:21163



Tech Info Library

Avid Cinema: No Menu Items Available (4/97)

Revised: 4/15/97
Security: Everyone

Avid Cinema: No Menu Items Available (4/97)

=====

Article Created: 15 April 1997

TOPIC -----

When Avid Cinema is launched, all menus except the File menu are grayed out and the only menu item available is Quit. What's happening?

DISCUSSION -----

This can happen after installing America Online 3.0. Some versions of AOL 3.0 install ObjectSupportLib 1.1.4. ObjectSupportLib 1.1.4 is incompatible with Avid Cinema and will cause the behavior you described.

The solution is to drag the ObjectSupportLib file from your Performa CD into your Extensions folder, replacing the incompatible version, and then restart.

The ObjectSupportLib file can be found by following this path on the Performa CD:

Begin_Table

Performa CD

Hard Disk Files

System Folder Files

Extensions

ObjectSupportLib

End_Table

This article was published in the 15 April 1997 "Information Alley."

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Tech Info Library Article Number:21164



Tech Info Library

PowerBook 3400: Speakerphone/Voicemail Capability (4/97)

Revised: 4/15/97
Security: Everyone

PowerBook 3400: Speakerphone/Voicemail Capability (4/97)

=====

Article Created: 15 April 1997

TOPIC -----

Can I use the PowerBook 3400 as a speaker phone/voice mail system like I can with some desktop Power Macintosh systems?

DISCUSSION -----

The internal PowerBook 3400 33.6 modem does not currently work with any Apple or third-party speaker phone/voice mail software. However, the PowerBook 3400 can be used as a full-functioning speaker phone and voice mail system when used with a GeoPort Telecom Adapter and PlainTalk microphone.

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Tech Info Library Article Number:21166



Tech Info Library

Performa 6360 & 6400: Performa Demo and -108 Error (4/97)

Revised: 4/16/97
Security: Everyone

Performa 6360 & 6400: Performa Demo and -108 Error (4/97)

=====

Article Created: 16 April 1997

TOPIC -----

I have a Performa 6360 & 6400 computer and have just upgraded my system software to 7.5.5. Now when I try to click the "Sign-Up with Apple" button in the Performa Demo, I get a blank dialog box with a -108.

What is this error and how can I avoid the problem?

DISCUSSION -----

The error is an out of memory error. It means that there is not enough memory to run both the Performa Demo and the "Sign-Up with Apple" application. The Performa Demo was designed to run with system software 7.5.3, Revision 2.2 on a Performa 6360 or 6400 computer with 16 MB of physical memory.

After updating the system software to 7.5.5, the memory requirements for the system software increase slightly. This slight increase is enough to prevent both the Performa Demo and the "Sign-Up with Apple" application to run simultaneously. There are 2 workarounds that will allow Performa 6360/6400 users with 16 MB of memory and running system software 7.5.5 to avoid this -108 error. They are as follows:

- 1) Turn Virtual Memory on (set to 17 MB and restart the computer)
- 2) Install more physical memory than 16 MB

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Tech Info Library Article Number:21168



Tech Info Library

Avid, MPEG and Video-In Card Compatibility (4/97)

Revised: 4/16/97
Security: Everyone

Avid, MPEG and Video-In Card Compatibility (4/97)

=====

Article Created: 16 April 1997

TOPIC -----

This article provides information on compatibility between the Apple Video-In cards, the Avid Cinema card, and the Apple MPEG card.

DISCUSSION -----

The Avid Cinema Card has a 60-pin connector and comes with a 60-pin ribbon cable; therefore, it must be used with the Video-In Card, Rev. D, which also has a 60-pin connector.

The Avid Cinema card is not compatible with the older Video-In Card, Rev. B, because of the difference in the connector sizes.

The Apple MPEG card has a 34-pin connector and comes with a 34-pin ribbon cable; therefore, it must be used with the older Video-In Card, Rev. B, which also has a 34-pin connector.

The Apple MPEG card is not compatible with the Video-In Card, Rev. D, because of the difference in the connector sizes.

Note that both versions of the Video-In Card provide the same performance.

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Tech Info Library Article Number:21173



Tech Info Library

NEC 8Xe CD-ROM: Raising Cache (4/97)

Revised: 4/16/97
Security: Everyone

NEC 8Xe CD-ROM: Raising Cache (4/97)

=====

Article Created: 16 April 1997

TOPIC -----

I have a PowerBook Duo 2300, running System 7.5.5, with a NEC 8Xe CD-ROM drive connected. The system locks up with a system error when I access the CD-ROM drive. Is my system broken? Are these devices compatible?

DISCUSSION -----

The devices are compatible. The behavior you describe can be eliminated by raising the NEC CD-ROM drive's cache to at least 256K, using the NEC control panel software.

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Tech Info Library Article Number:21174



Tech Info Library

PowerBook 500 Series: Voltages For Low Battery Warnings (4/97)

Revised: 4/16/97
Security: Everyone

PowerBook 500 Series: Voltages For Low Battery Warnings (4/97)

=====

Article Created: 16 April 1997

TOPIC -----

I have a PowerBook 500 series computer. I would like to know what the battery voltage levels are when the battery warnings appear.

DISCUSSION -----

There are two factors to take into consideration when discussing the battery voltage levels and the accompanying on-screen warnings:

- the battery warning voltage parameters are contained in the system enabler file, so if a new enabler comes out (such as in a system update or new system software) these voltages may change.
- when a battery is removed and then its voltage is checked, the voltage reading will be slightly higher since the battery is not under a load as it would be inside the PowerBook.

The voltages and their accompanying warnings for the PowerBook 500 series are:

Begin_Table

Full Battery	11.7 - 12.3 volts
1st warning	11.35 volts
2nd warning	11.15 volts
3rd warning	11 volts

End_Table

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Tech Info Library Article Number:21175



Tech Info Library

SCSI Disk Mode: Start Up Error Message (4/97)

Revised: 4/23/97
Security: Everyone

SCSI Disk Mode: Start Up Error Message (4/97)

Article Created: 17 April 1997
Article Reviewed/Updated: 23 April 1997

TOPIC -----

I have a PowerBook in SCSI Disk Mode (also known as HD Target Mode) connected to another Macintosh computer. After I turn the PowerBook on and get the moving SCSI icon and then try to turn on the other computer, I get an error message telling me that I'm using the wrong system software.

DISCUSSION -----

The host computer is trying to boot from the PowerBook hard drive. Follow these steps to remedy the situation:

- 1) Turn the host Macintosh off by pressing the power button.
- 2) Turn the PowerBook in SCSI disk mode off by pressing the power button.
- 3) Disconnect the SCSI cable from the host Macintosh.
- 4) Start up the host Macintosh.
- 5) Open the Startup Disk control panel and select the internal hard drive.
- 6) Shut down the host Macintosh.
- 7) Reconnect the SCSI cable.
- 8) Turn on the PowerBook.
- 9) Turn on the host Macintosh.

The host computer should now boot up from its own internal hard drive.

This article was published in the 23 April 1997 "Information Alley."

Article Change History:
23 Apr 1997 - Added Info Alley information.

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Tech Info Library Article Number:21178



Tech Info Library

Fax Option Cards: Year 2000 Support (4/97)

Revised: 4/17/97
Security: Everyone

Fax Option Cards: Year 2000 Support (4/97)

=====

Article Created: 17 April 1997

TOPIC -----

Is the date/time stamp kept on the fax card or by the computer? If kept by the fax cards will they support the year 2000 date when we reach it.

DISCUSSION -----

PostScript Fax Option Cards maintain their own clock which is supported by a long-life battery when the LaserWriter is off. This Fax clock is compatible with and accepts the new millennium date formats, such as March 10, 2000.

The date and time may be set from Macintoshes via the LaserWriter Fax Utility, or from DOS/Windows®3.1 via the Fax Control Panel. Step-by-step procedures for changing the clock settings are documented in the Fax Card User's Guide.

This pertains to any Apple Fax Option Cards available for the LW Pro 810, LW Select 360, and LW 16/600.

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Tech Info Library Article Number:21179



Tech Info Library

PC Exchange: Floppy Format Problem (4/97)

Revised: 4/17/97
Security: Everyone

PC Exchange: Floppy Format Problem (4/97)

Article Created: 17 April 1997

TOPIC -----

I installed PC Exchange 2.0.7 on a Performa 5300 and it does not work. What is wrong?

DISCUSSION -----

PC Exchange 2.0.7 is only for use with those Macintosh models that can support one of the PC Compatibility Cards or the DOS Compatibility Card. It will not run on all systems and is only available in the PC Setup 1.5 installer.

The machines supported by PC Exchange 2.0.7 are as follows:

Power Macintosh 6100/60 and all Performa 61xx variations
Power Macintosh 6100/66 and all Performa 61xx variations
Power Macintosh 7200 and 8200 series
Power Macintosh 7500 and 7600 series
Power Macintosh 8500 and 8600 series
Power Macintosh 9500 and 9600 series
Power Macintosh 5400 series

Quadra 630, LC 630 and all Performa 63x and 640 models

Performa 580
Performa 6360 and 64xx series

Note: Some of the systems above were released after PC Exchange 2.0.7 was tested, so PC Exchange may have problems on some of the later models.

If you are having problems with PC Exchange 2.0.7, PC Exchange 2.1.1 is now available with Mac OS 7.6

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Tech Info Library Article Number:21180



Tech Info Library

QuickTake 200: PowerBook Connection Issues (4/97)

Revised: 4/30/97
Security: Everyone

QuickTake 200: PowerBook Connection Issues (4/97)

=====

Article Created: 30 Apr 1997

TOPIC -----

This article dicusses issues with connecting a QuickTake 200 to different PowerBook models.

DISCUSSION -----

QuickTake 200 customers may encounter connection issues with their QuickTake camera and different PowerBook models. Below are areas to check when connecting a QuickTake camera to a PowerBook:

PowerBook 3400 w/internal modem

- Open the Modem Control Panel
- Set port to "Modem/Printer Port". DO NOT USE "Internal Modem".
- Save modem settings
- Close Modem Control Panel
- Select Chooser from the Apple Menu
- Select "Inactive for AppleTalk"
- Reboot machine (if you close internal modem from its "Close" menu item, you don't need to restart machine)

Other PowerBooks w/internal modem

- Select the PowerBook Control Panel
- Set to "Normal" mode
- Close the window
- Select Chooser from the Apple Menu
- Select "Inactive" for AppleTalk

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Tech Info Library Article Number:21225



Tech Info Library

Mac OS 7.6.1: RAM Disk Problem (5/97)

Revised: 5/5/97
Security: Everyone

Mac OS 7.6.1: RAM Disk Problem (5/97)

Article Created: 05 May 1997

TOPIC -----

I installed Mac OS 7.6.1 and setup a RAM disk. Now, when I try to shut the system down, the screen goes blank but the message saying it is safe to shutdown the system does not appear. On systems that power on from the keyboard, they will not shutdown so I have to use the button on the back of the CPU. What is wrong?

DISCUSSION -----

A problem has been found in Mac OS 7.6.1 that causes this problem but does not effect all Macintosh models. Apple is working on a solution and it will be available in Mac OS 8. In the meantime, downgrading to Mac OS 7.6 will resolve the issue.

This freeze occurs immediately preceding the display of the shutdown message or the system powering off. At this point, it is safe to turn off the system.

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Tech Info Library Article Number:21244



Tech Info Library

AppleVision 850AV Display: Technical Specifications (5/97)

Revised: 5/5/97
Security: Everyone

AppleVision 850AV Display: Technical Specifications (5/97)

=====

Article Created: 5 May 1997

TOPIC -----

This article gives the technical specifications for the AppleVision 850AV Display

DISCUSSION -----

Picture Tube

- * 20-in. (diagonal) Trinitron CRT
- * 19-in. (diagonal viewable image size)
- * 0.26-mm aperture grille pitch

Resolution*

Macintosh Computers

- * 640 x 480 pixels
- * 800 x 600 pixels
- * 832 x 624 pixels
- * 1,024 x 768 pixels
- * 1,152 x 870 pixels
- * 1,280 x 1,024 pixels
- * 1,600 x 1,200 pixels

PC-Compatible Systems

- * 640 x 480 pixels
- * 800 x 600 pixels
- * 1,024 x 768 pixels
- * 1,280 x 1,024 pixels
- * 1,600 x 1,200 pixels

Scanning Rates

- * 30 kHz to 94 kHz (horizontal)

- * 48 Hz to 120 Hz (vertical)

Apple DigitalColor Technology

- * Internal calibration to original factory measurements
- * Adjustment for ambient lighting
- * Adjustment for CRT phosphor aging

Multimedia Features

- * Integrated high-quality stereo speakers
- * Directional microphone
- * Stereo headphone connector

Screen Treatment

- * Antistatic, anti-reflective coating

Digital Software and Hardware Controls

- * Power on/off
- * Brightness
- * Contrast
- * Horizontal size and centering
- * Vertical size and centering
- * Convergence
- * Rotation
- * Pincushion
- * Keystone
- * Parallelogram
- * Gamma curve
- * Completely variable white-point selection: 4,100 degrees K to 9,300 degrees K
- * Bass control
- * Treble control
- * Volume control
- * Microphone mute
- * Speaker mute

Audio

- * Watts: 5 volts RMS, each channel
- * Frequency response: 80 Hz to 17 kHz
- * Speaker output: > 90 (dB) SPL at 1 KHz at 0.5 meters
- * Headphones: 600 ohm >0.5 volts RMS

Connector

- * 15-pin DSub connector for Macintosh systems
- * 15-pin DSub VGA mini-adapter for PCs

Degauss Circuitry

- * Automatic at power up

Electrical Requirements

- * Line voltage: 90 to 132 V AC and 198 to 264 V AC
- * Frequency: 47 to 63 Hz, single phase
- * Power: 180 W (maximum) when operating; less than 30 W in standby mode; 5 W (speakers off) or 30 W (speakers on) in suspend mode and when CPU is in energy-saver mode

Environmental Operating Requirements

- * Temperature: 50 degrees to 104 degrees F (10 degrees to 40 degrees C)
- * Humidity: 20% to 95%, noncondensing
- * Altitude: 0 to 10,000 ft. (0 to 3,048 m)

Size and Weight

- * Height: 21.8 in. (55.5 cm)
- * Width: 19.1 in. (48.5 cm)
- * Depth: 23.4 in. (59.5 cm)
- * Display weight: 78.0 lb. (35.4 kg)
- * Fully boxed weight: 92.1 lb. (41.9 kg)

Agency Approvals

- * FCC Part 15 Class B
- * CISPR 22 Class A (EN5008211) -- complies with European EMC directive
- * DOC Class B
- * MPR-II
- * VCCI Class 2
- * CE Mark
- * EPA Energy Star compliant
- * IEC 950
- * UL 1950
- * CSA 950
- * EN60950
- * NUTEK
- * TCO 92

System Requirements

- * Works with Power Macintosh, Macintosh Performa, and Macintosh Quadra computers with 68040 or later microprocessors running Macintosh System 7.1 or later*
- * Windows 95 Plug and Play certified

*Not all models and configurations are capable of driving the monitor to the highest resolution it supports.

Product specifications are subject to change. Check with your Apple reseller for the most current information about product specifications and configurations.

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Tech Info Library Article Number:21248



Tech Info Library

Mac OS 7.6.1 Update Read Me (5/97)

Revised: 5/5/97
Security: Everyone

Mac OS 7.6.1 Update Read Me (5/97)

Article Created: 5 May 1997

TOPIC -----

This article is the About Mac OS 7.6.1 Update Read Me file.

DISCUSSION -----

Mac OS 7.6.1 Update Overview and Installation.

Who can use Mac OS 7.6.1 Update?

Mac OS 7.6.1 Update improves the reliability of Mac OS computers.
If you are using a system software version prior to Mac OS 7.6, you must upgrade to Mac OS 7.6 before you install this update. Additionally, some newer PowerBooks, introduced after Mac OS 7.6, cannot use this update. To see if your computer can use this update, see "How Do I Know What Version of System Software I Have?" below.

IMPORTANT: Do not install this update if you have a Macintosh Performa 4400 or a Power Macintosh 4400, 5500, 6500, 7300, 8600, or 9600 series computer. You can obtain Mac OS 7.6 and Mac OS Update 7.6.1 through the Mac OS Up-To-Date program. If you have a PowerBook 3400, you need to download the Mac OS 7.6.1 Update for the PowerBook 3400. For more information, see the Mac OS Up-To-Date Web site at <<http://www.macos.apple.com/macos/releases/fulfillment.html>> or call 800-335-9258.

How do I know what version of system software I have?

To find out what system software version your computer is using, follow these steps:

- 1) Make sure you are in the Finder. (To switch to the Finder, open the Application menu, marked with an icon in the upper-right corner of your screen, and choose Finder.)

2) Open the Apple menu, located at the upper-left corner of your screen.

- If the first item in the Apple menu is called About This Computer, choose this item from the menu. In the box that appears, check the words in the upper-right corner. If you see the word "Enabler" under the line that reads "System Software 7.6," you cannot install this update. If you see "PowerBook 3400 1.0," then you need to download the Mac OS 7.6.1 Update for the PowerBook 3400. If the update is not currently available, it should be available soon. If there is no text between the line that reads "System Software 7.6" and the copyright notification, you can proceed with the installation.
- If the first item in the Apple menu is called About This Macintosh, you have an earlier version of system software. You must upgrade to Mac OS 7.6 before you can install this update.

What's included in the Mac OS 7.6.1 Update?

After you install the Mac OS 7.6.1 Update, you should notice improved stability, as well as the following fixes and enhancements:

- Nearly all Type 11 errors eliminated
Type 11 errors force you to restart the computer without saving your work. Most of these errors are now properly classified as Type 1 or Type 2 errors, which cause the active application to quit, but do not force you to restart the computer. Type 11 errors occur while using "native" applications used by computers with PowerPC processors.

IMPORTANT : When you get an error that forces a program to quit, you should still save your work in other open programs and restart the computer.

- Type 112 errors eliminated
Type 112 errors, which occurred when using some multimedia applications, have been eliminated.
- CFM-68K Runtime Enabler included for computers with 68030 and 68040 processors
Computers with 68030 and 68040 processors can now use programs that require the CFM-68K Runtime Enabler. The CFM-68K Runtime Enabler is a system extension which allows application programs to share code resources. Because of a problem with this extension, it was not included with Mac OS 7.6. This problem has been fixed.

Apple products that use the CFM-68K Runtime Enabler include OpenDoc, the LaserWriter 8.4 driver, Apple Telecom software 3.0 and later, and the Apple Media Tool. Applications from other companies that require the CFM-68K Runtime Enabler include America Online 3.0 and Internet Explorer 3.0. (If you continue to experience problems with non-Apple programs that use the CFM-68K Runtime Enabler, contact the manufacturer.)

- Improved compatibility with serial devices when using Performa 5400 and 6400 and PowerBook 3400 computers

Equipment connected to the serial port now communicates correctly with these computers. (Previously, some devices using the serial port were not recognized by these computers if the devices were connected when the computer started up.)

- Infrared problems fixed on PowerBook 1400 and 3400 computers
The computer no longer freezes if the infrared window is blocked when the computer is starting up or transferring files.
- Improved reliability when using large QuickTime files, or using QuickTime in low-memory situations
Application programs that use QuickTime files work more reliably when working with large files and when using QuickTime files in low-memory situations.
- Printing improved for Performa and Power Macintosh 5400 and 6400 series computers using non-Apple printers over LocalTalk networks
Performa and Power Macintosh 5400 and 6400 computers now print at an acceptable speed on non-Apple printers over a LocalTalk network. (Previously, printing was very slow.)
- Video applications recognize that MPEG is installed
Video applications, including the Apple Video Player, now correctly recognize when MPEG software or hardware is installed.
- Storage PC Cards no longer require a utility program to appear on the desktop
PC Cards used for storage now appear on the desktop when inserted. A mounting utility program is no longer required.
- Only two low-battery messages displayed on PowerBooks before computer shuts itself down
Only two low-battery messages are displayed, instead of three, before the computer shuts itself down. The first message appears approximately two to four minutes before shutdown. The second occurs approximately ten seconds before shutdown.
- PowerBook 1400 computers now wake from sleep faster
When you wake the computer, there is less of a delay before the screen appears.
- Contrast and brightness controls work as expected on PowerBook 1400 computers
The screen will get brighter or show more contrast when the plus (+) controls are pressed. Previously, the functionality of the plus (+) and minus (-) controls were reversed on PowerBook 1400 computers.
- On the PowerBook 3400, the CD-ROM drive works correctly if inserted when the computer is on
The removable CD-ROM drive now appears correctly on the desktop if it is inserted in the expansion bay while the computer is on.
- New version of Apple System Profiler

IDE-based CD-ROM drives, such as the built-in CD-ROM drive for the PowerBook 1400, are now listed in the Apple System Profiler window.

- New version of AppleVision software
A new version of AppleVision software improves reliability on computers that currently use AppleVision monitors.
- Graphics acceleration software works correctly with a universal System Folder
Graphics acceleration software now works correctly when used with a universal System Folder. Additionally, the Graphics Accelerator extension and the Graphics Accelerator 2 extension have been merged into the ATI Graphics extension.
- New version of Apple Video Player
Video-capture and TV tuner PC Cards now work correctly on PowerBook 3400 computers. Additionally, all computers can use the AppleScript scripting language to automate tasks in Apple Video Player.
- Settings in Energy Saver control panel are saved properly
Changes made to automatic startup and shutdown settings are now saved.
- Large files copied between IDE hard disks sometimes crashed the system
Files over 1 MB can now be copied between two IDE hard disks without causing a system crash.
- Better performance when using video-capture expansion cards and ATI accelerators
Video capture is faster on computers when using video-capture PCI expansion cards with ATI graphics accelerators.

Besides the bug fixes provided by Mac OS 7.6.1 Update, several of the bug fixes and features that have been previously released as extensions are now part of the OS. You may notice that these extensions have been removed from the Extensions folder. After installing the Mac OS 7.6.1 Update, you will no longer need these extensions in your Extensions folder.

- 54xx/64xx Update version 1.0
- 54xx/64xx Update version 1.1
- 7.5.5 SCSI Server Update
- Assistant Toolbox
- PCI Network Legacy Layer version 1.0
- PCI Network Legacy Loader version 1.0
- PowerBook 1400 ATA Flash
- PowerBook 1400 PMU Updater

- PowerBook VM Tuner for OS 7.6
- PowerMac Format Patch
- PowerPC Interrupt Extension

For additional technical information, see the Mac OS 7.6.1 Update Technote. You can find it at the Apple Developer World site at <http://devworld.apple.com/dev/technotes.shtml>.

Known problems with Mac OS 7.6.1

- Monitors Control Panel is not included in "Mac OS 7.6.1 base" and "Mac OS 7.6.1 all" extension manager sets
If you have a computer that does not have the Monitors & Sound control panel and you select the "Mac OS 7.6.1 base" or "Mac OS 7.6.1 all" extension manager sets, you will also need to select the Monitors Control Panel.

Known problems with Mac OS 7.6 not fixed with this update

- Connectix Speed Doubler disabled when Mac OS 7.6.1 is installed
There is a problem using Speed Doubler versions 1.3.1 and earlier and version 2.0 with Mac OS 7.6. If you use one of these Speed Doubler versions, it will be disabled after you install Mac OS 7.6.1 Update. Connectix is aware of this problem and is providing a free update. For more information, see the Connectix Web site at <http://www.connectix.com>, or call 800-839-3632.
- Versions of several Apple software products compatible with computers with 68030 and 68040 processors that require the CFM-68K Runtime Enabler not included with Mac OS 7.6
Because of a problem with the CFM-68K Runtime Enabler, the extension and compatible versions of several Apple software products (such as OpenDoc, the LaserWriter 8.4 driver, Apple Telecom software 3.0 and later, and the Apple Media Tool) were not included with Mac OS 7.6. The CFM-68K Runtime Enabler problem has been fixed and computers with 68030 and 68040 processors can now use programs that require this extension. The latest version of this software is available on "Apple SW Updates" on the Internet <http://www.info.apple.com>, America Online (keyword: AppleComputer), and CompuServe (GO APLSUP). To get a list of authorized mirror sites on the Internet, access the following URL: <http://support.info.apple.com/ftp/mirrors.html>
- LaserWriter 8.3.4 results in an error message when you print to a file and then drag the resulting file to a desktop printer
If you use the LaserWriter 8.3.4 driver to print to a file and then drag the resulting file to a desktop printer, you get a message stating that the print library is missing. To work around this problem, update your LaserWriter software to LaserWriter 8.4.1. This software is available on "Apple SW Updates" on the Internet <http://www.info.apple.com>, America Online (keyword: AppleComputer), and CompuServe (GO APLSUP). To get a list of authorized mirror sites on the Internet, access the following

URL: <<http://support.info.apple.com/ftp/mirrors.html>>

- After you install Mac OS 7.6.1 Update, the easy install option no longer works for reinstalling Mac OS 7.6

Once you have installed Mac OS 7.6.1 Update, you can no longer use the easy install option for reinstalling Mac OS 7.6 (installers cannot update over newer versions of software). You must use the clean install option to reinstall Mac OS 7.6. Specific components can be installed using the custom install option.

- Notes on Custom Installs

If you perform a custom install of a component from your Mac OS 7.6 CD (or floppy) and already have system 7.6.1 running on your system, you may notice the following warning dialog: "The file <name of the component> already on <name of your hard drive> is newer than what you are about to install. Click Newer to keep the Newer file, Older to replace that file, or Cancel to stop installation." You should pick Newer.

IMPORTANT: After the Mac OS 7.6 install finishes installing the selected components, you should then reinstall the Mac OS 7.6.1 Update to ensure that the components you just installed are up-to-date.

- Installing QuickDraw GX for use with a non-Apple printer

If you want to use QuickDraw GX with a non-Apple printer, you need to obtain a QuickDraw GX printer driver or remove QuickDraw GX. If QuickDraw GX is installed, you will not be able to use your non-Apple printer without a GX driver. Contact your printer vendor for details. (Turning off QuickDraw GX in the Extensions Manager will solve this problem.)

- Using the QuickDraw GX Installer when Adobe Acrobat is installed

If you use the QuickDraw GX Installer to either install or remove QuickDraw GX and your computer has Adobe Acrobat installed, Acrobat will display a message about missing fonts each time the computer is restarted. Reinstall or turn off Acrobat to stop the warning message. (Turning off QuickDraw GX in the Extensions Manager will not solve the problem.)

- Video Startup extension and Apple Video Player improperly installed by Mac OS 7.6

Mac OS 7.6 improperly installs the Video Startup extension and the Apple Video Player application on Macintosh TV. You should throw the Apple Video Player application and the Video Startup extension in the trash. If these components are present, the Mac OS 7.6.1 Update will update them to newer versions which still do not work on Macintosh TV.

- 3D images cannot be viewed with OpenDoc 3DMF Viewer 1.0.1 with QuickDraw 3D 1.5 or 1.5.1 installed

If QuickDraw 3D 1.5 or 1.5.1 is installed, a message about insufficient memory appears when attempting to place a 3D image in an OpenDoc document. Increasing the viewer's memory size with the Get Info command in the File menu does not solve the problem. To use the 3DMF Viewer,

install an earlier version of QuickDraw 3D.

- Internal speaker on Power Macintosh 5500 and 6500 computers remains muted after disconnecting external speakers
If the external speakers are connected when the computer starts up and then disconnected, the internal speakers remain muted. To work around this problem, restart the computer after disconnecting the external speakers. The internal speaker should work normally.
- Adjusting the volume by pushing the Buttons on the front of the Macintosh LC575 will not register on the Monitors and Sound Control Panel
If you use the front bezel button to change volume on a Macintosh LC575 the change in volume will not register on the "Computer System Volume" slider in the Monitors and Sound control panel. You will only have the Monitors and Sound Control Panel on a LC575 if you have and AppleVision Monitor or are running a universal system.
- Macintosh customers with the DayStar Digital 040 cards will need to do the following:
If you use the DayStar Digital 040 card, you will have to first remove the card, then install Mac OS 7.6.1 Update, and then reinstall the DayStar Digital 040 card
- Two system folders when no desktop printer is selected
If you notice two active system folders on your hard drive, create a desktop printer to work around this problem. To create a desktop printer select the Chooser in the Apple Menu, select any printer, and then press the Create button.

Before you install

Use the Disk First Aid application program before you install the Mac OS 7.6.1 Update to check your hard disk for problems. Disk First Aid comes on the Mac OS 7.6.1 Update, Disk 1 disk and on the Disk Tools disk that came with your computer. Follow these steps:

- 1) Insert the Mac OS 7.6.1 Update, Disk 1 disk into the floppy disk drive.
- 2) Double-click the Disk First Aid icon to open it.
- 3) Click the icon for the disk you are installing software on.
- 4) Click Verify.
- 5) If Disk First Aid tells you your disk appears to be OK, choose Quit from the File menu. If Disk First Aid reports problems with your hard disk, see the manual that came with your computer.

NOTE: If you have a problem using Disk First Aid, see the manual that came with your computer.

Installing Mac OS 7.6.1 Update

Before you install Mac OS 7.6.1 Update, you should have at least 10 MB of disk space temporarily available on your hard disk. It is very important that you follow these steps in order to install Mac OS 7.6.1 Update:

- 1) Open the Extensions Manager control panel.
- 2) Choose "Mac OS 7.6 Base" from the Sets pop-up menu. (This choice will only appear if you are using Mac OS 7.6. If it does not appear, you need to upgrade to Mac OS 7.6 before installing this update.)
- 3) If you have third-party peripheral devices that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, drivers for alternative input devices, network card drivers, and drivers for removable media drives, such as CD-ROM drives.)
- 4) Restart your computer.
- 5) Insert the Mac OS 7.6 Update, Disk 1 disk into the floppy disk drive.
- 6) Double-click the Installer icon to open it.
- 7) After you read the licensing agreement, click Agree to continue with the installation.
- 8) Make sure that the destination disk indicated on the screen is the disk that contains Mac OS 7.6. If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.
- 9) Click Install.
- 10) Follow the instructions on the screen. On-screen messages tell you when you need to insert the other disks.
- 11) When the installation is complete, click Restart to restart your computer.
- 12) Use the Extensions Manager to turn on additional extensions.
- 13) To use the extensions you turned on, restart the computer. (If you encounter problems, choose "Mac OS 7.6.1 Base" from the Sets pop-up menu, restart your computer, then turn on other extensions one at a time to determine if one of them is causing the problem.)
- 14) After you install Mac OS 7.6.1 Update, you may want to restart your Macintosh while holding the command () and option key. This will rebuild the desktop on your Macintosh and ensure that no Icons are generic.

IF YOU CANNOT INSTALL THIS UPDATE SUCCESSFULLY: If you have trouble installing this update, try choosing "All Off" from the pop-up menu in Step 2. If you failed to run the Disk First Aid application program, follow the steps in

"Before you install," then follow the steps for installing Mac OS 7.6.1 Update.

Updating a universal System Folder

A universal System Folder can be used to start up any computer that can use Mac OS 7.6.

Only some users need a universal System Folder. You might want to create a universal System Folder if you

- start up different computer models using removable media or an external startup disk
- want to simplify support of multiple users by giving all users the same System Folder

The universal System Folder will not contain

- the Password Security control panel
- ATI 3D Accelerator, ATI MPEG Accelerator, ATI YUV Accelerator, and ATI 6500 Graphics Extension
- ATI Graphics Accelerator 1.2.2 (ATI Graphics Accelerator 1.1.4 is installed in the universal System Folder)
- the Infrared control panel, IrDALib, and IRLanScannerPPC
- the CDStrip control strip module
- the TV/FM 1.5.3

If you are responsible for only one computer, you shouldn't need to create a universal System Folder.

- 1) Start with a universal System Folder created by the Install Mac OS program (available on the CD or floppy disks that came with Mac OS 7.6).
- 2) Update your universal System Folder by installing Mac OS 7.6.1 Update.

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Tech Info Library

Mac OS 7.6.1 Update for PowerBook 3400: Read Me (5/97)

Revised: 5/5/97
Security: Everyone

Mac OS 7.6.1 Update for PowerBook 3400: Read Me (5/97)

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Article Created: 5 May 1997

TOPIC -----

This article is the Mac OS 7.6.1 Update for PowerBook 3400 ReadMe file.

DISCUSSION -----

Overview and Installation

What's included in the Mac OS 7.6.1 Update?

This document contains information on Mac OS 7.6.1 Update for all Power Macintosh and Mac OS Compatible computers, however this installer will only install on the PowerBook 3400.

After you install the Mac OS 7.6.1 Update, you should notice improved stability, as well as the following fixes and enhancements:

- Nearly all Type 11 errors eliminated

Type 11 errors force you to restart the computer without saving your work. Most of these errors are now properly classified as Type 1 or Type 2 errors, which cause the active application to quit, but do not force you to restart the computer. Type 11 errors occur while using "native" applications used by computers with PowerPC processors.

IMPORTANT When you get an error that forces a program to quit, you should still save your work in other open programs and restart the computer.

- Type 112 errors eliminated

Type 112 errors, which occurred when using some multimedia applications, have been eliminated.

- CFM-68K Runtime Enabler included for computers with 68030 and 68040 processors

Computers with 68030 and 68040 processors can now use programs that

require the CFM-68K Runtime Enabler. The CFM-68K Runtime Enabler is a system extension which allows application programs to share code resources. Because of a problem with this extension, it was not included with Mac OS 7.6. This problem has been fixed.

Apple products that use the CFM-68K Runtime Enabler include OpenDoc, the LaserWriter 8.4 driver, Apple Telecom software 3.0 and later, and the Apple Media Tool. Applications from other companies that require the CFM-68K Runtime Enabler include America Online 3.0 and Internet Explorer 3.0. (If you continue to experience problems with non-Apple programs that use the CFM-68K Runtime Enabler, contact the manufacturer.)

- Improved compatibility with serial devices when using Performa 5400 and 6400 and PowerBook 3400 computers

Equipment connected to the serial port now communicates correctly with these computers. (Previously, some devices using the serial port were not recognized by these computers if the devices were connected when the computer started up.)

- Infrared problems fixed on PowerBook 1400 and 3400 computers

The computer no longer freezes if the infrared window is blocked when the computer is starting up or transferring files.

- Improved reliability when using large QuickTime files, or using QuickTime in low-memory situations

Application programs that use QuickTime files work more reliably when working with large files and when using QuickTime files in low-memory situations.

- Printing improved for Performa and Power Macintosh 5400 and 6400 series computers using non-Apple printers over LocalTalk networks

Performa and Power Macintosh 5400 and 6400 computers now print at an acceptable speed on non-Apple printers over a LocalTalk network. (Previously, printing was very slow.)

- Video applications recognize that MPEG is installed

Video applications, including the Apple Video Player, now correctly recognize when MPEG software or hardware is installed.

- Storage PC Cards no longer require a utility program to appear on the desktop
PC Cards used for storage now appear on the desktop when inserted. A mounting utility program is no longer required.

- Only two low-battery messages displayed on PowerBooks before computer shuts itself down

Only two low-battery messages are displayed, instead of three, before the computer shuts itself down. The first message appears approximately two to four minutes before shutdown. The second occurs approximately ten seconds before shutdown.

- PowerBook 1400 computers now wake from sleep faster

When you wake the computer, there is less of a delay before the screen appears.

- Contrast and brightness controls work as expected on PowerBook 1400 computers

The screen will get brighter or show more contrast when the plus (+) controls are pressed. Previously, the functionality of the plus (+) and minus (-)

controls were reversed on PowerBook 1400 computers.

- On the PowerBook 3400, the CD-ROM drive works correctly if inserted when the computer is on

The removable CD-ROM drive now appears correctly on the desktop if it is inserted in the expansion bay while the computer is on.

- New version of Apple System Profiler

IDE-based CD-ROM drives, such as the built-in CD-ROM drive for the PowerBook 1400, are now listed in the Apple System Profiler window.

- New version of AppleVision software

A new version of AppleVision software improves reliability on computers that currently use AppleVision monitors.

- Graphics acceleration software works correctly with a universal System Folder
- Graphics acceleration software now works correctly when used with a universal System Folder. Additionally, the Graphics Accelerator extension and the Graphics Accelerator 2 extension have been merged into the ATI Graphics extension.

- New version of Apple Video Player

All computers can use the AppleScript scripting language to automate tasks in Apple Video Player.

- Settings in Energy Saver control panel are saved properly

Changes made to automatic startup and shutdown settings are now saved.

- Large files copied between IDE hard disks sometimes crashed the system
- Files over 1 MB can now be copied between two IDE hard disks without causing a system crash.

- Better performance when using video-capture expansion cards and ATI accelerators

Video capture is faster on computers when using video-capture PCI expansion cards with ATI graphics accelerators.

Besides the bug fixes provided by Mac OS 7.6.1 Update, several of the bug fixes and features that have been previously released as extensions are now part of the OS. You may notice that these extensions have been removed from the Extensions folder. After installing the Mac OS 7.6.1 Update, you will no longer need these extensions in your Extensions folder.

54xx/64xx Update version 1.0

54xx/64xx Update version 1.1

7.5.5 SCSI Server Update

Assistant Toolbox

PCI Network Legacy Layer version 1.0

PCI Network Legacy Loader version 1.0

PowerBook 1400 ATA Flash

PowerBook 1400 PMU Updater

PowerBook VM Tuner for OS 7.6

PowerMac Format Patch

PowerPC Interrupt Extension

For additional technical information, see the Mac OS 7.6.1 Update Technote. You can find it at the Apple Developer World site at [<http://devworld.apple.com/dev/technotes.shtml>](http://devworld.apple.com/dev/technotes.shtml).

Known problems with Mac OS 7.6.1

Open Transport 1.1.2 and PowerBook 3400

Open Transport 1.1.2 and the PowerBook 3400 are not compatible unless you follow these instructions. Open Transport 1.1.2 was released to address issues with very specific network configurations of some customers, and is not required for most Open Transport users. If you require version 1.1.2 of Open Transport for your network configuration, first install Open Transport 1.1.2, and then immediately install the Mac OS 7.6.1 Update for PowerBook 3400. This will overwrite resources which otherwise could cause crashes when switching between Infrared and LocalTalk.

PowerBook 1400 and Newer Technology Ethernet Card

A PowerBook 1400 used with the Newer Technology Ethernet card requires Ethernet driver version 1.5 or later from Newer Technology. Drivers older than version 1.5 may cause crashes. Visit Newer Technology's web site for the latest version: [<http://newertech.com/software.html>](http://newertech.com/software.html), or call their Tech Support at 1-800-678-3726.

Infrared Control Panel Produces Incorrect Error

If the Infrared control panel is selected on a computer that does not have infrared capability, an error -192 message is displayed. The error should state that Infrared is not supported on this computer.

Printing Speed Improvements

Improved print speed is present for some computers using third party printers over LocalTalk networks, however, Power Macintosh 5400 and 6400 computers with processor speeds less than 200 MHz without an L2 cache still exhibit slow printing. Apple is working on a solution to this problem, and will post a solution as soon possible online in the same locations as this update.

68040Computers and Closed Caption Feature in Apple Video Player

Apple Video Player's Closed Caption option will cause a hang on a 68040 computers with the Apple TV Tuner installed. Reinstalling the Apple Video Player (version 1.4) from the Mac OS 7.6 CD will remedy the problem. To reinstall, launch "Install System Software" in the Mac OS 7.6 folder within the Software Installers folder on the Mac OS 7.6 CD. Choose "Custom Install" from the pop-up, then click on the triangle next to the item "Multimedia" to expand it. Select "Apple Video Player 1.4" and click "Install." When asked if the "Newer" or "Older" file should be used, select "Older."

Apple Video Player & Mac OS 7.6.1 Incompatible with QuickTime MPEG Card

Apple Video Player will not properly recognize a QuickTime MPEG Card when run under Mac OS 7.6 or Mac OS 7.6.1. With Mac OS 7.6.1 the QuickTime MPEG extension can be used to view MPEG files using software decompression with Apple Video Player.

Apple Video Plaer 1.6 is not Installed on PowerBook 3400

If you need to use this application program, it can be downloaded from
<<http://www.info.apple.com>>.

Power Macintosh 7100/80AV & Apple Video Player Sound Problems

If the sound is muted and the slider doesn't work in Apple Video Player on a 7100/80AV, open Apple Video Player and click on the mute button to activate it. Quitting and relaunching the Apple Video Player should then remedy the problem.

Mac OS 7.6.1 and AppleVision 1710: Missing Colorsync Profile

If you try to import the "AppleVision 1710-9300" ColorSync profile, and the error "Could not complete your request because a ColorSync error has occurred." appears, install AppleVision 1.5.1 to eliminate the problem.

Extensions Manager Mac OS 7.6.1 Sets Omit File Needed to Print

Selecting "Mac OS 7.6.1 Base" and "Mac OS 7.6.1 All" in Extensions Manager, mistakenly turns off "Printing Lib" and printing is disabled. Manually turning on "Printing Lib" within Extensions Manager after choosing one of these sets will allow printing.

Extensions Manager Mac OS 7.6.1 Sets Omit Monitors Control Panel

Selecting "Mac OS 7.6.1 Base" and "Mac OS 7.6.1 All" in Extensions Manager, mistakenly turns off "Monitors" control panel. Manually turning on "Monitors" within Extensions Manager after choosing one of these sets will allow access to this control panel.

Internal Speaker on Power Macintosh 5500 and 6500 Remain Muted

If external speakers are connected to a Power Macintosh 5500 or 6500 when the computer starts up and are then disconnected, the internal speakers remains muted. Restart the computer after disconnecting the external speakers and the internal speaker will work normally.

VM is not Turned on for 68030 & 68040 Computers with More Than 16 MB of RAM 68030- and 68040-based Macintosh computers with more than 16 MB of physical memory do not have Virtual Memory turned on after installing Mac OS 7.6.1 Update.

Known problems with Mac OS 7.6 not fixed with this update

- Connectix Speed Doubler disabled when Mac OS 7.6.1 is installed

There is a problem using Speed Doubler versions 1.3.1 and earlier and version 2.0 with Mac OS 7.6. If you use one of these Speed Doubler versions, it will be disabled after you install Mac OS 7.6.1 Update. Connectix is aware of this problem and is providing a free update. For more information, see the Connectix Web site at <<http://www.connectix.com>> or call 800-839-3632.

- Versions of several Apple software products compatible with computers with 68030 and 68040 processors that require the CFM-68K Runtime Enabler not included with Mac OS 7.6

Because of a problem with the CFM-68K Runtime Enabler, the extension and compatible versions of several Apple software products (such as OpenDoc, the LaserWriter 8.4 driver, Apple Telecom software 3.0 and later, and the Apple Media Tool) were not included with Mac OS 7.6. The CFM-68K Runtime Enabler problem has been fixed and computers with 68030 and 68040 processors can now use

programs that require this extension. The latest version of this software is available on "Apple SW Updates" on the Internet <<http://www.info.apple.com>>, America Online (keyword: AppleComputer), and CompuServe (GO APLSUP). To get a list of authorized mirror sites on the Internet, access the following URL: <<http://support.info.apple.com/ftp/mirrors.html>>

- LaserWriter 8.3.4 results in an error message when you print to a file and then drag the resulting file to a desktop printer
If you use the LaserWriter 8.3.4 driver to print to a file and then drag the resulting file to a desktop printer, you get a message stating that the print library is missing. To work around this problem, update your LaserWriter software to LaserWriter 8.4.1. This software is available on "Apple SW Updates" on the Internet <<http://www.info.apple.com>>, America Online (keyword: AppleComputer), and CompuServe (GO APLSUP). To get a list of authorized mirror sites on the Internet, access the following URL: <<http://support.info.apple.com/ftp/mirrors.html>>

- After you install Mac OS 7.6.1 Update, the easy install option no longer works for reinstalling Mac OS 7.6

Once you have installed Mac OS 7.6.1 Update, you can no longer use the easy install option for reinstalling Mac OS 7.6 (installers cannot update over newer versions of software). You must use the clean install option to reinstall Mac OS 7.6. Specific components can be installed using the custom install option.

- Notes on Custom Installs

If you perform a custom install of a component from your Mac OS 7.6 CD (or floppy) and already have system 7.6.1 running on your system, you may notice the following warning dialog: "The file <name of the component> already on <name of your hard drive> is newer than what you are about to install. Click Newer to keep the Newer file, Older to replace that file, or Cancel to stop installation." You should pick Newer.

IMPORTANT After the Mac OS 7.6 install finishes installing the selected components, you should then reinstall the Mac OS 7.6.1 Update to ensure that the components you just installed are up-to-date.

- Installing QuickDraw GX for use with a non-Apple printer

If you want to use QuickDraw GX with a non-Apple printer, you need to obtain a QuickDraw GX printer driver or remove QuickDraw GX. If QuickDraw GX is installed, you will not be able to use your non-Apple printer without a GX driver. Contact your printer vendor for details. (Turning off QuickDraw GX in the Extensions Manager will solve this problem.)

- Using the QuickDraw GX Installer when Adobe Acrobat is installed

If you use the QuickDraw GX Installer to either install or remove QuickDraw GX and your computer has Adobe Acrobat installed, Acrobat will display a message about missing fonts each time the computer is restarted. Reinstall or turn off Acrobat to stop the warning message. (Turning off QuickDraw GX in the Extensions Manager will not solve the problem.)

- Video Startup extension and Apple Video Player improperly installed by Mac OS 7.6

Mac OS 7.6 improperly installs the Video Startup extension and the Apple Video

Player application on Macintosh TV. You should throw the Apple Video Player application and the Video Startup extension in the trash. If these components are present, the Mac OS 7.6.1 Update will update them to newer versions which still do not work on Macintosh TV.

- 3D images cannot be viewed with OpenDoc 3DMF Viewer 1.0.1 with QuickDraw 3D 1.5 or 1.5.1 installed

If QuickDraw 3D 1.5 or 1.5.1 is installed, a message about insufficient memory appears when attempting to place a 3D image in an OpenDoc document. Increasing the viewer's memory size with the Get Info command in the File menu does not solve the problem. To use the 3DMF Viewer, install an earlier version of QuickDraw 3D.

- Macintosh customers with the DayStar Digital 040 cards will need to do the following:

If you use the DayStar Digital 040 card, you will have to first remove the card, then install Mac OS 7.6.1 Update, and then reinstall the DayStar Digital 040 card

- Two system folders when no desktop printer is selected

If you notice two active system folders on your hard drive, create a desktop printer to work around this problem. To create a desktop printer select the Chooser in the Apple () Menu, select any printer, and then press the Create button.

Before you install

Use the Disk First Aid application program before you install the Mac OS 7.6.1 Update to check your hard disk for problems. Disk First Aid comes on the Mac OS 7.6.1 Update, Disk 1 disk and on the Disk Tools disk that came with your computer. Follow these steps:

1. Insert the Mac OS 7.6.1 Update, Disk 1 disk into the floppy disk drive.
2. Double-click the Disk First Aid icon to open it.
3. Click the icon for the disk you are installing software on.
4. Click Verify.
5. If Disk First Aid tells you your disk appears to be OK, choose Quit from the File menu. If Disk First Aid reports problems with your hard disk, see the manual that came with your computer.

Note: If you have a problem using Disk First Aid, see the manual that came with your computer.

Installing Mac OS 7.6.1 Update

Before you install Mac OS 7.6.1 Update, you should have at least 10 MB of disk space temporarily available on your hard disk.

It is very important that you follow these steps in order to install Mac OS

7.6.1 Update:

1. Open the Extensions Manager control panel.
2. Choose "Mac OS 7.6 Base" from the Sets pop-up menu. (This choice will only appear if you are using Mac OS 7.6. If it does not appear, you need to upgrade to Mac OS 7.6 before installing this update.)
3. If you have third-party peripheral devices that are required for installation and that require an extension, turn those extensions back on. (Examples include video drivers, drivers for alternative input devices, network card drivers, and drivers for removable media drives, such as CD-ROM drives.)
4. Restart your computer.
5. Insert the Mac OS 7.6 Update, Disk 1 disk into the floppy disk drive.
6. Double-click the Installer icon to open it.
7. After you read the licensing agreement, click Agree to continue with the installation.
8. Make sure that the destination disk indicated on the screen is the disk that contains Mac OS 7.6. If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.
9. Click Install.
10. Follow the instructions on the screen. Onscreen messages tell you when you need to insert the other disks.
11. When the installation is complete, click Restart to restart your computer.
12. Use the Extensions Manager to turn on additional extensions.
13. To use the extensions you turned on, restart the computer. (If you encounter problems, choose "Mac OS 7.6.1 Base" from the Sets pop-up menu , restart your computer, then turn on other extensions one at a time to determine if one of them is causing the problem.)
14. After you install Mac OS 7.6.1 Update, you may want to restart your Macintosh while holding the command () and option key. This will rebuild the desktop on your Macintosh and ensure that no Icons are generic.

If you cannot install this update successfully: If you have trouble installing this update, try choosing "All Off" from the pop-up menu in Step 2. If you failed to run the Disk First Aid application program, follow the steps in "Before you install," then follow the steps for installing Mac OS 7.6.1 Update.

Updating a universal System Folder

A universal System Folder can be used to start up any computer that can use Mac OS 7.6.

Only some users need a universal System Folder. You might want to create a universal System Folder if you

- start up different computer models using removable media or an external startup disk
- want to simplify support of multiple users by giving all users the same System Folder

The universal System Folder will not contain

- the Password Security control panel
- ATI 3D Accelerator, ATI MPEG Accelerator, ATI YUV Accelerator, and ATI 6500 Graphics Extension
- ATI Graphics Accelerator 1.2.2 (ATI Graphics Accelerator 1.1.4 is installed in the universal System Folder)
- the Infrared control panel, IrDALib, and IRLanScannerPPC
- the CDStrip control strip module
- the TV/FM 1.5.3

If you are responsible for only one computer, you shouldn't need to create a universal System Folder.

1. Start with a universal System Folder created by the Install Mac OS program (available on the CD or floppy disks that came with Mac OS 7.6).
2. Update your universal System Folder by installing Mac OS 7.6.1 Update.

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Tech Info Library Article Number:21250



Tech Info Library

Power Macintosh: Level 2 Cache Modules Supported (5/97)

Revised: 5/5/97
Security: Everyone

Power Macintosh: Level 2 Cache Modules Supported (5/97)

=====

Article Created: 5 May 1997

TOPIC -----

I have a Power Macintosh 7300. It came with a 256K Level 2 cache module. I would like to upgrade the Level 2 cache.

Page 99 of the User's Guide states, "You can replace the existing cache module with a larger one. Cache modules are currently available from third-party manufacturers in various sizes up to 1 MB. However, Apple recommends that you use an Apple-brand cache module if you want to upgrade your existing cache."

Apple does not sell or support cache modules larger than 256K. How do I upgrade my cache with an Apple-brand cache if Apple does not sell one? Is there a third-party manufacturer that Apple recommends?

DISCUSSION -----

The statement in the User's Guide can cause confusion. Apple does not sell or support a Level 2 cache module larger than 256K.

A number of Power Macintosh systems have been designed and built to theoretically accept Level 2 cache modules larger than 256K. However, the design, testing, sale and technical support of such modules is entirely up to third-party manufacturers.

Apple Computer does not endorse a particular brand of Level 2 cache.

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Tech Info Library Article Number:21252

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Tech Info Library

TITLE

Performa w/GeoPort: Restore Modem SW & Clean 7.6
Install

Article ID: 22048
Created: 6/16/97
Modified: 11/13/97

TOPIC

I have a Performa 6360 or 6400; or a Power Macintosh 4400 or 6500 system with a software bundle. I performed a clean install of Mac OS 7.6 and/or 7.6.1. Now my internal GeoPort modem does not work. What should I do?

Note:: For the purposes of the following discussion, Clean Install means placing a new System Folder on the hard disk. It does not mean reformatting the hard disk. Clean system software installations can be done automatically, through the 7.6 and/or 7.6.1 installer in which case the previous System Folder is renamed to "Previous System Folder".

DISCUSSION

Mac OS 7.6 and/or 7.6.1 does not include GeoPort software, or most of the third-party software which came bundled with your computer. Installers are not available to automatically install this software; therefore, you have two options:

1. Perform a clean install of the original bundled Performa software, then conduct a Restore All Software operation, then re-install Mac OS 7.6 and/or 7.6.1.
2. Drag-copy the extra elements from the old System Folder or from your Macintosh Performa CD to your hard disk.

Important: The following steps only apply to the listed systems. Apple does not support drag-installing Apple Telecom software on other computer types or with previous versions of the Mac OS.

Option 1: Clean Install and Re-Install Mac OS 7.6 and/or 7.6.1

For the first option, perform the following steps:

1. View Tech Info Library (TIL) document 17768: **System SW Clean Restore: Macintosh Performa Computers w/CD**
2. Perform the instructions in the article mentioned above, even if you have already installed Mac OS 7.6 and/or 7.6.1. Choose Restore All Software when finished. This will re-install the original system software, and all third-party software.
3. Install Mac OS 7.6 and/or 7.6.1. If you added Mac OS 7.6.1 after installing Mac OS 7.6, you will need to install Mac OS 7.6 first, then apply the Mac OS 7.6.1 Update.

After installing Mac OS 7.6.1, you are finished. You will need to then reconfigure your various third-party applications.

Option 2: Drag-Copy Necessary Software From Another System Folder

The rest of this article deals with drag-installing software from your Previous System Folder or from your Macintosh Performa CD. There are various steps involved, therefore this approach is best used by experienced Macintosh users or system administrators.

Before proceeding, understand why you are doing this. Did you perform the clean install because you were troubleshooting an extensions or control panel conflict? If so, it would be a good idea to see if your new System Folder resolved the issue before adding extraneous control panels or extensions. If you are troubleshooting a problem, use caution. There are many Tech Info Library articles describing the purpose and mechanics of a clean install; many are tailored to specific systems. Perform a search using the search string "clean install" to get a list of these articles.

The following steps are mainly intended for users who like to install "sterile" system software, but who want control over the extra functionality that is available with the Performa version of System 7.5.3. The idea in the steps is to use either your Previous System Folder, or the pristine System Folder on your Macintosh Performa CD to dragging the data (files) from

If you choose to copy from your Macintosh Performa CD -- this is the preferred option -- the relevant files can be found in Hard Disk Files -> System Folder. If you are troubleshooting, you should probably not choose to copy from your Previous System Folder. However if you are not troubleshooting, and you choose to copy from your Previous System Folder, the relevant files are in the Preferences Folder. You should note that sometimes corrupted preferences files can cause problems.

Note: The following is solely intended for the Performa 6360/6400 and Power Macintosh 4400/6500 Small Business/Family Macintosh bundles that ship with GeoPort modems. Since product specifications can and do change without notice, Apple cannot guarantee that this article will keep pace with changes in the bundles for these computers. Therefore, some aspects of the following discussion may not specifically apply to your computer.

The following assumes you did an Easy Install of 7.6 and/or 7.6.1 in conjunction with the clean install process. If you did a Custom Install or Minimum Install, resources needed for the proper functioning of various software packages may not be present. The resulting behavior will range from system crashes to packages refusing to open.

Also, third-party applications, you purchased, may have their own requirements. If you find that these applications no longer work correctly, or look different, certain preferences may be absent, or extensions may not have been transferred. Your options are to either identify which items are missing and move them from the Previous System Folder to the new System Folder, or to simply re-install and re-configure these applications. Check with the application manufacturer if you are dealing with any critical data which you cannot afford to lose.

If you have a third-party printer, you will need to re-install its software from the disks that came with the printer.

Important: Do not throw away your Previous System Folder until you are absolutely certain that everything is working correctly. You may want to keep the Previous System Folder on your hard disk from two to four weeks to make sure that nothing valuable is left in it.

How to proceed

Identify which source you wish to use (your CD or your Previous System Folder), then drag the files, described below, from the source to the equivalent location in the new System Folder. For example, copy the Express Modem control panel from the CD as shown in the path below:

- Hard Disk files: System Folder files: Control Panels: Express Modem

to the same location on your computer's hard disk, using the path below:

- <name of your hard disk>: System Folder: Control Panels: Express Modem

Do not copy folders unless they are not present in the destination. For example, the Mimetics folder is not going to be in the new Mac OS 7.6 and/or 7.6.1 System Folder, so put that there.

GeoPort software (Do this first)

This provides basic modem functionality. If you do not have this, you cannot use the modem.

System Folder:Control Panels:Express Modem

System Folder:Extensions:Apple Telecom Modem

System Folder:Extensions:Express Modem Tool

System Folder:Extensions:GeoPort for Power Macintosh

System Folder:Extensions:GeoPort Serial Driver

System Folder:Extensions:GeoPort Telecom Adapter

System Folder:Extensions:GeoPort Telephone Tool

System Folder:Extensions:GeoPort/Express Modem

System Folder:Extensions:GeoPort/Express Modem CNG

System Folder:Preferences:Express Modem Preferences

Fax software

The fax software will let your computer send and receive faxes. You must install the basic modem software in order to use the fax software.

System Folder:Apple Menu Items:Apple Telecom Status

System Folder:Extensions:AddressBookLib.ppc

System Folder:Extensions:Apple Fax Gateway

System Folder:Extensions:Fax Extension

System Folder:Extensions:Fax Sender

System Folder:Extensions:Fax Sender GX

System Folder:Extensions:Log Extension

System Folder:Extensions:Modem Scripts (move whole folder)

System Folder:Extensions:Scripting Additions

..TIL22048-Performa_wGeoPort_Restore_Modem_SW_&_Clean_7-6_Install.pdf

System Folder:Extensions:Received fax folder (do not move the entire folder; move this single item)

System Folder:Mimetics.(move whole folder)

System Folder:Mimetics:EasyReader Fax

System Folder:Mimetics:Neuroneye

System Folder:Mimetics:UK Dictionary

System Folder:Mimetics:US Dictionary

System Folder:Preferences:Apple Fax Preferences (do not copy from CD , doing so disabled QuickFax)

System Folder:Preferences:Address Book Preferences (move whole folder)

System Folder:Preferences:Address Book Preferences:Address Book Preferences

System Folder:Preferences:Address Book Preferences:Preferred Address Book

Megaphone 2.0.5P software

Megaphone is your telephony solution. It lets you make voice phone calls using the computer, and to use the computer as an answering machine.

At Ease Items (you do not need to copy this if you re-install At Ease)

At Ease Setups:Parents:MegaPhone

At Ease Setups:Parents:MegaPhone 2.0 Tour

System Folder:Control Panels:MegaDial

System Folder:Extensions:ANSI C++ PPC Lib

System Folder:Extensions:CRC Address Book Extension

System Folder:Extensions:MegaDial Resources

System Folder:Extensions:MegaPhone Menu

System Folder:Extensions:MWRuntimeLib

System Folder:Extensions:Telephone Manager Extension

Cypress.(move whole folder)

System Folder:Extensions:Cypress:MegaDial Files

System Folder:Extensions:Cypress:MegaDial Locations

Launcher Items.(you do not need to copy this if you drag the Launcher Items)

System Folder:Launcher Items:MegaPhone II

System Folder:Launcher Items:Learning

System Folder:Launcher Items:Learning:MegaPhone 2.0 Tour

Preferences (these should be dragged from your old System Folder **)

System Folder:Preferences:Cypress

System suitcase

The System suitcase contains "ring" sounds which are used by MegaPhone and the Apple Telecom software. Open the System suitcase in the source System Folder and drag the individual "ring" sounds to the new System Folder and drop them into the System suitcase. You can verify what the sounds are like by double-clicking on them.

Apple Internet Connection Kit (AICK)

AICK is a collection of applications. However, there are some system-level extensions which some of these applications require. The following assumes you are using an "out of box" AICK environment, and that you have not added your own PPP client.

System Folder:Control Panels:Config PPP (Config PPP may not be present here; if it's not, it's OK)

System Folder:Extensions:Internet Config

System Folder:Extensions:PPP

Preferences (these should be dragged from your old System Folder **)

System Folder:Preferences:Internet Dialer folder

System Folder:Preferences:Internet Preferences

System Folder:Preferences:PPP Preferences

System Folder:Preferences:TCP/IP Preferences***

If you have installed OT/PPP, we recommend that you re-install OT/PPP from the original installer. Your preferences, after installation, can be found in

System Folder:Preferences:Remote Access

** Many Internet clients, like Netscape, store their preferences, including their bookmark files, in a folder bearing their name. This folder is also usually stored in the Preferences folder (exceptions include applications like Claris eMailer, which store them inside the application folder). You will need to determine what steps to take on a case-by-case basis. Please contact the manufacturer of the software if you need assistance.

*** Your computer originally ran Classic Networking. Mac OS 7.6 and/or 7.6.1, however, uses an networking architecture called Open Transport. Open Transport was available as an option under Mac OS 7.5.3 or 7.5.5. If you have an account with an Internet Service Provider, and did not already switch over to Open Transport while still running Mac OS 7.5.3 or 7.5.5, you will need to re-enter the information you originally entered into the Apple Internet Dialer or MacTCP. To do this, you will need to use the TCP/IP control panel. Please consult the setup information given to you by your ISP, or contact your ISP for further assistance.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Communications-Networking; Peripherals

Category: Modems & Fax Modems

Sub Category: GeoPort Telecom Adapter

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Tech Info Library

TITLE

Mac OS 8: Clean install instructions for Performa
Computers

Article ID: 22065
Created: 9/3/97
Modified: 9/2/98

TOPIC

This article describes performing a clean installation on a Performa computer.

DISCUSSION

Mac OS 8 installers do not install GeoPort software, or most third-party software which came bundled on the Performa product line. You must perform a clean installation of the original bundled software, then install Mac OS 8.

Follow these steps to perform a clean installation on any of the Performa systems. Additional information can be obtained from the Tech Info Library Article 17768: "**System SW Clean Restore: Macintosh Performa Computers w/CD**":

1. Restart From the Apple Performa CD by pressing and holding the "C" key immediately after powering on your Performa computer.
2. Run the Disk First Aid application.
3. Disable the System Folder. To disable the system folder move either the System, or Finder files from the System Folder. Once one or both of these file are removed rename the System Folder to something like "Storage".
4. Restore original software bundle by clicking Restore All Software in the Launcher.
5. Verify the newly installed system software works by restarting your computer from the hard disk.
6. Choose the Chooser from the Apple menu and make AppleTalk active. This eliminates problems from occurring when starting from the Mac OS 8 CD-ROM disc.
7. Insert the Mac OS 8 CD-ROM and restart the Performa. After you hear the startup chime, press and hold the "C" key.
8. Install Mac OS 8.
9. If you are using an Apple GeoPort modem, you should also updating the Telecom software to version 3.1.3 which can be found on the Mac OS 8 CD-ROM disc. The path to this software on the CD is: Mac OS 8 ->CD Extras ->Apple Telecom ->GeoPort/Express Modems ->Net Install ->Apple Telecom Disk 1 ->Installer. Once the installer has been launched, perform a custom installation by selecting the appropriate software for your GeoPort that is internal or external, Fax software, and the Apple Address Book. The reasoning for this is to keep Apple Phone from being installed. Apple Phone and Megaphone conflict so by not installing Apple Phone, you can avoid further issues.

EXTENDED Information - **Apple Internal Use - Service Providers and Support Professional**

Document Information

Product Area: Mac OS System Software
Category: Mac OS 8.0
Sub Category: General Topics



Tech Info Library

Mac OS 8.0: Dropping DA Suitcase on System Folder Works

TOPIC

TOPIC

This article describes the behavior of Mac OS 8.0 when a suitcase containing a desk accessory is dropped onto the System Folder.

DISCUSSION

The behavior when dropping a suitcase containing a desk accessory on top of the System Folder has changed with Mac OS 8.0.

Under Mac OS 8.0, if you drop a desk accessory suitcase on top of the System Folder the entire suitcase will automatically move to the Apple Menu Items folder. With System 7.5 and Mac OS 7.6 the desk accessory was removed from the suitcase and put in the Apple Menu Items folder, and the suitcase was deleted.

The change was not intentional; a future release of the system software will likely change this behavior.

Article Change History:

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Tech Info Library Article Number:24131



Tech Info Library

Mac OS 8: Clean Install Message

TOPIC

If I select a clean install in the Mac OS 8 Installer and switch to the Finder and back, I get the message "The clean install option was reverted to an update install. Please click Options if you wish to change this option." I encountered this error when I launched the Mac OS 8 Installer but found that I did not have enough free space to install Mac OS 8. I switched to the Finder to free up the space and switched back and got this message.

DISCUSSION

Ever since the clean install option was added to the Installer application (not the "Install Mac OS 8" application), the Installer has always reverted back to a standard installation if the user changed the destination volume or switched to another application.

This is annoying, but allowed Apple to implement the clean install feature in the available time. Prior to Mac OS 7.6, the Installer just silently reverted and left it up to the user to notice that the Clean Install button had changed to Install. For Mac OS 7.6, Apple decided to alert the user to this change by presenting the alert you see.

The easiest way enable the clean install option again is to click Options in the Installer application (not the "Install Mac OS 8" application), and choose Install New System Folder. If the Installer is quit and then restarted, using the "Install Mac OS 8" application, the clean install option will be enabled once again.

We expect to change this behavior in a future release of system software.

Article Change History:



Tech Info Library

Mac OS 8: Late Breaking Information

Subject: Mac OS 8: Late Breaking Information

TOPIC

This article includes late-breaking information regarding Mac OS 8 (as of August 6, 1997). For up-to-the-minute information, check the "Late Breaking Information" area of the Mac OS web site at <http://macos.apple.com/macos/latebreak/>

DISCUSSION

Installer Alias does not work to the Geoport/Express Modems Installer on the Mac OS 8 CD

The error: "The alias Installer could not be opened because the original item cannot be found" will appear if the icon is opened.

Workaround: The correct installer application can be found two folders down in: Net Install: Apple Telecom - Disk 1. Selecting the Installer alias, and choosing Get Info from the File menu will display the correct path.

Cannot Boot from Mac OS 8 CD When AppleTalk is Off

Some customers have reported that they are unable to boot from the Mac OS 8 Install CD. During the startup process, a dialog appears with the following message: 'Sorry, a system error has occurred. Bus Error Type 11. Restart with shift key held down.' This issue is currently under investigation.

Possible Workarounds (Not all of them may be necessary):

Make sure the computer is running from the startup disk. Activate AppleTalk (in the Chooser for classic networking, or in the AppleTalk control panel for Open Transport networking). With the Mac OS 8 CD in the CD-ROM drive, restart the computer while holding down the 'c' key.

With the Mac OS 8 CD in the CD-ROM drive, startup your computer, while pressing the letter 'c' (or cmd-opt-shift-del if appropriate). When the Happy Macintosh icon appears, release all keys and hold down the shift key until the boot screen appears with the 'extensions disabled' message.

Using the Mac OS 8 CD, create a startup Disk Tools disk. To make a Disk Tools disk, open the Disk Tools folder on the Mac OS 8 CD, then open the Make Disk Tools floppies application. When you startup from the Disk Tools disk, you will then be able to run the Mac OS 8 Installer from the CD. (This will only work with Apple CD-ROM drives).

Use the Extensions Manager to select a minimum (base) set of the Mac OS extensions. Boot from the hard disk and install from the Mac OS 8 CD. If the installer finds any problems with the hard disk, it will not be able to correct them.

Clear (zap) the Parameter RAM (PRAM). After doing this, restart holding down the 'c' key to start up from the Mac OS 8 Install CD.

No Compatibility Issues With Mac OS 8 and Personal Web Sharing

The Read me for Personal Web Sharing (posted separately on the Internet) incorrectly states that there are compatibility problems, and this misinformation has been posted on other web sites.

There are no known incompatibilities with Mac OS 8 and Personal Web Sharing. There is no need to turn off Virtual Memory (VM), nor is there an issue with the PCI Enet driver.

Intermittent Problem Copying a Large Number of Files in Low Memory Situation

Apple has identified an intermittent problem with Mac OS 8 relating to copying large number of files between volumes when memory is low. If memory is low and a very large copy is performed between two local volumes or a local volume and a shared volume, all items may not be copied correctly and no indication is given. The size of the copy necessary to produce the bug is related to how little memory remains when the copy is started but the problem most often

occurs with copies
of more than several thousand items. Apple is working on a fix for this problem.

Workaround: Make sure several megabytes of memory is available before starting a large copy and
copy fewer files at a time. To verify that the problem has not occurred, compare the number of items
in the result with that in the source. Select the source and result and select Get Info from the File
menu. Compare the number of items shown in the Size field. If the number are the same, the copy
finished correctly. Note that the total sizes may differ depending on the size of the source and
destination volumes. Different total sizes do not indicate a problem with the copy.

Starting a 68040 computers from a CD-ROM using the c key depressed or
"command-option-shift-delete" does not work when the SCSI-ID is 5

Typically, to start up using a bootable CD, holding down the "c" key
or "command-option-shift-delete"
will force the computer to ignore the default startup volume, and boot from the CD in the CD-ROM
drive. This will not work on 68K machines if your CDdrive is set to SCSI-ID 5. The computer will
chime, and display the sad Mac, which usually denotes a hardware problem.

Workaround: Select the CD as the startup disk in the Startup control panel or set the SCSI-ID to
anything but 5 will work around this problem. Note: internal CD drives shipped from Apple are not
set to SCSI-ID 5.

In a pop-up window, selecting make alias or duplicate from the contextual menu (Control-click)
will cause a system crash

Workaround: Selecting "make alias" from the menu, and using the contextual menu when not in a
pop-up window work correctly. Option-dragging the file also works correctly.

Duplication of a folder with more than 20 items on a remote server can unexpectedly fail

When a folder with more than 20 items in it is duplicated, sometimes the copy will not complete, and
no indication is given to the user. The copy failure can depend on the size of the files, and the order
they are copied (which is dependent on the B-tree). The problem results in the process being put to
sleep, and thus neither machine is doing anything. Neither machine is hung nor inoperative, and the
copy can be terminated from the workstation by clicking the Stop button.

Workaround: Workarounds include copying the folder to another volume and back again; copying less than 20 files at a time; compressing the files into one large file, duplicating, and decompressing them again. Copying the folder to another volume will always work, the problem only occurs when duplicating some folders on another machine over a network.

MBDF virus infection can result in visual defects when the "System-wide platinum appearance" is turned off

On a virus infected machine with the System-wide platinum appearance check box unchecked in the Appearance control panel, visual defects such as problems in menus, menu items that were white turning grey when the mouse tracks over them. This indicates that the system has probably been infected with the MBDF virus. This virus causes no problems other than this color discrepancy, but should be removed by a virus removal utility.

Workaround: Use a virus utility to disinfect your computer.

Adobe Type Manager (ATM) v 4.0.2 Installation Instructions

The latest version of Adobe Type Manager, version 4.0.2, is included with Mac OS 8. Previous versions of ATM did not load properly when running the new QuickDraw GX Graphics extension. ATM version 4.0.2 addresses this problem.

Note: This version of ATM is not compatible with ATM Deluxe version 4.0. If you are running ATM Deluxe, do not install this updated version ATM 4.0.2.

To install ATM 4.02, you need to run the QuickDraw GX Installer located in the folder QuickDraw GX in the Software Installers folder. Here are the steps:

1. Double-click Install QuickDraw GX
2. From the main installer screen click on the Easy Install pop-up menu.
3. Select Custom Install.
4. Select ATM for QuickDraw GX.
5. Click the Install button.
6. At the end of the installation you will need to restart your computer.

Incorrect Version of Dial-up Application for MacLink Plus 9.0

The incorrect version of the automatic dial-up registration application for MacLinkPlus 9.0 was

included on the Mac OS 8 CD. The International version was included instead of the U.S. version.

U.S. customers who want to register MacLinkPlus 9.0 electronically can do so by visiting DataViz at:

<http://www.dataviz.com/register>. Customers can also register by printing out the registration form, and mailing it to DataViz using the address found in the 'Contacting DataViz' file.

Mac OS Runtime for Java version 1.5 Now Available

Apple has released version 1.5 of the Mac OS Runtime for Java. This is a major update that includes

performance enhancement technology that can run your Java applets and applications up to 10

times faster. You can download your copy from our "Apple and Java" site:

<http://software.apple.com/mrj/>

Now Utilities Not Fully Compatible with Mac OS 8

Now Software is evaluating the situation and will announce their plans in the near future. In the

meantime, they recommend

that you do not install Now Utilities with Mac OS 8 or if you do, that you do so at your own risk.

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible

for its content. Please contact the vendor for additional information.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular

vendor's address and phone number.

These articles can help you locate the software update mentioned here:

"Where To Find Apple Software Updates" - Lists online services for free Apple software updates.

"Obtaining Apple Product Support in the USA" - Lists 800 numbers and online services for software

updates, Apple support information, and a subset of the Apple Tech Info Library.

Article Change History:

15 Aug 1997 - Repaired URL links.

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Tech Info Library Article Number:24160



Tech Info Library

Mac OS 8: Limitations of Desktop Pictures Control Panel

TOPIC

This article contains the following frequently asked questions (FAQ) about the Desktop Pictures control panel that is part of Mac OS 8, and answers to those questions.

- 1) Which file formats (such as GIF, JPEG, PICT, EPS) does Desktop Pictures support?
- 2) What are the the size limitations of pictures imported for use as a desktop picture? Are the size and number of pictures limited by available memory or is there a hard-coded limitation?

DISCUSSION

1) Question: Which file formats (such as GIF, JPEG, PICT, EPS) does Desktop Pictures support?

Answer: Desktop Pictures supports the following image formats:

- files supported by QuickTime 2.5 graphics import components including JPEG, GIF and PhotoShop
- QuickTime Compressed 'PICT'
- 'PICT'
- picture clippings

2) Question: What are the the size limitations of pictures imported for use as a desktop picture?
Are the size and number of pictures limited by available memory or is there a hard-coded limitation?

Answer: The use of the term "imported" is not quite proper. The pictures are not

absorbed by any preference file or the Desktop Pictures control panel itself. The pictures remain as separate individual files, with a reference to them in the Desktop Pictures Prefs file.

There are no known limits on dimensions or bit depth for the pictures displayed with Desktop Pictures.

The "number of pictures" has two interpretations. The number of pictures available to display and the number of pictures actually displayed in a multi-monitor configuration.

The number of pictures available to display is subject to theoretical file system limitations of files in a folder and practical limitations of number of files that can be displayed in the open file dialog by the List Manager.

The number of pictures actually displayed in a multi-monitor configuration would be constrained by available RAM. Desktop Pictures stores the picture in temporary memory. Thus, if you have sufficient free RAM, the picture stays in RAM and redraw happens quickly. If you launch an application that needs that temporary memory, the picture is read from disk and redraw happens much more slowly.

Article Change History:

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Tech Info Library

TITLE

Power Macintosh G3: Technical Information Guide

Article ID: 24213
Created: 11/12/97
Modified: 1/11/00

TOPIC

This article contains the information published in the Power Macintosh G3 Technical Information Guide, which is included with every Power Macintosh G3 desktop system.

DISCUSSION

Processor

266 megahertz (MHz) PowerPC 750 processor/66 MHz system bus
233 megahertz (MHz) PowerPC 750 processor/66 MHz system bus
300 megahertz (MHz) PowerPC 750 processor/66 MHz system bus

Memory

Dynamic Random Access Memory

The computer comes with 32 megabytes (MB) of synchronous dynamic random-access memory (SDRAM), supplied in removable Dual Inline Memory Modules (DIMMs). The main logic board has three expansion slots, which accept DIMMs that meet these specifications:

- 8, 16, 32, 64, or 128 MB DIMMs
- DIMMs must be 3.3 volt (V), unbuffered, 64-bit wide, 168-pin
- 100 MHz/10 nanosecond (ns) cycle time or faster using Synchronous Dynamic Random Access Memory (SDRAM).

Note: If you install DIMMs with different speeds, they will all operate at the speed of the slowest DIMM installed.

Important: Power Macintosh G3 series computers use Synchronous Dynamic Random Access Memory (SDRAM) DIMMs. DIMMs from older Macintosh computers are not compatible with your computer and should not be used even though they will fit into the DRAM DIMM slots.

To increase DRAM to the maximum of 384 MB, fill all three slots with 128 MB DIMMs.

(Note: *The printed version of the Technical Information Guide does not contain this additional information: a Power Macintosh G3 in a desktop enclosure is capable of taking 128MB DIMMs. However, smaller 128MB DIMMs must be used due to space constraints. For additional information, refer to Tech Info Library article 24343, "[Power Macintosh G3 \(Desktop\): 128MB Memory DIMM Support](#)".*)

Video Memory

Your computer comes with 2 MB of Synchronous Graphic RAM (SGRAM) video memory built into the logic board. The logic board contains a video memory expansion slot that accepts a DIMM to increase video memory up to a maximum of 6 MB. The DIMM must meet these specifications:

- 2 MB or 4 MB SGRAM SO-DIMM.
- DIMM must be 32-bit wide, 144-pin
- DIMM must have 83 MHz/12 ns cycle time or faster

Important: Use only SGRAM SO-DIMMS and never use 256K or 512K video memory DIMMs used in older Macintosh computers.

Other Memory:

- 4 MB of read-only memory (ROM)
- 8 kilobytes (KB) of nonvolatile parameter memory
- 512K to 1 MB of static RAM used as a level 2 cache integrated into the processor module

For more information and instructions on expanding your DRAM or video memory, see Chapter 3, "Installing PCI Expansion Cards and Additional Memory," in Setting Up Your Power Macintosh G3 series computer manual.

Graphics Modes

The table that follows shows the modes available for monitors that can be connected to the monitor port, along with the number of colors or grays supported with 2 MB of video memory (SGRAM) and with the optional expansion to 4 MB or 6 MB of SGRAM. The table also lists the screen refresh rates in hertz (Hz) and kilohertz (kHz). Peripheral component interconnect (PCI) expansion cards that can support other monitors and special video requirements are available from other manufacturers. See your Apple-authorized dealer for information.

Note: On some monitors from manufacturers other than Apple, the connector pinout designates one pin for both green video and timing synchronization. These "sync on green" monitors are not compatible with Power Macintosh computers. If you're not sure what type of monitor you have, check with your dealer.

You can use the Monitors & Sound control panel or the Control Strip to set a display mode that is supported by both your monitor and the built-in video circuitry. Refer to the manual that came with your monitor for a list of display modes that it supports.

Display Modes and Color Depths						
Display Mode	Screen Refresh Rate		Clock	Pixel Color Depth (bits per pixel)*		
(resolution)	vertical	horizontal		2MB	4MB	6MB
512 x 384	70.130 Hz	31.488 kHz	21.160	32	32	32
640 x 480	59.940 Hz	31.469 kHz	25.175	32	32	32
640 x 480	66.667 Hz	35.000 kHz	30.24	32	32	32
640 x 480	72.809 Hz	37.861 kHz	31.500	32	32	32
640 x 480	75.000 Hz	37.500 kHz	31.500	32	32	32
640 x 480	85.008 Hz	43.269 kHz	36.000	32	32	32
640 x 870	75.000 Hz	68.850 kHz	57.283	16	32	32
800 x 600	56.250 Hz	35.156 kHz	36.000	32	32	32
800 x 600	60.317 Hz	37.879 kHz	40.000	32	32	32
800 x 600	72.188 Hz	48.077 kHz	50.000	32	32	32
800 x 600	75.000 Hz	46.875 kHz	49.500	32	32	32
800 x 600	85.061 Hz	53.674 kHz	56.250	32	32	32
832 x 624	74.550 Hz	49.725 kHz	57.283	32	32	32
1024 x 768	60.004 Hz	48.363 kHz	65.000	16	32	32
1024 x 768	70.069 Hz	56.476 kHz	75.000	16	32	32
1024 x 768	75.029 Hz	60.023 kHz	78.750	16	32	32
1024 x 768	74.927 Hz	60.241 kHz	80.000	16	32	32
1024 x 768	84.997 Hz	68.677 kHz	94.500	16	32	32
1152 x 870	75.062 Hz	68.681 kHz	100.00	16	32	32
1280 x 960	75.000 Hz	75.000 kHz	126.000	8	16	16
1280 x 1024	60.020 Hz	63.981 kHz	108.000	8	16	32
1280 x 1024	75.025 Hz	79.976 kHz	135.000	8	16	16
1280 x 1024	85.024 Hz	91.146 kHz	157.500	8	16	16
1600 x 1200	60.000 Hz	75.000 kHz	162.000	8	16	16
1600 x 1200	65.000 Hz	81.250 kHz	175.500	8	16	16
1600 x 1200	70.000 Hz	87.500 kHz	189.000	8	16	16
1600 x 1200	75.000 Hz	93.750 kHz	202.500	8	16	16
The following five configurations are available only on Power Macintosh G3 computers with the revision 2 logic board:						
1280 x 960	75.000Hz	75.000kHz	126.000MHz	8	16	32
1280 x 1024	75.025Hz	79.976kHz	135.000MHz	8	16	32
1280 x 1024	85.024Hz	91.146kHz	157.500MHz	8	16	32
1920 x 1080	59.994Hz	70.313kHz	180.000MHz	8	16	16
1920 x 1080	71.992Hz	84.375kHz	216.000MHz	8	16	16

Table Notes:

* This mode is derived from VESA 640 x 400 timings (used primarily as a games mode).

Image bit depths:

32 bits=millions of colors

16 bits=thousands of colors

8 bits=256 colors

Internal Disk Drives

The following drives come factory-installed in your computer:

- Apple SuperDrive 1.4 MB high-density floppy disk drive
- Apple ATA hard disk drive
- 24x-speed ATAPI CD-ROM drive
- Internal 100Mb Zip drive for fast, easy storage or backup (some configurations)

Interfaces

- One ADB port supporting up to three ADB input devices (such as a keyboard, mouse, or trackball) daisy-chained through a low-speed, synchronous serial bus
- Monitor port supporting color and grayscale monitors of various sizes and resolutions Two internal ATA connectors: one supports the hard disk drive and one supports the built-in CD-ROM drive
- Three internal expansion card slots supporting PCI expansion cards. Install only expansion cards that come with Macintosh drivers and are compliant with the PCI 2.1 standard. NuBus cards cannot be used in these expansion slots.
- One printer port and one modem port. Both ports are RS-232/RS-422 serial ports, 230.4 kilobit (Kbit) per second maximum (up to 2.048 megabit [Mbit] per second if clocked externally), and are compatible with GeoPort devices such as the GeoPort Telecom Adapter. (**Note:** *The original information printed in the guide is incorrect. The ports are compatible with LocalTalk and GeoPort cables. The GeoPort Telecom Adapter with Apple Telecom software is not supported.*)
- One built-in 10Base-T Ethernet RJ-45 connector for direct connection to 10Base-T networks
- One 3.5-mm sound output port for headphones or amplified speakers
- One 3.5-mm sound input port for stereo sound input. The sound input port supports the Apple PlainTalk Microphone that comes with some Macintosh computers. The sound input port also supports a standard stereo (miniplug-to-RCA) cable adapter for connecting stereo equipment to your computer. The sound input port does not support the omnidirectional microphone (the round microphone shipped with some earlier models of Macintosh) or the attenuated RCA adapter provided with some Macintosh models.

Optional Audio/Video Interfaces

Some Power Macintosh G3 models include the following audio/video interfaces:

- Two pairs of RCA-type audio ports for stereo input and output
- Two composite video ports for video input and output
- Two S-video ports for video input and output

All the video ports support the NTSC and PAL video standards. The video input ports also support the SECAM video standard.

SCSI Interface

Your computer has one standard SCSI chain, which is capable of transferring data at up to 5 MB per second. The SCSI chain can support up to seven internal and external SCSI devices. This section describes the internal SCSI expansion options. For information on connecting external SCSI devices, see Setting Up Your Power Macintosh G3 Series Computer manual. An Apple-authorized dealer or service provider can install internal SCSI devices.

The computer has two internal expansion bays. Each one accepts a 3-1/2" or 5-1/4" storage device that is up to 1.625" (41.3 mm) high. Some models come with a Zip drive already installed in one of these bays. An Apple-authorized dealer or service provider can install internal SCSI devices, along with any necessary data cabling or brackets to properly secure each SCSI device inside the computer. (Models with an internal Zip drive have an internal SCSI cable that includes an extra SCSI connector for the second expansion bay. Models without an internal Zip drive do not come with an internal SCSI cable; a dealer or service provider must install a SCSI cable in order to connect internal devices to the SCSI chain.) An Apple-authorized dealer or service provider could also replace the CD-ROM drive with a 5.25-inch (or smaller) device as tall as 1.625 inches (41.3 mm), or replace the floppy disk drive with a 3.5-inch device as tall as 1.04 inches (26.0 mm).

All internal and external devices on the SCSI chain must have unique ID numbers. SCSI ID numbers 0 through 6 are available. If the computer came with an internal Zip drive, the drive already has SCSI ID number 5 assigned to it. The computer itself has been assigned SCSI ID number 7.

Important: Some older SCSI devices may require updated drivers to work with your computer. (A "driver" is special software that is installed in your System Folder.) Contact the device manufacturer for information on obtaining driver software.

Clock/Calendar

CMOS custom circuitry with long-life battery

Keyboard

Supports all Apple Desktop Bus (ADB) keyboards

Mouse

Supports all models of the ADB mouse

Audio System

Custom sound circuitry, including a stereo generator (digital-to-analog converter, or DAC) capable of driving stereo miniplug headphones or audio equipment and stereo sampling hardware (analog-to-digital converter, or ADC) for recording stereo sound.

- 16-bit stereo input and output
- Sample rates of 44.1 and 22.05 kilohertz (kHz)

Warning: Do not attempt to replace the clock battery yourself. If the clock begins to lose accuracy, have an Apple-authorized service provider replace the battery. The service provider will dispose of the battery according to the local environmental guidelines.

Typical Audio Specifications

Sound input using the sound input port:

- Input impedance (preamp off): more than 80 kilohm ($k\Omega$)
- Maximum input voltage (preamp off): 1 Volt (V rms) = 2.8 Volts peak-to-peak (V pp), nominal
- Input impedance (preamp on): more than 5 $k\Omega$
- Maximum input voltage (preamp on): 62 millivolts (mV rms) = 175 mV pp , nominal

Sound output using the sound output port:

- Output impedance: 33 Ω , nominal
- Maximum output voltage: 0.94 V rms = 2.65 V pp

Noise, Distortion, and Bandwidth:

- Sound input signal-to-noise ratio (SNR): 85 decibels (dB) unweighted (add +8 dB to estimate A weighting)
- Total harmonic distortion: 0.05%
- Bandwidth: 20 Hz 20 kHz at 44.1-kHz sample rate (Other sample rates scale the upper cut off frequency.)

AC line input:

- Line voltage: 100 120 volts alternating current(V AC) and 200 240 V AC, rms, single phase, manually set by voltage selector switch
- Frequency: 50/60 Hz
- Power: 250 watts (W) maximum continuous; 360 W peak input

AC line output:

- Output receptacle: 100 120 V AC; 3 amperes (A) maximum, or 200 240 V AC; 1.5 amperes (A) maximum (determined by actual input voltage)

DC power:

Continuous output: 161 W

Peak output (for 12 seconds at startup): 210 W

Output Voltage	Maximum Current
+5V	18.3A
+5V (trickle)	0.1A
+3.3V	12.5A
+12V	6.2A
-12V	0.4A

-- Total continuous power output cannot exceed 161 W.

-- Not more than 104 W total combined power.

Apple Desktop Bus (ADB)

- The mouse draws up to 10 milliamperes (mA).
- The keyboard draws 2580 mA (varies with keyboard model used).
- The maximum current available for all ADB devices is 500 mA.
- The ADB port can support up to three ADB devices.

Audio and Telecommunications Devices

The following table shows power allowances for external devices connected to input ports.

Device	Voltage	Current	Power
Microphone	+5V	20mA	100mW
A device connected to the printer port or modem port	+5V	500mA	2.5W

Expansion Cards and Other Internal Devices

If you add an expansion card or a 3.5-inch storage device to your computer, make sure the component's power requirements don't exceed the maximum power allowances allocated to it by the computer.

The maximum power allowances for expansion cards in your computer can accommodate three 15-watt, two 25-watt cards, or one 15-watt card and one 25-watt card. Some detailed guidelines are presented in the following table.

Device	Voltage	Current	Power
Expansion card (15 watts)*	+5V	3A	15W
	+12V	0.500A	6W
	-12V	0.100A	1.2W
	+3.3V	2A	6.6W
Expansion card (25 watts)**	+5V	5A	25W
	+12V	0.500A	6W
	-12V	0.100A	1.2W
	+3.3V	2A	6.6W
Storage devices (such as a hard disk)	+5V	3A	15W
	+12V	2.3A	27.6W
	+12V	6.2A peak***	-
Notes: * 15-watt expansion cards should not consume more than 15 watts of total power. ** 25-watt expansion cards should not consume more than 25 watts of total power. *** Peak power is for startup only and must not occur in normal operation.			

CD-ROM drive

Disc speed:

- 24x (twenty-four times speed)

Disc diameters supported:

- 120 mm (4.7 inches)
- 80 mm (3.2 inches)

Data capacity:

- 656 MB, Mode 1
- 748 MB, Mode 2

Modes supported:

- Audio CD
- CD-ROM: Modes 1 and 2
- CD-ROM XA: Mode 2, Forms 1 and 2

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

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Category: Power Macintosh

Sub Category: Power Macintosh G3

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TITLE

Apple Software Restore: How to Use

Article ID: 24270
Created: 12/15/97
Modified: 1/11/00

TOPIC

This article is intended to give you a brief overview of Apple Software Restore included with some Macintosh computers. Please note that this article covers Apple Software Restore, not Apple Restore that came bundled with some Macintosh Performa computers.

DISCUSSION

If any of the applications or extra files on the hard disk are damaged or erased inadvertently, Apple Software Restore will allow you to restore the complete set of software originally installed on your hard disk.

Follow these steps to restore software to your hard disk:

- 1) Insert the System Software CD that came with your computer into the computer.
- 2) Select Restart from the Special menu to restart the computer. Press the C key until the "Welcome to Macintosh" message appears. (This key allows the computer to start up from the CD.)
- 3) Locate and open the Restore Installed Software folder on the CD.
- 4) Double-click the Apple Restore icon.
- 5) Read the program's greeting and click OK.

Note: Versions of Apple Software Restore prior to 1.3.1 will not have the Volume Format option.

- 6) Select the configuration you wish to restore and click the Restore button.

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Tech Info Library

TITLE

Power Macintosh G3 (Desktop): 128MB Memory DIMM Support

Article ID: 24343
Created: 2/5/98
Modified: 4/9/98

TOPIC

The Power Macintosh Desktop G3 says that it only supports 192MB of memory. Can this be increased? Can I install 128MB modules?

DISCUSSION

The Power Macintosh Desktop G3 supports SDRAM DIMMs as defined by the mechanical JEDEC MO-161 specification, and the electrical specification as defined by the JEDEC Standard.

Electrically, the Power Macintosh Desktop can support 384MB of memory. Physically, however, the standard 128MB DIMM required for 384MB of memory is too tall for the Desktop case. Therefore, Apple only specifies 192MB of memory in the desktop unit.

Some Third Party vendors have redesigned their 128MB DIMMs to be slightly shorter and to fit in the desktop case. If the developer has followed the electrical JEDEC specification and verified the design and functionality for the Power Macintosh G3 Desktop, then these shorter DIMMs should work without problem in the Power Macintosh Desktop G3.

In addition, it is the responsibility of the third party manufacturer, not Apple Computer, Inc., to verify the design and ensure the reliability of their memory modules, including standardized parts, designed for the Macintosh.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers
Category: Power Macintosh
Sub Category: Power Macintosh G3

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Tech Info Library

TITLE

PowerBook G3, PowerBook G3 Series: No Contrast Control

Article ID: 24459
Created: 4/21/98
Modified: 1/4/00

TOPIC

How do I adjust the display's contrast on a PowerBook G3 or PowerBook G3 Series computer? I can't find the Contrast control button.

DISCUSSION

The PowerBook G3 and G3 Series computers have a fixed-contrast, liquid-crystal display like the PowerBook 2400. You cannot change the contrast on these displays.

You can, however, make some adjustments to the display by using ColorSync. Install the latest version of ColorSync (available at the Apple Software Updates Web site). Next, open the Monitors & Sound control panel and click the Color button. On the bottom of the window you will see a list of ColorSync Profiles and a Calibrate button. Click the button to launch the Apple Monitor Calibration Assistant. Walk through this series of adjustments until you get the screen the way you want it. Disregard the contrast setting instruction, but experiment with the other settings. The Target Gamma page will probably provide you with a contrast setting that will satisfy you. Then save the setting and you will return to the list of profiles. Select the new one and you are done. You can make multiple calibrations and create a choice of various settings for use in different applications or environmental settings.

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read Tech Info Library article 24604: "[PowerBook G3, G3 Series: Identifying Different Versions](#)"

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers
Category: PowerBook
Sub Category: PowerBook G3; PowerBook G3 Series

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Tech Info Library

TITLE

56Kbps Modems: Getting The Fastest Connection

Article ID: 24482
Created: 5/28/98
Modified: 11/4/99

TOPIC

My 56K modem is not connecting at the speed I expected. I understand that regulations in North America and some other countries limit connections to 53 kilobits per second, but my modem seldom connects at greater than 36 Kbps. Is it malfunctioning? Can anything be done?

DISCUSSION

A modem is unlikely to malfunction only to the extent that it is unable to achieve its top speeds. Lesser speeds are common and generally reflect limitations imposed by the operating conditions:

- Impairments in the telephone network path
- Interoperability issues between modems
- Modem settings

This article provides an overview of these conditions as they affect the connection speed and reliability of 56K modems, though much is equally relevant to other modems. It joins a large body of complementary material available online from many modem manufacturers and modem-related web pages.

But first, just how fast is that connection?

MEASURING CONNECTION SPEED

Initial connection speed. The PPP or Remote Access control panel shows the speed initially established, not the current or average connection speed, which often differs.

If operating conditions permit a faster connection, the modem will attempt to speed up (fall forward). If conditions prevent sustaining a speed without incurring excessive transmission errors, the modem will slow down (fall back). Because these adjustments are common but not reflected in the software, do not base performance measurements solely upon initial connection speed.

DTE speed (modem-to-computer speed or port speed) is generally represented by the static numbers 38400, 57600, or 115200, as configured in the software. It is not a measurement of connection speed. The ARA modem scripts (selected in the Modem control panel) for all Apple 56K modems correctly configure the DTE speed for a maximum of 115200 bps.

Determining the average Data Transfer Rate. Data Transfer Rate (DTR), or throughput, describes how fast data is being transferred, expressed in bits per second. The following method of obtaining the average DTR is a truer method of assessing modem performance than observing the initial connection speed or the fluctuating throughput indicators of web browsers or FTP clients. Because the upload (transmit) speeds of analog modems cannot exceed 33.6K, the discussion is confined to download (receive) speeds.

1. Connect to the internet and, preferably, open an FTP client application rather than a web browser. Anarchie, Fetch, NetFinder, and Viconsoft FTP Client are popular shareware examples.
2. Log in to an FTP server. Many Internet Service Providers make local FTP servers available for their members, and most FTP clients include a selection of public FTP server bookmarks. If you know of any FTP servers that are not very busy or are geographically nearby, use them. The more frequently the modem has to wait for a busy server to respond, the less accurate the test results will be. The greater the server's distance, the more likely the connection will pass through additional line impairments that may slow the connection.

3. Download a compressed file of approximately 500K or larger. Most compressed files have a file name extension of .sit, .sea, .cpt, or .zip. Apply the formula **file size (bytes)/download time (seconds) x 9 = average DTR (bits/second)**:

Example

For a 500K file that takes 2 minutes 5 seconds to complete downloading, the equation reads:

$$500,000 / 125 \times 9 = 36,000$$

The average DTR was 36K (kilobits, not kilobytes) per second, though the actual DTR at any moment may have been higher or lower.

About File Size

The file sizes shown in FTP client windows are generally approximate. Convert kilobytes to bytes using the decimal format appropriate to measuring data transfer rates, where 1K = 1,000 bytes. To convert the average DTR from bits per second to kilobits per second, always divide the result by 1,000.

About Download Time

The FTP client's download progress indicator may appear shortly before the file begins downloading. Do not begin timing until the download appears to be underway. Use your own timer instead of relying upon any download time that may be reported by the FTP client.

Why the Formula Is Not Perfect

Average DTR will be greater than calculated when transmission errors require data to be re-sent, thus increasing download time without changing file size. And if the modem negotiates a connection requiring start and stop bits (2 bits added to the baseline 8 bits per byte), DTR will be greater by an additional 1 bit per byte transferred. Because all connections require transmission of some amount of extra data, using 9 as the third variable in the formula provides a serviceable if not always entirely accurate compromise.

4. Disconnect, then repeat the procedure using different FTP servers at different times of the day, especially during the off-hours of early morning or late evening. The averaged results best represent what the modem is able to achieve under its current operating conditions, so look for improvement by making the operating conditions more suitable for faster connections.

OPERATING CONDITIONS AFFECTING CONNECTION SPEED & RELIABILITY

Impairments in the telephone network path

1. Multiple analog/digital conversions. Connections are limited to a maximum of 33.6 Kbps where more than one analog section exists in the telephone network path between modems. The first analog section begins with your modem. Internet Service Providers fully supporting 56K modem connections must provide a completely digital connection, but additional analog sections may be introduced elsewhere in the path.

What you can do

Nothing. The telephone company can confirm the presence of multiple A/D conversions in a path, but consider that no two calls are necessarily routed through the same path, even when dialing the same number. This is one reason why throughput can vary with each connection. There is always the hope that the telephone network in your area will be upgraded.

2. Signal interference & distortion. The telephone network path between modems must be sufficiently free of noise and frequency distortion to permit the desired speed. The modem analyzes these line impairments as they affect the quality of the transmission signal. Poor signal quality causes transmission errors, reduced throughput, reduced connection speed, and even dropped connections.

What you can do

a. Experiment with eliminating potential sources of line impairments in the home:

- Any device connected to any telephone outlet, especially if used by the modem, and even if on a different line: telephones, including cordless telephones and their base stations, answering machines, fax machines, caller ID boxes, and other modems
- Telephone line splitters, cable extenders, faulty or overly long telephone cables (shorter is better)
- Surge protectors, including those that offer telephone line protection
- Alarm systems, especially those that are connected to the telephone system
- Computer equipment, including speakers
- Fluorescent light fixtures and light dimmers
- Satellite dish receivers
- Appliances such as air conditioners, refrigerators, dryers, microwave ovens, and televisions
- Any AC power source and related cabling
- All other things electrical, including issues with the premises wiring: loose or corroded connections, too many splices or bridges, insulation deterioration and exposed wiring, non-twisted pair telephone wiring

Start with a direct, unobstructed, modem-to-outlet connection using a short, high-quality telephone cable. As a way of confirming the issue

prior to isolating it any further, there is the option of testing with a direct connection to the external telephone box located at the back or side walls of the residence. It provides one or more standard telephone jacks supplying the home telephone connections but bypassing most impairments inside.

b. Listen for noise. Because the telephone company is only obligated to provide voice-quality phone lines, it is unlikely to address the many and varied off-premises sources of line impairments that can affect connection speed but don't cause audible noise. Connect a telephone to the wall jack used by the modem, then pick up the line, dial the number 1 to stop the dial tone, and listen. Contact the telephone company if the line is not quiet (loud hiss, pops, static, voices), but first disconnect other telephone devices and check again.

c. Use a local dial-in number to your Internet Service Provider. Long distance and 800 numbers aren't typically a concern, but may cause the call to be routed through more facilities, indirect paths, and different carriers with different types of equipment and lines. Local calls may be auto-forwarded in the same manner, but most reputable ISP's don't engage in this practice. Finally, note that if you are dialing 9 to get an outside line, you are probably using a phone system that will limit throughput to around 33.6K or less.

Interoperability issues between modems

1. The modems on both the client and server side must support the same protocol. Apple 56K modems support K56flex and V.90, but not X2. Apple/GV 56K modems that have been flash-ROM updated support either K56flex or V.90, depending upon the modem updater used.

What you can do

Confirm with your ISP that you are dialing in to a number answered by a modem of the same 56K protocol as yours.

2. Where modems of different makes, models, firmware/flash-ROM revisions, and chipsets are concerned, one modem may have an incompatible method of implementing a connection that it has negotiated with the other modem, or the negotiation itself may fail. For example, if a modem cannot sustain the current connection speed but is unable to successfully negotiate a slower connection with the other modem, the connection will incur excessive transmission errors, decreasing throughput and potentially forcing a disconnect.

What you can do

a. If your modem can be flash-ROM upgraded via software, apply the most recent modem update available. Apple 56K modem updates are available online. The latest firmware code may make the two modems more compatible--or less.

b. Force a slower connection from the very start, such as by disabling 56K protocols in favor of V.34. This change is incorporated into the "V.34 Only" modem scripts available for some Apple 56K modems. A variety of other modem manufacturers supply similar ARA modem scripts for their modems. If you are connecting to the internet using software that does not use modem scripts, supply the software with a custom initialization string for your modem. Your ISP may be able to assist you, or you can teach yourself the proper initialization string by studying the AT command guide provided with your modem or available online from the manufacturer.

c. Ask your existing Internet Service Provider whether different modems are available via an alternate dial-in number, or switch to an ISP that provides different modems (call them first, as they may already know of issues they are having supporting the modem you are using). If all else fails, you may wish to go so far as to try a different modem yourself--one that your ISP recommends for best compatibility.

The settings of either modem

The default configuration of either modem may be altered to enforce one type of modulation over another (Apple's V.34 modem scripts enforce V.34, for example); disable or change the type of compression, error correction, and flow control; change the maximum and minimum speeds allowed, and respond differently when, for example, error correction fails. These settings are changed from their defaults--the factory settings--by the modem initialization string. Depending upon the connectivity software used, the modem initialization string is either entered manually into the software or is part of an Apple Remote Access modem script.

What you can do

a. Be certain that you are using the correct modem script for your modem. Macintosh computers that ship with internal modems already include the necessary modem script, and many manufacturers also provide them online separately or with modem firmware updates.

b. Try an alternate modem script if the software or the modem manufacturer provides one. A different modem script may contain an initialization string more suitable to your operating conditions. Externally contributed modem scripts may also be found in the Communications directory of Info-Mac FTP servers and elsewhere on the Internet.

c. Edit the initialization string contained in your modem script or use software that provides the option of entering an initialization string directly, such as FreePPP or MacPPP. Your Internet Service Provider may be able to tell you what initialization string, if any, they recommend for best compatibility with their modems. They may require that you fax them the AT and S-register command set from the modem's documentation, as these can vary among modems. Don't expect too much: the modem's default settings and those defined in the modem script typically place the modem into its most robust and flexible configuration, so changes often amount to turning off features that

are beneficial in most circumstances. That is why Apple does not provide end-user instruction in modifying ARA modem scripts, other than to make an unsupported tool, the Modem Script Generator, available online.

A failed modem

Again, a modem is unlikely to malfunction only to the extent that it is unable to achieve its top speeds, but it's a possibility that cannot be discounted outright. To find out, use your modem in place of another **identical** modem that is able to attain higher speeds. Conversely, use an **identical** modem that is able to attain higher speeds in place of your own modem.

If you don't see similar results using the formula provided above, and both modems are using the same modem cable and power supply (if present), and both have been updated to the same firmware revision, there may be a hardware issue with the slower modem.

FREQUENTLY ASKED QUESTIONS:

Q. I found a new ARA modem script on the Internet that claims to make my modem faster, and sure enough, I'm now connecting at 48000 bps every time.

A. Be wary of modem scripts that always report the same initial connection speed or that claim to exploit supposedly hidden features in the modem. When evaluating a new modem script or modem initialization string, base your judgement upon the modem's stability and apply the formula for obtaining the average DTR. A modem script can force a high initial connection speed (or lie about it), but cannot force the modem to sustain that speed without dropping the connection. It is of little benefit to have a fast but unreliable connection, or one that always starts fast before slowing down dramatically.

Q. My Internet Service Provider advised me to disable error correction and compression in order to boost my connection speed. Is this advisable?

A. Rarely. That advice is grounded in the notion that, over heavily impaired lines, the overall throughput of the modem may decrease when the error-correction protocol is forced to retransmit data to correct the errors. But without error correction and compression, the integrity of the data being transferred cannot be maintained. The Remote Access control panel provides an "allow error correction and compression in modem" checkbox that may be disabled if you wish to experiment.

Q. Would it help to connect with something else besides Remote Access or Open Transport/PPP?

A. Probably not, but feel free to experiment. Examples of other connectivity software are FreePPP, MacPPP, LinkUPPP!, and SonicPPP. The first two do provide a more convenient method of changing the modem initialization string than software that uses Apple Remote Access modem scripts.

Q: I'm making a connection between my home and office 56K modems using Apple Remote Access Personal Server, but I cannot exceed 33.6 Kbps, despite achieving faster rates when connecting to my ISP. Is this normal?

A. Yes. In order to provide the fully digital server-side connection required to exceed 33.6 Kbps (see part 1 of "Impairments in the telephone network path"), an Internet Service Provider uses high speed digital servers and modem racks quite unlike the consumer modem setup. The home-to-office scenario described not only introduces an additional analog segment to the network path, but cannot avoid the 33.6K upload (transmit) limit now affecting both sides of the connection instead of just the client side. Note that the connectivity software (ARA, Timbuktu, a terminal application) is not relevant to these limitations.

Q. Is it possible to determine the highest connection speed attained during a connection, instead of just the average DTR?

A. After terminating the connection, issue an AT&F and AT&V1 command from a terminal program. This works for most modems. The results will look something like this:

```
AT&F
OK
```

```
AT&V1
TERMINATION REASON..... LOCAL REQUEST
LAST TX rate..... 21600 BPS
HIGHEST TX rate..... 21600 BPS
LAST RX rate..... 24000 BPS
HIGHEST RX rate..... 24000 BPS
PROTOCOL..... LAPM
COMPRESSION..... V42Bis
Line QUALITY..... 035
Rx LEVEL..... 023
Highest Rx State..... 67
Highest TX State..... 67
```



```
EQM Sum..... 00C3
Min Distance..... N/A
RBS Pattern..... FF
Rate Drop..... FF
Digital Loss..... None
Local Rtrn Count..... 00
Remote Rtrn Count..... 00
Flex fail
```

HIGHEST RX rate (or MAX RX and similar) represents the highest connection speed attained. Note also the line QUALITY entry: values greater than approximately 020 suggest a line quality that is unlikely to permit connections greater than 33.6K, but results may vary.

Useful Links:

TIL article 24775: "**Remote Access: Using the Terminal Window to Send AT Commands**"

TIL article 17931: "**Modem AT Command Set: Description**"

Apple Software Updates: <http://www.apple.com/swupdates>

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Communications-Networking; Peripherals

Category: Modems & Fax Modems

Sub Category: General Topics

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Tech Info Library

TITLE

Apple Studio Display 15" LCD: "No Computer Signal"
Message

Article ID: 24494
Created: 6/27/98
Modified: 1/12/00

TOPIC

I have an Apple Studio Display (15" LCD) and when my computer goes into sleep mode the display does not go into sleep mode. Instead a message saying "No Computer Signal" is displayed. Is this correct behavior?

DISCUSSION

The Apple Studio Display should go into sleep mode when you select sleep or when Energy Saver is set to put the system or display to sleep. If you see the message "No Computer Signal" remain on the screen, then the Apple Studio Display needs to be reset to clear a value from its internal memory. To do this, press the reset button on the front of the Apple Studio Display (far left button with the triangle icon) until the LED starts to flash.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Monitors-Displays
Category: Multiple Scan Displays
Sub Category: Apple Studio Display

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Tech Info Library

TITLE

PowerBook G3 & G3 Series: Identifying Different Models

Article ID: 24604
Created: 9/10/98
Modified: 12/21/99

TOPIC

Apple has introduced a number of PowerBook computers with PowerBook G3 in the name. This article provides a method for differentiating between the various models. Though the names are similar, there are significant differences.

DISCUSSION

There are two definitive ways to differentiate the various PowerBook G3 models: by family number or by visual inspection. Remember that family numbers are not the same as model numbers, which are usually listed on the invoice or proof of purchase.

Identifying by Family Number

The product label on the bottom case of all PowerBook products lists the family number. Use the table below as a cross reference.

Model	Family Number
PowerBook G3 introduced October 1997	M3553
PowerBook G3 Series introduced May 1998	M4753
PowerBook G3 Series introduced September 1998	M4753
PowerBook G3 Series (Bronze keyboard) introduced May, 1999	M5343

Identifying By Visual Inspection

PowerBook G3

The Macintosh PowerBook G3 (M3553) has a small, six-color Apple logo on the exterior display housing, two small vents on the display housing, and it closely resembles the older PowerBook 3400.

PowerBook G3 Series

The Macintosh PowerBook G3 Series (M4753) has a large white Apple logo embedded near the middle of the display housing. The G3 Series has two PC Card slots and a Modem port on its left side. On the rear of the computer, the microphone and speaker ports are exposed.

The design of the PowerBook G3 Series is new for the product.

- It is slimmer--that is, it is not as thick as the older PowerBook G3 computer.
- It is about an inch longer and an inch wider than the older PowerBook G3 computer.

PowerBook G3 Series (Bronze keyboard)

The PowerBook G3 Series (Bronze keyboard) (M5343) also has the embedded white Apple logo. The main visual difference is the keyboard, which has a bronze translucent color. The computer has a single PC Card slot on the left side, no exposed Modem port, and is slimmer than the previous PowerBook G3 Series. Also, the ports on the back side of the computer are fully covered by the I/O door.

Additional information on the PowerBook G3 Series (Bronze keyboard) can be found in Tech Info Library Article 58328: "**PowerBook G3 Series (Bronze keyboard): How to Differentiate From Other PowerBook G3 Series Computers**".

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3; PowerBook G3 Series

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Tech Info Library

TITLE

Mac OS 8.5: Mac OS Help Crashes With Type 3 Error

Article ID: 24676
Created: 10/19/98
Modified: 12/1/98

TOPIC

This article describes a circumstance under which Mac OS Help will quit with the alert, "The application "" has unexpectedly quit because an error of Type 3 occurred."

DISCUSSION

When an incompatible version of Internet Config Extension is installed, or if the extension is missing, Mac OS Help will return an alert

Because Internet Config Extension is installed by a variety of Internet programs (web and FTP browsers, for example), it is possible for the version of Internet Config Extension included with Mac OS 8.5 to be silently replaced by an older version of Internet Config Extension during program installation.

To correct, ensure that Internet Config Extension version 2.0.2 or later is installed in the Extensions folder of the System Folder. If necessary, use the Mac OS 8.5 Installer to perform a custom-install of the Internet control panel. Both the Internet control panel and Internet Config Extension will be installed. Proceed as follows:

1. After you get to the "Custom installation and removal" screen that gives you all the various check boxes to select components, check the "Mac OS 8.5" box.
2. Click in the "recommended installation" field to the right and select "customized installation".
3. Scroll down to the bottom click the arrow to the left of the Control Panels option.
4. Check the box next to "internet".
5. Select OK.

This will also address the requirement for Internet Config expressed in the alert shown in Figure 2. For more information about how Internet Config relates to Mac OS 8.5, please see the following Tech Info Library article:

Article 24679: "[Mac OS 8.5: Internet Control Panel Or Internet Config?](#)"

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software

Category: Mac OS 8.5

Sub Category: System Software Components; Troubleshooting

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Tech Info Library

TITLE

Mac OS 8.5: Internet Control Panel Or Internet Config?

Article ID: 24679
Created: 10/20/98
Modified: 12/9/98

TOPIC

This article discusses important differences between the Internet control panel and the Internet Config application.

DISCUSSION

Mac OS 8.5 introduces the Internet control panel, providing features previously obtained through the Internet Config application. For more detail on these features, please see the following Tech Info Library article:

Article 58100: "**Mac OS 8.5: Internet Control Panel Features**"

Internet Config is not an Apple product, but was bundled with some prior versions of the Mac OS as part of a suite of useful third party Internet utilities. Mac OS 8.5 now integrates the functionality of this application into the new Internet control panel, which offers an entirely different look and feel.

Despite the differences in appearance, both applications are so closely related that they write to the same preferences file and use the same extension. Mac OS 8.5 is thus able to accommodate any Internet application that is configured to use Internet Config. Those who obtain Internet Config are nevertheless free to use it with Mac OS 8.5 instead of the Internet control panel, but with the following cautions:

-- Neither application's settings take precedence over the other because they both write to the same preferences file. Identical settings can thus be altered equally with either application. When using the Internet control panel in Administration mode (choose "User Mode" from the Edit menu to select Administration mode) to password-protect the settings, Internet Config will honor that protection.

-- Internet Config is able to install Internet Config Extension, but since Mac OS 8.5 already includes Internet Config Extension version 2.0.2, using Internet Config to install it again may cause it to be replaced by an older version, potentially interfering with Mac OS components (such as Mac OS Help) that rely upon having the correct version present. If in doubt, use the Internet control panel instead of Internet Config, despite Mac OS 8.5's own references to Internet Config in certain alert messages.

To install Internet Config Extension separately, use the Mac OS 8.5 Installer to perform a custom-install of the Internet control panel. Both the control panel and the extension will be installed. Proceed as follows:

1. After you get to the "Custom installation and removal" screen that gives you all the various check boxes to select components, check the "Mac OS 8.5" box.
2. Click in the "recommended installation" field to the right and select "customized installation".
3. Scroll down to the bottom click the arrow to the left of the Control Panels option.
4. Check the box next to "internet".
5. Select OK.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software

Category: Mac OS 8.5

Sub Category: Networking & Internet; System Software Components

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Tech Info Library

TITLE

PowerBook G3 Series: Identifying Circuit Boards

Article ID: 24706
Created: 11/4/98
Modified: 12/21/99

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

This article describes how to identify various circuit boards in PowerBook G3 Series computers, which is essential for ordering correct replacement parts.

DISCUSSION

When replacing PowerBook G3 series circuit boards it is very important to check the ID codes to verify that you are ordering the correct part.

The ID codes listed in the table below can be found within the serial numbers that are attached to the circuit boards. They are not part of the whole unit serial number that is attached to the bottom of the PowerBook.

These serial numbers can be located in the following locations:

Microprocessor Board: Follow the instructions in Service Source for removing the microprocessor card. With the card removed, look at the serial number/bar code label on the SODIMM connector on the bottom side of the card.

I/O Logic Board: This serial number label is viewable from the opening for the PC Card slots. You don't need to disassemble the PowerBook. Gently push in the PC Card slot doors and look inside the opening. You should see the serial number/bar code label. You may need to use a small flashlight to see the lettering on the label.

The ID codes are the next to last three characters in the serial number. For example, if the serial number is *CK8xxxxxyyx* then the ID code would be "yyy".

Identification

The serial number labels are printed in one of two ways:

The ID codes are the next to last three characters in the serial number. For example, if the serial number is *CK8xxxxxyyx* then the ID code would be "yyy".

-OR-

A different type of serial number label has "Singapore" printed directly after the serial number. In this case, the serial number labels have the ID codes within the last 5 characters of the serial number. For example, if the serial number is *KC8xxxxxyyx* then the ID code would be yyy.

Exchange Parts Like for Like

Unless directed otherwise in the Service Parts Database, exchange parts like for like. Refer to the following table for the listing of ID Codes.

Part	Description	Service Part Number	ID Code
------	-------------	------------------------	---------

Microprocessor Board	233 MHz/0 cache	661-2035	BKF
	233 MHz/512K cache	661-2089	DW3, ERN
	250 MHz/1 M cache	661-2036	BKE
	266 MHz/1 M cache	661-2097	EE8
	292 MHz/1 M cache	661-2021	BAD
	300 MHz/1 M cache	661-2088	DW4
I/O Logic Board	2 MB SGRAM, no TV out	661-2058	BKG, DGK, DFL
	2 MB SGRAM, TV out	661-2094	DW6
	4 MB SGRAM, TV out	661-2087	DW7
	4 MB SGRAM, TV out	661-2019	B9B, DGL, DFM

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, read Tech Info Library article 24604: "[PowerBook G3, G3 Series: Identifying Different Versions](#)"

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series

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Tech Info Library

TITLE

Sherlock: Internet Config Conflict

Article ID: 24736
Created: 11/30/98
Modified: 8/25/99

TOPIC

I am having trouble using Sherlock. When I try to perform an Internet search, I get an error dialog stating " A network error occurred. Check your network connections and settings, then try again." Can you help?

DISCUSSION

This error message may appear for a number of reasons. One possible cause is having an older version of Internet Config. It should be noted that this problem is not specifically an Internet Config 1.3 problem.

There is an Internet Config preference (kICUseHTTPProxy) that is defined to be a boolean (1 byte). It has not been determined exactly which application does this, but at least one application will set this preference to be a word (2 bytes). When Sherlock asks Internet Config for this preference, an error is returned because we are asking for a byte, but the property is stored as two bytes.

The workaround is to:

1. Open the "Internet" control panel.
2. Under the "Edit" menu, select the "User Mode..." menu.
3. Select the "Advanced" radio button and click OK in the dialog that comes up.
4. Select the "Advanced" tab in the "Internet" control panel.
5. Select the "Firewalls" icon in the list of the "Advanced" tab.
6. Select the "Web Proxy" check box.
7. Choose "Save Settings" from the "File" menu.
8. Uncheck the "Web Proxy" check box.
9. Choose "Save Settings" from the "File" menu.

This resets the kICUseHTTPProxy Internet Config preference to be stored as a byte instead of 2 bytes.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software
Category: General OS
Sub Category: General Topics

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Tech Info Library

TITLE

iMac Update 1.1: Misidentified With Apple System Profiler
2.1.2

Article ID: 24777
Created: 1/12/99
Modified: 1/13/00

TOPIC

I have encountered a few problems since installing the iMac Firmware Update and the iMac Update 1.1. Thinking that the problems may be associated with one of the updates, I used the Apple System Profiler to check the version numbers and it appears that Mac OS ROM version is not as recent as the one that was previously installed. Should I put the older Mac OS ROM file back?

DISCUSSION

First, Apple does not recommend going back to the previous Mac OS ROM file.

Your confusion results from the incorrect information being displayed in the Product Information section of Apple System Profiler 2.1.2.

Mac OS ROM file version as seen in Apple System Profiler 2.1.2 under Production Information:

iMac Update 1.0	1.1.5
iMac Update 1.1	1.1b2

This is not correct.

Use the information found in About This Computer or the Get Info box for the Mac OS ROM file to see what it should say.

After installing the iMac Update 1.1, About This Computer states that the Mac OS ROM file is version 1.2.1.

You can also use the USB section of "Devices and Drivers" of Apple System Profiler. If you have the iMac Update 1.1 installed the USB version will show up as 1.1. If you see 1.0.1 or 1.0, then you have an older Mac OS ROM file on your iMac and should install the update.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Software
Sub Category: Troubleshooting

Tech Info Library

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TITLE

Hard Drive Matrix

Article ID: 24782
Created: 1/14/99
Modified: 12/21/99

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not for General Public Release

This article contains the Apple Hard Drive Matrix, listing (and identifying) all the various hard drive mechanisms used.

This matrix is also available as an Adobe Acrobat Reader document (.pdf file), and can be found in two places:

- The Service Source CD contains the Hard Drive Matrix. From within the Service Source interface, click the Hardware tab along the upper edge of the window. Then click the Hard Drives tab along the left side of the window. You will then be presented with a link to the Hard Drive Matrix.
- Service Source Online contains the Hard Drive Matrix. It is available for download, or can be viewed online in your browser. The file can be found in the Service Tools section of Service Source Online.

The Service Source Online URL is:

<http://service.info.apple.com/>

Note: Service Source Online is a secure site. You must have the current user name and password in order to gain access to the site. The current user name and password are included with the latest version of the Service Source CD.

DISCUSSION

3.5-Inch SCSI Hard Drives						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
350 MB	3.5	661-0182	Satsuma	IBM	DSAS-3360	
			Lightning	Quantum	LT36S01E	
			Trailblazer	Quantum	TR36S01E	
500 MB	3.5	661-0219	Thunderbolt	Quantum	TH50S011	
			Filepro 3	Conner	CFA540S	
			Lightning	Quantum	LT50S026	
			Satsuma	IBM	DSAS-3540	
			Trailblazer	Quantum	TR50S01E	
			Fireball	Quantum	FB54S01E	
500 MB	3.5	661-0974	Maverick	Quantum	MV54S01E	1
700 MB	3.5	661-0184				2
800 MB	3.5	661-1102	Trailblazer	Quantum	TR84S011	
1 GB	3.5	661-0228	Antigua	Conner	CFP1080S	
			Pegasus	IBM	DPES-31080	
			Fireball	Quantum	FB10S01E	

			Fireball II	Quantum	FB10S02E	
1.2 GB	3.5	661-1142	Fireball II	Quantum	FB12S02E	
			Tempest	Quantum	TM12S012	
2 GB	3.5	661-0180	Starfire	IBM	DFMS-32160	
			Hawk II LP	Seagate	ST32430N	
			Hawk II XL	Seagate	ST32151N	
			Tempest	Quantum	TM21S011	
			Stratus	Quantum	ST21S01E	
			Orion	IBM	DORS-32160	
2 GB	3.5	661-1076	Hawk II LP	Seagate	ST32430N	3
			Hawk II XL	Seagate	ST32151N	3
			Orion	IBM	DORS-32160	3
2 GB	3.5	661-0892	Barracuda	Seagate	ST12550N	
			Starfire	IBM	DFHS-32160	
			Capricorn	IBM	DCAS-32160	
			Barracuda 2LP	Seagate	ST32550N	
			Barracuda 4LP	Seagate	ST32171N	
2 GB	3.5	661-1518	Capricorn	IBM	DCAS-32160	
3 GB	3.5	661-1251	Tempest	Quantum	TM32S01F	
4 GB	3.5	661-1450	Stratus	Quantum	ST43S01E	
4 GB	3.5	661-0998	Capricorn	IBM	DCAS-34330	
			Barracuda 4LP	Seagate	ST34371N	4
4 GB	3.5	661-0951	Starfire	IBM	DFHS-34320	
			Barracuda 4LP	Seagate	ST34371N	5
			Barracuda 4	Seagate	ST15150N	

Note 1: Not for use in PM7xxx.
Note 2: 661-0184 has been replaced by 661-1102.
Note 3: Single segmented cache--these are AV drives. Even though the model numbers are the same, the drives have different firmware.
Note 4: Firmware 0548 for WS7350 and PM9600.
Note 5: Firmware 0548.

3.5-Inch Fast Wide SCSI Hard Drives						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
2 GB	3.5	661-1178	Barracuda 2LP	Seagate	ST32550W	
			Barracuda 4LP	Seagate	ST32171W	
2 GB	3.5	661-0956	Starfire	IBM	DFHS-32160	
4 GB	3.5	661-1179	Barracuda 4	Seagate	ST15150W	1
4 GB	3.5	661-1087	Barracuda 4LP	Seagate	ST34371W	2
			Viking	Quantum	VK45W021	
4 GB	3.5	661-1436	Barracuda 4LP	Seagate	ST34371W	3
4 GB	3.5	661-0958	Starfire	IBM	DFHS-34320	1
4 GB	3.5	661-2050	Draco	IBM	DDRS-34560	
			Viking II	Quantum Phoenix	4.5WSE PX04W011	
9 GB	3.5	661-2047	Draco	IBM	DDRS-39130	
			Viking II	Quantum Phoenix	9.1WSE PX09W011	
9 GB	3.5	661-1247	Barracuda 9	Seagate	ST19171W	

			Draco	IBM	DDRS-39130	
Note 1: For Network servers. Note 2: For AWS9650 firmware 0548. Note 3: For Network servers firmware 0546.						

3.5-Inch Ultra2 Hard Drives						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
9 GB	3.5	661-2141	Cheetah II	Seagate	ST39102LW	
			Cheetah III	Seagate	ST39103LW	
9 GB	3.5	661-2142	Atlas IV Katana	Quantum	DDRS39139D	
			Phoenix	Quantum	PX09L02H	
			Neptune	IBM	DNES-309170	
			Draco	IBM	DDRS-39130	

3.5-Inch Ultra2 LVD Hard Drives						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
18 GB	3.5	661-2203	Cheetah III	Seagate	ST318203LW	
			Cheetah 3	Seagate	TN ATLAS IV	
36 GB	3.5	661-2185	Swordfish	IBM	Ultrastar 36XP	

3.5-Inch Ultra ATA Hard Drives						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
10 GB	3.5	661-2247	Corona Plus	Quantum	Fireball CX	
			Rebel	Western Digital	WD102AA	
13 GB	3.5	661-2245	Corona Plus	Quantum	Fireball CX	
			Rebel	Western Digital	WD136AA-00	
20 GB	3.5	661-2249	Katana +	Quantum	Fireball Plus KX	
			Triumph	Western Digital	WD205BA	
27 GB	3.5	661-2250	Katana +	Quantum	Fireball Plus KX	
			Triumph	Western Digital	WD273BA	
			Triumph	Western Digital	P780A30A	

3.5-Inch IDE Hard Drives					
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.
350 MB	3.5	661-0068	Satsuma	IBM	DSAA-3360
			Aladdin	IBM	DALA-3360
			Maverick	Quantum	MV36A01E
			Lightning	Quantum	LT36A01E
500 MB	3.5	661-0146	Lightning	Quantum	LT54A01E
			Aladdin	IBM	DALA-3540
			Fireball	Quantum	FB54A011
800 MB	3.5	661-0999	Trailblazer	Quantum	TR84A011
			Caviar 2850	Western Digital	AC2850

			Caboboat	Conner	CFS850A
1 GB	3.5	661-0955	Fireball	Quantum	FB10A011
1.2 GB	3.5	661-1106	Caboboat	Conner	CFS1275A
1.2 GB	3.5	661-1139	Fireball II	Quantum	FB12A02E
			Tempest	Quantum	TM12A01E
			Caviar 11200	Western Digital	AC11200
			Medalist	Seagate	ST31276A
1.6 GB	3.5	661-1107	Jafar	IBM	DJAA-31700
			Tempest	Quantum	TM17A01E
			Caviar 21700	Western Digital	AC21700
			Sirocco	Quantum	SR17A011
2 GB	3.5	661-1255	Tempest	Quantum	TM21A011
			Stratus	Quantum	ST21A01E
			Stratus +	Quantum	SE21A005
			Caviar	Western Digital	AC12100
			Caviar	Western Digital	AC22100
2.4 GB	3.5	661-1202	Sirocco	Quantum	SR25A011
			Caviar 22500	Western Digital	AC22500
			Tempest	Quantum	TM25A012
			Caviar 32500	Western Digital	AC32500
3 GB	3.5	661-1254	Tempest	Quantum	TM32A011
			Stratus	Quantum	ST32A01E
			Caviar	Western Digital	AC23200
			Titan	IBM	DTTA350320
3.6 GB	3.5	661-1256	Tempest	Quantum	TM38A012
4 GB	3.5	661-1342	Caviar 34000	Western Digital	AC34000
			Caviar 24300	Western Digital	AC24300
			Stratus ST	Quantum	ST43A01E
			Stratus SE	Quantum	SE43A005
			Titan	IBM	DTTA350430
			Bali	Seagate	ST34321A
4 GB	3.5	661-2133	Bali	Seagate	ST34321A
4 GB	3.5	661-2134	Flagstaff	Western Digital	AC24300
4 GB	3.5	661-2135	Eclipse +	Quantum	EX34A004
6 GB	3.5	661-1451	Caviar 36400	Western Digital	AC36400
			Titan	IBM	DTTA350640
			Fireball ST	Quantum	ST64A01E
			Fireball SE	Quantum	SE64A005
6 GB	3.5	661-2136	Eclipse+	Quantum	EX64A004
6 GB	3.5	661-2137	Titan	IBM	DTTA350640
			Quasar	Maxtor	90648D3
				Quantum	Fireball CR
6 GB	3.5	661-2169	Caviar	Western Digital	AC26400
6 GB	3.5	661-2228	Corona Plus	Quantum	Fireball CX
			Meteor	Maxtor	90650U2
8 GB	3.5	661-2054	Titan	IBM	DTTA350840
			Stratus +	Quantum	SE84A005
8 GB	3.5	661-2138	Eclipse +	Quantum	EX84A01E
8 GB	3.5	661-2139	Caviar	Western Digital	AC38400
10 GB	3.5	661-2070	Titan	IBM	DTTA371010

10 GB	3.5	661-2248	Corona Plus	Quantum	Fireball CX
			Meteor	Maxtor	91020U3
12 GB	3.5	661-2055	Titan	IBM	DTTA371290
12 GB	3.5	661-2101	Eclipse +	Quantum	EX12.7
12 GB	3.5	661-2140	Titan	IBM	DTTA351290
			Quasar	Maxtor	91303D6
13 GB	3.5	661-2252	Corona Plus	Quantum	Fireball CX
			Meteor	Maxtor	91360U4

2.5-Inch IDE/SCSI Hard Drive						
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.	Notes
1 GB	2.5	661-1298	IDE/SCSI	ADTX	AX-HDD-1298	1
Note 1: IDE-to-SCSI converted drive for older SCSI-based PowerBooks.						

2.5-Inch IDE Hard Drives					
Capacity	Size	Service Part No.	Vendor Model Name	Vendor	Vendor Part No.
500 MB	2.5	661-1058	Bolero	IBM	DBOA-2540
500 MB	2.5	661-0047	Bolero	IBM	DBOA-2540
750 MB	2.5	661-0957	Shima V	IBM	DVAA-2810
			Presto	IBM	DPRA-20810
750 MB	2.5	661-1253	Sonata	IBM	DSOA-20810
1 GB	2.5	661-1245	Sonata	IBM	DSOA-21080
			Marcato	IBM	DCMA-21080
1.1 GB	2.5	661-0944	Presto	IBM	DPRA-21215
1.3 GB	2.5	661-1333	Marcato	IBM	DMCA-21440
			MR2	Toshiba	MK1403MAV
2 GB	2.5	661-1241	Crescendo	IBM	DCRA-22160
			MR2	Toshiba	MK2103MAV
2 GB	2.5	661-1361	Tango	IBM	DTNA-22160
2 GB	2.5	661-2056	Yukon	IBM	DYKA-22160
			MR3	Toshiba	MK2105MAV
3 GB	2.5	661-1343	Legato	IBM	DLGA-23080
			MR2	Toshiba	MK3003MAN
4 GB	2.5	661-1493	Toccata	IBM	DTCA-24090
			GMR	Toshiba	MK4309MAT
			Klondike	IBM	DKLA-24320
5 GB	2.5	661-1482	Prelude	IBM	DPLA-25120
6 GB	2.5	661-2179	Biscayne/Acadia	IBM	DADA-26480
			GMR1	Toshiba	MKE6409MAV
8 GB	2.5	661-2057	Yellowstone	IBM	DYLA-28100
10 GB	2.5	661-2180	Croix	IBM	DCXA-21000

Document Information

Product Area: Peripherals
Category: Magnetic Storage Devices
Sub Category: Hard Disk; General

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Tech Info Library

TITLE

Troubleshooting "No Dial Tone"

Article ID: 24789
Created: 1/21/99
Modified: 11/4/99

TOPIC

When the modem cannot detect or successfully acquire a dial tone, the connection attempt will fail, and Apple Remote Access will respond with a dialog box.

Use the troubleshooting path in this article to help identify the source of the problem.

Note: While this article specifically mentions iMac, it is applicable to the PowerBook G3 Series (Bronze keyboard) and Power Macintosh G3 (Blue and White) as they use a variation of the iMac modem.

DISCUSSION

If Open Transport/PPP is installed, substitute "PPP control panel" for "Remote Access control panel" throughout these instructions.

Step One

Don't Confuse A No Dial Tone Error With A Silenced Modem

The audio feedback of some Apple internal modems, such as for the iMac and Power Macintosh G3 (Blue and White), is passed through the computer speakers and can therefore be silenced by the computer volume control, but not such that a no dial tone error will result.

Turn the computer volume up in the Control Strip or the Monitors & Sound control panel. Increasing the volume will automatically deselect the Mute button in Monitors & Sound.

Step Two

Verify Physical Connectivity

- a.** Check the telephone line connection at the wall outlet and the modem. For computers with internal modems, ensure the line is not connected to the ethernet port (if available) by mistake. Push firmly in on the connectors at both ends, or disconnect and reconnect them, to seat them securely.
- b.** External modems provide an additional jack for connection to a telephone. Do not connect the line from the wall outlet to this jack, which will often be identified by an icon of a telephone base unit with handset.

Note: Most analog modems are incompatible with digital/PBX phone lines. If an ordinary residential consumer telephone has worked in the same outlet, it is a compatible analog line.

Step Three

Configure The Modem Control Panel

Configure the Modem control panel to use the modem script appropriate for the modem. Apple-branded internal modems use these scripts, by computer:

Computer	Modem Script
Power Macintosh G3 (Blue and White)	PowerMac G3 Internal 56K, PowerMac G3 Int56K (v.34 Only)
PowerBook G3 Series	PowerBook G3 Internal 56K, PowerBook G3 Int56K (v.34 Only)

iMac	iMac Internal 56K, iMac Internal 56k (v.34 Only)
Power Macintosh G3 & Power Macintosh 6500	Apple/GV 56K
PowerBook 3400 & PowerBook G3	PowerBook 3400/G3 Internal 33.6
Geoport Telecom Adapter (internal or external)	Geoport/Express Modem

Step Four

Configure The Remote Access Control Panel And Test

- a. Open the Remote Access control panel. Enter a name (user ID), password, and telephone number.

Inaccurate entries will not prevent detection of a dial tone. However, if a prefix such as "9" must be dialed to reach an outside line, enter it before the telephone number, followed by a comma.

- b. Click Connect and listen for a dial tone, number tones, or handshaking (squealing sound). If they are audible, or if the Status field ever shows "Starting PPP," "Starting network protocols," "Communicating at 24000 bps," or any other such indicator that appears after acquiring a dial tone, the problem is fixed.

- c. If it is convenient to perform step 8 (test the line with a telephone), it may save some time to do so now. If it is not convenient, proceed through the steps in order.

Step Five

Disable Dial Tone Checking And Try Again

If the dial tone does not conform to what the modem expects to hear (because of poor signal level or quality, or non-standard frequency, for example) it may be difficult for the modem to recognize it as a dial tone. In such cases the modem software can be configured to assume that a dial tone is present without first checking for it.

- a. Open the Modem control panel and click the "Ignore dial tone" checkbox to enable it, then close the control panel and allow it to save the changes.

- b. Open the Remote Access control panel and click Connect, as in step 4. Watch and listen.

Important: Because "Ignore dial tone" is enabled, it is possible that only the number tones will be heard as dialing occurs, but not the dial tone or modem handshaking. The "modem is not responding properly" alert may then appear. If so, the problem persists.

- c. Voice mail. Disabling dial tone checking may work around the problem posed by some voice mail services that use an altered dial tone, or a series of initial tones, to notify the user of waiting voice mail. If a voice mail service is enabled on the line and the problem persists, try entering one or two commas (,) before the telephone number in the Remote Access control panel. Each comma represents a pause of a few seconds. The idea is to delay dial-out until after the voice mail tones have ended. If this works, it may not be necessary to leave Ignore dial tone enabled in the Modem control panel, though doing so will not affect modem performance.

Step Six

Trash Preferences

Damaged Remote Access preferences may be at fault. Considering that Remote Access was able to successfully detect and initialize the modem prior to checking for the dial tone, the odds of this are very unlikely, but it is easy to confirm prior to the more time-consuming tasks ahead.

- a. Move these two preference files to the desktop (or anywhere outside of the Preferences folder):

Apple Remote Access users:

- System Folder : Preferences : Modem Preferences
- System Folder : Preferences : Remote Access : Remote Access Connections

Open Transport/PPP users:

- System Folder : Preferences : Modem Preferences
- System Folder : Preferences : PPP Preferences

- b. Repeat steps 3 and 4 to reconfigure the control panels and test. If the symptom persists, the preferences were not at fault. To reclaim the configuration information they contained (optional), move them back to their original locations and allow them to replace the newer preference files that were created.

Step Seven

Hardware-Isolate The Line

Establish a point-to-point, one cable (the shorter the better) connection between the modem and the wall outlet, isolating the modem, the line, and the outlet from all other devices, including telephones, answering machines, fax machines, caller-ID boxes, cable extenders, line splitters, and so on. Then retest as per step 4.

If that works, one or more of the removed devices was hurting the line quality (thus affecting the dial tone) or pushing an already poor line past the breaking point. It may be necessary to attach those devices to different outlets or experiment with other devices, cables, splitters, and combinations thereof. Sometimes the inside or outside home wiring is at fault, requiring a telephone technician to diagnose.

Step Eight

Confirm That The Cable And Outlet Are Good

Disconnect the telephone cable from the modem (leave it attached to the wall outlet) and plug it into a telephone. Listen for a dial tone with the telephone handset. If it cannot be heard, there is a problem with the outlet or the cable. Try a different telephone cable and, if necessary, a different outlet.

It does not matter that a telephone used to work on the wall outlet at some earlier date, or that it worked there while using a different telephone cable. Unless the outlet and the cable were tested with a telephone just prior to connecting the modem to the same cable and same outlet, this must now be done.

Note: If you arrived here at step 8 directly from step 4, continue troubleshooting at step 5.

Step Nine

Perform A Clean Install Or Clean Restore

The Mac OS may be damaged.

a. Perform a clean install or clean restore of the operating system. If there is any connectivity software or modem drivers to be installed separately (Geoport modems, for example, will require the reinstallation of Apple Telecom), do so immediately afterward.

b. Repeat steps 3 and 4 to retest. If the problem continues, there may be a hardware problem with the modem.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac

Category: iMac Software

Sub Category: Communications; Troubleshooting

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Tech Info Library

TITLE

Troubleshooting Unreliable Modem Connections

Article ID: 24803
Created: 2/1/99
Modified: 11/4/99

TOPIC

When a successful dial-up connection is unexpectedly interrupted, Apple Remote Access responds:

"You have been disconnected."

And when similar circumstances prevent the connection from completing:

"The connection attempt failed. The activity log may have suggestions for fixing problems."

If this becomes a recurring problem, use this troubleshooting path to help identify solutions.

DISCUSSION

The occasional lost connection is to be expected given the nature of the technology and the typical operating conditions. An unreliable connection is suggested when disconnects occur more frequently, often shortly after the connection has been established.

Note: Where Open Transport/PPP is installed, substitute "PPP control panel" for "Remote Access control panel" throughout the instructions that follow.

Step One: Check the idle timeout and protocol settings

If the disconnect always occurs after a specific interval of time, or only after a period of network (Internet) inactivity, the problem may be related to either the "disconnect if idle" setting of Remote Access or the idle timeout policy of the Internet Service Provider (ISP).

a. Open the Remote Access control panel, click the Options button, then click the Connection tab. Click the "disconnect if idle" checkbox to disable it if necessary, or enter a larger number. Most ISP's will terminate the connection after similar periods of idleness. Check with your ISP for specifics.

b. Click the Protocol tab. It should be set correctly for the type of connection in use. Standard dial-up Internet connections use the PPP protocol, not the Apple Remote Access Protocol (ARAP). The hardware or software setups of some Internet Service Providers may not permit connections when the protocol is set to Automatic.

Step Two: Check for physical connection issues

If the disconnect can be encouraged by moving the modem or its associated cables, check them for secure connections and signs of damage.

Try a different, known-good telephone cable if available, then test using a direct modem-to-outlet connection. If movement still breaks the connection, seek service.

Step Three: Configure the Modem control panel

Configure the Modem control panel to use the modem script appropriate for the modem. Apple-branded internal modems use these scripts, by computer:

Computer	Modem Script
Power Macintosh G3 (Blue & White)	PowerMac G3 Internal 56K, PowerMac G3 Int56K (v.34 Only)

PowerBook G3 Series	PowerBook G3 Internal 56K, PowerBook G3 Int56K (v.34 Only)
iMac	iMac Internal 56K, iMac Internal 56k (v.34 Only)
Power Macintosh G3 & Power Macintosh 6500	Apple/GV 56K
PowerBook 3400 & PowerBook G3	PowerBook 3400/G3 Internal 33.6
Geoport Telecom Adapter (internal or external)	Geoport/Express Modem

Figure 3: Modem control panel.

Step Four: Disable call waiting

When an ongoing modem connection is interrupted by a call waiting tone signifying an incoming call, the modem will usually disconnect. Disconnects related to call waiting are random and don't usually occur only at precise intervals or always shortly after connecting.

If call waiting is enabled on the telephone line used by the modem, open the Remote Access control panel and enter *70,, before the telephone number. The extra comma, signifying an additional pause, is optional but occasionally necessary to allow the command sufficient time to be acknowledged.

If your line requires pulse dialing, use 1170,, instead. Call waiting will only be disabled for the duration of the connection.

Your local telephone company may require different numbers or may not automatically provide this feature.

Step Five: Troubleshoot interoperability issues between modems

Where modems of different makes, models, firmware/flash-ROM revisions, and chipsets are concerned, one modem may have an incompatible method of implementing a connection that it has negotiated with the other modem, or the negotiation itself may fail. For example, if a modem cannot sustain the current connection speed but is unable to successfully negotiate a slower connection with the other modem, the connection will incur excessive transmission errors, decreasing throughput and potentially forcing a disconnect.

- a. If your modem can be flash-ROM upgraded via software, apply the most recent modem update available. Apple 56K modem updates are available online. The latest firmware code may make the two modems more compatible--or less.
- b. Disable 56K protocols in favor of V.34. Limiting the modem in this way may reduce or eliminate the need for the modem to make as many adjustments in response to poor line conditions, potentially sidestepping interoperability issues altogether. This change is incorporated into the "V.34 Only" modem scripts available for some Apple 56K modems. A variety of other modem manufacturers supply similar ARA modem scripts for their modems. If you are connecting to the internet using software that does not use modem scripts, supply the software with a V.34 initialization string appropriate for your modem. Your ISP may be able to assist you, or you can teach yourself the proper initialization string by studying the AT command guide provided with your modem or available online from the manufacturer.
- c. Ask your ISP whether different modems are available via an alternate dial-in number, or switch to an ISP that provides different modems (call them first, as they may already know of issues they are having supporting the modem you are using). Perhaps borrow a friend's Internet account, obtain a trial membership with another ISP, or **connect to a PPP test server** if you know of one. If all else fails, you may wish to go so far as to try a different modem yourself--one that your ISP recommends for best compatibility.

Step Six: Reduce signal interference & distortion

The telephone network path between modems must be sufficiently free of noise and frequency distortion to permit a stable connection. The modem analyzes these line impairments as they affect the quality of the transmission signal. Poor signal quality causes transmission errors, reduced throughput, reduced connection speed, and dropped connections.

- a. Experiment with eliminating potential sources of line impairments in the home:
 - o Any device connected to any telephone outlet, especially if used by the modem, and even if on a different line: telephones, including cordless telephones and their base stations, answering machines, fax machines, caller ID boxes, and other modems

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- Telephone line splitters, cable extenders, faulty or overly long telephone cables (shorter is better)
- Surge protectors, including those that offer telephone line protection
- Alarm systems, especially those that are connected to the telephone system
- Computer equipment, including speakers
- Fluorescent light fixtures and light dimmers
- Satellite dish receivers
- Appliances such as air conditioners, refrigerators, dryers, microwave ovens, and televisions
- Any AC power source and related cabling
- All other things electrical, including problems with the premises wiring: loose or corroded connections, too many splices or bridges, insulation deterioration and exposed wiring, non-twisted pair telephone wiring

Start with a direct, unobstructed, modem-to-outlet connection using a short, high-quality telephone cable. As a way of confirming the problem prior to isolating it any further, there is the option of testing with a direct connection to the external telephone box located at the back or side walls of the residence. It provides one or more standard telephone jacks supplying the home telephone connections but bypassing most impairments inside.

b. Listen for noise. Because the telephone company is only obligated to provide voice-quality phone lines, it is unlikely to address the many and varied off-premises sources of line impairments that can affect the connection but don't cause audible noise. Connect a telephone to the wall jack used by the modem, then pick up the line, dial the number 1 to stop the dial tone, and listen. Contact the telephone company if the line is not quiet (loud hiss, pops, static, voices), but first disconnect other telephone devices and check again.

c. Use a local dial-in number to your Internet Service Provider. Long distance and 800 numbers aren't typically a concern, but may cause the call to be routed through more facilities, indirect paths, and different carriers with different types of equipment and lines. Local calls may be auto-forwarded in the same manner, but most reputable ISP's don't engage in this practice.

If daunted by these varied and uncertain possibilities, consider carrying the computer to a local Apple service provider for testing on analog lines of confirmed quality.

Step Seven: Configure the Extensions Manager control panel for Mac OS All

Realistically, these last two steps are unlikely to address this particular kind of problem. Nevertheless, the possibility that extensions troubleshooting or clean installing will resolve is one that cannot be discounted, so be sure to try these if all else fails.

a. Open the Extensions Manager control panel and select whichever Mac OS All set is available from the Selected Set menu. For example: Mac OS 8.6 All, iMac All, and so on.

b. If the modem requires any of its own extensions (excluding fax or telephony extensions), ensure they are installed and enabled. Enabled extensions show an "x" in the adjacent checkbox. Extensions Manager will ask to duplicate the Mac OS All set before additional extensions can be enabled. Allow it to do so.

Of the modems that shipped with Apple computers, the following require the extensions listed in order to respond:

Modem	Extensions
Apple 56K modem (but not Apple/GV 56K modem)	iMac Modem Extension, PowerMac G3 Modem, or PowerBook G3 Series Modem, depending upon the computer
Geoport Telecom Adapter	Apple Telecom Modem, Express Modem Tool, Geoport for Power Macintosh, Geoport Telecom Adapter, Geoport Serial Driver, Serial Extension (PM 6100/7100/8100 only), Shared Library Manager, Shared Library Manager PPC, and the Express Modem control panel
PowerBook 3400/G3 Internal Modem/Ethernet 33.6 card	PowerBook 3400 Ethernet extension and PowerBook 3400 Modem extension, or just the PowerBook 3400/G3 Modem extension

c. Close Extensions Manager and restart the computer. If the symptom does not recur, perform extensions troubleshooting to isolate the problem extensions. It may only be necessary to correctly configure the software that used them.

Step Eight: Perform a Clean Install or Clean Restore

The Mac OS may be damaged. Perform a clean install or clean restore of the operating system. If there is any connectivity software or modem software to be installed separately, do so immediately afterward. If the problem continues, there is likely a hardware problem requiring service.

Document Information

Product Area: iMac

Category: iMac Software

Sub Category: Communications; Troubleshooting

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Tech Info Library

TITLE

Power Macintosh G3: Processor Module Jumper Blocks

Article ID: 24846
Created: 3/12/99
Modified: 1/11/00

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

This article lists the jumpers that are required for each processor module in the following Power Macintosh G3 computers:

- Power Macintosh G3 All-in-one
- Power Macintosh G3 DeskTop
- Power Macintosh G3 MiniTower
- Power Macintosh G3 (Blue and White)
- Macintosh Server G3 (Blue and White)

The correct color jumper must be installed for each processor or the computer will not operate properly. Refer to the "Processor Module" Take Apart topic in the appropriate Power Macintosh G3 service manual for installation instructions.

DISCUSSION

Power Macintosh G3 Processor Module Jumper Blocks			
Product	Processor Speed	Color of Jumper Block	Service Part Number(1)
Power Macintosh G3 All-in-one	233 MHz	red	076-0716
	266 MHz	white	076-0717
Power Macintosh G3 DeskTop	233 MHz	red	076-0716
	266 MHz	white	076-0717
	300 MHz	black	076-0737
Power Macintosh G3 MiniTower	233 MHz	red	076-0716
	266 MHz	white	076-0717
	300 MHz	black	076-0737
	333 MHz	green	076-0750
Power Macintosh G3 (Blue and White)	300 MHz	black	076-0759
	350 MHz	blue	076-0760
	400 MHz	white	076-0758
Macintosh Server G3 (Blue and White)	300 MHz	black	076-0759
	350 MHz	blue	076-0760
	400 MHz	white	076-0758
Notes: 1. Each jumper block kit includes a warranty sticker, which must be applied for the warranty to remain intact.			

Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: Macintosh Server G3; Power Macintosh G3; Power Macintosh G3 - Blue and White

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TITLE

Modem Dials Automatically

Article ID: 24877
Created: 4/15/99
Modified: 4/15/99

TOPIC

My modem automatically dials up my Internet service provider after I sign off. How can I stop this behavior?

DISCUSSION

An application or control panel setting can be set to automatically connect to the Internet.

To stop this behavior, check the following items:

- Remove the start up file in the Startup Items folder.
- Open the Remote Access control panel and click the Options... button; an Options window will appear. Click the Protocol tab, then select the PPP protocol. Click the "Connect automatically when starting TCP/IP applications" checkbox to deselect this option. Close the Remote Access control panel.
- Open the TCP/IP control panel. Verify that the User Mode is set for Advanced. (The User Mode can be set by selecting User Mode... in the Edit menu.) Click the Options... button; an Options window will appear. Click the "Load only when needed" checkbox to select that option.
- Turn off File Sharing and Web Sharing.
- Check the e-mail application settings.

Quitting the web browser is not necessary if the above settings are correct.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Apple Software; Communications-Networking
Category: Internet Connection
Sub Category: General Topics

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Tech Info Library

TITLE

PowerBook G3 Series: Upgrading Memory

Article ID: 25002
Created: 9/27/99
Modified: 9/27/99

TOPIC

This article provides the necessary information for upgrading memory in the PowerBook G3 Series computer. These directions are taken from the PowerBook G3 Series User Manual, Chapter 4, titled "Installing a RAM Expansion Card And Removing Your Hard Disk."

DISCUSSION

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see the following Tech Info Library article:

Article 24604: "[PowerBook G3 & G3 Series: Identifying Different Models](#)"

For information on upgrading memory in a PowerBook G3 Series (Bronze keyboard) computer, see the following Tech Info Library article:

Article 58325: "[PowerBook G3 \(Bronze keyboard\): Upgrading Memory](#)"

Warning: To avoid damage to your computer, Apple recommends that only an Apple-certified technician install additional RAM. Consult the service and support information that came with your Apple product for instructions on how to contact an Apple-authorized service provider or Apple for service. If you attempt to install additional RAM yourself, any damage you may cause to your equipment will not be covered by the limited warranty on your computer. See an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Getting Ready

Before you open your computer, make sure that you have a Phillips or a Torx T-8 screwdriver (available from a hardware or electronics supply store).

Removing the Keyboard and Internal Heat Sink

The design of your Macintosh PowerBook allows you to easily access the internal components of the computer by removing the keyboard. The steps in this section explain how to remove the PowerBook keyboard and internal heat sink to access the RAM expansion slot.

Step One

Place your PowerBook on a hard, flat surface.

Step Two

If your PowerBook is turned on, press the Power button. In the Shut Down dialog box, click Shut Down.

Warning: The internal components (including the internal heat sink) of your PowerBook may be hot. If you have been using your PowerBook, wait 10 minutes before continuing, to let the internal components cool down.

Step Three

Unplug the power adapter and any other devices from the back of your PowerBook. Unplug any phone line from the internal modem.

Step Four

Adjust your display so that it is at a 90-degree angle to the computer.

..TIL25002-PowerBook_G3_Series_Upgrading_Memory.pdf

If your display is tilted too far back, your PowerBook may tip backward when the expansion bay modules are removed in the next step.

Step Five

Pull out both expansion bay release levers to eject the modules or batteries in both the expansion bays.

Step Six

Remove the modules or batteries from both the expansion bays.

Step Seven

With your thumbs positioned slightly below the keyboard, place your fingers inside the expansion bays and locate the small plastic tabs that hold the keyboard in place. The plastic tabs have small ridges on them and are located on the underside of the top shell of the PowerBook approximately one inch inside each expansion bay.

Step Eight

Slide the plastic tabs toward you until you see the lower portion of the keyboard pop up.

Step Nine

Lift the lower portion of the PowerBook keyboard up slightly and pull it back enough to displace the five metal tabs that hold the front of the keyboard in place.

Step Ten

Flip the keyboard over and lay it on the palm rests and trackpad.

Step Eleven

Remove the two screws that secure the internal heat sink (using a Phillips or Torx T-8 screwdriver) and then lift it up by pulling on the small metal tab.

Warning: The PowerBook internal heat sink may be hot. If you have been using your PowerBook, wait 10 minutes before continuing to let the internal components cool down.

You now have access to the internal components of your PowerBook.

Installing A RAM Expansion Card

To install a RAM expansion card in your PowerBook, follow these steps:

Important: Make sure that the RAM expansion card you are installing is made for your Macintosh PowerBook model. Components designed for other PowerBook models will not work with your computer.

Step One

Locate the empty RAM expansion slot. See Figure 6.

Note: If you ordered your PowerBook with additional memory, this slot may already have a RAM card installed.

Step Two

Gently touch the metal surface on the right side of the inside of the computer to discharge any static electricity built up on your body. This prevents damage to your Macintosh PowerBook or RAM card.

Don't walk around while installing the card. If you do, touch the metal surface again to discharge any static electricity.

Step Three

Position the RAM expansion card at a 30-degree angle. Line up the notch in the PowerBook RAM expansion card with the small tab in the RAM expansion slot.

Step Four

Push the RAM expansion card into the plastic expansion slot. You may feel some resistance. If you are having trouble inserting the card, try pushing one side at a time.

Step Five

Gently push the RAM expansion card down until the two snaps on either side of the card lock into place.

Your RAM expansion card is now ready to use.

Replacing the Keyboard and Internal Heat Sink

Follow the steps in this section to replace your PowerBook keyboard.

Step One

Insert the internal heat sink and replace the two screws to secure it in place.

Step Two

Press down on the bottom portion of the heat sink to secure it into place.

Step Three

Flip the keyboard back on top of the opening in your PowerBook.

Step Four

Insert the five small tabs at the top of the keyboard into the opening in the PowerBook case.

Step Five

Press down on the lower portion of the keyboard until it snaps into place.

Step Six

Replace the expansion bay modules.

You are now ready to start working with your PowerBook again.

Warning: Never turn on your PowerBook G3 Series computer unless all of its internal and external parts are in place. Operating the computer when it is open or missing parts can be dangerous, and can damage your computer.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series

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Tech Info Library

TITLE

Mac OS 8.0 & 8.1: Clean Install Instructions

Article ID: 26055
Created: 1/19/98
Modified: 7/13/98

TOPIC

Is there any shortcut for doing a clean system folder install in Mac OS 8? I would like to do this without having to remove the Finder or System file and renaming the system folder.

DISCUSSION

Purpose of a Clean Installation

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving all files in place, and forcing the Installer to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Clean Install Instructions

Follow these instructions in the order presented.

Starting from the Mac OS 8 CD

1. Insert the Apple Macintosh CD in the CD-ROM drive.
2. Restart your Macintosh.
3. As soon as you hear the startup chime, hold down the letter 'C' on the keyboard until you see the "Welcome to Macintosh" message.
4. As the computer starts up, you should see the "flying CD" background pattern- this will confirm that you are starting from the CD.
5. If the computer does not start from the CD, shut down the computer, turn on the computer and immediately hold down the Command-Option-Shift and the large Delete key simultaneously. Hold down these keys until you see the "Welcome to Macintosh" message.
6. If you receive a system error while starting from the CD, please see the section entitled "Cannot Boot from Mac OS 8 CD When AppleTalk is Off" in Tech Info Library article 24160: "**Mac OS 8: Late Breaking Information.**"
7. At the desktop, the Apple Macintosh CD's icon should be in the upper-right corner of your screen with your hard drive's icon below it. If any other hard drive appears above the Apple Macintosh CD, go to the Control Panels under the Apple Menu, open the Startup Disk item, select the Apple Macintosh CD, close all open windows and restart. The Apple Macintosh CD should then appear above the hard drive.
8. If you have successfully started from the Mac OS 8 CD, double click the "Mac OS Install" icon or the "Install Mac OS 8.1" icon, then proceed to the section entitled "Installing Mac OS 8".

Starting from the Disk Tools diskette

Note: These steps require a Mac OS 8 CD and Apple CD ROM drive.

1. Shut down your Macintosh computer.
2. Insert the appropriate Disk Tools diskette in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of your screen with your hard drive's icon below it.
3. Disk Tools Disk 1 is designed for use with all non-PowerPC machines except the PowerBook 190.

4. Disk Tools Disk 2 is designed for use with all PowerPC computers and the PowerBook 190.

5. Insert the Mac OS 8 CD and double click the "Mac OS Install" icon or the "Install Mac OS 8.1" icon, then proceed to the section entitled "Install Mac OS 8".

Starting from the Install Me First diskette

1. Shut down your Macintosh computer.
2. Insert the Install Me First diskette in the floppy drive, and turn on the computer. The installer program will launch automatically on startup.

Installing Mac OS 8

1. The "Welcome" screen will come up. Click the Continue button.
2. When the "Select Destination" screen comes up, select the appropriate disk in the Destination Disk pop-up menu.
3. Check the box marked "Perform Clean Installation", then click the Select button.
4. Read the Important Information on the next screen and click Continue.
5. Read the licensing agreement and click Continue.
6. At this point you may customize your installation. Refer to your Mac OS 8 manual for descriptions of the optional components listed.
7. If you are using a non-Apple hard disk, click the Options... button and uncheck the Update Apple Hard Disk Drivers option. It is very important that you check with the vendor of your non-Apple hard disk to confirm that your hard disk driver will be compatible with Mac OS 8 before you start the installation.
8. Click the start button. The installer will check your hard disk and attempt to repair any problems that it finds. If it is unable to repair them, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For Apple drives, use Drive Setup.

When you are finished with the installation, restart the computer. If you started from the diskette, it will be ejected, however if you started from the CD-ROM you may need to eject the Mac OS 8 CD.

Troubleshooting

These steps assume you are using the Clean Install of system software for troubleshooting purposes.

1) Verify Problem Resolution

2) After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of performing a clean installation.

3) Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Previous System Folder") such as fonts, extensions, and control panels. If possible, you should reinstall these items from their original disks.

If the original disks are not available, you may move the nonstandard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Only move items that are not already in the new System Folder. Open each corresponding folder within the System Folder and the Previous System Folder and then compare the contents. Move up to 5 items that are not already in the new System Folder and its sub folders from the Previous System Folder and its sub folders.

Restart your Macintosh.

Verify that the Macintosh is still starting up properly and that basic functions are working properly.

Repeat Steps 2-4 until all non-standard items have been moved from the Previous System Folder to the new System Folder.

4) Final Steps

Verify your applications are performing normally. If not, refer to the application manual or contact the vendor. When the Macintosh behaves as expected and you are sure that all needed items from the Previous System Folder are transferred or reinstalled, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.

Document Information

Product Area: Mac OS System Software

Category: Mac OS 8.0

Sub Category: General Topics

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Tech Info Library

Mac OS 8: About Mac OS 8 Read Me

TOPIC

This article is the About Mac OS 8 Read Me file.

DISCUSSION

This document provides information about Mac OS 8 that supplements the information in your installation manual. Read this document for information about known problems with this release and possible solutions.

Known problems and compatibility issues

Apple Language Kits & Mac OS 8

Apple's Language Kits require an updater for full functionality with this version of the Mac OS. The Language Kit Updater for Mac OS 8 can be downloaded from the software updates area of Apple's Web site, America Online, and other sites where Apple updates are available.

If you cannot obtain the Language Kit Updater right away, do the following as an interim method of improving compatibility: After installing Mac OS 8, open the Installer again and add the International components of the basic system software. (See Adding and Removing Software in Chapter 3 of the installation manual.) Then reinstall your Apple Language Kit software. If the Language Kit installer asks about older files, always choose Newer.

At Ease and Mac OS 8

Some of the Mac OS 8 control panels can't be enabled for At Ease users and won't appear in At Ease Setup. You should use these control panels in the Finder before running At Ease. Also, note

that At Ease does not support file sharing. Do not turn on file sharing when using At Ease or your computer may freeze.

Apple Location Manager and Mac OS 8

To use the Apple Location Manager with your PowerBook computer, you must install Apple Location Manager 1.0.1, which is included with Mac OS 8. Due to changes in Mac OS 8, previous versions of Apple Location Manager will not function correctly and should not be used.

Programs refuse to open

Some programs refuse to run if the system font is set to anything but Chicago. To change the system font, use the Appearance control panel and change the font from Charcoal (the default) to Chicago then restart your computer and try to open the program again. Contact the manufacturer of the program to see if an updated version is available.

Additionally, some programs might require a small amount of additional memory when used with Mac OS 8. If a program refuses to open, increase its minimum memory allocation by 200K or 300K. To do this, select the program's icon, then open the File menu and choose Get Info. See the Memory topic in Mac OS Help for more information.

Printing with a LaserWriter Select 300 or 360 printer

If you experience system freezes or other problems when printing on a LaserWriter Select 300 or 360 printer, make sure the printer is connected to the computer. Trying to cancel printing does not solve the problem and may cause a flashing error message or cause your computer's performance to slow down.

Using Mac OS 8 with HP Printers

If your computer freezes or crashes when you use the Page Setup dialog box, contact Hewlett-Packard to obtain updated drivers for your printer.

Enhanced CDs stop playing

Audio tracks on Enhanced Compact Discs may stop playing if you open a program, access a file, or use the Finder. Enhanced CDs contain both audio and data information, such as text, movies, or multimedia software. On occasion, the Finder needs to access information about the data portion of the CD, which causes the audio to stop playing. This problem does not occur with standard audio CDs.

Apple Telecom software

The Apple Telecom software provided in the CD Extras folder on the Mac OS 8 CD is for PowerPC computers only. Also, the Apple Fax Gateway is no longer supported and will be removed when you install the new version of Apple Telecom.

If you already have an earlier version of Apple Telecom installed on your computer, a regular installation of Mac OS 8 does not remove or alter it. However, if you perform a clean installation of Mac OS 8, you will need to reinstall Apple Telecom software. If you have a PowerPC computer, use the installer on the Mac OS 8 CD. If you have a 68040-based Macintosh, reinstall your previous version.

Note: If you have a 68040 (or earlier) Macintosh, do not install the Apple Telecom software included with Mac OS 8.

Express Modems and GeoPort Adapter

If you have an Express Modem or GeoPort Adapter, and a 68040-based Macintosh, you may experience unexpected disconnections when accessing the Internet, the Internet Registration Server, and online services. External modems that do not use the Apple Telecom software will not experience this problem.

Internet Setup Assistant and static IP addresses

If you perform a clean installation of Mac OS 8, and you are connected to the Internet via a LAN (instead of a modem connection) and you have a static IP address, you should set the AppleTalk control panel to use Ethernet before using the Internet Setup Assistant. This is necessary so the assistant can update your configuration settings with the information you enter. After you use the assistant, open the TCP/IP control panel to activate TCP/IP for your computer.

Desktop Printing Extension and Mac OS 8

The Desktop Printing Extension is unnecessary with Mac OS 8. If it is present in the Extensions folder it may cause a system crash when you startup your computer.

ATI Xclaim GA and 3DMF files

If you have an ATI Xclaim GA card and your computer freezes when the monitor is set to Thousands of Colors and you try to load a QuickDraw 3D (3DMF) file, remove the Graphics Accelerator 1.0.7x extension from the Extensions folder. This extension is installed by the ATI Installer but is no longer

needed with Mac OS 8.

ProDOS disks and File Sharing

Turn off File Sharing before accessing a ProDOS (Apple II) disk or hard drive.

Or, if you are using a

ProDOS disk, eject it before turning File Sharing on. The Finder will be less responsive when you

access ProDOS disks, and may freeze when ProDOS disks and File Sharing are used together.

Macintosh Tutorial

If you have the Macintosh Tutorial, parts of it may not work correctly on computers with 68040

processors and Mac OS 8. Additionally, due to changes in the Finder and other parts of Mac OS 8,

the information in the tutorial may not be correct. You can use the Mac OS Info Center to learn about

the capabilities of your computer.

IR File Exchange Guide

The Apple Guide for the IR File Exchange control panel does not recognize when the File Sharing

control panel is open. You can avoid this problem by setting your owner name in the File Sharing

control panel, or by using the Mac OS Setup Assistant.

Using old versions of Cyberdog with international text

Using Cyberdog 1.2.1 or earlier to send or receive non-Roman text in e-mail messages may result

in information being lost from the end of the message. Cyberdog 2.0, included with Mac OS 8,

solves this problem.

AppleScript and the Finder

Many of the new features of the Mac OS 8 Finder are scriptable, and some of the properties in

previous versions of the Finder have changed. Additionally, some scripting capabilities have been

removed from the Finder and placed into scriptable control panels. For example, you can now script

file sharing by addressing the File Sharing control panel directly. These changes might require

some scripts to be updated for use with Mac OS 8.

Recording scripts and Mac OS 8

When you record an AppleScript using the Script Editor, Mac OS 8 does not properly record name

changes. For example, when you turn on recording in the Script editor and then change the name of

an icon in the Finder, the script will incorrectly record as: set «class» of item "folder name" to "folder name."

The correct recording should be:

1. select item "folder name"
2. set name of selection to "new folder name"

To work around this problem, edit the script after you record it. Change the wording as shown above, substituting the correct names.

AppleShare IP 5.0 servers and Mac OS 8

Apple recommends that you use Mac OS 7.6 with AppleShare IP 5.0 servers. If you use Mac OS 8,

you may encounter problems with FTP access. When several FTP clients try to access the same file

simultaneously, the clients may receive one of several error messages and the server may stop

serving files properly, or may crash when you shut it down. To avoid this problem until a fix is

available, you can turn off FTP access using the AppleShare IP Web & File Admin application. For

the latest information on AppleShare IP 5.0 support for Mac OS 8, see the AppleShare IP web site at

<http://appleshareip.apple.com>.

Miscellaneous notes

Internet access in Canada

If you don't already have an account with an Internet service provider, you can obtain one using the

Internet Setup Assistant, or you can choose one from the list in the International Internet Access file

in the Internet Extras folder on the Mac OS 8 CD. Read this information before using the Internet

Setup Assistant.

Internet access in Latin America, Australia, New Zealand, and Asia

If you don't already have an account with an Internet service provider, see the file International

Internet Access in the Internet Extras folder on the Mac OS 8 CD for important information. Read this

information before using the Internet Setup Assistant.

Installing the Internet Utilities

If you use your computer for sending e-mail, you should install the program DropStuff. DropStuff will

install the StuffIt Engine that allows Claris EMailer to compress and send files via e-mail. The

DropStuff installer is located in the Aladdin folder of the Internet Utilities folder, in the Internet folder

on your hard disk.

General Controls, Empty Trash Warning, and Views settings

These settings are restored to their default values after installing Mac OS 8. Additionally, in previous versions of Mac OS, view settings such as snap to grid and calculate folder size applied to all folders. When you install Mac OS 8 your previous setting is used as the default, but you can now select different settings for each of your folders and the desktop.

If you use a disk with Mac OS 8, and then use it on a computer with a previous version of the Mac OS, you'll notice that some of your views may change. For example, if you set a folder to view by button, then access that folder with System 7.6, the files will be displayed in large icon view because button view is not available under the older system software. Additionally, if you ejected the disk with open windows on a Mac OS 8 computer, the windows will not automatically reopen on older versions of Mac OS.

Unusual or inconsistent appearance

Some applications will exhibit unusual or inconsistent cosmetic anomalies when used with Mac OS

8. These are harmless, but if they bother you turn off the system-wide setting in the Appearance

control panel. Contact the manufacturer of the program to see if an updated version of the program is available.

Entering comments for floppy disks

With Mac OS 8 you can no longer enter comments in the Get Info window for floppy disks. The space

formerly used for storing comments is now used by Mac OS 8 to store the view settings (button view, etc.) for the disk and its folders.

Stationery pads and Mac OS 8

If you use a stationery pad with an application that does not directly support stationery, Mac OS 8 will

automatically make a new copy of the stationery and open it using the application. In previous

versions of Mac OS, you were asked to enter a name for the new copy; now it is opened as an

untitled document automatically.

Disk cache setting and better performance

If opening windows, emptying trash, and other activities in the Finder seem very slow, increase the

size of the disk cache. Click the Use Defaults button in the Memory control panel to set the cache to

the minimum recommended size for your system. With Mac OS 8, you can perform many file-related

activities at the same time, and increasing the size of the disk cache will help

performance.

Using Desktop Pictures

If you select a desktop picture that is on a CD or external disk, the picture might not be available the next time you start up your computer and will not be displayed. You can prevent this by copying the picture you want to display to your hard disk.

Slow screen redrawing

If the desktop is redrawn slowly after closing a window, your computer might be running low on memory. Set Desktop Pictures to display a pattern, instead of a picture, to speed up the redrawing process.

PowerBook 2400 computers and OT/PPP

After installing Mac OS 8, the printer/modem port may be in use by AppleTalk. If you also install OT/PPP, you must turn off AppleTalk then restart your computer in order to release the port for use by OT/PPP. Turn off AppleTalk using the AppleTalk control panel. Then restart the PowerBook and select the modem/printer port in the OT/PPP control panel.

Using Acrobat PDF documents

Some of the manuals included with Mac OS 8 are in Adobe Acrobat format. These files have pdf at the end of their names. To view or print these documents you must install Adobe Acrobat Reader, located in the CD Extras folder on the Mac OS 8 CD.

QuickTake Image Access

When you are copying pictures from a QuickTake 100 or QuickTake 150 camera to your computer, make sure all the pictures you want have finished copying before you erase the contents of the camera. Previously, you couldn't erase the camera until copying was completed. With Mac OS 8, you can copy and delete files at the same time so it's possible to accidentally erase the pictures before they have been copied. You cannot recover a picture once it is erased from the camera.

QuickTake 150 software installs old version of QuickTime PowerPlug

Mac OS 8 includes a new version of the QuickTime PowerPlug for computers with PowerPC microprocessors. The QuickTake 150 installer replaces this with version 2.0. Remove the QuickTime PowerPlug file from your Extensions folder (inside the System Folder) before installing QuickTake 150 software. After the QuickTake software is installed, drag the PowerPlug file back to

the Extensions folder.

Using a RAM disk

On some models of Mac OS-based computers, RAM disk contents are saved by writing to the hard disk when the computer shuts down. Then the contents are reloaded at startup. If the RAM disk is large, this may result in a delay when you shut down or start up your computer.

Apple HD SC Setup program

After you install Mac OS 8, you cannot use the obsolete Apple HD SC Setup program to initialize your hard drive. Use the Drive Setup program supplied with Mac OS 8 instead.

Apple CD-ROM and non-Apple CD-ROM incompatibilities

If your computer or CD-ROM drive is not manufactured by Apple, or you have an Apple CD-ROM drive which has been updated with a non-Apple driver, incompatibilities may result. To permit your CD-ROM drive to function correctly, remove Apple CD-ROM from the Extensions folder, and reinstall the software to support your CD-ROM device.

Network Software Installer version 1.5.1 installs older version of AppleTalk

The Network Software Installer installs an earlier version of AppleTalk than the one included with Mac OS 8. If an earlier AppleTalk version is installed, Open Transport networking software will not work. Do not use the Network Software Installer after installing Mac OS 8.

Password Security protects one partition only

The PowerBook Password Security control panel asks for a password in order to start up the computer. If you have formatted your internal hard disk so it has more than one partition, only the start up partition will be password protected. Additionally, if more than one partition has a System Folder, the PowerBook may start up from a non-protected partition.

Password Security on PowerBook 2400 and 3400 computers

The Password Security control panel is incompatible with Mac OS 8 on PowerBook 2400 and PowerBook 3400 computers. The security protection that the control panel provides works correctly on these PowerBook computers, but you cannot use the current version of the control panel to set up password protection. As an alternative, you can boot your PowerBook using a Disk Tools diskette, then open the Password Security control panel on your hard drive and turn password protection on, off, or set your password.

AutoRemounter control panel is for PowerBooks only

The AutoRemounter control panel automatically remounts network devices after a PowerBook

computer awakes from sleep. On desktop computers, network devices are not unmounted when the computer sleeps, so AutoRemounter is not needed.

Serial Port In Use error message on PowerBook computers with IrDA

If you receive an error message about the modem port being in use when you try to establish a PPP connection using OT/PPP, open the Infrared control panel and change the setting to IRTalk.

Switching between a LocalTalk network and a serial printer

If you use the same port to alternately connect to a LocalTalk network and a serial printer, the port is not always correctly released after you turn off AppleTalk to use the printer. If you have trouble printing after turning AppleTalk off, restart the computer.

3D images cannot be viewed with OpenDoc 3DMF Viewer 1.0.1 with QuickDraw 3D 1.5 or 1.5.1 installed

If QuickDraw 3D 1.5 or 1.5.1 is installed, a message about insufficient memory appears when attempting to place a 3D image in an OpenDoc document. Increasing the viewer's memory size with the Get Info command in the File menu does not solve the problem. To use the 3DMF Viewer, install an earlier version of QuickDraw 3D.

Internal speaker on Power Macintosh 5500 and 6500 computers remains muted after disconnecting external speakers

If the external speakers are connected when the computer starts up and then are disconnected, the internal speakers remain muted. To work around this problem, restart the computer after disconnecting the external speakers. The internal speaker should work normally.

Using Monitors & Sound with add-on devices

If you have a video or sound device that cannot be accessed using the Monitors & Sound control panel, use the Monitors control panel, or the Sound control panel, instead. Copies of these older control panels are installed in the Apple Extras folder on your hard disk. Unless you need to use these older control panels, use the unified Monitors & Sound control panel instead.

File Sharing and Users & Groups

If you want to be able to use the File Sharing and Users & Groups control panels from a remote computer, you must remove the FileSharing Commands scripting addition from the Scripting

Additions folder and turn on the Program Linking setting for both control panels.

File Sharing control panel and AppleShare

If you have AppleShare installed, some of the instructions about file sharing in the on-screen help will be incorrect. For instructions on network identity, file sharing, and activity monitoring, refer to the AppleShare documentation.

ARA 2.1 Personal Server and Users & Groups control panel

AppleTalk Remote Access Personal Server 2.1 cannot automatically open the Users & Groups control panel when you choose Users & Groups in the ARA setup menu. Instead, open the control panel by choosing it from the Control Panels submenu, in the Apple menu.

PowerBook 190, 190cs ,and 5300cs computers

The PowerBook 190cs and 5300cs display may appear blank when you first restart after installing

Mac OS 8, as well as every time after resetting PRAM. This is because the power manager is being

updated on the PowerBook. Restarting the PowerBook once more will result in a normal screen. To

shut down the PowerBook safely, press the Power button one time (which brings up the shutdown

dialog box) and then press the Return key.

Reinstalling printer drivers

If you perform a clean installation of Mac OS 8, and an icon for your printer is not available in the

Chooser, you may need to reinstall the software that came with your printer. If you have a StyleWriter,

StyleWriter II, or StyleWriter 1200, you can use the StyleWriter 1500 driver that comes with Mac OS 8

instead of installing your original printer software. If you have a Color StyleWriter 2200 or Color

StyleWriter 2400, you can use the Color StyleWriter 2500 driver instead.

Drive Setup and Energy Saver

Use the Energy Saver control panel to set the hard drive sleep setting to Never when you use Drive

Setup to perform an extended operation, such as testing the disk or initializing the disk with a low

level format or zeroing all the data. This will prevent errors caused by the hard drive spinning down

before Drive Setup completes its operation.

Mac OS 8 hard disks and older Macintosh computers

The hard disk driver software that the Installer places on Apple hard disks is not compatible with

computers that have a 68000 microprocessor. If you have an external drive with Apple driver

software connected to your computer when you install Mac OS 8, the updated driver software will cause an error if you connect that drive to a Macintosh Plus, Macintosh Classic, Macintosh SE, Macintosh Portable, or PowerBook 100 computer.

Using MacsBug and Mac OS 8

Mac OS 8 requires a new version of MacsBug. (MacsBug is a tool for software developers.) For information, check the Apple developer Web site at <http://devworld.apple.com>.

Advanced users can find additional technical information in the Mac OS 8 Tech Notes document.

This document is located on the World Wide Web at <http://devworld.apple.com/dev/technotes.shtml>.

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Tech Info Library

Mac OS 8: About the English Text-to-Speech Software

TOPIC

This article is the Mac OS 8 English Text-to-Speech Software Read Me.

DISCUSSION

About the English text-to-speech software

With the English text-to-speech software installed, many Macintosh programs can read English text out loud. One of the programs that can read to you is the SimpleText program, which comes with this computer and is already installed on your hard disk. (You are probably reading this document using the SimpleText program.)

Technical details

The software that enables your computer to speak has these components:

Speech Manager, a system extension

one or more of these English speech synthesizers, depending on your hardware and software:

-
-
-

several voice files, each identified with one particular synthesizer
the Speech control panel

Software installation for different software releases

The Installer installs the files that are appropriate for your system.

Version 6.0.7 or 6.0.8

If you have version 6.0.7 or 6.0.8 of system software on any Macintosh, these files are installed:

Speech Manager, in the System Folder

MacinTalk 2, in the System Folder

9 voices, in the Voices folder, which is in the System Folder

Version 7.0 or later on 68040

If you have version 7.0 or later of system software on a Power Macintosh or on a Macintosh with a 68040 processor, the following files are installed:

Speech Manager, in the Extensions folder

the Speech control panel, in the Control Panels folder

MacinTalk 3 and MacinTalk Pro, in the Extensions folder

19 MacinTalk 3 voices, in the Voices folder, which is in the Extensions folder

3 MacinTalk Pro voices (Agnes, Bruce, and Victoria), also in the Voices folder

Version 7.0 or later on 68030

If you have version 7.0 or later of system software on a Macintosh with a 33 MHz or faster 68030 processor, the following files are installed:

Speech Manager, in the Extensions folder
the Speech control panel, in the Control Panels folder
MacinTalk 3, in the Extensions folder
19 voices, in the Voices folder, which is in the Extensions folder
Version 7.0 or later on other computers
If you have version 7.0 or later of system software on any other computer,
the following files are installed:
Speech Manager, in the Extensions folder
the Speech control panel, in the Control Panels folder
Note: On Macintosh SE computers, the Speech control panel requires version
7.1 or later of the system software.
MacinTalk 2, in the Extensions folder
9 voices, in the Voices folder, which is in the Extensions folder
Troubleshooting (problems and solutions)
My Macintosh won't speak.
Turn up the speaker volume in the Sound control panel.
Choose a voice that requires less random-access memory. The voices Agnes,
Bruce, and Victoria take the most memory.
The Installer program says there's a problem with the hard disk.
Re-install your system software, then try installing the English
text-to-speech software again.
The Installer program displays other error messages.
Make sure you restart the computer with extensions off, as described in
"Installing the Software," above.
I had an older version of text-to-speech software, then did a custom
installation of the new software, but some of my older voices disappeared.
The custom installation you chose erased the older version of the software
that can use those voices. You can install newer versions of the voices by
doing another custom installation of the new software to install MacinTalk
2 or MacinTalk 3, whichever you used to have. (If you are not sure which
you had, you can install both.)



Tech Info Library

Mac OS 8: About the Multiprocessing Software

TOPIC

This article is the About the Multiprocessing Software Read Me file that comes with Mac OS 8.

DISCUSSION

This document provides information about the multiprocessing software included with Mac OS 8 and how to configure your computer properly to take advantage of multiprocessor performance. You use multiprocessing software to use two processors at the same time, which increases your computer's speed.

Turn off virtual memory and do not install RAM Doubler
Turn off virtual memory in the Memory control panel, and do not install Connectix RAM Doubler software. If virtual memory is turned on or RAM Doubler is installed, then your multiprocessor-compatible software applications will not be able to take advantage of the second PowerPC processor.

To turn off virtual memory, open the Memory control panel. In the Virtual Memory section, click the Off button. Then restart your computer. For more detailed information about virtual memory, open the Help menu, then choose Help.

Turn off hard disk sleep
Make sure that the hard disk sleep interval is set to Never in the Energy Saver control panel. Otherwise, software applications designed to work with your multiprocessor computer may not work properly.

To set your hard disk sleep interval, do the following:

1. Open the Energy Saver control panel.
2. If necessary, click Show Details to make the additional options available.

3. Drag the top and bottom sliders all the way to the right as shown below.

If you wish, you can set a display sleep interval by dragging the middle slider. Display sleep works properly with multiprocessor-compatible software applications.

Important information about Document Auto-Save

The Energy Saver control panel contains a feature named Document Auto-Save. The purpose of this feature is to automatically quit all open applications during an idle or scheduled shutdown, while saving changes to any open documents in each application. Since there are literally thousands of applications available for the Mac OS (with new ones always arriving), Document Auto-Save may not be compatible with every application. This is especially true for any application that does not use standard routines to implement the alerts or dialog boxes used to save changes to new or modified documents. When Document Auto-Save is incompatible with an application, it will either not automatically quit, or it will display alerts or dialog boxes that Document Auto-Save does not recognize and therefore does not dismiss.

If you intend to turn Document Auto-Save on, it is recommended that you monitor its operation during the first attempted idle or scheduled shutdown and note if any of your applications are not compatible. You can avoid problems with incompatible applications simply by making sure you leave open no documents that are new or modified before an idle or scheduled shutdown is to occur. Alternatively, you can modify the Document Auto-Save preferences in the Energy Saver control panel so the computer will sleep rather than shut down when unsaved documents are open.

For instructions for using Energy Saver & Document Auto-Save, choose Help from the Help menu when the Finder is active.

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Tech Info Library

Mac OS 8: Open Transport 1.2 Read Me

TOPIC

This article is the Open Transport 1.2 Read Me article that is installed when you install Mac OS 8.

DISCUSSION

Introduction

This Read Me document contains late-breaking information about Open Transport compatibility, add-on software, and solutions to known problems with third-party software. For instructions about how to use the Open Transport control panels (AppleTalk and TCP/IP), see the Open Transport User's Guide. For additional technical information about Open Transport, see the Open Transport Technical Info file that came with Open Transport.

Contents

- What's new in Open Transport 1.2 - general
- Network interface options
- General compatibility
- Apple product compatibility update
- Dialup network connectivity - AppleTalk
- Dialup network connectivity - TCP/IP
- Native dialup network connectivity - TCP/IP
- Tips for SLIP and PPP configurations
- Known limitations and other issues

What's new in Open Transport 1.2 - General

- Fixes a TCP/IP crash often referred to as the Ping of Death.
- Provides improved TCP protection against denial-of-service attacks, otherwise referred to as SYN-attacks
- Improves overall performance of TCP when operating in a slow-link environment. This provides significant improvements for Web Servers where clients are using a modem to connect to an Internet Service Provider. This obsoletes the OTSlowLinkTuneUp Patch.
- Fixes a problem which could occur when AckSends were used without using

OTData

structures. While the data would be sent accurately, the buffer could be modified during the

operation, making the buffer unavailable for reuse. This problem was documented and

worked around in the OTVirtualServer sample code.

Fixes crashes which could occur with TCP applications, such as Netscape, when AppleTalk

was turned off. This problem was first noticed by America Online (AOL). This fix obsoletes

AOL's extension OpenOT.

Fixes a problem between native PAP and some HP LaserJet postscript printers.

Fixes a problem on some hardware platforms that would not permit multiple MDEVs located

in the Extensions folder to be initialized.

Fixes a problem where ADSP used via the native OT API could truncate outbound data if

some data was unsent when OTSndOrderlyRelease was called.

Fixes a rare crash in AppleTalk which could occur when a STREAMS buffer was freed twice.

Added support for the CompuServe PPP MDEV.

Multiple fixes to increase stability of AppleShare and AppleShare IP servers with more than

80 concurrently connected users.

Network Interface Options

Open Transport 1.2 supports PCI bus, NuBus, communications slot, and PC Card network interface

cards, as well as built-in LocalTalk, Ethernet, and Token Ring network adapters. For supported

computers without expansion options, Open Transport 1.2 also supports a SCSI-attached network

adapter. Third party network interface options available for Open Transport include Fast Ethernet, ATM, and FDDI.

General compatibility

Open Transport is compatible with:

existing applications that use AppleTalk as specified by Apple Computer, Inc.

existing applications that use MacTCP as specified by Apple Computer, Inc.

existing devices (such as printers) that you select in the Chooser
existing NuBus network interface cards for the Mac OS

Computers running Open Transport can be added to an existing AppleTalk or TCP/IP network

without upgrading other computers on the network.

Apple product compatibility update

At Ease version 2.x or 3.x may encounter problems when starting up with Open Transport. At

Ease Update 1.0 will update non-Workgroup versions of At Ease 2.x or 3.x to include Open

Transport compatibility. If you are using At Ease for Workgroups, you should upgrade to

version 3.0.2 or later. Both can be found on Apple Software Update sites on the Internet and

selected online services.

Assistant Toolbox version 1.2 is not compatible with Open Transport, and will result in

AppleTalk being turned off each time you restart your system. System 7.5 update 2.0 and

7.5.5 include Assistant Toolbox version 1.3 or later that is compatible with Open Transport.

The Apple PCI Token Ring Card (M3904Z/A) works with Open Transport 1.1.1 and later. The

Apple PCI Token Ring card is compatible with Power Macintosh 7200/120, 7300, 7500,

7600, 8500, 8600, 9500 and 9600 computers; it is not compatible with 7200/75 and 7200/90

computers.

Apple LaserWriter Bridge and LocalTalk Bridge 2.1 or later are compatible with Open

Transport.

Apple Internet Mail Server 1.1 or later software is compatible with Open Transport 1.1 and

later.

Apple Remote Access (ARA) Multiport Server 2.1, ARA Client 2.0.1, and ARA Personal Server

2.0.1 are compatible with Open Transport 1.1 and later.

Apple PCI-based Workgroup servers (Application, AppleShare, and Internet) are compatible

with Open Transport 1.1 or later.

Computers running the current versions of Apple IP Gateway and AppleTalk Internet Router

must not be updated to Open Transport; these products are based on classic networking.

These products do, however, interoperate with computers using either classic or Open

Transport networking. Apple has not yet announced plans regarding future versions of these

products.

Apple's MacTCP Ping is not compatible with Open Transport; no update is planned. MacPing

from Dartmouth, available at <ftp://www.dartmouth.edu/pages/softdev/>, OTTool from Neon

Software, available at <ftp://ftp.neon.com> and Mac TCP Watcher v2.0 from Peter N. Lewis &

Stairways Software available at <ftp://ftp.share.com> are Open Transport-compatible

alternatives.

ZapTCP is a classic networking tool and is neither compatible nor needed with Open

Transport. Functionality similar to ZapTCP is built into Open Transport.

Dialup network connectivity - AppleTalk

For dialup connectivity to AppleTalk networks, Open Transport supports Apple Remote Access

version 2.0.1 or later.

Dialup network connectivity: TCP/IP

For dialup connectivity to TCP/IP networks (including the Internet) Open

Transport supports

third-party extensions known as MDEVs. Serial Line Interface Protocol (SLIP) and Point to Point

Protocol (PPP) connectivity are provided in this manner. Not all versions of all MDEVs are

compatible with Open Transport 1.1 and later.

Open Transport 1.2 recognizes and is compatible with the following MDEVs. When properly installed

they appear in the Connect via pop-up menu in the TCP/IP control panel.

FreePPP version 1.0.5 or later

FreePPP is shareware and can be found on the Internet, typically at info-mac mirror sites in the

comm/tcp/conn directory. A list of info-mac mirror sites can currently be found at:

<http://www.pht.com/info-mac/mirror-list.html>.

Some sites where FreePPP can be found currently include:

<ftp://mirrors.aol.com/pub/info-mac/comm/tcp/conn/>, and

<ftp://mirror.apple.com/mirrors/Info-Mac.Archive/comm/tcp/conn/>.

FreePPP versions prior to 2.5 may experience problems when running with virtual memory turned

on (including RAM Doubler). If you have problems using FreePPP with VM, either update to FreePPP

2.5, or temporarily turn VM off. The current version of FreePPP is 2.5v3.

MacPPP version 2.1.4 or later (MacPPP 2.5 is recommended)

MacPPP versions prior to 2.5 may experience problems when running with virtual memory turned on

(including RAM Doubler). If you have problems using MacPPP with VM, either update to MacPPP 2.5,

or temporarily turn VM off.

An Open Transport-compatible version of MacPPP (MacPPP 2.5) is included in the Open Transport

Extras folder. For more information, please refer to the MacPPP Read Me document.

InterPPP version 1.2.9 or later; InterPPP II version 1.1 or later

InterPPP and InterPPP II are commercial software products. For availability and

ordering information

in the U.S., contact InterCon Systems at 800-468-7266 or 703-709-5500.

MacSLIP version 3.0.3 or later

MacSLIP is commercial software developed by Hyde Park Software. It supports both SLIP and PPP.

For availability and ordering information in the U.S., contact TriSoft at 800-531-5170 or

512-472-0744. For more details see the MacSLIP Web page at

<http://www.zilker.net/~hydepark/>.

Sonic PPP version 1.0.2 or later

SonicPPP is commercial software developed by Sonic Systems, Inc. For availability and ordering

information in the U.S., contact Sonic Systems at 408-736-1900 (voice)

408-736-7228 (fax). For

more details see the Sonic Systems Web page at <http://www.sonicsys.com/>.

NTS PPP version 2.0 or later

NTS PPP is commercial software developed by Network Telesystems, Inc. For availability and

ordering information in the U.S., contact Network Telesystems at 408-523-8100 (voice)

408-523-8818 (fax). For more details see the Network Telesystems Web page at

<http://www.ntsi.com/>.

SAT/SAGEM PPP version 1.02b1 or later

SAT/SAGEM PPP is commercial software developed by SAT/SAGEM. For availability and ordering

information in the US, contact SAT/SAGEM at 408-446-8690 (voice) 408-446-9766 (fax). For more

details see the SAGEM Web page at <http://www.satusa.com/>.

CompuServe PPP

CompuServe PPP is commercial software developed by CompuServe. For availability and ordering

information in the U.S., contact CompuServe Customer Service at 1-800-848-8990.

For more details

see the CompuServe Web page at <http://www.compuserve.com/>.

LeoTCP version 2.0.1 or later

LeoTCP is commercial software developed by Hermstedt GmbH. For availability and ordering

information in the U.S., contact Hermstedt USA at 1-800-828-5522 (voice). In

Europe contact

Hermstedt GmbH at +49 621-76500 (voice) +49 621-7650100 (fax).

T-Online CSLIP version 1.0.3 or later

T-Online CSLIP is commercial software developed by Computer Consulting GbR. For availability

and ordering information in Europe, contact format network & communication at +49 2206-95840.

For more details, contact format network & communication at info@format.de.

University of Michigan ISDN version 2.0.6 or later

In addition to these, there are a number of other MDEVs (examples include those from Pacer, FCR, and Tribe) which are indistinguishable from one another to Open Transport. When installed, these appear in the Connect via pop-up menu as TCP/IP PPP.

Native dialup network connectivity: TCP/IP

Open Transport supports extensions that use the STREAMS architecture. OT/PPP version 1.0 or later is available on the Apple Software Update sites on the Internet and requires Open Transport 1.1.1 or later.

Tips for SLIP and PPP configurations

Some MDEVs are known to be incompatible with other MDEVs. If you experience problems, remove unused MDEVs so that only one MDEV is installed on your computer at a time.

Users who dial into a TCP/IP network or Internet Service Provider (ISP) may have been assigned a router (gateway) address that is not a part of their local subnet. This was an accepted but technically invalid configuration for MacTCP. Open Transport users should not enter a value for the router address or subnet mask; Open Transport/TCP generates correct values for these fields automatically. In unusual circumstances, these supplied values can be overridden using the Administration mode of the TCP/IP control panel.

If BootP is used over SLIP or PPP for interface configuration, and if BootP returns additional default router addresses, Open Transport will automatically add those addresses to the list of default routers.

When Open Transport is installed on a computer that previously had MacTCP configured for a server configuration, the initial configuration method (the selection in the Configure pop-up menu in the TCP/IP control panel) is set for the use of a BootP server. This default may not be the appropriate choice for you; please verify.

If your computer was previously configured for MacTCP server addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

1. Open the TCP/IP control panel.

2. Choose Using PPP Server or Using SLIP from the Configure pop-up menu.
3. Close the TCP/IP control panel, and save changes when prompted.
4. Try connecting again.

If your computer was previously configured for MacTCP manual addressing and you experience connection difficulties using PPP or SLIP after installing Open Transport, follow these steps:

1. Open the TCP/IP control panel.
2. Choose Manual from the Configure pop-up menu.
3. Verify that the correct IP address is entered in the Address field.
4. Close the TCP/IP control panel, and save changes when prompted.
5. Open the configuration utility supplied with your SLIP or PPP software, and verify that it also reflects the correct IP address in the appropriate location. Refer to the documentation supplied with your SLIP or PPP software for further information on how to enter an IP address, and how to save an updated configuration.
6. Try connecting again.

Note: In MacPPP's Config PPP control panel, this setting is entered in the IPCP dialog box. Refer to the documentation that came with MacPPP or FreePPP for additional information.

Known limitations and other issues

PowerBooks

The AppleTalk control panel displays separate printer and modem ports on the PowerBook 190.

LocalTalk will only work correctly when the modem port is selected in the AppleTalk control panel.

The software that dims the screen of PowerBook Duo computers when the PowerBook is docked

and idle is not compatible with Open Transport. Use a third-party screen saver in place of the Apple-provided module.

In some cases, on a PowerBook 190 configured to use the Infrared Port in the AppleTalk Connect

via pop-up menu, networking services may become disabled following a sleep/wake or restart. If

this happens, try putting the computer to sleep and waking it up again, or use the AppleTalk control

panel to temporarily select the modem/printer port before switching back to the infrared port.

Desktop Computers

On a IIcx or a Quadra 950, Open Transport can only use the compatible mode setting in the Serial Switch control panel. Do not use the faster mode setting with LocalTalk.

On 68030 and 68040 computers, changes in AppleTalk configurations can cause systems running Meeting Maker 3.5 or 3.5.1 to crash. This can occur when changing AppleTalk links, turning AppleTalk off, or bringing ARA connections up or down. This problem will occur on classic networking as well. Apple is working with ON Technology to resolve this problem.

Open Transport

Open Transport generally requires more memory (RAM) than MacTCP. To conserve memory, you might try some of the following:

- Rename or re-order one or more third-party extensions (INITs), to change the order in which memory is allocated when your computer starts up. If you use extensions from Global Village, try renaming those extensions so that they load last.
- Especially on PowerPC-based computers, turn on virtual memory. This may affect performance.

TCP/IP

When TCP/IP is set to Load only when needed (in the control panel's Options window), ping^{ing} an Open Transport workstation will fail if TCP/IP is not currently being used. To make sure your computer is pingable at all times, turn off the Load only when needed option (open the TCP/IP control panel and click the Options button, then click the Load only when needed checkbox to remove the X) and restart your computer.

When TCP/IP is set to Load only when needed (in the control panel's Options window), the first TCP/IP application opened will cause Open Transport to load into memory. Some older applications do not cause Open Transport to load, and then report errors similar to those encountered when MacTCP is not installed. If this is a problem, turn off the Load only when needed option (open the TCP/IP control panel and click the Options button, then click the Load only when needed checkbox to

remove the X) and restart your computer.

The TCP/IP control panel is able to obtain and utilize multiple gateway and name server addresses from DHCP and BootP servers. However, it will currently display only the first one in the list. This should be addressed in a future release.

Generally, you should turn on the Load only when needed option in the TCP/IP control panel when using a modem. If TCP/IP is always loaded (Load only when needed is not checked), your modem may attempt to initiate a dialup connection at startup. Some MDEVs require more system heap memory than is available at startup, which may cause the computer to hang. Also, some Internet service providers charge by connect time, so you may be charged for the connection, even if you were not using it.

You should only specify use of 802.3 framing in the TCP/IP control panel if you have been directed to do so by your network manager, or if you are sure that all other stations on your network segment, including your IP router(s), are also configured to use 802.3 and not Ethernet version 2.0 framing.

MacSLIP

If you use MacSLIP, you should likewise not configure the MacSLIP control panel to initialize MacSLIP at system startup time. As stated above, this may require more system heap memory than is available at startup, which may cause the computer to hang.

If you are experiencing problems when using MacSLIP with virtual memory on, increasing your virtual memory size may give you better results. (Use the Memory control panel to increase virtual memory.)

Netscape

If you are using Netscape, 16MB or more of built-in memory (RAM) is recommended.

MacTCP

Some MacTCP-based applications will not function correctly unless the MacTCP DNR file is in its original location at the root level of the System Folder.

Claris EMailer

Claris EMailer version 1.1 v3 or later and Claris EMailer Lite version 1.1 v4 or later is compatible with Open Transport 1.2. Earlier versions of Claris EMailer may not be

compatible with Open

Transport's Load only when needed configuration option. If you experience a system crash 2-3

minutes after quitting EMailer, turn off the Load only when needed option. (Open the TCP/IP control

panel and click the Options button, then click the Load only when needed checkbox to remove the X.)

MacTraceRoute Ethernet LAP

The current version of the MacTraceRoute Ethernet LAP does not work on computers running Open

Transport. This utility only works with Classic networking. Open Transport compatible alternatives

include Mac TCP Watcher v2.0 from Peter N. Lewis & Stairways Software, available at

<ftp://ftp.share.com>, and IP NetLink from Sustainable Softworks, available at

<http://www.sustworks.com/~psichel/>.

NFS/Share

NFS/Share versions 1.4.4 or later are compatible with Open Transport.

Netware Client

When using Netware Client version 5.11 configured for NetwareIP service, the first login may yield a

Netware Configuration error message. To avoid this error, open the NetwareIP control panel and

change the value under Domain SAP Server (DSS) Retry Attempts from 1 to 2. You can also change

OpenTransport TCP/IP control panel to always load TCP/IP into memory (open the TCP/IP control

panel, click the Options button, and click the Load only when needed box to remove the X).

eXodus

eXodus 5.2.2 and later are compatible with Open Transport.

Anarchie

Versions of Anarchie prior to 1.6 have a data corruption problem when used with Open Transport.

Make sure you are using Anarchie 1.6 or later.

Apple Remote Access

If an Apple Remote Access (ARA) user is on a non-routed, extended (Ethernet) network, and there

are devices on the local network with the same network number as devices on the remote network,

the user will not be able to see the local devices. This problem can be fixed by installing a router.

Another workaround is to clear the PRAM on the ARA computer. (Hold down the Command, Option,

and PR keys simultaneously while starting up the computer). Clearing PRAM causes the computer

to start up with a new network number, which should not conflict with the remote

network number.

Daemon

Daemon 1.0.0 & Daemon Killer 1.0 are not compatible with Open Transport.

MudDweller

MudDweller 1.2 is not completely compatible with Open Transport. You can open new connections, but the reconnect choice does not work correctly.

NetPresenz

The system will crash during launch of NetPresenz if Open Transport TCP/IP is configured to use MacIP and the selected zone has no MacIP server.

VersaTerm SLIP

Current versions of VersaTerm SLIP are not compatible with Open Transport.

KeyServer

Problems can occur with old versions of the KeyServer package from Sassafras Software when TCP/IP is configured to Load only when needed (in the control panel's Options window). Contact Sassafras for the latest revisions at <http://www.sassafras.com>.

Open Transport/LocalTalk Bridge/Global Village Toolbox/GlobalFax

The combination of Open Transport 1.2, LocalTalk Bridge 2.1f2, Global Village Toolbox and GlobalFax extensions causes a crash. This also happens when using classic networking. The workaround is to move the LocalTalk Bridge file to the Extension folder, renaming it to aLocalTalk Bridge. You can make an alias and rename the alias as desired. Put the alias wherever you want, including the Control Panels folder. This will allow the LocalTalk Bridge to load before Global Village and avoid the cause of the crash.

CSI Hurdler

To use the CSI Hurdler serial card with Open Transport, contact CSI to get a copy of their preference file patch. This will enable the card to be compatible with Open Transport 1.2.

MPW

The current official release of the MPW shell will hang the system when used with virtual memory and Open Transport. When using the MPW shell and Open Transport, turn off virtual memory. The ETO #21 pre-release MPW shell, version 3.4.2b2, fixes this problem.

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Mac OS 8: Open Transport 1.2 Technical Information Read Me

TOPIC

This article is the Open Transport 1.2 Technical Information Read Me file that comes with Mac OS 8.0.

DISCUSSION

This document contains technical information about Open Transport that may be useful to network managers and administrators. You do not need to read this document in order to use Open Transport.

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Introduction

Open Transport is modern networking and communications system software for the Mac OS. It is

based on industry standards and brings a new level of networking connectivity, control, and

compatibility to Mac OS computers, while preserving built-in support for easy-to-use networking.

Open Transport is supported on system software versions 7.1, 7.1.1, 7.1.2, 7.5.3, 7.5.5 or later.

System software version 7.5.3 or later is recommended. No other system software versions are supported.

For more important information about system requirements, compatibility, and known incompatibilities and limitations, read the About Open Transport 1.2 document.

Files added by the Open Transport installer

Open Transport installs the AppleTalk and TCP/IP control panels into the Control Panels folder

inside the System Folder of your startup disk. The Open Transport Installer also adds the following

files to the Extensions folder inside the System Folder:

Shared Library Manager, Shared Library Manager PPC

These extensions implement a shared library mechanism on 68K and PowerPC Mac OS computers, respectively. Both extensions are required on PowerPC-based computers in order to support both emulated and native shared libraries.

OpenTransportLib, Open Transport Library

These shared libraries implement core Open Transport services on PowerPC-based computers.

The first library contains the PowerPC implementation and an interface for native PPC applications.

The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptAppleTalkLib, Open Tpt AppleTalk Library

These shared libraries implement Open Transport AppleTalk services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

OpenTptInternetLib, Open Tpt Internet Library

These shared libraries implement Open Transport TCP/IP services on PowerPC-based computers. The first library contains the PowerPC implementation and an interface for native PPC applications. The second library contains the built-in Open Transport modules and an interface for emulated 68K applications.

Open Transport 68K Library

This shared library implements core Open Transport services on 68030- and 68040-based computers.

Open Tpt ATalk 68K Library

This shared library implements Open Transport AppleTalk services on 68030- and 68040-based computers.

Open Tpt Inet 68K Library

This shared library implements Open Transport TCP/IP services on 68030- and 68040-based computers.

Open Transport AppleTalk Features

Static and dynamic AppleTalk address allocation
Open Transport AppleTalk supports static assigned (manually administered) protocol addresses as well as the dynamic addressing provided by AppleTalk Address Resolution Protocol (ARP).
Static addressing allows AppleTalk nodes to be managed using the protocol address as a unique and stable identifier.

It is important that all nodes on each individual AppleTalk subnet (a given cable segment assigned a unique network number or network number range) be administered consistently--either all with dynamic addressing or all with pre-assigned static addresses. This avoids a potential conflict when a new dynamic node acquires an address assigned to manually-addressed node that is not connected or is off line. Administrators can enforce the addressing policy for a subnet by locking the addressing mode. As a precaution, Open Transport AppleTalk checks for duplicate protocol addresses on the LAN even when static addressing is configured.

Use of parameter RAM

Under classic AppleTalk, AppleTalk's on/off state, the selected network interface, the previous network (protocol) address, and the previous AppleTalk zone name are saved in persistent memory (parameter RAM) for reuse at startup. To ensure backward compatibility, this information is still stored and retrieved on systems using Open Transport AppleTalk. However, the following differences are found with Open Transport:

At startup, Open Transport reads the current AppleTalk configuration file to determine if

AppleTalk should be turned on or off. This value overrides the value saved in parameter RAM.

The user is not explicitly notified when this occurs.

If the network interface specified in the current AppleTalk configuration file is locked and the

specified port is not available or cannot be initialized, Open Transport will not automatically

switch the port back to LocalTalk. Instead, AppleTalk will remain off.

The user sees a dialog

box with this information.

Open Transport TCP/IP features

Open Transport brings a workstation-class implementation of TCP/IP protocols to Mac OS. As with

MacTCP, Open Transport TCP/IP is a full 32-bit stack. Open Transport TCP/IP adds support for:

dynamic path MTU discovery, for more efficient network use in heterogeneous network

topologies.

Dynamic Host Configuration Protocol (DHCP), for centralized IP address configuration

management. DHCP is an Internet Engineering Task Force (IETF) standards-track protocol.

IP multicast, for participation as an Mbone client for applications

written to the native Open

Transport API.

simultaneous TCP connections for applications written to the native Open Transport API are

limited only by installed memory and processor power, for increased functionality as an

Internet or other TCP/IP network server.

a new, more robust and standards-compliant domain name resolver (a caching stub DNR).

support for developer access to raw IP services, as well as TCP and UDP.

Ethernet Version 2.0 and IEEE 802.3 framing, for better interoperability with a wider range of

TCP/IP hosts.

implicit and explicit domain name search paths, for increased control of domain name

resolution.

use of multiple IP routers with fail-over, for increased robustness in mission-critical

applications.

TCP wildcard source port assignments start at 2048, increasing from that point.

DHCP server support

Apple's implementation conforms to the current versions of the applicable specification documents

(RFCs). To date, Open Transport TCP/IP has been tested with the following DHCP server

implementations:

Competitive Automation <http://www.join.com>

FTP Software <http://www.ftp.com>

Hewlett Packard HP-UX <http://www.hp.com>

Microsoft Windows NT Advanced Server <http://www.microsoft.com>

Silicon Graphics <http://www.sgi.com>

Sun Solaris and SunOS <http://www.sun.com>

TGV <http://www.tgv.com>

DHCP address lease support

Open Transport TCP/IP supports DHCP address leases. Open Transport TCP/IP automatically

attempts to renew any address lease that reaches its renewal interval (by default, the renewal

interval is reached when the lease is halfway completed). The renewal interval may be configured to

a different value by making changes to the configuring DHCP server. Renewal is attempted

regardless of how many times the lease has already been renewed. Lease rebinding is also

supported. Should an interface's IP address lease expire, the interface is closed down. Open

Transport TCP/IP does not currently support the DHCP Client ID option or the DHCPINFORM

message, nor will it currently try to use the remainder of a previous but

unexpired lease upon
rebooting.

Windows NT advanced server support

With Open Transport 1.1 and later, Mac OS clients are interoperable with the Windows NTAS DHCP server on LAN links. However, Mac OS clients cannot acquire configuration information from an NT DHCP server across a dialup (PPP) link because there is not yet an accepted industry standard for DHCP over dialup. The NT implementation is based on proprietary Microsoft extensions. Mac OS clients cannot acquire configuration information nor register with a Microsoft WINS server. WINS is also dependent on Microsoft extensions to TCP/IP (requiring NetBIOS support).

The Internet Engineering Task Force (IETF) is developing a cross-platform industry standard technology for dynamic registration and look-up of IP names through the Dynamic Service Location working group. Apple has no current plans to implement the WINS extensions. Instead, we are fully committed to implementation of the applicable IETF standards as they emerge.

Macintosh clients running versions of Open Transport prior to 1.1 could experience some interoperability problems due to other significant differences between the Microsoft implementation and that of a typical UNIX-based server.

BootP support

Open Transport 1.1 and later fully supports Bootstrap Protocol (BootP). Versions of Open Transport prior to 1.1 failed to accept a BootP Reply sent to the unicast (subnet broadcast) address, (for example, xxx.xxx.xxx.255. Replies sent to the all-nets broadcast address (for example, 255.255.255.255) were handled properly. Also, earlier versions of Open Transport required that the BootP gateway be zero hops away.

Local Hosts file support

Open Transport TCP/IP supports a Hosts file that may be used to supplement and/or customize the Domain Name Resolver's initial cache of information. The Hosts file is normally stored in the Preferences folder in the active System Folder. When Open Transport TCP/IP is initialized, it reads the Hosts file (if any). As in MacTCP, the supported Hosts file features follow a subset of the Domain Name System Master File Format (RFC 1035).

Open Transport TCP/IP is more stringent regarding the content and format of the

Hosts file than was

MacTCP, which permitted violation of the FQDN requirement for <domain-name>. For instance, the format:

```
charlie      A      128.1.1.1
```

which was acceptable to the MacTCP DNR, is no longer permitted because of the use of domain

search lists in Open Transport/TCP (charlie could potentially exist in any or all of the configured

domains). To accomplish the same effect, use this format instead:

```
charlie      CNAME  myhost.mydomain.edu
```

```
myhost.mydomain.edu  A      128.1.1.1
```

This associates the local alias charlie with the fully qualified domain name myhost.mydomain.edu,

and resolves it to the address 128.1.1.1. Use of local aliases is limited to CNAME entries; NS and A

entries must use fully qualified domain names.

You can create a Hosts file with any text editor or word processor (the Hosts file must be stored in

text format). If you use a Hosts file, keep it as short as possible, and include only entries that will be

accessed frequently. This reduces the memory required to cache the DNS information and

minimizes the need to maintain and update Hosts files as system information changes.

Open Transport TCP/IP automatically uses a Hosts file stored in the Preferences folder of the active

System Folder. If no Hosts file is found in the Preferences folder, Open Transport TCP/IP searches

the active System Folder for a Hosts file. You can specify a particular Hosts file to use with a specific

configuration. For example, one Hosts file might be set up for a user connecting via Ethernet, and

another set up for when that user connects via modem.

For additional information about the Hosts file design of the Open Transport Domain Name

Resolver, see the document Apple Open Transport Reference Q&A. The latest version of the Q&A is

in the Open Transport Extras folder and is available on the Internet at <ftp://seeding.apple.com/ess/public/opentransport/>.

MacTCP server addressing support

Open Transport TCP/IP supports both Bootstrap Protocol (BootP) and Reverse Address Resolution

Protocol (RARP) configuration methods. MacTCP Server mode addressing was a

combination of

BootP and RARP. When Server mode was selected, MacTCP used BootP to attempt to acquire an IP address. If that failed, MacTCP tried RARP. Whichever protocol was successful was stored as a preference, and was used first the next time the computer started up. In Open Transport, you must choose BootP or RARP explicitly.

MacTCP dynamic addressing

Open Transport does not support MacTCP dynamic addressing. MacTCP dynamic mode addressing was based on an Apple-proprietary extension to TCP/IP protocols. It applied the address negotiation and assignment rules used by the AppleTalk protocols to TCP/IP networks, making it very easy to set up a Macintosh-only standalone TCP/IP network. Use of this dynamic addressing method in other scenarios, however, could create additional work for a network administrator.

The Internet community (IETF) has since developed a multivendor standard for the dynamic assignment of IP addresses, known as Dynamic Host Configuration Protocol (DHCP). Open Transport TCP/IP supports the industry standard DHCP.

MacIP support

MacIP is a protocol specification developed for carrying TCP/IP traffic on AppleTalk-only networks, originally LocalTalk networks. MacIP is today frequently used with AppleTalk Remote Access Protocol (ARAP) to provide mobile users access to TCP/IP network services.

Use of MacIP typically requires a gateway, which strips off the AppleTalk encapsulation and places the IP packet on the TCP/IP LAN. When packets are sent back to the MacIP end-node, the gateway replaces the AppleTalk encapsulation. MacIP gateway support is most frequently offered as an integrated service within a multiprotocol router. The gateway (router) attaches to both an AppleTalk and a TCP/IP network.

Open Transport supports MacIP in the TCP/IP control panel. Once selected, TCP/IP data is encapsulated in AppleTalk packets, and is sent through the selected network interface.

PPP connectivity

PPP (Point to Point Protocol) connectivity for Open Transport is currently based on the use of third-party software extensions known as MDEVs. Early versions of these

extensions may not be compatible with Open Transport. For information about MDEV compatibility, see the About Open Transport 1.2 document.

Memory requirements

Open Transport provides many new features and capabilities to Mac OS customers and, in general, will require more system memory (RAM) than does classic networking. However, the actual memory requirements of Open Transport vary depending upon the networking services in use at a given time. This is different from classic networking, which allocates memory to networking services and keeps it allocated even after networking services are no longer in use.

Factors contributing to differences in memory requirements include:

- Open Transport provides implementations of networking as both 680x0 and native PowerPC

- code. PowerPC code is typically larger (but also faster).

- Open Transport provides mixed-mode applications support, making it possible for both

- PowerPC native and 680x0 applications to use native networking on PowerPC-based computers.

- Open Transport includes both the new implementations of networking and the libraries

- required to provide backward compatibility support for the older AppleTalk and MacTCP programming interfaces.

- Open Transport requires less memory on systems with virtual memory enabled. Classic

- networking has about the same memory requirements regardless of the VM setting.

- Open Transport is based on the cross-platform standard STREAMS environment, which

- requires more memory than classic networking.

The difference in memory requirements depends upon the configuration of your computer. Some examples of base memory requirements are shown in the table below.

Computer

System

Virtual
Memory

Classic
AppleTalk & MacTCP

Open
Transport

PowerPC-based

On

		350K to 450KB	200KB
PowerPC-based	Off	350K to 450KB	
			up to 1.2 MB
680x0-based	Off	350K to 450KB	
			700KB to
800KB			

Application compatibility guidelines

Apple has defined three levels of interoperability with Open Transport. The first, Open Transport Compatible, is used to describe network applications originally developed for classic AppleTalk or MacTCP programming interfaces that now take advantage of Open Transport Compatibility Services. These applications automatically gain the benefits associated with the Open Transport control panels. However, they will not realize a significant performance increase on Power Macintosh systems, nor can they take advantage of Open Transport's transport-independence capabilities.

Open Transport Ready applications have adopted the new Open Transport APIs. They are PowerPC native, in addition to running on 680x0-based Macintosh systems. Open Transport-ready applications benefit from the new control panels and may also realize a significant performance boost when running on PowerPC-based computers.

The highest category of interoperability is Open Transport Enhanced. In addition to adopting the new Open Transport APIs and being Power PC native, these applications can be dynamically configured to support AppleTalk, TCP/IP, or serial communication.

Applications that rely on undocumented APIs or examine private data structures in AppleTalk or MacTCP may not be fully compatible with Open Transport. Updated versions of these software products will be required for full compatibility.

Performance

Open Transport is designed to take advantage of the PowerPC processor. For maximum performance, however, networking applications must also take advantage of the PowerPC processor, and should adopt the new Open Transport programming interfaces.

In general, current Mac OS networking applications are written for the 680x0 processor and use the classic (680x0-based) networking programming interfaces. These applications can still be used with Open Transport, and may perform somewhat better. Networking applications that are PowerPC-native but not Open Transport-ready may yield better performance, but still fall short of the maximum potential performance because they make use of Open Transport backward compatibility rather than its full capabilities.

Performance improvements will be greater with protocols that use larger datagram sizes. For example, TCP/IP users will see greater improvements than AppleTalk users, because AppleTalk has a fixed and limited datagram size. On high-speed datalinks such as fast Ethernet, FDDI, and ATM, the performance of the network interface card (NIC) driver code is also a significant factor.

Overall performance also depends on the amount of RAM available. Larger packet sizes and higher throughput place increased demand on the buffering system of Open Transport. If Open Transport becomes low on memory, throughput decreases to accommodate the limitation.

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Tech Info Library

Mac OS 8: Open Transport/PPP 1.0.1 Read Me

TOPIC

This article is the About Open Transport/PPP 1.0.1 Read Me file that comes with Mac OS 8.0.

DISCUSSION

Introduction

This document contains late-breaking information about Open Transport/PPP. For instructions about how to use Open Transport/PPP--including the modem and PPP control panels--see the Open Transport/PPP User's Manual. Onscreen help is also available in Mac OS Guide. Choose Help from the Help menu. Information about Open Transport/PPP appears in the Telecommunications topic area. Or you can click the question-mark icon that appears in the modem and PPP control panels.

Additional information about Open Transport/PPP is also available on the Open Transport/PPP home page: <http://devworld.apple.com/dev/opentransport/ppp.html>. Included on this home page is a log of the release notes that describes the changes in each beta release of the Open Transport/PPP software.

License Agreement

This release of Open Transport/PPP is subject to the terms and conditions of the license agreement that accompanies the software in the file named License. By using the software you agree to abide by the terms and conditions of the license agreement.

System Requirements

Open Transport/PPP 1.0.1 is designed to work on Mac OS-compatible computers with

a Motorola

68030- or 68040-family microprocessor, or a PowerPC 601, 603e, 604, or 604e microprocessor.

You also need Mac OS System 8.0 or later and Open Transport 1.1.2 or later.

Note: You must install Open Transport 1.1.2 or later before installing Open Transport/PPP.

Open Transport/PPP 1.0.1 requires a minimum of 500K of RAM (for 68030- or 68040-based computers) or 600K of RAM (for PowerPC-based computers). Open Transport/PPP memory requirements are based on the size of total system memory, including virtual memory, minus the size of any RAM disk or disk cache you're using.

Apple Software Update Sites

Information about updating Apple software is available online on the World Wide Web and other

online servers. On the Web, go to either of the following sites:

<http://www.info.apple.com> and

<http://www.support.apple.com>. Both of these sites provide links to the Apple Software Updates page.

These sites also provide links to the Technical Info Library (TIL). By searching for "find apple software updates" in the TIL, you can find Apple Software Updates locations for Internet, America Online, CompuServe, and other online services.

Once you reach an Apple Software Updates site, use the following path to locate the Open Transport software: Apple SW Updates/US/Macintosh/Networking-Communications/Open Transport.

Before You Install Open Transport/PPP 1.0.1

Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.

If you already use SLIP or PPP software to access the Internet, make a note of the configuration information that you entered into your previous SLIP or PPP control panels. Configurations are not automatically converted from third-party SLIP or PPP software.

What's New In Open Transport/PPP 1.0.1?

The OpenTpt Serial Arbitrator no longer crashes with extensions that open a serial driver during system startup (such as the Wacom Tablet driver).

Open Transport/PPP does not display dialog boxes for background-only

applications (such as
Personal Web Sharing).

Note: When opening a PPP connection from a background-only application, the machine will appear frozen until the connection is established.

Known Incompatibilities and Limitations

Open Transport 1.1.2 or later is required for use with Open Transport/PPP 1.0.1. You should not attempt to use Open Transport/PPP with a previous version of Open Transport.

ARA 2.x modem CCL scripts can be used with Open Transport/PPP. However, some ARA 2.x scripts do not support modem-based error correction and data compression, so performance may not be optimal. You should try to use one of the modem scripts provided with Open Transport/PPP. If you can't find one that matches your modem, you can modify an existing script to suit your needs.

If you are using both ARA 2.1 and Open Transport/PPP, be sure to install Open Transport/PPP after ARA 2.1 to get the correct set of modem scripts for both products.

If you are running Open Transport/PPP on a desktop Macintosh that has sleep capability, your Open Transport/PPP connection will not be automatically terminated when you choose Sleep from the Special menu, because sleeping desktop computers can continue network activity (unlike PowerBook models). If you do not want to remain connected to your PPP server when you put your desktop system to sleep, disconnect manually using the PPP control panel.

If you have a copy of Open Transport/PPP older than 1.0f1c2 installed, you must discard your old Open Transport/PPP preferences files. To do so, remove the Remote Access folder from the active Preferences folder. Restart your computer and then use the modem and PPP control panels to customize your configuration.

Open Transport/PPP 1.0.1 has some incompatibilities with the Apple Express Modem. If the internal modem choice does not appear in the modem control panel's Port pop-up menu, uncheck the "Use internal modem instead of Modem/Printer port" checkbox in the Express Modem control panel and restart. Then open the modem control panel again.

You may experience some difficulty with older application programs that do not use Open Transport and try to use the serial port while PPP is active. The workaround is to disconnect PPP using the PPP control panel before starting up the older application.

Claris EMailer version 1.1v3 or later is compatible with Open Transport 1.1.1 or later. A problem in the Quit command of earlier versions of Claris EMailer sometimes causes a crash with Open Transport 1.1.x (with or without Open Transport/PPP). For your convenience, the Claris EMailer version 1.1v3 patcher and Claris EMailer Lite version 1.1v3 patcher have been provided in the Open Transport Extras folder.

You may experience CD and TV sound problems when you are dialing your Internet service provider from a Performa 6300CD computer. The workaround is to launch Megaphone before trying to connect.

When entering phone numbers for the Motorola BitSURFR Pro 56K and 64K ISDN terminal adapters, do not use dashes or spaces between the numbers. For example, 555-9999 should be entered as 5559999. Entering spaces or dashes may prevent successful connections with the BitSURFR Pro, particularly when two ISDN channels are used.

If you use PortShare Pro from Stalker GmbH to set up a virtual modem or virtual printer port, the ports appear as modem or printer, respectively, in the modem control panel. They do not appear as virtual modem or virtual printer. PortShare Pro replaces the serial drivers for the on-board modem/printer ports with its own, so selecting modem or printer causes Open

Transport/PPP (and any other native Open Transport serial application) to use the replacement drivers.

Open Transport/PPP will report the single channel speed of 56 Kbps or 64 Kbps. The 112

Kbps or 128 Kbps speeds are used but not displayed when using a second ISDN channel

with multilink PPP. Use the terminal adapter to find out the speed of the second channel.

Compatibility with the Apple Internet Connection Kit

You can install both Open Transport/PPP and the Apple Internet Connection Kit (AICK) on your computer at the same time. Both products enable you to dial with your modem and connect to the Internet.

At the time of this release, AICK does not use the Open Transport/PPP software to dial and connect to the Internet. AICK has its own Dialer, which uses MacPPP software to establish the remote connection. MacPPP is a third-party implementation of the Point-to-Point Protocol.

All of the AICK applications, however, are compatible with Open Transport/PPP 1.0.1. To use Open Transport/PPP with AICK applications, you must configure Open Transport/PPP as described in the Open Transport/PPP User's Manual and in the Connecting to the Internet topic area of Mac OS Guide.

The currently active PPP software is selected using the Connect via pop-up menu in the TCP/IP control panel. MacPPP is listed as MacPPP. OT/PPP is listed as PPP. MacPPP is controlled by using the Config PPP control panel, the Apple Internet Dialer application, or the Apple Internet Status application. Open Transport/PPP is controlled by using the modem and PPP control panels, which do not modify or change MacPPP configuration information.

If you use both PPP software packages (one at a time), note that launching either the Apple Internet Dialer or Apple Internet Status will make MacPPP active. Furthermore, you will need to switch TCP/IP configurations each time you switch from one PPP software package to the other. (Information about changing TCP/IP configurations appears in the Network topic area of Mac OS Guide.)

Modem support

Scripts that support many popular modems are provided on the Open Transport/PPP installation

disks. The scripts include:

- 3Com Impact Analog 14.4
- 3Com Impact ISDN 56K
- 3Com Impact ISDN 56K MLPPP
- 3Com Impact ISDN 64K
- 3Com Impact ISDN 64K MLPPP
- Apple Personal Modem
- AT&T Dataport 288
- AT&T KeepInTouch
- Best Data Smart One 28.8/33.6
- Dayna CommuniCard 28800
- Farallon Netopia 56K
- Farallon Netopia 56K MLPPP
- Farallon Netopia 64K
- Farallon Netopia 64K MLPPP
- GeoPort/Express Modem
- GeoPort/Express Modem CNG
- Global Village Gold/Silver/Merc
- Global Village Platinum/Gold II
- Hayes Accura 288
- Hayes Optima 288
- Megahertz CruiseCard 14.4
- Megahertz CruiseCard 28.8
- Metricom Ricochet Wireless
- Microcom DeskPorte Fast/288
- Microcom QX/4232bis
- Motorola BitSURFR 56K
- Motorola BitSURFR 56K MLPPP
- Motorola BitSURFR 64K
- Motorola BitSURFR 64K MLPPP
- Motorola ModemSURFR 28.8
- Motorola Power/Lifestyle 28.8
- Null Modem 9600
- Null Modem 19200
- Null Modem 57600
- Null Modem 115200
- Practical Peripherals V.34
- Smart One 28.8
- Supra 14.4
- Supra 28.8/33.6
- TDK DF2814
- Telebit QBlazer
- US Robotics Universal
- Zoom V-Series

Apple now installs all modem scripts in the Modem Scripts folder (in the Extensions folder) instead

of directly in the Extensions folder. Open Transport/PPP does not recognize modem scripts stored outside the Modem Scripts folder.

Auto-routing of modem scripts has been disabled by the Installer. Once Open Transport/PPP is installed, a modem script will not be routed to the Extensions folder if it is dragged into an active System Folder.

The Easy Install mode of the Installer copies all of the Open Transport/PPP modem scripts on your disk. You can choose Custom Install to limit the installation to only the scripts you choose.

Note: You can delete any unneeded scripts from the Modem Scripts folder, which is located inside the Extensions Folder. To recognize scripts, look for files of the kind "Modem Link Tool Personal document."

Additional (Unsupported) Modem Scripts

User-contributed scripts are available online. New modems are regularly introduced and Apple is willing to help publish scripts donated by users to aid in making Apple Remote Access and Open Transport/PPP work easily with as many modems as possible.

Note: User-contributed scripts are not tested or supported by Apple Computer, Inc., so you should contact the script's author rather than Apple if you run into difficulty using a script downloaded from the unsupported folder. User-contributed modem scripts are provided on an as-is basis as a convenience to Apple customers. They are not warranted to be complete or free from errors, although Apple may choose to review and fully test some user-contributed scripts and include them in future versions of Apple software. If you want to provide Apple with feedback about particular user-contributed scripts, send electronic mail to the following address: msg@apple.com.

To find these scripts, go to any Apple Software Updates location and use the following path: Apple SW Updates/US/Macintosh/Unsupported/CCL.

If you want to contribute a modem script, please use the following procedure:

1. Download the sample Read Me file from the User-contributed scripts folder. The file is named CCL_README_TEMPLATE.

2. Customize the sample Read Me as appropriate for the script you want to submit.

3. Send electronic mail to msg@apple.com and enclose the script in BinHex format.

Scripts will only be posted if they are accompanied by a Read Me explaining the script's purpose and how to contact the author.

(See Apple Software Updates Sites near the beginning of this Read Me for information on how to find Apple Software Updates locations.)

Modem Cable Requirements

Most modems require a cable that supports the data terminal ready (DTR) signal. In addition, certain modems require a cable that supports CTS/RTS hardware flow control. To support DTR, the cable must connect pin 20 on the DB-25 connector to pin 1 on the Mini DIN-8. To support CTS/RTS, the cable must connect pin 5 on the DB-25 connector to pin 2 on the Mini DIN-8 and pin 4 on the DB-25 connector to pin 1 on the Mini DIN-8. Contact your modem vendor or Apple-authorized dealer to obtain the necessary cable.

Open Transport/PPP and Apple Remote Access Compatibility

Open Transport/PPP and ARA versions 1.0, 2.0, 2.0.1, and 2.1 are fully compatible and can be used on the same system. Only one can be used at a time.

Versions of ARA before 2.1 install modem scripts directly in the Extensions folder. To make sure that these scripts appear as choices in the modem control panel, move them to the Modem Scripts folder in the Extensions folder.

ARA 2.1 installs its scripts in the Modem Scripts folder in the Extensions folder. If you are using ARA 2.1, you must install Open Transport/PPP 1.0.1 after ARA 2.1 to get a set of scripts in the Modem Scripts folder that works optimally with both products. The Open Transport/PPP scripts support certain modem-based features, such as error correction and data compression, that improve PPP performance. The ARA 2.x scripts may not support these features.

Also, some scripts included with ARA 2.1 are no longer installed with Open Transport/PPP. These scripts are left on your disk by the Open Transport/PPP installer. They may be usable with Open Transport/PPP, but have not been tested for compatibility by Apple.

Registered User or Guest?

If your PPP server does not require a user name and password, or if the server requires only that

you enter a name and password in a terminal window, you can select the Guest mode button in the

PPP control panel. This will hide the Name and Password fields and will cause the Connect button

to be enabled as soon as you enter a phone number.

If your server requires a PPP user name and password instead of, or in addition to, a terminal server

login, you must use the Registered User mode of the PPP control panel. In this mode, you must

enter something in the Name and Number fields to enable the Connect button. If you leave the

Password field blank, and Save password is not checked, you will be prompted to confirm that you

want to connect without a password.

Connect Scripts

The following varStrings have been added to the CCL scripting language for the user name and

password:

Name: ^11 or ^U

Password: ^12 or ^P

When the connect script is executed, these varStrings are replaced by the strings stored in the

Name and Password fields of the PPP control panel.

When you record a connect script, and you have entered your name and password in the PPP

control panel, the connect script that is recorded by the terminal window will replace those strings

with the appropriate varStrings.

The ^U and ^P varStrings are provided as mnemonics for the user name and password, but they

cannot be used as parameters of some CCL commands like IFSTR. With those commands, use

the ^11 and ^12 varStrings instead.

Connection CCL scripts that use the password varString (^12) in WRITE commands do not log the

password in clear text. The password is logged as bullets. This is true whether the user records the

script or types it in.

More detailed information about the syntax of the CCL language used for both modem scripts and

connect scripts is in the ARA Modem Scripting Guide.PDF file in the OT/PPP Extras folder. This file is in Adobe Acrobat format.

Manual Dialing

Procedures for establishing an Open Transport/PPP connection with manual dialing vary according to the type of modem you are using. To ensure that you can make a connection while using manual dialing, you may need to experiment with pressing the Connect button slightly before or after you hear the remote modem answer the phone.

Using an Express Modem or GeoPort Telecom Adapter

If you are using Express Modem software with either an Express Modem or a GeoPort Telecom Adapter, you must turn on 32-bit addressing in the Memory control panel. Using 24-bit addressing may result in incorrect behavior.

Using Global Village PC Card Products

The Global Village software included with your modem adds an entry to the Connect via pop-up menu of the modem control panel called PowerPort PC Card. Under some circumstances, an entry for the actual slot your PC Card is plugged into will show up as well (Upper-slot, Lower-slot). These slot-specific items should not be used and the PowerPort PC Card item should be used instead or the port will be erroneously reported as busy.

Using an ISDN Terminal Adapter

Both Open Transport/PPP 1.0.1 and ARA 2.1 support serial connection speeds of 115,200 and 230,400 bps. By doing so, Apple enables Macintosh users to make ARA and PPP connections over ISDN lines at 64 kbps or even 112 kbps if the ISDN terminal adapters at both ends support channel bonding and proper modem scripts are used.

Note: The Connected at line of the PPP control panel status box may not accurately reflect the connection speed of ISDN connections. A slower speed may be indicated because ISDN terminal adapter hardware does not report the establishment of second channel connections to the CCL script engine. This will usually happen if you use the Multilink PPP (MLPPP) version of an ISDN script.

Connection speeds of 115,200 and 230,400 bps are not supported by the serial ports on most older Macintosh computers. Here is a partial list of Macintosh models that have fast

serial port support:

Macintosh Centris 660AV, Macintosh Quadra 660AV and Macintosh Quadra 840AV models

Macintosh Performa 6100CD series

Power Macintosh 6100, 7100, 7200, 7500, 7600, 8100, 8500, and 9500 models

Workgroup Server 6150, 7250, 8150, 8550, and 9150 models

To set the built-in serial ports at 115,200 or 230,400 bps, a new serial driver called SerialDMA must be installed to replace the standard Macintosh serial device driver. SerialDMA is provided by Apple, and the current version is 2.0.2. It is highly recommended that the file Serial (Built-in) be installed in the Extensions folder as well on Macintosh models with PCI slots to support these high speeds (38,400 bps and above). System 7.5.3 or later includes the latest version of SerialDMA and the file Serial (Built-in).

Note: In general, ISDN terminal adapters have more configuration options than conventional modems. At this time it is not possible for Apple to support all combinations of these options for all the ISDN terminal adapters that are supported. We have attempted to write scripts that work with the most common ISDN configurations. You may have to get a revised script from your Internet service provider or network administrator if your server uses different options. You can also modify a script yourself using the Modem Script Generator or by editing the script text directly.

How to Turn Off or Remove Open Transport/PPP

To disable and remove Open Transport/PPP software by using the Custom Remove option in the Installer, follow these steps:

1. Open the Installer application included with Open Transport/PPP 1.0.1. The Welcome to the Apple Installer screen appears.
2. Click the Continue button. The Open Transport PPP Installation screen appears
3. Choose Custom Remove from the pop-up menu in the upper-left corner.
4. In the list that appears, select the files you would like to remove by clicking the box next to each file so that an "X" appears in it. To completely remove Open Transport/PPP, you should select all the files listed.

5. Click the Remove button. If a window appears asking you whether to quit any open applications, click Continue. A window will appear telling you to restart your computer.

6. Click the Restart button.

7. Reinstall and configure your previous SLIP/PPP software as required.

To disable Open Transport/PPP without using the Installer, follow these steps:

Note: Although the PPP and modem control panels appear in the Extensions Manager, there is no component in the Extensions Manager that lets you disable Open Transport/PPP. To disable Open Transport/PPP without using the Installer, you must follow the instructions given here.

1. Move the OpenTpt Remote Access, OpenTpt Modem, and OpenTpt Serial Arbitrator shared libraries from the Extensions folder in the active System Folder.
2. Move the PPP Commands file from the Scripting Additions folder in the Extensions folder.
3. Move the PPP and modem control panels from the Control Panels folder in the active System Folder.
4. Restart your computer.

It is not necessary to move the Modem Scripts folder from the Extensions folder.

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Tech Info Library Article Number:28024



Tech Info Library

Mac OS 8: About AppleShare 3.6.5 Read Me

This article is the About AppleShare 3.6.5 Read Me file that comes with Mac OS 8.0.

If you have AppleShare versions 3.6, 3.6.1, 3.6.2, or 3.6.4 you should update to AppleShare 3.6.5 before installing Mac OS 8 over a network. If you have an earlier version of AppleShare, you do not need to install AppleShare 3.6.5.

Installing AppleShare 3.6.5

1. Drag the AppleShare 3.6.5 icon to your closed System Folder icon.
2. In the dialog box that appears, click OK to place AppleShare in your Extensions folder.
3. In the next dialog box that appears, click OK to replace your older version of AppleShare with the newer one.
4. Restart your computer.
5. Connect to the server you are using to install Mac OS 8.
6. Double-click the Install Mac OS icon to install the software.

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Tech Info Library Article Number:28025



Tech Info Library

Mac OS 8: About Internet Access

Subject: Mac OS 8: About Internet Access

TOPIC

This article is the About Internet Access Read Me file that comes with Mac OS 8.0.

DISCUSSION

This file contains late-breaking news about Internet Access for the Mac OS. You will find instructions on how to set up Internet Access and solutions for common problems in the manual that came with your software or computer. Additional information about the Internet and Internet Access for Mac OS 8 can be found in the Info Center.

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What to do first

If you have not previously connected to the Internet with this computer, you need to configure the

Internet settings. Double-click the Internet Setup Assistant icon located in your Internet folder to

begin. If you already have an account with an Internet service provider, you should have that

information handy before you begin.

Customers in Canada

The Internet Setup Assistant can help you create automatically a new Internet account online, or set

up an existing dial-up or LAN Internet account. Double-click the Internet Setup Assistant icon located

in your Internet folder to begin. For more information on how to set up an Internet account in Canada,

refer to the Internet Extras folder on your Mac OS CD.

Customers in Asia, Australia, Latin America, and New Zealand

The Internet Setup Assistant can help you set up an existing dial-up or LAN Internet account. If you

do not yet have an Internet account, you need to set up an account with an Internet service provider

first. For more information on how to set up an Internet account in your country, refer to the Internet

Extras folder on your Mac OS CD. Then double-click the Internet Setup Assistant icon located in your

Internet folder to begin.

Additional Software

If your Mac OS software came with a CD, refer to the CD and the Internet Extras folder for late-breaking software to help you access and use the Internet more effectively.

Auto-dial and auto-disconnect settings

Your computer is set to dial your Internet service provider automatically when an application that requires an Internet connection is used. In addition, it has been set to disconnect automatically after 10 minutes of network inactivity. Use the PPP control panel to change or verify these settings.

TCP/IP connection options and Internet Access in Mac OS 8

Apple Internet Connection Kit preferences

If you used the Apple Internet Connection Kit (AICK) before you upgraded to Mac OS 8, then your Internet configurations are transferred automatically. Before you use Internet Access in Mac OS 8 it is a good idea to verify your Internet configurations. To do this, launch the Internet Setup Assistant and select Update. Then select Modify and complete the interview process.

During the interview process notice that your login and e-mail passwords are blank. This is for security reasons. You must enter the same passwords you used in AICK. If you have forgotten your passwords, contact your Internet Service Provider.

Ethernet

Internet Access for Mac OS 8 supports the Ethernet option in the TCP/IP control panel for Ethernet built into your computer. If you have added an Ethernet card to your computer, you must open the TCP/IP control panel to verify the settings are correct, and make changes if necessary.

MacIP

Internet Access for Mac OS supports MacIP configurations that use dynamic (or server-based) addressing, such as the MacIP configuration used for Apple Remote Access. It does not support MacIP configurations that use static IP addresses.

Load only when needed

The Load only when needed feature is turned on by default. We recommend that you do not change this setting. When Load only when needed is turned on, TCP/IP is not loaded until you open a network connection. If you turn this feature off, and auto-dial is turned on,

then your modem will dial every time you start up your machine. To turn this feature on or off, do the following:

1. Open the TCP/IP control panel.
2. Choose User Mode from the Edit menu.
3. Click Advanced; then click OK.
4. Click Options; then click the checkbox next to Load only when needed.
5. Click OK.
6. Close the TCP/IP control panel.

TCP/IP, PPP and modem configurations from previous versions of Mac OS
TCP/IP, PPP, and modem configurations from prior versions of Mac OS must have the same name for them to work with Internet Access in Mac OS 8. Otherwise changes you make to the TCP/IP, PPP, or modem control panels will not be reflected in Internet Access for Mac OS 8.

Follow these steps to rename PPP and modem configurations so they match your TCP/IP configurations:

1. Open the TCP/IP control panel.
2. Choose Configurations from the File menu to view your TCP/IP configurations.
3. Make a note of each configuration's name. Your list of TCP/IP configurations should be equal to the number of Internet configurations you have.
4. Click Done and then close the TCP/IP control panel.
5. Open the modem control panel.
6. Choose Configurations from the File menu to view your modem configurations.
7. Select a configuration and click Rename. Type the name that matches the corresponding TCP/IP configuration, and then click OK.
8. Repeat step 7 until all your modem configurations have been renamed.
9. Click Done and then close the modem control panel.
10. Open the PPP control panel.
11. Choose Configurations from the File menu to view your PPP configurations.

12. Select a configuration and click Rename. Type the name that matches the corresponding TCP/IP configuration, and then click OK.

13. Repeat step 11 until all your PPP configurations have been renamed

14. Click Done and close the PPP control panel.

Length of configuration names

When you use Internet Access for Mac OS you must limit the length of a configuration name to 32 characters. If you used TCP/IP or other control panels to create a configuration with a longer name, you must rename the configuration in order to use it with Internet Access for Mac OS.

To rename your configurations, follow the steps for renaming PPP and modem configurations outlined in the previous section: TCP/IP, PPP, and modem configurations from previous versions of Mac OS. Be sure to shorten the name of the TCP/IP configuration when you open the TCP/IP panel.

Modem scripts

Additional modem scripts can be found in the CD Extras folder located on the CD that came with your Mac OS software.

Password length

For security reasons, the Internet Setup Assistant displays 16 bullets in the Password boxes for e-mail and login passwords, regardless of the length of your password.

Proxies and other Internet Config settings

Internet Access for Mac OS 8 only manipulates your e-mail and news settings in Internet Config. You need to make sure other Internet Config settings, such as proxies, for each of your Internet configurations are set properly. To adjust other Internet configuration settings, double-click the Internet Config icon located in the Internet Utilities folder in your Internet folder. Then click the appropriate button, such as Firewalls, to change proxies.

Web browser issues

Using Netscape Navigator 2.0 after you've used 3.01

Mac OS 8 installs Netscape Navigator 3.01. If you use Netscape Navigator 3.01 and then want to go back to using Netscape Navigator 2.0, follow these steps to restore your preferences and bookmarks:

1. Quit Netscape Navigator if it is open.
2. Open the Backup folder in the Internet folder.
3. Drag the Netscape Preferences icon into your Netscape 2.0 folder.
4. Drag the Netscape Bookmarks.html icon into your Netscape 2.0 folder.
5. Open Netscape Navigator 2.0.

Using Netscape Navigator 3.01 with 2.0 plug-ins

When Mac OS 8 was installed, a new Netscape Navigator folder was created in the Internet

Applications folder located in the Internet folder on your startup disk. You must move your Netscape

Navigator 2.0 plug-ins to the Plug-ins folder located in this Netscape Navigator folder.

Web browser memory needs for QuickTime and Shockwave plug-ins

For optimum performance when viewing QuickTime or Shockwave media over the Internet, you

should increase the amount of memory allocated to Netscape Navigator. To do this:

1. Open the Internet folder.
2. Click the Netscape alias.
3. Choose Get Info from the File menu.
4. Click Find Original. The folder containing the Netscape icon opens, and Netscape is selected.
5. Choose Get Info from the File menu.
6. If you are using QuickTime only, increase the minimum size in the Memory Requirements box by 1000.
7. If you are using Shockwave only, increase the minimum size in the Memory Requirements box by 3000.
8. If you are using both QuickTime and Shockwave, increase the minimum size in the Memory Requirements box by 4000.

Obtaining a Web browser that uses highly secure (128-bit) encryption

Mac OS 8 installs Netscape Navigator 3.01 with International (40-bit)

encryption. This supports a

standard level of security suitable for worldwide export and use. In the United States and Canada,

some electronic commerce web sites, such as banking and shopping sites,

recommend using
non-International (128-bit) encryption for a greater level of security. Contact
Netscape
(<http://www.netscape.com>) or Microsoft (<http://www.microsoft.com>) for more
information.

Troubleshooting

You can find additional information on the problems described below in the
onscreen help on your
computer or in the documentation provided with your Mac OS software and
computer.

Netscape is unable to locate the registration server

You see this message when you try to register with an Internet service provider:

"Netscape is unable
to locate the server: reggie.netscape.com The server does not have a DNS entry.
Check the server
name in the Location (URL) and try again."

Solution: You cannot check the server name in the Location box because Netscape
runs in kiosk
mode when it connects to the registration server. Instead, you must quit
Netscape and try
connecting again. If reconnecting does not work, you may need to try registering
at a different time.

Reinstalling Internet Access components

If your Internet Access files become corrupted and you want to do a clean
installation, you must
remove all Internet Access files before you use the Installer. If you do not,
files with current version
numbers will not be replaced whether or not they are corrupted. The Internet
Access files that must
be removed are the Internet folder, the Internet Access extension, and the
following items which are
located in the Preferences folder in your System Folder: Netscape ?, Internet
Preferences, Internet
Setup Preferences, and Internet Dialer Preferences.

Switching from Internet Access in Mac OS 8 to Apple Internet Connection Kit

If you modify your old Apple Internet Connection Kit (AICK) configuration with
the Internet Setup
Assistant, the Assistant switches TCP/IP from MacPPP to PPP. If you open AICK
dialer, you see a
dialog box that asks you to go to the TCP/IP control panel. Open the TCP/IP
control panel and
choose MacPPP in the Connect Via pop-up menu.

If you decide to use AICK after Internet Access for Mac OS 8 is installed, you
can't register with a new
Internet service provider online. You must use the Internet Setup Assistant to
register with a new
ISP.

If you switch back and forth between Internet Access for Mac OS 8 and AICK, and you have multiple ISP settings with AICK, you will find duplicate configurations when you use Internet Access. Although this does not create a problem, you may want to remove the duplicate configurations. You can use the Internet Setup Utility to remove duplicate configurations. The Internet Setup Utility is located in the Internet Utilities folder located in the Internet folder on your hard disk.

Changing your configuration type from LAN to modem, or from modem to LAN
You can't use the Modify feature of the Internet Setup Assistant to change an Internet configuration type. To change an Internet configuration from LAN to modem, or from modem to LAN you must first use the Internet Setup Assistant to remove the configuration. Then you use the Internet Setup Assistant to add the configuration with the new type.

Before you remove the configuration you should write down any information that you may need, such as your login name and password.

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Mac OS 8: About MRJ Read Me

TOPIC

This article is the About Mac OS Runtime for Java 1.0.2 Read Me file that comes with Mac OS 8.0.

DISCUSSION

Introduction

Mac OS Runtime for Java (MRJ) is Apple's implementation of the Java runtime environment based on software from Sun Microsystems, Inc. With MRJ, Mac OS applications can run Java applets and applications.

MRJ 1.0.2 implements version 1.0.2 of Sun's Java. MRJ 1.0.2 includes Apple Applet Runner, a standalone application that runs Java applets, and Apple Applet Viewer, an OpenDoc viewer you use to put Java applets into OpenDoc documents.

MRJ 1.0.2 is a minor upgrade to MRJ 1.0.1 that fixes a bug where some Java applications were not able to save files.

Important: The Applets menu in Apple Applet Runner includes a set of applets provided by Sun Microsystems, Inc. These applets were not created by Apple Computer, Inc. and may not follow Apple guidelines for user interaction. For example, buttons in an applet may have different behavior from buttons in applications developed specifically for the Mac OS.

System requirements

MRJ 1.0.2 works on computers with 68030 or 68040 microprocessors or PowerPC microprocessors. You also need System 7.5 or later, a minimum of 8 MB of RAM (16 MB is strongly

recommended) and at least 7 MB of free disk space. Computers with 68030 or 68040 microprocessors must have 32-bit addressing turned on. This can be done by using the Memory control panel.

The Apple Applet Viewer requires OpenDoc 1.0.4 or later. To get OpenDoc, see the OpenDoc Web page at <http://www.opendoc.apple.com/>. MRJ 1.0.2 and the Apple Applet Runner do not require OpenDoc.

Using Java applets over the Internet requires MacTCP 2.0.4 or later, or OpenTransport 1.1 or later with TCP/IP, and an active Internet connection.

MRJ 1.0.2 works with Cyberdog 1.2.1 or later. See the Cyberdog Web page at <http://www.cyberdog.apple.com/> for more information.

What Is Installed with MRJ?

The MRJ 1.0.2 installer places the required software components in your System Folder. If necessary, the installer will force you to restart your computer before using MRJ.

Warning: If you have been using a pre-release version of MRJ, you need to remove files installed with the pre-release version before installing version 1.0.2. Use the list below to check the files you need to remove. However, do not remove the file named Text Encoding Converter or the folder named Text Encodings.

On all computers, MRJ 1.0.2 installs:

- Mac OS Runtime for Java folder in the Apple Extras folder at the root of the startup disk
- MRJ Libraries folder in the Extensions folder of the active System Folder
- Text Encoding Converter in the Extensions folder of the active System Folder
- Text Encodings folder in the active System Folder

If you have a 68030 or 68040 computer, MRJ 1.0.2 also installs CFM-68K Runtime Enabler in the Extensions folder of the active System Folder

If you have OpenDoc installed, MRJ 1.0.2 also installs:

- Apple Applet Viewer Libraries in the Editors folder of the active System Folder
- Apple Applet Viewer Stationery in the Stationery folder at the root of the startup disk

Using the Apple Applet Runner produces a preferences file named Apple Applet Runner Prefs in the Preferences folder of the active System Folder.

Description of MRJ Components

MRJ 1.0.2 contains the system components necessary to use Java. It also includes two demonstration tools that use these components to run Java applets.

System Components

The MRJ 1.0.2 installer puts a folder named MRJ Libraries in the Extensions folder of the active System Folder. This folder contains two items necessary for Java support: MRJLib and the MRJClasses folder.

Apple Applet Runner

You use Apple Applet Runner to run Java applets from your local disk. If you have MacTCP or Open Transport installed and an active Internet connection, you can also run Java applets over the Internet.

You can open URLs or local HTML files containing <applet> tags from the Applet Runner's File menu. In addition, you can drop HTML files containing <applet> tags onto the Apple Applet Runner application icon from the Finder. You will only see the applet itself inside Apple Applet Runner; if you use a Web browser to open the HTML file, you may see additional information.

Apple Applet Runner remembers URLs of remote (http://) or local (file:///) applets. This information is stored in the Apple Applet Runner Prefs file in the Preferences folder of the active System Folder. A few sample URLs are available by choosing Open URL from the File menu; you may add more URLs if you desire. You must have an active Internet connection to use these remote URLs.

Demonstration applets are available under the Applets menu in Applet Runner. You may run these demonstration applets even if you do not have an active Internet connection. These applets are stored locally in the Applets folder.

Apple Applet Viewer (for OpenDoc)

You use Apple Applet Viewer to place Java applets into your OpenDoc documents.

A folder called Apple Applet Viewer is installed in your Editors folder and the Apple Applet Viewer Stationery file is installed in your Stationery folder. Refer to your OpenDoc

documentation for
instructions on using stationery.

You use Java applets by dragging one of the following to the Apple Applet Viewer frame:

- An HTML file that contains an <applet> tag,
- A text file that contains a URL for an HTML document containing an <applet> tag, or
- A Scrapbook clipping that contains either a URL for an HTML document containing an <applet> tag or an <applet> tag.

Note: You must have an active Internet connection to use applets at remote URLs.

Tips for Using MRJ

OpenDoc

If you do not have OpenDoc installed when you install MRJ 1.0.2, the Apple Applet Viewer will not be installed. If you install OpenDoc later, you must reinstall MRJ to use the Applet Viewer.

Memory Usage

MRJ uses system memory to run Java applets and applications. Applications allocate their own application memory, leaving less memory available to the system. If an application that uses MRJ (such as the Applet Runner or Cyberdog) is using an especially large amount of memory, you may have trouble running large Java applets or applications. If you encounter problems, try quitting applications you are not using. If you still cannot run the applet or application, try reducing the amount of memory used by the application that is using MRJ.

To reduce an application's memory size, first quit the application, then select the application's icon and choose Get Info from the File menu. Type a smaller number in the Preferred Size field. (However, do not set the preferred size smaller than the indicated minimum size.)

Known Problems

You must restart your computer after installing MRJ. If you attempt to run MRJ without restarting, MRJ may behave in unexpected ways.

Do not remove the Text Encodings folder from the System Folder or the Text Encoder Converter file from the Extensions folder. Removing these items may cause problems while using

MRJ or using
other applications requiring these files.

In pre-release versions of MRJ, the preferences file was named Applet Runner Prefs. If you had a pre-release version of MRJ installed, make sure you throw the Applet Runner Prefs file away. (The old file may conflict with preference files created by applet runner applications from other companies.)

There is a known problem with the PPCExceptionEnabler extension. This extension is installed by Macintosh Common Lisp (MCL) 3.9. If you have this extension, you must remove it before running MRJ. Future versions of MCL will not require this extension.

There are known problems with some applets when using MRJ 1.0.2 with Microsoft Internet Explorer, including display problems, sound problems and possible crashes. We are working with Microsoft to resolve these problems in a future release of Internet Explorer.

If you are running applications or applets compiled with the JavaSoft 1.0.2 JDK release for Macintosh, you may encounter numerics-related problems. Specifically, floating-point constants (and in some cases computed integer constants) may not be accurate. If possible, use another Java compiler to recompile any applications or applets displaying this problem.

If all the images and sounds an applet uses do not appear, there may not be enough memory available for all the images and sounds. You may be able to free up memory by quitting all applications (such as the Apple Applet Runner and Apple Applet Viewer) that use MRJ. If necessary, try quitting other applications as well. After quitting the applications, try reopening Apple Applet Runner or Apple Applet Viewer. See Memory Usage above for additional information.

Some Java applets (such as Clock) or applications that are processor intensive may cause other applets to open or run slowly, or may cause them not to open at all. To improve performance, try closing applets or applications that you are not using.

The Apple Applet Viewer does not report some errors. If an applet does not open in Apple Applet Viewer, try opening it with Apple Applet Runner to see if an error message appears.

Further Information and Reporting Problems

See our Web site at <http://applejava.apple.com/> to find out about future releases of Mac OS Runtime for Java or get information on how to report problems with the software.

Other Applets on the Internet

There are thousands of applets available on the Internet. Two good starting points for finding applets are <http://www.javasoft.com/> and <http://www.gamelan.com/>.

Software Development Kit Available

A software development kit (SDK) is available for MRJ 1.0.2. The MRJ SDK includes interfaces to the runtime environment that allow software developers to:

- run Java applets and applications within a Macintosh application
- access the Java runtime from a Macintosh application
- call Java methods from C and C++
- call native methods from Java
- build standalone Java applications

The SDK also includes a utility to run Java applications.

See our Web site at <http://applejava.apple.com/> to get the MRJ SDK.

Java not fault-tolerant

The Java technology is not fault-tolerant and is not designed, manufactured or intended for use or resale as on-line control equipment in the operation of nuclear facilities, aircraft navigation or communication systems, or air traffic control machines in which the failure of the Java technology or Mac OS Runtime for Java could lead directly to death, personal injury, or severe physical or environmental damage.

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Tech Info Library

Mac OS 8: About OpenDoc Read Me

TOPIC

This article is the About OpenDoc Read Me file that comes with Mac OS 8.0.

DISCUSSION

What is OpenDoc?

OpenDoc is a new plug-in software architecture that lets you extend the usefulness of your applications by easily adding new functionality. OpenDoc uses software components (called parts) that can be dragged-and-dropped into documents created by any OpenDoc-aware application. You can combine parts from different Mac OS software developers to add tables, graphs, outlines, and even live Internet resources into your documents. Since OpenDoc is a cross-platform technology, documents created with OpenDoc can work across different computer platforms, including Mac OS, Windows, UNIX, and OS/2.

What does OpenDoc install?

Installing OpenDoc adds the following items to your computer:

- OpenDoc system software (in the Extensions folder)
- the Editors folder (in the System Folder)
- the Stationery folder (at the root level of your hard disk)

OpenDoc system software

After you install OpenDoc system software, your computer is ready to use OpenDoc parts and

OpenDoc-aware applications from popular Mac OS software developers.

The Editors folder

When you install OpenDoc parts, the part editors are placed in the Editors folder. Editors are like mini-applications that handle different types of data, such as text, graphics, or Internet information.

Once an editor is installed, it works something like a system extension: its functionality is available

but you do not open or use the editor itself. To use an editor, you need to locate the editor's stationery (in the Stationery folder on the root level of your hard drive).

Important: All of your OpenDoc editors should be located in the Editors folder (inside the System Folder). Otherwise, OpenDoc will not be able to locate the editors.

The Stationery folder

When you install an OpenDoc part, part stationery is placed in the Stationery folder. You can either double-click an editor's stationery to create a new document with the editor or drag the stationery into another document to add the editor's functionality to any OpenDoc-aware application or document. OpenDoc stationery can be placed anywhere in your system. You do not have to leave it in the Stationery folder.

Where can I get more information?

For more information about OpenDoc and developers who are producing OpenDoc-aware software, look on the World Wide Web at <http://opendoc.apple.com>.

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Tech Info Library

Mac OS 8: About Personal Web Sharing Read Me

TOPIC

This article is the About Personal Web Sharing Read Me file that comes with Mac OS 8.0.

DISCUSSION

Important information about Mac OS Personal Web Sharing

Welcome to Mac OS Personal Web Sharing. This read me document introduces the software and

contains late-breaking information about setting up and using your own Web server.

Mac OS Personal Web Sharing is the easiest way to share your information with everyone on your intranet, no matter what type of computer or browser they are using. All you do is put the items you want to share in the server folder and turn on the server.

Installing Personal Web Sharing

To install Personal Web Sharing, double-click the WebScript icon in the Web Sharing folder. To set

up your Web server, see the instructions in Using Personal Web Sharing in the Web Pages folder

(which is created when the software is installed) at the root level of your hard disk.

The Web Pages folder also contains a file named Default.html which you can use as the home

page for your server. You can modify this file or choose a different home page (see Using Personal Web Sharing for instructions).

Compatibility

Personal Web Sharing is compatible with Open Transport 1.1.1 (or a more recent version). MacTCP

2.0.6 is supported only with System 7.5.5, but we have noticed some inconsistencies with large volume connections.

Important: A continuous TCP/IP connection and a static IP address are strongly recommended for use of Personal Web Sharing. If your system does not have a persistent

connection and a static IP address, any interruption in the network connection could negatively affect TCP/IP signals. In some circumstances, this could cause the system to appear to hang. To avoid this problem, always use a continuous TCP/IP connection and a static IP address.

Note: This problem could also occur with other server applications.

Known Problems

Virtual memory off

Web servers expose a bug in the Ethernet driver for PCI-based computers. To ensure that your server works correctly, either turn off virtual memory (VM) or install Mac OS System 7.6.

OT/PPP

There is a known problem using OT/PPP 1.0 with Personal Web Sharing. This software runs as a background application, which conflicts with the dialog box that PPP tries to display when reconnecting (if the connection has been broken). This can cause your system to crash. To work around this problem, turn off the automatic reconnect option in the PPP control panel.

Follow these steps to turn off the automatic reconnect option:

1. Open the PPP control panel.
2. Click the Options button.
3. Click the Connection tab.
4. Click to remove the X from the box labeled Connect automatically when starting TCP/IP applications, and click OK.
5. Close the PPP control panel.

Location of server folder

To ensure that the correct content is served, the Web Pages folder (or other server folder) should be located no more than five levels below the root level of the hard disk.

Browsers look for index.html document

Visitors to your Web server may use a browser that automatically looks for a document named default.html or one named index.html as the point of entry (home page) to your server, regardless of the home page you select in the Web Sharing control panel. This occurs because some browsers

assume that the home page will have one of the names noted above, and they only look for the home page name you specified after looking for either default.html or index.html.

You can avoid having visitors inadvertently see the wrong document by renaming any files named default.html and index.html (whether at root level or inside a nested folder on the server). If you change document names, be sure to revise any links to the renamed documents so they reflect the new name.

Personal NetFinder and an index.html document

In Personal NetFinder view (similar to list view in the Finder), if there is a document named index.html, it will open in the visitor's browser. Therefore visitors will see that document as if it were a home page, and the list view of files at that level of the server will not be displayed. If you do not want visitors to see the list of files in a certain folder on your server, you can put an index.html document in that folder. By contrast, if you want visitors always to see a list of files at each level of the server's content, do not include any files named index.html.

File sharing and AppleShare

If you want to use access privileges for your server, you must use the File Sharing privileges, which you set in the Users & Groups control panel of your system software. Personal Web Sharing is incompatible with the Users & Groups component of the AppleShare Server Software; do not use AppleShare Server Software's privileges for your Web server. If you want to use the AppleShare Server Software and Personal Web Sharing, configure the Web server to give everyone read-only access in the Web Sharing control panel.

MacIP via LocalTalk

Some computers providing a server may experience slower performance overall during times of heavy activity on the Personal Web Sharing server over LocalTalk.

IP Addressing

Every Personal Web Sharing server will need a unique assigned IP address. Do not use nonstandard IP addressing with your server. Some IP addresses (0.0.0.0 or 1.1.1.1, for example) are reserved for network hardware such as routers and gateways. If you are not sure how to assign an IP address to your server, contact your network administrator.

Optimizing Personal NetFinder

As with the Finder, Personal NetFinder will take a longer time to display its list of files if the server contains a large number of files. To optimize performance, limit the number of items in any one folder in your server content.

CGIs (Common Gateway Interfaces)

CGIs are applications, created by developers, that add functionality such as counters, image maps, and database access to your server. Personal Web Sharing supports CGIs that are compatible with MacHTTP 2.2 and WebStar 1.3.1. To obtain information about CGIs, contact your Internet Service Provider, a user group, or your network administrator.

Mixed-Platform Environment

Personal Web Sharing allows you to publish documents across multiple platforms. Because character sets may differ from one platform to another, you may notice a difference in how data is displayed on some other types of computers on the network. To get a more accurate representation of HTML documents in a cross-platform environment, we recommend that you use Personal NetFinder to display the documents on your server.

File formats also vary from one type of computer to another in a cross-platform environment. Each computer on the network should have its browser's helper applications configured correctly for the types of files your server contains before connecting to your server.

Non-English-Language Documents

Mac to Mac: If your server contains non-English-language pages, the client's browser should be set to the appropriate document encoding option. Please review your browser documentation for more information on document encoding.

Mac to non-Mac: If your server contains non-English-language pages, a non-Mac OS computer will encounter some incompatibilities. For example, character sets may differ from one type of computer to another.

Non-English System Software

Personal NetFinder displays header information in the language of the Finder (part of the system software) used by the server.

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Tech Info Library

Mac OS 8: About QuickDraw GX Read Me

TOPIC

This article is the About QuickDraw GX Read Me file that comes with Mac OS 8.0.

DISCUSSION

Visit the QuickDraw GX website (start at <http://www.macos.apple.com/macos/tech.html>) for the latest information about applications, utilities, and fonts which enhance your productivity using QuickDraw GX 1.1.6.

Prompted by our new dual OS strategy--Mac OS and Rhapsody--Apple has reevaluated the graphics and printing architectures of Mac OS. This Read Me outlines the decisions that have been made to provide a better printing migration path for our customers to future OS releases. The new implementation of QuickDraw GX will continue to offer our customers the advantages of the superior graphic and typography features of the Mac OS, while still providing an attractive printing environment.

Mac OS Unified Printing Architecture; GX Printer Drivers and GX Printing Extensions No Longer Supported
Beginning with Mac OS 8 and QuickDraw GX 1.1.6, Apple will provide a unified operating system printing architecture, standardizing on classic (non-GX) QuickDraw printing and printer drivers. With the unified printing architecture, QuickDraw GX printer drivers and QuickDraw GX printing extensions will not be supported in Mac OS 8 and future Mac OS releases.

Other than simplifying the printing procedure, the impact of Apple's new unified printing architecture

will be fairly minimal. For applications that work in both QuickDraw GX and classic QuickDraw printing environments, no changes in operation will be necessary.

Customers wanting to print from their QuickDraw GX-only application will have to obtain a version of the application upgraded to be able to print via non-QuickDraw GX printing. Please contact your application's vendor for information on availability.

Using Fonts with QuickDraw GX 1.1.6

QuickDraw GX no longer enables Type 1 Fonts Automatically

If you would like to use Type 1 fonts with QuickDraw GX installed, you can use the Type 1 Enabler (one of the QuickDraw GX Utilities available via Custom Install). The Type 1 Enabler allows you to create copies of your Type 1 fonts that are compatible with QuickDraw GX. Your original Type 1 fonts are not modified and are placed in a folder called Archived Type 1 Fonts.

Using the Type 1 Enabler

To install the QuickDraw GX Utilities and enable Type 1 fonts, perform a custom install of QuickDraw GX 1.1.6; see the instructions in Chapter 3 (Adding and Removing Software) of the Mac OS 8 Installation Guide.

When using the Type 1 Enabler, make sure that each Type 1 font family is in its own suitcase. The Type 1 Enabler will not enable your Type 1 fonts if multiple font families are contained in one suitcase.

The Type 1 Enabler supports only Type 1 fonts. If the Type 1 Enabler program encounters a suitcase containing Type 3 fonts, it displays the message "Contains a Type 3 font program" and does not enable the suitcase.

The Type 1 Enabler does not enable hybrid fonts. If you see the message "Contains a hybrid font program (see README file for details)" when the Type 1 Enabler attempts to enable Optima or ITC Eras, it may be because you have an old version of these fonts. These fonts cannot be enabled because they are hybrid fonts. If you are a registered owner of Optima or ITC Eras, call Adobe Systems Technical Support to obtain an upgrade to the non-hybrid versions of these families.

The Type 1 Enabler may not succeed in restarting your system after it is finished. If this happens,

you should restart your system manually from the Finder.

Removing Duplicate Fonts

To make sure that QuickDraw GX properly manages currently installed fonts, you should make sure you have no duplicate fonts installed in the System Folder. Remove any duplicates that you find.

Restoring Type 1 Fonts to Their Original State

If you remove QuickDraw GX from your system, you need to restore your Type 1 fonts. To restore Type 1 fonts, follow these steps:

1. Open the System Folder.
2. Open the Fonts folder.
3. Drag any suitcases that have been enabled to the Trash.
4. Open the Archived Type 1 Fonts folder.
5. Move the contents of the Archived Type 1 Fonts folder to the Fonts folder.
6. Drag the Archived Type 1 Fonts folder to the Trash.

Adobe Type Manager version 4.0.2

ATM version 4.0.2 can be custom installed with this version of QuickDraw GX.

Caution: installing ATM 4.0.2 will replace any other installed version of ATM, including ATM Deluxe.

Type 1 fonts will display and print properly only if ATM is installed and turned on. As with previous versions, ATM 4.0.2 rasterizes Type 1 font data from the POST resource in conventional outline font files (file type LWFN). In addition, ATM 4.0.2 rasterizes Type 1 font data from the sfnt resource in suitcase files (file type FFIL). ATM 4.0.2 does not include font substitution capability.

Previous versions of ATM and ATM Deluxe 4.0 are not compatible with this version of QuickDraw GX.

Type 1 fonts will display on the screen but will not print. Check with Adobe for a newer version of ATM Deluxe.

Portable Digital Documents

You will no longer be able to create GX PDDs with QuickDraw GX 1.1.6. Also, SimpleText will not display PDDs under QuickDraw GX 1.1.6. You should convert PDD files to a different format, such as Adobe Acrobat PDF files, before attempting to use them with Mac OS 8 or QuickDraw GX 1.1.6.

Adobe Acrobat

If you install Adobe Acrobat prior to installing QuickDraw GX, you will need to reinstall Acrobat afterwards. Acrobat needs to recognize that QuickDraw GX is present when it is installed in order to function properly.

QuickDraw GX and WorldScript II

Make sure that you upgrade to the newest version of WorldScript II, included with Mac OS 8. You will need to do a custom install from the Mac OS Installer.

QuickDraw GX and At Ease

Make sure that you are using At Ease version 2.0.3 or later.

Printer Driver Versions

Apple recommends that you use the latest versions of drivers for Apple printers, installed as part of Mac OS 8, when printing from QuickDraw GX applications. The printer drivers included with Mac OS 8 are all compatible with QuickDraw GX.

Application Compatibility

Apple has conducted some limited compatibility testing with QuickDraw GX 1.1.6 and GX-aware applications. If you do not see your application listed here, contact the application vendor for compatibility information.

The following GX-aware applications are fully functional with QuickDraw GX 1.1.6 installed:

- BareBones BBEdit 4.0.4
- Cherwell pro fit 5.00
- ClaireWare Personal Log 2.10
- Microsoft Word 6.01
- Microsoft Excel 5.00
- NisusWriter 5.00
- PierceSoft ShareDraw 2.01
- Symantec Act! 2.50
- WorldSoft WorldWrite 3.0.1

The following applications will not start up if QuickDraw GX 1.1.6 is installed:

- Lightning Draw GX
- MovieClips
- TexGX 1.1b3

The following applications will not print correctly if QuickDraw GX 1.1.6 is installed:

Nisus Qued/M 3.00
PaceWorks ObjectDancer 1.00
Pixar Typestry 2.1.1
UniQorn
Corel WordPerfect 3.5.2 (68k only)

Contact the application vendor for information on obtaining updated versions of these applications.

Known Problems

Current versions of printer drivers may generate large spool files and take a long time to print when printing documents containing QuickDraw GX data. In addition, QuickDraw GX data printed to the Apple Color LaserWriter may be printed at less than full printer resolution. These problems will be addressed in future versions of printer drivers from Apple and other vendors.

With ATM 4.0.2, some PDF documents that use ATM substitution fonts may not print correctly using the LaserWriter 8 driver. This problem will be fixed in a future version of LaserWriter 8 and/or ATM.

Some older QuickDraw pictures with embedded QuickDraw GX data may print with random noise in the background of the picture. This is due to a problem in QuickTime, and will be fixed in a future version of QuickTime.

Some QuickDraw GX data may print incorrectly in low memory conditions. You may notice that parts of the image repeat rather than the entire image printing correctly. This problem is in the QuickDraw GX QuickTime Codec and will be fixed in a future version of QuickTime. Apple will also make an interim fix available on its web site via a new version of the QuickTime GX Codec. Check <http://support.info.apple.com/ftp/swhome.html> for availability.

The Tech Info Library article titled "Locating Vendor Information" can help you search for a particular vendor's address and phone number.

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Tech Info Library

Mac OS 8: About 5XXX/6XXX Tester Read Me

TOPIC

This article is the About the 5XXX/6XXX Tester Read Me file that comes with Mac OS 8.0.

DISCUSSION

This document describes the 5XXX/6XXX Tester application. This application checks Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers for hardware problems that may cause the computer to freeze. The tester only works on Power Macintosh and Performa 5200, 5300, 6200, and 6300 series computers.

IMPORTANT: The Power Macintosh or Performa 6360 does not have this hardware problem. If you have a Power Macintosh or Performa 6360, you do not need to use the tester program.

If you are experiencing problems with your computer other than system freezing, you should contact an Apple-authorized service provider to obtain a full diagnostic test.

How to use the tester application
To use the tester application, double-click its icon.

After the tester has checked your computer, you will see a message. If the message indicates that a problem has been found, contact an Apple-authorized service provider or Apple customer support to have your computer repaired. The necessary repairs are covered under a repair extension program.

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Tech Info Library

Mac OS 8: About the Utilities Read Me

TOPIC

This article is the About the Utilities Read Me file that comes with Mac OS 8.0.

DISCUSSION

This document contains information about the utilities provided with Mac OS 8.

5xxx/6xxx Tester

This program tests Performa and Power Macintosh 5200, 5300, 6200, and 6300 computers for a possible hardware problem. If you have a Performa or Power Macintosh 5200, 5300, 6200, or 6300 series computer, you should use the tester before installing Mac OS 8. See the document inside the Tester folder for instructions on using the tester.

Important: The Power Macintosh or Performa 6320, 6360, and 5260 do not have this hardware problem. If you have a Power Macintosh or Performa 6320, 6360, or 5260, you do not need to use the tester program.

AppleShare software

If you have AppleShare software earlier than version 3.6.5, you should upgrade to version 3.6.5 before installing Mac OS 8 over a network. See the document inside the AppleShare folder for instructions.

Drive Setup

You use the Drive Setup program to update your disk driver or to reinitialize a disk. When you do this, all the contents of your hard disk are erased.

To update the disk driver with Drive Setup, follow these steps:

Warning: Before using Drive Setup to update your disk driver, make sure you turn off any disk protection software you may be using.

1. Open the Drive Setup program.
2. Click the disk whose driver you want to update.
3. Choose Update Driver from the Functions menu.

Important: If the Update Driver command is dimmed, or if the disk name never appears when you click Drive, the problem disk is either not supported, or it is previously has been updated with a non-Apple utility.

After installing Mac OS 8, you cannot use the obsolete Apple HD SC Setup utility to initialize your hard disk. Use the Drive Setup program supplied with Mac OS 8 instead.

Disk not supported

If the disk is not supported, check the instructions that came with your computer or disk to see if the manufacturer includes or recommends a disk utility, and use that utility to update the driver. To ensure a successful update, obtain the latest version of the utility. If you have an Iomega Zip or Jaz drive, updated driver software is provided on the Mac OS 8 CD, in the CD Extras folder.

Disk updated with non-Apple utility

If you have updated or formatted the disk with a non-Apple utility, you will need to use that utility again to perform the update. To ensure a successful update, obtain the latest version of the utility.

Disk First Aid

You use the Disk First Aid program to diagnose and repair problems with your hard disk. In order to successfully repair problems, you must start up your computer using a disk other than the hard disk being repaired. You can use the Mac OS 8 CD or disks for this. See the installation manual for details.

Disk Copy

You use the Disk Copy program to make exact copies of floppy disks from a disk image, mount disk images on your desktop, and various other functions related to disk images. Many Apple updates are provided in Disk Copy format. You can use this program to create floppy disks or otherwise use the disk images. See the information in the Disk Copy folder for details.

SimpleText

SimpleText is a text editing program that you can use to create, edit, and view

documents. It can also
play QuickTime movies, display QuickDraw 3D objects, and speak text aloud. Many
Read Me files,
such as this one, are distributed in SimpleText format.

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Tech Info Library

Mac OS 8: Apple Location Manager Read Me

TOPIC

This article is the Apple Location Manager Read Me file that comes with Mac OS 8.0.

DISCUSSION

This document provides late-breaking news about the Apple Location Manager control panel. You may want to print this document to keep with the user's manual for your computer.

Additional modules for Apple Location Manager
Additional modules for Apple Location Manager are being developed. Check the Web address <http://www.powerbook.apple.com> regularly for more information.

Quick start for Apple Location Manager
To assure that Apple Location Manager recognizes all the modules you can add to locations, follow these steps the first time you use the Location Manager control panel.

1. Before you open the Location Manager control panel, open and close the Extensions Manager control panel.
2. Open both AppleTalk and TCP/IP control panels and create a new configuration in each control panel. (Save the configuration with a name other than Default.) For instructions, see "How do I change AppleTalk settings all at once?" in the Networks section of Mac OS Guide.
3. Open the Location Manager control panel and create the locations you want to use.

Name to avoid when naming a location
To avoid confusion, do not use the name "None (off)" for a location you create with Apple Location Manager. This is the phrase you use to turn off Location Manager or to select

none of the existing
locations in the control panel's pop-up menu.

Setting a startup location

Apple Location Manager only changes system settings when you tell it to; it does not automatically change settings at startup (although you can use Preferences in the Edit menu to have the program prompt you to change settings). If you want Apple Location Manager to switch to a specific location each time the computer starts up, you can create an AppleScript script that performs that task. Put the script in the Startup Items folder and the location you want will be set at startup. Open the location you want to use at startup, then create the script below. Using the Script Editor application, type the following lines:

```
tell application "Finder"

open file ((control panels folder as string) & "Location Manager")

tell application "Location Manager"

set current location to location "snd"

end tell

end tell
```

Copy the script above exactly and substitute the name of your location for "snd;" for instance, type Sample if you want the Sample location to be used each time you start up. When finished typing the script, launch Location Manager and then compile the script.

Using Auto-Open Item to open folders or mount servers

You can set Apple Location Manager to open one or more items automatically when a location becomes active. These items can be documents or programs. To open a folder or mount a server, you must first create an alias to the item, then choose that alias when adding Auto-Open Item to a location. (You create an alias by selecting the item and choosing Make Alias from the File menu.)

Deferred switches when switching at startup

If you switch locations as the computer is starting up, Apple Location Manager may defer changing some settings such as sound level or auto-opening a document, until the computer's startup procedure is complete. Usually you will see a message reporting that the switch to the new settings

is being deferred.

If you switch locations during startup and then switch again before continuing with the startup process, the deferred settings will only occur for the last location chosen. If there were deferred settings in the first location, they will be skipped.

Installing Apple Location Manager

Always use the installer program to install Apple Location Manager. The software may not work correctly if you try to copy or drag it to the System Folder. (You install Apple Location Manager by locating its folder in the Install Applications folder on the CD that came with your computer and double-clicking the install document.)

Using existing locations on a different computer

You can export and import locations you create with Apple Location Manager. To use a location on a different computer, follow these steps:

1. Export the location you want to use on the other computer. (To export a location, select it in the Location Manager control panel, choose Export Location... in the File menu, and specify where to save the exported location.)
2. Install Apple Location Manager on the other computer, using the installer program.
3. Open Apple Location Manager and import the location you exported previously. (You import a location by choosing Import Location... from the File menu and selecting the location file you want to use.)

Importing may not install all software

Importing a location from another computer does not guarantee that all the software required to use the location is installed. (Apple Location Manager does not install software.) For example, you may import a location that specifies LaserWriter 300 as the default printer, but the location cannot switch to that printer unless you have the printer's driver software installed. Therefore, it is a good idea to check all the settings in a location you import to verify that they are available on the new computer.

Selecting and setting up a LaserWriter

If you import any location that includes settings for a LaserWriter as the default printer, you must reselect and set up the printer in the Chooser. (Otherwise the location you

imported will use the generic printer information for your LaserWriter instead of the specific information for the model identified in the original location.) You select and set up a LaserWriter by:

1. opening the Chooser
2. selecting the LaserWriter icon
3. selecting the printer's name
4. clicking the Setup button
5. clicking Auto Setup. When the printer's model name appears, click OK.

Note: your computer must be connected to the network the printer is on to update the LaserWriter correctly.

Incompatibility with At Ease's Protect System Folder option

If you are using At Ease on your computer and you establish locations for Apple Location Manager, you may see an error message when a module for Location Manager interacts with part of the system software to which access has been restricted by At Ease. You may need to turn off the Protect System Folder option so that Location Manager operates correctly.

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Tech Info Library Article Number:28033



Tech Info Library

Mac OS 8: Installing Mac OS 8

TOPIC

This article is the Installing Mac OS 8 Read Me file.

DISCUSSION

This document describes how to install Mac OS 8. It includes compatibility information, instructions for the Install Mac OS application program, and basic installation troubleshooting. For more detailed information, see the Mac OS 8 installation manual.

Warning: PowerTalk is not compatible with Mac OS 8. After you install Mac OS 8, you will not be able to access your PowerTalk mail or catalogs, nor will you be able to use your keychain or other PowerTalk services. See the Mac OS 8 installation manual for more information.

Warning: Application programs that use QuickDraw GX may not be able to print due to changes in the version of QuickDraw GX included with Mac OS 8. See the file About QuickDraw GX for more information.

Before you install

1. Turn off any security software that you may have installed on your computer.
2. If you have a PowerBook, make sure that it is plugged into AC power and set not to go to sleep.
3. If you have AppleShare software earlier than version 3.6.4, you should upgrade to version 3.6.4 before installing Mac OS 8 over a network. See the document in the AppleShare folder in the Utilities folder for instructions.
4. Write down your current Internet settings, such as the IP address, subnet mask, name server, and so on. After installation, the Internet Setup Assistant will ask you to enter this information.
5. Start up your computer using the Mac OS CD-ROM disc or the Mac OS 8 Install Me

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First floppy disk. See your installation manual for instructions.

If you can't start up with the Mac OS 8 disks, be sure to do the following additional steps:

1. Turn off any virus-protection software that you may have installed on your computer.
2. Disable all non-Apple extensions and control panels. If you have System 7.5 or later, use the Extensions Manager control panel to select the System 7.x base set of extensions and control panels. See the installation manual for more details.
3. Restart your computer before installing Mac OS 8.

Compatibility information

Although compatibility problems are not expected, you can ensure a smooth upgrade by checking with the manufacturers of any non-Apple software you use to make sure it is compatible with Mac OS 8. If you do experience a problem, see the troubleshooting chapter in your installation manual for more information on isolating compatibility problems.

Computers with 68040 processor upgrade cards

Computers upgraded to 68040 with a processor upgrade card are not supported by Mac OS 8.

Performa or Power Macintosh 5000 and 6000 series computers

Some Performa or Power Macintosh 5200 series, 5300 series, 6200 series, and 6300 series models cannot use Mac OS 8 until a hardware problem is fixed. The repairs are covered under the Apple repair extension program. To see if your computer has this hardware problem, use the 5xxx/6xxx Tester utility in the Utilities folder on the CD before installing Mac OS 8.

Note: The Power Macintosh or Performa 6320, 6360, and 5260 do not have this hardware problem. If you have a Power Macintosh or Performa 6320, 6360, or 5260, you do not need to use the tester program.

Installing Mac OS 8

Accelerated NuBus PowerPC computers

If you have a Power Macintosh 6100, 7100, 8100, or 9150 with a third-party accelerator that increases the clock speed of your computer, the Installer might refuse to install Mac OS 8 because it doesn't recognize your system. You can install

Mac OS 8 on these computers by using the individual installers located in the Software Installers folder on the Mac OS 8 CD instead.

MacODBC and Mac OS 8

If you use MacODBC, you should either install it before installing Mac OS 8, or perform a custom install of MacODBC and make sure the ASLM extensions are not selected. The MacODBC installer installs older versions of ASLM extensions that are incompatible with Mac OS 8.

Third-party Finder and utility software

Some third-party programs that extend or add features to Mac OS may be incompatible. Examples include programs that change the way menus work, change how files are stored, or alter the way you work with files in the Finder. Contact the software's manufacturer for information about using such programs with

Mac OS 8. This is especially important if you're using a program that automatically alters the way files are stored (such as compressing them) because you might not be able to access those files until you obtain updated software for use with Mac OS 8.

400K diskettes and Mac OS 8

The 400K MFS diskette format is not supported by Mac OS 8. If you have information or programs on obsolete 400K diskettes that you want to access, copy the files to your hard disk, an 800K diskette, or a 1.44 MB diskette before installing Mac OS 8.

Using the Install Mac OS program

To ensure a successful upgrade, use the Install Mac OS program to install the software. This program unifies the tasks recommended for a successful installation and simplifies the installation process. Refer to the Mac OS 8 installation manual and the onscreen help in the Install Mac OS program for more information.

Troubleshooting suggestions

Disk cannot be updated with the Apple utilities

Some Apple-branded disks manufactured by third parties, including the Apple 365 MB external hard disk, are not supported by the Apple disk utilities. If your disk cannot be updated with the Apple utilities, you will need to use a third-party disk utility to update the driver.

Disk has problems and cannot be repaired message

If you see a message that your disk has problems and cannot be repaired, turn off file sharing if it is on, then try installing again. If that does not work, try using another disk-repair utility. If you do not have another utility, or if that utility also does not work,

you may need to reinitialize the disk. Copy all your files to another disk first, as reinitializing erases the disk. For more information about reinitializing, see the manual that came with your computer.

Problems during installation

If you experience problems during installation, be sure to start up with the Mac OS 8 CD-ROM disc or the Mac OS 8 Install Me First floppy disk. See your installation manual for instructions.

Cannot start up with CD-ROM

If you are installing over a network, or if you have a non-Apple CD-ROM drive and cannot start up with the CD or disk, turn off all extensions that were not provided with your system software. Then restart the computer.

See the troubleshooting chapter in your installation manual for additional suggestions.

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Article Change History:

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Tech Info Library Article Number:28034



Tech Info Library

Mac OS 8: Internet Explorer Read Me

TOPIC

This article is the Internet Explorer Read Me file that comes with Mac OS 8.0.

DISCUSSION

Microsoft Internet Explorer 3.01 for Macintosh

Thank you for choosing Microsoft Internet Explorer for Macintosh. Although Internet Explorer 3.01 has dozens of new features, by the time you read this, there may already be a new version of Internet Explorer, so please check out <http://www.microsoft.com/ie/mac> periodically for updates.

Microsoft Internet Explorer is a World Wide Web (WWW) browser for the Macintosh. The WWW is the fastest growing component of the Internet today. In order to use a WWW browser, you will need a modem or network access, access to the Internet, and software that enables your computer to communicate with the Internet.

Microsoft Internet Mail and News, our small and fast e-mail client, and Microsoft Personal Web Server, which turns any Mac into a Web serving solution are not included in this installer. You can visit <http://www.microsoft.com/ie/mac> to download these products.

Registering Internet Explorer

We've made it even easier for you to register Internet Explorer 3.01. The first time you open Internet Explorer, you will automatically visit our online registration site at http://www.microsoft.com/ie/ie_reg.htm. Remember that this only occurs the first time you open

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Internet Explorer after installation. The next time you open Internet Explorer, you will visit your default home page. For more information, see the License Agreement.

Requirements

System Requirements

- Macintosh with 68030 or higher processor
- System 7.1 and higher
- 8 MB of RAM
- 7 MB of hard disk space when Internet Explorer is installed.

Access to the Internet

You must have access to the Internet through an Internet Service Provider or the network to which your computer is connected.

Internet software

- Open Transport 1.0.8 or greater (Extension) or Mac TCP
- If you are a dial-up user, Config PPP or similar PPP connection software (Control Panel) with PPP (Extension)

New Features

Version 3.01 of Internet Explorer represents a surprisingly large number of new features, so be sure to take a look at the following:

JavaScript

JavaScript is the easiest and fastest way for Web authors to add interactivity to a Web site. Unlike Java, which is based on separate software components, JavaScript is a scripting language whose programs are embedded right in the HTML. You can use the Preferences dialog box to turn scripting on and off.

Choose your Java virtual machine

Settings in the Preferences dialog box give you greater control over the use of Java:

- You can choose which Java virtual machine you would like to use:

- Microsoft VM or Microsoft

- JIT. If Apple MRJ is already installed on your machine, you can choose it.

- You can specify whether a warning should be displayed if there are errors in the Java applet

- or whether the browser should save the output text from the Java applet.

Downloading files

The Download File command in the File menu lets you download files from the

Internet while you

continue to browse other Web pages. Once you have typed the URL of the file you want to download, the Download Manager will open and give you information on the status, size, and download time of the file. The Download Manager is also available from the File menu and it keeps a history of the files you have downloaded. You can double-click the downloaded item in the Download Manager for more information.

Internet Explorer now supports folder downloads from FTP and Gopher sites. Drag and drop the folder to the Finder to download the contents of the folder. You can also press and hold down the mouse button over an item on the Web page, and then choose Download Link to Disk from the context menu.

Enhanced download options include automatically decoding BinHex and MacBinary files while the file is being downloaded.

Manage site passwords and user names

The Site Passwords page in the Preferences dialog box maintains a list of the user names and passwords you have used to access a site. Now, you can change access information without going to the site.

Receive updates to your favorite pages

When you mark favorite pages as subscribed pages, Internet Explorer will monitor those sites and notify you, when and if a subscribed page changes. To select how often you want Internet Explorer to look for changes, and how you want to be notified of changes, choose Subscription Options from the Favorites menu.

Note: This is a subset of the Subscription functionality that will be included in the Internet Explorer 4.0 platform preview.

Improved favorites

You can sort favorite items, rename the path, and resize the columns in the favorites list. In addition, you can turn a subscription to a favorite page on and off by clicking in the Subscriptions column (the left most column in the Favorites window). To change subscription information for a particular item, double-click the subscriptions icon located beside the favorite item.

Manage cookies

A cookie is a small piece of information that a Web site downloads on your hard disk for future reference. For example, a cookie might be used to store a customized view of a Web site or ensure that you never see the same advertisement twice. Settings in the Internet Explorer Preferences dialog box let you control the download of cookies. For example, you can choose to always accept cookies or you can choose to always display an alert when a Web site wants to download cookies.

Autosearch

Internet Explorer has made searching the Internet even easier with the Autosearch feature. Simply type go or ? and the topic you'd like to search for in the Address Bar, and Yahoo! (www.yahoo.com) will search its databases for matching topics and display them for you. For example, type ? cooking to find all references to cooking in the Yahoo! database.

Fetch bookmarks

Do you have Fetch bookmarks? Now, you can import them into Internet Explorer. Drag and drop your Fetch bookmarks into the Favorites window of Internet Explorer.

Type ahead in the Address bar

Type an address into the Address bar and Internet Explorer can attempt to complete the address using the contents of your favorites and history lists. First, Internet Explorer will review the names and addresses in your favorites list, and then, if it doesn't find a match, it will review the names and addresses in your history list. For example, if you recently visited the Microsoft site at http://www.microsoft.com, you might need to type only the letters Mic or http://www.mic before Internet Explorer displays the complete address for you.

You can turn off this option by choosing Preferences from the Edit menu, clicking the Browser Display under Web Browser, and then clearing the Auto-Complete Addresses check box.

Refreshing a Web page from the context menu

You can reload a Web page quickly by using the Refresh command from the context menu. This feature is especially useful when you want to refresh the contents of a file contained in a frame. Simply click inside the frame, hold down the mouse button, and choose Refresh from the context menu.

Preferences and Internet Config

Internet Explorer is now more closely integrated with Internet Config and works with the preferences file for Internet Config directly. You no longer have to select whether or not you want to use Internet Config. Any settings you change in the Internet Explorer Preferences dialog box automatically go to the Internet Config Preferences file. If you currently use the Internet Config application, you can continue to do so and the changes you make will automatically appear in Internet Explorer.

More preferences are now available from the Preferences dialog box to better customize your browsing experience. You can control animated GIFs, file downloads, Java VMs, proxies and other features.

ActiveX update

We now have a new version of the ActiveX SDK that supports ActiveX scripting. For more information on this feature, please go to the ActiveX SDK site at <http://www.microsoft.com/intdev/sdk/mac>.

Known Issues

Installing from the CD

Internet Explorer Installer requires that the startup disk of your computer is a hard disk. You will get an error during installation if your startup disk is a CD ROM drive. If this occurs, restart your computer and then run the Internet Explorer installer.

Java

You may not be able to view large Java applets on 8 MB machines when there is not enough system memory free. This occurs because the Java virtual machine is loaded and unloaded dynamically in the system memory. Memory is used only when you view pages with Java applications.

A 68K JIT is not available at this time. If you are a 68K user make sure that you choose the MSIE/MW VM or the Apple VM (if installed). Please visit <http://www.microsoft.com/ie/mac> for updates.

ActiveX

Microsoft Internet Explorer 3.01 for Macintosh has native ActiveX support, and does not require the use of a plug-in. The Microsoft ActiveX Plug-in included with this installer is for use with older versions of Internet Explorer or other browsers that use plug-ins and do not have native support for ActiveX.

Some Web pages may have ActiveX controls that do not support Mac OS. If this happens and you are unable to view the page, you can turn off viewing of ActiveX content. To do so, choose Preferences from the Edit menu, click Web Content under Web Browser, and then clear the Enable ActiveX check box.

Note: Please be aware that in this release, Internet Explorer cannot verify the integrity of ActiveX controls. Download and use ActiveX controls from trusted servers only.

Protocol helpers

You can use the Preferences dialog box to assign protocol helpers. When you do so, please note that the Use Current Application If Possible check box is turned on by default so that if Internet Explorer can handle the protocol, it will be used instead of the assigned helper. For example, if you have assigned Fetch as your current FTP (File Transfer Protocol) helper and have not cleared the Use Current Application If Possible check box, when you click an FTP link in Internet Explorer, Internet Explorer will be used to download the file, not Fetch.

If you do not want Internet Explorer to handle a protocol, be sure to clear the Use Current Application If Possible check box.

Real Player 4.0b1

The current beta version of the Real Player 4.0b1 installer may corrupt the Internet Preferences file, in which Internet Explorer stores its preferences. If this occurs, delete the Internet Preferences file (located in your Preferences folder inside your System folder). The next time you open Internet Explorer, a new Internet Preferences file will be created.

QuickTime and PowerPlug

If you have QuickTime installed, Internet Explorer requires that the QuickTime PowerPlug be installed in the Extensions folder in your System folder. QuickTime extensions are available for download from <http://quicktime.apple.com>.

QuickTime and QuickDraw 3D

If you use the Extensions Manager to disable QuickTime and QuickDraw 3D, you need to remove the appropriate QuickTime and QuickDraw 3D libraries.

VRML

If you are using Internet Explorer to view VRML pages, you must have QuickDraw

3D version 1.5 or
later installed. QuickDraw 3D is available for download from
<http://quickdraw3d.apple.com/>.

Internet Config File Mappings table

Internet Explorer maintains an internal list of viewers that tells it how to handle different types of documents. In this release, this list is exported and merged with the Internet Config File Mappings table. As a result, please consider the following:

Internet Explorer's list of viewers is indexed by the MIME types (Multimedia Internet Mail Extensions) of incoming documents. Since Internet Explorer cannot use a viewer without a MIME type, it will ignore them, but not delete or alter file mappings in Internet Config that do not contain a MIME type.

Internet Explorer maintains only one table entry per MIME type. If you have multiple file mappings in Internet Config with the same MIME type, Internet Explorer will use only the last setting in the table.

Internet Explorer adds a small amount of information to each file mapping in Internet Config to store its How to Handle setting. When you choose Use Explorer as a Viewer, Internet Explorer always attempts to handle the document type, regardless of the settings in Internet Config. Most file formats use the viewer specified in Internet Config, however, certain file formats like GIF and JPEG are handled by Internet Explorer regardless of your Internet Config setting.

Using Help

Internet Explorer Help is available from the Help (?) menu and will give you the information you need to use the powerful features of Internet Explorer.

1. Click a topic area on the left to see a list of related procedures. To open the procedures in a separate window, press and hold on the topic area link and then choose Open Link from the context sensitive menu.
2. Click Index to see the Index. Use the Index just as you would an index in a book.
3. Click Tips & Tricks for information about a particular menu item and its keyboard shortcut.
4. Internet Explorer Help is best viewed in Internet Explorer.

5. Click the Internet Explorer logo at the bottom of the topics list to visit the Internet Products home page at www.microsoft.com/ie/mac.

6. For best viewing, choose Preferences from the Edit menu, click the Web Content tab, and make sure Allow Page To Specify Colors is selected.

7. To print, click in the frame that contains the information you want, and then choose Print from the File menu.

Reporting problems and making suggestions

Send mail to giraffe@microsoft.com with your suggestions. Include:

- System configuration information (on the Apple menu, choose About Internet Explorer, and then click Support).
- Version of operating system
- Type of Macintosh
- Type of connection to the Internet
- Steps that lead to the problem. For example:

1. Start Microsoft Internet Explorer.

2. From the File menu, choose Open.

3. Click the Cancel button.

4. Result: Nothing happens.

Any other information that will help us reproduce the bug successfully.

Although you will not receive a response via e-mail, all your messages will be read and evaluated by the engineering team. We appreciate your feedback.

Technical support

Microsoft offers 90 days of product support at (206) 635-7123 in the U.S. and (905) 568-4494 in Canada. This support is free of charge, except for the cost of the telephone call.

Visit the Internet Explorer for Macintosh home page

Learn more about the many features and updates of Internet Explorer by visiting our home page at <http://www.microsoft.com/ie/mac>.

Join the Internet Explorer for Macintosh newsgroup

Interact with other users of Internet Explorer for Macintosh by joining microsoft.public.inetexplorer.mac. For more information, please visit the

Technical Support

Newsgroup page at <http://www.microsoft.com/support/news/>.

Redistribute Microsoft Internet Explorer--royalty free!

With the Internet Explorer Administration Kit 3.0 for the Macintosh, users can deploy Internet Explorer across an organization, or distribute it with their applications. You do not have to pay royalties when redistributing Internet Explorer, just a small fee for shipping and handling of the CD. To receive the Internet Explorer Administration Kit, check out <http://www.microsoft.com/ie/ieak>.

Java Virtual Machine components for Internet Explorer 3.01

Microsoft Internet Explorer 3.01 Java support is based on the JManager interface as defined by

Apple Computer, Inc. Internet Explorer has an open architecture that supports multiple Java Virtual

Machines such as the Apple Java Virtual Machine, MSIE/MW VM, and MSIE/MW PPC_JIT VM.

To enable Java in Internet Explorer:

1. Choose Preferences from the Edit menu.
2. Click Java under Web Browser, and make sure the Enable Java check box is selected.
3. To change your VM, choose it from the Java Virtual Machine menu.

Java VM pop-up menu will be grayed out, if a Java VM is not installed on your machine. To install

Java VM see the instructions in The Apple VM below.

The Apple VM

Internet Explorer uses the Apple Java Virtual Machine that comes with your system software. If not installed please install it from the Mac OS System Software CD or download and install it from <http://applejava.apple.com/>.

The Microsoft Java VM

The Microsoft Java VM was jointly developed by Microsoft and Metrowerks and is available in two

flavors: MSIE/MW VM and MSIE/MW PPC_JIT VM. You may use either the MSIE/MW VM or MSIE/MW

PPC_JIT VM with Internet Explorer, but one may be better suited to your needs.

The Microsoft Java VM is not included in this version of the Internet Explorer Installer. The MSIE/MW

VM can be downloaded from <http://www.microsoft.com/ie/download>. Follow the instructions to

install, and change Internet Explorer Preferences as noted above to choose from

the different Java
Virtual Machines.

The MSIE/MW VM is installed with Internet Explorer requires less memory and lets you debug Java applets. The MSIE/MW PPC_JIT VM includes technology known as a Just In Time (JIT) compiler. The JIT takes standard Java byte codes and compiles them into native PowerPC instructions. For computational applets, you will see a dramatic increase in speed. Graphics speed, however, will remain largely unaffected. The JIT VM does not support debugging and it requires more RAM because PowerPC code is larger than Java byte-code.

Note: A 68K JIT is not available at this time. If you are a 68K user make sure that you choose the MSIE/MW VM or the Apple VM (if installed).

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Java is a registered trademark of Sun Microsystems, Inc.

Article Change History:

5 Aug 1997 - Formatting changes.

30 July 1997 - Corrected formatting, added hypertext links, corrected grammatical errors.

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Tech Info Library Article Number:28035



Tech Info Library

Mac OS 8: MacLinkPlus Read Me

TOPIC

This article is the MacLinkPlus Read Me file that comes with Mac OS 8.0.

DISCUSSION

Contents

- Version 9.0 translation capability
- Version 9.0 new features
- No longer supported
- Limiting the number of translators
- A word about some of the translators
- Version 9.0.2 Bun list of components and their locations
- Complete list of translators in version 9.0
- Contacting technical support

Version 9.0 translation capability

Two new translators have been added since version 8.1: /Quattro Pro for Windows v.7 and WordPerfect for Windows v.7. For a complete list of translators in version 9.0, see the end of this file.

Version 9.0 new features

Numbers and multilevel outlines

MacLinkPlus supports these formats in the following ways:

- ClarisWorks (Mac and Win) v. 3 & 4: bullets, numbers & multilevel outlines supported as ClarisWorks Labels.
- RTF: supports auto bullets, numbers & multilevel outlines.
- Microsoft Word for Mac v. 5.1: supports bullets as characters & numbers as outlines.
- Microsoft Word for Mac v. 6: supports auto bullets, numbers & multilevel outlines. No support

of special auto bullet characters.

Microsoft Word for Windows v. 2 & 6: supports auto bullets, numbers & multilevel outlines.

No support of special auto bullet characters.

Microsoft Works for Mac v. 4: supports bullets only via paragraph style.

Microsoft Works for Windows v. 3 & 4: supports auto bullets only.

WordPerfect for Mac v. 3.x: supports bullets as paragraph style & auto numbers/multilevel outlines.

WordPerfect for DOS: supports bullets, numbers and multilevel outlines as paragraph attributes.

WordPerfect for Windows v. 6 & 7: supports bullets, numbers and multilevel outlines as paragraph attributes.

There is a preference in the MacLinkPlus Setup Control Panel to treat all auto attributes as text. If you are experiencing problems with translation results, this setting will make the resulting document look better in most cases. Be sure to try changing this preference before calling with a problem.

Custom bullet characters and the symbol font characters are not supported at this time.

Bookmarks and hypertext links

MacLinkPlus will convert Hypertext links between two word processors that support this feature. If you are translating from HTML, URLs will be converted to hypertext links in applications that support them, and into blue underlined text in applications that do not. There is also a preference in the MacLinkPlus Setup control panel to reference the URLs in HTML documents as footnotes.

The following word processors support Bookmarks and Hypertext links:

Word 6.0 Mac (with Internet Assistant)
RTF (opened in Word with Internet Assistant)
Word 6.0 & 7.0 Windows (with Internet Assistant)
WordPerfect 7.0 Windows
WordPerfect 3.5 Mac

Absolutely positioned objects (text and graphic frames)

In most newer word processors graphics can be placed into a document in one of two ways: Inline

or absolutely positioned. If they are inline, that means that they flow with the text in the document. If

they are absolutely positioned, they are anchored to a page, margin, paragraph or some other

geographic place in a document. In versions prior to 9.0, MacLinkPlus only

supported inline
graphics. With 9.0 we have begun to support absolutely positioned graphics and
text frames in the
following applications:

- ClarisWorks 2.x, 3 & 4.0
- MacWrite Pro
- RTF
- Word 5.1 (Mac)
- Word 2.0 (Windows)
- Word 6.0 & 7.0 (Mac & Windows)
- WordPerfect 5.1, 6.0 & 7.0 (Windows)
- WordPerfect 2, 3 & 3.5 (Mac)
- Microsoft Works 4.0 (Mac)
- Microsoft Works 3.0 & 4.0 (Windows)

No longer supported

In Version 9.0, we have removed support for Microsoft Word External Converters
and Microsoft

Works Converters. This means that you will no longer be able to access the
MacLinkPlus

translators from the open or save as dialogs in these two applications. You
will, however, still be

able to translate to and from Microsoft Word and Works through our recommended
translation

systems such as Mac OS Easy Open and the Document Converter. The reason the
functionality was

removed is that our translators have moved beyond the capabilities of these
translation delivery

systems. The MacLinkPlus installer will move them from their existing positions
and place them in a

folder in the MacLinkPlus 9.0 folder called No Longer Supported.

Limiting the number of translators

In order to reduce disk space or system requirements related to MacLinkPlus, it
is now possible to

disable selected translators. Removing infrequently used translators will speed
up System startup

and Document Converter setup. It will also make the removed translators
inaccessible from any of

the recommended translation methods like Mac OS Easy Open, Document Converter,
XTND and the

MacLinkPlus application.

The MacLinkPlus Installer will allow you to reinstall the entire translation
library should you find that

a translator has been inadvertently deleted from your hard drive.

Create a folder called Unused Translators in the DataViz folder in the System
folder and place

infrequently used translators in that folder to disable them. To enable them,
put the translator files

back in the DataViz folder root level and restart.

A word about some of the translators

AmiPro 3

Although AmiPro supports APOs & AutoBullets/Numbers, support for these features was not added for version 9.

In the case of APOs, the Ami Pro translator will attempt to place absolutely positioned objects as inline graphics whenever possible. If the translator is unable to determine where in the document the object is intended to be placed, it will insert all graphics at the beginning or end of the document, depending on the original file format being converted.

In the case of AutoBullets and Numbers, use the Convert to Text option in the MacLinkPlus Setup Control Panel for best results.

ClarisWorks 4

ClarisWorks allows you to embed spreadsheets inside word processing files. If MacLinkPlus encounters a spreadsheet while translating a word processing file, that spreadsheet will be converted to a table. If that spreadsheet is anchored to text, it will be placed at the end of the paragraph. If that spreadsheet is floating (anchored to the page) then it will be placed at the end of the document.

WordPerfect 6.0 and WPG2 graphics

In translations FROM WordPerfect 6.0, if the Mac OS system doing the translation does not have a math co-processor installed, files which contain embedded graphics may appear to be frozen while the translation is going on. Be patient, especially if the WordPerfect file contains several graphics. This is also true if you are translating a stand-alone WPG2 graphic file (i.e. not embedded into a word processing file).

Nisus and NisusWriter

In translations FROM Nisus, graphics will be properly converted to other applications (where supported). However, if a graphic is placed in an unanchored frame in the Nisus document, it will be placed at the end of the resulting document. Graphics placed in anchored frames will remain in their original locations.

OLE translations

Translations of large OLE documents can be very memory-intensive. If problems

are encountered,
you may wish to increase the memory available to your application by increasing
the Preferred Size
in Get Info for the application. (Supported OLE applications are: Excel 5.0,
Word Macintosh 6.0, Word
for Windows 6.0 & 7.0, MS Works Macintosh 4.0, and MS Works for Windows 3.0 &
4.0)

Version 9.0.2 Bun list of components and their locations

*Made by Apple Computer

Control Panels (68k & PowerMac)

- *PC Exchange 2.0.5
- *Mac OS Easy Open 1.1.2
- MacLinkPlus Setup

Extensions (68k)

- MacLinkPlus for Easy Open 68k
- *Shared Library Manager

Extensions (PowerMac)

- MacLinkPlus for Easy Open

DataViz folder

The DataViz folder must be at the root level of the System Folder on the startup
drive and must be
named DataViz. There are 88 items in the v.9 DataViz folder. The following list
of translators is for the
Power Mac version. The 68k version translator filenames contain 68k at the end
of the name.

- Ami Pro 2.0, 3.0, 3.1
- AppleWorks DB
- AppleWorks SS
- AppleWorks WP 2
- AppleWorks WP 3
- AppleWorks WP GS
- AutoCAD DXF
- BMP - DIB
- CGM
- ClarisWorks DB 2.0-3.0
- ClarisWorks DB 4.0
- ClarisWorks SS 2.0-3.0
- ClarisWorks SS 4.0
- ClarisWorks WP 1.0
- ClarisWorks WP 2.0-3.0
- ClarisWorks WP 4.0
- Comma Values DB
- Comma Values SS
- DataViz Required Rsrcs (The file, DataViz Required Rsrcs, contains

non-Power Mac Native

translators for MacWrite, MS Word v3, WordPerfect v4.2, WordPerfect Mac
1, Wordstar below

v5, Multimate below v4, XYWrite, Mac Works v2 WP, Office Writer, WriteNow
below v3, and

some graphics paths for these old formats.)

DataViz Translation Mgr.

DataViz WP Interface

dBase II, III, IV

DCA-RFT

DIF DB

EPS

Excel 2.x

Excel 3.0

Excel 4.0

Excel 5.0

FrameMaker MIF 2.0

FrameMaker MIF 3.0

kas_wdog.68K

Languages (this is a folder)

Lotus PIC

Lotus WK3, WK4

Lotus WKS, WK1

MacWrite II

MacWrite Pro 1.0, 1.5

MS Works DB 2.0 Mac

MS Works DB 2.0,3.0 DOS

MS Works DB 3.0 Mac

MS Works DB 3.0 Win

MS Works DB 4.0 Mac

MS Works SS 2.0,3.0 Mac

MS Works SS 3.0 Win

MS Works SS 4.0 Mac

MS Works WP 2 DOS-Win

MS Works WP 2.0 Mac

MS Works WP 3.0 Mac

MS Works WP 3.0 Win

MS Works WP 4.0 Mac

Multimate 4

Nisus 3, Nisus Writer 4

PCX - DIB

PICT - DIB

PICT to WMF

Professional Write

Quattro Pro 1, 5, 6, 7 Win

Quattro Pro 4.0 DOS

RTF Rich Text Format

SYLK DB

SYLK SS

Text

TIFF - DIB

Ventura Publisher GEM

Ventura Publisher IMG

WMF to PICT
WMF to WPG
WMF to WPG2
Word 1.0 Win
Word 2.0 Win
Word 4.0, 5.0, 5.1 Mac
Word 5.5 DOS
Word 6.0 Mac-Win
WordPerfect 6,7
WordPfct 5.0 DOS
WordPfct 5.1,5.2DOS-Win
WordPfct Mac 2
WordPfct Mac 3.0,3.1,3.5
WordPfct Works DB 2 Win
WordPfct Works SS 2 Win
WordPfct Works WP 2 Win
WordStar 5,6,7
WPG to WMF
WPG2 to WMF
WriteNow 3, 4

MacLinkPlus Bridge

The MacLink Plus bridge is located in the Claris Translators folder, in the Claris folder, in the System Folder.

DataViz FileView

The DataViz FileView can reside anywhere on your Mac, but is most likely in the MacLinkPlus folder, in the Applications folder or an alias is on the desktop.

Document Converter

The Document Converter can reside anywhere on your Mac, but is most likely in the MacLinkPlus folder, in the Applications folder. The name of the Document Converter can change when it has been set. For example, it can be called "to Claris Works 3.0 WP document." Also, you can have more than one Document Converter. To locate the Document Converter(s) on your Mac, choose File from your menu bar, and select Find. Search for items on your hard drive whose creator is tra". This will display Document Converter(s) and location(s).

MacLinkPlus folder

The MacLink Plus folder can be located anywhere on your Mac, but is installed at the root level of your hard drive. Most users choose to keep it in their Applications folder. The contents of the MacLinkPlus folder will vary depending upon your product. The basics include:

Document Converter
MacLinkPlus Version Checker

..TIL28036-Mac_OS_8-MacLinkPlus_Read_Me.pdf

Several instructional and technical read me files
Registration Information

No longer supported in version 9.0

Word external converters
Works converters

Complete list of translators in version 9.0
Below is a complete list of the file formats supported by MacLinkPlus version 9.0.

Note: Macintosh formats can be translated into PC formats in the same category and vice versa (i.e., any Macintosh word processing format can be translated into any PC word processing format, any PC spreadsheet can be translated into any Macintosh spreadsheet, etc.). In addition, Macintosh formats can be translated to other Macintosh formats (e.g., Microsoft Word to ClarisWorks, Excel to MS Works spreadsheet). For graphic translations, the actual translation paths are noted.

Macintosh word processing formats
The following formats are translated "from" only.

ClarisWorks v. 1, 2, 3 & 4
FrameMaker MIF v. 2 & 3
MacWrite v. 4.5 & 5
MacWrite II
MacWrite Pro v. 1 & 1.5
Nisus
Nisus Writer
RTF
Text
MS Word v. 3, 4, 5 & 6
WordPerfect v. 1, 2, 2.1, 3, 3.1 & 3.5
MS Works v. 2, 3 & 4
WriteNow v. 2, 3 & 4
AppleWorks (Apple II) v. 2.1 & 3

PC word processing formats
The following formats are translated "from" only.

Ami Pro (Windows) v. 1, 2 & 3
ClarisWorks (Windows) v. 1, 3 & 4
DCA-RFT
MultiMate through v. 4
OfficeWriter v. 5 & 6
Professional Write v. 2
RTF
Text
MS Word (DOS & Windows) through v. 7

WordPerfect (DOS & Windows) v. 4.2, 5, 5.1, 6, 6.1, 7
WordPerfect Works (Windows) v. 2
WordStar v. 3, 4, 5, 6 & 7
MS Works (DOS & Windows) v. 2, 3 & 4
XYWrite III

Macintosh spreadsheet formats

ClarisWorks v. 1, 2, 3 & 4
Excel v. 2, 3, 4 & 5
MS Works v. 2, 3 & 4
SYLK
AppleWorks (Apple II) v. 3

PC spreadsheet formats

ClarisWorks (Windows) v. 1, 3 & 4
Excel (Windows) v. 2, 3, 4, 5 & 7
Lotus 1-2-3 (WKS, WK1, WK3, WK4)
MS Works (DOS & Windows) v. 2, 3 & 4
Quattro Pro (DOS & Windows) v. 1, 4, 5, 6, 7
SYLK
Symphony (WRK, WR1)
WordPerfect Works (Windows) v. 2

Macintosh database formats

ClarisWorks v. 1, 2, 3 & 4
dBASE (DBF) II, III & IV
FoxBASE
MS Works v. 2, 3 & 4
AppleWorks (Apple II) v. 2.1 & 3

PC database formats

ClarisWorks (Windows) v. 1, 3 & 4
dBASE (DBF) II, III, IV
FoxBASE
MS Works (DOS & Windows) v. 2, 3 & 4
WordPerfect Works (Windows) v. 2

Graphic formats

These PC formats can be translated to and from PICT and TIFF:

PC Paintbrush
Windows Bitmap
Windows Metafile
WordPerfect Graphic

These PC formats can be translated to Mac PICT:

AutoCad.DXF
Harvard Graphics.CGM
Lotus.PIC
Lotus Freelance.CGM
Ventura Publisher.GEM
Ventura Publisher.IMG

EPS

EPS Mac (PICT preview) can be translated to and from EPS PC (TIFF preview).

Contacting Technical Support

DataViz provides telephone support for technical problems from 9 AM to 6 PM Eastern time. We can provide better service if you already have the following information when you call:

MacLinkPlus version*
Serial number*
Remote computer, if applicable (PC Connect)
Model
Translating (application and version numbers)from and to
Error code
Message

Note: Version and serial number of the MacLinkPlus translators can be obtained from the MacLinkPlus Setup control panel.

DataViz, Inc.

55 Corporate Drive

Trumbull, CT USA 06611

(203) 268-0030

e-mail info@list.dataviz.com

World Wide Web: <http://www.dataviz.com>

MacLinkPlus is a Trademark and MacLink is a Registered Trademark of DataViz, Inc.

Article Change History:

5 Aug 1997 - Corrected capitalization.

4 Aug 1997 - Corrected formatting and created hypertext link.

Tech Info Library Article Number:28036



Tech Info Library

Mac OS 8: QuickDraw 3D Read Me

TOPIC

This article is the QuickDraw 3D Read Me file that comes with Mac OS 8.0.

DISCUSSION

Important Information About QuickDraw 3D

QuickDraw 3D enables your computer to display three-dimensional graphics using applications

designed to take advantage of QuickDraw 3D. It also provides a common file format, called

QuickDraw 3D Metafile (or 3DMF for short), for exchanging 3D documents.

QuickDraw 3D also

provides acceleration services which support plug-and-play accelerator cards.

For computers running the Mac OS, the following are required to install and run QuickDraw 3D:

- a PowerPC based computer with a minimum of 16 megabytes of memory (RAM)
- Mac OS System 7.1.2 or later

The latest version of QuickDraw 3D, along with software demos, QuickDraw 3D Metafiles, and additional information is available through the Internet at the following site: <http://quickdraw3d.apple.com/>.

Using QuickDraw 3D

The QuickDraw 3D folder includes the following applications, 3D models, and textures that allow you to explore the 3D capabilities of your computer:

- SimpleText version 1.3.1 and Scrapbook version 7.5.2. These applications allow you to open

- and interact with 3DMF models.

- A new Scrapbook File with sample 3DMF models.

- A number of 3DMF models provided by Model Masters

- (www.interaccess.com/modelmaster), Plastic Thought, Inc (www.3d-active.com),

- Viewpoint DataLabs International (www.viewpoint.com), and Zygote (www.zygote.com).

You can expect even more applications that use QuickDraw 3D in the near future, including new versions of application programs you may already own. Contact your software vendors for more information about their plans to support this new technology.

Troubleshooting

If you try to start an application that uses QuickDraw 3D and get the message "The application 'application name' could not be launched because QuickDraw 3D could not be found," make sure that the following files are in the Extensions folder, inside the System Folder:

- QuickDraw 3D
- QuickDraw 3D IR
- QuickDraw 3D RAVE
- QuickDraw 3D Viewer

If the files are there and you still get the message, it means that you do not have enough memory to run the application. You may be able to open the application if you try the following:

- Quit other open applications.

Reduce the amount of memory allocated to the application. This is done by:

1. selecting the application's icon in the Finder
2. choosing Get Info from the File menu
3. typing a lower number in the boxes for Minimum Size and Preferred Size.

- Install more memory (RAM).

Using US software on a localized system

If you are using a localized system, and you install this U.S. software, you will need to copy the Scrapbook File in the QuickDraw 3D Folder to the System Folder on your computer. Otherwise, when you choose Scrapbook from the Apple menu, you will get an empty scrapbook. Note that this operation will replace any existing Scrapbook File in the System Folder, thus erasing any previously stored contents.

Using highly detailed models

Some of the sample models included with QuickDraw 3D, such as Big Ben and Red

Hatchback, are highly detailed (they contain additional 3D modeling data such as vertex normals and surface UVs) and thus will require a larger amount of memory than the other supplied models. If you experience problems when opening these files from SimpleText, you should open only one file at a time.

How QuickDraw 3D uses memory

QuickDraw 3D is a shared library. When no applications that rely on QuickDraw 3D are open, the library does not take up memory space (RAM). Once a QuickDraw 3D-based application is open, the amount of memory taken up by the shared library does not increase if other QuickDraw 3D-based applications are launched. Of course, each application will take up memory according to their size and the complexity of the files being used. The memory taken up by QuickDraw 3D becomes available when you quit all QuickDraw 3D-based applications.

While a QuickDraw 3D application is open, the QuickDraw 3D library allocates memory from temporary memory. This memory shows up in the About This Macintosh window as memory used by the system. When you quit the application, the memory becomes available, but the size shown in the About This Macintosh window may not reflect this. The memory previously used by QuickDraw 3D is, nonetheless, available for other applications (it is released to the applications as needed).

Apple QuickDraw 3D Accelerator Card

If you have an Apple QuickDraw 3D Accelerator Card present in your machine, the following files will also be installed in the Extensions folder, inside the System Folder:

- Apple QD3D HW Driver
- Apple QD3D HW Plug-In

If you need to re-install these files at a later time, you can do so by:

1. launching the installer, as described in the section below under If you need to reinstall QuickDraw 3D
2. selecting Custom Install from the pop-up menu
3. selecting the Apple QuickDraw 3D Accelerator Card item in the list.

We recommend that you turn off Virtual Memory when using Apple's QuickDraw 3D Accelerator Card.

Scrapbook 7.5.2

We strongly recommend that the Scrapbook not be used with less than 300k of memory available.

To determine how much memory is available, select About This Macintosh from the Apple menu and look at the value next to Largest Unused Block.

If you need to reinstall QuickDraw 3D

If you need to reinstall QuickDraw 3D, follow these steps:

1. Open the QuickDraw 3D Install folder and double-click the installer icon.
2. After installing QuickDraw 3D, restart your computer.
3. If you want the items in the QuickDraw 3D Extras folder, drag the folder to the newly-created QuickDraw 3D Folder inside the Apple Extras folder.

Removing QuickDraw 3D

If you wish to remove QuickDraw 3D, follow these steps:

1. Open the QuickDraw 3D Install folder and double-click the installer icon.
2. Choose Custom Remove from the pop-up menu.
3. Click the box next to each item to put a check in it.
4. Click Remove.
5. Restart your computer.

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Article Change History:

- 6 Aug 1997 - Corrected characters that did not translate.
- 4 Aug 1997 - Corrected formatting.
- 30 July 1997 - Changed formatting.



Tech Info Library

Mac OS 8: ARA Client Read Me

TOPIC

This article is the ARA Client Read Me file that comes with Mac OS 8.0.

DISCUSSION

This document provides late-breaking news about the Apple Remote Access Client that is not covered in the Apple Remote Access Client User's Guide. You may need to refer to that guide to understand the use of several terms in this document, and you may want to print this document to keep with your user's guide.

Modems Supported by the Apple Remote Access Client

Scripts that support most popular modems are provided on the Remote Access Client installation disks. The scripts include:

- 3Com Impact Analog 14.4
- 3Com Impact ISDN 56K
- 3Com Impact ISDN 64K
- Apple Modem 2400
- AT&T Dataport 288
- AT&T KeepInTouch
- Dayna CommuniCard 28800
- Farallon Netopia 56K
- Farallon Netopia 64K
- GeoPort/Express Modem
- GeoPort/Express Modem CNG
- Global Village Gold/Silver/Mercury
- Global Village Platinum
- Hayes Accura 288
- Hayes Optima 14.4
- Hayes Optima 288
- Megahertz CruiseCard 14.4

Megahertz CruiseCard 28.8
Metricom Ricochet Wireless
Microcom MicroPorte 4232bis
Microcom QX/4232bis
Motorola 326xV34
Motorola BitSURFR 56K
Motorola BitSURFR 64K
Motorola Power/Lifestyle 28.8
Practical Peripherals V.34
Prometheus ProModem 144e
Prometheus ProModem 96
PSI PowerModem II
PSI PowerModem III/IV
Supra 144
Supra 288
TDK DF2814
Telebit QBlazer
Telebit T3000
Telebit Worldblazer
US Robotics Universal
Zoom V-series

Beginning with version 2.1 of the Apple Remote Access Client and the companion Personal Server product, modem scripts are no longer stored in the Extensions Folder. A new folder called Modem Scripts within the Extensions Folder is created by Apple Remote Access to hold modem scripts.

The Apple Remote Access Installer will move any existing scripts you may already have in your Extensions Folder to the new Modem Scripts folder in addition to placing scripts for all the modems listed above into the Modem Scripts folder.

Future remote access products from Apple will also use the Modem Scripts folder. However, there will be a transition period before other products are updated to use the new folder. Some existing products may install modem scripts into the Extensions Folder. If such a product is installed after Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the script.

You can use modem scripts included with the Apple Remote Access MultiPort Server (any version) with version 2.1 of Apple Remote Access Client. You can also use AppleTalk Remote Access version 1.0 modem scripts with version 2.1 of the Client, but certain new features, such as Ignore Dial Tone, Manual Dialing, and MNP 10 support, will not be available.

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Additionally, you will be able to use scripts from future Apple dial-up products with version 2.1 of Apple Remote Access. But, see the note below on some issues related to manual dialing.

Apple Remote Access and System 7.5.3

The Read Me documents for System 7.5.3 and System Update 2.0 suggest that Apple Remote Access should be installed before System 7.5.3. This is not necessary. Beginning with version 2.1, Apple Remote Access should be installed after System 7.5.3.

Installing ARA X.25 Client over Apple Remote Access 2.1

The Apple Remote Access X.25 Client installer places X.25 scripts into the Extensions folder. If you install the X.25 additions after installing Apple Remote Access 2.1, you will have to open your Extensions Folder and drag the X.25 scripts into the Modem Scripts folder in order for Apple Remote Access to recognize the scripts.

If you use the Apple Remote Access 2.1 installer to upgrade your existing Remote Access 2.0.1 and X.25 Client, the installer will move the scripts for you.

Compatibility with AppleTalk Remote Access 1.0

Version 2.1 of the Apple Remote Access Client will successfully connect to both AppleTalk Remote Access 1.0 compatible servers and Apple Remote Access 2.x compatible servers. The compatibility setting in the connection document of earlier version 2.0 and 2.0.1 has been removed. Since connection to either style server is automatic, the setting is no longer necessary.

The next major upgrade to Apple Remote Access will no longer support ARA 1.0 clients or servers.

Using an MNP 10 Modem

MNP 10 is an error-correction protocol that allows for more reliable data connections over cellular modems. Clicking the Use MNP 10 error correction in modem checkbox in the Remote Access Setup window puts MNP 10 modems into cellular mode. Do not click the Use MNP 10 error correction in modem checkbox to use MNP 10 over land lines.

To establish an MNP 10 connection, both your modem and the modem you are calling must support MNP 10; clicking the Use MNP 10 error correction in modem checkbox in the Remote Access Setup window is not by itself sufficient to establish an MNP 10 connection.

Manual Dialing

The method used to do manual dialing in Apple Remote Access 2.0/2.0.1 has not worked well.

Apple Remote Access presents a dialog asking you to dial, wait for the phone to ring, and then press OK. Often the user has to experiment to determine exactly when to press OK to dismiss the dialog.

To improve manual dialing, a new dialog has been incorporated into the modem scripts installed along with version 2.1 of Apple Remote Access. Two dialogs are now displayed when doing manual dialing. This first dialog is still present to provide backwards compatibility with the wide variety of existing modem scripts. When using newer scripts, the first dialog box should be dismissed before dialing, and you will be prompted by the modem script when to actually dial the phone. If you are using a modem script not included with this product, you may have to experiment to determine if the first dialog box should be ignored.

Future remote access and dial-up products from Apple will require the new style scripts and will not present two dialog boxes.

Using the Redialing Feature

If the redialing option is selected, the Remote Access Client attempts redialing only when the phone number that has been dialed is busy. If the connection attempt fails for any other reason including a failed callback attempt, Remote Access stops redialing so that you can correct any problems.

If you use the Redialing option, set the Time between retries number to five seconds or greater. Anything less than five seconds may not give your modem sufficient time to reset.

When using the Redialing Alternate Number option, the main number is dialed once and then redialing sequence alternates between the alternate and main numbers.

Using DialAssist

If you are calling within a country with no city or area codes, and you encounter problems using DialAssist, try entering a space in the Connect To City/Area Code box in your connection document.

Serial Port Arbitration

When a Remote Access connection is established, Remote Access prevents other application

programs from using the serial port selected in the Remote Access Setup control panel. Most programs will inform you that the port is in use.

Remote Access Client provides this port arbitration through a system extension called the Serial Port Arbitrator located in the Extensions folder. Some programs that use the serial port may not be compatible with this extension. If you suspect that a program is not compatible with the Serial Port Arbitrator:

1. Remove the Serial Port Arbitrator file from the Extensions folder.
2. Restart your Macintosh.
3. Try the program again.

Note: The Serial Port Arbitrator will not work on a Macintosh if Remote Access Client has not been installed.

High Speed Serial Connections

Both Apple Remote Access Personal Server 2.1 and Client 2.1 support specifying a serial connection speed of 115200 bps in a modem script. Not all Macintosh built-in serial ports support connection speed of 115200 bps. Here is a list of Macintoshes that do.

Centris/Quadra 660AV, Quadra 840AV
Macintosh Performa 61xx
Power Macintosh 61xx, 71xx, 72xx, 75xx, 76xx, 81xx, 85xx, 95xx
Workgroup Server 6150, 7250, 8150, 8550, 9150

In order to use the serial port at 115200 bps on one of these computers, you need a new serial extension called SerialDMA. System 7.5.3 or later incorporates this driver into the operating system.

If you use a modem script that specifies 115200 bps, and your computer does not support this data rate, Apple Remote Access will automatically fall back to 57600 bps.

Using a Local Printer

If you are using a non-networked printer connected to the printer port of your Macintosh, you may get an error dialog when trying to initiate a connection or when trying to print while connected saying that one of your serial ports is already in use. You may need to select Remote Only in the Network Control Panel (AppleTalk Control panel for Open Transport-based machines).

Apple Remote Access Client and the Apple Internet Router
Apple Remote Access Client should not be installed on the same Macintosh as the Apple Internet Router.

Using ARA Security Modules (like SecurID) with Virtual Memory
There is an incompatibility between some ARA security modules (like SecurID) and Virtual Memory.
This bug has been fixed in the latest system release (7.5.3).

Changes in version 2.1 of the Apple Remote Access Client

Modem scripts have been moved to a new Modem Scripts folder within the Extensions

Folder.

The compatibility option in the connection document is no longer necessary and has been removed.

The method of manual dialing has been changed. See the section above.

Interoperability with some non-Apple Remote Access Servers has been improved.

The installer has been upgraded from version 3.4 to version 4.0.3.

There is no longer a separate Remote Access Aliases extension.

The installer is now on a single high-density diskette.

A bug that caused machines with certain extensions to crash during boot has been fixed in

the Serial Port Arbitrator.

Serial port rates of up to 115,200 bps are now supported in modem scripts. If the computer

doesn't support 115,200, Apple Remote Access will use 57,600 bps instead.

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Article Change History:

4 Aug 1997 - Corrected formatting.

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Tech Info Library Article Number:28038



Tech Info Library

Mac OS 8: Before Installing OT/PPP

TOPIC

This article is the Before Installing Open Transport/PPP 1.0.1 Read Me file that comes with Mac OS 8.0.

DISCUSSION

Introduction

This document contains late-breaking information about Open Transport/PPP. For instructions about how to use Open Transport/PPP--including the Modem and PPP control panels--see the Open Transport/PPP User's Manual. Onscreen help is also available in Mac OS Guide. Choose Help from the Help menu. Information about Open Transport/PPP appears in the Telecommunications topic area. Or you can click the question-mark icon that appears in the Modem and PPP control panels.

Additional information about Open Transport/PPP is also available on the Open Transport/PPP home page: <http://devworld.apple.com/dev/opentransport/ppp.html>. Included on this home page is a log of the release notes that describes the changes in each beta release of the Open Transport/PPP software.

License Agreement

This release of Open Transport/PPP is subject to the terms and conditions of the license agreement that accompanies the software in the file named License. By using the software you agree to abide by the terms and conditions of the license agreement.

System Requirements

Open Transport/PPP 1.0.1 is designed to work on Mac OS-compatible computers with a Motorola 68030- or 68040-family microprocessor, or a PowerPC 601, 603e, 604, or 604e microprocessor.

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You also need Mac OS System 8.0 or later and Open Transport 1.1.2 or later.

IMPORTANT: You must install Open Transport 1.1.2 or later before installing Open Transport/PPP.

Open Transport/PPP 1.0.1 requires a minimum of 500K of RAM (for 68030- or 68040-based computers) or 600K of RAM (for PowerPC-based computers). Open Transport/PPP memory requirements are based on the size of total system memory, including virtual memory, minus the size of any RAM disk or disk cache you are using.

Apple Software Update Sites

Information about updating Apple software is available online on the World Wide Web and other online servers. On the Web, go to either of the following sites:

www.info.apple.com

www.support.apple.com

Both of these sites provide links to the Apple Software Updates page.

These sites also provide links to the Technical Info Library (TIL). By searching for "find apple software updates" in the TIL, you can find Apple Software Updates locations for Internet, America Online, CompuServe, and other online services.

Once you reach an Apple Software Updates site, use the following path to locate the Open Transport software:

Apple SW Updates

US

Macintosh

Networking-Communications

Open Transport

Before You Install Open Transport/PPP 1.0.1

- Make backup copies of the software and documents on your hard disk (especially your System Folder) before installing this software.
- If you already use SLIP or PPP software to access the Internet, make a note of the configuration

information that you entered into your previous SLIP or PPP control panels. Configurations are not automatically converted from third-party SLIP or PPP software.

What's New In Open Transport/PPP 1.0.1?

- The OpenTpt Serial Arbitrator no longer crashes with extensions that open a serial driver during system startup (such as the Wacom Tablet driver).
- Open Transport/PPP does not display dialog boxes for background-only applications (such as Personal Web Sharing). NOTE: When opening a PPP connection from a background-only application, the machine will appear frozen until the connection is established.

Known Incompatibilities and Limitations

- Open Transport 1.1.2 or later is required for use with Open Transport/PPP 1.0.1. You should not attempt to use Open Transport/PPP with a previous version of Open Transport.
- ARA 2.x modem CCL scripts can be used with Open Transport/PPP. However, some ARA 2.x scripts do not support modem-based error correction and data compression, so performance may not be optimal. You should try to use one of the modem scripts provided with Open Transport/PPP. If you can't find one that matches your modem, you can modify an existing script to suit your needs.
- If you are using both ARA 2.1 and Open Transport/PPP, be sure to install Open Transport/PPP after ARA 2.1 to get the correct set of modem scripts for both products.
- If you are running Open Transport/PPP on a desktop Macintosh that has sleep capability, your Open Transport/PPP connection will not be automatically terminated when you choose Sleep from the Special menu, because sleeping desktop computers can continue network activity (unlike PowerBook models). If you do not want to remain connected to your PPP server when you put your desktop system to sleep, disconnect manually using the PPP control panel.
- If you have a copy of Open Transport/PPP older than 1.0f1c2 installed, you must discard your old Open Transport/PPP preferences files. To do so, remove the Remote Access folder from the active Preferences folder. Restart your computer and then use the Modem and PPP control panels to customize your configuration.

- Open Transport/PPP 1.0.1 has some incompatibilities with the Apple Express Modem. If the Internal Modem choice does not appear in the Modem control panel's Port pop-up menu, uncheck the "Use internal modem instead of Modem/Printer port" checkbox in the Express Modem control panel and restart. Then open the Modem control panel again.
- You may experience some difficulty with older application programs that do not use Open Transport and try to use the serial port while PPP is active. The workaround is to disconnect PPP using the PPP control panel before starting up the older application.
- Claris EMailer version 1.1v3 or later is compatible with Open Transport 1.1.1 or later. A problem in the Quit command of earlier versions of Claris EMailer sometimes causes a crash with Open Transport 1.1.x (with or without Open Transport/PPP). For your convenience, the Claris EMailer version 1.1v3 patcher and Claris EMailer Lite version 1.1v3 patcher have been provided in the Open Transport Extras folder.
- You may experience CD and TV sound problems when you are dialing your Internet service provider from a Performa 6300CD computer. The workaround is to launch Megaphone before trying to connect.
- When entering phone numbers for the Motorola BitSURFR Pro 56K and 64K ISDN terminal adapters, do not use dashes or spaces between the numbers. For example, "555-9999" should be entered as "5559999". Entering spaces or dashes may prevent successful connections with the BitSURFR Pro, particularly when two ISDN channels are used.
- If you use PortShare Pro from Stalker GmbH to set up a virtual modem or virtual printer port, the ports appear as Modem or Printer, respectively, in the Modem control panel. They do not appear as Virtual Modem or Virtual Printer. PortShare Pro replaces the serial drivers for the on-board modem/printer ports with its own, so selecting Modem or Printer causes Open Transport/PPP (and any other native Open Transport serial application) to use the replacement drivers.
- Open Transport/PPP will report the single channel speed of 56 Kbps or 64 Kbps. The 112 Kbps or 128 Kbps speeds are used but not displayed when using a second ISDN channel with

multilink

PPP. Use the terminal adapter to find out the speed of the second channel.

Compatibility with the Apple Internet Connection Kit

You can install both Open Transport/PPP and the Apple Internet Connection Kit (AICK) on your computer at the same time. Both products enable you to dial with your modem and connect to the Internet.

At the time of this release, AICK does not use the Open Transport/PPP software to dial and connect to the Internet. AICK has its own Dialer, which uses MacPPP software to establish the remote connection. MacPPP is a third-party implementation of the Point-to-Point Protocol.

All of the AICK applications, however, are compatible with Open Transport/PPP 1.0.1. To use Open Transport/PPP with AICK applications, you must configure Open Transport/PPP as described in the Open Transport/PPP User's Manual and in the "Connecting to the Internet" topic area of Mac OS Guide.

The currently active PPP software is selected using the "Connect via" pop-up menu in the TCP/IP control panel. MacPPP is listed as MacPPP. OT/PPP is listed as PPP. MacPPP is controlled by using the ConfigPPP control panel, the Apple Internet Dialer application, or the Apple Internet Status application. Open Transport/PPP is controlled by using the Modem and PPP control panels, which do not modify or change MacPPP configuration information.

If you use both PPP software packages (one at a time), note that launching either the Apple Internet Dialer or Apple Internet Status will make MacPPP active. Furthermore, you will need to switch TCP/IP configurations each time you switch from one PPP software package to the other. (Information about changing TCP/IP configurations appears in the Network topic area of Mac OS Guide.)

Modem Support

Scripts that support many popular modems are provided on the Open Transport/PPP installation disks. The scripts include:

3Com Impact Analog 14.4

3Com Impact ISDN 56K

3Com Impact ISDN 56K MLPPP

3Com Impact ISDN 64K

3Com Impact ISDN 64K MLPPP

Apple Personal Modem

AT&T Dataport 288

AT&T KeepInTouch

Best Data Smart One 28.8/33.6

Dayna CommuniCard 28800

Farallon Netopia 56K

Farallon Netopia 56K MLPPP

Farallon Netopia 64K

Farallon Netopia 64K MLPPP

GeoPort/Express Modem

GeoPort/Express Modem CNG

Global Village Gold/Silver/Merc

Global Village Platinum/Gold II

Hayes Accura 288

Hayes Optima 288

Megahertz CruiseCard 14.4

Megahertz CruiseCard 28.8

Metricom Ricochet Wireless

Microcom DeskPorte Fast/288

Microcom QX/4232bis

Motorola BitSURFR 56K

Motorola BitSURFR 56K MLPPP

Motorola BitSURFR 64K

Motorola BitSURFR 64K MLPPP

Motorola ModemSURFR 28.8

Motorola Power/Lifestyle 28.8

Null Modem 9600

Null Modem 19200

Null Modem 57600

Null Modem 115200

Practical Peripherals V.34

Smart One 28.8

Supra 14.4

Supra 28.8/33.6

TDK DF2814

Telebit QBlazer

US Robotics Universal

Zoom V-Series

Apple now installs all modem scripts in the Modem Scripts folder (in the Extensions folder) instead of directly in the Extensions folder. Open Transport/PPP does not recognize modem scripts stored outside the Modem Scripts folder.

Auto-routing of modem scripts has been disabled by the Installer. Once Open Transport/PPP is installed, a modem script will not be routed to the Extensions folder if it is dragged into an active System Folder.

The Easy Install mode of the Installer copies all of the Open Transport/PPP modem scripts on your disk. You can choose Custom Install to limit the installation to only the scripts you choose.

NOTE: You can delete any unneeded scripts from the Modem Scripts folder, which is located inside the Extensions Folder. To recognize scripts, look for files of the kind "Modem Link Tool Personal document."

Additional (Unsupported) Modem Scripts

User-contributed scripts are available online. New modems are regularly introduced and Apple is willing to help publish scripts donated by users to aid in making Apple Remote Access and Open Transport/PPP work easily with as many modems as possible.

IMPORTANT: User-contributed scripts are not tested or supported by Apple Computer, Inc., so you should contact the script's author rather than Apple if you run into difficulty using a script downloaded from the unsupported folder. User-contributed modem scripts are provided on an as-is basis as a convenience to Apple customers. They are not warranted to be complete or free from errors, although Apple may choose to review and fully test some user-contributed scripts and include them in future versions of Apple software. If you want to provide Apple with feedback about particular user-contributed scripts, send electronic mail to the following address: msg@apple.com

To find these scripts, go to any Apple Software Updates location and use the following path:

Apple SW Updates

US

Macintosh

Unsupported

CCL

If you want to contribute a modem script, please use the following procedure:

1. Download the sample Read Me file from the User-contributed scripts folder. The file is named

CCL_README_TEMPLATE.

2. Customize the sample Read Me as appropriate for the script you want to submit.

3. Send electronic mail to msg@apple.com and enclose the script in BinHex format.

Scripts will only be posted if they are accompanied by a Read Me explaining the script's purpose and how to contact the author.

(See "Apple Software Updates Sites" near the beginning of this Read Me for information on how to find Apple Software Updates locations.)

Modem Cable Requirements

Most modems require a cable that supports the data terminal ready (DTR) signal. In addition, certain modems require a cable that supports CTS/RTS hardware flow control. To support DTR, the cable must connect pin 20 on the DB-25 connector to pin 1 on the Mini DIN-8. To support CTS/RTS, the cable must connect pin 5 on the DB-25 connector to pin 2 on the Mini DIN-8 and pin 4 on the DB-25 connector to pin 1 on the Mini DIN-8. Contact your modem vendor or Apple-authorized dealer to obtain the necessary cable.

Open Transport/PPP and Apple Remote Access Compatibility

Open Transport/PPP and ARA versions 1.0, 2.0, 2.0.1, and 2.1 are fully compatible and can be used on the same system. Only one can be used at a time.

Versions of ARA before 2.1 install modem scripts directly in the Extensions folder. To make sure that these scripts appear as choices in the Modem control panel, move them to the Modem Scripts folder in the Extensions folder.

ARA 2.1 installs its scripts in the Modem Scripts folder in the Extensions folder. If you are using ARA 2.1, you must install Open Transport/PPP 1.0.1 after ARA 2.1 to get a set of scripts in the Modem Scripts folder that works optimally with both products. The Open Transport/PPP scripts support certain modem-based features, such as error correction and data compression, that improve PPP performance. The ARA 2.x scripts may not support these features.

Also, some scripts included with ARA 2.1 are no longer installed with Open Transport/PPP. These scripts are left on your disk by the Open Transport/PPP installer. They may be usable with Open Transport/PPP, but have not been tested for compatibility by Apple.

Registered User or Guest?

If your PPP server does not require a user name and password, or if the server requires only that you enter a name and password in a terminal window, you can select the Guest mode button in the

PPP control panel. This will hide the Name and Password fields and will cause the Connect button to be enabled as soon as you enter a phone number.

If your server requires a PPP user name and password instead of, or in addition to, a terminal server login, you must use the Registered User mode of the PPP control panel. In this mode, you must enter something in the Name and Number fields to enable the Connect button. If you leave the Password field blank, and "Save password" is not checked, you will be prompted to confirm that you want to connect without a password.

Connect Scripts

The following varStrings have been added to the CCL scripting language for the user name and password:

Name: ^11 or ^U

Password: ^12 or ^P

When the connect script is executed, these varStrings are replaced by the strings stored in the Name and Password fields of the PPP control panel.

When you record a connect script, and you have entered your name and password in the PPP control panel, the connect script that is recorded by the terminal window will replace those strings with the appropriate varStrings.

The ^U and ^P varStrings are provided as mnemonics for the user name and password, but they cannot be used as parameters of some CCL commands like IFSTR. With those commands, use the ^11 and ^12 varStrings instead.

Connection CCL scripts that use the password varString (^12) in WRITE commands do not log the password in clear text. The password is logged as bullets. This is true whether the user records the script or types it in.

More detailed information about the syntax of the CCL language used for both modem scripts and connect scripts is in the ARA Modem Scripting Guide.PDF file in the OT/PPP Extras folder. This file is in Adobe Acrobat format.

Manual Dialing

Procedures for establishing an Open Transport/PPP connection with manual dialing vary according to the type of modem you are using. To ensure that you can make a connection while using manual dialing, you may need to experiment with pressing the Connect button slightly before or after you hear the remote modem answer the phone.

Using an Express Modem or GeoPort Telecom Adapter

If you are using Express Modem software with either an Express Modem or a GeoPort Telecom Adapter, you must turn on 32-bit addressing in the Memory control panel. Using 24-bit addressing may result in incorrect behavior.

Using Global Village PC Card Products

The Global Village software included with your modem adds an entry to the "Connect via" pop-up menu of the Modem control panel called "PowerPort PC Card". Under some circumstances, an entry for the actual slot your PC Card is plugged into will show up as well ("Upper-slot," "Lower-slot"). These slot-specific items should not be used and the "PowerPort PC Card" item should be used instead or the port will be erroneously reported as busy.

Using an ISDN Terminal Adapter

Both Open Transport/PPP 1.0.1 and ARA 2.1 support serial connection speeds of 115,200 and 230,400 bps. By doing so, Apple enables Macintosh users to make ARA and PPP connections over ISDN lines at 64 kbps or even 112 kbps if the ISDN terminal adapters at both ends support channel bonding and proper modem scripts are used.

NOTE: The "Connected at" line of the PPP control panel status box may not accurately reflect the connection speed of ISDN connections. A slower speed may be indicated because ISDN terminal adapter hardware does not report the establishment of second channel connections to the CCL script engine. This will usually happen if you use the Multilink PPP (MLPPP) version of an ISDN script.

Connection speeds of 115,200 and 230,400 bps are not supported by the serial ports on most older Macintosh computers. Here is a partial list of Macintosh models that have fast serial port support:

- Macintosh Centris 660AV, Macintosh Quadra 660AV and Macintosh Quadra 840AV models
- Macintosh Performa 6100CD series
- Power Macintosh 6100, 7100, 7200, 7500, 7600, 8100, 8500, and 9500 models
- Workgroup Server 6150, 7250, 8150, 8550, and 9150 models

To set the built-in serial ports at 115,200 or 230,400 bps, a new serial driver called SerialDMA must be installed to replace the standard Macintosh serial device driver. SerialDMA is provided by Apple, and the current version is 2.0.2. It is highly recommended that the file Serial (Built-in) be installed in the Extensions folder as well on Macintosh models with PCI slots to support these high speeds (38,400 bps and above). System 7.5.3 or later includes the latest version of SerialDMA and the file Serial (Built-in).

NOTE: In general, ISDN terminal adapters have more configuration options than conventional modems. At this time it is not possible for Apple to support all combinations of these options for all the ISDN terminal adapters that are supported. We have attempted to write scripts that work with the most common ISDN configurations. You may have to get a revised script from your Internet service provider or network administrator if your server uses different options. You can also modify a script yourself using the Modem Script Generator or by editing the script text directly.

How to Turn Off or Remove Open Transport/PPP

To disable and remove Open Transport/PPP software by using the Custom Remove option in the Installer, follow these steps:

1. Open the Installer application included with Open Transport/PPP 1.0.1.

The Welcome to the Apple Installer screen appears.

2. Click the Continue button.

The Open Transport PPP Installation screen appears

3. Choose Custom Remove from the pop-up menu in the upper-left corner.

4. In the list that appears, select the files you would like to remove by

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clicking the box next to each file so that an "X" appears in it. To completely remove

Open Transport/PPP, you should select all the files listed.

5. Click the Remove button.

If a window appears asking you whether to quit any open applications, click Continue.

A window will appear telling you to restart your computer.

6. Click the Restart button.

7. Reinstall and configure your previous SLIP/PPP software as required.

To disable Open Transport/PPP without using the Installer, follow these steps:

NOTE: Although the PPP and Modem control panels appear in the Extensions Manager, there is no component in the Extensions Manager that lets you disable Open Transport/PPP. To disable Open Transport/PPP without using the Installer, you must follow the instructions given here.

1. Move the OpenTpt Remote Access, OpenTpt Modem, and OpenTpt Serial Arbitrator shared libraries from the Extensions folder in the active System Folder.

2. Move the PPP Commands file from the Scripting Additions folder in the Extensions folder.

3. Move the PPP and Modem control panels from the Control Panels folder in the active System Folder.

4. Restart your computer.

It is not necessary to move the Modem Scripts folder from the Extensions folder.

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Article Change History:

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TITLE

Mac OS 7.6: Clean Install Instructions

Article ID: 30034
Created: 6/17/97
Modified: 1/19/99

TOPIC

Is there any shortcut for doing a clean system folder install under System 7.6? I would like to do this without having to remove the Finder or System file and renaming the system folder.

DISCUSSION

Purpose of a Clean Installation

A normal system software installation modifies and updates the existing System Folder. A clean installation disables the existing System Folder, leaving all files in place, and forcing the Installer to create a new System Folder.

A clean system installation brings the system software back to the standard configuration. This is necessary when system software has been damaged or modified, preventing a normal installation. It is also useful in troubleshooting.

Clean Install Instructions

Follow these instructions in the order presented.

If you have a Disk Tools Disk:

1. Shut down your Macintosh computer.
2. Insert Disk Tools in the floppy drive, and turn on the computer. At the desktop, the Disk Tools floppy disk's icon should be in the upper-right corner of your screen with your hard drive's icon below it.
3. If the computer ejects the Disk Tools disk, make sure you have an Apple SuperDrive (formerly FDHD) that will read high-density disks and that you are using the appropriate Disk Tools that came with System 7.6.
4. Disk Tools Disk 1 is designed for use with all non-PowerPC machines except those with IDE drives.
5. Disk Tools Disk 2 is designed for use with all machines with IDE drives (LC 630, PowerBook 190, LC 580, Performa 640, etc.), and all PowerPC computers.

If you have an Mac OS 7.6 CD

1. Insert the Apple Macintosh CD in the CD-ROM drive.
2. Restart your Macintosh.
3. Hold down the letter 'C' on the keyboard and turn the computer on. Hold down the key until you see the "Welcome to Macintosh" message.
4. If the computer does not start from the CD, shut down the computer, turn on the computer and immediately hold down the Command-Option-Shift and the large Delete key simultaneously. Hold down these keys until you see the "Welcome to Macintosh" message.
5. At the desktop, the Apple Macintosh CD's icon should be in the upper-right corner of your screen with your hard drive's icon below it. If any other hard drive appears above the Apple Macintosh CD, go to the Control Panels under the Apple Menu, open the Startup Disk item, select the Apple Macintosh CD, close all open windows and restart. The Apple Macintosh CD should then appear above the hard drive.

Run Disk First Aid

1. Disk First Aid can detect and repair problems with a hard disk.
2. Open the Disk Tools disk or the Apple Macintosh CD. Apple Macintosh CD users should open the Utilities or Disk Tools Folder.
3. Double-click on the Disk First Aid icon. Select the main hard drive's icon at the top of the Disk First Aid window.
4. Click on Verify. Disk First Aid will check your hard disk for any potential problems. If it finds a problem, click Repair. It will attempt to fix the problem.
5. Repeat this procedure for each hard disk attached to the system.
6. When you are finished verifying the hard disks, choose Quit from the File menu to return to the desktop.

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If Disk First Aid cannot repair a hard disk, you should back up the hard disk and reinitialize it using the appropriate formatting utility for that drive. For Apple drives, use Apple HD SC Setup or Drive Setup.

Install System 7.6:

From Floppy Disk

This assumes you have started the computer using the Disk Tools diskette.

1. You have finished using the Disk Tools disk so, choose Shut Down from the Special menu. The Disk Tools will automatically eject.
2. Insert the "Install Disk 1" disk into the Macintosh and turn the computer on. The computer will start up using the system file on the Install disk.
3. The "Mac OS 7.6" welcome screen will come up.
4. Follow Step 1 in the Mac OS installer by reading the Read Me file. Click on the document icon, read the file if you have not already, then quit SimpleText and return to the Installer.
5. Follow Step 2 in the Mac OS installer by updating the hard disk driver. Click on the button with 3 stacked drives. This launches Drive Setup or HDSC Setup, depending on which computer you are using. Select your hard drive, then click on the Update Driver button. You will be prompted to quit the application and return to the Installer. (See note)
6. Follow Step 3 in the Mac OS installer by choosing the drive you are installing onto. Click on the drive button. This will prompt you to choose a drive to install onto. Select the appropriate hard drive that has enough room, then click OK.
7. To install the software, click on the Installer button in Step 4 of the Mac OS installer.
8. When the installer window appears, first select the features of 7.6 you wish to install. For further information about these features, refer back to the Read Me file. Then click on the Options button. Select the box next to "Create New System Folder (Clean Installation)" and then click "OK." This will install a new system folder and rename you current folder "Previous System Folder."
9. Insert the other disks when instructed by the Installer.

Note: You cannot update the driver if you are using a non-Apple drive, or if you have used a third-party utility to reformat your drive.

From Mac OS 7.6 CD-ROM

This assumes you have started the computer using the Mac OS 7.6 CD-ROM.

1. Open the Mac OS 7.6 CD icon.
2. Double-click the "Install Mac OS" icon
3. The "Mac OS 7.6" welcome screen will come up.
4. Follow Step 1 in the installer by reading the Read Me file. Click on the document icon, read the file if you have not already, then quit SimpleText and return to the Installer
5. Follow Step 2 in the installer by updating the hard disk driver. Click on the button with 3 stacked drives. This launches Drive Setup or HDSC Setup, depending on which computer you are using. Select your hard drive, then click on the Update Driver button. You will be prompted to quit the application and return to the Installer. (See note)
6. Follow Step 3 in the installer by choosing the drive you are installing onto. Click on the drive button. This will prompt you to choose a drive to install onto. Select the appropriate hard drive that has enough room, then hit OK.
7. To install the software, click on the Installer button in Step 4 of the installer.
8. When the installer window appears, first select the features of Mac OS 7.6 you wish to install. For further information about these features, refer back to the Read Me file. Then click on the Options button. Select the box next to "Create New System Folder (Clean Installation)" and then click "OK." This will install a new system folder and rename you current folder "Previous System Folder."

Note: You cannot update the driver if you are using a non-Apple drive, or if you have used a third-party utility to reformat your drive.

When you are finished with the installation, restart the computer. If you started from the diskette, it will be ejected, however if you started from the CD-ROM you will need to eject the Mac OS 7.6 CD.

After performing a Mac OS 7.6 Clean Install and restarting the computer, "About This Computer" under the Apple Menu will no longer display the specific Macintosh name. Instead, it will display only "Macintosh", "Macintosh Powerbook", or "Power Macintosh" depending on the type of computer it is running on.

Troubleshooting

These steps assume you are using the Clean Install of system software for troubleshooting purposes.

Verify Problem Resolution

After performing a clean installation, verify that you resolved the problem before adding anything to the new System Folder. Adding items to the System Folder before resolving your problem defeats the purpose of performing a clean installation.

Install Non-Standard Items

You can now reinstall the non-standard items from the old System Folder (now named "Previous System Folder") such as fonts, screen savers and device drivers. If possible, you should reinstall these items from their original disks.

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If the original disks are not available, you may move the nonstandard items from the Previous System Folder to the new System Folder. Be careful not to replace anything that is already in the new System Folder. Only move items that are not already in the new System Folder.

- Open each corresponding folder within the System Folder and the Previous System Folder and then compare the contents.
- Move up to 5 items that are not already in the new System Folder and its sub folders from the Previous System Folder and its sub folders.
- Restart your Macintosh.
- Verify that the Macintosh is still starting up properly and that basic functions are working properly.
- Repeat Steps 2-4 until all non-standard items have been moved from the Previous System Folder to the new System Folder.

Final Steps

- Verify your applications are performing normally. If not, refer to the application manual or contact the vendor.
- When the Macintosh behaves as expected and you are sure that all needed items from the Previous System Folder are transferred or reinstalled, move the Previous System Folder to the Trash, and choose Empty Trash from the Special menu.

Mac OS 7.6.1 System Update

If you have the Mac OS 7.6.1 Software update now would be an excellent time to complete the update.

The Mac OS 7.6.1 System Update is available through online services such as America OnLine and Compuserve, and at Apple's Web site at <http://www.apple.com/swupdates>.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software

Category: Mac OS 7.6

Sub Category: General Topics

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Tech Info Library

TITLE

StyleWriter Printers: Print Drivers and Cable Matrix

Article ID: 30153
 Created: 8/29/97
 Modified: 1/12/00

TOPIC

This articles provides a chart of Apple StyleWriter printers, their appropriate printer drivers, and the cables to use.

Most print drivers are available for download from the Apple Software Updates Web site at <http://www.apple.com/swupdates>. Use the print driver name as the search query.

DISCUSSION

Apple StyleWriter Printers			
Printer Driver	Version	Cable	Notes
StyleWriter			
Color StyleWriter 1500	2.2.1	Serial/Shareable	(1)(5)
Color StyleWriter 1500 GX	1.1.1	Serial	(3)(4)
StyleWriter II			
Color StyleWriter 1500	2.2.1	Serial/Shareable	(1)(5)
Color StyleWriter 1500 GX	1.0.2	Serial/Shareable	(3)
Portable StyleWriter			
Portable StyleWriter	1.0.1	Serial	(7)
Color StyleWriter Pro			
Color StyleWriter Pro	1.5.2	Serial/Shareable	(1)
Color StyleWriter Pro GX	1.0	Serial/Shareable	(3)
StyleWriter 1200			
Color StyleWriter 1500	2.2.1	Serial/Shareable	(1)
Color StyleWriter 1500 GX	1.0.2	Serial/Shareable	(3)
Color StyleWriter 1500			
Color StyleWriter 1500	2.2.1	Serial/Shareable	(1)
		EtherTalk	(6)
Color StyleWriter 1500 GX	1.0.2	Serial/Shareable	(3)
Color StyleWriter 2200			
Color StyleWriter 2500	2.2.1	Serial/Shareable	(1)
		EtherTalk	(6)
Color StyleWriter 2500 GX	1.0.2	Serial/Shareable	(3)
Color StyleWriter 2400			
Color StyleWriter 2500	2.2.1	Serial/Shareable	(1)
		LocalTalk	(2)
Color StyleWriter 2500 GX	1.0.2	Serial/Shareable	(3)
Color StyleWriter 2500			

Color StyleWriter 2500	2.2.1	Serial/Shareable	(1)
		LocalTalk	(6)
Color StyleWriter 2500 GX	1.0.2	Serial/Shareable	(3)
Color StyleWriter 4100			
CSW 4000 Series	1.1	Serial	-
CSW 4000 Series (AT)	1.0.3	LocalTalk	-
Color StyleWriter 4500			
CSW 4000 Series	1.1	Serial	-
CSW 4000 Series (AT)	1.0.3	LocalTalk	-
Color StyleWriter 6500			
CSW 6000 Series	3.1.1	Serial, LocalTalk	-
Notes			
1	Uses GrayShare. Apple's GrayShare technology gives you the ability to print over 130 shades of gray and lets you connect your printer to a network through your Macintosh. Color StyleWriter printers uses ColorShare instead of GrayShare.		
2	LocalTalk requires Color StyleWriter 2400 LocalTalk Module (M3458LL/A).		
3	All GX printer drivers require System 7.5.x, or 7.6.x and QuickDraw GX. You cannot use these drivers without QuickDraw GX installed. QuickDraw GX print drivers are not supported with any version of Mac OS beyond 7.6.x, and are not Mac OS 8 compatible.		
4	These drivers were updated from 1.0 when you install QuickDraw GX v1.1.2		
5	Use the StyleWriter 1200 driver to print from a Power Macintosh with System 7.5.2 to a StyleWriter I or II Printer		
6	LocalTalk requires LocalTalk Module (M4615ZM/A). EtherTalk requires EtherTalk Adapter (M4775LL/A).		
7	Contact GDT Softworks for QuickDraw GX versions of these printer drivers.		

Other Printer Driver and Cable Articles:

For additional information on printer drivers and cables check the following TIL articles:

["LaserWriter Printers: Print Drivers & Cable Matrix"](#) article 30154

["Other Printers: Print Drivers & Cable Matrix"](#) article 15372

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: Printers

Category: StyleWriters

Sub Category: General Topics

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Tech Info Library

TITLE

LaserWriter Printers: Mac OS Print Drivers and Cable Matrix

Article ID: 30154
Created: 8/29/97
Modified: 1/12/00

TOPIC

This article provides a chart of Apple LaserWriter printers, their appropriate print drivers, and the cables to use.

Most print drivers are available for download from the Apple Software Updates Web site at <http://www.apple.com/swupdates>. Use the print driver name as the search query.

DISCUSSION

Apple LaserWriter Printers			
Printer Driver	Version	Cable	Notes
Personal LaserWriter LS			
LaserWriter 300/LS	1.2	Serial/Shareable	(1)
LaserWriter 300/LS GX	1.1.1	Serial/Shareable	(3)(5)
Personal LaserWriter NT			
LaserWriter	7.1.2	LocalTalk	-
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
Personal LaserWriter NTR			
LaserWriter	7.1.2	LocalTalk	-
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
Personal LaserWriter SC			
Personal LaserWriter SC	7.0.1	SCSI	9
LaserWriter IISC GX	1.1.1	SCSI	(3)(5)
Personal LaserWriter 300			
LaserWriter 300/LS	1.2	Serial/Shareable	(1)
LaserWriter 300/LS GX	1.1.1	Serial/Shareable	(3)(5)
Personal LaserWriter 320			
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter			
LaserWriter	7.1.2	LocalTalk	(2)
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter Plus			
LaserWriter	7.1.2	LocalTalk	(2)

LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter II SC			
Personal LaserWriter SC	7.0.1	SCSI	-
LaserWriter II SC GX	1.1.1	SCSI	(3)(5)
LaserWriter IINT			
LaserWriter	7.1.2	LocalTalk	-
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter IINTX			
LaserWriter	7.1.2	LocalTalk	-
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter IIf			
LaserWriter	7.1.2	LocalTalk	-
LaserWriter 8	8.6.5	LocalTalk	(4)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter IIg			
LaserWriter	7.1.2	LocalTalk, Ethernet	-
LaserWriter 8	8.6.5	LocalTalk, Ethernet	(4)
LaserWriter GX	1.1.2	LocalTalk, Ethernet	(3)(5)
Apple LaserWriter Printers			
Printer Driver	Version	Cable	Notes
LaserWriter Select 300			
LaserWriter Select 300	1.2	Serial/Shareable	(1)
LaserWriter 300/LS	1.2	Serial/Shareable	(1)
LaserWriter 300/LS GX	1.1.1	Serial/Shareable	(3)(5)
LaserWriter Select 310			
LaserWriter Select 310	7.0.1	Serial	-
LaserWriter GX	1.1.2	Serial	(3)(5)
LaserWriter Select 360			
LaserWriter	7.2	Serial, LocalTalk	-
LaserWriter 8	8.6.5	Serial, LocalTalk	(4)(6)
LaserWriter GX	1.1.2	LocalTalk	(3)(5)
LaserWriter Pro 600			
LaserWriter	7.2	Serial, LocalTalk	-
LaserWriter 8	8.6.5	Serial, LocalTalk	(4)
LaserWriter GX	1.1.2	Serial, LocalTalk	(3)(5)
LaserWriter Pro 630			
LaserWriter	7.2	Serial, LocalTalk, Ethernet	-
LaserWriter 8	8.6.5	Serial, LocalTalk, Ethernet	(4)
LaserWriter GX	1.1.2	Serial, LocalTalk, Ethernet	(3)(5)
LaserWriter Pro 810			
LaserWriter	7.2	Serial, LocalTalk, Ethernet	-
LaserWriter 8	8.6.5	Serial, LocalTalk, Ethernet	(4)(6)
LaserWriter GX	1.1.2	Serial, LocalTalk, Ethernet	(3)(5)
LaserWriter 4/600 PS			
LaserWriter	8.6.5	LocalTalk	-
LaserWriter GX	1.1.2	LocalTalk	(3)(5)

LaserWriter 16/600 PS			
LaserWriter 8	8.6.5	Serial, LocalTalk, Ethernet	(4)(6)
LaserWriter GX	1.1.2	Serial, LocalTalk, Ethernet	(3)(5)
LaserWriter 12/640 PS			
LaserWriter	8.6.5	Serial, LocalTalk, Ethernet	(7)(8)
Color LaserWriter 12/600 PS			
LaserWriter 8	8.6.5	Serial, LocalTalk, Ethernet	-
LaserWriter GX	1.1.2	Serial, LocalTalk, Ethernet	(3)(5)
Color LaserWriter 12/660 PS			
LaserWriter 8	8.6.5	Serial, LocalTalk, Ethernet	-
LaserWriter GX	1.1.2	Serial, LocalTalk, Ethernet	(3)(5)
LaserWriter 8500			
LaserWriter 8	8.6.5	LocalTalk, Ethernet	-

Notes	
1	Uses GrayShare. Apple's GrayShare technology gives you the ability to print over 130 shades of gray and lets you connect your printer to a network through your Macintosh. Color StyleWriter printers uses ColorShare instead of GrayShare.
2	Some LaserWriters and LaserWriter Plus printers are not compatible with LaserWriter 7.1.2 and should use the LaserWriter 7.0 or 8.1.1 driver instead.
3	All GX printer drivers require System 7.5.x, or 7.6.x and QuickDraw GX. You cannot use these drivers without QuickDraw GX installed. QuickDraw GX print drivers are not supported with any version of Mac OS beyond 7.6.x, and are not Mac OS 8 compatible.
4	LaserWriter 8.6.1 driver update is posted online. LaserWriter 8.6.5 is only available with Mac OS 8.6.
5	The drivers are updated from 1.0 when you install QuickDraw GX v1.1.2 or newer. This QuickDraw GX driver is bundled with QuickDraw GX--it is not posted to online services separately. To download this driver from online services you must download all of QuickDraw GX.
6	For support of the optional PostScript Fax Card and use of the Fax Phone Book features, use LaserWriter 8.2.3f.
7	The LaserWriter 8.3.4 driver can be helpful when troubleshooting the LaserWriter 12/640 PS printer. However, it is not recommended for daily use. When using this driver, you must use the PPD supplied from the LaserWriter 8.5.1 software.
8	In order to change the printer name or toggle the startup page on the LaserWriter 12/640 PS, you need to use an Ethernet or LocalTalk connection. You cannot use a serial connection to perform these changes.
9	The Personal LaserWriter SC driver is supported on System 7.5.1 and earlier.

Other Printer Driver and Cable Articles:

For additional information on printer drivers and cables check the following TIL articles:

Article 30153: ["StyleWriter Printers: Print Drivers & Cable Matrix"](#)

Article 15372: ["Other Printers: Print Drivers & Cable Matrix"](#)

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: Printers

Category: LaserWriters

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS 8: No Sleep Choice in Special Menu

Article ID: 30157
Created: 9/5/97
Modified: 9/5/97

TOPIC

I just did a clean install of Mac OS 8 on my PowerBook. Now when I go to select Sleep from the Special Menu I only have the choices of Empty Trash, Eject and Shut Down. How do I put the PowerBook to sleep? Did I install Mac OS 8 wrong?

DISCUSSION

You are most likely in Mac OS 8's "Simple Finder" mode. When in this mode you only have access to the essential features and commands.

To change from "Simple Finder" mode, follow these steps:

- Go to the Edit Menu and select Preferences.
- In the Prefrences dialog box uncheck the Simple Finder check box.
- Then close up the Preferences window and Sleep should now be an avaiible selection under the Special Menu.

"Simple Finder" mode will simplify your menu selections down to the following choices:

The Apple Menu will stay the same.

The File Menu will have:

New Folder
Open
Close Window
Duplicate
Find

Edit Menu:

Cut
Copy
Paste
Preferences

View Menu:

as Icons
as Buttons
as List

Special Menu:

Empty Trash
Eject
Shut Down

Help Menu:

About Help
Show Ballons
Help

Document Information

Product Area: Mac OS System Software

Category: Mac OS 8.0

Sub Category: General Topics

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Tech Info Library

TITLE

Apple Studio Display (15" LCD): Description

Article ID: 30458
Created: 3/18/98
Modified: 1/12/00

TOPIC

This article contains a description of the Apple Studio Display (15" LCD).

DISCUSSION

The Apple Studio Display combines state-of-the-art digital imaging technology with a number of advanced software-based features unique to Apple. The result is a high-performance flat-panel display that is the ideal choice for virtually anyone who spends a lot of time manipulating text, graphics, and other media on-screen. Whether you are a multimedia content creator, a designer, a writer, an educator, or an accountant, the Apple Studio Display can make your job look a lot better to you and make you look a lot better at your job.

When it comes to on-screen image quality, the Thin Film Transistor Active-Matrix LCD technology used by the Apple Studio Display enables it to offer outstanding brightness, contrast ratio, and sharpness, the factors that combine to provide optimal viewing. It also provides you with an impressively wide (120 degree - horizontal) viewing angle, as well as completely eliminating screen flicker (which many people find not only eliminates eyestrain but also significantly increases their productivity). And, of course, there is that key advantage in terms of work-space efficiency: The Apple Studio Display offers all of this performance in a product that is a fraction the size of a traditional computer monitor.

Probably the most distinguishing feature of this display, though, is the advantage it takes of Apple's outstanding hardware/software integration. In the case of the Apple Studio Display, what this enables is an unmatched combination of "smart features" and superior software controls, which adds up to an extraordinarily flexible, responsive device with which to view your work.

In fact, the Apple Studio Display can help you handle virtually any task efficiently and effectively, making that eight hours per day you spend in front of your computer significantly more productive and surprisingly more pleasant. If you deal primarily with graphics, you will be glad to know that the Apple Studio Display requires no special graphics adapter. If you deal more with multimedia, you will appreciate its built-in connectors for both composite and S-video as well as audio input. And if, like many creative professionals today, what you deal with most frequently is a combination, you will find the Apple Studio Display's ability to shift instantly between graphics and video modes invaluable.

The Apple Studio Display, because when you look at all of its high-performance capabilities, you'll really like what you see.

Features

Spectacular display performance:

- offers outstandingly crisp, clear images using Thin Film Transistor Active-Matrix Liquid Crystal Display technology
- produces a completely distortion-free image without any time-consuming geometric correction
- enables flexible viewing through its wide (120 degree - horizontal) viewing angle
- includes both composite and S-video connectors, so you can easily display full-screen video
- eliminates screen flicker, which reduces eyestrain and enhances productivity

Stunning style and ergonomic excellence:

- features a flat-panel design that takes up a fraction of the space required by a traditional display
- includes tilt-and-swivel, and height adjustments for optimal viewing comfort
- offers an alternate picture-frame stand that can further minimize its desktop footprint
- provides easy access to audio/video connectors and screen-control buttons
- reduces cable clutter through an integrated cable guide
- complies with the strict global TCO 95 standards for low power consumption, low emissions, and recyclability

Outstanding hardware/software integration:

- offers an unmatched combination of "smart" features and superior software user controls

..TIL30458-Apple_Studio_Display_(15_LCD)_Description.pdf

- features smart scaling that provides full-screen, high-quality viewing of graphics and video at varying resolutions
- ensures the best-possible performance regardless of display/graphics card or analog input from CPU, through accurate, easy phase adjustment
- makes it easy to optimize your viewing experience using a unique software-based tool that gives you precise, integrated control over white level, black level, and brightness

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Monitors-Displays

Category: Flat-Panel Displays

Sub Category: Apple Studio Display

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Tech Info Library

TITLE

Apple Studio Display 15-inch LCD: Technical Specifications (Rev. A and B)

Article ID: 30460
Created: 3/18/98
Modified: 1/12/00

TOPIC

This article provides the technical specifications for the original Apple Studio Display, and the Revision B display introduced at the 1999 San Francisco MacWorld.

The specifications for the two displays are virtually identical. Differences specific to the Rev. B display are in a separate section at the bottom of this article.

DISCUSSION

Technical Specifications

Screen size/diagonal viewable image size:

- 15.1 inches (diagonal viewable image size)

Screen type:

- Thin film transistor (TFT) active-matrix liquid crystal display

Display colors

- 16 million (maximum)

Viewing angle (typical):

- 120 degree horizontal; 90 degree vertical

Brightness (typical):

- 180 (cd/m²)

Contrast ratio (typical):

- 200:1

Resolution and screen refresh rates:

- 640 x 480 pixels at 60Hz, 67Hz, 72Hz, or 75Hz
- 720 x 400 pixels at 70Hz
- 800 x 600 pixels at 56Hz, 72Hz, or 75Hz
- 832 x 624 pixels at 75Hz
- 1,024 x 768 pixels at 60Hz, 70Hz, 74.9Hz, or 75Hz

User controls (hardware and software):

- Power on/off
- Graphics/video toggle
- Brightness
- Video source select
- Reset
- On-screen display (OSD) navigation
 - Menu select
 - Position
 - Information (display status)

- Language
- Function adjustment
- Menu off
- o On-screen display functions
 - Tracking (course, fine)
 - Position (vertical, horizontal)
 - White level
 - Black level
 - Sharpness
 - White point

Screen treatment:

- o Antistatic, antireflective coating

Connectors and cables:

- o Input:
 - 15-pin D-sub for RGB video
 - 4-pin DIN for S-video
 - RCA-type connector for composite video
 - RCA-type connectors for audio
 - 6.5mm DC connector for DC input
- o Output:
 - Mini-stereo connector for audio
- Two 4-pin DIN connectors for Apple Desktop Bus

Electrical requirements:

- o Line voltage: 100 to 120 V AC (200 to 240 V DC)
- o Frequency: 50 to 60 Hz, single phase
- o Power: 30 W (operating)

Agency approvals:

- o FCC Part 15 Class B
- o CISPR 22 Class A (EN500821f) - complies with European EMC directive
- o DOC Class B
- o MPR -II
- o VCCI Class 2
- o CE Mark
- o EPA Energy Star compliant
- o IEC 950
- o UL 1950
- o CSA 950
- o EN60950
- o NUTEK
- o TCO '95

Environmental requirements:

- o Operating temperature: 50 degree F (10 degree C) to 95 degree F (35 degree C)
- o Storage temperature: -4 degree F (-20 degree C) to 140 degree F (60 degree C)
- o Operating humidity: 20% to 80%, noncondensing
- o Storage humidity: 5% to 95%, noncondensing
- o Operating altitude: 0 to 10,000 ft. (0 to 3,048 m)
- o Shipping: 0 to 35,000 feet (0 to 10,606 m)

System requirements:

- o Works with Power Macintosh or other Mac OS-based systems with Power PC processors running Mac OS 7.5 or later*
- o Works with Windows 95- and Windows NT-based systems

* Does not work with Macintosh PowerBook 1400, 2300, 3400, or 5300 systems, nor with 680X0 or Power PC-accelerated 680X0 computers

Size and weight:

- o With desktop stand: 15.0 in. (minimum) to 19.3 in. (maximum) by 15.7 in. by 9.8 in. (38.1 cm to 49.0 cm by 39.9 cm by 24.9 cm)
- o With picture-frame stand: 11.6 in. by 15.7 in. by 6.9 in. (29.7 cm by 39.9 cm by 17.5 cm)

- With desktop stand: 10 lbs. (4.5 kg)
- With picture frame stand: 5 lbs. (2.3 kg)

Ordering Information:

Order No: M6356LL/A (azul)

- Apple Display software
- VGA-to-Macintosh adapter
- Power cord and adapter
- Picture-frame stand
- User's manual
- Limited warranty

Order No. M6356LL/B (blue and white)

- Apple Display software
- VGA-to-Macintosh adapter
- Power cord and adapter
- Picture-frame stand
- User's manual
- Limited warranty

For more information about this product, or to find out where to buy Apple products - through a reseller or from the Apple Store - visit <http://www.apple.com> or call 1-800-538-9696 in the US. In Europe please contact your local Assistance Centre.

REV. B STUDIO DISPLAY SPECIFICATIONS

Unless specifically noted below, all Rev. A specifications hold true for the Rev. B display.

Brightness (Typical)

- 200cd/m²

Resolution and screen refresh rates

- 1,024 by 768 pixels at 60Hz, 70Hz, or 75Hz

Connectors and cables

- 15-pin mini D-Sub VGA connector

Power supply electrical requirements

- Power: less than 35W (operating)

System requirements:

- Works with Power Macintosh or other Mac OS-based systems with Power PC processors running Mac OS 8.0 or later*

Size and weight

- With desktop stand: 12 lbs. (5.5 kg)
- With picture frame stand: 7.7 lbs. (3.5 kg)

Apple Studio Display: Differences Between Revisions A and B		
Feature	Apple Studio Display (rev B)	Apple Studio Display (rev A)
Brightness (typical)	200cd/m ²	180/m ²
Resolution and screen rates	1024 x 768 at 60Hz, 70Hz, or 75Hz	1024 x 768 at 60Hz, 70Hz, 74.9Hz, or 75Hz
Connectors and cables	15-pin mini D-Sub VGA connector	15-pin D-sub for RGB video
Power (operating)	less than 35 watts	less than 30 watts
System requirements	Power PC-based Macintosh running Mac OS 8.0 or later	Power PC-based Macintosh running Mac OS 7.5 or later
Weight (with desktop stand)	12 lbs. (5.5 kg)	10 lbs. (4.5 kg)
Weight (with picture frame stand)	7.7 lbs. (3.5 kg)	5 lbs. (2.3 kg)

Document Information

Product Area: Monitors-Displays
Category: Flat-Panel Displays
Sub Category: Apple Studio Display

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Tech Info Library

TITLE

PowerBook G3 Series: System Reset Key Sequence

Article ID: 30539
Created: 5/6/98
Modified: 1/4/00

TOPIC

This article describes the new key sequence used to reset the system.

DISCUSSION

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

The Macintosh PowerBook G3 Series has a new key sequence to reset the system.

The four key sequence is Shift-Fn (function)- Ctrl (control)-Power.

The first three keys are located in the lower left hand corner of the keyboard. The power button is just above keys F9 and F10.

The PowerBook G3 Series does not have a hardware reset button. This key sequence is its equivalent. This is marked on the back panel of the system.

This key sequence is used to reset the Power Management Unit.

Resetting the machine in this fashion will also reset the PRAM (parameter RAM).

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Computers
Category: PowerBook
Sub Category: PowerBook G3 Series

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TITLE

PowerBook G3 Series: Read Me

Article ID: 30540
Created: 5/6/98
Modified: 12/21/99

TOPIC

This article contains the Read Me document for the PowerBook G3 Series (M4735)

DISCUSSION

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. To visually identify which type of computer you have, close the display and inspect the display case. A Macintosh PowerBook G3 has a small, six-color Apple logo on the display case. A Macintosh PowerBook G3 Series computer has a large Apple logo on the display case that is not six-colored.

Important Information About Your Macintosh PowerBook Computer

This document provides late-breaking news about your Macintosh PowerBook G3 Series computer. You may want to print this document to keep with the user's manual for your PowerBook.

Important Information About Your Hard Disk's Format

Your computer's hard disk uses a new, improved file format called Mac OS Extended format (sometimes called HFS Plus). Mac OS Extended format has two benefits: it increases the number of files you can store on your hard disk, and it lets your computer work with data more efficiently than previous formats.

Using Norton Utilities

Norton Utilities version 3.5 is not compatible with Mac OS Extended format. When version 3.5.3 or 3.5.2 detects a Mac OS Extended format drive, it will not attempt to repair the drive.

Warning: Norton Utilities versions 3.5.1 and earlier cannot recognize that a hard disk is in Mac OS Extended format. Using Norton Utilities version 3.5.1 or earlier on your hard disk can result in hard disk corruption and loss of all your data.

If you experience problems with your hard disk, Apple Computer recommends using the version of Disk First Aid included on your system software CD. See the Symantec Web site at http://www.symantec.com/techsupp/num/kbase_num.html for more information on Norton Utilities and Mac OS Extended format.

Using Other Hard Disk Utility and Disk Locking Programs

Some other disk utility and disk locking programs are incompatible with Mac OS Extended format. Before you attempt to use a disk utility or disk locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the manufacturer or the vendor that supplied the program.

Using SCSI Disk Mode

To use your PowerBook in SCSI disk mode, the computer to which you are connecting your PowerBook must have Mac OS 8.1 or later installed. If the computer has an earlier version of system software, you will not be able to access your PowerBook's hard disk.

Important Information About Your System Software

The system software on your computer and on the PowerBook G3 Series CD is specially designed to work with Macintosh PowerBook

G3 Series computers. The general release of System 8.0 and the System 8.1 Update are not compatible with your PowerBook. (The system software installed on your computer also has the version number 8.1, but it includes components designed only for your PowerBook model. These components are not included in the general release of System 8.1.)

Important Information About Your Battery

Your battery has external indicator LEDs that let you monitor the charge level of your battery. Before the LEDs will report levels correctly, the battery must be fully discharged and recharged to calibrate the battery. After this calibration, the LEDs will report charge levels properly.

Important Information About External CD-ROM Drives

If you are using an external CD-ROM drive to play audio CDs through the line-in jack on your PowerBook, the audio input source will be switched to the expansion bay each time you select a new track. You can use the SoundSource control strip portion to select Sound In again.

Important Information About Computer Sleep

When Using IrDA:

When the IrDA method of infrared (IR) communication is selected in the AppleTalk control panel and AppleTalk is on, the computer will not go to sleep automatically.

When Using a Communications Program:

Many communications programs, such as PPP, Apple Remote Access, or other dial-up programs, monitor the computer's modem port to check for incoming transmissions. This may mean that the PowerBook will not sleep automatically (after the interval set in the PowerBook control panel). Forcing sleep while connected may result in a lost connection or crash. When your computer is using the battery, you may want to quit a communications program whenever you aren't using it to conserve the battery's charge. (See the user's manual that came with your communications program for more information.)

Important Information About Using an External Monitor

Your PowerBook display must be open when using an external monitor because heat from the PowerBook processor is partially dissipated through the keyboard. Closing the display will cause the PowerBook to go to sleep. Macintosh PowerBook G3 Series computers do not support operation with the display closed.

When connecting an AppleVision monitor to the PowerBook, be sure to connect the monitor's ADB cable to the ADB port (on the back panel). This connection is required by the AppleVision software.

When using an Apple 15" Multiscan monitor in simulscan mode, be sure to set the PowerBook display to turn off rather than dim in sleep. If the computer is set to dim, the external display may behave erratically before going to black. To set the display:

1. Open the Energy Saver control panel
2. Click Advanced Settings
3. Check "Turn off the PowerBook display instead of dimming it."

For general information and instructions on using the external monitor, see these Mac OS Help topic areas:

- Monitors (standard settings)
- Sound (for using the sound capabilities built into an AppleVision monitor)

To set up or change most settings for an external monitor, you use the Monitors & Sound control panel.

The PowerBook G3 Series will support the Portrait and Two Page Grayscale Displays only in 256 Colors/Grays mode.

Important Information About Your Expansion Bays

Booting from Expansion Bay devices:

If the system folder on your internal hard drive is invalid and you need to boot from a expansion bay module, be sure the module is inserted prior to booting or restarting your computer. If you insert the module after booting, you will see a blinking question mark.

Floppy Installation:

When installing software with the floppy module in the left bay, you may experience problems recognizing master disks if the software uses copy-protected disks. If your software requires installation from a CD and authorization from a master (key) floppy, put the floppy in the left bay and the CD module in the right prior to beginning the installation process. If the program cannot locate the floppy in the left bay at the time of authorization, you'll need to cancel the authorization process and quit the installer. Eject the CD and remove the module from the right bay, then insert the floppy module and floppy disk. Launching the application will then allow you to complete the authorization process.

DVD/CD Drive and Waking From Sleep:

There is a period of time when waking from sleep that the DVD/CD drive will allow you to manually eject a mounted DVD/CD using the button on the drive tray. This will cause unexpected behavior. Closing the tray will correct the situation.

DVD Disc Won't Mount After Bootable CD:

If you have a DVD-ROM drive in the right expansion bay of your computer and start up the computer with a bootable CD-ROM disc in the drive, but not as the start-up volume, you may not be able to use DVD discs after starting up until you remove the CD-ROM disc and restart the computer. To use the DVD-ROM drive make sure you do not have a bootable CD-ROM disc in the drive when starting the computer unless you are starting up from it. After starting the computer, you may then use both CD-ROM and DVD discs. This is not an issue if you have the PowerBook G3 Series bootable CD in your drive.

Important Information About Infrared Communication

If you experience trouble connecting to other computers or performance degradation when the IRTalk method of infrared (IR) communication is selected, try moving the computers further apart or off-angle to one another.

Important Information About Using a Microphone

To avoid getting feedback when you use a PlainTalk microphone, be sure that the microphone is at least 1 foot away from the computer. Feedback can also be reduced by lowering the system volume in the Sound control strip portion or the Monitors & Sound control panel.

Important Information About PC Cards

PC Card ATA Hard Drives:

Before you can use a PC card ATA hard drive as a bootable device, you must first run Drive Setup to update the driver on the card. Drive Setup is available in the Utilities folder on your hard drive and also on your PowerBook G3 Series CD.

Zoomed Video PC Cards:

When using applications that use a video digitizer component such as Apple Video Player, be sure to insert your Zoomed Video PC Card in the bottom slot prior to launching the application. If the card is inserted after the application is launched, the picture will not be displayed. You will need to quit and relaunch the application for it to display properly.

Important Information About Using the QuickTake Camera

For best results, use the QuickTake Image Access control panel to look at images in the camera and transfer them to your Macintosh. This method is faster and more reliable than using the PhotoFlash program.

Important Information About QuickTime

When using QuickTime to play MPEG movies with either MoviePlayer or Apple Video Player, you may want to change one or more of the following settings to achieve optimum playback.

- If you have more than 16 megabytes (MB) of RAM, reset the disk cache to at least 1 MB in the Memory control panel.
- Hide the Control Strip, using the Control Strip control panel, if you cannot set the disk cache to 1 MB.
- Turn off virtual memory in the Memory control panel.

Changing the disk cache should permit optimum playback. To reset the disk cache and turn off virtual memory, follow these steps:

1. Open the Memory control panel.
2. Use the arrows at the upper-right section of the control panel to set the disk cache to 1 MB or more.
3. Click Off in the virtual memory section of the control panel.
4. Restart the computer.

To hide the Control Strip, follow these steps:

1. Open the Control Strip control panel.
2. Click the Hide button.

To avoid feedback loops or stuck notes when playing MIDI files with Movie Player, turn virtual memory off. For information on how to turn virtual memory on and off, choose Help from the Help menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?".

Important Information About Virtual Memory

Virtual memory is a feature of the Macintosh that lets you use part of your hard disk as additional memory. Your computer comes with virtual memory turned on. If you are using an application program designed especially for PowerPC-based computers (often called a

"native" application program), turning on virtual memory lets your application use memory more efficiently. If you check the program's Get Info box before and after turning on virtual memory, you'll see that the numbers in the Memory Requirements box change.

For information on how to turn virtual memory on and off, choose Help from the Help menu when the Finder is active. Click the Memory topic area, and then click "How do I use hard disk space as memory?".

To improve performance, you can also install more memory (RAM) in your computer. See the user's manual that came with your computer for more information.

Important Information About the Apple Color StyleWriter 4000 Series

Your PowerBook may "crash" when printing on a Color StyleWriter 4000 series printer (CSW 4100 or 4500) if the version of its driver is 1.0.3 or earlier. To determine the version of the installed driver software, open the Extensions Manager control panel and locate the CSW 4000 Series extension. The version number will be in a column to the right of the extension name. The CSW 4000 Update 1.1 is available on the Apple Software Updates Web site at: <http://www.info.apple.com/swupdates>.

Important Information About Apple Remote Access (ARA) 3.0

The read me file titled "About Mac OS 8.1 Update" contains some incorrect information about ARA 3.0. The ARA 2.1 installer is not included on your hard drive or CD, so there is no danger of installing it over 3.0. Also, the version of Internet Access installed on your hard drive is compatible with ARA 3.0. The problem with the Internet Dialer has been fixed.

Important Information About At Ease 5.0 and Mac OS Extended Format

The disk security feature of At Ease is not compatible with the format of your hard drive. If you use At Ease and need to restrict access to the computer, please use Password Security instead. Future versions of At Ease will be compatible with Mac OS Extended Format.

Important Information About Third Party Applications

Norton Utilities:

Norton Utilities version 3.5 is not compatible with Mac OS Extended format. When version 3.5.3 or 3.5.2 detects a Mac OS Extended format drive, it will not attempt to repair the drive.

Warning: Norton Utilities versions 3.5.1 and earlier cannot recognize that a hard disk is in Mac OS Extended format. Using Norton Utilities version 3.5.1 or earlier on your hard disk can result in hard disk corruption and loss of all your data.

If you experience problems with your hard disk, Apple Computer recommends using the version of Disk First Aid included on your system software CD. See the Symantec Web site at: <http://www.symantec.com/nu/num-hfs.html> for more information on Norton Utilities and Mac OS Extended format.

Now Contact/Up-To-Date:

The Now Up-to-Date & Contact CD includes outdated versions of Apple software. You do not need to install these pieces because the software included on your computer and the PowerBook G3 Series CD is more current.

The Easy Install of Now Up-to-Date & Contact will install items that will overlay your existing menubar items. To avoid this after installing, you can turn off the menubar items in the QuickContact and QuickDay control panels. To avoid this while installing, follow these instructions to do a Custom Install:

1. Double-click "Install Now Up-to-Date & Contact".
2. Click Continue when the installer splash screen appears.
3. Read or print the license agreement then click Continue to accept it.
4. Click Custom.
5. Scroll down until you see "Now Up-to-Date Application" and "Now Contact Application".
6. Press the Shift key while clicking on the two applications.
7. Click Install.

This will install just the applications, not the corresponding control panels and menubar items. If you would like to install additional items, follow the instructions above and select the items from the window.

..TIL30540-PowerBook_G3_Series_Read_Me.pdf

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series

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Tech Info Library

TITLE

iMac: ClarisWorks Registration Information

Article ID: 30702
Created: 8/18/98
Modified: 9/15/99

TOPIC

When I launch the ClarisWorks that came on my iMac, it asks me to fill out a registration form, but I cannot find a registration number anywhere in the box. Am I missing something?

DISCUSSION

No, there is nothing missing from your iMac box. The registration notice that comes up when you run ClarisWorks is one of the items left behind from its previous development at Claris Corporation and will be removed from Apple's rebranded version, AppleWorks.

The one registration card that came with your iMac is sufficient to register all Apple products included with your computer, including ClarisWorks. Please take a moment to fill it out and mail it in, or follow the instructions on the card to register via the web.

To avoid any further inconvenience, it is recommended that you click the "Never" button in the ClarisWorks registration notice. The registration card produced by this notice has outdated return address information and should not be used as a substitute for the card that came in your iMac box.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Software
Sub Category: Apple Bundled SW

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Tech Info Library

TITLE

Macintosh: Printing to a PostScript Printer via IrDA

Article ID: 30707
Created: 8/20/98
Modified: 6/10/99

TOPIC

With the release of LaserWriter printer driver version 8.6, printing over the IrDA communication channel is now possible.

DISCUSSION

First verify your computer supports IrDA by reviewing Article 20928: ["Macintosh Infrared: Is It IrDA Compatible?"](#).

If your computer is equipped with infrared technology that uses the IrDA protocol, you can establish a wireless TCP/IP or AppleTalk connection to a network using an IrDA network access device, or exchange files with another IrDA equipped computer.

Depending on the type of network protocol that you are going to use, choose Infrared Port (IrDA) from the "Connect via" pop-up menu in either the AppleTalk control panel or TCP/IP control panel.

LaserWriter driver, version 8.6, provides IrDA printing capabilities to Macintoshes having IrDA ports, such as the PowerBook G3 and PowerBook G3 Series, PowerBooks 2400 and 3400, iMac, and so on, for printing to PostScript printers having IrDA ports.

This includes the HP LaserJet 5MP and HP LaserJet 6MP, as well other 100% compatible IrDA printers.

LaserWriter 8.6 is included with Mac OS 8.5.

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Document Information

Product Area: Computers
Category: General Topics
Sub Category: General Topics

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Tech Info Library

TITLE

V.90 Protocol: Connectivity Discussion

Article ID: 30734
Created: 9/2/98
Modified: 1/22/99

TOPIC

My iMac comes with a 56 kbps capable modem, why should I use a modem script that limits my speed to 33.6 kbps?

DISCUSSION

The iMac modem is the first modem Apple has shipped that supports the new V.90 protocol. Although derived from the competing x2 and K56flex protocols, the V.90 specification is in its infancy and will be undergoing changes over the next several months.

When a modem is attempting to establish a connection with another modem it will attempt to connect at the highest speed possible. The speed of the connection is determined by two factors:

1. The capabilities of the other modem

The remote modem must support the same protocols. The iMac modem supports both V.90 and K56flex protocols so it can connect to other modems that support these protocols at speeds between 33.6 kbps and 53 kbps (although the modem technology is capable of 56 kbps, FCC regulations limit the top speed to 53 kbps). If the remote modem does not support either of these protocols, the iMac modem will then try using the V.34 protocol which has a top speed of 33.6 kbps. The modems will continue to try slower protocols until they find one that both modems are capable of supporting.

2. Quality of the connection:

Modem connections are being made over regular voice telephone lines. The quality of a connection between two points can be different each time the connections is made. Once the modems have negotiated a protocol to use, they test the ability of the connection to sustain the speed of the connection. The higher the speed of the connection, the more susceptible it is to noise on the phone lines. Therefore, even when making a V.90 connection between the same two points, one connection could be 44000 bps while the other could be 38000 bps.

If the quality of the connection is such that it can not support the slowest V.90 connection then the modems will step down to the next protocol.

What we are observing with the iMac modem is this V.90 implementation is overly aggressive. Instead of negotiating down to support a slower but more stable connection, the modem keeps trying to connect at a higher speed. This causes the remote modem to determine that a connection can't be established and it hangs up.

There are times when this aggressive behavior will manage to complete a connection, only to be dropped minutes later since the quality of the phone connection really can not support that connection speed.

The V.34 only modem script is a work around for customers that are unable to connect using the V.90 protocol. In many cases, even if the V.90 implementation negotiated downward properly, the resulting connection might end up being between 28.8 kbps and 33.6 kbps due to phone line quality. In these cases there is no performance difference between using the V.34 and V.90 protocols.

Apple is working with others in the modem industry to improve the behavior of the V.90 implementation. The iMac modem is capable of being upgraded via software.

Currently, modem firmware updates are available from the Apple Software Updates updates page at: <http://asu.info.apple.com>

For additional information on 56 kbps connectivity, see:

Tech Info Library Article 24482: "[56Kbps Modems: Getting the Fastest Connection](#)"

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: Communications

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Tech Info Library

TITLE

iMac Discussion Board: Frequently Asked Questions

Article ID: 30808
Created: 10/15/98
Modified: 12/21/99

TOPIC

This article contains iMac commonly asked questions, and information regarding technical issues that may be encountered with an iMac. If the link to the answer to your question is not here, try using the Tech Info Library Search function, or visit the iMac Discussion Board to find more current information.

Links to TIL Articles regarding the following Frequently Asked Questions (FAQ) included in this article:

- How do I know if my iMac has all the Apple-recommended updates and where can I find these updates?
- I get a flashing question mark displayed on the screen momentarily when the iMac starts up. It goes away but I was wondering why it happens and how to get rid of it.
- My Control Strip moved up near the left center of the screen. How did it get up there? How do I move it back down?
- I am having trouble getting my Epson Color Stylus 600 or Epson Stylus 740 to work with my iMac. What should I do?
- Some of my menu options, such as Sleep, Restart, Get Info, and View Options are no longer listed. What is causing this symptom?
- What type of random-access memory (RAM) and video random-access memory (VRAM) do I need for my iMac?
- How do I upgrade the memory in my iMac?
- Why is there a hole in the I/O door?
- My modem dials automatically. How do I get it to stop?
- How do I change my default browser and e-mail application?
- How do I register the ClarisWorks application that came with my iMac?
- What books do you recommend to learn about the Macintosh computers in general, Mac OS, and iMac?
- My computer starts up with a green light but there is no video.
- Certain CDs make a vibrating noise when used in my iMac. What is causing this noise and how can I eliminate it?
- I just installed memory in my iMac and now I have no sound. What could be causing this symptom?
- I am having some difficulty in connecting to my Internet service provider (ISP). Sometimes I will connect successfully, but the connection is dropped after a few minutes. What can I do to resolve this issue?
- I get intermittent freezes and type xx errors. What should I do?
- What Apple products are compatible with the iMac's Infrared (IR) port and how do I network my PowerBook G3 series computer to the iMac using the IR port?
- I want to know more about connecting my iMac to another infrared capable computer or printer. How do I set it up to share files?

DISCUSSION

Question: How do I know if my iMac has all the Apple-recommended updates and where do I get them if it needs them?

Answer: The iMac revision A and B may need the iMac Firmware Update and iMac update 1.1. The newer revisions do not need them but their presence can be confirmed using the Apple System Profiler.

[TIL Article 58174](#) : "iMac: When to Install Available Updaters"

[TIL Article 24777](#) : "iMac Update 1.1: Misidentified With AppleSystem Profiler 2.1.2"

[TIL Article 58175](#) : "iMac: Confirming Installation of the AppleModem Updater"

The updates are available at Apple Software Updates. See the note at the end of this document.

Question: I get a flashing question mark displayed on the screen momentarily when the iMac starts up. It goes away but I was wondering why it happens and how to get rid of it.

[TIL Article 58042](#) : "iMac: Blinking Question Mark at Startup"

Question: My Control Strip moved up near the left center of the screen. How did it get up there? How do I move it back down?

[TIL Article 60241](#) : "Mac OS: Moving the Control Strip"

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Question: I am having trouble getting my Epson Color Stylus 600 or Epson Stylus 740 to work with my iMac. What should I do?

Answer: If you have not done so already, install iMac Update 1.1. The software is available from the Apple Software Updates site.

Also make sure you install the latest iMac/USB driver for your specific printer. You can download the latest Epson drivers from <http://www.epson.com/support/instans/macijans.html>.

Review the recommended Apple software updates suggested by the USB device manufacturer. If you encounter issues with the Epson printing software, remove all the Epson printer software and reinstall the latest software version.

Question: Some of my menu options, such as Sleep, Restart, Get Info, and View Options are no longer listed. What is causing this symptom?

[TIL Article 30157](#): "Mac OS 8: No Sleep Choice in Special Menu"

[TIL Article 58047](#): "Mac OS 8.5: Keyboard Commands Disabled by Simple Finder"

Question: What type of random-access memory (RAM) and video random-access memory (VRAM) do I need for my iMac?

[TIL Article 58007](#): "iMac: Type of Memory to Order to Upgrade RAM and VRAM"

[TIL Article 43011](#): "iMac: About Memory, DRAM and Video Memory Configurations"

Question: How do I upgrade the memory in my iMac?

[TIL Article 43012](#): "iMac: Installing Memory (1 of 2)"

[TIL Article 43013](#): "iMac: Installing Memory (2 of 2)"

Question: Why is there a hole in the I/O door?

Answer: The hole is for using a finger to open the door.

[TIL Article 58055](#): "iMac: Hole in I/O Door Not For Cables"

Question: My modem dials automatically. How do I get it to stop?

Answer: There are numerous settings to automate a connection to the Internet. Most settings are listed in the following article.

[TIL Article 24877](#): "Modem Dials Automatically"

Question: How do I change my default browser and e-mail application?

Answer: Apple recommends using the Internet control panel.

[TIL Article 58041](#): "iMac: Changing Internet Settings and Applications"

If you choose to use Internet Config instead of the Apple Internet control panel use the latest version of Internet Config. Review the following articles for further tips.

[TIL Article 24679](#): "Mac OS 8.5: Internet Control Panel or Internet Config?"

[TIL Article 24676](#): "Mac OS 8.5: Mac OS Help Crashes With Type 3 Error"

[TIL Article 58168](#): "Mac OS 8.5: Error Opening Internet Control Panel or File Exchange"

[TIL Article 24736](#): "Sherlock: Internet Config Conflict"

Question: How do I register the ClarisWorks application that came with my iMac?

[TIL Article 30702](#): "iMac: ClarisWorks Registration Information"

Question: What books do you recommend to learn about the Macintosh computers in general, Mac OS, and iMac?

Answer: Your local book store will have many excellent books covering those subjects. Here are a few books recommended by Macintosh users like yourself.

- "The Little Mac Book"
- "Sad Macs, Bombs, and Other Disasters : And What to Do About Them"
- "Beyond the Little Mac Book"
- "The Little iMac Book"
- "The Macintosh Bible (Bible Series)"
- "Mac OS 8.5 for Dummies (For Dummies)"
- "The Complete Idiot's Guide to Macintosh OS 8.5"

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- "Mac Answers!"

Here are some iMac-specific titles:

- "The iMac for Dummies"
- "Sam's Teach Yourself iMac in 10 Minutes"
- "The iMac Book "
- "Quick Start Your iMac Training CD - Macintosh (1 of 1) Vol 1"

Question: My computer starts up with a green light but there is no video.

Answer: If you can get to computer to restart with the video install the iMac Firmware Update. If the issue continues or the update has no affect have the computer checked by a local Apple-authorized service provider .

Question: Certain CDs make a vibrating noise when used in my iMac. What is causing this noise and how can I eliminate it?

Answer: It is normal to get a slight vibrating noise with certain CDs when using a high-speed CD-ROM drive like the drive in the iMac. The artwork on a CD-ROM disc may cause the CD's center of gravity to be slightly off center. Because the CD is spinning at such a fast rate, the CD will wobble, which in turn causes a slight vibration. This is perfectly normal and does not damage your computer or CD-ROM drive in any way.

If you are using a CD with a removable, sticky label, remove the label prior to using the CD.

Also install iMac CD Update 2.0. This software update improves the way the CD-ROM drive handles unbalanced CDs. It may reduce the amount of vibration for most CDs.

The software is available from the Apple Software Updates site.

TIL Article 20233: "Macintosh Computers: 8x-Speed (or faster) CD-ROM Drive & Vibration"

Question: I just installed memory in my iMac and now I have no sound. What could be causing this symptom?

Answer: It is possible the audio cable may have been accidentally disconnected or it may not be seated properly. Remove the rear access cover from the computer. You will notice four cables attached to the main logic board. The cable furthest to the left is the audio cable. Make sure it is seated properly. Reseat the cable if necessary. The Mac OS Info center has directions on how to install memory in your computer. Refer to these directions if you need help removing the rear access cover. Step 10 in the directions has a good diagram depicting the audio cable.

TIL Article 58044: "iMac: No Sound or Startup Chime Heard"

Question: I am having some difficulty in connecting to my Internet service provider (ISP). Sometimes I will connect successfully, but the connection is dropped after a few minutes. What can I do to resolve this issue?

TIL Article 30893: "iMac: Troubleshooting Modem Not Responding Error"

TIL Article 24789: "iMac: Troubleshooting "No Dial Tone""

TIL Article 24803: "iMac: Troubleshooting Unreliable Modem Connections"

TIL Article 58046: "iMac: ISP Compatibility With v.90 Specification"

TIL Article 30734: "V.90 Protocol: Connectivity Discussion"

TIL Article 24482: "56Kbps Modems: Getting the Fastest Connection"

Question: I get intermittent freezes and type xx errors. What should I do?

Answer: For information on troubleshooting freezes and type xx error, refer to page 9 of the Emergency Handbook provided with your iMac.

TIL Article 1749: "Macintosh System Error Codes Explained"

TIL Article 16473: "Mac OS: Troubleshooting Startup Problems"

iMac Technical Articles

Macintosh Troubleshooting

Question: What Apple products are compatible with the iMac's Infrared (IR) port and how do I network my PowerBook G3 series computer to the iMac using the IR port?

Answer: The iMac's IR port is compatible with some PowerBook computers including the PowerBook 2400, 3400, G3, and PowerBook

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G3 Series computers. Other IR capable Apple products are not compatible because they use a different infrared lens and transmitter. The Apple MessagePad and eMate are not compatible with the iMac's IR port.

[TIL Article 58012](#): "iMac: Infrared Communications"

Contact the printer manufacturer regarding infrared compatibility with the IrDA port on the iMac. If you already have a printer that supports infrared you can test it and set it up as follows.

[TIL Article 30861](#): "PowerBook: Printing to an IrDA Printer"

Question: I want to know more about connecting my iMac to another infrared capable computer or printer. How do I set it up to share files?

[TIL Article 20928](#): "Macintosh Infrared: Is It IrDA Compatible?"

[TIL Article 58239](#): "iMac: Sharing Files Via IrDA"

[TIL Article 30707](#): "Macintosh: Printing to a PostScript Printer via IrDA"

The following article can help you locate the Apple software updates mentioned here:

[TIL Article 14724](#): "Where To Find Apple Software Updates"

Lists online services for free Apple software updates. To locate iMac specific updates search "iMac."

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: iMac

Category: iMac Support

Sub Category: FAQ

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Tech Info Library

TITLE

PowerBook: Printing to an IrDA Printer

Article ID: 30861
Created: 12/8/98
Modified: 12/9/98

TOPIC

How can I print from my IrDA-capable PowerBook to an IrDA laser printer? The Infrared control panel says that it sees the printer. The printer's IRDA light comes on and I have switched AppleTalk over to the IRDA port.

However, in the Chooser, when I click on the laser printer's icon, the printer does not show up on the right hand side. What else do I need to do?

DISCUSSION

Create a new Infrared desktop printer with the Desktop Printer Utility. This utility is located in the Apple LaserWriter Software Folder in the Apple Extras folder. Double-click the Desktop Printer Utility. Choose New from the File Menu. Then select Printer (Infrared) from the window that opens.

Another window open which has a Generic, printer icon. To change to the printer of your choice click on the Change button.

The Printer File window opens displaying a choice of printers. Select your printer from the list and click Select. This window will close and the name of the selected printer will appear in the Untitled window. Choose Save As from the File Menu and save this Printer file as a desktop printer.

The desktop printer icon will appear on the desktop.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers
Category: PowerBook
Sub Category: General Topics

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Tech Info Library

TITLE

Remote Access: Modem Not Responding Alert

Article ID: 30893
Created: 1/22/99
Modified: 11/4/99

TOPIC

When Remote Access is not receiving correct responses from the modem (usually, no response at all), the connection attempt will fail with an alert.

Use this troubleshooting path to help identify the source of the failure.

DISCUSSION

Where Open Transport/PPP is installed, substitute "PPP control panel" for "Remote Access control panel" throughout.

1. Reset the modem and check its connections

- a. External modems: Press the modem's reset button if available, or disconnect its power for least 15 seconds. If the modem does not use a separate power cable, it draws power from its connection to the computer. Internal modems: Shut down the computer for at least 15 seconds.
- b. "Check its connections" in the alert refers to the modem's connection to the computer, not the telephone outlet. This is not easily checked for internal modems, but for external modems, check the modem and power cables for secure connections and signs of damage. This is especially important if the symptom is intermittent or can be caused by moving the modem or its cables. If the modem normally provides any visual signs of power, such as illuminated LED's, check for them.

2. Configure the Modem control panel

Configure the Modem control panel to use the modem script appropriate for the modem. Apple-branded internal modems use these scripts, by computer:

- **Power Macintosh G3 (Blue & White):** PowerMac G3 Internal 56K, PowerMac G3 Int56K (v.34 Only)
- **PowerBook G3 Series:** PowerBook G3 Internal 56K, PowerBook G3 Int56K (v.34 Only)
- **iMac:** iMac Internal 56K, iMac Internal 56k (v.34 Only)
- **Power Macintosh G3 & Power Macintosh 6500:** Apple/GV 56K
- **PowerBook 3400 & PowerBook G3:** PowerBook 3400/G3 Internal 33.6
- **Geoport Telecom Adapter (internal or external):** Geoport/Express Modem

3. Configure the Remote Access control panel and test

- a. Open the Remote Access control panel. Enter any name (user ID), password, and telephone number
- b. Click Connect. If the symptom persists, continue to the next step.

4. Configure the Extensions Manager control panel for Mac OS All

- a. Open the Extensions Manager control panel and select whichever Mac OS All set is available from the Selected Set menu. For example: Mac OS 8.6 All, iMac All, and so on.
- b. If the modem requires any of its own extensions (excluding fax or telephony extensions), ensure they are installed and enabled. Enabled extensions show an "x" in the adjacent checkbox. Extensions Manager will ask to duplicate the Mac OS All set before additional extensions can be enabled. Allow it to do so.

Of the modems that shipped with Apple computers, the following require the extensions listed in order to respond:

- **Apple 56K modem (but not Apple/GV 56K modem):** iMac Modem Extension, PowerMac G3 Modem, or PowerBook G3 Series

Modem, depending upon the computer

- **Geoport Telecom Adapter:** Apple Telecom Modem, Express Modem Tool, Geoport for Power Macintosh, Geoport Telecom Adapter, Geoport Serial Driver, Serial Extension (PM 6100/7100/8100 only), Shared Library Manager, Shared Library Manager PPC, and the Express Modem control panel

- **PowerBook 3400/G3 Internal Modem/Ethernet 33.6 card:** PowerBook 3400 Ethernet extension and PowerBook 3400 Modem extension, or just the PowerBook 3400/G3 Modem extension

c. Close Extensions Manager and restart the computer. Any extensions that may have captured the modem port for their own use are disabled and will remain so until re-enabled in Extensions Manager.

d. After restarting, open the Remote Access control panel and click Connect. If the symptom does not recur, perform extensions troubleshooting to isolate the extensions responsible for the issue. It may only be necessary to correctly configure the software that used them

5. Reset Parameter RAM

a. Select Restart from the Special menu, then immediately press Option-Command-P-R (four keyboard keys, all pressed together), keeping them pressed until the computer chimes or restarts twice. It will not work if the Caps Lock key is depressed, and may not work with non-Apple keyboards.

b. Open the Remote Access control panel and click Connect. If the symptom does not recur, it indicates that there was a conflicting setting in Parameter RAM, probably created by one or more of the disabled extensions, either because it was involved in a system crash, is in conflict with other extensions or with the Mac OS, or was not configured correctly. Perform extensions troubleshooting, but the fault may not immediately or ever return, even after re-enabling the extensions.

6. Trash preferences

Damaged Remote Access preferences may be at fault. This is unlikely given the symptom, but easy enough to confirm prior to the more time-consuming tasks ahead.

a. Move these preference files to the desktop:

- System Folder : Preferences : **Modem Preferences**

- System Folder : Preferences : Remote Access : **Remote Access Connections**

Open Transport/PPP users:

- System Folder : Preferences : **Modem Preferences**

- System Folder : Preferences : **PPP Preferences**

b. Repeat steps 2 & 3 to reconfigure the control panels and test. If the symptom persists, the preferences were not at fault. If you wish to reclaim the configuration information they contained, move them back to their original locations and allow them to replace the newer preference files.

7. Reinstall the modem software, if applicable

Many modems today don't require specific software in order to function for a data connection. Where such software is needed, it is usually for faxing or telephony (using the modem for voice calls). Rarely, a modem might require an extension to enable data compression and error correction (as with some Global Village Teleport Bronze modems, for example). But for this symptom, we're only concerned with software that is required to enable even the barest functionality.

a. If the modem requires such software and the modem never worked reliably, either with this computer or the version of Mac OS in use, check with the manufacturer for a compatible version. Users of Geoport Telecom Adapters, for example, commonly install older, incompatible versions of Apple Telecom that either came with the adapter or with the previous version of Mac OS that was installed.

b. If the modem requires such software and the modem was working successfully before, the software may be damaged. Reinstall the modem software. For Apple modems, this is more likely to affect Geoport Telecom Adapters, for which the software required is abundant. For other Apple modems, continue to the next step.

8. Perform a Clean Install or Clean Restore

The Mac OS may be damaged.

a. Perform a clean install or clean restore of the operating system. If there is any connectivity or modem software to be installed separately, do so immediately afterward.

b. Repeat steps 2 and 3 to retest. If the issue still exists, there is likely a hardware problem requiring service. If you are using an external modem, the problem may be further isolated between the computer and modem by testing the modem on another computer, or confirming that other devices will work on the modem port of this computer.

In many modem troubleshooting calls the customer has only one phone line, and you (the support person) are talking with the customer on that line. So how can you troubleshoot when the line is in use? Here's how:

A "modem not responding" error occurs **before** the modem dials. If the issue is resolved, you will hear the modem attempt to take over the line, then the customer will get a "no dial tone" error. If the issue persists, the "modem not responding" error will persist.

No need to hang up so the customer can try a fix, then get a callback from the customer, then hang up again so the customer can try something else, and so on.

Document Information

Product Area: iMac

Category: iMac Software

Sub Category: Communications; Troubleshooting

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Tech Info Library

TITLE

Mac OS X Server: Release Notes

Article ID: 30925
Created: 3/25/99
Modified: 9/2/99

TOPIC

The following documents are installed as part of Mac OS X Server in the /System/Documentation/ReadMe/ directory.

DISCUSSION

Release Notes (/System/Documentation/ReadMe/)

- Tech Info Library Article 60101: ["Mac OS X Server: About Mac OS X Server"](#)

Networking & Services folder:

- Tech Info Library Article 60102: ["Mac OS X Server: About the Apache Web Server"](#)
- Tech Info Library Article 60103: ["Mac OS X Server: About Apple File Services"](#)
- Tech Info Library Article 60104: ["Mac OS X Server: AppleShare Client 3.8.2 Read Me"](#)
- Tech Info Library Article 60105: ["Mac OS X Server: About the Dec21x4Ethernet Driver"](#)
- Tech Info Library Article 60106: ["Mac OS X Server: About Kerberos on Mac OS X Server"](#)
- Tech Info Library Article 60107: ["Mac OS X Server: About Linux NFS Volumes"](#)
- Tech Info Library Article 60108: ["Mac OS X Server: About NetInfoManager"](#)
- Tech Info Library Article 60109: ["Mac OS X Server: About Networking"](#)
- Tech Info Library Article 60110: ["Mac OS X Server: About NetworkManager"](#)
- Tech Info Library Article 60111: ["Mac OS X Server: About QuickTime Streaming Server"](#)
- Tech Info Library Article 60112: ["Mac OS X Server: About Security With Mac OS X Server"](#)
- Tech Info Library Article 60113: ["Mac OS X Server: About The Group Wheel"](#)

Programs & Applications folder:

- Tech Info Library Article 60122: ["Mac OS X Server: About Disk First Aid"](#)
- Tech Info Library Article 60123: ["Mac OS X Server: About the Find Application"](#)
- Tech Info Library Article 60124: ["Mac OS X Server: Mac OS Compatibility \(MacOS.app\) v2.2 Release Notes"](#)
- Tech Info Library Article 60125: ["Mac OS X Server: About MailViewer"](#)
- Tech Info Library Article 60126: ["Mac OS X Server: About Setting Preferences"](#)
- Tech Info Library Article 60127: [" Mac OS X Server: About QuickTime on Mac OS X Server"](#)
- Tech Info Library Article 60128: [" Mac OS X Server: About Terminal"](#)
- Tech Info Library Article 60129: [" Mac OS X Server: About TextEdit"](#)
- Tech Info Library Article 60130: [" Mac OS X Server: About the Workspace Manager"](#)

Others folder:

- Tech Info Library Article 60114: ["Mac OS X Server: Apple Menu Release Notes"](#)
- Tech Info Library Article 60115: ["Mac OS X Server: About Exception Handling on Mac OS X Server"](#)
- Tech Info Library Article 60116: ["Mac OS X Server: Floppy Disk Driver Release Notes"](#)
- Tech Info Library Article 60117: ["Mac OS X Server: About Mac OS Format Volumes"](#)
- Tech Info Library Article 60118: ["Mac OS X Server: About Installation Applications"](#)
- Tech Info Library Article 60119: ["Mac OS X Server: About Japanese on Mac OS X Server"](#)
- Tech Info Library Article 60120: ["Mac OS X Server: About Apple Multiscan 720 Display"](#)

- Tech Info Library Article 60121: "**Mac OS X Server: About Printing**"

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS: Extensions Troubleshooting/Extensions Manager
Features

Article ID: 30929
Created: 3/29/99
Modified: 1/12/00

TOPIC

This article explains the functionality of the Extensions Manager and how to troubleshoot your extensions. The troubleshooting section is at the end of this article.

DISCUSSION

History

The Extensions Manager first made its appearance in the Mac OS in System 7.5. It simplified the way Macintosh users determined what INITs were conflicting with other INITs. In Mac OS 7.6, the Extensions Manager went through a major update and is what we still use today.

What Is Extensions Troubleshooting?

Troubleshooting Extensions is process of trial and error. This process will require you to restart multiple times, which does not harm your Macintosh computer.

How Do I Know if I Have an Extensions Conflict?

If you can startup with the system extensions (Mac OS 8.x All) and your problem does not recur, then you have got an extensions conflict. If you still have the problem using the set Mac OS 8.x All, you should perform a clean installation of your system software.

Is Disabling All the Extensions in the Extensions Manager the Same as Pressing the Shift Key at Startup?

Not quite, see: Tech Info Library Article 17392: "[Extensions Manager: Extensions Off Compared To Shift Down](#)"

EXTENSIONS MANAGER FEATURES

What Are Sets?

A set consists of Extensions, Control Panels, System Extensions, Startup Items and Shutdown Items. The Selected Set displays the name of the current extensions set.

Mac OS 8.x All and Mac OS 8.x Base are locked sets supplied by Apple. These are known-good extension sets, and you have to duplicate these sets to modify them. My Settings is a generic name for a set that has not been named.

View Menu

While you're in the Extensions Manager, open the View Menu. You have more options than just viewing as Folders. Try "View by Packages", you can turn on and off entire software packages with a single click (very useful in troubleshooting extensions). View by Items is one big list of all your Extensions, Control Panels, Startup and Shutdown Items (similar to the Extensions Manager in System 7).

Opening Extensions Manager at Startup

Before the first extension displays at startup, hold down the Space Bar to bring up the Extensions Manager. The changes you make reflect this startup so you do not have to restart again. You have all the same options here as you do in the Finder, most of them in the Selected Set pop-up window.

Press Command and Option keys, close the window and you will restart.

Can I Backup My Extension List?

Not exactly, you can save a list to a SimpleText document from the File Menu. You also can create a report using Apple System Profiler, as well as other useful system information. Also, you cannot import sets.

Identifying Extensions

Be sure to check the Show Item Information section. Information provided there depends on what the vendor wrote into the extension. You can also Get Info in the Edit menu while in the Extensions Manager.

What are the Extensions and Extensions (Disabled) Folders?

In your System Folder, there are Extensions and Extensions (Disabled) folders, setup by the Extensions Manager. They are created if they are not found in the System Folder. When you close the Extensions Manager, all the changes you made are moved by the Finder to the appropriate folder. For example, you disable an extension in the Extensions Manager. Once you quit, the item is moved from the Extensions folder to the Extensions (Disabled) folder.

Troubleshooting Extensions

First, save the current set that has the problem. Next switch to Mac OS 8.x All or Base and restart. If the problem still persists, try disabling the extensions by restarting and pressing the Shift key. If that does not do it, then perform a clean installation of your system software.

Duplicate Mac OS 8.x Set and name it something like "Troubleshooting" or "Test." Using the problem set you saved, determine which extensions from that set are different from our Troubleshooting set. Turn on 3 to 5 of those items while in the Troubleshooting set and restart. Continue this process of turning on items and restarting until the problem reoccurs. You can also turn on a Package at a time, if you choose to View as Packages.

Once the problem occurs, you know that it was one of the last few items you turned on. So start turning off the last group one at a time until you determine which it is.

Once you determine the problem extension, check for version incompatibilities with other extensions or the Mac OS. If you have determined that they are compatible, then try removing and reinstalling the software used to install the extension.

Remember to run a disk repair utility, such as Disk First Aid. If you reinstall a software package, remember to remove the preferences, for that software package, from the Preference Folder. Just drag the preferences to the Trash and empty the Trash.

If you are still having problems, contact the vendor for further assistance.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software

Category: Mac OS 8.0

Sub Category: General Topics

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Tech Info Library

TITLE

PowerBook G3 Series (Bronze Keyboard): Mold Lines in Plastic

Article ID: 31053
Created: 7/16/99
Modified: 12/21/99

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

The PowerBook G3 Series (Bronze keyboard) has mold lines in the plastic. Is this normal?

DISCUSSION

Mold lines will appear during the manufacturing process. On the PowerBook G3 Series (Bronze keyboard), these lines are faintly visible on the top case between the keyboard and trackpad, and between the trackpad and trackpad button.

These mold lines are normal, and the unit does not need to be repaired.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information
Product Area: Computers
Category: PowerBook
Sub Category: PowerBook G3 Series (Bronze Kbd)



Tech Info Library

Mac OS 8: Claris Emailer Lite 1.1v4 and Sending Compressed Files

TOPIC

I received Emailer Lite 1.1v4 as part of Mac OS 8 internet access. I am unable to send compressed enclosures (the default setting).

DISCUSSION

Unlike the stand alone Claris Emailer-Lite Installer 1.1v3, the Installer inside IAFIT in Mac OS 8 omits the "File Transfer Tools" file.

You will need to manually install Aladdin's DropStuff w/EE 4.0. The Installer for this software can be found following this path on your Mac OS 8 System:

- Internet folder
- Internet Utilities folder
- Aladdin folder
- DropStuff w/EE 4.0 Installer

Article Change History:

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Tech Info Library Article Number:32014

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Tech Info Library

TITLE

iMac: About Memory, DRAM and Video Memory
Configurations

Article ID: 43011
Created: 7/29/98
Modified: 1/15/99

TOPIC

This article explains iMac Memory, including DRAM configurations and Video Memory Configurations.

DISCUSSION

(This information is gleaned from the Info Center online help system, which is located on your computer's hard disk.)

About Memory

Your computer contains two types of memory: dynamic random-access memory (DRAM) and video memory. You can add DRAM or video memory to your computer in packages called Dual Inline Memory Modules, or DIMMs.

DRAM Configurations

You can increase your computer's DRAM up to 128 megabytes (the revision /A iMac) or 256 megabytes (the revision /B iMac and the 266 megahertz iMac) by adding Dual Inline Memory Modules (DIMMs) to the 2 RAM DIMM slots on the main logic board. For more information about the type of DIMM you must use, see Memory Technical Specifications.

Note: Although revision /A iMac computers may work with larger capacity SO-DIMM's than stated, these larger sizes weren't available for official testing at the time of product development, and so therefore aren't included.

Important: This computer uses Synchronous Dynamic Random-Access Memory (SDRAM) DIMMs. DIMMs from older Macintosh computers are not compatible with your computer and should not be used even though they may fit into the RAM DIMM slots.

There are two slots where memory can be added--an upper slot and a lower slot. You should install memory only in the upper slot. To add additional memory in the lower slot, you must have an Apple-authorized dealer install the memory.

Video Memory Configurations

Your computer comes with 2 MB of video memory built into the logic board and a video memory expansion slot that allows you to expand video memory up to 6 MB. You may want to add more video memory for better performance on applications that use 3D graphics.

The expansion slot accepts a 2 MB or 4 MB Synchronous Graphic RAM (SGRAM) SO-DIMM. For more information about the type of DIMM you must use, see the article on Memory Technical Specifications.

Important: Use only SGRAM SO-DIMMs.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: General Topics

..TIL43011-iMac_About_Memory_DRAM_and_Video_Memory_Configurations.pdf

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Tech Info Library

TITLE

iMac: Installing Memory (1 of 2)

Article ID: 43012
Created: 7/29/98
Modified: 11/1/99

TOPIC

This article is the first of two parts describing the specific process for installing memory in your iMac.

For more information on the type of memory used to upgrade your iMac, read TIL article 58007:
"iMac: Type of Memory to Order to Upgrade RAM and VRAM".

For information on upgrading memory on an iMac (Slot Loading), refer to TIL article 58466:
"iMac (Slot Loading): Memory Upgrades".

DISCUSSION

Installing Memory in Your Computer

Important: Before you add memory, print these instructions. You won't be able to view this information, because you must turn off your computer to install additional memory.

Installing memory involves four procedures:

1. Turning off the computer.
2. Opening the computer.
3. Inserting the memory module into a specific slot.
4. Closing the computer.

Warning: Apple Computer recommends that you have an Apple-certified technician install memory. Apple does not provide telephone support for memory upgrades. Consult the service and support information that came with your computer for instructions on how to contact an Apple-authorized service provider or Apple for service. If you install these items yourself, you risk damaging your equipment, and this damage is not covered by the limited warranty on your computer. See an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Follow these instructions to install memory. Before installing memory, carefully read the "DRAM Configurations" and "Video Memory Configurations" sections above.

Note: Do not use a powered screwdriver. You may damage the screws on your computer.

1. If your computer is turned on, turn it off by choosing Shut Down from the Special menu.
2. Unplug all the cables from the computer, including the power cord.

Warning: If your internal modem is connected to a telephone line, make sure you disconnect the telephone line from the internal modem port before you open the computer's cover. This prevents electric shock.

3. If the computer is secured, unlock it by removing the security cable from the handle.
4. Place a soft towel or cloth on the desk or surface.
5. Holding the handle with one hand and the front of the computer with the other, slowly lift up and turn the computer so the screen is facing

down on the cloth.

6. Use a Phillips screwdriver to unscrew the screw on the lower back cover.

7. Grab the small plastic handle on the cover and pull the cover away from the computer.

8. Set the cover aside.

9. Touch any exposed metal on the logic board/drive assembly. This helps protect the computer from damage caused by electrostatic discharge.

Important: Always do this before you touch any parts, or install any components, inside the computer. To avoid generating static electricity, do not walk around the room until you have completed the installation of the memory and closed the computer.

10. If your computer has clamps over any cables, release the cables underneath the clamp. If the clamp has a screw, unscrew it first, then release the cable.

11. Disconnect the four cables connected to the main logic board. Note: You may need to use a screwdriver to disconnect the video cable.

12. Move the cables aside so they are out of your way.

13. Use a Phillips screwdriver to unscrew the two screws inside the plastic handle.

14. With one hand on the plastic handle, gently pull the handle straight up and out of the computer.

15. Lay the logic board/drive assembly on a clean surface.

This procedure is continued in [iMac: Installing Memory \(2 of 2\)](#)

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Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: General Topics

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Tech Info Library

TITLE

iMac: Installing Memory (2 of 2)

Article ID: 43013
Created: 7/29/98
Modified: 6/17/99

TOPIC

This is part two of a two part article explaining how to install memory in your iMac.

DISCUSSION

(This information is gleaned from the Info Center online help system, which is located on your computer's hard disk.)

(Note: The first half of this procedure is covered in TIL Article 43012: [iMac: Installing Memory \(1 of 2\)](#)

16. If you moved around the room at all, you may have generated some static electricity. Touch any exposed metal on the logic board/drive assembly. This helps protect the computer from damage caused by electrostatic discharge.

17. Carefully snap off the metal shield by lifting both sides.

18. To install a DRAM DIMM, align it in the DRAM slot and push the DIMM down until it snaps into place.

Important: Do not touch the DIMM's edge connectors. Handle the DIMM only by the other edges. The SO-DIMM is designed to fit into the slot only one way. Align the notch in the DIMM with the small rib in the slot and insert the DIMM at an angle. Snap the DIMM into place by pushing down on it until it is lying flat and parallel to the main logic board. Your DIMM's shape and components may vary.

19. Snap the metal shield back into place.

20. To install video memory, place the SO-DIMM in the slot.

21. With one hand on the plastic handle, gently lower the logic board/drive assembly straight down into the computer until it is in place.

22. Use a Phillips screwdriver to screw the two screws back inside the plastic handle.

23. Reconnect the four cables. Note: You may need to use a screwdriver to reconnect the video cable.

24. If your computer has clamps over any cables, tuck the cables underneath the clamp. If the clamp has a screw, replace the clamp over the cable, then screw the clamp into place.

25. Replace the plastic cover. Make sure you snap it back into place around all of the edges. Note: If the cover doesn't fit properly, check the cable connections to make sure the cables are layered properly.

26. Use a Phillips-head screwdriver to screw the screw back on the lower back cover.

27. If you locked the back cover, place the security cable through the handle and lock the cover.

28. Reconnect the cables and power cord you disconnected from your computer and turn on the computer. If you need help reconnecting your cables, see the setup instructions that came with your computer.

Warning: Never turn on your computer unless all of its internal and external parts are in place. Operating the computer when it is open or missing parts can be dangerous and damage your computer.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: General Topics

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Tech Info Library

TITLE

iMac and iBook: Connecting to a 10/100Base-T Ethernet Network

Article ID: 43021
Created: 7/30/98
Modified: 12/21/99

TOPIC

This article provides information on connecting your iMac or iBook to a 10/100Base-T Ethernet network.

DISCUSSION

To connect your computer to an Ethernet network that uses twisted-pair cable, follow these steps:

Note: The hardware connection requires a twisted-pair cable with an RJ-45 connector, which looks like a wide version of a standard telephone connector. Take care to use the correct cable.

1. Plug one end of the RJ-45 twisted-pair cable into the 10/100Base-T Ethernet port on your computer.
2. Plug the other end of the twisted-pair cable into an RJ-45 network outlet. In a small home network, you may be plugging directly into the Ethernet hub. In a larger office network, you will likely plug the cable into an RJ-45 jack in the wall.

You should now have access to other devices such as printers and file servers on the network. If you are connecting to a 100Base-T network, you must use Category-5, otherwise known as Cat-5, cable.

TIL article 43022: "[Creating a Small Ethernet Network in Your Home or Office](#)" has additional details on creating a small network.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: Communications

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Tech Info Library

TITLE

Creating a Small Ethernet Network in Your Home or Office

Article ID: 43022
Created: 7/30/98
Modified: 12/14/99

TOPIC

This article gives some general advice on how to create a small Ethernet network in your home or office.

DISCUSSION

If you don't have access to an established Ethernet network, you can create a small Ethernet network between several computers. This is useful if you have one or more computers at your home or office and want to transfer information between them, or share a printer or DSL (Digital Subscriber Line). And, with an AirPort Base Station, all users on the Ethernet network get access to the Internet.

Setting up the network

To set up a small Ethernet network, you need an Ethernet hub, which is a device that has multiple Ethernet ports. You can purchase an Ethernet hub at an Apple-authorized retailer or electronics retailer.

The built-in Ethernet capabilities of your computer allow you to connect to any standard Ethernet network using 10/100Base-T twisted-pair cables, thin or thick coaxial cables, fiber optic media, or other standard Ethernet cables.

You can connect directly to an Ethernet network that uses 10/100Base-T twisted-pair cable. The use of other cables will require a special transceiver, available from the network vendor or an electronics retailer.

Note: Do not confuse the Ethernet port with the modem port. Though they look similar, connecting a phone line to the Ethernet port may cause damage to the phone or computer.

Configuring Your Network Connection

After you physically connect your computer to an Ethernet network, you need to configure the software for your network connection. You use either the AppleTalk control panel or the TCP/IP control panel, or both.

Use the AppleTalk control panel to set up your connection to an AppleTalk network (that is, a network using the AppleTalk protocol). Use the TCP/IP control panel to set up your connection to the Internet and to a TCP/IP network. TCP/IP stands for Transmission Control Protocol/Internet Protocol, a standard system for connections between computers of different types, as well as the Internet.

For help with setting up and using your AppleTalk and TCP/IP control panels, see Mac OS Help.

You may need additional information about the network to which your computer is connected, or about the service through which your computer is connected to the Internet, to configure these control panels properly. To get this information, you may need to contact your network administrator or your Internet service provider.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: Communications

..TIL43022-Creating_a_Small_Ethernet_Network_in_Your_Home_or_Office.pdf

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Tech Info Library

TITLE

iMac: Where Can I Get a Floppy Drive?

Article ID: 43028
Created: 7/30/98
Modified: 11/18/99

TOPIC

Since the iMac does not come with a floppy disk drive built-in, is there a external floppy drive available? Are there other removable media drives, such as Zip or external hard disk drives available?

While this article specifically mentions the iMac, the information is relevant for any Power Macintosh computer which uses USB.

DISCUSSION

Yes, there are a number of third-party companies providing a number of low cost floppy drives, removable media drives, and external hard disk drives.

All of these products will connect to your iMac via the new industry standard Universal Serial Bus, or USB for short. USB is a peripheral bus standard that allows you to connect a variety of peripheral devices to your computer. Many Macintosh computers use Small Computer Standard Interface (SCSI), Apple Desktop Bus (ADB), and serial connections to connect peripheral devices. USB will eventually replace these standards.

Here are a few of the products already announced:

The Imation SuperDisk USB Drive, which reads both 1.44 MB and 120 MB disks. Further information available at:
<http://www.imation.com/>

The Iomega 100 MB Zip Drive. Further information available at: <http://www.iomega.com/>

LaCie external 2, 4 and 8 Gigabyte hard disk drives and an external DVD-ROM drive. Further information available at:
<http://www.lacie.com/>

VST Technologies FireWire Full Height Zip250 Drive, FireWire Zip100. Further information available at:
<http://www.vsttech.com>

For further information, please refer to the following Tech Info Library articles which address many USB Frequently Asked Questions or visit Apple's USB page at: <http://www.apple.com/usb/>

Related articles on connecting older peripherals to iMacs:

- [Article 43028: iMac: Where Can I Get a Floppy Drive?](#)
- [Article 43027: iMac: Can I Connect My Serial Printer?](#)
- [Article 43025: iMac: Can I Use My Old Joystick?](#)
- [Article 43026: iMac: Can I Use My External SCSI Hard Disk?](#)

Additional information on USB:

USB is a multi-platform standard. You can use any USB device that is developed for use with the Mac OS. Check for the Mac OS logo on the USB product packaging, which tells you that the USB product will work with Macintosh computers.

Manufacturers of USB devices for personal computers that do not use the Mac OS may offer software you can install on your computer so that you can use their USB device with your Mac OS computer. For more information, contact the device's manufacturer. For the latest information on USB in Apple products, visit: <http://www.apple.com/usb/>

Document Information

Product Area: iMac

Category: USB

Sub Category: General Topics

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Tech Info Library

TITLE

iMac and iBook: How to Backup Hard Drive Contents

Article ID: 43031
Created: 7/31/98
Modified: 1/13/00

TOPIC

This article suggests some approaches on how to back up your hard disk drive.

DISCUSSION

iMac and iBook feature Universal Serial Bus (USB) ports that make it easy to attach the kind of mass-storage devices that are ideal for backing up the larger hard drives in today's personal computers.

For example, let's say you're using a mere 10 percent of your hard drive--400 MB--for data or applications you need to back up regularly. As an alternative to backing up to floppy disks, you could reach for a single SyQuest SparQ disk--each holds up to 1 GB. Or four Iomega Zip disks--each holds up to 100 MB. Or four Imation SuperDisks--each holds up to 120 MB.

There are also network solutions. If you're connected to a network, you can use products such as Retrospect from Dantz Development to back up your files--to a large volume on the network, a DAT drive, or some other media--and you don't even have to be at your computer when it gets backed up.

Finally, you can arrange for your hard drive to be backed up right over the Internet, including Apple's iDisk:

iDisk: <http://www.apple.com/itools/>
BackJack Internet Backup Service: <http://www.backjack.com>
iMacbackup.com: <http://www.iMacbackup.com/>
Aladdin Systems: <http://www.aladdinsys.com/freedrive/index.html>

To see some of the USB storage devices, and other USB devices, refer to: <http://www.apple.com/usb>

To read about Retrospect: <http://www.dantz.com>

For further thoughts on what to do about a substitute for a floppy drive, read the following Tech Info Library article:

Article 43028: [Where's the Floppy Drive?](#)

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: General Topics

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Tech Info Library

TITLE

Troubleshooting Handbook: Reinstalling Your Computer's Software

Article ID: 43033
Created: 8/5/98
Modified: 3/18/99

TOPIC

Reinstalling Your Computer's Software is part one of chapter 4: Reinstalling Your Computer's Software of the Troubleshooting Handbook.

DISCUSSION

Reinstalling Your Computer's Software

If you are having problems with the system software or applications that came with your computer, you can replace software in the following ways:

- reinstall system software-if you encounter system software problems or you want to add or remove system software components
- reinstall individual applications-if you inadvertently erased an application on your hard disk, are having problems with an application, or an application is damaged
- restore your hard disk with its original contents-if you want your computer to have its original system software, factory settings, and applications that came with the computer

Reinstalling System Software

The Mac OS Install application, located on the software install CD, lets you reinstall the Mac OS (or specific components of the Mac OS) on your computer. This CD also includes a Read Me document that describes how to reinstall custom system software settings and application software that came with your computer.

Before Installing System Software

Before you begin the installation, do the following:

- Customized preferences and settings: If you have preferences or settings in control panels and individual applications, make a note of them so you can easily reset them if necessary, after you install system software.

Note: If you are having problems with your computer, you may not be able to open any files with preferences or customized settings.

- Software that runs in the background: If you are using software that runs in the background, such as virus protection software or access control software, you may need to turn it off before you reinstall system software. For instructions, see the documentation that came with the software.
- If you are installing the Mac OS on a PowerBook: Plug the PowerBook in, open the Energy Saver control panel, and set the PowerBook so it doesn't go to sleep. Turn off password protection in the Password Security control panel.

Important It is highly recommended that you back up the data on your hard disk before installing system software. Apple is not responsible for any lost data.

Using the Installer

Note: If something goes wrong, see Article 43035: "[Problems During Installation.](#)"

1. Start up from the software install CD-ROM disc.
2. Double-click the Mac OS Install icon.

A Welcome screen describes the steps in the installation process.

3. When you're ready to begin, click Continue.

The Mac OS Install application guides you through the steps necessary to install the software. For help during installation, click the Help button in the upper-right corner of the window. If you encounter problems, see Article 43035: ["Problems During Installation."](#)

4. To perform a clean installation, skip to Article 43034: ["Performing a Clean Installation"](#). Otherwise, continue with the following step.

In a clean installation, the Installer creates a new System Folder on your hard disk. Performing a clean installation can be a complicated and lengthy procedure, but if you are experiencing problems or your computer seems slow, it may help.

5. Choose the destination disk from the pop-up menu and click Select.

A dialog box appears asking if you want to reinstall or add/remove software.

6. Do one of the following:

- To install all the software you need for your computer, click Reinstall and follow the onscreen instructions. This is the best choice to solve system software problems.
- To add or remove specific system software components, click Add/Remove. Proceed to the next section, "Custom Installation."

Selecting Which Software to Install

After selecting a disk, you need to decide between a standard or a custom installation. The standard installation installs all the software you need for your model of computer and is the best choice to solve system software problems. A custom installation lets you add or remove specific system software components.

Note: Keep in mind that the more components you install, the more memory, or RAM, is used and the greater the potential for software conflicts. Install only the items you expect to use.

Standard installation: Click Reinstall. Proceed to "Standard Installation" below.

If necessary, use the pop-up menu to choose another destination disk.

Custom installation: Click Add/Remove. Proceed to "Custom Installation" below.

Custom Installation

1. In the window that appears, select the software to install, the software to remove, or both.
2. To install or remove specific items within a component, open the "Installation mode" pop-up menu and choose Customized Installation, or Customized Removal.

The Recommended Installation option installs all items within the software component.

3. If you choose Customized Installation or Customized Removal, a list of the available items within the software component appears. Select the items you want to install or remove. Click the triangle on the left to see individual features within each item. To get information about an item, click the box in the right column with the letter i in it.

4 Repeat steps 1-3 for each software component you want to install.

5. When you're finished, click Start. If you see messages about problems with your hard disk, see Article 43035: ["Problems During Installation"](#)

6. When a message appears saying that the installation process finished, click Quit to close the program or click Continue to install or remove other software.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac

Category: iMac Support

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Sub Category: Online-Internet

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Tech Info Library

TITLE

Troubleshooting Handbook: Performing a Clean Installation

Article ID: 43034
Created: 8/5/98
Modified: 7/29/99

TOPIC

Performing A Clean Installation is part two of Chapter 4: Reinstalling Your Computer's Software, part of the Troubleshooting Handbook.

DISCUSSION

Performing a Clean Installation

This section provides instructions for what is commonly called a clean installation of system software. A normal system software installation replaces changed system files and adds new ones, but leaves other files alone. When you install system software using a clean installation, the Installer creates a new System Folder on your hard disk. The old System Folder is renamed Previous System Folder.

Note: Performing a clean installation does not erase the contents of your hard disk. Performing a clean installation can be a complicated and lengthy procedure, but if you are experiencing problems or your computer seems slow, it may help.

After you do a clean installation, your computer has a new System Folder. Once you make sure your computer is working properly, you'll need to reinstall any non-Apple extensions, fonts, and control panels. If your computer came with software that was already installed, some of those programs may need to be reinstalled after you perform a clean installation, particularly if those programs rely on files that used to be in the System Folder. For more information, see "Reinstalling Individual Applications" on page 41.

1. Write down your Internet settings (from the Modem, TCP/IP, and Remote Access control panels).

You'll need to enter these settings in the control panels once the clean installation is finished.

2. Make sure the Caps Lock key is not engaged.
3. Start up your computer from the software install CD.

(See Chapter 2, "Starting Up From a CD")

4. Double-click the Mac OS Install icon to open the Installer.

5. In the Welcome dialog box, click Continue.

The Select Destination dialog box appears.

6. Click the Options button.
7. Click the Perform Clean Installation checkbox to select it, then click OK.
8. Select the destination hard disk, then click the Select button.
9. Click Start to begin the installation.

If you want to customize your installation, click Add/Remove after selecting the destination disk, and see Article 43033: "[Custom Installation](#)"

A new System Folder is installed on your hard disk. (The old System Folder is renamed Previous System Folder.)

10 When the Mac OS Install is finished, restart your computer to make sure it's working properly.

11 Reinstall extensions, fonts, control panels, and other items not installed with the Mac OS from their original disks.

If you don't have the original disks, you can drag these items one at a time from the Previous System Folder to the new System Folder. To make sure the software is compatible with this version of the Mac OS, restart your computer after you reinstall each item.

12. After you're sure that you've copied all the items you want to save into your new System Folder, delete the Previous System Folder from your hard disk.

If the Clean Installation Didn't Solve the Problem

You may want to revert to the Previous System Folder so that you do not have to reinstall your custom extensions, fonts, control panels, and other items not installed with Mac OS 8.

To use the previous system again, follow the steps in this section.

1. Locate the active System Folder. It has the Mac OS icon on it.
2. Open the System Folder and move the System file into the Preferences folder. Close the System Folder.
3. Rename the System Folder "Clean System Folder."
4. Rename the Previous System Folder (the one you wish to use again) "System Folder."
5. Open the newly designated System Folder and double-click the System file. Close the window that appears, then close the System Folder. The Mac OS icon should appear on the System Folder's icon.
6. Restart your computer.
7. Once you are sure your computer is working properly, drag the Clean System Folder to the Trash.

If this doesn't work, you may have a hardware problem. Consult an Apple-authorized service provider.

Warning This procedure may not work. If it does not, you will have to perform a clean installation again.

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Category: iMac Support

Sub Category: Online-Internet

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Tech Info Library

TITLE

Troubleshooting Handbook: Problems During Installation

Article ID: 43035
Created: 8/5/98
Modified: 3/18/99

TOPIC

Problems During Installation is the third part of Chapter 4: Reinstalling Your Computer's Software, of the Troubleshooting Handbook.

DISCUSSION

Problems During Installation

This section helps you solve problems you may encounter while installing your software.

You can't start up the computer using the software install CD.

Your computer located the system software on your hard disk before it located the system software on the CD. If you have an external hard disk with system software, the computer may locate and start up from that device instead of the CD.

Or, with the CD inserted, open the Startup Disk control panel and click the CD icon.

Then restart the computer. After you install the software, use the Startup Disk control panel to reselect your hard disk, then restart your computer.

An error message appears saying installation couldn't occur.

If a message says installation could not occur because a file is open, quit all programs. If file sharing is on, turn it off. Then try installing again.

- Restart your computer with virtual memory turned off. To do this, either restart your computer from the software install CD or hold down the Command key until the message "Welcome to Mac OS" appears. Then try installing again.

An error message says something is wrong with the hard disk.

- Use a third-party disk repair utility to see if it can repair the disk.
- If you don't have a third-party utility, or if that utility can't repair the disk either, you may need to reinitialize the hard disk.
- After you've reinitialized the disk, use the Mac OS Installer to reinstall system software, then reinstall your application programs.

The Installer cannot update the hard disk driver.

- If you have a PowerBook, make sure you've turned off password protection in the Password Security control panel.
- You may not have an Apple-brand hard disk or you don't have an Apple-brand computer.

Use the disk utility recommended by the manufacturer of your computer or hard disk to update the drivers on your system before installing Mac OS. Make sure to get the latest version of the utility from the manufacturer. An old version will not be able to update your disk with the most current driver.

You may have previously updated your Apple hard disk with a non-Apple disk utility. You need to use the utility you used previously to update the driver again. To ensure a successful update, obtain the latest version of the utility from the manufacturer.

Warning If you use Norton Utilities, make sure you have version 3.5.2 or later. Using earlier versions to repair a Mac OS Extended format hard disk may damage the data on the disk.

The files on your hard disk disappear when you start up from the CD.

- If no files appear on the hard disk except for a single document called "Where have all my files gone?", you started up your computer from a CD with system software earlier than Mac OS 8.1. To see the contents of your disk, you must start up your computer from a disc with Mac OS 8.1 (or later).

You can't install or restore software.

- Make sure your computer started up from the software install CD.

The Installer cannot repair your hard disk.

- If you see a message that the disk can't be fixed because a file is open, quit all programs. If file sharing is on, turn it off. Then try installing again.
- Use Disk First Aid or a third-party disk repair utility to see if it can repair the disk.

Note: Before using a disk utility from a manufacturer other than Apple, see the documentation that came with the software or contact the software manufacturer to make sure the program is compatible with your computer and the version of Mac OS installed on your computer. Apple cannot guarantee the performance of software from manufacturers other than Apple.

If you don't have a third-party utility, or if that utility can't repair the disk either, you may

need to reinitialize the hard disk. After you've reinitialized the disk, try installing the system software again.

The Installer cannot update the hard disk driver.

- If you don't have an Apple-brand hard disk, or if you've updated your Apple hard disk with a non-Apple disk utility, use that disk utility or the one supplied by the disk's manufacturer to update the drivers on your system. Make sure to get the latest version of the utility.
- Some hard disks must be reinitialized before you can update the driver.

You see a message that there's not enough memory to use the Installer.

- Start up the computer using the software install CD. See Chapter 2, "Starting Up From a CD," on page 25.
- If the hard disk is your startup disk, the disk cache or RAM disk setting may be set too high in the Memory control panel. Open the Memory control panel, set your disk cache to the default setting, and reduce or turn off your RAM disk. Then restart the computer.

A message says your computer doesn't have enough memory to use the software.

- Contact an Apple-authorized service provider for information about how to purchase additional memory.

A message says there's not enough disk space.

- Make sure you've selected the correct drive.
- Make more space available on your hard disk by removing some files from the disk. Make backup copies of the files you want to keep. Then drag them to the Trash and choose Empty Trash from the Special menu to delete the files. You don't need to quit the Installer in order to delete files from the disk.

Some of the software you selected may have been successfully installed. The Install Software window in the Installer program indicates which software has already been installed.

You see a message that the System file cannot be modified.

- Make sure you've selected the correct disk as your destination disk.
- You may have virus-protection software installed that guards against modification of the System file. Make sure you are starting up the computer from the software install CD. Drag any virus-protection software out of the System Folder and try installing again. You can put the virus-protection software back after installation.

The System and Finder files may be locked. To see if your System file or Finder file is locked, select the file's icon. Then open the File menu and choose Get Info. If a checkmark appears in the checkbox next to "Locked," the file is locked and cannot be deleted or replaced. To unlock the file, click the checkbox to deselect it.

- The System file may be corrupted. Perform a clean installation of system software.
- You may have file sharing turned on. Open the File Sharing control panel and turn it off.

A message says an item cannot be replaced.

- The Installer is attempting to replace a file, but there is a folder on the disk that has the same name as the file being replaced. Find the folder on your disk and rename it, then try the installation again.
- The file may be corrupted. You need to move or delete the file.
- You may have file sharing turned on. Open the File Sharing control panel and turn it off.
- You may have virtual memory turned on. Open the Memory control panel and turn virtual memory off.
- Start up from the software install CD (see Chapter 2, "Starting Up From a CD") and try reinstalling system software again.

You see a message that the installation was not successful.

You may have an incompatible item in your System Folder. Start up your computer using the software install CD. Then, try doing a clean

installation. See "Performing a Clean Installation".

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac

Category: iMac Support

Sub Category: Online-Internet

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TITLE

Troubleshooting Handbook: Reinstalling Individual Applications & All Original Software

Article ID: 43036
Created: 8/5/98
Modified: 3/18/99

TOPIC

Reinstalling Individual Applications & All Original Software is part of Chapter 4: Reinstalling Your Computer's Software, of the Troubleshooting Handbook.

DISCUSSION

Reinstalling Individual Applications

If you're having problems with an application or it was damaged or inadvertently erased, try reinstalling that application. If an application came with its own CD, see the software documentation or the Read Me document on that CD for instructions on how to reinstall that software. If not, see the Read Me document on the software install CD for instructions on how to reinstall that software.

Important If you have preferences or settings for individual applications, make a note of them so you can easily reset them if necessary, after you install system software. If you are having problems with your computer, you may not be able to open any files with preferences or customized settings.

Restoring All Original Software

Some computers come with a software restore CD, which contains the Apple Software Restore application. This application lets you restore all your original software, including the system software, factory settings, and applications that came with your computer. You have the option of erasing your hard disk before restoring the original software, or just replacing the original software (Restore In Place).

Before Restoring Your Software

Before you begin the restore process, do the following:

- Customized preferences and settings: If you have preferences or settings in control panels and individual applications, make a note of them so you can easily reset them if necessary, after you install system software.
- Software that runs in the background: If you are using software that runs in the background, such as virus protection software or access control software, you may need to turn it off before you reinstall system software. For instructions, see the documentation that came with the software.
- If you are restoring software on a PowerBook: Plug the PowerBook in, open the Energy Saver control panel, and set the PowerBook so it doesn't go to sleep. Turn off password protection in the Password Security control panel.

Important It is highly recommended that you back up the data on your hard disk before restoring software. Apple is not responsible for any lost data.

Restoring In Place

This procedure replaces only your original software (original system software, factory settings, and applications that came with your computer) with new copies from the CD, leaving everything else on your disk untouched.

1. Start up your computer from the software restore CD and open the Apple Software Restore application.
2. Click the OK button on the introductory screen.
3. If necessary, click Switch Disk to choose the disk on which you want to restore your software.
4. Click the checkbox next to "Restore In Place."

5. Click Restore.
6. An onscreen message shows the status of the restore process.
7. Click Quit when the process is complete.

Important It is highly recommended that you back up the data on your hard disk on an external storage device or network file server before restoring your system.

Important Your preferences may be reset to their original factory defaults, and if you've already registered software, this procedure may modify that data.

7. Click Quit when the process is complete.

Erasing Your Hard Disk

This procedure completely erases the contents of your hard disk before restoring the original contents (original system software, factory settings, and applications that came with your computer).

1. Start up your computer from the software restore CD and open the Apple Software Restore application.
2. Click the OK button on the introductory screen.
3. If necessary, click Switch Disk to choose the disk on which you want to restore your software.
4. Click the checkbox next to "Erase your hard disk before restoring."
5. If necessary, change the disk format you want from the Volume Format pop-up menu. The recommended option is "Same as selected configuration" because it restores your hard disk to the Mac OS Extended format. This format provides more efficient storage, especially on large disks.
6. Click Restore.
7. Click OK.
8. An onscreen message shows the status of the erase and restore process.
9. Click Quit when the process is complete.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac
Category: iMac Support
Sub Category: Online-Internet

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Tech Info Library

Mac OS 8: Not Compatible with Apple WorkGroup Servers

TOPIC

I want to install Mac OS 8 on my Apple WorkGroup Server, but when I get an error that states "This program cannot update the hard drive drivers on the listed devices." How can I install Mac OS 8 on this server?

DISCUSSION

Mac OS 8 is not supported with any configuration of server software at this time. In addition, Apple RAID has not been qualified with Mac OS 8 either.

The error message you received can also appear with certain other Apple branded hard disks since some hard disks are manufactured by third-parties, and are not supported by the Apple disk utilities, including the external 365 MB drive. Before installing Mac OS 8, contact the manufacturer of the drive utility that you use to determine if you need to update your drivers.

If the Apple WorkGroup Server is being setup as a workstation, you should the disk driver using the Drive Setup software.

Article Change History:

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Tech Info Library Article Number:45026

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Tech Info Library

TITLE

iMac: Type of Memory to Order to Upgrade RAM and
VRAM

Article ID: 58007
Created: 8/13/98
Modified: 10/5/99

TOPIC

What type of random access memory (RAM) is used in iMac?

DISCUSSION

Note: The information in this article is valid for the original iMac only. Refer to TIL article 58466: "[iMac \(Slot Loading\): Memory Upgrades](#)" for information on upgrading that computer.

SUMMARY

The iMac has two memory expansion slots. To expand the built-in memory (DRAM) in your iMac, use the following information when ordering memory:

- DRAM Form Factor - SO-DIMM
- DRAM Type - SDRAM, 3.3 volt (V), unbuffered, 64-bit wide, 144-pin, with Serial Presence Detect
- DRAM Speed - 100 MHz, 10 ns (or faster meaning a lower number)
- Max size of SO-DIMM Supported - 64 MB per slot (revision /A iMac), or 128 MB per slot (revision /B iMac and 266 megahertz iMac)
- Total DRAM Supported - 128 MB with both slots filled (revision /A iMac), or 256 MB (/B iMac, 266 MHz, and 333 MHz iMac)

Note: Although /A iMac computers may work with higher capacity SO-DIMM's than stated, these larger sizes weren't available for official testing at the time of product development, and so therefore aren't included.

Refer to TIL article 43012: "[iMac: Installing Memory \(1 of 2\)](#)" for specific instructions on installing memory into iMac.

To expand the video memory (VRAM) in your iMac, use the following information when ordering VRAM:

- Form Factor - SO-DIMM
- RAM Type - SGRAM

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Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: Features

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Tech Info Library

TITLE

iMac: Infrared Communications

Article ID: 58012
Created: 8/13/98
Modified: 10/5/99

TOPIC

Does iMac support infrared communications? How does it work?

DISCUSSION

Note: The infrared port was removed from the iMac beginning with the multi-colored versions introduced in January, 1999.

The iMac does support infrared communications via the Infrared (or IR) transmitter/receiver located behind a dark plastic cover next to the left speaker.

The infrared lens transmits infrared light in a 30-degree radius, pointing outward from the computer. The recommended minimum distance between devices is 1 meter.

The iMac transmits files using the IrDA protocol, which transmits data up to 4 megabits per second and is capable of using AppleTalk and TCP/IP protocols. The iMac infrared port is compatible with some PowerBook computers including the PowerBook 2400, 3400, G3 and PowerBook G3 Series computers. Other infrared capable Apple products are not compatible because they use a different infrared lens and transmitter.

For infrared to function properly with the iMac, the following items must be installed:

- Infrared Control Panel
- IrDALib Extension
- IrLanScanner/PPC Extension

Infrared Control Panel

The Infrared Control Panel provides information about an active Infrared connection as well as infrared type.

Note: The Infrared Control Panel will not open if one of the following conditions occur:

- IrDALib Extension, IrLanScanner/PPC Extension, or Infrared Control Panel are missing, disabled, or corrupted
- The Infrared controller board is defective
- The iMac does not recognize the controller board

Additional information on IrDA compatibility can be found in the following Tech Info Library article:

Article 20928: [Macintosh Infrared: Is It IrDA Compatible?](#)

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: Features

..TIL58012-iMac_Infrared_Communications.pdf

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Tech Info Library

TITLE

iMac: Changing Internet Settings and Applications

Article ID: 58041
Created: 8/17/98
Modified: 8/17/98

TOPIC

I went through Internet Setup Assistant and entered all my information. I can connect to the internet just fine, but I would like to use Netscape Navigator rather than Microsoft Internet Explorer as my default browser.

DISCUSSION

There are two applications that determine the way your computer accesses the internet, Internet Setup Assistant and Internet Config.

Internet Setup Assistant

If you need to change your internet service provider (ISP) configuration details, you can use the Internet Setup Assistant located under the Apple Menu in the Internet sub-menu. This application automates the process of entering details such as: connection protocol, service name, domain name server address, router (gateway) address and other details.

Most of this information is stored in the TCP/IP control panel preferences as configuration information. You can make a backup of your configuration by opening the TCP/IP control panel, choosing the Configurations option under the File menu, selecting your active configuration and clicking the "export" button. This will save your configuration to a file that can later be imported, without the need to re-enter all your information.

Internet Config

General internet configuration information, such as the default browser, default homepage, helper applications and other settings may be changed using Internet Config application. Internet Config is located in the path: Macintosh HD: Internet: Internet Utilities: Internet Config.

The iMac uses Microsoft Internet Explorer as the default browser, but this setting may be changed using Internet Config. Other settings that determine how your computer routes information may also be changed in Internet Config. Some of the more common settings are:

Email - email Address, email Account, email Password, SMTP Host, email Headers

File Mappings - Extension (i.e. .html) to Application

Helpers - Document type (i.e. sound file) to Application

News - NNTP Host, News Username, News Password

World Wide Web - Home Page

You can make a backup of these settings using the "Save As" option under the Internet Config File Menu. This backup of your Internet Preferences can later be retrieved without the need to re-enter all your information.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac

Category: iMac Software

Sub Category: General Topics

..TIL58041-iMac_Changing_Internet_Settings_and_Applications.pdf

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TITLE

Macintosh: Blinking Question Mark at Startup

Article ID: 58042
Created: 8/17/98
Modified: 10/8/99

TOPIC

My iMac displays a Flashing question mark when I first power it on, then after a few seconds it continues to boot. Is this normal?

Note: This article also applies to Power Macintosh and PowerBook computers introduced after iMac.

DISCUSSION

Yes, this is normal behavior for the computer if a startup disk has not been selected in the Startup Disk control panel. The blinking question mark does not usually indicate a problem with the computer. Rather, it is displayed while the computer is looking for the System Folder to start up the computer.

If your computer appears to function properly in all other respects, this issue is easily resolved by opening the Startup Disk control panel and selecting your internal hard disk as the startup disk. This directs the Mac OS ROM to the use the selected volume and system folder to start up the computer.

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Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: Troubleshooting

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TITLE

iMac: No Sound or Startup Chime Heard

Article ID: 58044
Created: 8/18/98
Modified: 8/26/99

TOPIC

When I power on my iMac, I get no sound, not even a start-up chime. All sound-in and sound-out ports are empty. Does this indicate a hardware problem?

DISCUSSION

It is likely that the system volume setting in the Sound portion of the Monitors & Sound control panel is either at the lowest setting or muted. Unlike previous Macintosh desktop computers, the start-up chime on the iMac is controlled via software sound controls, allowing the volume of the startup chime to be adjusted.

If RAM was recently installed it is possible the audio cable may have been accidentally disconnected or it may not be properly connected. Remove the rear access cover from the computer. You will see four cables attached to the main logic board. The cable furthest to the left is the audio cable. Make sure it is properly connected. Connect the cable if necessary. The Mac OS Info center has directions on how to install memory in your computer. Refer to these directions if you need help removing the rear access cover. Step 10 in the directions has a good diagram depicting the audio cable. If the cable is connected correctly, you may consider having the computer inspected by an Apple-authorized service provider.

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Product Area: iMac
Category: iMac Hardware
Sub Category: Troubleshooting

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TITLE

iMac: ISP Compatibility With v.90 Specification

Article ID: 58046
Created: 8/21/98
Modified: 9/15/99

TOPIC

I seem to have some difficulty connecting to my internet service provider (ISP) with my iMac. I either cannot connect, or my connection is dropped after a few minutes. My 33.6 modem connected with no problem. What's different about iMac that makes connecting more difficult?

DISCUSSION

iMac combines the excitement of the Internet and the simplicity of the Macintosh. The Internet connection experience via the iMac is nothing out of the ordinary. The modem used in the iMac is a 56K modem based on the new V.90 specification. Any time a new modem standard is introduced there is a period of adjustment while various ISPs work to ensure that their POP (Point of Presence) servers are compatible with the new specification.

If you are having difficulty connecting to a specific ISP, you may wish to contact them to ensure they are currently using V.90 compliant modems, or have plans to update to them in the near future. In the mean time, Apple has released a modified modem script for the iMac Internal 56k modem that will result in more reliable connections. This script forces the modem to connect at 33.6 kbps or lower speeds. These connections are more robust in situations where the phone line quality is marginal.

This CCL modem script can be found in the Apple Software Updates site. This URL will take you to Apple's Software Updates web site so you can download the "iMac v34 Only Modem Script.smi" file: <http://asu.info.apple.com/swupdates.nsf/artnum/n11128>

Also see [TIL article number 22234](#) for more information.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: iMac
Category: iMac Software
Sub Category: Communications

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Tech Info Library

TITLE

iMac: Hole in I/O Door Not For Cables

Article ID: 58055
Created: 8/28/98
Modified: 10/8/99

TOPIC

I routed all of my cables through the hole in the I/O door on my iMac, but it is hard to open because there is not enough room for my finger. Should the cables not be routed through the hole?

DISCUSSION

As pictured in step 5 of the tri-fold "Welcome to your iMac" pamphlet, the cables should be routed through the large gaps at the bottom of the I/O door. The large hole provides the only convenient means of opening the I/O door. Routing cables through the hole may also cause them to become disconnected when the I/O door is opened.

The iMac (Slot Loading) does not have a door over the I/O ports so this is not an issue.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac
Category: iMac Hardware
Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS 8.5: Error Opening Internet Control Panel or File Exchange

Article ID: 58168
Created: 10/30/98
Modified: 10/30/98

TOPIC

I'm trying to go into the Internet control panel and I'm getting an error stating "To use the Internet control panel, you must first install Internet Config Extension version 2.0, or later." I've also tried to open the File Exchange Control Panel and it gives me an error saying "Internet Config is not installed properly." What's wrong?

DISCUSSION

Both the Internet Control Panel and the File Exchange Control Panel in Mac OS 8.5 use version 2.0.2 of the Internet Config Extension. However, several installers (typically web browsers and email programs) may automatically replace that extension with an older version.

The only way to resolve this is to use the Mac OS 8.5 Installer and do a custom install of the internet control panel (when you do this, the installer will automatically reinstall the Internet Control Panel as well as the latest version of the internet config extension).

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software
Category: Mac OS 8.5
Sub Category: Networking & Internet; System Software Components

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Tech Info Library

TITLE

iMac: When to Install Available Updaters

Article ID: 58174
Created: 11/9/98
Modified: 1/20/00

TOPIC

This article provides a table for each iMac model showing which updates should be installed.

DISCUSSION

The following table lists the update or updates you may need, depending upon which iMac model you own. Under each iMac model is the list of updates that should be installed on your computer. If you are unsure if your iMac has a particular update installed, download and run the update installer. If the update is present, the installer will alert you.

Updates can be located and downloaded from the Apple Software Updates Web site at <http://www.apple.com/swupdates>. Use the name of the update as your search query.

233 MHz iMac running Mac OS 8.1 M6709x/A

Update Name	Notes
iMac Update 1.0 (no longer available from Apple Software Updates)	1
iMac v.34 Only Modem Script	2
Apple Modem Updater 1.3.5	3
iMac CD Update 2.0	4
iMac Firmware Update 1.2	10

233 MHz iMac upgraded to Mac OS 8.5 M6709x/A

Update Name	Notes
iMac v.34 Only Modem Script	2
Apple Modem Updater 1.3.5	3
iMac CD Update 2.0	4
Mac OS 8.5.1 Update	5
iMac Firmware Update 1.2	10
iMac Update 1.1	7,9

233 MHz iMac M6709x/B

Update Name	Notes
Apple Modem Updater 1.3.5	3
iMac CD Update 2.0	4
Mac OS 8.5.1 Update	5
iMac Firmware Update 1.2	10
iMac Update 1.1	7,9

266 MHz iMac: M7389LL/A Strawberry, M7392LL/A Lime, M7391LL/A Tangerine, M7390LL/A Grape, M7345LL/A Blueberry

Update Name	Notes
iMac Firmware Update 1.2	10
iMac CD Update 2.0	4

333 MHz iMac: M7441LL/A Strawberry, M7444LL/A Lime, M7443LL/A Tangerine, M7442LL/A Grape, M7740LL/A Blueberry

Update Name	Notes
iMac Firmware Update 1.2	10
iMac CD Update 2.0	4

All iMacs running Mac OS 8.6 only:

Update Name	Notes
Mac OS ROM 1.0 Update	11

iMac DV or iMac DV Special Edition with internal DVD-ROM drive:

Update Name	Notes
iMac DVD Update 1.0	12

Notes:

1. The contents of the iMac update 1.0 have been incorporated into Mac OS 8.5. You will not need to install this update on any M6709x/B (Rev. B) iMac or later, or on any original iMac that has been upgraded to Mac OS 8.5 in any language.
2. This file is only needed if you are having difficulty making and maintaining modem connections. It is installed by the Mac OS 8.5 that ships with the Rev. B iMac. It is not part of the retail Mac OS 8.5 package.
3. In early versions of the Rev. B iMac, the modems will not have the version 2.2 firmware installed. As such, you should run the modem updater located in the CD Extras folder of the System Software CD bundled with iMac.
4. The iMac CD Update 2.0 incorporates the iMac CD Update 1.0. Apple recommends all iMac users install the 2.0 update.
5. Apple recommends all Mac OS 8.5 owners install this update.
6. (this item left intentionally blank; no longer used.)
7. Customers outside the United States should use the localized version of the update to ensure proper operation.
8. (this item left intentionally blank; no longer used.)
9. The iMac Update 1.1 requires the prior installation of Mac OS 8.5 or 8.5.1, and the iMac Firmware Update. If you have an original iMac running Mac OS 8.1, you cannot use the iMac Update 1.1 until you update to Mac OS 8.5. Learn how to update to Mac OS 8.5 by going to the Web site appropriate to your geographical location:

<http://www.apple.com.au/macOS/> for Australia,
<http://www.media.euro.apple.com/MacOSonline/Europe/UpToDate> for Europe,
<http://asu.info.apple.com/> for North America.
10. The iMac Firmware Update version 1.2 should be installed on all iMac computers used in NetBoot client environments. The update also corrects a rare condition wherein SGRAM amounts over 2MB may not be properly identified at startup. This update incorporates the iMac Firmware Update 1.1.
11. Apple recommends that every iMac customer running Mac OS 8.6 install this update. For additional information on this update please read TIL Article 60408: "[Mac OS ROM Update 1.0: Read Me](#)"
12. iMac DVD Update 1.0 places new firmware on the DVD-ROM shipped in iMac DV and iMac DV Special Edition computers. This update improves the ability of iMac DV models to read certain CD-ROM discs and to determine if a disc is unreadable. For additional information on this update please read TIL Article 58557: "[iMac DVD Update 1.0: Read Me](#)"

Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: General Topics; Troubleshooting

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Tech Info Library

TITLE

iMac: Confirming Installation of the Apple Modem Updater

Article ID: 58175
Created: 11/17/98
Modified: 1/13/00

TOPIC

I just installed the Apple Modem Updater on my iMac and want to be sure the Updater installed properly. How can I confirm that the modem ROM was updated?

DISCUSSION

NOTE: The following information can be used to confirm the installation of the Modem Update for iMac and PowerBook G3 Series computers.

There are two methods for verifying the update was installed. First is to simply run the updater again. If the modem ROM was updated, it will return the following message in the status window:

"This updater contains the same firmware as the modem. Check www.apple.com/support for a more current version of Apple Modem Updater."

In the event that you do not have access to the updater, you can use a terminal program to confirm the ROM is updated. Enter the following AT commands for your modem in your terminal program; on the iMac you can use the AppleWorks communications module.

Setup the connection using the Serial Tool and then enter:

```
ati3
```

If the modem's firmware has been updated, it will return the following information:

```
V2.200-V90_2M_DLS
```

```
OK
```

If the modem firmware has not been updated, it will return the following:

```
V2.100-V90_2M_DLS
```

```
OK
```

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Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: Troubleshooting

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TITLE

Mac OS 8.5/8.6: Performing a Clean Install

Article ID: 58176
Created: 11/17/98
Modified: 6/18/99

TOPIC

This article, taken from the Mac OS Info Center on your hard drive, describes the clean install procedure for Mac OS 8.5, 8.5.1, and 8.6

DISCUSSION

Performing a clean installation creates a new System folder on your hard disk. The old System folder is renamed Previous System Folder. You may want to perform a clean installation if you are having persistent problems with your computer that a normal reinstallation does not solve.

IMPORTANT: Because your computer has a new System Folder, after a clean install you must reinstall any third-party fonts, extensions, and control panels that you have added to your system or that came with programs you have installed.

The steps below assume that you are accepting the default choices for installing system software. You may customize what gets installed by manually selecting the various system software components after clicking the Customize button.

To perform a clean installation:

1. Start up your computer from the system software CD.
2. Open the Mac OS Installer application.
3. In the Welcome dialog box, click Continue.
4. In the Select Destination dialog box, click the Options button.
5. Select the Perform Clean Installation option, then click OK.
6. Select the destination hard disk, then click the Select button.
7. Click Start to begin installation.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software
Category: General OS
Sub Category: General Topics

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Tech Info Library

TITLE

Power-On Self Test Beep Definition - Part 1

Article ID: 58183
Created: 1/1/99
Modified: 12/21/99

TOPIC

What do the beeps during the Power-On Self Test (POST) mean?

Refer to TIL article 58442: "[Power On Self Test Beep Definition - Part 2](#)" for information on more recent Macintosh computers.

DISCUSSION

The power-on self test resides in the ROM of the computer. Only computers that are based on the ROM-in-RAM (New World) technology, such as the iMac, Power Macintosh G3 (Blue and White), Power Mac G4 (PCI Graphics), and PowerBook G3 Series (Bronze keyboard) will generate these beeps. This test runs whenever the computer is powered on after being fully shut down (the power-on self test does not run if the computer is only restarted).

If a fault is detected during the test, you will not hear a normal startup chime. Instead, the system will beep as explained below. If you experience one of these beeps, you should call your Apple-authorized service provider for additional troubleshooting assistance.

- 1 beep = No RAM installed/detected
- 2 beeps = Incompatible RAM type installed (for example, EDO)
- 3 beeps = No RAM banks passed memory testing
- 4 beeps = Bad checksum for the remainder of the boot ROM
- 5 beeps = Bad checksum for the ROM boot block

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Computers

Category: iMac; Power Macintosh; PowerBook

Sub Category: iMac Hardware; Power Macintosh G3 - Blue and White; PowerBook G3 Series
(Bronze Kbd)

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Tech Info Library

TITLE

Power Macintosh: Differences Between DVD-ROM,
DVD-RAM, and DVD+RW

Article ID: 58187
Created: 1/1/99
Modified: 1/11/00

TOPIC

What is the difference between DVD-ROM, DVD-RAM, and DVD+RW?

DISCUSSION

DVD-ROM, as its name implies, is a Digital Versatile Disc read-only media. You can access the contents on it, be it movies or games, but you cannot write to it.

DVD-RAM (DVD random-access memory) and DVD+RW (DVD rewritable) are both rewritable mediums. However, DVD+RW is a new rewritable format and has not yet been standardized. DVD-RAM on the other hand, is the official rewritable DVD standard and has been finalized and published by the DVD Forum, which consists of 10 major corporations including industry heavyweights like Matsushita, Toshiba, Hitachi and Time Warner.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information
Product Area: Computers
Category: Power Macintosh
Sub Category: General Topics

Tech Info Library

TITLE

Power Macintosh G3 (Blue and White): SCSI FAQ

Article ID: 58204
Created: 1/1/99
Modified: 1/11/00

TOPIC

This article provides information on the various SCSI standards and how they relate to the SCSI cards currently available from Apple for the Power Macintosh G3 (Blue and White) and Power Mac G4 (AGP Graphics).

DISCUSSION

Apple SCSI FAQ

Question: What is SCSI?

Answer: SCSI, or Small Computer System Interface, is a standard for connecting peripherals to your computer, including disk and cartridge drives, CD-ROM drives, scanners, and other devices. A SCSI port was included on most Macintosh systems up until the iMac and the 1999 models of the Power Macintosh G3 and Macintosh Server G3.

Question: What are the differences between the various types of SCSI?

Answer: SCSI implementations vary depending on a number of different characteristics. Each type of SCSI can support the transfer of data at a certain speed, measured in megabytes per second. SCSI types are also characterized by the number of devices that can be connected to each channel or bus and the HPbs maximum cable length supported. Different types of SCSI also use different connectors. The chart below summarizes the difference:

Type of SCSI	Max. Transfer Rate (MBps)	Max. Devices	Max. Cable Length	Connector Types Used
SCSI-1	5	7	3 meters	25-pin 50-pin Centronics
SCSI-2 (Fast)	10	7	3 meters	50-pin high density 50-pin standard 50-pin Centronics
Ultra Narrow	20	15	1.5 meters	50-pin high density 50-pin standard 50-pin Centronics
Ultra Wide	40	15	1.5 meters	68-pin high density
Ultra2 LVD	80	15	12 meters	68-pin high density

You'll find good reference for many SCSI-related terms on the Adaptec Web site at <http://www.adaptec.com/tools/glossary/general.html>.

Question: Why did Apple remove the SCSI port from the logic board of the new Power Macintosh G3 (Blue and White) and Macintosh Server G3 systems?

Answer: Apple has provided a new method of connecting peripherals, called FireWire, on every Power Macintosh G3 (Blue and White) and Macintosh Server G3 system. FireWire will revolutionize the way individuals connect high-speed devices to their Macintosh. It provides such features as hot pluggability, support for up to 63 devices, easy cable connectivity, and even bus-supplied power, which make it the perfect successor to SCSI as a means to connect external peripherals. By including FireWire in every Power Macintosh, Apple is providing its customers with high-performance and easy-to-use I/O technology that will be used far into the future.

Question: What SCSI options are available from Apple for the new Power Macintosh G3 (Blue and White) and G3 Server systems?

Answer: Apple offers a number of SCSI options for optimal hard disk performance and connectivity to older SCSI devices. The following options are available from Apple:

Ultra SCSI PCI card

The Ultra SCSI PCI card is offered as a build-to-order option at the Apple Store. It works in any new (1999 model) Power Macintosh G3 or Macintosh Server G3 configuration. The card allows users to connect external SCSI peripherals to the Macintosh, such as scanners, tape drives, and hard disks that use standard SCSI (SCSI-1), Fast SCSI (SCSI-2), and Ultra SCSI (also called Ultra Narrow SCSI). It supports booting the Macintosh from externally connected devices. The card comes with a high-density 50-pin external connector and a 50-pin to 25-pin female SCSI adapter to ensure compatibility with existing SCSI cabling. The card also comes with a 50-pin internal connector that is unsupported by Apple. You can connect up to seven external Ultra Narrow devices to the card with a total cable length of 1.5 meters. You can connect up to seven SCSI-1 and SCSI-2 devices to the card with a total cable length of 3 meters. You can also connect a mix of SCSI-1, SCSI-2, and Ultra Narrow external devices, but you will be limited to a total cable length of 1.5 meters.

Single-channel SCSI card (Ultra2 LVD)

The single-channel SCSI card is installed in some configurations of the Power Macintosh G3 and Macintosh Server G3. It is also available through the Apple Store, with a number of hard drive configurations to choose from. This card connects to internal and external Ultra2 LVD SCSI devices. The cable connected to the card provides support for up to three internal Ultra2 LVD SCSI devices. The card supports booting the Macintosh from internal or external devices. It comes with a 68-pin internal connector and a 68-pin external connector. You can connect up to 15 Ultra2 devices to the single-channel SCSI card with a total cable length, both internally and externally, of 12 meters. Apple does not recommend connecting other types of SCSI devices to the single-channel card due to possible cabling limitations or effects on the performance of the internal Ultra2 LVD SCSI hard drives.

Dual-channel SCSI card (Ultra2 LVD) Version 1

The dual-channel SCSI card is offered as a configure-to-order option at the Apple Store with certain hard drive configurations, including the option of three 36GB hard drives, for the Power Macintosh G3 (Blue and White) and Macintosh Server G3. The dual-channel card provides two independent Ultra2 LVD SCSI channels, Channel A and Channel B. Internal Ultra2 LVD SCSI hard drives are connected to the internal Channel B connector. External or internal SCSI devices can be connected to the external or internal Channel A connectors. This card is the perfect all-in-one solution for customers who want to use high-performance internal Ultra2 disk drives and external SCSI peripherals at the same time.

The card comes with two 68-pin internal connectors (Channels A and B), a 50-pin internal connector (Channel B), and a 68-pin external connector (Channel A). You can connect up to 30 Ultra2 SCSI devices to the card with a total cable length, both internally and externally, of twelve meters. You can connect up to 11 Ultra Narrow or Ultra Wide devices with a total cable length, both internally and externally, of 1.5 meters. You can connect up to seven SCSI-1 or SCSI-2 devices to the external channel (Channel A) with a total cable length, both internally and externally, of 3 meters. You can also connect a mix of SCSI-1, SCSI-2, Ultra Narrow, and Ultra Wide devices on the external channel (Channel A), but you will be limited to a total cable length, both internally and externally, of 1.5 meters. The internal 50-pin connector (Channel B) is unsupported by Apple.

Dual-channel SCSI card (Ultra2 LVD) Version 2

The version 2 dual channel SCSI card is functionally equivalent to the version1 card, though it has been tested and approved for use with the Power Mac G4 (AGP Graphics) computer. Refer to the chart below for more specific technical information. The card is based on the ATTO ExpressPCI UL2D card. You may refer to the ATTO Web site at <http://www.attotech.com> for more information on it.

The chart below illustrates many of the technical differences between the various Apple SCSI cards.

Specification	Ultra SCSI	Single Channel	Dual Channel version 1	Dual Channel version 2
Supported Computer	Power Macintosh G3 (Blue and White) and Power Mac G4	Power Macintosh G3 (Blue and White)	Power Macintosh G3 (Blue and White)	Power Mac G4 (AGP Graphics)
Max. Transfer Rate (MB/Sec)	20	80	80 per channel	80 per channel
Apple Supported Types	SCSI-1, SCSI-2 (Fast), Ultra Narrow	Ultra2 LVD	Channel A: SCSI-1, SCSI-2 (Fast), Ultra Narrow, Ultra Wide, Ultra2 LVD Channel B: Ultra2 LVD	Channel 1: SCSI-1, SCSI-2 (Fast), Ultra Narrow, Ultra Wide, Ultra2 LVD Channel 2: Ultra2 LVD
Internal Connector	50-pin standard (Male) (Not Apple Supported)	68-pin high-density Ultra2 (Female)	Channel A: 68-pin high-density Ultra2 (Female) Channel B: 68-pin high-density Ultra2 (Female), and 50-pin standard (Male) *	Channel 2: 68-pin high-density Ultra2 (Female)

External Connector	50-pin high-density (Female) Includes a high density 50-pin to DB25 adapter	68-pin high-density Ultra2 (Female)	Channel A: 68-pin high-density Ultra2 (Female) **	Channel 1: 68-pin VHDCI Ultra2 (Female)
Max. Devices Int/Ext	Up to 7 total	Up to 15 total	Up to 30 total	Up to 30 total
Maximum Cable Length Internal/External	3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices	12 meters w/only Ultra2 LVD devices	Channel A: 3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices; 12 meters w/only Ultra2 LVD devices Channel B: 12 meters w/only Ultra2 LVD devices	Channel 1: 3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices; 12 meters w/only Ultra2 LVD devices Channel 2: 12 meters w/only Ultra2 LVD devices
PCI System Bus	32 bit	32 bit	64 bit	64 bit
Driver Compatibility	Compatible with SCSI Manager 4.3, and earlier drivers	Requires SCSI Manager 4.3 compliant driver	Requires SCSI Manager 4.3 compliant driver	Requires SCSI Manager 4.3 compliant driver

* 50-pin standard (Male) (Not Apple Supported)

Question: What do I do about my older SCSI devices that I want to use?

Answer: Apple offers two SCSI solutions to accommodate the transition between older SCSI devices and FireWire devices. Those options, the Ultra SCSI PCI card and the dual-channel SCSI card, are described in detail above. In addition, a number of vendors are delivering SCSI card solutions for the Power Macintosh G3.

The Adaptec PowerDomain 2930 is an Ultra Narrow SCSI PCI card that supports devices with an external high-density 50-pin connector and an internal standard 50-pin connector (the card ships with an internal SCSI cable). The PowerDomain 2930 supports up to seven internal or external SCSI-1, SCSI-2, and Ultra Narrow SCSI devices. You can boot the new Power Macintosh G3 from internal or external devices with the PowerDomain 2930. For more information, see <http://www.adaptec.com/products/overview/pd2930u.html>.

See Adaptec's Web site for more information on Macintosh SCSI solutions:
<http://www.adaptec.com/products/solutions/macintosh.html>.

Question: What happens if I connect older SCSI devices to the single-channel SCSI Ultra2 LVD card that ships in my Power Macintosh G3 or Macintosh Server G3?

Answer: Depending on the type of SCSI device that you connect to the external 68-pin connector on the single-channel SCSI Ultra2 LVD card, you may exceed cable length limitations or slow down the speed of your SCSI bus. For example, connecting an external SCSI-2 drive to the single-channel SCSI card will slow the entire Ultra2 SCSI bus from a maximum throughput of 80 MBps to 40 MBps. It also may exceed the maximum cable length of 1.5 meters supported by Ultra Narrow SCSI because the cable connecting the internal Ultra2 hard drive is already nearly 1 meter long. Therefore, Apple strongly recommends that customers do not connect slower SCSI devices to the single-channel SCSI card.

Question: What happens when I mix different types of SCSI devices on the same SCSI channel or bus?

Answer: Both the speed and cable length limitations of different devices can be affected by mixed SCSI types on a single bus or channel. Any mix of SCSI-1, SCSI-2, Ultra Narrow, and Ultra Wide devices does not affect the maximum throughput of any non-Ultra2 LVD SCSI bus or channel. For example, a SCSI-1 CD-ROM drive, a SCSI-2 Jaz drive, and an Ultra Wide hard drive all connected to an Ultra Wide SCSI bus, will all operate at their respective speeds (5 MBps for SCSI-1, 10MBps for SCSI-2, and 40 MBps for Ultra Wide) because the Ultra Wide SCSI bus supports up to 40 MBps. Mixing SCSI-1 and SCSI-2 devices with Ultra Narrow and Ultra Wide devices always results in a maximum cable length, both internally and externally, of 1.5 meters.

An Ultra2 LVD SCSI bus or channel with a mix of Ultra2 LVD and non-Ultra2 LVD devices will operate at a maximum throughput of 40 MBps, instead of 80 MBps. For example, a SCSI-1 CD-ROM drive, a SCSI-2 Jaz drive, an Ultra-Wide hard drive, and an Ultra2 LVD hard drive all connected to an Ultra2 LVD SCSI bus, will operate at their respective speeds except for the Ultra2 LVD hard drive, which will be limited to 40MBps. Mixing Ultra2 LVD devices with non-Ultra2 LVD devices always results in a maximum cable length, both internally and externally, of 1.5 meters.

Question: Do the Apple SCSI cards support all SCSI devices?

Answer: The single-channel and dual-channel SCSI cards do not support all SCSI devices. These cards support only devices that are SCSI Manager 4.3-compliant. The Ultra SCSI PCI card is specifically designed to support older SCSI devices and will work with most older

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devices. To find out whether a specific SCSI peripheral is SCSI Manager 4.3-compliant, contact the vendor of the peripheral for more information.

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Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: Macintosh Server G3; Power Macintosh G3 - Blue and White

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Tech Info Library

TITLE

Apple Studio Display 21: Do Not Daisy Chain Multiple Displays Together	Article ID: 58214 Created: 1/4/99 Modified: 1/13/00
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TOPIC

I noticed there are four USB ports on the Apple Studio Display 21". Can I use one of those ports to daisy chain the USB cable when using more than one Apple Studio Display on my Power Macintosh G3 (Blue and White)?

DISCUSSION

If you daisy chain multiple Apple Studio Display 21" displays together, the Power Macintosh G3 (Blue and White) may restart itself approximately 3-5 seconds after you shut down. If this occurs, reconnect the additional displays directly to your Power Macintosh G3 (Blue and White).

Alternatively you can use a USB hub. Although the Apple Studio Display 21" is a USB hub, the four ports on the side should be used for connecting other USB devices.

Note: The Viewable Image Size of the Apple Studio Display 21" is 19.8 inches.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information
Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 21

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TITLE

Apple Studio Display 17: Noise or Shimmer at Startup is Normal

Article ID: 58216
Created: 1/4/99
Modified: 8/10/99

TOPIC

I notice that when I start up my computer, my Apple Studio Display 17 makes a noise and the image shimmers a bit then settles down. Is there a problem with the display?

DISCUSSION

No, the display is behaving normally and does not require service. What is happening is called Degaussing. Degaussing is the process of stabilizing the magnetic field of the CRT. It is a normal function of every display and does not indicate a need for service.

Waking the display from sleep or initiating a degauss from the on-screen display can also cause the same noise to be generated.

Note: The Viewable Image Size of the Apple Studio Display 17 is 16.0 inches.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information
Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 17

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TITLE

Apple Studio Display 21/Apple Studio Display 17: Tripod
Stand Safety Tips

Article ID: 58217
Created: 1/4/99
Modified: 1/13/00

TOPIC

This article provides specific safety tips relating to the new tripod stand used on the Apple Studio Display 21" and Apple Studio Display 17" displays.

DISCUSSION

- Lift the display by the indentations on the under-sides near the front of the display. Never lift the display by the tripod stand.
- Likewise, do not adjust the position of the monitor by pulling the stand legs. The tripod stand is subject to damage if mishandled.
- When placing the monitor on a table surface, ensure that all three legs on the tripod stand contact a solid surface. If one of the legs is too close to the table edge, the weight of the monitor could cause the display to fall off the edge.

Note: The Viewable Image Size of the Apple Studio Display 21" is 19.8 inches, the Apple Studio Display 17" has a Viewable Image Size of 16.0 inches.

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Document Information

Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 17; Studio Display 21

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TITLE

Power Macintosh G3 (Blue and White): Possible to Use
Both ADB and USB Devices

Article ID: 58223
Created: 1/4/99
Modified: 1/11/00

TOPIC

Since the Power Macintosh G3 (Blue and White) has both ADB and USB ports, can I mix and match input devices?

DISCUSSION

Yes, it is possible to use both USB and ADB input devices on the Power Macintosh G3.

Be aware that if you have two similar input devices, such as a USB mouse and an ADB mouse, connected simultaneously, the results are unpredictable and it is not recommended. However, using a USB mouse with an ADB keyboard for example is fine.

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Category: Power Macintosh
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TITLE

Apple Studio Display 21: Description

Article ID: 58229
Created: 1/6/99
Modified: 1/13/00

TOPIC

This article provides a description of the new Apple Studio Display 21".

DISCUSSION

Color is indispensable to today's computer applications, whether you are producing magazines, creating business presentations, or designing multimedia materials.

The Apple Studio Display with ColorSync technology is an uncompromising monitor that provides accurate color for every situation. It combines lifetime color calibration with out-standing visual performance and a stunning appearance--all for little more than competitive monitors without those features.

The first thing you will notice about this Apple Studio Display is its striking appearance. Its elegant translucent enclosure and sleek design complements our newest Power Macintosh G3 systems and is also highly functional. It includes a four-port Universal Serial Bus (USB) hub, and its unique stand has room underneath to store your keyboard.

The Apple Studio Display with ColorSync technology uses a 21-inch (19.8-inch viewable image size) Trinitron CRT to deliver vivid colors and sharp text. The cylindrical design of this CRT creates a vertically flat screen that minimizes glare. The end result is a monitor that's a pleasure to view and to work with.

But the most important feature of the Apple Studio Display with ColorSync technology is its superior color accuracy--and its ability to maintain that accuracy over its lifetime. Using a patented internal measurement system, the monitor adjusts its electron beam as time passes to maintain the precise calibrations made at the factory. It can also compensate for changes in the ambient light. And because it stores its own ColorSync profiles, it can exchange accurate color information with the other devices in your production process, creating color consistency that directly translates into fewer trial-and-error stages when you output color documents.

The Apple Studio Display makes it easy to meet your specific needs and to compensate for changes in environmental conditions. A button on the display brings up the familiar Macintosh Monitors & Sound control panel on your computer, giving you powerful yet intuitive software control over all screen adjustments.

With its large screen, crisp Trinitron performance, ready-to-use USB ports, built-in color calibration, and elegant design, the Apple Studio Display with ColorSync technology is the complete monitor for demanding applications.

Exceptional Display Quality

- 21-inch (19.8-inch viewable image size) Sony Trinitron CRT
- aperture grill technology for vivid colors and sharp text
- vertically flat screen for reduced glare

Stunning Design

- elegant translucent case that matches Apple's latest Power Macintosh G3 computers
- storage space under the display for your keyboard
- four-port USB hub for connecting peripherals

Built-In Color Calibration

- uses industry-standard ColorSync color management technology
- ensures consistent, accurate color over the lifetime of the monitor
- saves production time by creating accurate output with fewer trials

Easy Access to Powerful Software Controls

- Single-button access to the familiar Macintosh Monitors & Sound control panel
- intuitive control over all screen adjustments

Ordering Information

- Apple Studio Display with ColorSync technology
- order No.M6204LL/A
- Apple Displays software
- VGA-to-Macintosh adapter
- power cord
- ambient light tool
- user's setup guide
- limited warranty

For More Information

For more information about this product, or to find out where to buy Apple products, visit www.apple.com on the World Wide Web or call 1-800-538-9696. To purchase this product from the Apple Store, go to <http://www.apple.com/store>.

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Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 21

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Tech Info Library

TITLE

Apple Studio Display 17: Description

Article ID: 58231
Created: 1/6/99
Modified: 1/13/00

TOPIC

This article provides a description of the Apple Studio Display 17".

DISCUSSION

Looking for a monitor that's big enough to keep you productive, without taking up too much of your desk space--or your budget?

The perfect companion to your new Power Macintosh G3 system, the Apple Studio Display combines a gorgeous screen, a stunning look, and a competitive price. It's a great choice for a wide variety of applications from business to education to science and engineering to the home.

The first thing you'll notice about the Studio Display is its striking appearance. Its elegant translucent enclosure and sleek design complement our newest computer systems. And its unique stand even has room underneath to store your keyboard when you are not using it.

The high quality of this display comes from a 17-inch (16.0-inch viewable image size) Mitsubishi Diamondtron CRT. These CRTs feature aperture grille technology for vivid colors and sharp text. And their vertically flat screens minimize glare to make your viewing more comfortable.

On-screen controls let you quickly adjust the Apple Studio Display to meet your specific needs and to compensate for changes in environmental conditions. The monitor meets strict worldwide standards for energy consumption, electromagnetic emissions, and recyclability.

Put all those features together and you have a high-quality display for a much lower price than you would expect. That makes the Apple Studio Display one of the best monitor values available for your Macintosh system--and one you will enjoy inside and out every day you use it.

Features

Superb Screen Quality

- 17-inch (16.0-inch viewable image size) Mitsubishi Diamondtron CRT
- aperture grill technology for vivid colors and sharp text
- vertically flat screen for reduced glare

Stunning Design

- elegant translucent case that matches Apple's latest Power Macintosh G3 computers
- storage space under the display for your keyboard

Advanced Architecture

- supports high-resolution display at flicker-free refresh rates
- includes on-screen controls for easy setup and adjustment to environmental variations
- meets strict EPA ENERGY STAR and TCO 95 requirements

Ordering Information

- Studio Display Order No.M6221LL/A
- Apple Displays software
- power cord
- VGA-to-Macintosh adapter
- user's manual

- limited warranty

For More Information

For more information about this product, or to find out where to buy Apple products, visit <http://www.apple.com> on the World Wide Web or call 1-800-538-9696. To purchase this product from the Apple Store, go to <http://www.apple.com/store>.

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Category: Macintosh Displays

Sub Category: Studio Display 17

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Tech Info Library

TITLE

Power Macintosh G3 (Blue and White): Frequently Asked Questions

Article ID: 58238
Created: 1/11/99
Modified: 1/4/00

TOPIC

This article contains frequently asked questions and answers relating to the new Power Macintosh G3 (Blue and White).

- What type of memory does the Power Macintosh G3 (Blue and White) use? Is the memory the same as in other Power Macintosh G3 systems?
- What is the maximum amount of memory that can be put in the Power Macintosh G3 (Blue and White)?
- What is FireWire?
- What is USB? Is it the same technology used in iMac?
- What graphics accelerator does the Power Macintosh G3 (Blue and White) use? Can you tell me more about the 66-MHz PCI slot? Are the other three slots standard PCI slots?
- Does the Power Macintosh G3 (Blue and White) have a floppy disk drive or serial port?
- What kinds of hard disk drives does the Power Macintosh G3 (Blue and White) support? How many devices does it support? How do I connect my older I/O devices?
- Does the Power Macintosh G3 (Blue and White) come with a modem?
- What version of the Mac OS does the Power Macintosh G3 (Blue and White) include?
- Is it possible to start up from a FireWire hard drive?

DISCUSSION

Q. What type of memory does the Power Macintosh G3 (Blue and White) use? Is the memory the same as in other Power Macintosh G3 systems?

A. The Power Macintosh G3 (Blue and White) requires PC100-compliant SDRAM. The memory must be 3.3-volt, unbuffered, 168-pin. If an SDRAM DIMM is sold or marketed as "PC100," this helps ensure that it will function correctly and optimally in your system. Please check with the manufacturer before purchasing. Memory from prior Power Macintosh (EDO or FPM RAM) computers cannot be used in this system.

Q. What is the maximum amount of memory that can be put in the Power Macintosh G3 (Blue and White)?

A. The Power Macintosh G3 (Blue and White) has four DIMM slots that can accommodate up to 256MB DIMMs each, for a total of 1,024MB (1 gigabyte) of memory. When using 256MB DIMMs, use 128Mbit-device technology, not 64Mbit or 256Mbit. The 256MB DIMMs are available from the Apple Store.

Q. What is FireWire?

A. FireWire, also known as IEEE 1394, is an industry-standard, high-speed input/output (I/O) technology that can support multimedia and high-bandwidth devices like printers, digital cameras, and FireWire hard disk drives. Apple has even included 15 watts of bus power that will spawn a whole new class of easy-to-use self-powered devices such as hard drives and cameras. FireWire is perfect for digital-video editing. The two FireWire ports on the Power Macintosh G3 (Blue and White) system support transfer speeds of up to 400 megabits-per-second (Mbps). FireWire lets you plug in and unplug devices without restarting the system. There are no device ID numbers to track, and the cables are long (14 feet) and easy to snap in. FireWire supports up to 63 devices. Information about FireWire technology can be found at:<http://www.apple.com/firewire>.

Q. What is USB? Is it the same technology used in iMac?

A. The USB (Universal Serial Bus) implementation in the Power Macintosh G3 (Blue and White) is the same as iMac. USB is a standard for attaching peripheral devices to a personal computer, delivering higher performance (up to 12 megabits-per-second) than previous serial port connection methods. USB is used to connect devices such as keyboards, mice, trackballs, modems, printers, scanners, and joysticks. You can plug in and unplug USB devices without restarting the system. Maximum cable length is 5 meters. Up to 127 USB devices can be attached to the computer simultaneously. The new Power Macintosh G3 system ships with two USB ports. Apple also provides a USB keyboard and USB mouse with each system. The Apple USB Keyboard includes a built-in, bus-powered hub with two additional USB ports. The Power Macintosh G3 (Blue and White) also includes an Apple keyboard extender cable that increases the length of the Apple USB Keyboard cable and gives you the option to place the system either on the desktop or on the floor. Information about USB technology can be found at: <http://www.apple.com/usb>.

Q. What graphics accelerator does the Power Macintosh G3 (Blue and White) use? Can you tell me more about the 66-MHz PCI slot? Are the other three slots standard PCI slots?

A. All Power Macintosh systems come standard with the latest graphics accelerator chip from ATi, the RAGE 128. It includes 16MB of SDRAM graphics memory that provide extraordinary multitexturing valued by games developers. This speedy graphics card provides stellar 2D performance to support large displays and great 3D performance for professional 3D applications and games. The RAGE 128 card has an industry-standard VGA video connector. For customers who want to connect the Power Macintosh to older Macintosh-type (DB-15 pin) connectors, Apple supplies a VGA-to-Macintosh connector in the accessory kit. The three 33-MHz, 64-bit PCI slots are PCI 2.1-compliant slots and can also accommodate 33-MHz, 32-bit cards. You can add many different types of cards, including graphics, networking, or cards that support storage devices.

Q. Does the Power Macintosh G3 (Blue and White) have a floppy disk drive or serial port?

A. Like iMac, this system does not have a floppy disk drive. If you need to use a floppy disk drive, there are several third-party solutions available on the market. If you need to support serial devices, you can purchase third-party adapters or PCI cards. There is no serial port in the system. If you need to support ADB, or SCSI devices, you can use third-party dongles, adapters, PCI cards, or external connection boxes. Apple is aggressively embracing I/O technologies such as FireWire and USB that allow you to attach devices directly to the system. There are several other options for getting information in or out of the system, including Internet access, optional internal Zip drives, LAN, and other mass-storage devices.

Q. What kinds of hard disk drives does the Power Macintosh G3 (Blue and White) support? How many devices does it support? How do I connect my older I/O devices?

A. The Power Macintosh G3 (Blue and White) system comes with an Ultra ATA hard disk drive or Ultra2 Low Voltage Differential (LVD) SCSI hard disk drive. Ultra2 SCSI is the next generation of SCSI. The Ultra2 LVD option includes a SCSI hard disk and a SCSI PCI card in one of the PCI slots. It doubles the data burst rate, up to 80 megabytes-per-second, providing greater system throughput. The maximum cable length is 12 meters, increasing flexibility in adding external storage devices. Ultra2 LVD SCSI supports up to 15 SCSI drive IDs. Customers who want to attach standard, Fast, or Fast Wide SCSI devices to the system along with Ultra2 LVD can add a PCI card offered by third-party vendors, but the bus speed will be slower.

Q. Does the Power Macintosh G3 (Blue and White) come with a modem?

A. The new Power Macintosh G3 comes standard with a built-in slot to accommodate a 56K modem that supports both the K56flex and V.90 standards. The modem is available as a build-to-order option via the Apple Store. Customers can also purchase external modems from third-party vendors.

Q. What version of the Mac OS does the Power Macintosh G3 (Blue and White) include?

A. The Power Macintosh G3 series ship with Mac OS 8.5.1. This version has lots of great new features and functionality. One of the highlights is Sherlock, your own private search detective. Sherlock is a powerful technology that lets you easily and quickly find information on local hard disk drives and the Internet.

Q. Is it possible to start up from a FireWire hard drive?

A. No, the boot ROM cannot currently support booting from FireWire-based storage devices.

Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: Power Macintosh G3 - Blue and White

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Tech Info Library

TITLE

iMac: Sharing Files Via IrDA

Article ID: 58239
Created: 1/11/99
Modified: 1/11/99

TOPIC

How do I set up my iMac to communicate via infrared to another Macintosh computer?

DISCUSSION

First verify your computer supports IrDA by reviewing Article 20928: "[Macintosh Infrared: Is It IrDA Compatible?](#)".

If your computer is equipped with infrared technology that uses the IrDA protocol, you can establish a wireless TCP/IP or AppleTalk connection to a network using an IrDA network access device, or exchange files with another IrDA equipped computer.

Depending on the type of network protocol that you are going to use, choose Infrared Port (IrDA) from the "Connect via" pop-up menu in either the AppleTalk control panel or TCP/IP control panel.

AppleTalk Setup

In the AppleTalk control panel, select the Connect via option "Infrared Port (IrDA)." Close the window and save changes. **TCP/IP Setup**

Open the TCP/IP control panel.

Create an infrared configuration by selecting the Configurations option under the File menu, or press Command-K. Create a new set by selecting an existing set, duplicating it, and renaming it Infrared. Click Make Active. This step will make it easier to switch between IR, Ethernet, or other configurations later.

Select Connect via option "Infrared Port (IrDA)."

Enter an IP address and a default Subnet mask value as described in Article 30821: "[TCP/IP: Setting up a Private Network](#)". If you are switching the connection from an existing Ethernet network you can use the previous network values.

Example:

Computer 1:

- IP addr 10.0.0.1

- subnet mask 255.0.0.0

Computer 2:

- IP addr 10.0.0.2

- subnet mask 255.0.0.0

Close the window and save changes.

Establishing an IrDA Connection

To establish an IrDA connection, position your computer within three feet of the other computer or infrared network access device. IrDA devices that are in range will appear in the Infrared control panel.

Verify File Sharing is turned on and the appropriate volume is being shared. Review the setup in the Mac OS Help under "Sharing files with others on the network." You may now open your Chooser, select AppleShare and select the file server you wish to connect to.

Troubleshooting

If you are unable to enable IrDA, verify the following extensions and control panels are active by viewing them in the Extensions Manager control panel. If they are inactive, make them active and restart your computer. If they are missing, you will need to reinstall those components from your original system software CD.

Extensions:

IrDALib Extension

InLanScanner/PPC Extension

Control panels:

Infrared Control Panel

If the Infrared Port (IrDA) choice is not available

For PowerBook computers, make sure that IrDA is selected in the Options section of the Infrared control panel. The iMac will not have this choice, it will display Infrared built-in.

EXTENDED Information - [Apple Internal Use - Service Providers and Support Professional](#)

Document Information

Product Area: iMac

Category: iMac Hardware

Sub Category: Communications

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Tech Info Library

TITLE

About Your Ultra SCSI PCI Card

Article ID: 58245
Created: 1/14/99
Modified: 10/7/99

TOPIC

This article provides description and usage information for the Apple Ultra SCSI PCI Card for the Power Macintosh G3 (Blue and White), and the Power Mac G4 available as a Configure to Order option from the Apple Store at <http://www.store.apple.com>

DISCUSSION

Congratulations on purchasing the Apple Ultra SCSI PCI Card. This peripheral component interconnect (PCI) expansion card allows you to connect devices that use the Small Computer System Interface (SCSI, pronounced "skuh-zee"). SCSI is a standard method for connecting disk and cartridge drives, CD-ROM drives, scanners, and other devices. The SCSI port permits high-speed communication between the computer and SCSI devices.

Installing the Card

To install the card, you'll need to open your computer, install the card, then close the computer. For detailed instructions on installing PCI expansion cards, please refer to the documentation that came with your computer.

About SCSI Devices

Once you've installed the card and closed your computer, you can connect and use up to seven external SCSI devices with your computer. You connect external SCSI devices to the SCSI port on the card in a chain. The first device in the chain plugs into the SCSI port; the second device plugs into the first device, and so on.

Before You Connect a SCSI Device

Before you connect a SCSI device to your computer, follow the instructions in this section.

IMPORTANT This section contains general instructions for attaching SCSI devices to your computer. Also, follow the specific instructions that came with your SCSI device that tell how to change a device's ID number and attach a SCSI cable or terminator to the device.

Make Sure Each Device Has a Unique ID Number

Each external SCSI device connected to your computer must have its own unique ID number from 0 to 6. The SCSI ID number helps the computer keep track of the devices when several devices in the SCSI chain are communicating with the computer simultaneously.

The SCSI devices can be in any physical order in the chain; it is not necessary to arrange them in numerical order. See the instructions that came with each SCSI device for information on checking and setting its SCSI ID number.

IMPORTANT If you use two or more devices attached to the SCSI interface with the same ID number, your computer will not start up properly, your equipment may malfunction, and you may lose data as a result.

Use the Right Type and Length of Cable

To attach a SCSI device to your computer or to another device in the chain, always use SCSI cables that are double-shielded, such as Apple SCSI cables. Never use printer-type RS-232 cables (commonly used with DOS and Windows computers). Poor-quality SCSI cables are often the cause of SCSI problems. Avoid mixing brands and types of SCSI cables.

If the device is the first or only one you're connecting, use a SCSI system cable to connect it to the computer's SCSI port. If the device is not the first one, use a SCSI peripheral interface cable to connect it to the last device in the chain.

Keep the cables between SCSI devices as short as possible. Cables 18 to 24 inches long are best. PowerBooks and some SCSI devices

(particularly scanners) may not be able to handle cables longer than 24 inches.

IMPORTANT The total length of the cables in a SCSI chain should not exceed 6 meters (about 20 feet). SCSI cables must have a 110-ohm impedance.

Terminate the SCSI Chain Properly

To ensure accurate transmission of information, a terminator must be present at each end of a SCSI chain. One terminator, at the beginning of the SCSI chain, is inside your computer. When you connect external SCSI devices, make sure that only the last external device in the chain has a terminator.

IMPORTANT In almost all cases, only the first and last devices in the SCSI chain should be terminated, with one exception noted later in this section. Make sure that no external SCSI device but the last one has a terminator.

To terminate the last device in the chain, do one of the following:

- Use a device that has a built-in terminator as the last device in the chain. If you wish to attach two or more SCSI devices that have built-in terminators, an Apple-authorized service provider can remove the extra built-in terminators.
- If the device at the end of the SCSI chain does not have a built-in terminator, attach an external terminator. You can attach or remove external terminators yourself. (Do not use a black terminator; the black terminators are for Macintosh IIx computers and certain LaserWriter printers only.) Terminators are available at authorized Apple dealers.

IMPORTANT: Do not attach a terminator to a device that already has a built-in terminator. If you do, your computer may not start up properly.

Exception to the "first and last" rule: If the total cable length in the chain is greater than 10 feet, the chain may need a third terminator at the 10-foot point. Do not add the third terminator unless you are experiencing a SCSI problem, and check all other possible causes of the problem before adding the third terminator.

Connecting a SCSI Device

After you read the earlier section, "Before You Connect a SCSI Device," follow the instructions below. Use these general instructions in conjunction with the more specific instructions that came with your SCSI device.

1. Shut down your computer and make sure the SCSI device is turned off.
2. Connect one end of a SCSI cable to the SCSI port on your SCSI device.
3. Connect the SCSI adapter that came with your computer, shown below, to the other end of the SCSI cable.
4. Connect the SCSI cable with the adapter attached to the computer's SCSI port or to the last SCSI device already in the chain.
IMPORTANT Make sure the last device in the SCSI chain is terminated properly.
5. Turn on all devices in your SCSI chain. Then turn on your computer. **IMPORTANT** Always turn on all external SCSI devices connected to your computer before turning on the computer itself. Otherwise, your computer won't recognize that the SCSI devices are connected to it and your computer may not be able to start up.
6. Install any necessary device drivers (software that makes a device work with your computer).

Drivers needed for a SCSI device usually come on a floppy disk with the device. Some older SCSI devices may require updated drivers to work with your computer. For more information about drivers, contact the manufacturer of your SCSI device.

Note: If you experience problems after connecting a SCSI device, see the troubleshooting documentation that came with your computer or Mac OS Help for solutions.

Keep in mind:

- If you are not going to use a SCSI device and want to turn it off, disconnect the device from the existing SCSI chain of devices before turning the device off. If you turn off a device while others in the chain are still on, you may experience data loss or corruption, poor performance, or your computer may freeze.
- If you use different types of SCSI devices (such as SCSI-2 and Ultra SCSI) in the same SCSI chain, all devices will perform at the level of the slowest connected SCSI device.

Technical Specifications

- Operating system: Mac OS 8.5 or later
- System requirements: Power Macintosh G3 (Blue and White) and Macintosh G3 servers

..TIL58245-About_Your_Ultra_SCSI_PCI_Card.pdf

- Interface: One external, 50-pin Ultra Narrow SCSI connector
- Maximum data transfer rate: Up to 20 megabytes per second (MB/sec)
- Supports up to 7 SCSI external devices of the following types: SCSI-1, SCSI-2, Fast SCSI, Ultra SCSI
- SCSI ID number: Card uses SCSI ID 7

Note: While the Apple Ultra SCSI PCI Card is functionally equivalent to the Adaptec 2930 card, Apple has only tested, and therefore only supports the card using the external connector.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: Power Macintosh G3 - Blue and White

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Tech Info Library

TITLE

Power Macintosh G3 and G4: Differentiating Between Available SCSI Cards

Article ID: 58256
Created: 1/21/99
Modified: 1/11/00

TOPIC

The Power Macintosh G3 (Blue and White) and Power Mac G4 have a number of SCSI cards available. What are the differences between them?

DISCUSSION

The three Apple SCSI cards available as configure-to-order options are as follows, with a shortened name in parentheses:

- Ultra SCSI PCI Card (Ultra)
- Single Channel Ultra2 LVD SCSI Card (Single)
- Dual Channel Ultra2 LVD SCSI Card (Dual) version 1 and 2

The version 2 dual channel SCSI card is functionally equivalent to the version 1 card, though it has been tested and approved for use with the Power Mac G4 (AGP Graphics) computer. Refer to the chart below for more specific technical information. The card is based on the ATTO ExpressPCI UL2D card. You may refer to the ATTO Web site at <http://www.attotech.com> for more information about the card.

Table 1 differentiates the various Apple cards based on their features. The Ultra card is best utilized for connecting slower, legacy SCSI-1 and SCSI-2 devices such as tape drives, hard drives, and scanners, as well as Ultra Narrow SCSI devices.

While there is some overlap among the cards, you should make your purchase decision based on what type of device you intend to connect to the card.

Specification	Ultra SCSI Card	Single Channel Card	Dual Channel Card version 1	Dual Channel version 2
Supported Computer	Power Macintosh G3 (Blue and White) and Power Mac G4	Power Macintosh G3 (Blue and White)	Power Macintosh G3 (Blue and White)	Power Mac G4 (AGP Graphics)
Max. Transfer Rate (MB/Sec)	20	80	80 per channel	80 per channel
Apple Supported Types	SCSI-1, SCSI-2 (Fast), Ultra Narrow	Ultra2 LVD	Channel A: SCSI-1, SCSI-2 (Fast), Ultra Narrow, Ultra Wide, Ultra2 LVD Channel B: Ultra2 LVD	Channel 1: SCSI-1, SCSI-2 (Fast), Ultra Narrow, Ultra Wide, Ultra2 LVD Channel 2: Ultra2 LVD
Internal Connector	50-pin standard (Male) (Not Apple Supported)	68-pin high-density Ultra2 (Female)	Channel A: 68-pin high-density Ultra2 (Female) Channel B: 68-pin high-density Ultra2 (Female), and 50-pin standard (Male) *	Channel 2: 68-pin high-density Ultra2 (Female)
External Connector	50-pin high-density (Female) Includes a high density 50-pin to DB25 adapter	68-pin high-density Ultra2 (Female)	Channel A: 68-pin high-density Ultra2 (Female) **	Channel 1: 68-pin VHDCI Ultra2 (Female)
Max. Devices Int/Ext	Up to 7 total	Up to 15 total	Up to 30 total	Up to 30 total

Maximum Cable Length Internal/External	3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices	12 meters w/only Ultra2 LVD devices	Channel A: 3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices; 12 meters w/only Ultra2 LVD devices Channel B: 12 meters w/only Ultra2 LVD devices	Channel 1: 3 meters w/non-Ultra devices; 1.5 meters w/Ultra devices or a mix of Ultra and non-Ultra devices; 12 meters w/only Ultra2 LVD devices Channel 2: 12 meters w/only Ultra2 LVD devices
PCI System Bus	32 bit	32 bit	64 bit	64 bit
Driver Compatibility	Compatible with SCSI Manager 4.3, and earlier drivers	Requires SCSI Manager 4.3 compliant driver	Requires SCSI Manager 4.3 compliant driver	Requires SCSI Manager 4.3 compliant driver

Table 1 Apple SCSI Card Specifications

* For maximum performance, the internal connector (Channel B) is recommended for Ultra2 devices only.

** The internal/external (Channel A) connectors are recommended for use with all SCSI types.

All three Apple SCSI cards allow you to boot your Power Macintosh G3 (Blue and White) from an attached device that has the appropriate system software installed.

Maximum throughput (Ultra2) is only possible when only Ultra2 devices are on the SCSI bus. When you connect a non-Ultra2 device to the single or dual channel card, the SCSI manager will negotiate with each device for maximum speed for that particular device.

Definitions

Additional definitions may be found at the following Web sites:

<http://www.seagate.com:80/support/disc/faq/scsirev.shtml>

<http://www.adaptec.com/tools/glossary/general.html>

Notes

1. The term Low Voltage Differential (LVD) can be used interchangeably with the term Ultra2.
2. High Voltage Differential, also known as Differential devices, are not supported.
3. With regards to the Ultra2 LVD SCSI cards, there are adapters to connect a Narrow device to the Wide bus, but this may leave a portion of the signal unterminated resulting in possible data transmission errors or data loss. Using such an adapter is not an Apple-recommended or supported solution.
4. Though Apple SCSI cards may be similar to certain Adaptec cards, use **only** Apple SCSI Card Firmware Updates on Apple cards. Do **not** use Apple Firmware Updates on Adaptec Power Domain cards. Similar firmware updates for Adaptec SCSI cards may be available from Adaptec.
5. For more information on the Apple Ultra SCSI PCI Card, see the following Tech Info Library article:
Article 58245: "[Power Macintosh G3 \(Blue and White\): About The Ultra SCSI PCI Card](#)"

This article provides information about a non-Apple product. Apple Computer, Inc. is not responsible for its content. Please contact the vendor for additional information.

The following Tech Info Library article can help you search for a particular vendor's address and phone number:

Article 17159: "[Locating Vendor Information](#)"

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers; Power Mac G4

Category: Power Macintosh; Power Mac G4 Hardware

Sub Category: Macintosh Server G3; Power Macintosh G3 - Blue and White; General Topics

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Tech Info Library

TITLE

Apple Studio Display 17: Using With Older Power
Macintosh Computers

Article ID: 58271
Created: 2/3/99
Modified: 1/13/00

TOPIC

This article describes how to set up your Apple Studio Display 17" display to make the maximum number of resolutions available for use with older Power Macintosh computers.

DISCUSSION

If you are using any of the following computer models or graphics cards, you will need to turn off the DDC (Data Display Channel) control to make the maximum number of resolutions available.

- Power Macintosh 6100, 7100, and 8100 series
- PowerBook 1400 and 5300
- Power Macintosh 9500, 6200, 6300, and 6400 series
- some third-party video cards

For instance, if you are using any of the above computer models, or a third-party video card, and you are able to access only the 640 x 480 resolution setting, you will need to turn off the DDC control to access the rest of the resolution settings.

To turn off the DDC control:

1. Press the OSD Enter button on the left of the monitor. The main menu of the OSD, the Basic Adjustments menu, appears. This menu contains the seven main control icons of the On-Screen Display:

- Basic Adjustments
- Geometry
- Image
- Color
- OSD Adjust
- Language
- ETC

These icons represent controls that you use to adjust the picture and the On-Screen Display window.

2. To access a control, use the left or right arrow buttons to highlight icons. When the icon you want becomes highlighted, press the Enter button. Move the selection bar over the ETC icon and press the Enter button. Your choices are On or Off, select Off to disable DDC enabling more video resolutions to become available.

3. Press the OSD Exit button to leave the OSD function.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 17

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Tech Info Library

TITLE

Apple Studio Display 17: Removing Vertical Lines from Display

Article ID: 58272
Created: 2/4/99
Modified: 1/13/00

TOPIC

Upon setting up my Apple Studio Display 17", I noticed a number of thin vertical lines. How can I remove the lines?

DISCUSSION

The Diamondtron CRT used in the 17-inch Studio Display incorporates an aperture grid of very fine, vertical wires to enhance the sharpness of the image. Exposure to cold and or vibration can cause these fine wires to temporarily adhere to each other.

Note: Be careful not to confuse a vertical line with the horizontal stabilizing grid wires described in TIL Article 11497 "[Apple Color Monitors: Cause of Thin Horizontal Line\(s\)](#)". The horizontal wires are completely normal.

The vertical line anomaly is inherent to this type of display when exposed to lower temperatures and is not indicative of the need for a service call.

If your display is exhibiting visible thin vertical lines, you can most often break the adhesion between the grid wires by using the heel of your hand to moderately impact the side of your display under the Apple logo on the right, then left side. Using moderate force will not damage your display.

To avoid scratching or marring the external plastics, remove any jewelry or watches before you tap the display.

If the lines persist after a few attempts to break the adhesion of the wires, you should take the display to an Apple-authorized service provider for additional troubleshooting.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

If a customer presents an Apple Studio Display 17" which continues to exhibit the thin vertical lines after a gentle tap with their hand, you may attempt to relieve the adhesion of the grid wires using a rubber mallet.

Note: If the customer calls, talk them through the above procedure before they bring the display to you for additional troubleshooting.

The display can be impacted at the center of the CRT, beginning with light force. You may increase the force applied with the mallet until you are approximately 12 inches from the face of the CRT. To avoid marring the face of the display, use only a solid rubber mallet and place a soft cloth over the CRT.

If the lines persist, you should contact Apple technical support for further troubleshooting instructions.

Do not replace any modules as this will not resolve the problem.

Document Information

Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 17

..TIL58272-Apple_Studio_Display_17_Removing_Vertical_Lines_from_Display.pdf

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Tech Info Library

TITLE

Apple Studio Display 21: Using a USB PCI Card for
Troubleshooting

Article ID: 58302
Created: 3/23/99
Modified: 1/13/00

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

When troubleshooting an Apple Studio Display 21", it is acceptable to use a USB PCI expansion card if you do not have a Power Macintosh G3 (Blue and White) to connect the Apple Studio Display to. The following information has been added to the Service Source CD.

DISCUSSION

ADDED TO BASICS CHAPTER

Extended Compatibility for Service

At introduction in January 1999, the Apple Studio Display (21" CRT, 19.8" VIS) worked only with the USB-based Power Macintosh G3 (Blue and White). This configuration is still the only approved configuration for customers. However, service providers may service the display using one of the Power Macintosh computers listed below, running Mac OS 8.5 or later, with a Keyspan USB card installed in a PCI slot.

ADDED TO TROUBLESHOOTING SYMPTOM CHART

Important: Although this configuration is not approved for customers, the display can be serviced using one of the Power Macintosh computers listed below, with a Keyspan USB card installed in the PCI expansion slot. Other third-party USB cards have not been tested with this display.

To properly set up the display to work with one of the following Power Macintosh computers:

1. Install Keyspan USB card in a PCI expansion slot. **Note:** You can obtain additional information on the Keyspan USB card at their Web site: <http://www.keyspan.com>
2. Perform a clean installation with Mac OS 8.5 or later.
3. Install Apple Displays Software 1.7 or later.
4. Install USB driver 1.1 (called Mac Installer) from disc that comes with Keyspan USB card.

Due to a bug, the USB Display Service Utility v1.1 will not run on Power Macintosh G3 Desktop or Power Macintosh G3 Minitowers. However, it does run on the following PCI-Based Power Macintosh computers:

Power Macintosh 4400
Power Macintosh 6400
Power Macintosh 6500
Power Macintosh 7200
Power Macintosh 7250
Power Macintosh 7300

Power Macintosh 7350
Power Macintosh 8500
Power Macintosh 8550
Power Macintosh 8600
Power Macintosh 9500
Power Macintosh 9600
Power Macintosh 9650
Power Macintosh G3 (Blue and White)

This problem will be fixed in the next version of the USB Display Service Utility.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Monitors-Displays
Category: Macintosh Displays
Sub Category: Studio Display 21

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Tech Info Library

TITLE

PowerBook G3 Series (Bronze Keyboard): Upgrading
Memory

Article ID: 58325
Created: 5/6/99
Modified: 12/21/99

TOPIC

This article provides the necessary information for upgrading memory in the PowerBook G3 Series (Bronze keyboard) computer.

DISCUSSION

Note: Macintosh PowerBook G3 Series computers should not be confused with Macintosh PowerBook G3 computers. Though the names are similar, there are significant differences. For more information differentiating between the computers, please see the following Tech Info Library article:

Article 24604: "[PowerBook G3 & G3 Series: Identifying Different Models](#)"

For information on upgrading memory in a PowerBook G3 Series computer, see the following Tech Info Library article:

Article 25002: "[PowerBook G3 Series: Upgrading Memory](#)"

The PowerBook G3 Series (Bronze keyboard) uses the same memory as the PowerBook G3 Series and iMac, with a maximum of 384 MB supported. There are two available slots for memory upgrades. The 128 MB configuration from Apple may use one-128 MB module or two-64 MB modules. Before ordering memory, ensure you have an available memory slot.

To verify your current memory configuration, open Apple System Profiler and click the System Profile tab. In the Memory Overview under the Built-in memory arrow it will describe how the Bottom and Top memory banks are configured.

Note: These directions are also available under the Help menu in the Help Center. Select the About Your PowerBook guide and refer to the Installing Memory section.

To upgrade the memory in your computer, follow these steps:

1. Remove AC power and the main battery.
2. Remove keyboard by first releasing the screw behind the port access door on the back of the computer. Turn the screw 7 to 8 times counter-clockwise to release it.

Note: Apple does not ship the PowerBook with the keyboard locking screw engaged. As such, it may or may not need to be released prior to keyboard removal.

The screw will not come out of the computer. Once the screw is released, slide the two release latches along the function key row towards the front of the computer to release the keyboard. Roll the keyboard towards you and rest it over the trackpad.

3. Remove the three screws holding the heatsink to the processor. Use caution when removing the heatsink as the material on the processor may stick to the heatsink. Lift the front edge of the heatsink first, then remove it completely from the computer.

4. Install the memory card. When installing the memory, start at a 30 degree position and then push the memory card in and down slightly. You will feel a slight snap as the card locks into position.

5. Reinstall the heatsink being careful not to damage clip holding the RAM card to the processor card. Refer to TIL article 58405: "[PowerBook G3 Series \(Bronze keyboard\): Heatsink Reinstallation Tip](#)" for additional information on reinstalling the processor heatsink.

6. Reinstall the keyboard, again sliding the release latches back to allow the keyboard to be secured to the computer. Retighten the keyboard locking screw to secure the keyboard to the computer.

Note: When reinstalling the keyboard, make sure all the tabs on the leading edge are fully inserted into the corresponding slot. Failure to do so may cause the keyboard tab to put pressure on the CD-ROM drive possibly causing a grinding noise when resting your hand on the palmrest when a CD is inserted.

7. Turn the computer on and choose About This Computer from the Apple menu to ensure the memory is recognized.

Note: Care should be exercised when installing memory as this exposes components that are static sensitive. Use a grounded work area to discharge any static electricity on your body before handling memory. Damage caused by static electricity will not be covered by the Apple Limited Product Warranty.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series (Bronze Kbd)

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Tech Info Library

TITLE

PowerBook G3 Series (Bronze Keyboard): Information
About NewWorld ROM

Article ID: 58342
Created: 5/6/99
Modified: 12/21/99

TOPIC

I understand the PowerBook G3 Series (Bronze keyboard) uses the ROM-in-RAM (NewWorld ROM). What is it and what does it mean to me?

DISCUSSION

This PowerBook is different from previous Macintosh PowerBook computers in that it has no single, large physical ROM that contains many components of the Mac OS, the 68K emulator, hardware initialization, and the nanokernel. Instead, a small physical ROM provides hardware initialization functions and provides a mechanism to load the Mac OS ROM image into RAM. The new software architecture that is centered around ROM-in-RAM and its ramifications has the code name NewWorld.

ROM-in-RAM

Hardware-specific code resides in firmware (ROM) that fits into one ROM called the boot ROM. The boot ROM includes the code and tables needed to start up the computer, load an operating system, and provide common hardware access services.

All higher-level software resides in what has been historically known as the Mac OS ROM, but with much of the old hardware-specific code moved into the boot ROM. As before, the Mac OS ROM can still be augmented by enablers, the System file, and extensions.

Prior to the iMac, all Macintosh computers required a ROM component that contained many components of the Mac OS software. The ROM-in-RAM approach sidesteps this requirement by copying an image of the Mac OS ROM into RAM before the Mac OS begins operation. Once the Mac OS begins operation, a Mac OS ROM image in RAM and an actual Mac OS ROM behave in the same way. No new or different software interfaces are directly accessible from the Mac OS. During the boot process, software contained in the Mac OS ROM file communicates with Open Firmware to collect information about the hardware, using the Open Firmware Client Interface.

Performance

Performance of a PowerBook computer using ROM-in-RAM should exceed performance measurements for other Macintosh computers with comparable microprocessors and speeds due to the improved interrupt handling with the ROM-in-RAM approach. In addition, performance is improved because code that used to exist in ROM is now in RAM and RAM chips operate faster than the ROM chips.

RAM Footprint

Because the Mac OS ROM image is stored in RAM, approximately 3 megabytes of RAM is removed from availability for other uses. In effect, a system with 64 megabytes of RAM appears to have only 61 megabytes available. Some portion of the missing 3 megabytes is offset by having fewer patches in RAM.

Data Structures and Files

The Mac OS ROM image is contained in a new file, named "Mac OS ROM", that is kept in the System Folder. The Mac OS ROM image is exactly the same as it would be if it were an actual Mac OS ROM, containing the high-level software, the kernel software, and the 68K emulator.

Startup Disk Control Panel

Previous systems stored the user's selected startup device in PRAM when the user selected a device in the Startup Disk control panel. This device was honored by the Mac OS ROM unless the selected device was unavailable or was overridden by the user. The startup disk routine for the PowerBook computer, rather than setting Mac OS PRAM, sets an Open Firmware config variable called boot-device. This setting is honored by Open Firmware unless the selected device is unavailable or is overridden by the user.

Pressing the following keys during the startup sequence can be used to override the selected startup device.

Command-Option-Shift-Delete: will ignore the device that is selected in the Startup Disk control panel.

C: force the internal CD-ROM drive to be the startup device

D: force the internal hard disk to be the startup device.

Open Firmware and Startup Devices

In order for a device supported by an expansion card (for example a SCSI PC card) to participate in the startup process (for example, to boot a drive connected to that SCSI PC card), the card must include an expansion ROM containing startup firmware. Expansion cards for startup devices must contain all the driver code required during startup in the expansion ROM on the card. Depending on their functions, such cards may also need to provide support resources such as fonts.

Examples of devices needed during system startup include display, keyboard, and mouse devices, and storage devices such as hard drives and CD-ROM drives.

Important: If Open Firmware code is not included in the expansion card for a startup device, the card will not be usable until the operating system loads its supporting software from disk after the startup process has concluded.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series (Bronze Kbd)

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Tech Info Library

TITLE

PowerBook G3 Series (Bronze Keyboard): Read Me

Article ID: 58354
Created: 5/10/99
Modified: 12/21/99

TOPIC

This article comprises the PowerBook G3 Series (Bronze keyboard) Read Me.

DISCUSSION

Important Information About Your Macintosh PowerBook

This document provides late-breaking news about your Macintosh PowerBook G3 Series computer. You may want to print this document to keep with the user's manual for your PowerBook.

Important Information About Your Hard Disk's Format

Using Hard Disk Utilities and Disk Locking Programs Some disk utility and disk locking programs are incompatible with Mac OS Extended format. Before you attempt to use a disk utility or disk locking program, make sure the version you have is compatible with Mac OS Extended format. Check the documentation that came with the program or contact the manufacturer or the vendor that supplied the program.

Important Information About Reinstalling System Software

Your computer came with all necessary system software already installed. However, if you use the Mac OS Install program to reinstall your system software you will need to install certain items from the CD separately. These items are located in a folder titled "Important Extra System Software"

To install the extra system software:

1. After reinstalling the Mac OS, drag and drop the items from the folder on top of a closed system folder on your hard disk.
2. Click OK when asked to put the items in their proper location.
3. Restart your computer.

Important Information About Your Battery

Your battery has external indicator LEDs that let you monitor the charge level of your battery. Before the LEDs will report levels correctly, the battery must be fully discharged and recharged to calibrate the battery. After this calibration, the LEDs will report charge levels properly.

Important Information About Computer Sleep

When Using IrDA When the IrDA method of infrared (IR) communication is selected in the AppleTalk control panel and AppleTalk is on, the computer will not go to sleep automatically.

When Using a Communications Program

Many communications programs, such as PPP, Apple Remote Access, or other dial-up programs, monitor the computer's modem port to check for incoming transmissions. This may mean that the PowerBook will not sleep automatically (after the interval set in the Energy Saver control panel). Forcing sleep while connected may result in a lost connection or crash. When your computer is using the battery, you may want to quit a communications program whenever you are not using it to conserve the battery's charge. (See the manual that came with your communications program for more information.)

When Using Fax Software

Your computer will not completely sleep and the screen will only dim (instead of turn off) when fax software is set to auto answer. To avoid draining your computer battery, plug in the power adapter when waiting to receive a fax.

When FAXstf is set to answer a fax automatically, your computer will not sleep automatically. To enable the Auto sleep function in FAXstf, select Settings from the Edit menu, choose the "Fax Modem" icon, and select Never from the pop-up menu.

Waking From Sleep and the CD-ROM or DVD-ROM Drive

There is a period of time when waking from sleep that the CD-ROM or DVD-ROM drive will allow you to manually eject a mounted disc using the button on the drive tray. This will cause unexpected behavior. Closing the tray will correct the situation.

Important Information About SCSI Disk Mode

SCSI Disk Mode

The software needed to SCSI Disk Mode, is now included in the Mac OS ROM file located in the System folder. Your PowerBook cannot operate in SCSI disk mode if the System Folder is damaged or missing. Repair your System Folder by starting up from the PowerBook CD that came with your computer and reinstalling system software.

PowerBook SCSI Setup control panel

The PowerBook SCSI Disk Mode control panel has been renamed PowerBook SCSI Setup because it includes a new feature that allows the ability to wake from sleep faster.

Setting the SCSI ID

When you use your PowerBook in SCSI Disk Mode, the SCSI ID of the PowerBook will be set to #2, regardless of the ID you set in the PowerBook SCSI Setup control panel. When setting up your PowerBook for SCSI Disk mode, make sure that no other devices use SCSI ID #2.

SCSI Disk Mode and Battery Power

Always connect the power adapter when operating in SCSI Disk mode. Low battery conditions are not reported and data loss could occur if the battery gets completely drained.

Important Information About Networking

Connecting to a 10/100Base-T network

When you connect your PowerBook to an Ethernet network, the computer automatically senses whether it is connected to a 10Base-T network or to a 100Base-T network. Some (possibly all) ports on some network hubs/switches support both speeds. If you're using this type of hub/switch, there may be a delay in establishing a network link. The delay may last for several seconds after you start or restart the PowerBook and a message may appear saying the network is not available or that the network has only just become available. If you don't want a delay, connect your computer to an Ethernet network port that is not auto-sensing (10 or 100 megabits per second (Mbps) only). For more information, contact the manufacturer of the Ethernet hub/switch or your network administrator.

Performance Problems Using Ethernet

If you experience performance problems on your Ethernet network, check with your network administrator. Your computer performs best when the Ethernet port that it is connected to is set to auto-negotiate.

Important: The duplex mode of an Ethernet link to a hub is not detected if the hub's port is not auto-negotiating. If the hub's port is not auto-negotiating, your computer will detect the appropriate speed but default to half-duplex. If the hub's port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the hub's port to auto-negotiate where possible. If this isn't possible, then set the hub's port to half-duplex. For more information, see the documentation that came with the Ethernet hub.

Important Information About Displays

When connecting an Apple Studio Display monitor with a USB cable to your PowerBook, be sure to connect the monitor's USB cable to the USB port (on the back panel of the computer). The AppleVision software requires this connection.

If you have an older AppleVision or Apple Studio Display monitor that has an ADB type cable you will be unable to attach the ADB cable to your PowerBook. In order to adjust the screen image you will need to use the external controls on the monitor. For more information see the documentation that came with your monitor.

When using an Apple 15" MultiScan, Apple 1705 MultiScan or an AppleVision 1710AV monitor, the PowerBook display should be set to turn off rather than dim. If the computer is set to dim, the external display may behave erratically. To set the display:

1. Open the Energy Saver control panel
2. Click on "Advanced Settings"
3. Check "Turn off the PowerBook display instead of dimming it."

Important Information About Operating With the Display Closed

When operating with the display closed and an external monitor attached, you must have the PowerBook connected to the power adapter. Display closed operation while running on battery power is not supported.

Important Information About Your Expansion Bays

Booting from Expansion Bay devices If the system folder on your internal hard drive is invalid and you need to boot from an expansion bay module, be sure the module is inserted prior to booting or restarting your computer. If you insert the module after booting, you will see a blinking question mark or blinking folder icon. This is not recommended as unexpected results may occur.

Important Information About the Internal Modem

The modem used in the PowerBook G3 Series is a 56K modem based on the new V.90 specification. Any time a new modem standard is introduced there is a period of adjustment while various Internet service providers (ISPs) work to ensure that their POP (Point-of-Presence) servers are compatible with the new specification.

If you're having problems connecting in V.90 mode--if the modem won't connect at all, or the connection is dropped after a few minutes--it may be because the phone lines are too noisy or there's too much interference to sustain a connection of speeds above 33.6 kilobits/second (Kbps). Contact your ISP to ensure they are currently using V.90-compliant modems, or have plans to update to them in the near future. Use the PowerBook G3 Series Internal 56K (V.34 Only) modem script, which forces the modem to connect at 33.6 Kbps or lower speeds. This type of connection is more reliable in situations where the phone line quality is questionable.

To use the PowerBook G3 Series Internal 56K (V.34 Only) option, follow these steps:

1. Open the Modem control panel in the Apple menu.
2. Make sure the "Connect via" pop-up menu is set to Internal Modem.
3. Open the Modem pop-up menu and choose "PowerBook G3 Int56K (v.34 Only)".
4. If necessary, set the Sound and Dialing options.
5. Close the control panel. A message asks if you want to save the changes to the current configuration.
6. Click Save. **Note:** You do not have to restart your computer in order to use the new modem software.

Important Information About Startup Disk Devices

Be sure a valid startup disk is selected in the Startup Disk control panel. If an invalid startup disk is selected, your computer could take as long as 2 minutes to locate a volume that it can startup from. PC Card devices and RAM disks are examples of devices that are not valid to start up from, even though the icon may be displayed in the Startup Disk control panel.

Selecting the Network Disk icon in the Startup control panel without having a Netboot server properly setup will also significantly delay the time it takes you PowerBook to boot up.

Your computer cannot startup using an external USB device.

Important Information About Using A Television With Your PowerBook

The online Help incorrectly states that you can turn TV Mirroring on and off from the control strip. TV Mirroring should turn on automatically after you wake or start up the computer. To turn it off, sleep the PowerBook and then disconnect the video cable from the back panel of the computer.

Important Information About Viewing DVD Video

For best performance when viewing a DVD video:

- Turn off virtual memory in the Memory control panel.
- Turn off file sharing in the File Sharing control panel.

- Make sure that the disk cache is to the default setting in the Memory control panel.
- Quit all other applications.

Important Information About Third-Party Hardware

About drivers for USB input devices To run a USB device on a Mac OS-based computer, the device needs a software program called a "driver," available from the manufacturer of the device. Drivers appear as extension files stored in the Extensions folder within the System Folder. Apple already includes drivers in the Mac OS for USB mice, keyboards, hubs, game devices, and Iomega's USB Zip drive. Drivers for other devices, such as Epson and Hewlett-Packard printers, are included on the software install CD that came with your computer. These drivers can be found in the CD Extras folder, within the USB Device Drivers folder. After you install the driver software, you should be able to use the device. If you have problems, please contact the manufacturer of the device. From time to time, new versions of USB drivers become available. For up-to-date information on driver software, contact the manufacturer of the device.

Check the documentation that came with the device for installation instructions or contact the manufacturer or the vendor that supplied the device.

Some USB devices may not work with Mac OS until Mac OS drivers are made available. For information about the compatibility of a USB device with Mac OS, contact the manufacturer of the device.

Some applications don't recognize USB devices if the devices are plugged in while the application is running. To use the USB device with that application, quit the application, make sure the device is properly plugged in, then start the application again.

Using ADB Dongles

Some applications require the use of an ADB (Apple Desktop Bus) dongle for security purposes to prevent software piracy. The PowerBook now uses Universal Serial Bus (USB) technology. You may be able to use a USB dongle with these applications. For more information, contact the software manufacturer.

Using USB-to-Serial Converters

Some serial devices such as modems, printers and digital cameras may be able to be used with your PowerBook using a third-party USB-to-Serial converter adapter. However, all serial devices will not necessarily be compatible with such an adapter. For more information, contact the adapter manufacturer.

Using files on USB Storage devices

When working with files on an external USB storage device, always quit any open applications that may be using a file on the device before you sleep your PowerBook or disconnect the device. Unexpected results may occur, including the possibility of corruption of the media within the USB device. Contact the vendor of the specific USB device for more information.

Important Information About Installing Help For Your Computer

Your computer came with additional Help files specific for your model of computer. These files are already installed on your hard disk and available in the Help Center. This installation program will reinstall the Help files specific for your model of computer.

Reinstallation of these Help files is only necessary if you performed a clean installation of this or future versions of the Mac OS system software and your computer specific Help files are missing from the Help Center. The installation program for these computer specific Help files is located in the CD Extras folder on your PowerBook G3 Series CD.

Important Information About PC Cards

Your computer has a manual PC Card eject mechanism. To eject a PC Card, drag the card's icon to the trash and then use the PC Card eject button to eject the card. This is different from previous PowerBooks where dragging the icon to the trash would cause the card to be ejected from the slot.

Important Information About a RAM disk

The RAM disk cannot be used as a startup disk. If you create a RAM disk, its icon will not be displayed in the Startup Disk control panel.

The contents of a RAM disk are saved to the startup drive when you restart your computer. The contents are restored, once the computer restarts. Large RAM disks may add additional time to shutting down and restarting the computer.

Warning: The contents of the RAM disk can be lost if:

- the startup drive is read-only, such as a CD-ROM disc
 - the startup drive does not have sufficient space to store the contents of the RAM disk
 - the startup drive does not have a valid System Folder
 - the computer loses power
-

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: PowerBook G3 Series (Bronze Kbd)

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Tech Info Library

TITLE

Troubleshooting a CD-ROM or DVD-ROM Disc That
Will Not Mount

Article ID: 58382
Created: 5/17/99
Modified: 11/22/99

TOPIC

This article provides steps for troubleshooting a CD or DVD disc which will not mount to the desktop.

DISCUSSION

Prior to troubleshooting, verify the following:

- Whether you have a DVD or CD drive. Using Apple System Profiler, click the Devices and Volumes tab, or read the label on the drive itself. If the drive is DVD capable, it will say DVD on the label. DVD drives require specific driver software to function properly.
- Make sure the appropriate extensions are installed and active in the Extensions Manager. (Apple CD/DVD Driver, Foreign File Access, UDF Volume Access).
- Make sure the disc is inserted in the proper orientation; the label should be facing up. Some DVD discs are double-sided so try the other side if double-sided. Be sure the disc is fully seated in the drive tray.

Note: If your CD/DVD-ROM drive has recently been replaced, try updating the CD/DVD-ROM driver located in the extensions folder within the System Folder. The driver can be reinstalled from the system software CD that came with the computer, or downloaded from the Apple Software Updates web site at **<http://www.apple.com/swupdates>**.

Once you have verified the above conditions, follow these steps:

1. Hold down Command-Option-i when closing the drive door. This will attempt to mount the disc as an ISO formatted disc instead of the UDF format. Continue to hold these keys down until the disc mounts. If disc does not mount within 30 seconds, proceed to the next step.
2. Try another CD or DVD disc. If another disc works, try cleaning the problematic disc with a cleaner and try that disc again.
3. For PowerBook computers, make sure the computer is powered off, then eject and reinsert the CD-ROM drive mechanism. For Power Macintosh computers try reseating the cables to the back of the CD-ROM drive and try the disc again.
4. Restart computer and reset PRAM, and then try disc again. Refer to TIL Article 2238:
Macintosh: How to Reset PRAM and NVRAM
5. Use the System Software CD that came with the computer to reinstall the CD/DVD software. Restart the computer and try the disc again.
6. For PowerBook computers, try another drive if available. If not, the PowerBook will require service by an Apple Authorized Service Provider. If another drive works, call an Apple Authorized Service Provider to receive a replacement drive. For Power Macintosh computers, contact an Apple Authorized Service Provider to have the computer serviced.

For further information on this topic see the following articles:

TIL Article 30878: **DVD Discs: Not Mounting and/or No Sound**

TIL Article 20799: **PCI-Based Macintosh Computers: Won't Mount CD-ROM**

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

When you replace a CD/DVD ROM drive, verify whether you are replacing it with a like speed drive. If the drive is faster, it may not read

certain CDs. If it fails to read some CDs, update the CD/DVD drivers using Apple CD-ROM Software. You download the current CD-ROM software from the Apple Software Updates web site at <http://www.apple.com/swupdates>.

Document Information

Product Area: Computers

Category: PowerBook

Sub Category: General Topics

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Tech Info Library

TITLE

PowerBook and iBook: Troubleshooting a Dead Unit

Article ID: 58385
Created: 5/17/99
Modified: 1/5/00

TOPIC

This article provides troubleshooting steps for a PowerBook or iBook computer that appears dead, or otherwise non-functional, with either a battery or AC power.

DISCUSSION

1. Remove any peripheral devices from the computer.
2. Remove AC adapter and battery from the PowerBook or iBook and reset the power manager. For more information on resetting the power manager, refer to TIL article 14449: "[PowerBook: Resetting Power Manager](#)".
3. Verify the outlet is working and all connections are tight. Connect the AC adapter to a known good power outlet and make sure power adapter cord is fully inserted into the power adapter. Ensure you are using the AC adapter which was designed for use with your computer. Refer to TIL article 16168: "[PowerBook: Battery, Recharger & AC Adapter Identification](#)" for help identifying the appropriate power adapter.
4. Connect the AC adapter to the PowerBook or iBook, wait a few seconds, and then press the power on button. If the unit powers on, it is likely that you have a bad battery. If you have another battery you should try it, if you do not, have your computer serviced. If the computer did not power on with the AC adapter connected, go to step 5.
5. Remove the AC adapter, insert a charged battery, and try the power on button again. If the computer powers on, you most likely have a bad AC adapter. You should contact Apple for a replacement. If the computer does not power on, proceed to step 6.
6. If problem continues, it is likely that your computer has a hardware failure that will require a repair.

Note: The PowerBook G3 Series battery has a series of LEDs that indicate the charge level when you press the small button. If only one LED is flashing, or no LEDs are on, the battery is depleted and needs to be charged.

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Tech Info Library

TITLE

Power Macintosh G3: DVD Troubleshooting

Article ID: 58402
Created: 6/7/99
Modified: 1/25/00

TOPIC

This article provides troubleshooting information for a variety of issues which may arise when playing DVD video. This information is mainly directed at the Power Macintosh G3 computers though general DVD troubleshooting is still relevant to other DVD-ROM capable computers.

DISCUSSION

Video Stutter During Playback of a DVD Movie

There are a number of possible causes for stutter when playing back a movie. Stutter is defined as a momentary pause in playback, either sound or video could be affected.

Possible causes are:

- Virtual memory is turned on.
- Speech or other background processes/applications can also cause stutter. Quit all other applications when viewing DVD video.
- The disc could be switching layers.
- The disc may be dirty. Try cleaning it with a soft cloth.

"Cannot find required hardware" Error Message

This error can occur when either the appropriate hardware is not detected, or if the appropriate software components are not detected. Refer to TIL article 30887: **Power Macintosh G3 (Blue and White): Apple DVD Player Cannot Open** for troubleshooting tips.

Pixelation in Dark Areas

- Set the Bit Depth to Millions in the Monitors & Sound control panel.
- Switch resolution to 800 x 600 or 720 x 480 if available (only when connected to an external display).
- Choose normal size as opposed to full screen for the best quality image.
- Select best for video when watching on S-video device such as a television.

Low Sound Volume

- Check preferences and make sure Line In audio is not selected.

No Sound

- Make sure the Sound In source in the Control Strip is set to DVD.
- Try changing the sound setting when playing the movie by selecting the audio button on the DVD Controller.

Stops at Opening Window

- Press Return key and wait a few seconds. If the video has not started, press the spacebar.

Some Items in the Menu Are Not Able to be Selected

- Try using the arrow keys and the return key.

The DVD Disc Box Says "The DVD-ROM features will not work on a CD-ROM or a Macintosh computer."

Many features, including the ability to play the movie, are still available when using the Apple DVD player. Only features that require

..TIL58402-Power_Macintosh_G3_DVD_Troubleshooting.pdf

additional software to be installed will not be available. For the most part, those features are likely to have software written for a Windows environment.

Movie Does Not Immediately Start

It will take a moment for the movie to load. The system software is accessing necessary information to decode the movie. It is completely normal and not indicative of any hardware or software failure.

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Document Information

Product Area: Computers

Category: Power Macintosh

Sub Category: Power Macintosh G3; Power Macintosh G3 - Blue and White

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TITLE

PowerBook G3 Series (Bronze keyboard): Heatsink
Reinstallation Tip

Article ID: 58405
Created: 6/10/99
Modified: 6/10/99

TOPIC

This article provides an important tip when reinstalling the processor heatsink in the PowerBook G3 Series (Bronze keyboard).

DISCUSSION

When reinstalling the heatsink, for example after a memory upgrade, be sure that the ferrite bead on the display cable is not under the heatsink. If the ferrite bead is under the heatsink, the EMI gasket and ferrite bead will stack up possibly causing a slight bow in the keyboard after reinstallation.

Before screwing the heatsink down, gently push the ferrite bead towards the rear of the PowerBook creating the necessary clearance for the heatsink.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Computers
Category: PowerBook
Sub Category: PowerBook G3 Series (Bronze Kbd)

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TITLE

PowerBook G3 Series (Bronze Keyboard): Reattaching
I/O Door Spring

Article ID: 58408
Created: 6/30/99
Modified: 12/21/99

TOPIC

*** RESTRICTED: Apple Internal and Support Providers Only ***
Not For General Public Release

This article provides directions for reattaching the I/O door spring on a PowerBook G3 Series (Bronze keyboard). This article will be helpful if the door is still fully on its hinges but it no longer has any spring action, either opening or closing, and it cannot be fully closed.

DISCUSSION

The root cause of the problem is that one of the door's legs, usually the right one, pops off its spring when the door is bent during use. Typically this happens when an object, or the user's hand, catches the bottom of the door near the middle, causing it to bow out and pull the end of the leg off the spring.

1. Grasp the I/O door near the middle between your thumb and forefinger.
2. Gently and slowly pull the door out from the unit, making sure you are pulling both the top and bottom of the door evenly. You should be able to see a thin, crescent-shaped gap appear between the door and the I/O wall. It's important to pull the bottom of the door out evenly with the top.
3. When you've pulled the door out 5 to 10 millimeters (0.2 - 0.5 inches) from the I/O wall, you'll hear, and feel with your fingers, a small pop. Also, you will notice at that moment, the right side hinge pin in the door will pop out slightly (approximately 1-2 mm). Do not pull the door out any further, proceed to the next step.
4. While still holding the door in your fingers, rotate it to the closed position and let it relax back into place. You will hear another pop as the spring goes back into its proper position.

The door should now operate correctly and close fully. Open and close it a few times to make sure.

EXTENDED Information - **Apple Internal Use - Service Providers and Support Professional**

Document Information

Product Area: Computers
Category: PowerBook
Sub Category: PowerBook G3 Series (Bronze Kbd)

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TITLE

Power Mac G4: Select a Startup Disk to Reduce Start Up Time

Article ID: 58421
Created: 8/31/99
Modified: 1/11/00

TOPIC

Is it necessary to select a startup disk from within the Startup Disk control panel? I did not do it and it seems to take quite a long time for my Power Mac G4 to start up.

DISCUSSION

Power Macintosh computers that use the ROM-in-RAM (otherwise known as New World) architecture, such as the Power Mac G4, will take longer to start up unless the drive that contains the active system folder and the Mac OS ROM file is selected in the Startup Disk control panel.

If you do not have a drive selected there, the computer has to scan through all the available interfaces where a start up device can be found, including SCSI (if installed), IDE, any network port, and USB. This takes some time to do, so the length of time to start up the computer is extended.

All you need to do is select the appropriate disk in the Startup Disk control panel, on the next restart you should notice an reduction in the amount of time it takes to start up your computer.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information
Product Area: Power Mac G4
Category: Power Mac G4 Hardware
Sub Category: Troubleshooting

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Tech Info Library

TITLE

Power Mac G4 (AGP Graphics): Supports Power Manager 2.0

Article ID: 58422
Created: 8/31/99
Modified: 1/5/00

TOPIC

What is PCI Power Down mode and how does it relate to Power Manager 2.0?

DISCUSSION

In an effort to continually reduce the environmental impact of our products, the new Power Mac G4 (AGP Graphics) provides a method to turn off power to PCI interface cards after a pre-determined amount of time. Since the cards are turned off, the system fan can also be turned off providing further power saving benefits. This functionality, referred to as PCI power down mode, is provided as part of Power Manager 2.0.

Not all PCI cards support this mode however. If you have an older PCI card installed that does not support Power Manager 2.0, the PCI bus will not power down and the system fan will continue to run. Because of this, maximum power savings will not be realized. All cards installed must support PCI power down mode or the computer will not enter that mode.

Check with the vendor of the PCI card to determine if it supports this mode or can be upgraded to do so.

Note: The Apple Ultra SCSI card has been revised to provide Power Manager 2.0 compliance. The revised card was implemented in Power Mac G4 (AGP Graphics) models built after October 31, 1999.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Power Mac G4
Category: Power Mac G4 Hardware
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TITLE

Power Mac G4: Description of Velocity Engine

Article ID: 58427
Created: 8/31/99
Modified: 1/5/00

TOPIC

This article describes the Velocity Engine, also known as AltiVec, which is incorporated into the new PowerPC G4 processors in the Power Mac G4 computer.

DISCUSSION

The Velocity Engine can process data in 128-bit chunks, instead of the smaller 32-bit or 64-bit chunks used in traditional processors (it's the 128-bit vector processing technology used in scientific supercomputers--except that we've added 162 new instructions to speed up computations). In addition, it can perform four (in some cases eight) 32-bit floating-point calculations in a single cycle--2-4 times faster than traditional processors.

The PowerPC G4 with Velocity Engine works with the PowerPC architecture to accelerate the data-intensive processing required by next-generation video, voice, and graphics applications. Among the G4 key features is a vector permute function capable of rearranging data in the registers--a priceless benefit when converting data from one format to another (often necessary with voice, video and graphics apps, which typically need to save data in a number of different formats). These vector processing acceleration advantages give the G4 microprocessor a significant edge when it comes to fast visualization of large data sets, and intensive math for real-time simulations. Making the G4 perfect for everything from graphics and 3D games to astronomy, the biosciences, and predictive modeling.

For an in-depth discussion of the technology, refer to the Motorola Web page on AltiVec at <http://www.mot.com/SPS/PowerPC/AltiVec/index.html>.

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Document Information

Product Area: Power Mac G4
Category: Power Mac G4 Hardware
Sub Category: Specifications

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TITLE

Power Mac G4 (AGP Graphics): Ethernet and Wireless
Networking Specifications

Article ID: 58431
Created: 8/31/99
Modified: 1/11/00

TOPIC

This article provides the specifications for the Ethernet and wireless networking capabilities of the Power Mac G4 (AGP Graphics).

DISCUSSION

The Ethernet controller on the Power Mac G4 (AGP Graphics) is similar in function to previous 10/100 Megabit Ethernet controllers Apple has used. The main difference is with the controller itself. Apple originally used a DEC 21143 chipset for Ethernet. Ethernet and FireWire has since been rolled into the Uni-N chipset. Because it is a different hardware controller, you should only use Ethernet drivers that came with the Power Mac G4 (AGP Graphics) and not any versions from previous Macintosh computers.

Some of the other specs for the onboard Ethernet are:

- IEEE 802.3 compliant
- Maximum cable length: 100 meters (m)
- Open Transport, Mac OS 8.5 or later, AppleShare, AppleTalk, NetWare for Macintosh, TCP/IP
- Connector: RJ-45 for 10Base-T and 100Base-TX
- Media, 10Base-T: Category 3 or better UTP on 2 pairs up to 100 m
- Media, 100Base-TX: Category 5 UTP on 2 pairs up to 100 m
- Channel speeds: IEEE Auto Negotiation of 10Base-T and 100Base-TX

About Wireless Networking

The Power Mac G4 (AGP Graphics) supports wireless networking using the optional AirPort Card. To participate in wireless networking, you need the following items:

- Internal radio antenna - The radio antenna necessary for wireless networking is already installed inside your computer.
- AirPort Card - This small card (about the size and shape of a credit card) is installed in the wireless networking slot inside the computer. If your computer did not come with an AirPort card, you can purchase one from your Apple-authorized dealer or from The Apple Store at <http://www.apple.com/store>.
- Wireless network access point - To use your computer's wireless capabilities to access a computer network or Internet service provider, you need to connect a wireless access device to your network. This access device can be an AirPort Base Station (a standalone box with a wireless antenna and network and modem connections) or an AirPort Software Access Point (software running on a wireless-equipped computer).

Specifications for optional AirPort Card

Wireless Data Rate - 11 megabits per second (Mbps) maximum with fallback to 5.5, 2, and 1 Mbps

Range - 150 feet in typical use (varies with building construction)

Frequency band - 2.4 gigahertz (GHz)

Radio output power - 15 dBm (nominal)

Compatibility - 802.11 Direct Sequence Spread Spectrum (DSSS) 1, 2 Mbps standard

- 802.11 HR DSSS 11 Mbps draft standard

Document Information

Product Area: Power Mac G4
Category: Power Mac G4 Hardware
Sub Category: Specifications

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TITLE

Power Mac G4: Read Me

Article ID: 58433
Created: 8/31/99
Modified: 1/19/00

TOPIC

This article comprises the Read Me document for the Power Mac G4.

DISCUSSION

Important Information About Your Power Mac G4

This document contains important late-breaking information about your Power Mac G4 computer. You may want to print this document and keep it with your other printed documentation. For additional information, see Mac Help and the print and online documentation that came with your computer. Apple also provides substantial information online. If you have access to the World Wide Web, you can check the latest information about the Power Mac G4 in the support area at the URL **<http://www.apple.com/support>**.

The following topics are covered in this document:

Using your Power Mac G4

Putting your computer to sleep

Copying and pasting alert sounds

Adjusting and testing external speakers

Playing and recording from audio CDs

Using striped volumes

Using a startup disk formatted with third-party formatting software

Performance problems using Ethernet

Connecting your computer directly to an Ethernet switch

Third-party software issues

Connecting RAID volumes formatted with SoftRaid software

Moving Bookmarks and Favorites files before reinstalling Internet Explorer and Netscape Communicator

Hardware compatibility issues

Connecting a monitor that uses a DB-15 connector

Important information about displays

Installing additional ATA hard drives

Formatting external USB (Universal Serial Bus) hard disk drives

Connecting and disconnecting USB devices while the computer is asleep

Using password protection for Zip disks

Using a digital video camera

Using third-party SCSI PCI cards

Using your Power Mac G4

Putting your computer to sleep

Your Power Mac G4 supports new intelligent power management during computer sleep. When your computer sleeps, it will attempt to reduce power usage to the lowest level possible. The lowest power level is achieved by powering off many of the components in the computer, including the PCI bus. Older PCI cards do not support this style of power management, so the PCI bus and the system cooling fan are left powered on during sleep. When you install newer PCI cards which support this new style of power management, or if there are no PCI cards installed, the system cooling fan is turned off during sleep.

Note: If your computer is in sleep with the system cooling fan off, opening the enclosure will cause the computer to wake as a reminder that the computer is not shutdown.

Copying and pasting alert sounds

Long alert sounds require large amounts of memory. If you have difficulty copying and pasting long alert sounds into the Sound control panel, you may need to adjust memory requirements for the control panel. To do this, open the Control Panels folder within the System Folder. Select the Sound control panel, then choose Get Info from the File menu. Increase the preferred memory size until you are able to copy and paste the alert sound. The amount of memory needed depends on the sound quality of the sound input device you are using.

Adjusting and testing external speakers

Use the Output section of the Sound control panel to adjust the overall volume of your computer. The Speaker Setup section of the Sound control panel allows you to adjust the relative volume of speakers connected to your computer. In this section, you can also select which speakers you want to use and change the relative volume for each speaker by using the slider underneath the speaker.

You can also test the speakers connected to your computer by clicking Start Test in the Speaker Setup section. The computer plays a white noise test tone on each speaker, allowing you to adjust the relative volume of that speaker. The white noise test tone contains sound for all frequencies and sounds like static. You may want to reduce the overall sound volume for your computer using the Output section of the Sound control panel before testing your speakers, as the test tone can be quite loud on some speakers.

Playing and recording from audio CDs

Audio CD playback is now done digitally for increased fidelity and use with digital audio peripheral devices. When you play audio CDs, you no longer have to select Internal CD in the Input section of the Sound control panel or the Sound section of the Control Strip. To record from an audio CD, you may need to select Internal CD in the Input section of the Sound control panel or the Sound section of the Control Strip.

Using striped volumes

You cannot start up your Power Mac G4 from a striped volume. Only standard and mirrored volumes can be used as startup volumes.

Using a startup disk formatted with third-party formatting software

You can use third-party software, such as Anubis or FWB, to format and partition a hard disk in your computer. However, if you install a System Folder on one of these partitions and select it as your startup disk in the Startup Disk control panel, the computer will not use the Startup Disk volume selected.

Performance problems using Ethernet

Your computer performs best when the Ethernet port is set to auto-negotiate. If you experience performance problems on your Ethernet network, check with your network administrator.

IMPORTANT: The duplex mode of an Ethernet link to a switch is not detected if the port is not auto-negotiating. In this case, your computer will detect the appropriate speed but will default to half-duplex. If the port at the other end of the link is configured for full-duplex, a large number of late events can occur on the link. Set the switch's port to auto-negotiate where possible. If this is not possible, then set the switch's port to half-duplex. For more information, see the documentation that came with the Ethernet switch.

Connecting your computer directly to an Ethernet switch

If you connect your Power Mac G4 computer directly to an Ethernet switch, disable spanning tree on that port. Otherwise your computer could duplicate the AppleTalk address of another computer on the same network and both network connections would become unreliable.

Third-Party Software Issues

Connecting RAID volumes formatted with SoftRaid software

Hard drives formatted as RAID volumes using SoftRaid software earlier than v2.2, will be incorrectly reported as uninitialized or damaged by the system software on your Power Mac G4. Do not erase or initialize your RAID volumes if this occurs. Your RAID volumes will be correctly recognized by the system software when you update the drivers on your RAID volumes to SoftRaid v2.2 or later.

Moving Bookmarks and Favorites files before reinstalling Internet Explorer and Netscape Communicator

If you inadvertently delete the Internet Explorer or Netscape Communicator applications, you can reinstall the applications using the

software install CD that came with your computer. Before you reinstall Internet Explorer or Netscape Communicator, you must move the file that contains your Internet sites list to a different location, such as the desktop. In Internet Explorer, this file is Favorites.html; in Netscape Communicator, the file is Bookmarks.html. When you reinstall Internet Explorer or Netscape Communicator, the program overwrites these files and any locations or bookmarks that you added or that were preinstalled will be lost.

Hardware Compatibility Issues

Connecting a monitor that uses a DB-15 connector

If you want to use an older monitor that has a DB-15 connector, you need to use a Mac-to-VGA adapter to connect the monitor to the VGA monitor port on the computer. For instructions on doing this, see the documentation that came with your computer.

Some Mac-to-VGA adapters do not allow the monitor to correctly identify itself to the computer. Therefore, incorrect screen resolutions and timings may be shown as Recommended settings in the Monitors control panel and the Monitor Resolution settings in the Control Strip.

To view the correct screen resolutions and timings, do the following:

1. Open the Apple menu, select Control Panels, then choose Monitors.
2. In the Resolution section on the right, click the Show pop-up menu and choose All.

Important information about displays

When connecting an Apple Studio Display monitor with a USB cable to your Power Mac G4, be sure to connect the monitor's USB cable to the USB port on the back panel of the computer. The AppleVision software requires this connection.

If you have an older AppleVision or Apple Studio Display monitor that has an ADB-type cable along with the monitor cable, you will be unable to attach the ADB cable to your Power Mac G4. Connecting the ADB cable to older Macintosh computers would allow automatic software adjustment of the screen image. In order to adjust the screen image on your model of Power Mac, you need to use the external controls on the monitor. For more information see the documentation that came with the monitor.

Installing additional ATA hard drives

If you install an Ultra ATA hard drive in your computer, you must use an 80-pin Ultra ATA cable to connect the ATA drive to your computer. Use only 80-pin Ultra ATA cables; do not use 40-pin ATA cables used with earlier models of Power Macintosh computers. For more information about installing internal storage devices in your computer, see the documentation that came with your computer.

[Editor's Note: The original paragraph above is incorrect. It should state, "If you install an Ultra ATA hard drive in your computer, you must use a 40-pin Ultra ATA cable to connect the drive to your computer. Use only 40-pin Ultra ATA cables; do not use the 40-pin ATA cables used with earlier models of Power Macintosh computers. For more information..."]

Formatting external USB (Universal Serial Bus) hard disk drives

Many USB hard disk drives are DOS-formatted at the factory. You can use DOS-formatted USB hard drives with your computer, but you will get much better performance if the USB hard drive is formatted as Mac OS Extended or Mac OS Standard. To reformat the hard drive to Mac OS Extended or Mac OS Standard format, use the formatting utility that came with the USB hard drive. If you do not have a formatting utility, you can change the drive to Mac OS format by following the steps below.

WARNING: Erasing the hard drive will destroy any data stored on the drive.

1. If you haven't already done so, connect the external USB hard drive to your computer and turn it on.
For more information, see the topic Connecting USB devices to your computer in Mac Help and the documentation that came with the device.
2. Open the Apple menu, select Control Panels, then choose File Exchange.
The File Exchange control panel opens.
3. If necessary, click the PC Exchange tab.
4. Click the checkbox next to Mount at startup. (The checkbox should be blank.)
This turns off PC Exchange.
5. Click the close box to close the control panel.
6. Click the USB drive's icon on the Desktop, then from the Special menu choose Erase Disk.
A window appears.
7. From the Format pop-up menu, select Mac OS Extended or Mac OS Standard format, then click Erase.

Connecting USB devices while the computer is asleep

When you connect a USB device from your computer while the computer is in sleep mode, your computer automatically wakes.

Using password protection for Zip disks

The installed USB Mass Storage Support driver does not support Zip drive password protection. When a password-protected disk is inserted, the disk is ejected and a dialog box appears saying that this feature is not supported. Contact the Zip drive manufacturer to obtain software that supports this feature.

Using a digital video camera

Some DV cameras have a problem establishing a DV link. If your computer does not recognize your DV camera, try turning the camera off and on to establish the DV Link.

Using third-party SCSI PCI cards

Many older third-party SCSI PCI cards installed in your computer may not work or you may experience problems with SCSI devices that are connected to this card's port your computer. Some wide SCSI cards will only support 8 devices and not 15, which is the SCSI specification. Contact the card's manufacturer or see the manufacturer's Web site for the latest information on compatibility and possible firmware updates.

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Category: Power Mac G4 Hardware

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Tech Info Library

TITLE

Power Mac G4: Technical Specifications

Article ID: 58434
Created: 8/31/99
Modified: 1/24/00

TOPIC

This article comprises the technical specifications for the Power Mac G4. A description of the computer can be found in TIL article 58435: "[Power Mac G4: Description](#)".

Technical specifications for the Macintosh Server G4 can be found in article 58577: "[Macintosh Server G4: Technical Specifications](#)".

DISCUSSION

Technical Specifications

All configurations include the following features (unless noted).

Processor

- 350-, 400-, or 450-MHz PowerPC G4 processor
- Velocity Engine vector processing unit with 162 integrated Single Instruction Multiple Data (SIMD) instructions
- full 128-bit internal memory data paths
- powerful new floating-point unit supporting single-cycle, double-precision calculations
- data stream prefetching operations supporting four simultaneous 32-bit data streams
- 1MB backside level 2 cache running at half the processor speed
- 100-MHz system bus supporting up to 800-MBps data throughput

Memory

- 64MB, 128MB, or 256MB of PC100 SDRAM (3.3-volt, unbuffered, 64-bit-wide, 168-pin, running at 100 MHz)
- four DIMM slots support up to 1.5GB of PC100 SDRAM (999MB maximum per application) using the following DIMMs:
 - 32MB, 64MB, or 128MB DIMMs (64-bit-wide, 64-Mbit technology)
 - 128MB or 256MB DIMMs (64-bit-wide, 128-Mbit technology)
 - 512MB DIMMs (64-bit-wide, 256-Mbit technology)

Storage

- one of the following hard disk drives:
 - 10GB 5400-rpm Ultra ATA/33 hard disk
 - 20GB 7200-rpm Ultra ATA/66 hard disk
 - 27GB 7200-rpm Ultra ATA/66 hard disk
- one of the following optical drives:
 - 32x-speed (maximum) CD-ROM drive
 - DVD-ROM drive with DVD-Video playback
 - DVD-RAM drive with DVD-Video playback
- 100MB Zip drive (some configurations)
- three 3.5-inch hard disk drive expansion bays:
 - One ATA drive preinstalled in standard configurations
 - Support for up to two internal ATA drives
 - Support for up to three internal SCSI drives

Graphics support

- ATI RAGE 128, or ATI Rage 128 Pro graphics card with 16MB of SDRAM graphics memory installed in a dedicated graphics slot (either a 66-MHz PCI slot or a 133-MHz AGP 2X slot)
- support for up to 1,600 x 1,200-pixel resolution at 32 bits per pixel (millions of colors) and up to 85-Hz refresh rate
- 15-pin mini D-Sub VGA connector; Rage 128 Pro card adds a DVI connector for digital displays
- The maximum supported resolution is 1920 x 1080; 1920 x 1200 with Rage 128 Pro graphics card.

Keyboard and mouse

- Apple USB Keyboard with 2-meter cable and Apple USB Mouse

Electrical requirements and agency approvals

- line voltage: 115V AC (90V to 132V AC) or 230V AC (180V to 264V AC)
- frequency: 47 to 63 Hz, single phase
- maximum continuous power (not including display): 200W
- EPA ENERGY STAR and Blue Angel compliant (some configurations)

Environmental requirements

- operating temperature: 50to 95F (10to 35C)
- storage temperature: -40to 116F (-40to 47C)
- relative humidity: 5% to 95% noncondensing
- maximum altitude: 10,000 feet (3,048 m)

Size and weight

- height: 17.0 inches (43.2 cm)
- width: 8.9 inches (22.6 cm)
- depth: 18.4 inches (46.7 cm)
- weight: 30.0 pounds (13.6 kg)

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Power Mac G4

Category: Power Mac G4 Hardware

Sub Category: Specifications

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Tech Info Library

TITLE

Power Mac G4: Description

Article ID: 58435
Created: 8/31/99
Modified: 1/5/00

TOPIC

This article describes the Power Mac G4. The technical specifications can be found in TIL article 58434: "[Power Mac G4: Technical Specs](#)".

DISCUSSION

Apple designed the new Power Mac G4 for creative professionals who use computers as the pivotal tool of their trade, setting the pace of their work, their productivity, even their success. With its Pentium-crushing speed and convention-crushing design, the Power Mac G4 picks up where the best-selling Power Macintosh G3 left off. It's simply the fastest desktop computer ever, easily running up to a stunning 100% to 200% faster than the fastest Pentium III-based PCs. The Power Mac G4 is so powerful that its speed is measured in gigaflops, or billions of floating-point operations per second, just like supercomputers.

At the heart of this system is the brand-new PowerPC G4 with Velocity Engine. Using vector processing, the PowerPC G4 brings supercomputer performance to the desktop for the first time. The Velocity Engine moves vector and multimedia data at superefficient speeds--it can process data in 128-bit chunks, instead of the smaller 32-bit or 64-bit chunks used in traditional processors. System performance is further enhanced through the use of an all-new, superfast system bus and 1 megabyte of backside cache.

Expansion is this computer's particular talent. It accommodates more than 100 gigabytes of hard disk storage and up to 1.5 gigabytes of SDRAM. 2 USB and FireWire ports let you connect to high-bandwidth peripherals such as printers, digital video cameras, hard disk drives, and more. Three 64-bit PCI slots, a feature that until recently was available only in high-end workstations, support a wide variety of expansion cards. Choose Apple's Final Cut Pro video editing software for flexible, highly productive video editing, compositing, and special effects.

When you're ready, get unwired with AirPort, Apple's new high-speed wireless local area network option. AirPort gives you the freedom to surf the Internet without cables, additional phone lines, or complicated networking hardware. Just install the AirPort wireless networking card, connect to an AirPort wireless network, and start surfing from your business, classroom, or any room in your home.

For all those who consider their desktop system a tool for expressing their creative abilities, there's finally a computer that can keep up with everything their minds can imagine--as quickly as they can imagine it. Power Mac G4.

Superior performance

- PowerPC G4 processor running at up to 450 megahertz and featuring Velocity Engine advanced vector processing technology
- 1 megabyte of backside level 2 cache running at half the processor speed
- built-in 10/100BASE-T Ethernet networking
- ATI RAGE 128 graphics card with 16MB of graphics memory

Maximum expansion

- support for up to 1.5 gigabytes of high-performance PC100 SDRAM
- four expansion slots, including three 64-bit PCI slots and one dedicated graphics card slot (either a 66- megahertz PCI slot or an AGP 2X slot)
- support for more than 100 gigabytes of internal hard disk storage
- two or three 400-megabit-per-second FireWire ports for connecting up to 63 devices, including digital video cameras, hard disk drives, and high-speed multimedia peripherals
- two Universal Serial Bus (USB) ports for connecting up to 127 peripherals

Elegant design

- instant access side door makes it very easy to install cards, drives, and memory
- built-in antenna and support for optional AirPort wireless networking (some configurations)

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- convenient low-power sleep/wake feature that virtually eliminates the need to shut down the computer (some configurations)

Performance Comparison

For up-to-date benchmark information, visit <http://www.apple.com/powermac> on the World Wide Web.

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Document Information

Product Area: Power Mac G4

Category: Power Mac G4 Hardware

Sub Category: Specifications

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Tech Info Library

TITLE

Power Macintosh G3/G4: Black Screen After Installing
ATA Zip Drive

Article ID: 58440
Created: 9/1/99
Modified: 1/5/00

TOPIC

After installing an internal Iomega Zip drive on a Power Macintosh G3 (Blue and White), the computer boots to a black screen.

DISCUSSION

On Power Macintosh G3 (Blue and White) and Power Mac G4 computers, it is important to make sure that the power cable is connected to the internal Zip drive before powering up the computer. If only the data cable is connected, the computer will start up to a black screen.

If this should occur, power down the computer and make sure both the data and power cables are properly connected to the internal Zip drive then reboot the computer. If the problem persists, consult your Apple-authorized service provider for further troubleshooting.

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Document Information
Product Area: Computers
Category: Power Macintosh
Sub Category: Power Macintosh G3 - Blue and White

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Tech Info Library

TITLE

Power On Self Test Beep Definition - Part 2

Article ID: 58442
Created: 9/7/99
Modified: 10/4/99

TOPIC

The Power Mac G4 (AGP Graphics), iBook, and iMac (Slot Loading) use a revised set of power on self test beeps during startup. This article describes each one.

Refer to TIL article 58183: "[Power On Self Test Beep Definition - Part 1](#)" for information on earlier computers.

DISCUSSION

The power on self test resides in the ROM of the computer. This test runs whenever the computer is powered on after being fully shut down (the power-on self test does not run if the computer is only restarted).

If a fault is detected during the test, you will not hear a normal startup chime. Instead, the system will beep as explained below. If you experience one of these beeps, you should call your Apple Authorized Service Provider for additional troubleshooting assistance.

- 1 beep = no RAM installed
- 2 beeps = incompatible RAM types
- 3 beeps = no good banks
- 4 beeps = no good boot images in the boot ROM (and/or bad sys config block)
- 5 beeps = processor is not usable

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Document Information

Product Area: Power Mac G4
Category: Power Mac G4 Hardware
Sub Category: Troubleshooting

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TITLE

iMac (Slot Loading): How to Eject a CD

Article ID: 58465
Created: 10/4/99
Modified: 1/13/00

TOPIC

Since the iMac (Slot Loading) has a slot loading CD-ROM drive similar to an automobile CD player, how do I eject a disc in an emergency or at startup? I don't see a mechanical eject button like on previous CD-ROM drives.

DISCUSSION

The CD eject mechanism is electrical rather than mechanical on the iMac. If you wish to eject a startup CD-ROM disc at startup, simply press the mouse button until it ejects. If the CD is not a startup disc, simply wait for the iMac to startup and drag the CD icon to the trash can.

If this fails to release the CD, there is an eject button that can be activated by a small, blunt object such as a paper clip. The button is located on the right side of the CD slot. The power must be on to eject a CD using this method.

Once you eject the CD, it will extend just past the center hole in the disc to facilitate its safe removal from the drive.

Important: After ejecting the CD with the manual eject button, you must restart your iMac to restore functionality to the CD-ROM drive.

Note: Because the CD-ROM drive is slot loading, only round, standard size (4.7 inch or 120 mm) CDs are to be used. The mechanism does not support 3 inch or irregularly shaped CDs; damage may occur if they are used.

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Document Information

Product Area: iMac (Slot Loading)

Category: iMac Hardware (Slot Load)

Sub Category: How To

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TITLE

iMac (Slot Loading): Upgrading Memory

Article ID: 58466
Created: 10/4/99
Modified: 1/13/00

TOPIC

What is the memory expansion capability and specification for the iMac (Slot Loading)?

DISCUSSION

The iMac (Slot Loading) uses standard PC-100 DIMMs with the following specifications:

- PC-100 Synchronous DRAM (SDRAM)
- 64-bit wide, 168-pin module
- maximum of 16 memory devices on the DIMM
- unbuffered; do not use registered or buffered Synchronous DRAM (SDRAM)
- maximum height of 2.0 inches.

There are two DIMM slots accessible from the bottom of the computer. Use a coin, such as a quarter, to release the access panel and install the DIMM or DIMMs.

The maximum DIMM size for each slot is 256 MB, for a total of 512MB. Depending upon which iMac model you purchase, the base amount of memory will vary. The base model has 64 MB, the iMac DV has 64 MB, and the iMac DV Special Edition has 128 MB.

There is 8 MB of soldered SDRAM dedicated for video. Although it's not upgradeable, iMac can display 24-bit color at its highest resolution. In addition, the computer now uses AGP2X to make use of main memory for 3D rendering.

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Product Area: iMac (Slot Loading)

Category: iMac Hardware (Slot Load)

Sub Category: How To

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TITLE

iMac (Slot Loading): How to Connect External Display to
VGA Port

Article ID: 58467
Created: 10/4/99
Modified: 1/13/00

TOPIC

According to the specs for my iMac, it has a VGA port for video mirroring, yet I cannot seem to locate the port to connect the display. Where is it?

DISCUSSION

Only iMac DV models support VGA video mirroring. This feature allows you to display the same image on two different monitors, such as in a classroom environment. You cannot use the second monitor to extend your desktop area.

To access the VGA port, you'll need to replace the vented cover with the VGA vented cover provided in the accessory kit with the iMac DV models. Instructions are provided online in Mac Help on each computer.

If your iMac did not originally ship from Apple with VGA video mirroring capability already installed, there is no upgrade from Apple to provide this functionality.

Note: The image size displayed on the external monitor will match that shown on the built-in iMac monitor. If no image is displayed on the external monitor, try switching the resolution in the Monitors control panel to 1024 x 768 at 75 Hz, then back to the desired resolution.

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Document Information

Product Area: iMac (Slot Loading)
Category: iMac Hardware (Slot Load)
Sub Category: How To

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Tech Info Library

TITLE

iMac (Slot Loading): Sound Out Volume Lower with 3D
Sound Selected

Article ID: 58468
Created: 10/4/99
Modified: 1/13/00

TOPIC

Is it normal for the speaker volume to be lower when 3D Sound is selected in the Sound control panel?

DISCUSSION

Yes, due to the method in which 3D sound is created, the sound level will be slightly lower than if 3D sound was not selected. Selecting 3D sound simulates a wider sound-field that results in a slightly lower volume level.

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Document Information

Product Area: iMac (Slot Loading)
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Tech Info Library

TITLE

iMac (Slot Loading): Different Functionality for Power Button

Article ID: 58470
Created: 10/4/99
Modified: 1/13/00

TOPIC

The iMac (Slot Loading) power button has different functionality compared with previous iMac and other Macintosh computers.

DISCUSSION

The following table explains the result of pressing the iMac power button. The keyboard power button retains the same functionality as earlier iMac computers whereby you are presented with a dialog box to cancel, sleep, restart, or shut down your iMac.

	Current State	Result of Pressing
iMac button	Powered on	Immediate sleep unless server mounted, then dialog box presented
	Powered on but not responsive	Press and hold for 5 seconds to shut down iMac.
	Powered off or in sleep	Powers on or wakes from sleep

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Document Information

Product Area: iMac (Slot Loading)
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Tech Info Library

TITLE

iMac (Slot Loading): What's New and Different

Article ID: 58471
Created: 10/4/99
Modified: 1/13/00

TOPIC

This article lists the major new features of iMac (Slot Loading), as well as a brief description.

DISCUSSION

Here are the major new features of iMac:

- Slot loading CD- or DVD-ROM drive - Rather than using a tray to hold the CD, the iMac (Slot Loading) has a slot similar to an automotive CD player. Simply insert any 4.7 inch (120 millimeter) CD into the slot and iMac takes it from there.
- The iMac DV models have a slot loading DVD-ROM drive in place of the CD-ROM drive.
- VGA Mirroring - There is a VGA port on the iMac DV models that provides the capability to connect an external VGA style monitor to mirror the image on the iMac screen.
- FireWire - There are two 400 Mbps FireWire ports on the iMac DV models for use with high-speed FireWire devices such as video camcorders and hard drives. More information on FireWire and FireWire devices can be found at <http://www.apple.com/firewire/>.
- Firewire cable - To enable early adopters to get started making movies quickly, Apple is including as a special bonus, an Apple-designed FireWire camcorder (4-6 pin) cable in the box with iMac DV models. This is being provided for the first month, or while supplies last.
- Wireless networking ready - The iMac is ready to accept the an AirPort card. An antenna is built-in to the iMac enclosure.
- Better sound - The front speakers of iMac provide improved mid and high range sound, while a speaker port on the underside of iMac improves low end bass response.
- Dual Channel USB - Each USB port now has its own dedicated USB controller providing enhanced functionality such as USB booting and USB audio support.
- No System Fan - The iMac (Slot Loading) does not have an internal system fan. Instead, it relies on convection for cooling.

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Document Information

Product Area: iMac (Slot Loading)
Category: iMac Hardware (Slot Load)
Sub Category: Reference

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TITLE

iMac (Slot Loading): Differences Between Models

Article ID: 58473
Created: 10/4/99
Modified: 1/24/00

TOPIC

This article documents the differences between models of the iMac (Slot Loading) computer.

DISCUSSION This table documents the major feature differences between the three iMac models introduced in September, 1999.

Feature	iMac	iMac DV	iMac DV Special Edition
Color	Blueberry	Tangerine, Blueberry, Strawberry, Grape, Lime	Graphite
Hard Drive	6 GB	10 GB	13 GB
Memory	64 MB	64 MB	128 MB
Processor	350-MHz G3 processor	400-MHz G3 processor	400-MHz G3 processor
CD or DVD Drive	CD-ROM	DVD-ROM	DVD-ROM

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Document Information

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TITLE

iMac (Slot Loading): Technical Specifications

Article ID: 58474
Created: 10/4/99
Modified: 1/24/00

TOPIC

This article provides the technical specifications for the iMac (Slot Loading) computer.

DISCUSSION

Technical Specifications

Processor and Memory

- 350- or 400-MHz PowerPC G3 processor
- 512K backside level 2 cache
- 100MHz system bus
- 64 MB or 128 MB of PC100 SDRAM (3.3-volt, 64-bit wide, 168-pin, running at 100 MHz); two DIMM slots support up to 512 MB using 64 MB, 128 MB, or 256 MB DIMMs

Display

- built-in 15-inch shadow-mask CRT (13.8-inch diagonal viewable image size); 0.28-mm dot pitch
- built-in ColorSync color calibration for uniform color from input to display to output
- on-screen geometry adjustment to keep display images properly aligned throughout its lifetime
- flip foot for 17° tilt

Graphics Support

- ATI RAGE 128 VR 2D/3D graphics accelerator with 8 MB of SDRAM graphics memory and AGP 2X support
- Three crisp, flicker-free screen resolutions: 640 x 480 pixels at 117 Hz, 800 x 600 pixels at 95 Hz, and 1,024 x 768 pixels at 75 Hz
- 24-bit true color at all resolutions for displaying millions of colors

Storage

- 6 GB, 10 GB, or 13 GB Ultra ATA hard disk drive
- Slot-loading, 24x-speed (maximum) CD-ROM drive; or slot-loading, 4x-speed (maximum) DVD-ROM drive (plays DVD-Video discs; plays CD-ROMs at up to 24x speed)
- Support for external USB storage devices; DV models also support external FireWire storage devices

Communications

- built-in 56K modem supports V.90 and K56flex standards (RJ-11 connector)*
- built-in auto-switching 10/100BASE-T Ethernet (RJ-45 connector)
- AirPort wireless networking slot for optional AirPort Card; runs at up to 11 Mbps; 150-foot maximum range (depending on surrounding environment); 2.4 GHz frequency; nominal power output of 15 dBm; compatible with other devices that comply with the IEEE 802.11 and 802.11HR specifications

Peripheral connections

- two USB ports running at up to 12 Mbps each; provides up to 500 milliamps per port to support bus-powered devices
- two, 6-pin FireWire (IEEE 1394) ports running at up to 400 Mbps (DV models only); provides 6 watts of power to support bus-powered devices

Audio

- integrated, high-performance Odyssey audio system from Harman Kardon
- built-in microphone for speech recognition and audio recording
- front-mounted dual mini headphone jacks

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- analog audio input and output minijacks; up to 16-bit stereo and 44.1kHz sampling rate
- support for external USB audio devices

Video (DV models only)

- standard VGA output port (15-pin mini D-Sub connector)
 - supports video mirroring: external devices display an image identical to that shown on the built-in display

Keyboard and Mouse

- Apple USB Keyboard
 - integrated two-port USB hub with two Type A USB connectors
 - two-position adjustable slope (0° and 6°) using flip foot
 - 12 programmable function keys
- high-resolution (400 dpi) Apple USB Mouse

Electrical Requirements and Agency Approvals

- line voltage: 100V to 260V
- AC Frequency: 47 to 63 Hz, single phase
- maximum continuous power: 150 W
- EPA ENERGY STAR compliant

Environmental Requirements

- operating temperature: 50° to 95° F (10° to 35° C)
- storage temperature: -40° to 116° F (-40° to 47° C)
- relative humidity: 5% to 95% noncondensing
- maximum altitude: 10,000 feet (3,048 m)

Size and weight

- height: 15.0 inches (38.1 cm)
- width: 15.0 inches (38.1 cm)
- depth: 17.1 inches (43.5 cm)
- weight: 34.7 pounds (15.8 kg)

*Actual modem speeds lower; speed depends on connection rate and other factors.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: iMac (Slot Loading)

Category: iMac Hardware (Slot Load)

Sub Category: Reference

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TITLE

iMac (Slot Loading): Buzzing Noise After Shutdown

Article ID: 58527
Created: 11/22/99
Modified: 1/24/00

TOPIC

This article describes a buzzing noise heard from the iMac (Slot Loading) after shut down.

DISCUSSION

A very small number of iMac (Slot Loading) computers may produce a buzzing or humming noise from the speakers after shut down. The noise can last for several minutes and will go away if the power cord is unplugged from the computer.

If your iMac (Slot Loading) makes a loud buzzing or humming noise after shut down, contact Apple or an Apple-authorized service provider for assistance in getting the issue resolved.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

The root cause of the buzzing noise is on the main logic board. The problem is most likely to occur when the iMac (Slot Loading) is plugged into a 220 volt or higher power source, however, it can occur when the iMac is plugged into a 110 volt power source.

If a customer complains that their iMac (Slot Loading) makes a loud buzzing or humming noise after shut down, replace the main logic board under warranty. Refer to Service Source for instructions on replacing the main logic board.

Document Information

Product Area: iMac (Slot Load)

Category:

Sub Category:

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TITLE

iMac (Slot Loading): Installing AirPort Card

Article ID: 58537
Created: 12/1/99
Modified: 1/24/00

TOPIC

This article provides instructions for installing the AirPort Card into an iMac (Slot Loading) computer. Similar instructions, with graphics, are included with the AirPort Card.

DISCUSSION

1. Before installing, shut down the computer, unplug all cables, except the power cord, and place the computer face down on a soft cloth.
 2. Unlock the access door using a coin, then open the door.
 3. Touch the metal shield inside the recessed latch area to discharge static electricity, then unplug the power cord from the computer. Don't walk around the room until you've finished installing the AirPort Card.
 4. Detach the antenna from the left rail guide on the upper AirPort Card slot and remove the protective cap. Then connect the antenna to the AirPort Card.
 5. Align the edges of the AirPort Card with the guides on the slot and insert the AirPort Card sideways into the slot.
 6. Close the access door and use a coin to lock it. Reconnect all cables and cords, then press the Power button on the computer. Never turn your computer on unless all of its internal and extra parts are in place.
- Instructions for using the AirPort software are in Mac Help, available in the Help menu.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

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Tech Info Library

TITLE

Mac OS X Server: About Mac OS X Server

Article ID: 60101
Created: 3/11/99
Modified: 1/11/00

TOPIC

Contents

Introduction
Backing Up and Restoring Your Mac OS X Server
AppleShare and Apple File Services Issues
QuickTime Streaming Server Preview Software
Obtaining Database Adapters for WebObjects
Selecting Ethernet Ports
Naming Users and Groups
Other Issues

Note: This document was installed by Mac OS X Server in /System/Documentation/ReadMe. For a list of other release notes see: Tech Info Library Article 30925: "[Mac OS X Server: Release Notes](#)"

DISCUSSION

Introduction

This document provides information about your Mac OS X Server software that supplements the information in the Mac OS X Server Installation Manual. Read this document for information about known problems with this release and possible solutions. Additional information can be found in the following places:

- Read Me documents available in the System/Documentation/ReadMe/ folder
- Read Me documents in the Admin folder in the NetBoot installation volume
- the Help menu

For up-to-date news and compatibility information, see the Apple Support Web site at <http://www.apple.com/support>.

Note: If you are familiar with UNIX-based systems, you will find using your Mac OS X Server easier. Information in this document and the other Read Me documents included with your server assume you are familiar with this type of operating system.

Backing Up and Restoring Your Mac OS X Server

Your Mac OS X Server system uses a UFS format volume. You may also have Mac OS (Standard or Extended) format volumes on your Mac OS X Server. At present, to back up and restore volumes, you need to follow different procedures depending on the format of the volume.

Complete backup and restore solutions should be available soon from third-party developers, such as OmniGroup Backup & Restore. For information about the availability of OmniGroup Backup & Restore, see <http://www.omnigroup.com/Software/Backup/>.

Backing Up and Restoring Mac OS Format Volumes

To back up and restore Mac OS format volumes, you can use third-party programs such as Retrospect from Dantz Development Corporation. To use such a program, install the software in the Mac OS environment (open the Apple menu and choose Mac OS), then open the program and follow the instructions provided with the software.

Important: Retrospect does not back up permissions information for files and folders. If you restore a volume using Restrospect, you will need to set permissions again.

Backing Up and Restoring Mac OS X Server Format Volumes

For information about backing up and restoring a Mac OS X Server format volume, go to the Apple Support Web site at <http://www.apple.com/Support>.

AppleShare and Apple File Services Issues

AppleShare password security: When a client user logs in to Apple file services, the user's password is sent over the network in clear text form. Someone monitoring your network traffic could get the Administrator password, thus compromising your network's security. For information about updates to correct this situation, see <http://www.apple.com/Support>.

AppleShare client software: To connect to an Apple file services volume from a client computer, you need to install the AppleShare client software, versions 3.8.2, on the client computer. This version is available in the Utilities folder on your Mac OS X Server installation CD.

Connecting to Apple file services using IP: If you want to connect to Apple file services from a client computer using IP, instead of AppleTalk, you need to enter the server's IP address in the Router box in the TCP/IP control panel on each client computer. To do so, open the TCP/IP control panel on the client computer, choose Ethernet from the "Connect via" popup menu and Manually from the Configure popup menu, then enter the server's IP address in the Router address box, as well as the other information required for the connection.

QuickTime Streaming Server Preview Software

This release of Mac OS X Server includes a preview release of the QuickTime Streaming server, which will let you deliver rich digital media over the Internet or intranets to any QuickTime-capable application. For information about updates for QuickTime Streaming, see the QuickTime Web site at www.apple.com/quicktime/.

Note: Telephone support is not available for preview software, such as QuickTime Streaming server.

Obtaining Database Adapters for WebObjects

Your Mac OS X Server includes WebObjects adaptors that let WebObjects applications connect to and retrieve data from OpenBase and flat-file databases. An adaptor for Oracle will be available soon. For information about availability of other adaptors, see the Apple Developer Web site at <http://www.apple.com/developer>.

Selecting Ethernet Ports

If you purchased a Mac OS Server G3 With Mac OS X Server, it includes a four-port Ethernet card. An illustration in "Connecting to an Ethernet Network," in Chapter 1 of Setting Up Your Macintosh Server G3, shows the four ports of the Ethernet card numbered 1 to 4 from left to right. However, the ports are numbered from right to left. Therefore, in the Setup Assistant or Network settings panel, Ethernet Card Port 1 corresponds to the port on the right while Ethernet Card Port 4 corresponds to the port on the left.

Creating and Changing Users and Groups

You should name users and groups on a Mac OS X Server using only the lowercase alphabetic characters (a-z), the numeric characters (0-9), and the underscore character. This includes users and groups you create for Apple file services using Remote Server Administration.

If you create a NetInfo user account on your Mac OS X Server, do not use a name that you plan to use for a Macintosh Manager user account. If you do, you will see a warning message when you try to create a user with that name in Macintosh Manager.

Remote Administration shows Administrator (root), Unprivileged user (nobody), and macos group. Do not change the names of these items.

NetworkManager lets you change the names and IDs of all user accounts and groups. Do not change the names or IDs of user accounts and groups with IDs less than 100.

Other Issues

- You cannot start up a Mac OS X Server from an ATA disk configured in Slave mode.
- You should not change the name of a volume used by NetBoot server unless absolutely necessary. If you do change the name of the volume, you will need to install the NetBoot server software again.
- You can customize the contents of your Mac OS X Server Apple menu by choosing Configure Menu from the Apple Menu. If Configure Menu is not available, open the AppleMenuOptions application directly from the Workspace Manager. The application is located in the System/Applications folder.
- The floppy disk driver supports MFM formats such as 1.44 MB and 720 MB floppies. At present, it does not support formatting and writing to GCR formats such as 400K and 800K. Therefore, GCR floppies are marked as Write Protected.

EXTENDED Information - **Apple Internal Use - Service Providers and Support Professional**

Document Information

Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS X Server: General FAQ

Article ID: 60165
Created: 3/18/99
Modified: 1/11/00

TOPIC

This article contains frequently asked questions (FAQ) about Mac OS X Server. See also Tech Info Library articles:

Article 60166: "[Mac OS X Server: Operating System FAQ](#)"

Article 60167: "[Mac OS X Server: Services FAQ](#)"

Article 60168: "[Mac OS X Server: NetBoot/Macintosh Manager FAQ](#)"

Article 60169: "[Mac OS X Server: Hardware and Compatibility FAQ](#)"

Article 60170: "[Mac OS X Server: Pricing and Availability FAQ](#)"

DISCUSSION

Q. What is Mac OS X Server?

A. Mac OS X Server is the first in a line of new server software products that demonstrate Apple's commitment to providing servers that meet the needs of its customers. The first release of Mac OS X Server will be available in both software and hardware configurations. It is the first product built on the core technology of Mac OS X, the desktop operating system scheduled for later in 1999. It includes innovative services such as the Apache Web server, WebObjects application server, NetBoot workgroup management technology, and Apple file services.

Q. When will Mac OS X Server be available?

A. Mac OS X Server is now available in English in the U.S. and Canada. It is scheduled to be available worldwide in April in English, Japanese, French, and German.

Q. Who is the target customer for Mac OS X Server?

A. Mac OS X Server is designed for use by experienced system and network administrators, who typically have had previous experience with configuring and managing at least two of the following:

- AppleShare IP and At Ease for Workgroups
- complicated networks, including routing between subnets
- other UNIX servers, such as Solaris and Linux

Q. Is Mac OS X Server the same as Mac OS X?

A. No. The client (end-user) version of the Mac OS X operating system is scheduled to be available at the end of the year. While Mac OS X will include an upgraded version of the Mac OS X Server foundation, the user experience will be optimized for a desktop operating system and will be more familiar to today's Mac OS users. Unlike Mac OS X, Mac OS X Server does not include Carbon, the technology for porting today's Macintosh applications to the new foundation.

Q. How does Mac OS X Server differ from AppleShare IP?

A. The two servers offer different types of services. AppleShare IP is a general-purpose server that includes a fully integrated set of services based on the familiar Mac OS 8.5 operating system, delivering high performance and exceptional ease of use. Some key services are unique to AppleShare IP, such as mail servers, SMB support, and firewalls.

Mac OS X Server provides innovative services such as an Apache Web server, WebObjects network application services, and the revolutionary new NetBoot server software for easily managing numerous Mac systems. Mac OS X Server provides these services through

a powerful core operating system, which features advanced capabilities such as preemptive multitasking and protected memory for incredible stability and scalability.

Q. How does Mac OS X Server provide greater scalability than AppleShare IP?

A. Mac OS X Server is scalable in four key ways:

- The core system supports over 1,000 simultaneous user connections.
- The multithreaded file system can handle over 4,000 open files per process.
- Advanced networking provides support for multiple 100-megabit-per-second network interface cards, allowing simultaneous full-bandwidth file transfers across multiple subnets.

Q. Will there be future releases of Mac OS X Server?

A. Yes. Mac OS X Server lays the foundation for Apple's future server software. Over time, it will incorporate features currently available only in AppleShare IP. Mac OS X Server will evolve into a bundle of services built on top of Mac OS X, similar to the way AppleShare IP currently builds services on top of Mac OS 8.

Q. Will there be future releases of AppleShare IP?

A. Yes, but Apple is not announcing specific plans at this time. Over time, Mac OS X Server will incorporate identical or equivalent functionality to AppleShare IP, and will become Apple's sole server operating system product.

Q. Is Mac OS X Server the same as Rhapsody?

A. No. Mac OS X Server leverages a number of the technologies formerly called Rhapsody. In addition, it includes some innovative services that were not part of the original Rhapsody project.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

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Tech Info Library

TITLE

Mac OS X Server: Operating System FAQ

Article ID: 60166
Created: 3/18/99
Modified: 1/11/00

TOPIC

This article contains frequently asked questions (FAQ) about Mac OS X Server. See also Tech Info Library articles:

Article 60165: "[Mac OS X Server: General FAQ](#)"

Article 60167: "[Mac OS X Server: Services FAQ](#)"

Article 60168: "[Mac OS X Server: NetBoot/Macintosh Manager FAQ](#)"

Article 60169: "[Mac OS X Server: Hardware and Compatibility FAQ](#)"

Article 60170: "[Mac OS X Server: Pricing and Availability FAQ](#)"

DISCUSSION

Q. What is the foundation for Mac OS X Server?

A. Mac OS X Server is based on a Mach microkernel that roughly corresponds to Mach 2.5. This microkernel is integrated with an implementation of BSD 4.4 to provide a full UNIX-style operating environment.

Q. Is Mac OS X Server based on UNIX?

A. Mac OS X Server is built on UNIX technologies, implementing most of the POSIX APIs, which makes it easy to port UNIX applications, particularly those from a BSD heritage. The main exception is applications with a graphical user interface, because Mac OS X Server doesn't include the X Window System UI toolkits. Mac OS X Server is built around a graphical interface, unlike traditional UNIX systems that rely on the command line. However, Mac OS X Server cannot be called a UNIX operating system, as it does not fully comply with the POSIX and X/OPEN specifications required for use of the UNIX trademark.

Q. Does Mac OS X Server use a command line interface?

A. The primary interface is a Mac-like user interface, allowing administration with graphical tools. For administrators who prefer the command line interface or make use of Telnet/rlogin for remote administration, a Terminal application and several UNIX shells are included, as well as standard tools such as NFS, FTP, Perl, Tcl, and Emacs.

Q. Does configuring Mac OS X Server require editing configuration files?

A. No. Mac OS X Server provides a friendly Setup Assistant and a rich set of graphical administration tools. Editing configuration files is not required for basic use of any of the core services. However, certain UNIX-derived services such as Apache use their existing configuration files for advanced administration.

Q. Does Mac OS X Server support remote administration?

A. Yes. There are currently several options, each suited to different purposes. Users, groups, and mountable volumes can be managed via a web-based remote-administration tool, similar to the one in AppleShare IP Configuration information can also be managed from another Mac OS X Server system via NetInfo, the built-in Network Directory Service. In addition, UNIX-savvy system administrators can enable Telnet for command line-based remote administration.

Document Information

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Category: Mac OS X Server

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Tech Info Library

TITLE

Mac OS X Server: Services FAQ

Article ID: 60167
Created: 3/18/99
Modified: 4/19/99

TOPIC

This article contains frequently asked questions about Mac OS X Server. See also Tech Info Library articles:

Article 60165: "[Mac OS X Server: General FAQ](#)"

Article 60166: "[Mac OS X Server: Operating System FAQ](#)"

Article 60168: "[Mac OS X Server: NetBoot/Macintosh Manager FAQ](#)"

Article 60169: "[Mac OS X Server: Hardware and Compatibility FAQ](#)"

Article 60170: "[Mac OS X Server: Pricing and Availability FAQ](#)"

DISCUSSION

Q. What are the key services provided with Mac OS X Server?

- A. There are four primary services in this release of Mac OS X Server:
- Apache Web server
 - WebObjects network application services
 - NetBoot and Macintosh Management server software for workgroup administration
 - Apple file services

Q. What is Apache?

A. Apache is today's most popular Web server, serving over half of the public Web sites on the Internet. Apache is an open-source HTTP server developed by the Apache Group (www.apache.org). The Apache source code is freely available, making it easy for a large community to assist in fixing bugs, porting to new platforms, and customizing for special purposes.

Q. What version of Apache is included in Mac OS X Server?

A. Mac OS X Server includes Apache 1.3.4, the latest version available at the time of release. We are working with the Apache Group to ensure that future versions of Apache will compile directly on Mac OS X Server.

Q. How is Apache administered?

A. Basic administration of Apache is very simple. The Setup Assistant and control panels allow for easy on/off configuration, as well as selection of the hostname and documents director y. For advanced configuration, you can edit the same configuration files used by Apache on other platforms.

Q. What is WebObjects?

A. WebObjects is the industry's leading application server, with a flexible, scalable architecture for creating and deploying network applications. WebObjects provides a dynamic object-oriented environment for creating applications that can draw their data from a database server and run their user interface on any standard Web browser. WebObjects makes it easy to develop personalized content, e-commerce solutions, and MIS applications. For more information, see www.apple.com/webobjects.

Q. Which version of WebObjects is included with Mac OS X Server?

A. Mac OS X Server includes WebObjects 4.0.1, along with a 50-transaction-per-minute deployment license. The deployment license can be used for testing or for low-volume usage, or it can be upgraded for full-scale Internet deployment. For the first release of Mac OS X

Server, Apple is including all of the WebObjects developer tools. These tools can be used for compiling WebObjects network applications, database client/server applications, or UNIX server applications. The included license covers only the tools and runtimes for Mac OS X Server. WebObjects 4.0.1 for Windows NT and UNIX platforms will continue to be available as a separate product.

Q. What is NetBoot?

A. NetBoot is a revolutionary Apple technology for managing Macintosh networks. System and user files are stored on the server, bypassing the local hard disk drive, thus making it easy to centrally administer large networks of Macintosh clients. Mac OS X Server also includes Macin-tosh Manager, a tool for allowing users of both NetBoot and non-NetBoot client computers to access their personal files and desktop environment from anywhere on the network.

Q. Which Apple file services are included?

A. Mac OS X Server includes a high-performance native implementation of AFP, the Apple File Protocol, allowing it to share HFS Plus volumes with any AppleShare client over TCP/IP or AppleTalk. You need to update client systems to the latest AppleShare client (version 3.8.2 or later) to ensure reliability, performance, and security. User, group, and mountable volume information can be managed remotely using a Web-based remote-administration tool, similar to the one in AppleShare IP.

Q. Can I transfer my AppleShare IP user and group information to Mac OS X Server?

A. Yes. AppleShare IP includes the ability to export its user information, which can then be imported into Mac OS X Server. It does not export passwords and group information, however, so that information will need to be recreated.

Q. Does Mac OS X Server support Windows clients via SMB file sharing?

A. This version does not provide integrated support for native Windows (SMB) file sharing. However, Mac OS X Server can support Windows clients that function as AppleShare clients. Several third-party solutions should be available, including the free SAMBA server.

Q. Is QuickTime streaming available with Mac OS X Server?

A. A preview version of the QuickTime Streaming Server was included with Mac OS X Server. The final version of this software was released by Apple 19 April 1999 and is available for downloading from Apple Software Updates Online. Please see Software Updates Document Number 11366, or use your Web browser to access the article at: <http://asu.info.apple.com/swupdates.nsf/artnum/n11356>. QuickTime 4 is required to view movies streamed by QuickTime Streaming Server. QuickTime 4 Pro is required to created streaming movies.

Q. Is print spooling available?

A. Yes. Macintosh customers can use the Desktop Printer Utility LPR support to connect to a Mac OS X Server print spooler. Mac OS X Server can spool files to any PostScript-capable network printer over either AppleTalk or TCP/IP. There are also a number of third-party print-spooling products available for the publishing industry.

Q. How many clients can Mac OS X Server support?

- A. The Macintosh Server G3 with Mac OS X Server configuration running a single service, if properly configured, can support:
- Millions of Web transactions a day
 - Approximately 50 NetBoot clients
 - Over a thousand AppleShare clients
 - Thousands of Macintosh Manager clients

The actual number of clients supported depends on your network environment, usage scenarios, and hardware configuration.

Q. Can Mac OS X Server run all these services at the same time?

A. Not quite. Thanks to the power of preemptive multitasking, you can efficiently run multiple services on a single server. However, this requires more memory than running a single service, and it reduces the maximum load sustainable by any given service. The exact details depend strongly on your usage patterns. More information on optimal configurations will be available in Apple's Tech Info Library at til.info.apple.com.

Q. Do all these services use the same user and group information?

A. No. Apple file services (and NFS) use the native users and groups based on NetInfo, allowing the information to be shared among computers. Macintosh Manager maintains its own user and group information, as does Apache. WebObjects applications can be designed to work with Apache users and groups, but often verify against the underlying database used by the application.

Q. Is a backup utility available with Mac OS X Server?

A. No. A native backup solution is being developed by the Omni Group and will be available free to Mac OS X Server customers at <http://www.omnigroup.com/Software/Backup>.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS X Server: NetBoot/Macintosh Manager FAQ

Article ID: 60168
Created: 3/18/99
Modified: 4/21/99

TOPIC

This article contains frequently asked questions about Mac OS X Server. See also Tech Info Library articles:

Article 60165: [Mac OS X Server: General FAQ](#)

Article 60166: [Mac OS X Server: Operating System FAQ](#)

Article 60167: [Mac OS X Server: Services FAQ](#)

Article 60169: [Mac OS X Server: Hardware and Compatibility FAQ](#)

Article 60170: [Mac OS X Server: Pricing and Availability FAQ](#)

DISCUSSION

Q. What are the advantages of the NetBoot server?

A. The NetBoot server makes it easy to manage a network of Macintosh computers. With a traditional network, adding an application or changing a system component requires administrators to physically update every computer on the network. NetBoot-capable Macintosh computers--called NetBoot clients--share the same System Folder and applications stored on the NetBoot server. Updating the shared System Folder or adding an application to the server immediately updates every NetBoot client on the network. The shared system components are protected to prevent users from corrupting the system. Since new NetBoot client computers on the network don't require any configuration, adding one system or creating a new lab of computers is fast and simple. Users also have access to their applications, documents, and personal desktop environment at any Macintosh on the network.

Q. Who should use the NetBoot server?

A. The NetBoot server is designed for any organization using Macintosh computers on a network. It helps educators bring technology to the classroom with low-cost, easy-to-manage computers like the iMac. NetBoot helps educators who want to:

- Improve the student to computer ratio.
- Achieve technology goals under tight fiscal constraints.
- Reduce the cost of managing their computing infrastructure.
- Use existing technology resources.

The NetBoot server is also ideal for business customers with Macintosh networks, particularly those who want to replace data entry or editorial terminals. It allows them to reduce their computer costs through low-cost Macintosh hardware and reduced administration requirements.

Q. What components are included with the NetBoot server?

A. The NetBoot server runs on Macintosh G3 computers with the Mac OS X Server operating system. NetBoot includes:

- Three server applications: a BootP server, an AFP server, and a Macintosh Management server.
- Mac OS 8.5.1 system software and accompanying applications used by the NetBoot client computers.
- Two administration applications: NetBoot Desktop Admin for installing applications for use by NetBoot clients, and Macintosh Manager for administering users and groups on the network.

Q. What types of Macintosh computers can I use with the NetBoot server?

A. All iMac computers and the new Power Macintosh G3 (Blue and White) computers introduced at Macworld 1999 have the necessary hardware and firmware needed to support NetBoot. Future Macintosh computers may also be NetBoot-capable.

Q. What is Macintosh Manager, and how does it interact with At Ease for Workgroups?

A. Macintosh Manager is a technology for storing the user's computing environment on the server, so that the user can obtain his or her environment from any Macintosh on the network. This can include application preferences, desktop patterns, and fonts, depending on the level of customization allowed by the administrator. Macintosh Manager is based on, and can be considered a replacement for, At Ease for Workgroups, an earlier Apple product available only to education customers. Macintosh Manager on Mac OS X Server systems can serve both NetBoot and non-NetBoot clients.

Q. Can I manage non-NetBoot clients with Macintosh Manager?

A. Yes. An installer is provided that adds the necessary components to non-NetBoot Macintosh computers.

Q. Can other Mac systems be upgraded to support NetBoot?

A. No. Systems that are not NetBoot-capable can only take advantage of the file, Web, and Macintosh Management services of Mac OS X Server.

Q. How does a Macintosh start up from the network?

A. At startup, the NetBoot client computer broadcasts a BootP request on the network. BootP is a standard industry protocol for allowing computers to discover information about their network settings and the location of files to execute from a network server. The NetBoot server receives the BootP request and replies to the client's request with the information needed to start up. The client uses the information to configure its network settings and begins a TFTP download of the Mac OS into RAM. The client uses this file to finish booting.

Q. How do I set up a Macintosh to start up from the server?

A. A NetBoot-capable Macintosh requires no software setup to start up from the NetBoot server. To make a Macintosh boot the first time, hold down the N key until the Mac OS logo appears. After the computer is booted, simply set the Startup Disk Control Panel to start up from the network drive. From then on, the Macintosh will boot from the network without the aid of the N key.

Q. What version of the Mac OS runs on a NetBoot client?

A. NetBoot clients run Mac OS 8.5.1 with some minor modifications. These modifications allow the Macintosh to operate over the network and do not affect the user experience.

Q. Do I need special applications for NetBoot client computers?

A. NetBoot clients run most Macintosh applications available today. NetBoot does not include any special provisions for software licensing. You need to work with individual vendors to ensure that you have the appropriate number of licenses required by each application used on NetBoot clients.

Q. Does a NetBoot client use its own hard disk drive?

A. The NetBoot client does not normally use its hard disk drive. The NetBoot software includes a special system extension that unmounts the local hard disk drive, making it unavailable to the user. Administrators can disable this extension and make the local drive available for use. The local drive can be used normally for storing files and applications and providing disk space for the computer's virtual memory requirements.

Q. If there is no local hard disk drive, where are files stored?

A. In the NetBoot environment, every user has a home folder. These home folders can be located on the NetBoot server or on any AppleShare server connected to the network. The user's home folder appears on the desktop whenever the user logs in. Users can access their home folders via AppleShare from any Macintosh on the network, not just from NetBoot clients.

Q. Why do users log in to their computers?

A. The NetBoot server maintains a directory of users. When users log in, the server provides them with their personal desktop and data files, no matter which computer on the network they are using. It also provides a security mechanism for protecting the network from rogue users.

Q. What are the NetBoot server requirements?

A. The NetBoot server requires Mac OS X Server software running on a Macintosh G3 computer. The minimum recommended configuration is a 5GB hard disk and 64MB of RAM.

A server can support different quantities of client computers, depending on its configuration.

Q. What are the networking requirements?

A. The NetBoot server should connect to the network at no less than 100 Mbps for each connected port. NetBoot clients should also have at least 100-Mbps shared connections or 10-Mbps switched (dedicated) connections.

Q. Can NetBoot be used across the Internet?

A. No. Currently the NetBoot server is designed only for use on 100-Mbps Ethernet networks.

Q. Is Apple making "diskless" computers?

A. No. NetBoot gives users the flexibility to boot their computers from the local hard disk drive or from the NetBoot server.

Q. How does NetBoot relate to Apple Network Assistant and At Ease?

A. Apple has continually evolved Apple Network Assistant and At Ease for better system management of Macintosh clients. NetBoot takes system management one step further and introduces a new model for keeping Mac clients up to date. Many of the features in Apple Network Assistant and At Ease are incorporated in NetBoot. Apple will continue to develop these products to support Mac clients that are not NetBoot-capable.

EXTENDED Information - Apple Internal Use - Service Providers and Support Professional

Document Information

Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics; Macintosh Manager; NetBoot

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Tech Info Library

TITLE

Mac OS X Server: Hardware and Compatibility FAQ

Article ID: 60169
Created: 3/18/99
Modified: 4/16/99

TOPIC

This article contains frequently asked questions about Mac OS X Server. See also Tech Info Library articles:

Article 30604: [Mac OS X Server: System Requirements](#)

Article 60165: [Mac OS X Server: General FAQ](#)

Article 60166: [Mac OS X Server: Operating System FAQ](#)

Article 60167: [Mac OS X Server: Services FAQ](#)

Article 60168: [Mac OS X Server: NetBoot/Macintosh Manager FAQ](#)

Article 60170: [Mac OS X Server: Pricing and Availability FAQ](#)

DISCUSSION

Q. What are the hardware requirements for Mac OS X Server?

A. Mac OS X Server requires a Power Macintosh G3/Macintosh Server G3 with at least 64MB of memory and a 1GB hard disk drive. For heavily loaded servers, at least 128MB of RAM is recommended, and 200MB or more for multiple services. Mac OS X Server is supported only on Power Macintosh G3 and Macintosh Server G3 computers in their shipped configuration.

Q. To what extent does Mac OS X Server work with added third party hardware?

A. The extent to which Mac OS X Server will interoperate with third party hardware and software will vary from one product to another. Consult with the developer of the hardware or software in question to determine it's compatibility with Mac OS X Server. The Macintosh Products guide at: <http://www.macsoftware.apple.com/> provides a forum for developers to showcase their products and is an excellent starting point for those searching for specific hardware or software solutions.

Q. Will Mac OS X Server be available for Intel machines?

A. Apple has no plans to provide Mac OS X Server for any architecture other than PowerPC.

Q. Does Mac OS X Server support all the Power Macintosh G3 build-to-order options?

A. No. It supports ATA and SCSI drives, Ethernet, and limited USB (for keyboard and mouse). There is currently no support for serial ports, FireWire, or LocalTalk.

Q. Does Mac OS X Server support RAID?

A. Mac OS X Server does not include RAID software. However, it is compatible with a number of Ultra2 SCSI-based RAID devices, including those from MicroNet.

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Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS X Server: Pricing and Availability FAQ

Article ID: 60170
Created: 3/18/99
Modified: 3/18/99

TOPIC

This article contains frequently asked questions about Mac OS X Server. See also Tech Info Library articles:

Article 60165: **[Mac OS X Server: General FAQ](#)**

Article 60166: **[Mac OS X Server: Operating System FAQ](#)**

Article 60167: **[Mac OS X Server: Services FAQ](#)**

Article 60168: **[Mac OS X Server: NetBoot/Macintosh Manager FAQ](#)**

Article 60169: **[Mac OS X Server: Hardware and Compatibility FAQ](#)**

DISCUSSION

Q. What is the price of Mac OS X Server?

A. In the United States Mac OS X Server software is USD499 and is available to education customers for USD249. The hardware configuration, Macintosh Server G3 with Mac OS X Server, is USD4,999.

Q. What licensing do I get for that price?

A. Just about everything. You get unlimited client access (as much as your hardware can handle) for:

- Apache Web server
- Apple file services
- NetBoot network startup
- Macintosh Manager (both NetBoot and non-NetBoot systems)

For WebObjects, you get a basic 50-transaction-per-minute deployment license. You can purchase WebObjects upgrade licenses through the normal Apple Enterprise Software channels. For more information, see www.apple.com/webobjects.

Q. What is included in the Macintosh Server G3 with Mac OS X Server configuration?

A. The Macintosh Server G3 with Mac OS X Server includes a 400-MHz PowerPC G3 processor with 1MB of backside cache, 256MB of high-performance PC100 SDRAM, two 9GB 10,000-rpm Ultra2 LVD SCSI hard disk drives, built-in 10/100BASE-T Ethernet connector and four-port 10/100BASE-T Ethernet PCI card, CD-ROM drive, and Mac OS X Server software (preinstalled). This hardware configuration includes an unlimited-client license for Apple file services, NetBoot clients, and Macintosh Manager clients, and a 50-transaction-per-minute deployment license for WebObjects.

Q. What build-to-order (BTO) options are available for the Macintosh Server G3 with Mac OS X Server?

A. The Macintosh Server G3 with Mac OS X Server will offer the following BTO options:

- 256MB, 384MB, 512MB, 768MB, or 1GB of PC100 SDRAM
- Two or three 9GB 10,000-rpm Ultra2 LVD SCSI hard disk drives
- One, two, or three 36GB 7,200-rpm Ultra2 LVD SCSI hard disk drives
- Dual-channel Ultra2 LVD SCSI PCI card with any hard disk drive configuration
- Ultra SCSI PCI card
- Gigabit Ethernet PCI card
- LaCie external DDS-3 tape drive

For up-to-date information about options and availability, visit <http://www.apple.com/store>.

Q. Where will the software and hardware be available?

A. They will be available through most traditional Apple channels, including the online Apple Store, Apple sales agents, and most Apple resellers.

Q. Will the products be available from Apple Enterprise Sales?

A. Yes. For this release, Mac OS X Server will be the only vehicle for purchasing WebObjects 4 for Power Macintosh systems. WebObjects deployment licenses and consulting services will continue to be available solely through Apple Enterprise Sales.

Q. Are there any upgrade or volume discounts?

A. No. This is the first in a new line of server products.

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Document Information

Product Area: Mac OS System Software

Category: Mac OS X Server

Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS: Moving the Control Strip

Article ID: 60241
Created: 4/14/99
Modified: 4/14/99

TOPIC

When I started my computer I noticed the Control Strip is in the middle of the monitor. How do I move it back to where it was before? Why did it move up?

DISCUSSION

To move the Control Strip, hold down the Option key and drag the tab at the end of the Control Strip. The Control Strip always stays on the left or right edge of your monitor. If you drag it more than halfway across the screen, the Control Strip moves to the other edge. If you have more than one monitor, you can drag the Control Strip to the left or right edge of the other monitor as well.

Changing the monitor's resolution from a smaller one to larger one and restarting the computer will move the Control Strip higher up on the display image.

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Document Information

Product Area: Mac OS System Software
Category: General OS
Sub Category: General Topics

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Tech Info Library

TITLE

Mac OS ROM Update 1.0: Read Me

Article ID: 60408
Created: 6/28/99
Modified: 7/1/99

TOPIC

This article comprises the Read Me for Mac OS ROM Update version 1.0. This software was released by Apple on 28 June 1999 and is available for downloading from the Apple Software Updates Web site. Copy and paste the following URL into your Web browser to access the download directly:

<http://asui.info.apple.com/swupdates.nsf/artnum/n11476>

iMac, Power Macintosh G3 (Blue and White), and PowerBook G3 Series (Bronze keyboard) customer install this update. Requires Mac OS 8.6.

DISCUSSION

About Mac OS ROM Update 1.0

Based on customer and developer feedback, Apple has made improvements to its software for the iMac, Power Macintosh G3 (Blue and White), and PowerBook G3 Series (Bronze keyboard) customers. The Mac OS ROM Update 1.0 replaces the Mac OS ROM version 1.4 with version 1.6, which includes the following fixes:

- Fixed an intermittent issue where after startup the keyboard/mouse does not respond when a mouse is attached to the top USB port and a keyboard attached to the bottom USB port."
- A possible crash on the PowerBook G3 when removing an attached USB keyboard at the same time as putting the unit to sleep.
- Hot swapping a media bay device into a bronze keyboard PowerBook G3 would not always recognize the device.
- Using the Target Disk Mode feature on the bronze keyboard PowerBook G3, a user can only use the SCSI ID setting of 2.

Who needs the Mac OS ROM Update?

Apple recommends that every iMac, Power Macintosh G3 (Blue and White), and PowerBook G3 Series (Bronze keyboard) customer install this update.

Before you install

- Your iMac, Power Macintosh G3 or PowerBook G3 must have Mac OS 8.6.
- If you are using software that runs in the background, such as virus-protection or security software, turn it off before you install Mac OS ROM Update 1.0.

Important: Installing this upgrade will not affect files stored on your hard disk. However, it is highly recommended that you back up the data on your computer before installing this update. Apple is not responsible for any lost data.

Installing the Mac OS ROM update

1. Follow the instructions on Apple's Support web site (<http://www.apple.com/swupdates>) and download the Mac OS ROM Update 1.0.
2. Double-click the Mac OS ROM Update file to open it. A Mac OS ROM Update icon appears on the Desktop. Note: If there was a problem downloading the file, an error message appears. Try downloading the file again.
3. Double-click the Mac OS ROM Update icon to open the folder.
4. Double-click the Installer icon and follow the onscreen instructions.
5. When a message appears saying installation was successful, click OK. Your computer will restart.

After you install

If you perform a clean installation of Mac OS 8.6 after you've installed Mac OS ROM Update 1.0, the updated MacOS ROM file 1.6 may

be replaced with an older version and you may need to reinstall this update.

To see if you need to reinstall the Mac OS ROM Update, open the Apple menu and choose Apple System Profiler. Under the System Profile tab, locate "Production Information" at the bottom of the window. Click the triangle to open the Production Information contents if it is not already open. The "MacOS ROM file version" should be 1.6 or later. If it is not, follow the instructions for "Installing the Update" above.

For further information, please point your web browser to: <http://www.apple.com/support>

Writers Notes

When connecting a keyboard and mouse via USB, Apple recommends connecting the mouse to the keyboard, and the keyboard to the computer.

Mac OS ROM version 1.6 is already installed on most PowerBook G3 Series (Bronze keyboard) computers. Check the version number of the Mac OS ROM file to determine whether this update may be required.

NetBoot client images should also be updated to version 1.6 of the Mac OS ROM. For instructions on updating the NetBoot client image, refer to Tech Info Library article:

Article 60363: **Mac OS X Server: Updating the NetBoot HD.img to Mac OS 8.6.**

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Product Area: Mac OS System Software

Category: General OS

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TITLE

Mac OS 9: Performing a Clean Installation

Article ID: 60496
Created: 9/30/99
Modified: 12/21/99

TOPIC

This article provides instructions for what is commonly called a clean installation of system software. A normal system software installation replaces changed system files and adds new ones, but leaves other files alone. A clean installation creates a completely new System Folder on your hard disk.

DISCUSSION

Performing a clean installation can be a lengthy procedure, but if you have tried other troubleshooting methods and are still experiencing problems, it may help.

1. Start up your computer from the Mac OS CD.
2. Open the Mac OS Installer application.
3. In the Select Destination window of the Installer, click the Options button.
4. Click the Perform Clean Installation checkbox to select it, then click OK.
5. Follow the onscreen instructions to begin the installation. When the installation is finished, you can reinstall extensions, fonts, control panels, applications, and other items not installed with the Mac OS from their original disks. If you don't have the original disks, you can drag the items one at a time from the Previous System Folder to the new System Folder. To make sure the software is compatible with this version of the Mac OS, you should restart your computer after you reinstall each item.

Important A clean installation creates a completely new System Folder. This means you must reinstall any non-Apple extensions, fonts, and control panels after you do the installation. Before you begin, write down your Internet settings (from the Modem, TCP/IP, and Remote Access control panels). Some of your application programs might also need to be reinstalled after you perform a clean installation, particularly if they rely on files that used to be in the System Folder.

After you're sure you've copied all the items you want to save into your new System Folder, delete the Previous System Folder from your hard disk.

EXTENDED Information - [Apple Internal Use](#) - [Service Providers and Support Professional](#)

Document Information

Product Area: Mac OS System Software
Category: Mac OS 9.0
Sub Category: Troubleshooting